



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



**HEALTHY AIR LIVING™**

JUN 08 2011

Dean Robinson  
Ameresco Foothill, LLC  
111 Speen St., Suite 410  
Framingham, CA 01701

**RE: Notice of Final Action - Authority to Construct**  
**Project Number: N-1103269**

Dear Mr. Robinson:

The Air Pollution Control Officer has issued Authority to Construct permits to Ameresco Foothill, LLC for a landfill gas-to-energy facility with two 3,012 bhp landfill gas-fired internal combustion engines, at 6484 N Waverly Rd. in Linden, California. 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 May 2, 2011. The District's analysis of the proposal was also sent to CARB on April 27, 2011. All comments received following the District's preliminary decision on this project were considered.

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: fgd

Enclosures

**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

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



JUN 08 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-1103269**

Dear Mr. Tollstrup:

Thank you for your comment on the above project. Following are the District's specific responses to your comment:

Comment: This facility is subject to ARB's regulation regarding methane emissions from MSW landfills.

The District has no authority to implement this regulation at present. However, Ameresco Foothill LLC has been advised of their obligation to comply with this regulation.

The Air Pollution Control Officer has issued Authority to Construct permits to Ameresco Foothill, LLC for a landfill gas-to-energy facility with two 3,012 bhp landfill gas-fired internal combustion engines, at 6484 N Waverly Rd. in Linden, California.

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.

We trust that the above response satisfies your concerns and appreciate your concurrence on this project. On the other hand, if you disagree with the District's position, we would appreciate your prompt response detailing your concerns.

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

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Mr. Mike Tollstrup  
Page 2

If you have any questions, regarding the above response, or require additional clarification, please contact Mr. Rupi Gill at (209) 557-6400.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Warner', with a long horizontal flourish extending to the right.

David Warner  
Director of Permit Services

DW: fgd

Enclosures

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 Foothill, LLC for a landfill gas-to-energy facility with two 3,012 bhp landfill gas-fired internal combustion engines, at 6484 N Waverly Rd. in Linden, California.

All comments received following the District's preliminary decision on this project were considered.

The application review for Project #N-1103269 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, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**

# MSW Landfill Regulation Regulatory Advisory

California Environmental Protection Agency

 **Air Resources Board**

December 2010

## Overview

On June 17, 2010, the regulation to reduce methane emissions from municipal solid waste (MSW) landfills became effective. It requires owners and operators of certain uncontrolled MSW landfills to install gas collection and control systems, and requires existing and newly installed gas collection and control systems to operate in an optimal manner. The regulation is a discrete early action measure to reduce greenhouse gas emissions in California as described in the Global Warming Solutions Act. A hardcopy of the regulation can be downloaded from the ARB website at: <http://www.arb.ca.gov/regact/2009/landfills09/landfillfinalfro.pdf>.

## Applicability

The regulation applies to all MSW landfills that received solid waste after January 1, 1977, active MSW landfills with less than 450,000 tons waste-in-place, and MSW landfills (active, closed, and inactive) with 450,000 tons or more waste-in-place. MSW landfills that are exempt from the regulation include: landfills receiving only hazardous waste or currently regulated under the Comprehensive Environmental Response Compensation and Liability Act; landfills receiving only construction and demolition wastes, inert waste, or non-decomposable wastes; and closed or inactive MSW landfills with less than 450,000 tons of waste-in-place.

## What reports must be submitted after the effective date of the regulation?

By September 17, 2010, owners and operators of active MSW landfills having less than 450,000 tons of waste-in-place were required to submit a Waste-in-Place Report to ARB. The report must be submitted annually until the landfill reaches a size greater than or equal to 450,000 tons of waste-in-place. Additionally, to determine if a gas collection and control system is required to be installed, owners or operators of MSW landfills having 450,000 tons of waste-in-place or greater must determine their landfill's gas heat input capacity and submit a report to ARB by September 17, 2010. However, due to the delayed approval date of the regulation, ARB is delaying enforcement of the September 17, 2010, compliance date for both of these reports until December 31, 2010.

## When must Annual Reports be submitted?

Due to the delayed effective date of the regulation, the data collection period for the **first** annual report should cover from January 1, 2011 to December 31, 2011, instead of June 17, 2010 (effective date) to December 31, 2010. This first annual report is due on March 15, 2012. All subsequent annual reports must cover the period from January 1<sup>st</sup> to December 31<sup>st</sup> of **each** year.

## To whom must the reports be submitted?

Reports in hardcopy format should be submitted to:

Mr. Renaldo Crooks  
California Air Resources Board/SSD  
1001 I Street  
Sacramento, CA 95814

Reports in digital format should be submitted to: [rcrooks@arb.ca.gov](mailto:rcrooks@arb.ca.gov).

## What is the compliance schedule for installing a gas collection and control system?

If a gas collection and control system which meets the requirements of the regulation has not been installed, a Design Plan must be submitted by the landfill owner or operator either by:

- June 17, 2011; or
- One year after the determining that the landfill gas heat input capacity is greater than 3.0 MMBtu/hr; or
- One year of measuring a leak on the landfill surface that exceeds 200 ppmv pursuant to the surface methane demonstration test (as specified in the regulation).

## Summary of Compliance Dates

Milestone	Compliance Date
Waste-in-Place Report (Active Landfills < 450,000 tons WIP <sup>1</sup> )	<ul style="list-style-type: none"> <li>• By December 31, 2010</li> </ul>
Landfill Gas Heat Capacity Report <sup>2</sup> (Landfills ≥ 450,000 tons WIP)	<ul style="list-style-type: none"> <li>• By December 31, 2010</li> </ul>
Gas Collection and Control System Design Plan	<ul style="list-style-type: none"> <li>• By June 17, 2011 or;</li> <li>• Within 1 year after determining landfill gas heat input capacity is ≥ 3.0 MMBtu/hr; or</li> <li>• Within 1 year detecting a leak on landfill surface ≥ 200 ppmv pursuant to the surface methane demonstration test.</li> </ul>
Installation of Collection and Control System	<ul style="list-style-type: none"> <li>• Within 18 months of Design Plan approval by the implementing agency (Active Landfill); or</li> <li>• Within 30 months of Design Plan approval by the implementing agency (Inactive Landfill).</li> </ul>
Surface Methane Emissions Monitoring	<ul style="list-style-type: none"> <li>• Starting July 1, 2011</li> </ul>
Initial Performance Test of Control System	<ul style="list-style-type: none"> <li>• Within 180 days from initial start up (Initial Test)</li> </ul>
Annual Report	<ul style="list-style-type: none"> <li>• By March 15 of each year (starting March 15, 2012)</li> </ul>

1. Waste-in-Place

2. ARB's Landfill Emissions Tool Version 1.2 is an acceptable method to use for this purpose. Visit our website at: [http://www.arb.ca.gov/cc/protocols/localgov/pubs/landfill emissions tool v1 2 2010-06-03.xls](http://www.arb.ca.gov/cc/protocols/localgov/pubs/landfill%20emissions%20tool%20v1%202010-06-03.xls).

### Surface Emissions Monitoring Requirements

Due to a delay in implementation, the January 1, 2011, enforcement of the integrated and instantaneous surface methane emission monitoring requirements will not begin until July 1, 2011. Owners and operators of MSW landfills must comply with all other requirements of the regulation (component leak checking, well head monitoring, etc.) beginning on, June 17, 2010.

### Implementation and Enforcement

The local air pollution control and air quality management districts ("districts") currently implement and enforce rules related to controlling emissions from landfills. ARB staff is working with local air districts in developing an agreement or a Memorandum of Understanding (MOU) by which these agencies can implement and enforce the regulation.

### Implementation Guidance Document

ARB staff has been working with stakeholders to develop an implementation guidance document that will assist MSW landfill owners or operators in complying with the requirements of the regulation. A draft version of the document is expected to be available in by the end of 2010.

### For More Information

If you would like to be informed of the current status of the regulation please contact Mr. Renaldo Crooks at [rcrooks@arb.ca.gov](mailto:rcrooks@arb.ca.gov) or (916) 327-5618, or visit our website at: <http://www.arb.ca.gov/cc/landfills/landfills.htm>. If you need this document in an alternative format or another language, please call (916) 323-4327. TTY/TDD/Speech users may dial 711 for a California Relay Service.



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** N-8247-1-0

**ISSUANCE DATE:** 06/02/2011

**LEGAL OWNER OR OPERATOR:** AMERESCO Foothill, LLC  
**MAILING ADDRESS:** 6484 NORTH WAVERLY ROAD  
LINDEN, CA

**LOCATION:** 6484 NORTH WAVERLY ROAD  
LINDEN, 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-8247-2), 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 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]

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

  
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DAVID WARNER, Director of Permit Services  
N-8247-1-0 - Jun 7 2011 8:44AM - DEMARISF - Joint Inspection NOT Required

9. 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]
10. The landfill gas flow rate to this stationary source shall not exceed 2,084 scf/min. [District Rule 2201]
11. This engine shall be fired exclusively with landfill gas. [District Rule 2201]
12. Emissions from this landfill gas-fired engine shall not exceed 0.15 g-NO<sub>x</sub>/bhp-hr, 0.07 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]
13. 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)]
14. CO emissions from this stationary source shall not exceed 199,999 pounds in any rolling 12-consecutive-month period. [District Rule 2201]
15. VOC emissions from this stationary source shall not exceed 19,999 pounds in any rolling 12-consecutive-month period. [District Rule 2201]
16. 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 Rule 4702]
17. 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]
18. 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 Rule 4702]
19. 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 Rule 4702]
20. 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 Rule 4702]

CONDITIONS CONTINUE ON NEXT PAGE



21. 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]
22. 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]
23. 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 Rule 4702 and 40 CFR 60.752(b)(2)(iii)(B)]
24. 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 and 4702]
25. 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]
26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
28. 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 Rule 4702 and 40 CFR 60.752(b)(2)(iii)(B)]
29. 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 and 4702, and 40 CFR 60.754(d)]
30. 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 Rule 4702]
31. 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]
32. Permittee shall maintain records of actual gross electrical output from this engine, in kW-hr. [District Rule 2201]
33. 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]
34. 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

35. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702]



# AUTHORITY TO CONSTRUCT

**PERMIT NO:** N-8247-2-0

**ISSUANCE DATE:** 06/02/2011

**LEGAL OWNER OR OPERATOR:** AMERESCO Foothill, LLC  
**MAILING ADDRESS:** 6484 NORTH WAVERLY ROAD  
LINDEN, CA

**LOCATION:** 6484 NORTH WAVERLY ROAD  
LINDEN, CA

**EQUIPMENT DESCRIPTION:**

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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]
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Seyed Sadredin, Executive Director / APCO

  
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DAVID WARNER, Director of Permit Services  
N-8247-2-0 Jun 7 2011 8:44AM - DEMARISF Joint Inspection NOT Required

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13. 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)]
14. CO emissions from this stationary source shall not exceed 199,999 pounds in any rolling 12-consecutive-month period. [District Rule 2201]
15. VOC emissions from this stationary source shall not exceed 19,999 pounds in any rolling 12-consecutive-month period. [District Rule 2201]
16. 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 Rule 4702]
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18. 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 Rule 4702]
19. 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 Rule 4702]
20. 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 Rule 4702]

CONDITIONS CONTINUE ON NEXT PAGE

21. 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]
22. 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]
23. 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 Rule 4702 and 40 CFR 60.752(b)(2)(iii)(B)]
24. 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 and 4702]
25. 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]
26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
28. 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 Rule 4702 and 40 CFR 60.752(b)(2)(iii)(B)]
29. 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 and 4702, and 40 CFR 60.754(d)]
30. 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 Rule 4702]
31. 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]
32. Permittee shall maintain records of actual gross electrical output from this engine, in kW-hr. [District Rule 2201]
33. 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]
34. 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

35. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702]



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** N-8247-3-0

**ISSUANCE DATE:** 06/02/2011

**LEGAL OWNER OR OPERATOR:** AMERESCO Foothill, LLC  
**MAILING ADDRESS:** 6484 NORTH WAVERLY ROAD  
LINDEN, CA

**LOCATION:** 6484 NORTH WAVERLY ROAD  
LINDEN, CA

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

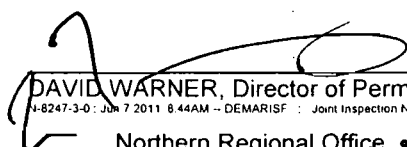
### CONDITIONS

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 flare shall have a minimum stack height of 50 feet above the ground. [District Rules 2201 and 4102]
6. 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]
7. The landfill gas flow rate to this stationary source shall not exceed 2,084 scf/min. [District Rule 2201]
8. 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]
9. 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]

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-8247-3-0: Jun 7 2011 8:44AM - DEMARISF : Joint Inspection NOT Required

10. 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)]
11. CO emissions from this stationary source shall not exceed 199,999 pounds in any rolling 12-consecutive-month period. [District Rule 2201]
12. VOC emissions from this stationary source shall not exceed 19,999 pounds in any rolling 12-consecutive-month period. [District Rule 2201]
13. 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]
14. 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]
15. 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]
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
17. 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]
18. 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]
19. 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]