

**MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT
TITLE V OPERATING PERMIT TV50-01**

EVALUATION REPORT

24580 Silver Cloud Court
Monterey, CA 93940
Telephone: (831) 647-9411

APPLICATION RECEIVED FROM:

Ameresco, Inc.
dba Ameresco Santa Cruz Energy LLC
111 Speen Street, Suite 410
Framingham, MA 01701

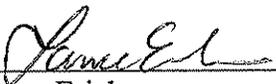
PLANT SITE LOCATION:

1231 Buena Vista Drive
Watsonville, CA 95076

APPLICATION PROCESSED BY:

Mike Sewell, Air Quality Engineer

APPROVED FOR RELEASE BY:



Lance Ericksen
Engineering Division Manager

3/10/08
Date

**MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT
TITLE V OPERATING PERMIT
EVALUATION REPORT**

24580 Silver Cloud Court
Monterey, CA 93940
Telephone: (831) 647-9411

Dated: March 10, 2008

APPLICATION RECEIVED FROM:

Ameresco, Inc.
dba Ameresco Santa Cruz Energy LLC
111 Speen Street, Suite 410
Framingham, MA 01701

PLANT SITE LOCATION:

1231 Buena Vista Drive
Watsonville, CA 95076

APPLICATION PROCESSED BY:

Mike Sewell, Air Quality Engineer

Nature of Business: Landfill gas to energy facility

SIC Code: 4911 - Electric Power Generation

RESPONSIBLE OFFICIAL:

Name: Ben Heuser
Title: Director - Plant Operations
Phone: (715) 549-6023

ALTERNATIVE RESPONSIBLE OFFICIAL:

Name: Joseph P. DeManche
Title: Executive Vice President
Phone: (508) 661-2266

FACILITY CONTACT PERSON:

Name: Steve Simmons
Title: Senior Plant Specialist
Phone: (831) 728-4589

TABLE OF CONTENTS

FACILITY DESCRIPTION 3
EQUIPMENT DESCRIPTION 3
APPLICABLE FEDERAL REQUIREMENTS 3
COMPLIANCE DETERMINATION FOR APPLICABLE FEDERAL REQUIREMENTS 3
THE FOLLOWING CONDITIONS WILL BE INCLUDED ON THE TITLE V PERMIT: 5
FEDERALLY ENFORCEABLE EMISSION LIMITS AND STANDARDS 5
TESTING REQUIREMENTS AND PROCEDURES 6
RECORD KEEPING REQUIREMENTS 6
REPORTING REQUIREMENTS 7
GENERAL CONDITIONS 8

FACILITY DESCRIPTION

The Ameresco Santa Cruz Energy LLC facility is an alternative energy facility. This facility recovers and combusts landfill gas from the County of Santa Cruz Buena Vista Landfill in three internal combustion engines which drive generators to create electricity. The electricity generated is then sold to the local utility company.

The Ameresco Santa Cruz Energy LLC facility is considered a federal Major Source and subject to the Title V permitting program due to the potential to emit (PTE) carbon monoxide. The PTE carbon monoxide from the facility exceeds the 100 ton per year (TPY) major source threshold.

EQUIPMENT DESCRIPTION

INTERNAL COMBUSTION ENGINE GENERATOR SETS UTILIZING LANDFILL GAS CONSISTING OF:

1. Three Jenbacher "JES AG" Type J320GSC82, Spark Ignited-Lean Burn Engines, Each Rated 1,468 Brake Horsepower At 1,800 RPM.
2. Three Generators, Each Rated At 1,057 Kw.

APPLICABLE FEDERAL REQUIREMENTS

Rule 200 - Permits Required
Rule 201 - Sources Not Requiring Permits
Rule 207 - Review of New or Modified Sources
Rule 214 - Breakdown Condition
Rule 218 - Title V: Federal Operating Permits
Rule 308 - Title V: Federal Operating Permit Fees
Rule 400 - Visible Emissions
Rule 403 - Particulate Matter
Rule 404 - Sulfur Compounds and Nitrogen Oxides
Rule 412 - Sulfur Content of Fuels
Rule 426 - Architectural Coatings
40 CFR Part 60, Subpart WWW - New Source Performance Standard (NSPS) for Municipal Solid Waste Landfills
40 CFR Part 68- Risk Management Planning: Accidental Release Prevention (Section 112r)
40 CFR Part 82 - Protection of Stratospheric Ozone

COMPLIANCE DETERMINATION FOR APPLICABLE FEDERAL REQUIREMENTS

Rule 200 - Permits Required

This facility has historically complied with the requirements of this rule and continued compliance is expected.

Rule 201 - Sources Not Requiring Permits

This rule identifies which equipment is exempt from District permitting requirements.

Rule 207 - Review of New or Modified Sources

This facility triggered the NSR process during the issuance of their local permit. Therefore, the emission levels established by the District permits are considered federally enforceable and will be included on the Title V Permit.

Rule 214 - Breakdown Condition

This is the implementing regulation in which the District has established the criteria for reporting breakdowns. The requirements imposed by this rule will be included on this permit.

Rule 218 - Title V: Federal Operating Permits

This is the implementing regulation by which the District issues the federal Operating Permits. All requirements imposed by this rule will be included in the Title V permit.

Rule 308 - Title V: Federal Operating Permit Fees

This is the District's fee rule for Title V. Appropriate conditions will be included on the Title V permit to ensure compliance with the fee provisions contained in this rule.

Rule 400 - Visible Emissions

This rule is applicable to the emissions from the facility. Appropriate conditions will be included on the permit to ensure compliance with this rule.

Rule 403 - Particulate Matter

The March 22, 2000 version of this rule, which was adopted into the SIP on December 15, 2000, exempts *stationary internal combustion engines* from the requirements of this rule.

Rule 404 - Sulfur Compounds and Nitrogen Oxides

This rule is applicable to the emissions from the facility. Compliance with the 140 lb/hr NO_x limit is assumed due to the 3.56 lb/hr limit from the New Source Review process (Rule 207). In addition, source testing reports for the facility show a NO_x concentration of 52, 63, and 63 ppm which equate to 2.28, 2.72, and 2.79 pounds/hr, respectively for Engines 1, 2 and 3.

Therefore, the 140 lb/hr NO_x limit will be subsumed under the NSR limit contained on the Title V permit. An appropriate condition will be included on the permit for the 0.2 percent by volume sulfur dioxide limit.

Rule 412 - Sulfur Content of Fuels

This rule is applicable to the fuel combusted at the facility. Appropriate conditions will be included on the permit to ensure compliance with the provisions of this rule.

Rule 426 - Architectural Coatings

This rule is applicable to all applications of architectural coatings and limits the VOC content of these coatings. The facility is in compliance with the requirements of this rule.

An appropriate condition will be included on the permit to ensure compliance with the requirements of this rule.

40 CFR Part 60, Subpart WWW - New Source Performance Standard (NSPS) for Municipal Solid Waste Landfills

This facility is located on, and combusts landfill gas from a facility subject to the requirements of this NSPS. Therefore, this facility is subject to the emission limitation contained in the NSPS. Appropriate conditions will be included on the permit to ensure compliance with the requirements of this NSPS that pertain to this facility.

40 CFR Part 68 - Risk Management Planning: Accidental Release Prevention (Section 112r)

This facility is not presently subject to the requirements of this part. An appropriate condition will be included on the permit to ensure compliance with the requirements of this part if the facility were to become subject.

40 CFR Part 82 - Protection of Stratospheric Ozone

This facility is in compliance with the requirements of this part. An appropriate condition will be included on the

permit to ensure compliance with these requirements.

THE FOLLOWING CONDITIONS WILL BE INCLUDED ON THE TITLE V PERMIT:

FEDERALLY ENFORCEABLE EMISSION LIMITS AND STANDARDS

1. The mass emission rates from the facility shall be less than the following limits [District Rule 207, District Rule 404 NO_x limit of 140 lbs/hr]:

<u>Pollutant</u>	<u>Grams/bhp-hr</u>	<u>Lbs/Hr</u>
Oxides of Nitrogen	1.1	3.56
Volatile Organic Compounds	0.6	1.94
Carbon Monoxide	3.0	9.70

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three (3) minutes in any one (1) hour which is as dark or darker than Ringelmann 1, or equivalent 20% opacity. [District Rule 400]
3. Sulfur compounds calculated as sulfur dioxide (SO₂) shall not exceed 0.2 percent by volume in the exhaust stream. [District Rule 404]
4. The landfill gas combusted shall contain no more than 50 grains of sulfur compounds (calculated as hydrogen sulfide) per 100 cubic feet of gas. [District Rule 412]
5. Ameresco Santa Cruz Energy LLC shall either reduce non-methane organic compounds (NMOC) by 98 weight-percent or reduce the NMOC outlet concentration to less than 20 ppmv, dry basis as hexane at 3% oxygen. [40 CFR Part 60, Subpart WWW]
6. Ameresco Santa Cruz Energy LLC shall operate the Landfill Gas Engine at all times that the collected landfill gas is routed to the system. [40 CFR Part 60, Subpart WWW]
7. Condition numbers 5 and 6 do not apply to Ameresco Santa Cruz Energy LLC' Landfill Gas Engine during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 1 hour. [40 CFR Part 60, Subpart WWW]
8. For the Landfill Gas Engine, Ameresco Santa Cruz Energy LLC shall calibrate, maintain, and operate according to the manufacturer's specifications an exhaust gas temperature monitoring device equipped with continuous recorders having an accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 °C, whichever is greater. [40 CFR Part 60, Subpart WWW]
9. Ameresco Santa Cruz Energy LLC shall limit emissions of volatile organic compounds from the use of architectural coatings pursuant to the requirements of District Rule 426. [District Rule 426]
10. Should the facility, as defined in 40 CFR §68.3 become subject to Part 68, then Ameresco Santa Cruz Energy LLC shall submit a risk management plan (RMP) by the date specified in 40 CFR §68.10. Once subject to Part 68, Ameresco Santa Cruz Energy LLC shall certify compliance with these requirements as part of the annual compliance certification required by 40 CFR Part 70 and this permit. [40 CFR Part 68]

11. Ameresco Santa Cruz Energy LLC shall comply with the requirements of 40 CFR Part 82 - Protection of Stratospheric Ozone. [40 CFR Part 82]

TESTING REQUIREMENTS AND PROCEDURES

12. Annual performance testing of the Landfill Gas Engine shall be conducted during the month of July, August, or September of each year. Ameresco Santa Cruz Energy LLC shall conduct performance tests in accordance with CARB Method 100 to verify compliance with condition numbers 1 and 3. Ameresco Santa Cruz Energy LLC shall furnish the District written results of such performance tests within sixty (60) days of the test completion. A testing protocol shall be submitted to the District for approval at least thirty (30) days prior to the scheduled testing date. Written notice of the performance test shall be provided to the District a minimum of ten (10) days prior to the test so that a District observer may be present. [District Rules 207 and 218]
13. No testing is specified for the generic (Rule 400) opacity requirement from condition number 2. The Landfill Gas Engines are assumed to be in compliance with the opacity requirement due to their being fired on gaseous fuel. If testing is conducted for condition number 2, Ameresco Santa Cruz Energy LLC should conduct testing in accordance with the methodology contained in EPA Method 9 and the data reduction procedures contained in District Rule 400. [District Rule 218]
14. Annual testing of the landfill gas to determine the sulfur content shall be conducted. Ameresco Santa Cruz Energy LLC shall conduct testing in accordance with ASTM D 1072-80, ASTM D 3031-81, ASTM D 3246-81 or SCAQMD Method 307-91 to verify compliance with condition number 4. Ameresco Santa Cruz Energy LLC shall furnish the District written results of the test within sixty (60) days of completion. [District Rule 218]
15. On an annual basis, Ameresco Santa Cruz Energy LLC shall cause testing to be conducted to verify compliance with condition number 5. This testing shall be conducted in accordance with EPA test method 18 or 25. [40 CFR Part 60, Subpart WWW and District Rule 218]

RECORD KEEPING REQUIREMENTS

16. As required in Section 60.757(f) of the NSPS for MSW Landfills, Ameresco Santa Cruz Energy LLC shall maintain the following specific monitoring records: [40 CFR Part 60, Subpart WWW]
 - A) the value and length of time for exceedances of applicable parameters monitored under Section 60.756(d) and specified in the design plan submittal; and
 - B) a description and the duration of all times when the control device was not operating for any period exceeding 1 hour and the length of time the control device was not operating.
17. As applicable Ameresco Santa Cruz Energy LLC shall maintain the following general records of required monitoring information: [District Rule 218]
 - A) the date and time of sampling or measurements;
 - B) the date(s) analyses were performed;
 - C) the company or entity that performed the analyses;
 - D) the analytical techniques or methods used;
 - E) the results of such analyses;
 - F) the operating conditions existing at the time of sampling or measurement; and
 - G) the records of quality assurance for continuous monitoring systems (including, but not

limited to quality control activities, audits, and calibration drift checks) and source testing methods.

18. Ameresco Santa Cruz Energy LLC shall maintain records on the occurrence and duration of any start-up, shutdown, or malfunction in the operation of the equipment under this permit. [District Rule 218]
19. Ameresco Santa Cruz Energy LLC shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring, sample collection, measurement, report, and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. [District Rule 218]

REPORTING REQUIREMENTS

20. Ameresco Santa Cruz Energy LLC shall report all breakdowns to the Air Pollution Control Officer (APCO) within 1 hour of the occurrence. This one hour period may be extended up to six hours for good cause by the APCO.

The estimated time for repair of the breakdown shall be supplied to the APCO within 24 hours of the occurrence and a written report shall be supplied to the APCO within 5 days after the occurrence has been corrected. This report shall include at a minimum [District Rule 214]:

- A) a statement that the condition or failure has been corrected and the date of the correction; and
 - B) a description of the reasons for the occurrence; and
 - C) a description of the corrective measures undertaken and/or to be undertaken to avoid such an occurrence in the future; and
 - D) an estimate of the emissions caused by the condition or failure.
21. Ameresco Santa Cruz Energy LLC shall submit semiannual monitoring reports to the District, in a District approved format, no later than August 15 for the period of January 1 through June 30 and no later than February 15 for the period of July 1 through December 31.

These monitoring reports shall include at a minimum:

- A) the time intervals, date and magnitude of excess emissions, nature and cause of the excess (if known), corrective actions and preventative measures adopted; and
 - B) the averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard for the pollutant in question; and
 - C) all information pertaining to any monitoring as required by the permit; and
 - D) a negative declaration specifying when no excess emissions occurred.
22. Ameresco Santa Cruz Energy LLC shall submit an annual compliance certification report to the District and U.S. EPA, in a District approved format, no later than February 15 for the period of January 1 through December 31 of the preceding year.

This report shall include a written statement from the responsible official which certifies the truth, accuracy, and completeness of the report and shall include at a minimum:

- A) identification of each term or condition of the permit that is the basis of the certification; and
- B) the compliance status; and

- C) whether compliance was continuous or intermittent; and
- D) the method(s) used for determining the compliance status of the source, currently and over the reporting period.

GENERAL CONDITIONS

- 23. Ameresco Santa Cruz Energy LLC shall comply with all conditions of this federal operating permit. Any noncompliance with a permit condition constitutes a violation of the Federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [District Rule 218]
- 24. In an enforcement action, the fact that Ameresco Santa Cruz Energy LLC would have to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit is not a defense. [District Rule 218]
- 25. This permit may be modified, revoked, reopened and reissued, or terminated for cause as determined by the District. The filing of a request by Ameresco Santa Cruz Energy LLC for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 218]
- 26. This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. [District Rule 218]
- 27. Ameresco Santa Cruz Energy LLC shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. [District Rule 218]
- 28. For applicable requirements that will become effective during the permit term, Ameresco Santa Cruz Energy LLC shall meet such requirements on a timely basis unless a more detailed schedule is expressly required by the applicable requirement. [District Rule 218]
- 29. Any document submitted to the District pursuant to this permit shall contain certification by the responsible official of truth, accuracy and completeness. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Ameresco Santa Cruz Energy LLC shall promptly, upon discovery, report to the District a material error or omission in these records, reports, plans, or other documents. [District Rule 218]
- 30. Ameresco Santa Cruz Energy LLC shall report any violation of any requirement contained in this permit to the District within 96 hours after such occurrence. The violation report shall include the time intervals, date and magnitude of excess emissions; nature and cause of the excess (if known), corrective actions and preventive measures adopted. [District Rule 218]
- 31. Upon any administrative or judicial challenge, all the emission limits, specific and general conditions, monitoring, record keeping, and reporting requirements of this permit, except those being challenged, remain valid and must be complied with. [District Rule 218]

32. For this federal operating permit to remain valid through the permit term of five years from the date of issuance, Ameresco Santa Cruz Energy LLC shall pay an annual emission fee based upon the requirements of District Rule 308. [District Rule 218]
33. Ameresco Santa Cruz Energy LLC shall have available at the facility at all times a copy of this federal operating permit. [District Rule 218]
34. For protection from enforcement action based upon an emergency, as defined in District Rule 218, the responsible official for Ameresco Santa Cruz Energy LLC shall submit to the District relevant evidence which demonstrates: [District Rule 218]
- A) an emergency occurred; and
 - B) that Ameresco Santa Cruz Energy LLC can identify the cause(s) of the emergency; and
 - C) that the facility was being properly operated at the time of the emergency; and
 - D) that all steps were taken to minimize the emissions resulting from the emergency; and
 - E) within two working days of the emergency event, Pacific Recovery Corporation provided the District with a description of the emergency and any mitigating or corrective actions taken.
35. Upon presentation of credentials, Ameresco Santa Cruz Energy LLC shall allow the District, the ARB, the EPA, or an authorized representative, to perform the following [District Rule 218]:
- A) enter upon the premises where the federal operating permit source is located or in which any records are required to be kept under the terms and conditions of this federal operating permit;
 - B) to have access to and copy any records required to be kept under the terms and conditions of this federal operating permit;
 - C) to inspect any equipment, operation, or process described or required in this federal operating permit; and,
 - D) to sample emissions from the source.
