

**MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT
TITLE V OPERATING PERMIT TV61-01**

EVALUATION REPORT

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

APPLICATION RECEIVED FROM:

Santa Cruz County Public Works
701 Ocean Street, Room 410
Santa Cruz, CA 95060

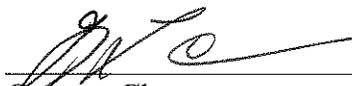
PLANT SITE LOCATION:

150 Roundtree Lane
Watsonville, California

APPLICATION PROCESSED BY:

Mike Sewell, Air Quality Engineer

APPROVED FOR RELEASE BY:



Gregory Chee
Engineering Division Supervisor

NOV 21 2011

Date

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Dated: November 9, 2011

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701 Ocean Street, Room 410
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PLANT SITE LOCATION:

150 Roundtree Lane
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APPLICATION PROCESSED BY:

Mike Sewell, Air Quality Engineer

Nature of Business: Municipal Solid Waste Landfill

SIC Code: 4953 - Refuse Systems

RESPONSIBLE OFFICIAL:

Name: Mr. John J. Presleigh
Title: Director of Public Works
Phone: (831) 454-2160

**ALTERNATIVE
RESPONSIBLE OFFICIAL:**

Name: Mr. Kasey Kolassa
Title: Recycling & Solid Waste Services Manager
Phone: (831) 454-2377

FACILITY CONTACT PERSON:

Name: Mr. Brian Van Straten
Title: Superintendent
Phone: (831) 454-5156

TABLE OF CONTENTS

FACILITY DESCRIPTION 3

EQUIPMENT DESCRIPTION..... 3

APPLICABLE FEDERAL REQUIREMENTS 3

THE FOLLOWING CONDITIONS WILL BE INCLUDED ON THE TITLE V PERMIT:..... 6

FEDERALLY ENFORCEABLE EMISSION LIMITS AND STANDARDS 7

TESTING REQUIREMENTS AND PROCEDURES..... 7

RECORD KEEPING REQUIREMENTS..... 8

REPORTING REQUIREMENTS 9

GENERAL CONDITIONS..... 10

FACILITY DESCRIPTION

The County of Santa Cruz's Buena Vista Landfill is a Municipal Solid Waste (MSW) Landfill permitted by the California Integrated Waste Management Board to receive a maximum of 774 tons per day of MSW in 2001 with a 2% increase in allowed tonnage in each following year. This landfill site has been accepting waste since the site opened in 1981.

The landfill is subject to the federal New Source Performance Standard (NSPS) for Municipal Solid Waste Landfills based upon the design capacity of the landfill being greater than 2.5 million cubic meters. Landfills subject to the MSW Landfill NSPS are also subject to Title V permitting requirements.

Located at the landfill and operated by a third-party is a landfill gas collection, treatment, and destruction system which is not subject to the NSPS requirements as the facilities' non-methane organic compounds (NMOC) emission rate is below the 50 Mg per year threshold. The collected landfill gas is treated and combusted in three internal combustion engines which drive generators to produce electricity or in an enclosed ground flare. The electricity generated is sold to the local utility company.

EQUIPMENT DESCRIPTION

MUNICIPAL SOLID WASTE LANDFILL CONSISTING OF:

1. 126 Acre Landfill Site Of Which 61 Acres Are Permitted For Waste Disposal.
2. NSPS Exempt Landfill Gas Collection Systems, Vertical Wells, Lateral Collector Pipes, Header Pipe, And Gas Movers To Collect And Route Landfill Gas To The Landfill Gas Destruction Systems.
3. NSPS Exempt Landfill Gas Treatment System, System To Filter, De-water, And Compress Landfill Gas. Treated Gas Routed To Gas Destruction System
4. NSPS Exempt Treated Gas Destruction Systems:
 - A) Three Landfill Gas Engine-Generator Sets, Each Nominally Rated At 1,400 Bhp And 1Mw Output.
 - B) Enclosed Ground Flare, Rated At 54 MMBtu/Hr Maximum..

APPLICABLE FEDERAL REQUIREMENTS

Rule 207 - Review of New or Modified Sources

The District has established that any "landfill" (a place used for the disposal of garbage where the rubbish, etc. is buried under a shallow layer of ground) is not subject to local District permitting. This is because a "landfill" does not trigger local District permitting requirements for "any article, machine, equipment or other contrivance". Therefore, this "landfill" has not been reviewed under the District new source review rule and no conditions from

this rule will be included on the permit for the "landfill" proper.

However, other operations or processes related to and located at the landfill site may require local permits. This is the case for the enclosed ground flare presently installed. The enclosed ground flare was permitted by the District and was installed in 1993. The engine-generator sets are owned and operated by a third party, and therefore, the specific engine requirements are not included on this permit.

Rule 214 - Breakdown Conditions

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 0.15 grains per dry cubic foot emission standard is applicable to the enclosed ground flare and will be included on the permit. Based upon a calculated emission rate of 25.9 lbs PM₁₀/day (0.02 lbs PM₁₀/MMBtu from Santa Barbara APCD Flare Study, July 1991), this would equate to a grain loading of 0.017 grains per dry cubic foot [25.9 lbs/day x 7000 grains/lb x 1 min/7866 ft³ x 1 day/1400 minutes = 0.02 grains/ft³]. Therefore, no testing will be required as compliance is assured from the above calculation.

Rule 404 - Sulfur Compounds and Nitrogen Oxides

The SO₂ provisions of the rule are applicable to the emissions from the facility.

Compliance with the 0.2% by volume (2000 ppmv) limit for SO₂ for combustion of landfill gas in the enclosed ground flare is assumed due to a calculated emission rate of 7.01 lbs/hr based upon the Rule 412 limit of 50 grains/100 ft³ [(50 gr/100 scf)*(1 lb/7000 gr)*(54 MMBtu/Hr)*(1 ft³/550 Btu) = 7.01 lbs/hr]. Utilizing this emission factor and the volumetric flow (F factor) for gaseous fuels, the SO₂ concentration from the enclosed ground flare would equate to 79.0 ppmv [7.01 lbs SO₂/MMBtu* ((MM lbmoles air)/(64.1 lbmole SO₂))*((379 Ft³ Air)/(lbmole air))/((8,740 SDCFM)*(60 M/Hr)) = 79.0 ppmv]. This value is well below the 2000 ppmv SO₂ allowed in this rule.

Therefore, no monitoring/testing or record keeping will be included on the permit to show compliance with the SO₂ limit for the combustion of landfill gas in the enclosed ground flare.

The 140 pound per hour NO_x limit for any new or expanded combustion unit is applicable to the enclosed ground flare. Compliance with this limit is assured due to the following calculation for the enclosed ground flare which shows an hourly NO_x emission rate of 3.24 NO_x/hour. This value is well below the 140 pound per hour NO_x limit allowed in this rule. Therefore, no monitoring/testing or record keeping will be included on the permit to show

compliance with the NO_x limit for the combustion of landfill gas in the enclosed ground flare.

Rule 412 - Sulfur Content of Fuels

This rule which requires that the sulfur content of fuels combusted be less than 50 grains per 100 cubic feet for gaseous fuels is applicable to this facility. Appropriate conditions will be included on the permit to ensure compliance with the provisions of this rule.

Rule 437 - Municipal Solid Waste Landfills

This rule adopts by reference the requirements of 40 CFR Part 60, Subpart WWW. Compliance will be assured due to the inclusion of the Subpart WWW requirements on the permit.

40 CFR Part 60, Subpart A - New Source Performance Standards, General Provisions

This facility is subject to the requirements of 60.7 (notification and record keeping), 60.8 (performance tests), 60.11 (compliance with standards and maintenance requirements), and 60.13 (monitoring requirements) because they are subject to 40 CFR Part 60, Subpart WWW.

The District asserts that compliance with the conditions on the Title V permit shall be considered compliance with the monitoring, record keeping, and reporting requirements contained in 40 CFR Parts 60.7, 60.8, 60.11, and 60.13.

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

This facility is subject to the requirements of this NSPS. However, the facility has completed a Tier 2 emissions calculation which estimated emissions of less than 8.0 Mg/year of NMOC for the next 5 years; well below the 50 Mg/year trigger level for many of the requirements in this regulation. In addition, EPA has determined that treated (filtered, dewatered, and compressed) landfill gas is not subject to the requirements of this regulation.

Appropriate conditions will be include on the permit to ensure compliance with the remaining requirements of this NSPS.

40 CFR Part 63, Subpart AAAA - National Emission Standards for Hazardous Air Pollutants for Municipal Solid Waste Landfills

This facility is subject to the requirements of this NESHAP. However, no specific requirements are applicable to this facility as the facility has not yet triggered the 50 megagram NMOC emission rate contained in 40 CFR Part 60 that would trigger the installation and operation of a landfill gas collection and destruction system. Therefore, no conditions will be include on the permit to ensure compliance with the requirements of this NESHAP.

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

This facility is not subject to the requirements of this part. An appropriate condition will be included on the permit to ensure compliance with the Part 68 requirements 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 amount of landfill gas vented to the flare shall not exceed 1.8 million cubic feet per day. [District Rule 207]

2. Emissions from the flare shall be less than the following limits [District Rule 207]:

<u>Pollutant</u>	<u>Emission Level</u>	<u>Emission Limit</u>
NO _x	0.06 lbs/MMBTU	137 lbs/day
VOC	0.03 lbs/MMBTU	137 lbs/day
CO	0.59 lbs/MMBTU	550 lbs/day

3. The flare combustion temperature shall be maintained at 1400° F or greater. [District Rule 207]

4. 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 Adopted 12/13/84]

5. Particulate matter shall not exceed 0.15 grains per standard dry cubic foot in the exhaust stream of the enclosed ground flare. [District Rule 403 Adopted 9/1/74]

6. Sulfur compounds calculated as sulfur dioxide (SO₂) shall not exceed 0.2 percent by volume in the exhaust stream of the enclosed ground flare. [District Rule 404 Adopted 10/16/96]

7. The 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 Adopted 9/1/74]

8. No later than 1 year after the first report required by Condition 25 in which the Non-Methane Organic Compound (NMOC) emission rate equals or exceeds 50 megagrams per year, the County of Santa Cruz shall submit to the District a collection and control system design plan prepared by a professional engineer. This plan shall meet the design requirements specified in §60.752(b)(2)(ii) [restated in Condition 8] and must include the information required by §60.752(b)(2)(i). [District Rule 437 Adopted 10/16/96]

9. No later than 30 months after the first report required by Condition 25 in which the NMOC emission rate equals or exceeds 50 megagrams per year, the County of Santa Cruz shall cause to be operated a landfill gas collection system that effectively captures the gas generated such that [District Rule 437 Adopted 10/16/96]:

- A) the system is designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas collection system; and

- B) landfill gas is collected from each area, cell or group of cells in which non-asbestos degradable solid waste has been placed for a period of 5 years or more for active areas or 2 years or more for closed areas; and
 - C) offsite migration of subsurface gas is minimized; and
 - D) each wellhead is under negative pressure except under the following conditions:
 - i) a fire or increased well temperature. The County of Santa Cruz shall record instances when positive pressure occurs in efforts to avoid a fire; or
 - ii) use of a geomembrane or synthetic cover. Acceptable pressure limits shall be submitted by the County of Santa Cruz in their design plan; or
 - iii) a decommissioned well.
 - E) the collected landfill gas temperature is less than 55°C at each well with a nitrogen level less than or equal to 20 percent or an oxygen level less than or equal to 5 percent; and
 - F) the surface methane concentration over the landfill shall not exceed 500 ppm above background.
10. The County of Santa Cruz shall comply with the requirements of 40 CFR Part 68 - Risk Management Plans. The County of Santa Cruz shall submit a Risk Management Plan (RMP) if the facility becomes subject to the requirements of Part 68. [40 CFR Part 68]
11. The County of Santa Cruz 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 tests on the enclosed ground flare shall be conducted in accordance with the Monterey Bay Unified Air Pollution Control District test procedures to verify compliance with Condition 2. A testing protocol shall be submitted to the District for approval at least 30 days prior to the scheduled testing date. The District must be notified at least ten days prior to the actual testing in order that a District representative may be present. [District Rule 218 Adopted 3/26/97]
13. No testing is specified for the generic (Rule 400) opacity requirement from Condition 4. The landfill gas destruction device(s) are assumed to be in compliance with the opacity requirement due to the firing of gaseous fuel. If testing is conducted for Condition 4, the County of Santa Cruz should conduct testing in accordance with the methodology contained in EPA Method 9 and the averaging/aggregating period contained in District Rule 400. [District Rule 218 Adopted 3/26/97]
14. No testing is specified for the generic (Rule 403) particulate matter emission standard from Condition 5. The landfill gas destruction device(s) are assumed to be in compliance with the particulate matter emission standard due to the firing of gaseous fuel. If testing is conducted for Condition 5, the County of Santa Cruz

should conduct testing in accordance with the methodology contained in EPA Method 5. [District Rule 218 Adopted 3/26/97]

15. No testing is specified for the generic (Rule 412) sulfur concentration limit in Condition 6. The landfill gas destruction device(s) are assumed to be in compliance with the sulfur concentration limit based upon the calculations contained in the engineering evaluation. If testing is conducted for Condition 6, the County of Santa Cruz should conduct testing in accordance with the methodology contained in EPA Method 20. [District Rule 218 Adopted 3/26/97]
16. Annual testing of the landfill gas from the gas collection system(s) to determine the sulfur content shall be completed. The County of Santa Cruz 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 7. [District Rule 218 Adopted 3/26/97]

RECORD KEEPING REQUIREMENTS

17. As applicable the County of Santa Cruz 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. The County of Santa Cruz 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. The County of Santa Cruz 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. The County of Santa Cruz shall report all breakdowns which result in the inability to comply with any emission standard or requirement contained on this permit 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 APCO may elect to take no enforcement action if the County of Santa Cruz demonstrates to the APCO's satisfaction that a breakdown condition exists.

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 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. The County of Santa Cruz 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]
22. For protection from enforcement action based upon an emergency, as defined in District Rule 218, the responsible official for the County of Santa Cruz shall submit to the District relevant evidence which demonstrates [District Rule 218]:
- A) an emergency occurred; and
 - B) that the County of Santa Cruz 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, the County of Santa Cruz provided the District with a description of the emergency and any mitigating or corrective actions taken.
23. The County of Santa Cruz 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. [District Rule 218]

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.
24. The County of Santa Cruz 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. [District Rule 218]
- 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.
25. Every five years, the County of Santa Cruz shall submit a NMOC emission rate report to the District as specified in §60.757(b)(1)(ii) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed. [District Rule 437 Adopted 10/16/98]
26. The County of Santa Cruz shall submit a closure report to the District within 30 days of waste acceptance cessation. If a closure report has been submitted to the District, no additional wastes may be placed into the landfill without filing a notification of modification as described in 40 CFR §60.7(a)(4). [District Rule 437 Adopted 10/16/96]

GENERAL CONDITIONS

27. The County of Santa Cruz 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]

28. In an enforcement action, the fact that the County of Santa Cruz 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]
29. This permit may be modified, revoked, reopened and reissued, or terminated for cause as determined by the District. The filing of a request by the County of Santa Cruz 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]
30. 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]
31. The County of Santa Cruz 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. Upon request, the County of Santa Cruz shall also furnish to the District copies of records required to be retained by this permit. [District Rule 218]
32. For applicable requirements that will become effective during the permit term, the County of Santa Cruz shall meet such requirements on a timely basis unless a more detailed schedule is expressly required by the applicable requirement. [District Rule 218]
33. Any document submitted to the District pursuant to this permit shall contain certification by the responsible or the alternative 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. The County of Santa Cruz shall promptly, upon discovery, report to the District a material error or omission in these records, reports, plans, or other documents. [District Rule 218]
34. 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]
35. For this federal operating permit to remain valid through the permit term of five years from the date of issuance, the County of Santa Cruz shall pay an annual emission fee based upon the requirements of District Rule 308. [District Rule 218]
36. The County of Santa Cruz shall have available at the facility at all times a copy of this federal operating permit. [District Rule 218]
37. Upon presentation of credentials, the County of Santa Cruz 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.
