



NOV 29 2011

Joseph Demanche  
Ameresco Forward, LLC  
111 Speen Street, Suite 410  
Framingham, MA 01701

**RE: Notice of Final Action - Authority to Construct  
Project Number: N-1110808**

Dear Mr. Demanche:

The Air Pollution Control Officer has issued Authority to Construct permits to Ameresco Forward, LLC for a landfill gas to energy project consisting of two landfill gas-fired internal combustion engines and a siloxane removal system with an enclosed flare, at 9999 S Austin Rd in Manteca, 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 October 19, 2011. The District's analysis of the proposal was also sent to CARB on October 14, 2011. 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.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Rupi Gill at (209) 557-6400.

Sincerely,



David Warner  
Director of Permit Services

DW:JH

Enclosures

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

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**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  
[www.valleyair.org](http://www.valleyair.org)

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

[www.healthyairliving.com](http://www.healthyairliving.com)



NOV 29 2011

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

**RE: Notice of Final Action - Authority to Construct**  
**Project Number: N-1110808**

Dear Mr. Tollstrup:

The Air Pollution Control Officer has issued Authority to Construct permits to Ameresco Forward, LLC for a landfill gas to energy project consisting of two landfill gas-fired internal combustion engines and a siloxane removal system with an enclosed flare, at 9999 S Austin Rd in Manteca, CA.

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Stockton Record

**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 Ameresco Forward, LLC for a landfill gas to energy project consisting of two landfill gas-fired internal combustion engines and a siloxane removal system with an enclosed flare, at 9999 S Austin Rd in Manteca, CA.

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

The application review for Project #N-1110808 is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](http://www.valleyair.org/notices/public_notices_idx.htm) and the **SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, REGION'S ADDRESS**REGION'S ADDRESS.



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** N-8569-1-0

**ISSUANCE DATE:** 11/22/2011

**LEGAL OWNER OR OPERATOR:** AMERESCO FORWARD, LLC  
**MAILING ADDRESS:** 111 SPEEN STREET, SUITE 410  
FRAMINGHAM, MA 01701

**LOCATION:** 9999 SOUTH AUSTIN ROAD  
MANTECA, CA

**EQUIPMENT DESCRIPTION:**

3,012 BHP GE ENERGY MODEL JGS616 LANDFILL GAS-FIRED LEAN BURN IC ENGINE POWERING A 2,175 KW ELECTRICAL GENERATOR AND SERVED BY A SILOXANE REMOVAL SYSTEM (SHARED WITH PERMIT UNIT N-8569-2), AN OXIDATION CATALYST, AND A SELECTIVE CATALYTIC REDUCTION SYSTEM

### CONDITIONS

1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. Permittee shall install, calibrate, and maintain in operation a volumetric, totalizing, non-resettable gas flow meter to measure the volume of landfill gas entering this stationary source. [District Rule 2201]
6. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
7. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702]
8. The engine exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

N-8569-1-01 Nov 22 2011 8:48AM - CHANK : Joint Inspection NOT Required

9. The engine exhaust stack shall have a minimum height of 40 feet above the ground, and a maximum inside diameter of 20 inches at the point where the exhaust gas is emitted to the atmosphere. [District Rules 2201 and 4102]
10. The concentration of sulfur compounds in the landfill gas entering this stationary source shall not exceed 150 ppmvd as H<sub>2</sub>S. [District Rule 2201]
11. The landfill gas flow rate to this stationary source shall not exceed 2,084 scf/min. [District Rule 2201]
12. This engine shall be fired exclusively with landfill gas. [District Rule 2201]
13. Emissions from this landfill gas-fired engine shall not exceed 0.15 g-NO<sub>x</sub>/bhp-hr, 0.05 g-PM<sub>10</sub>/bhp-hr, 1.8 g-CO/bhp-hr, 0.20 g-VOC/bhp-hr, and 15 ppmvd NH<sub>3</sub> at 15% O<sub>2</sub>. [District Rules 2201 and 4102]
14. Either the non-methane organic compound (NMOC) emissions from this landfill gas-fired engine shall not exceed 20 ppmvd (as hexane) at 3% O<sub>2</sub> or the NMOC destruction efficiency shall be at least 98%. [District Rule 2201 and 40 CFR 60.752(b)(2)(iii)(B)]
15. CO emissions from this stationary source shall not exceed 199,999 pounds in any rolling 12-consecutive-month period. [District Rule 2201]
16. VOC emissions from this stationary source shall not exceed 19,999 pounds in any rolling 12-consecutive-month period. [District Rule 2201]
17. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> concurrently at least once every calendar month (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O<sub>2</sub> monitors may be allowed if approved by the APCO.] 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 five 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 Rules 4701 and 4702]
18. The permittee shall monitor and record the stack concentration of NH<sub>3</sub> at least once every calendar quarter (in which a source test is not performed). NH<sub>3</sub> monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. 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 five 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 2201]
19. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, 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 24 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 performing the notification and testing required by this condition. [District Rules 4701 and 4702]
20. 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 4701 and 4702]
21. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702]

CONDITIONS CONTINUE ON NEXT PAGE

22. The sulfur compound content of the landfill gas entering this stationary source shall be monitored and recorded monthly. After four consecutive monthly tests show compliance, the monitoring frequency may be reduced to once every calendar quarter. If quarterly monitoring shows an exceedance of the limit, then monthly monitoring shall resume and continue until four consecutive months of monitoring show compliance with the limit. Once compliance with the limit is shown for four consecutive months, then the monitoring frequency may return to quarterly. Monitoring shall not be required in any month during which neither the engines nor the flare operate. Records of monitoring results shall be maintained as required elsewhere in this permit. [District Rule 2201]
23. Monitoring of the landfill gas sulfur compound content shall be performed using Draeger tubes or an alternative method approved in writing by the District. [District Rule 2201]
24. Source testing to measure landfill gas-combustion NO<sub>x</sub>, CO, NH<sub>3</sub>, and VOC emissions, and NMOC emissions and destruction efficiency, from this unit shall be conducted within 90 days of initial start-up. [District Rules 4701 and 4702 and 40 CFR 60.752(b)(2)(iii)(B)]
25. Source testing to measure landfill gas-combustion NO<sub>x</sub>, CO, NH<sub>3</sub>, and VOC emissions from this unit shall be conducted at least once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 24 months. If the result of the 24-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 12 months. [District Rules 2201, 4701, and 4702]
26. 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 Rules 4701 and 4702]
27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
28. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
29. 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 both as methane and as hexane. NO<sub>x</sub> and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. VOC concentrations shall be reported in ppmv, corrected to 15% oxygen as methane and corrected to 3% oxygen as hexane. [District Rules 4701 and 4702 and 40 CFR 60.752(b)(2)(iii)(B)]
30. The following test methods shall be used: NO<sub>x</sub> (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, VOC (ppmv) - EPA Method 18, 25A or 25B, or ARB Method 100, and NMOC (ppmv) - EPA Method 18, 25, 25A, or 25C. [District Rules 1081, 4701, and 4702, and 40 CFR 60.754(d)]
31. The permittee 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, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702]
32. 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]
33. Permittee shall maintain records of actual gross electrical output from this engine, in kW-hr. [District Rule 2201]
34. Permittee shall maintain records of actual VOC and CO emissions from this LFG-fired engine. Emissions shall be calculated as follows: (actual gross electrical output, in kW-hr) x (1.341 bhp/kW) x (emission factor calculated from most recent source test data for that pollutant, g/bhp-hr) ÷ (453.6 g/lb) ÷ (0.96). [District Rule 2201]
35. Permittee shall maintain records of actual VOC and CO emissions from this stationary source. Records for comparison with the annual VOC and CO emission limit shall be updated at least once each calendar month. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

36. 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 4701 and 4702]
37. Permittee shall submit an emission control plan for this engine, as specified in Section 6.1 of District Rule 4702, by July 1, 2012. [District Rule 4702]



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** N-8569-2-0

**ISSUANCE DATE:** 11/22/2011

**LEGAL OWNER OR OPERATOR:** AMERESCO FORWARD, LLC  
**MAILING ADDRESS:** 111 SPEEN STREET, SUITE 410  
FRAMINGHAM, MA 01701

**LOCATION:** 9999 SOUTH AUSTIN ROAD  
MANTECA, CA

**EQUIPMENT DESCRIPTION:**

3,012 BHP GE ENERGY MODEL JGS616 LANDFILL GAS-FIRED LEAN BURN IC ENGINE POWERING A 2,175 KW ELECTRICAL GENERATOR AND SERVED BY A SILOXANE REMOVAL SYSTEM (SHARED WITH PERMIT UNIT N-8569-1), AN OXIDATION CATALYST, AND A SELECTIVE CATALYTIC REDUCTION SYSTEM

### CONDITIONS

1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. Permittee shall install, calibrate, and maintain in operation a volumetric, totalizing, non-resettable gas flow meter to measure the volume of landfill gas entering this stationary source. [District Rule 2201]
6. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
7. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702]
8. The engine exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

N-8569-2-0; Nov 22 2011 10:18AM - CHANK Joint Inspection NOT Required



9. The engine exhaust stack shall have a minimum height of 40 feet above the ground, and a maximum inside diameter of 20 inches at the point where the exhaust gas is emitted to the atmosphere. [District Rules 2201 and 4102]
10. The concentration of sulfur compounds in the landfill gas entering this stationary source shall not exceed 150 ppmvd as H<sub>2</sub>S. [District Rule 2201]
11. The landfill gas flow rate to this stationary source shall not exceed 2,084 scf/min. [District Rule 2201]
12. This engine shall be fired exclusively with landfill gas. [District Rule 2201]
13. Emissions from this landfill gas-fired engine shall not exceed 0.15 g-NO<sub>x</sub>/bhp-hr, 0.05 g-PM<sub>10</sub>/bhp-hr, 1.8 g-CO/bhp-hr, 0.20 g-VOC/bhp-hr, and 15 ppmvd NH<sub>3</sub> at 15% O<sub>2</sub>. [District Rules 2201 and 4102]
14. Either the non-methane organic compound (NMOC) emissions from this landfill gas-fired engine shall not exceed 20 ppmvd (as hexane) at 3% O<sub>2</sub> or the NMOC destruction efficiency shall be at least 98%. [District Rule 2201 and 40 CFR 60.752(b)(2)(iii)(B)]
15. CO emissions from this stationary source shall not exceed 199,999 pounds in any rolling 12-consecutive-month period. [District Rule 2201]
16. VOC emissions from this stationary source shall not exceed 19,999 pounds in any rolling 12-consecutive-month period. [District Rule 2201]
17. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> concurrently at least once every calendar month (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O<sub>2</sub> monitors may be allowed if approved by the APCO.] 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 five 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 Rules 4701 and 4702]
18. The permittee shall monitor and record the stack concentration of NH<sub>3</sub> at least once every calendar quarter (in which a source test is not performed). NH<sub>3</sub> monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. 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 five 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 2201]
19. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, 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 24 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 performing the notification and testing required by this condition. [District Rules 4701 and 4702]
20. 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 4701 and 4702]
21. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702]

CONDITIONS CONTINUE ON NEXT PAGE

22. The sulfur compound content of the landfill gas entering this stationary source shall be monitored and recorded monthly. After four consecutive monthly tests show compliance, the monitoring frequency may be reduced to once every calendar quarter. If quarterly monitoring shows an exceedance of the limit, then monthly monitoring shall resume and continue until four consecutive months of monitoring show compliance with the limit. Once compliance with the limit is shown for four consecutive months, then the monitoring frequency may return to quarterly. Monitoring shall not be required in any month during which neither the engines nor the flare operate. Records of monitoring results shall be maintained as required elsewhere in this permit. [District Rule 2201]
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24. Source testing to measure landfill gas-combustion NO<sub>x</sub>, CO, NH<sub>3</sub>, and VOC emissions, and NMOC emissions and destruction efficiency, from this unit shall be conducted within 90 days of initial start-up. [District Rules 4701 and 4702 and 40 CFR 60.752(b)(2)(iii)(B)]
25. Source testing to measure landfill gas-combustion NO<sub>x</sub>, CO, NH<sub>3</sub>, and VOC emissions from this unit shall be conducted at least once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 24 months. If the result of the 24-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 12 months. [District Rules 2201, 4701, and 4702]
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28. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
29. 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 both as methane and as hexane. NO<sub>x</sub> and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. VOC concentrations shall be reported in ppmv, corrected to 15% oxygen as methane and corrected to 3% oxygen as hexane. [District Rules 4701 and 4702 and 40 CFR 60.752(b)(2)(iii)(B)]
30. The following test methods shall be used: NO<sub>x</sub> (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, VOC (ppmv) - EPA Method 18, 25A or 25B, or ARB Method 100, and NMOC (ppmv) - EPA Method 18, 25, 25A, or 25C. [District Rules 1081, 4701, and 4702, and 40 CFR 60.754(d)]
31. The permittee 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, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702]
32. 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]
33. Permittee shall maintain records of actual gross electrical output from this engine, in kW-hr. [District Rule 2201]
34. Permittee shall maintain records of actual VOC and CO emissions from this LFG-fired engine. Emissions shall be calculated as follows: (actual gross electrical output, in kW-hr) x (1.341 bhp/kW) x (emission factor calculated from most recent source test data for that pollutant, g/bhp-hr) ÷ (453.6 g/lb) ÷ (0.96). [District Rule 2201]
35. Permittee shall maintain records of actual VOC and CO emissions from this stationary source. Records for comparison with the annual VOC and CO emission limit shall be updated at least once each calendar month. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

36. 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 4701 and 4702]
37. Permittee shall submit an emission control plan for this engine, as specified in Section 6.1 of District Rule 4702, by July 1, 2012. [District Rule 4702]



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** N-8569-3-0

**ISSUANCE DATE:** 11/22/2011

**LEGAL OWNER OR OPERATOR:** AMERESCO FORWARD, LLC  
**MAILING ADDRESS:** 111 SPEEN STREET, SUITE 410  
FRAMINGHAM, MA 01701

**LOCATION:** 9999 SOUTH AUSTIN ROAD  
MANTECA, CA

**EQUIPMENT DESCRIPTION:**  
SILOXANE REMOVAL SYSTEM SERVED BY A 5.64 MMBTU/HR ABUTEC MODEL HTF WASTE GAS-FIRED FLARE

### CONDITIONS

1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
6. Permittee shall install, calibrate, and maintain in operation a volumetric, totalizing, non-resettable gas flow meter to measure the volume of landfill gas entering this stationary source. [District Rule 2201]
7. The flare exhaust stack shall have a minimum height of 50 feet above the ground, and a maximum inside diameter of 30 inches at the point where the exhaust gas is emitted to the atmosphere. [District Rules 2201 and 4102]
8. The concentration of sulfur compounds in the landfill gas entering this stationary source shall not exceed 150 ppmvd as H<sub>2</sub>S. [District Rule 2201]
9. The landfill gas flow rate to this stationary source shall not exceed 2,084 scf/min. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadardin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

N-8569-3-0; Nov 22, 2011 9:49AM - C:\ANK Job: Inspection; NOT Required

10. This flare shall be fired with waste gas from the siloxane removal system, with landfill gas as supplemental fuel and propane for startup. [District Rule 2201]
11. Emissions from this waste gas-fired flare shall not exceed 0.041 lb-NO<sub>x</sub>/MMBtu, 0.20 lb-PM<sub>10</sub>/MMBtu, 0.20 lb-CO/MMBtu, and 0.14 lb-VOC/MMBtu. [District Rule 2201]
12. Either the non-methane organic compound (NMOC) emissions from this waste gas-fired flare shall not exceed 20 ppmvd (as hexane) at 3% O<sub>2</sub> or the NMOC destruction efficiency shall be at least 98%. [District Rule 2201 and 40 CFR 60.752(b)(2)(iii)(B)]
13. CO emissions from this stationary source shall not exceed 199,999 pounds in any rolling 12-consecutive-month period. [District Rule 2201]
14. VOC emissions from this stationary source shall not exceed 19,999 pounds in any rolling 12-consecutive-month period. [District Rule 2201]
15. Source testing to measure the VOC and CO emission concentrations, and NMOC emissions and destruction efficiency, shall be conducted within 90 days of initial startup and annually thereafter. [District Rule 2201]
16. Source testing shall be conducted using EPA Method 25, 25C, or 18 (for VOC concentration), EPA Method 10 or 10B or ARB Method 100 (for CO concentration), EPA Method 3 or 3A (for oxygen concentration), and NMOC (ppmv) - EPA Method 18, 25, 25A, or 25C. [District Rule 2201]
17. 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]
18. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
19. Permittee shall maintain records of actual VOC and CO emissions from this waste gas-fired flare. Emissions shall be calculated as follows: (heat input to the flare, MMBtu) x (emission factor calculated from most recent source test data for that pollutant, lb/MMBtu). [District Rule 2201]
20. Permittee shall maintain records of actual VOC and CO emissions from this stationary source. Records for comparison with the annual VOC emission limit shall be updated at least once each calendar month. [District Rule 2201]
21. 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. [District Rule 1070]