

MAY - 2 2012

Se Dang Le California Dairies Inc. 2000 N Plaza Drive Visalia, CA 93291

RE: Notice of Final Action - Authority to Construct

Project Number: S-1111009

Dear Mr. Le:

The Air Pollution Control Officer has issued Authority to Construct permits to California Dairies Inc for the installation of two 5.7 MW gas turbines with heat recovery steam generators (HRSGs) to provide electricity and steam for facility operation, at 2000 N Plaza Drive, Visalia, CA.

Enclosed are copies of 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 this Authority to Construct was published on February 21, 2012. The District's analysis of the proposal was also sent to CARB on February 14, 2012. No comments were received following the District's preliminary decision on this project.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leonard Scandura at (661) 392-5500.

Sincerely.

**David Warner** 

**Director of Permit Services** 

DW: RUE/cm

**Enclosures** 

Executive Director/Air Pollution Control Officer



MAY - 2 2012

Mike Tollstrup, Chief Project Assessment Branch Stationary Source Division California Air Resources Board PO Box 2815 Sacramento, CA 95812-2815

Notice of Final Action - Authority to Construct

**Project Number: S-1111009** 

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Enclosed are copies of 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.

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Sincerely,

David Warner

Director of Permit Services

DW: RUE/cm

**Enclosures** 

Seved Sadredin

Executive Director/Air Pollution Control Officer

# NOTICE OF FINAL ACTION FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT PERMITS

NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer has issued Authority to Construct permits to California Dairies Inc for the installation of two 5.7 MW gas turbines with heat recovery steam generators (HRSGs) to provide electricity and steam for facility operation, at 2000 N Plaza Drive, Visalia, CA.

No comments were received following the District's preliminary decision on this project.

The application review for Project #S-1111009 is available for public inspection at http://www.valleyair.org/notices/public\_notices\_idx.htm and the SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.





**PERMIT NO:** S-7063-8-5

**ISSUANCE DATE: 04/27/2012** 

LEGAL OWNER OR OPERATOR: CALIFORNIA DAIRIES, INC

MAILING ADDRESS:

CALIFORNIA DAIRIES, INC 2000 NORTH PLAZA DRIVE

VISALIA, CA 93291

LOCATION:

2000 NORTH PLAZA DRIVE

VISALIA, CA 93291

#### **EQUIPMENT DESCRIPTION:**

MODIFICATION OF 63 MMBTU/HR HURST SERIES 400 NATURAL GAS FIRED BOILER WITH AN NOVA PLUS ULTRA LOW NOX COMBUSTION SYSTEM MODEL NVC17-G-40 ULTRA LOW NOX BURNER AND INDUCED FLUE GAS RECIRCULATION (FGR) SYSTEM: LIMIT COMBINED USE OF '-8, '-9 AND '-18 TO 90,720 MMBTU/YR

## CONDITIONS

- 1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 2. 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]
- 3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- 4. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201]
- 5. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained, [District Rule 2201]
- 6. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 7.0 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
- 7. Combined fuel use for boilers S-7063-8, '-9, and '-18 shall not exceed 90,720 MMBtu/yr. [District Rule 2201]
- 8. 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]
- 9. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

  CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR 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:

Seved Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

- 10. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]
- 11. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. NOx emissions during the source test shall be calculated as the arithmetic average of three 30-consecutive-minute test runs. [District Rule 4305, 4306, and 4320]
- 12. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. CO emissions during the source test shall be calculated as the arithmetic average of three 30-consecutive-minute test runs. [District Rule 4305, 4306, and 4320]
- 13. Stack gas oxygen shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4305, 4306 and 4320]
- 14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320]
- 15. During the 36-month source testing interval, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4306]
- 16. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4306]
- 17. The flue gas recirculation valve(s) setting shall be monitored at least on a weekly basis. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305, 4306, and 4320]
- 18. The acceptable settings for the flue gas recirculation valve(s) shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be that for which compliance with applicable NOx and CO emissions rates have been demonstrated through source testing at a similar firing rate. [District Rules 4305, 4306, and 4320]
- 19. Normal range or level for the flue gas recirculation valve(s) settings shall be re-established during each source test required by this permit. [District Rules 4305, 4306, and 4320]
- 20. If the flue gas recirculation valve(s) setting is less than the normal range/level, the permittee shall return the flue gas recirculation valve(s) setting to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the flue gas recirculation valve(s) setting is not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour, and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new flue gas recirculation valve(s) setting. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. 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 reestablished, 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 Rules 4305, 4306, and 4320]

- 21. The permittee shall maintain records of the date and time of flue gas recirculation valve(s) settings, the observed setting, and the firing rate at the time of the flue gas recirculation valve(s) setting measurements. The records must also include a description of any corrective action taken to maintain the flue gas recirculation valve(s) setting within the acceptable range. [District Rules 4305, 4306, and 4320]
- 22. Permittee shall maintain daily records of the type and quantity of fuel combusted by the boiler. [District Rule 2201]
- 23. 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 1070, 4305, 4306, and 4320]
- 24. ATCs S-7063-8-5, '-9-5, and '-18-2 shall be implemented within 90 days of startup of turbines S-7063-19 and '-20. [District Rule 2201]





PERMIT NO: S-7063-9-5

**ISSUANCE DATE: 04/27/2012** 

LEGAL OWNER OR OPERATOR: CALIFORNIA DAIRIES, INC. **MAILING ADDRESS:** 

2000 NORTH PLAZA DRIVE

VISALIA, CA 93291

LOCATION:

2000 NORTH PLAZA DRIVE

VISALIA, CA 93291

### **EQUIPMENT DESCRIPTION:**

MODIFICATION OF 63 MMBTU/HR HURST SERIES 400 NATURAL GAS FIRED BOILER WITH AN NOVA PLUS ULTRA LOW NOX COMBUSTION SYSTEM MODEL NVC17-G-40 ULTRA LOW NOX BURNER AND INDUCED FLUE GAS RECIRCULATION (FGR) SYSTEM: LIMIT COMBINED USE OF '-8, '-9 AND '-18 TO 90,720 MMBTU/YR

## CONDITIONS

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- 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]
- 3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- 4. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201]
- A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201]
- Emissions from the natural gas-fired unit shall not exceed any of the following limits: 7.0 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
- Combined fuel use for boilers S-7063-8, '-9, and '-18 shall not exceed 90,720 MMBtu/yr. [District Rule 2201]
- 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]
- The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

- 10. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]
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- 15. During the 36-month source testing interval, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4306]
- 16. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4306]
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- 23. 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 1070, 4305, 4306, and 4320]
- 24. ATCs S-7063-8-5, '-9-5, and '-18-2 shall be implemented within 90 days of startup of turbines S-7063-19 and '-20. [District Rule 2201]





PERMIT NO: S-7063-18-2 ISSUANCE DATE: 04/27/2012

LEGAL OWNER OR OPERATOR: CALIFORNIA DAIRIES, INC

2000 NORTH PLAZA DRIVE

MAILING ADDRESS:

VISALIA, CA 93291

LOCATION:

2000 NORTH PLAZA DRIVE

VISALIA, CA 93291

#### **EQUIPMENT DESCRIPTION:**

MODIFICATION OF 63 MMBTU/HR HURST SERIES 400 NATURAL GAS FIRED BOILER WITH A NOVA PLUS ULTRA LOW NOX COMBUSTION SYSTEM MODEL NVC17-G-40 ULTRA LOW NOX BURNER AND INDUCED FLUE GAS RECIRCULATION (FGR) SYSTEM: LIMIT COMBINED USE OF '-8, '-9 AND '-18 TO 90,720 MMBTU/YR

## **CONDITIONS**

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  CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services \$7053/8-2: Apr 27 2012 2:10PM - EDGEHILR: Joint Inspection NOT Required

- 10. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]
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- 23. 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 1070, 4305, 4306, and 4320]
- 24. ATCs S-7063-8-5, '-9-5, and '-18-2 shall be implemented within 90 days of startup of turbines S-7063-19 and '-20. [District Rule 2201]





**PERMIT NO: S-7063-19-0** 

**ISSUANCE DATE: 04/27/2012** 

LEGAL OWNER OR OPERATOR: CALIFORNIA DAIRIES, INC **MAILING ADDRESS:** 

2000 NORTH PLAZA DRIVE

VISALIA, CA 93291

LOCATION:

2000 NORTH PLAZA DRIVE

VISALIA, CA 93291

#### **EQUIPMENT DESCRIPTION:**

5.7 MW NATURAL GAS-FIRED SOLAR TAURUS 60S TURBINE POWERING AN ELECTRICAL GENERATOR WITH AN UNFIRED HEAT RECOVERY STEAM GENERATOR WITH SELECTIVE CATALYTIC REDUCTION AND AN OXIDATION **CATALYST** 

## CONDITIONS

- No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- Heat recovery steam generator design shall provide space for additional catalysts if additional catalyst are necessary to achieve NOx emission limits. [District Rule 2201]
- Maximum heat input rating of Solar Taurus 60S gas-fired turbine engine shall not exceed 64.47 MMBtu/hr. [District Rule 2201]
- Gas turbine engine lube oil vents, generator lube oil vents, and lube oil accumulator vents shall be equipped with mist eliminators. Lube oil vents shall not exhibit visible emissions of 5% opacity or greater except for up to three minutes in any hour. [District Rule 2201]
- Gas-fired turbine engine shall be equipped with selective catalytic reduction (SCR) NOx control system utilizing ammonia as reducing agent. [District Rule 2201]
- Gas turbine shall be fired exclusively on PUC-regulated natural gas with a sulfur content not exceeding 1.0 gr S/100 scf. [District Rule 2201]
- Gas turbine shall be equipped with continuously recording fuel gas flow meter. [District Rule 2201] 7.
- Exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods. [District Rule 1081]

#### CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

- 9. 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]
- 10. Except during startup and shutdown, emissions from the gas turbine system shall not exceed any of the following limits: 2.5 ppmvd NOx @ 15% O2 referenced as NO2; 6.0 ppmvd CO @ 15% O2; 0.021 lb-PM10/MMBtu; 2.0 ppmvd VOC @ 15% O2 referenced as methane; and 0.00285 lb-SOx/MMBtu referenced as SO2. NOx and CO emission limits are based on 3-hour rolling average period. [District Rules 2201 and 4703]
- 11. Emissions concentration limits shall not apply during initial commission of the unit for a period not to exceed 60 days of initial firing. [District Rule 2201]
- 12. Start-up shall not exceed 2 hours per event. [District Rule 4703]
- 13. Shutdown shall not exceed 2 hours per event. [District Rule 4703]
- 14. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703]
- 15. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703]
- 16. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703]
- 17. No more than 3 startups nor 3 shutdowns shall occur per day and no more than 365 startups nor 365 shutdowns shall occur per year. [District Rule 2201]
- 18. Ammonia (NH3) emissions shall not exceed 5 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 4102]
- 19. Combined fuel use for gas turbines S-7063-19 and '-20 shall not exceed 871,634 MMBtu/yr. [District Rule 2201]
- 20. Emissions from the gas turbine system shall not exceed any of the following limits: 17.1 lb-NOx/day referenced as NO2; 4.4 lb-SOx/day; 32.5 lb-PM10/day; 71.1 lb-CO/day; 8.1 lb-VOC/day; and 10.7 lb-NH3/day. [District Rule 2201]
- 21. Combined emissions from gas turbines S-7063-19 and '-20 shall not exceed any of the following limits: 8,763 lb-NOx/yr; 2,484 lb-SOx/yr; 18,304 lb-PM10/yr; 24,118 lb-CO/yr; 3,201 lb-VOC/yr; and 6,014 lb-NH3/yr. [District Rule 2201]
- 22. Each three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201]
- 23. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used to determine compliance with annual emission limits shall be compiled from the twelve most recent calendar months. [District Rule 2201]
- 24. Ammonia shall be injected whenever the selective catalytic reduction system catalyst temperature exceeds the minimum ammonia injection temperature recommended by the manufacturer. The minimum ammonia injection rate demonstrated during the initial compliance test to result in compliance with the NOx and ammonia emissions limits shall by imposed as a condition in the Permit to Operate. [District Rules 2201 and 4703, 40 CFR part 64, 40 CFR 60.4355]
- 25. The permittee shall monitor and record the ammonia injection rate on a daily basis to assure the emission control system is functioning properly. Monitoring shall not be required if the gas turbine is not in operation, i.e. the gas turbine need not be started solely to perform monitoring. [40 CFR Part 64]
- 26. The approved ammonia injection rate operating range for monitoring daily compliance shall be established from manufacturer's information or by source testing this unit, and shall be stated on this permit. This operating range must be determined during the next source test or within six months, whichever comes first. [40 CFR Part 64]

- 27. If the ammonia injection rate is less than the minimum ammonia injection rate demonstrated during the initial compliance test, the permittee shall return the ammonia injection rate above the minimum ammonia injection rate established during compliance testing as soon as possible, but no longer than 8 hours after detection. If the ammonia injection rate is not returned above the minimum ammonia injection rate established during compliance testing within 8 hours, the permittee shall notify the District within the following 1 hour and conduct a source test within 60 days of the first exceedance to demonstrate compliance with the applicable emission limits at the reduced ammonia injection rate. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must 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 Rules 2201 and 4703, 40 CFR part 64, 40 CFR 60.4355]
- 28. The owner or operator shall submit to the District information correlating the ammonia injection rate to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when ammonia injection rate cannot be monitored. [District Rule 4703]
- 29. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64]
- 30. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64]
- 31. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 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]
- 32. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 weekly. If compliance with NOx and CO emission is demonstrated for eight (8) consecutive weeks, then the monitoring frequency shall be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until 8 consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within one (1) day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rules 2201 and 4703].
- 33. If the NOx and/or CO concentrations, as measured by the permittee with a portable analyzer, exceed the permitted emission limits, the permittee shall notify the District and return the NOx and CO concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emission limits after eight (8) hour, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been reestablished, 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 Rules 2201 and 4703]
- 34. All alternate 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 Rules 2201 and 4703]
- 35. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201 and 4703]

- 36. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081]
- 37. 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]
- 38. Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081]
- 39. Source testing to determine compliance with the NOx, CO, VOC, and NH3 emission rates (ppmvd @ 15% O2) during normal operation shall be conducted within 60 days of initial startup under this permit and annually thereafter. [District Rules 2201 and 4703, CFR 60.4400]
- 40. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O2) during normal operation in this permit, the arithmetic mean of three test runs shall apply, unless two of the three results are above an applicable limit. If two of three runs are above the applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 1081]
- 41. The following test methods shall be used: NOx EPA Method 7E or 20 or CARB Method 100; CO EPA Method 10 or 10B or CARB Method 100; VOC EPA Method 18 or 25; PM10 EPA Method 5 (front half and back half) or 201 and 202a; ammonia BAAQMD ST-1B; and O2 EPA Method 3, 3A, or 20 or CARB Method 100; natural gas fuel sulfur content: ASTM D3246; natural gas higher heating value (HHV): ASTM D3588-91, 1826-88, or 1945-81. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, and 40 CFR 60.4400 (1)(i)]
- 42. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 40 CFR 60.4375(b)]
- 43. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, total hours of operation, the type and quantity of fuel used, duration of each start-up and each shutdown time period. [District Rule 4703]
- 44. The permittee shall maintain records including as utility bills/invoices from natural gas supplier for fuel sulfur content verification. [40 CFR Subpart 60.4365]
- 45. The permittee shall maintain records of daily and annual natural gas consumption (MMBtu) of gas turbine engine, daily and annual calculated emissions, ammonia injection rate, and catalyst inlet temperature. [District Rule 2201 and 40 CFR Subpart 60.4365]
- 46. Applicant shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NOx emissions control system. [40 CFR 60.4355]
- 47. All records required to be maintained by this permit shall be maintained for a period of five years and shall be made readily available for District inspection upon request. [District Rule 2201]
- 48. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 132 lb/quarter and PM10: 1988 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201]
- 49. ERC Certificate Numbers N-836-2 and N-986-5 (or certificates split from theses certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]
- 50. ATCs S-7063-8-5, '-9-5, and '-18-2 shall be implemented within 90 days of startup of turbines S-7063-19 and '-20. [District Rule 2201]





**PERMIT NO:** S-7063-20-0

**ISSUANCE DATE: 04/27/2012** 

LEGAL OWNER OR OPERATOR: CALIFORNIA DAIRIES, INC

2000 NORTH PLAZA DRIVE

MAILING ADDRESS:

VISALIA, CA 93291

LOCATION:

2000 NORTH PLAZA DRIVE

VISALIA, CA 93291

#### **EQUIPMENT DESCRIPTION:**

5.7 MW NATURAL GAS-FIRED SOLAR TAURUS 60S TURBINE POWERING AN ELECTRICAL GENERATOR WITH AN UNFIRED HEAT RECOVERY STEAM GENERATOR WITH SELECTIVE CATALYTIC REDUCTION AND AN OXIDATION CATALYST

## CONDITIONS

- 1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 2. Heat recovery steam generator design shall provide space for additional catalysts if additional catalyst are necessary to achieve NOx emission limits. [District Rule 2201]
- 3. Maximum heat input rating of Solar Taurus 60S gas-fired turbine engine shall not exceed 64.47 MMBtu/hr. [District Rule 2201]
- 4. Gas turbine engine lube oil vents, generator lube oil vents, and lube oil accumulator vents shall be equipped with mist eliminators. Lube oil vents shall not exhibit visible emissions of 5% opacity or greater except for up to three minutes in any hour. [District Rule 2201]
- 5. Gas-fired turbine engine shall be equipped with selective catalytic reduction (SCR) NOx control system utilizing ammonia as reducing agent. [District Rule 2201]
- 6. Gas turbine shall be fired exclusively on PUC-regulated natural gas with a sulfur content not exceeding 1.0 gr S/100 scf. [District Rule 2201]
- 7. Gas turbine shall be equipped with continuously recording fuel gas flow meter. [District Rule 2201]
- 8. Exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods. [District Rule 1081]

#### 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

DAVID WARNER, Director of Permit Services

- 9. 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]
- 10. Except during startup and shutdown, emissions from the gas turbine system shall not exceed any of the following limits: 2.5 ppmvd NOx @ 15% O2 referenced as NO2; 6.0 ppmvd CO @ 15% O2; 0.021 lb-PM10/MMBtu; 2.0 ppmvd VOC @ 15% O2 referenced as methane; and 0.00285 lb-SOx/MMBtu referenced as SO2. NOx and CO emission limits are based on 3-hour rolling average period. [District Rules 2201 and 4703]
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- 27. If the ammonia injection rate is less than the minimum ammonia injection rate demonstrated during the initial compliance test, the permittee shall return the ammonia injection rate above the minimum ammonia injection rate established during compliance testing as soon as possible, but no longer than 8 hours after detection. If the ammonia injection rate is not returned above the minimum ammonia injection rate established during compliance testing within 8 hours, the permittee shall notify the District within the following 1 hour and conduct a source test within 60 days of the first exceedance to demonstrate compliance with the applicable emission limits at the reduced ammonia injection rate. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must 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 Rules 2201 and 4703, 40 CFR part 64, 40 CFR 60.4355]
- 28. The owner or operator shall submit to the District information correlating the ammonia injection rate to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when ammonia injection rate cannot be monitored. [District Rule 4703]
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- 31. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 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]
- 32. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 weekly. If compliance with NOx and CO emission is demonstrated for eight (8) consecutive weeks, then the monitoring frequency shall be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until 8 consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within one (1) day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rules 2201 and 4703]
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- 34. All alternate 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 Rules 2201 and 4703]
- 35. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201 and 4703]

- 36. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081]
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- 38. Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081]
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- 40. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O2) during normal operation in this permit, the arithmetic mean of three test runs shall apply, unless two of the three results are above an applicable limit. If two of three runs are above the applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 1081]
- 41. The following test methods shall be used: NOx EPA Method 7E or 20 or CARB Method 100; CO EPA Method 10 or 10B or CARB Method 100; VOC EPA Method 18 or 25; PM10 EPA Method 5 (front half and back half) or 201 and 202a; ammonia BAAQMD ST-1B; and O2 EPA Method 3, 3A, or 20 or CARB Method 100; natural gas fuel sulfur content: ASTM D3246; natural gas higher heating value (HHV): ASTM D3588-91, 1826-88, or 1945-81. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, and 40 CFR 60.4400 (1)(i)]
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- 46. Applicant shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NOx emissions control system. [40 CFR 60.4355]
- 47. All records required to be maintained by this permit shall be maintained for a period of five years and shall be made readily available for District inspection upon request. [District Rule 2201]
- 48. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 132 lb/quarter and PM10: 1988 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201]
- 49. ERC Certificate Numbers N-836-2 and N-986-5 (or certificates split from theses certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 22011
- 50. ATCs S-7063-8-5, '-9-5, and '-18-2 shall be implemented within 90 days of startup of turbines S-7063-19 and '-20. [District Rule 2201]