

TITLE V FEDERAL OPERATING PERMITS PROGRAM  
PERMIT EVALUATION OF APPLICABLE FEDERAL REQUIREMENTS  
TEHAMA COUNTY AIR POLLUTION CONTROL DISTRICT  
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NATURE OF BUSINESS: Municipal Solid Waste Landfill

APPLICATION COMPLETENESS DATE: 12/26/2005

SIC CODE: 4953

Responsible Official:

Name: Allan Abbs

Title: Solid Waste Director

Address: Tehama County/City of Red Bluff Landfill

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Phone: 530-528-1103

Site Contact Person:

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**FACILITY DESCRIPTION, EMISSION UNITS AND EQUIPMENT LISTS:**

**A. FACILITY DESCRIPTION**

The Tehama County/City of Red Bluff Landfill is a Municipal Solid Waste (MSW) Landfill permitted by the California Integrated Waste Management Board to receive a maximum of 400 tons per day of MSW. This landfill has been accepting waste since the site opened in 1964, originally as a burn dump.

On June 24, 2002 the landfill applied for an Authority to Construct (ATC) to install an enclosed flare and a landfill gas collection system. ATC #239-001 was issued June 28, 2002 and the system was installed and source tested. Permit to Operate (PTO) #239 was issued on August 25, 2003 (see Attachment A). The flare and gas collection system were designed to comply with the requirements of 40 CFR 60 subpart WWW, Standards of Performance for Municipal Solid Waste Landfills. The ATC and the PTO were written

and issued to assure compliance with those same requirements. The landfill gas is combusted in the LFG&E model Triton 500 flare.

On June 20, 2005 the landfill received a permit from the California Integrated Waste Management Board to expand the design capacity of the facility from 2,633,000 cubic yards (Phase I) to 5,097,000 cubic yards (design capacity of Phase II is 2,464,000 cubic yards). Due to the expansion of the facility to a design capacity greater than 2.5 million cubic meters, the Tehama County/City of Red Bluff Landfill is subject to Title V permitting per District Rule: 4:33, Municipal Solid Waste Landfills. Rule 4:33 was adopted June 3, 1997 to control emissions from existing MSW Landfills as required by 40 CFR 60, Subpart Cc. Rule 4:33 adopted by reference the standards established in the New Source Performance Standards for Municipal Solid Waste Landfills (40 CFR 60, Subpart WWW). The Tehama County/City of Red Bluff Landfill submitted a Title V permit application to the District on October 25, 2005. The application was considered complete on December 25, 2005 (see Attachment B).

**Equipment Description**

The Tehama County/City of Red Bluff Landfill is a Municipal Solid Waste Landfill consisting of:

1. 159.6 acre landfill site of which 53.6 acres are permitted for waste disposal.
2. Landfill gas collection system, vertical wells, lateral collector pipes, header pipe and gas movers to collect and route landfill gas to the landfill gas destruction system.
3. Landfill gas destruction system, LFG&E International model Triton 500 enclosed ground flare, rated at 14 MMBtu/Hr maximum.

**B. Insignificant Emissions Units**

The equipment items listed in Table 1 do not require an operating permit pursuant to Tehama County Air Pollution Control District (APCD) Rule 7:1 Federal Operating Permit Program regulation. They do not have actual emissions above deminimus threshold levels and are hereby listed as insignificant emissions units. The equipment listed in Table 1 may be supplemented, replaced or modified without notice provided the operating status has not changed as defined in current district or federal rules. However, insignificant emissions units shall comply at all times with the generally applicable requirements identified in Conditions 32. through 46. of the permit to operate.

Emission Factors (EF) in the table below are taken from Model List of Insignificant Activities for Title V Permit Program Dated September 29, 1998.

**Table 1. Insignificant Emission Units (full list)**

Description	Capacity	Justification	Deminimus Emissions
Methane Gas Condensate Tank fixed roof, 6,000	3,000 gallon HDPE tank	EF = 0.39 lb VOC/1000 gal storage	In every 12 month period, actual

gallon per year throughput		capacity $0.39 \times 3 = 1.17 \text{ lb/yr}$	emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.
Used Oil Receptor Tank fixed roof, 3,605 gallon per year throughput	1,050 gallon steel tank	EF = 5.8 lb VOC/1000 gal throughput $5.8 \times 3.605 = 20.91 \text{ lb/yr}$	In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.
Used Motor Oil Tank fixed roof, 8,210 gallon per year throughput	360 gallon steel tank	EF = 5.8 lb VOC/1000 gal throughput $5.8 \times 8.21 = 47.62 \text{ lb/yr}$	In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.
Lube Rack Oil Tank above ground, 520 gallon per year throughput	200 gallon concrete shell steel tank	EF = 5.8 lb VOC/1000 gal throughput $5.8 \times .52 = 3.02 \text{ lb/yr}$	In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.

Diesel Storage Tank #1 fixed roof, 15,000 gallon per year throughput	2,000 gallon steel tank	EF = 5.8 lb VOC/1000 gal throughput $5.8 \times 15 = 87$ lb/yr	In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.
Diesel Storage Tank #2 fixed roof, 15,000 gallon per year throughput	2,000 gallon steel tank	EF = 5.8 lb VOC/1000 gal throughput $5.8 \times 15 = 87$ lb/yr	In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.
Diesel Storage Tank #3 fixed roof, double- walled, 15,000 gallon per year throughput	8,000 gallon steel tank	EF = 5.8 lb VOC/1000 gal throughput $5.8 \times 15 = 87$ lb/yr	In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.
Leachate Tank #1 fixed roof, 14,000 gallon per year throughput	10,000 gallon HDPE tank	EF = 0.39 lbVOC/1000 gal storage capacity $0.39 \times 14 = 5.46$ lb/yr	In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.

<p>Leachate Tank #2 fixed roof, 14,000 gallon per year throughput</p>	<p>10,000 gallon HDPE tank</p>	<p>EF = 0.39 lbVOC/1000 gal storage capacity <math>0.39 \times 14 = 5.46</math> lb/yr</p>	<p>In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.</p>
<p>Hazardous Waste Recycling Facility accepts and recycles flammable and poisonous materials, used motor oil, paint, antifreeze, acids, bases, car and household batteries, and compressed gas cylinders.</p>	<p>Per year, the facility accepts approximately 49 tons of oil and oil filters, 4 tons of latex paint, 0.6 tons of antifreeze, 11 tons of household and car batteries, 14 tons of flammable and poisonous materials, 0.2 tons of acids, 0.02 tons of bases and 1.25 tons of compressed gas cylinders.</p>	<p>All materials are sent on to a proper disposal site. All hazardous waste is bulked in sealed containers before shipment. See Control/Work Practice Requirements in Table 2. below.</p>	<p>In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.</p>

<p>Green Waste/Wood Waste Facility and Inert Construction and Demolition Material Facility accepts green waste material (grass clippings, brush, etc.) and woody material (logs, construction lumber, etc.). which is chipped, stored and transported offsite bi-annually. Inert construction and demolition material is placed in the landfill.</p>	<p>Per year, facility accepts approximately 1,557 tons of green waste and 4,527 tons of inert construction and demolition material.</p>	<p>The green waste is chipped directly into trucks and moved off site.</p>	<p>In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.</p>
<p>Scrap Metal Facility accepts scrap metal and white goods (washing machines, dryers, water heaters, refrigerators). The scrap metal and white goods are stored on site until the materials can be transported to the proper recycling facilities.</p>	<p>Per year, facility accepts approximately 1,414 tons of scrap metals and white goods.</p>	<p>Refrigerants, oil, etc. are removed from white goods by a qualified technician and moved to the hazardous waste facility. Once decontaminated, the items are so marked and put into the scrap metal inventory.</p>	<p>In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.</p>
<p>Electronic Scrap Materials Facility accepts televisions, computer monitors and miscellaneous electronics which are stored on site until it can be transported to the proper recycling facility.</p>	<p>45 tons of electronic scrap is processed each year.</p>	<p>Negligible air contaminants</p>	<p>In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.</p>

Materials Recycling Facility accepts and stores curbside recycling material (aluminum cans, glass bottles, cardboard, paper, plastics, etc.). Facility includes a picking line to sort recyclable material and a bailer and conveyor belt for bailing recyclables for transport. Recyclables are stored on site until they can be transported to the proper facilities.	Per year, facility accepts approximately 1,500 tons of recyclables.	Negligible air contaminants	In every 12 month period, actual emissions are expected to be less than 4000 pounds per year of criteria pollutants and/or 1000 pounds per year of hazardous air pollutants.
Earth Mover/Scraper, Compactor, Backhoe, Dozer, Water Truck, Pick-up Trucks		Regulated under the California Air Resources Board Diesel Emissions Reduction Plan.	Vehicles are exempt from District permitting under District Rule 2:4

**Table 2. Insignificant Emission Units Control Equipment/Work Practice List**

<b>Unit Description</b>	<b>Control / Work Practice Requirements</b>
Hazardous Waste Recycling Facility	All hazardous waste is bulked and sealed in containers by a qualified technician and then sent to a proper disposal site.
Materials Recycling Facility	Facility housekeeping is performed daily to minimize any fugitive dust emissions.
Fugitive dust emissions: Unpaved roadways, equipment storage, and facility maintenance.	Fugitive emissions control practices: Slower driving speeds, watering, palliative dust agents, chip sealing, or paving.

**Applicable Federal Requirements:**

Applicable federal requirements are all requirements that the facility must comply with including the following:

1. District administrative and prohibitory rules adopted into the State Implementation Plan (SIP):

2. A copy of the SIP Action Log can be found in Attachment C. Note that some of the SIP approved rules contained in the SIP Action Log clearly do not apply to this facility and are not included in the Title V Operating Permit. Also, SIP rules that do not apply are not included in the Permit Evaluation. Each applicable District rule and the justification including the rule requirements in the Title V Operating Permit will be addressed below. A complete copy of each of the applicable SIP-approved administrative and prohibitory District rules listed below are included in Attachment C.
  
3. Some District rules listed in the earlier SIP approved version of a particular rule have been recodified and/or superseded by a more current SIP approved version of the rule that is at least as stringent. Therefore, requirements of the most current SIP approved rule will be implemented and enforced through the Title V Operating Permit.

**SIP APPROVED DISTRICT RULES CONTAINED IN THE  
TEHAMA COUNTY/CITY OF RED BLUFF LANDFILL TITLE V OPERATING  
PERMIT**

**Table 1**

SIP Approved Rule Number & SIP Approval Date With FR Citation	Enforcement/Comments
Rule 2:1 General Requirements SIP Approved on 04/12/82 47 FR 15586	This Rule will be enforced through the Title V Operating Permit, Administrative Requirements and Conditions, Section B., subsection 1.
Rule 2:2 Permits Required SIP Approved on 05/31/72 37 FR 10856	This Rule will be enforced through the Title V Operating Permit, Administrative Requirements and Conditions, Section B., subsection 2.
Rule 2:4 Exemptions from Permit and Registration (New and Existing Operations) Approved on 05/31/72 37 FR 10856	This rule identifies which equipment is exempt from District permitting requirements.
Rule 2:5 Standards for Granting Applications for Permits Approved on 04/12/82 47 FR 15586	This rule identifies standards by which the Air Pollution Control Officer decides whether to grant or deny an Authority to Construct or a Permit to Operate.
Rule 4:1 Visible Emissions SIP Approved on 04/12/82 47 FR 15586	This Rule will be enforced through the Title V Operating Permit, Condition 5.
Rule 4:3 Particulate Matter	This Rule will be enforced through the Title V Operating

SIP Approved on 04/17/89 54 FR 15180	Permit, Condition 6.
Rule 4:9 Specific Contaminants SIP Approved on 07/12/90 55 FR 28624	This Rule will be enforced through the Title V Operating Permit, Condition 7.

**Applicable District Rules That Have Not Been Granted SIP Approval and Are Included in the Tehama County/City of Red Bluff Landfill Title V Operating Permit**

**Table 2**

Rule Number and Name	Applicability/ Reference	Enforcement Reference
Rule 2:3.A New Source Review	District Rule 2:3A and 40 CFR 60 Subpart A	Federal requirement enforced though the Title V Operating Permit, Conditions 1., 2., 3., 8., 10.
Rule 4:17 Upset or Breakdown Conditions	District Rule 7:1 Title V Operating Permits Section F.1.a.12)a)(1)	“The permittee shall comply with District Rule 4:17, Upset or Breakdown Conditions, and the emergency provisions contained in all applicable federal requirements.” Enforcement will be through the Title V Operating Permit, Condition 27.
Rule 4:33 Municipal Solid Waste Landfills	District Rule 4:33 Municipal Solid Waste Landfills and 40 CFR 60 Subpart WWW	Federal requirement enforced though the Title V Operating Permit, Conditions 11., 12., 13., 14., 15., 16., 17., 18., 20., 21., 22., 23., 29., 31., 32., 33.
Rule 4:39 Architectural Coatings	District Rule 4:39 Architectural Coatings and 40 CFR Part 59	Federal requirement enforced though the Title V Operating Permit, Condition 9, 10.

Rule 7:1 Title V: Federal Operating Permit Program	District Rule 7:1 Federal Operating Permit Program and 40 CFR 60 Subpart W W W . T h e TCAPCD Title V permitting program is USEPA approved. Therefore, all conditions in Rule 7:1 are Federally Enforceable.	This Rule will be enforced through the Title V Operating Permit, Conditions 24., 25., 26., 28., 30., 35., 36., 37., 39., 40., 41., 42., 43., 44., 45., 46, 47., 48.
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District rules referenced above can be found in Attachment D.

## COMPLIANCE DETERMINATION FOR APPLICABLE FEDERAL REQUIREMENTS

### Rule 2:1 - General Requirements

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

### Rule 2:2 - Permits Required

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

### Rule 2:4 - Exemptions from Permit and Registrations (New and Existing Operations)

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

### Rule 2:5 - Standards for Granting Applications for Permits

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

### Rule 2:3.A - New Source Review **DISTRICT RULE ONLY, NOT SIP APPROVED**

The District has established that any “landfill” (a place 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 (Rule 2:3.A) 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 in the landfill site may require local permits. This is the case for the enclosed ground flare installed at the facility. The enclosed ground flare Authority to Construct was permitted by the District on June 20, 2002 and was

installed in 2003. Permit to Operate (PTO) #239 was issued by the District on August 25, 2003. The review and permitting process of the enclosed ground flare established that the flare could operate in compliance with all District rules and that the emissions from the equipment did not exceed the trigger levels requiring public notification. The conditions from the local permitting action are included in the Title V permit.

Although Rule 2:3A is not SIP approved, Rules 2:2 and 2:5 are, and condition 19 of ATC 753-239 requires that the landfill gas collection and control system shall be subject to all applicable terms and conditions of Rule 2:3A. Therefore the preconstruction permit conditions are federally enforceable and are included in the Title V permit. [40 CFR 70.2(2)]

#### Rule 4:1 - Visible Emissions

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

#### Rule 4:3 - 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 Title V permit. Based upon a calculated emission rate of 6.72 lbs PM10 per day (0.02 lbs/MMBtu from Santa Barbara APCD Flare Study, July 1991), this would equate to a grain loading of 0.0048 grains per dry cubic foot [6.72 lbs/day x 7000 grains/lb x 1 min/7000 ft<sup>3</sup> x 1 day/1400 minutes = 0.0048 grains/ft<sup>3</sup>]. Therefore no testing will be required as compliance is assured from the above calculation.

#### Rule 4:9 - Specific Contaminants

The SO<sub>2</sub> provisions of the rule are applicable to the emissions from the facility.

#### Rule 4:17 - Upset or Breakdown Conditions **DISTRICT RULE ONLY, NOT SIP APPROVED**

This is the regulation in which the District has established the criteria for reporting breakdowns.

#### Rule 4:33 - Municipal Solid Waste Landfills **DISTRICT RULE ONLY, NOT SIP APPROVED**

This rule adopts by reference the requirements of 40 CFR 60, Subpart WWW. Compliance will be assured due to the inclusion of these requirements in the Title V permit.

#### Rule 4:39 - Architectural Coatings **DISTRICT RULE ONLY, NOT SIP APPROVED**

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 in the Title V permit to ensure continued compliance.

#### Rule 7:1 - Title V: Federal Operating Permit Program **DISTRICT RULE ONLY, NOT SIP APPROVED**

This rule adopts by reference the requirements of 40 CFR 70 - State Operating Permit Programs. Compliance will be assured due to the inclusion of these requirements in the Title V permit.

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

This facility is subject to the requirements of 40 CFR 60.7 (notification and record keeping), 40 CFR 60.8 (performance tests), 40 CFR 60.11 (compliance with standards and maintenance requirements), and 40 CFR 60.13 (monitoring requirements) because they are subject to 40 CFR 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 60, Subpart WWW - New Source Performance Standards (NSPS) for Municipal Solid Waste Landfills

This facility is subject to the requirements of this NSPS based upon the requirements of District Rule 4:33. Appropriate conditions will be included in the Title V permit to ensure compliance with the requirements of this NSPS.

40 CFR 70 - State Operating Permit Programs

This facility is subject to the requirements of 40 CFR 70 based upon the requirements of District Rule 7:1. Appropriate conditions will be included in the Title V permit to ensure compliance with the requirements of the federal regulation.

40 CFR 82 - Protection of Stratospheric Ozone

This facility is in compliance with the requirements of 40 CFR 82. An appropriate condition will be included in the Title V permit to ensure continued compliance with these requirements.

**THE FOLLOWING CONDITIONS WILL BE INCLUDED IN THE TITLE V PERMIT**

**FEDERALLY ENFORCEABLE EMISSION LIMITS AND STANDARDS**

(All conditions are federally enforceable unless otherwise noted)

1. The heat input rate to the flare shall not exceed 14 MMBtu/Hr. The LFG&E International flare may be operated on extracted landfill gas, a combination of landfill gas and propane, or landfill gas and natural gas from the local pipeline.[District Rule 2:3.A and ATC 753-239 condition 24]
2. Emissions from the flare shall not exceed the following limits: [District Rule 2:3.A and ATC 753-239 condition 19]

<u>Pollutant</u>	<u>Emission Limit</u>	<u>Max. Allowable Emission Level</u>
NOx	25 lb/day	0.0744 lb/MMBtu
CO	500 lb/day	1.4880 lb/MMBtu



6. Particulate matter shall not exceed 0.15 grains per dry standard cubic foot in the exhaust stream of the enclosed ground flare. [District Rule 4:3]
7. Sulfur compounds calculated as sulfur dioxide (SO<sub>2</sub>) shall not exceed 250 ppm in the exhaust stream of the enclosed ground flare. [District Rule 4:9]
8. Emissions of sulfur compounds calculated as hydrogen sulfide (H<sub>2</sub>S) shall not exceed 50 lb/day in the exhaust stream of the enclosed ground flare. [District Rule 2:3.A and ATC 753-239 condition 19]
9. The Tehama County/City of Red Bluff Landfill shall limit emissions of volatile organic compounds by the use of architectural coatings which comply with the requirements of District Rule 4:39. [District Rule 4:39, Not Federally Enforceable]
10. The Tehama County/City of Red Bluff Landfill submitted to the District a collection and control system design plan prepared by a professional engineer along with an application for an Authority to Construct on June 24, 2002. This plan met the requirements specified in 40 CFR 60.752(b)(2)(ii) and (iii) [restated in condition 12] and includes the information required by 40 CFR 60.752(b)(2)(I). [District Rule 4:33 and 40 CFR 60.752(b)(2)]

The system was installed prior to triggering the need for a Title V permit and has been in operation since 2002. The system shall be continuously maintained and operated in compliance with all applicable federal, state and local rules and regulations.

11. The landfill gas collection and control system shall be subject to all applicable terms and conditions of District Rule 2:3A New Source Review. [ATC 753-239 condition 19]
12. No later than 30 months after the first report required by Condition 31 in which the NMOC emission rate equals or exceeds 50 megagrams per year, the Tehama County/City of Red Bluff Landfill shall cause to be operated a landfill gas collection system that effectively captures the gas generated such that [District Rule 4:33, ATC condition 25. and 40 CFR 60.752(b)(2)]:
  - a. the system is designed to handle the maximum expected gas flow flow rate from the entire area of the landfill that warrants control over the intended use period of the gas collection system; either of the variable airflow 15 horsepower blower(s) shall maintain a sufficient extraction rate to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions for the life of the blower; 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 five (5) years or more for active areas or two (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; or
    - ii. use of a geomembrane or synthetic cover; or
    - iii. a decommissioned well.
  - e. the collected landfill gas temperature is less than 55°C at each operating well with a nitrogen level less than or equal to 50 percent or an oxygen level less than or equal to 12 percent; and
  - f. the methane concentration over the landfill shall not exceed 500 ppm above background at the surface of the landfill.
13. No later than thirty (30) months after the first report required by Condition 31 in which the NMOC emission rate equals or exceeds 50 megagrams per year, the enclosed ground flare 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. [District Rule 4:33 and 40 CFR 60.752(b)(2) and ATC 753-239 condition 20]
14. The Tehama County/City of Red Bluff Landfill shall cause the enclosed ground flare to be operated at all times that the collected landfill gas is routed to the system. Operation of the LFG&E International, model Triton 500 flare shall not exceed twenty-four hours per day (24 hr/dy), seven days per week (7 dy/wk) and fifty-two weeks per year (52 wks/yr) for a total of eight thousand seven hundred sixty hours per year (8,760 hrs/yr). The landfill gas flare shall not emit greater than eighty percent (80%) of any air contaminates in excess of the threshold for a major source of regulated air pollutants, or a major source of hazardous air pollutants requiring a federal Title V Operating Permit pursuant to District Rule 7:1[District Rule 4:33 and 40 CFR 60.753(f) and ATC 753-239 conditions 20, 21 and 34]
15. Conditions 13 and 14 do not apply to the enclosed ground flare during periods of start-up, shutdown or malfunction, provided that the duration of start-up, shutdown or malfunction shall not exceed one (1) hour. [District Rule 4:33 and 40 CFR 60.753(e)]
16. The Tehama County/City of Red Bluff Landfill shall cause the enclosed ground flare to be equipped with exhaust gas temperature monitoring devices equipped with continuous

recorders having an accuracy of  $\pm 1\%$  of the temperature being measured expressed in degrees Celsius or  $\pm 0.5^\circ\text{C}$ , whichever is greater. [District Rule 4:33 and 40 CFR 60.756(b) and ATC 753-239 condition 22 a.]

17. The Tehama County/City of Red Bluff Landfill shall cause the operation of gas flow rate measuring device(s) that provide measurements of gas flow rate to the enclosed ground flare or to the bypass valves if so equipped. The flare gas flow rate measuring device shall record the gas flow to the flare at least once every fifteen (15) minutes. [District Rule 4:33 and 40 CFR 60.756 and ATC 753-239 condition 22 b.]
18. If the gas collection system is equipped with valves to bypass the enclosed ground flare, these bypass valves must be in a closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that gas flow is not diverted through the bypass line. [District Rule 4:33 and 40 CFR 60.756 and ATC 753-239 condition 22 b.]

## **TESTING REQUIREMENTS AND PROCEDURES**

19. The Tehama County/City of Red Bluff Landfill shall conduct an annual performance test to verify compliance with Conditions 2, 3, 7, 8 and 12. The testing shall be conducted in accordance with the USEPA test methods indicated below, and the written results of the performance tests shall be provided to the District within forty-five (45) days after testing [40 CFR 60.8 and ATC 753-239 conditions 29 and 30].

A complete source test protocol shall be submitted to the District no later than thirty (30) days prior to testing. The District shall approve the source test protocol in writing prior to actual source testing. The District shall be notified at least ten (10) days prior to actual testing so that a District observer may be present.

Within forty-five (45) days of completion of required source testing a final report shall be submitted to the District by the independent testing firm that shall list all performance test determinations of flue gas concentrations in appropriate units such as  $\text{gr/dscf}$ ,  $\text{ppmvd}$ ,  $\text{lbs/MMBtu}$ , or  $\text{lbs/ft}^3$ . The appropriate reporting units shall be calculated for emissions of  $\text{NO}_x$ ,  $\text{CO}$ ,  $\text{CO}_2$ , and Total Hydrocarbons (as NMOC), and reported in pounds per hour ( $\text{lbs/hr}$ ), pounds per day ( $\text{lbs/day}$ ) and tons per year ( $\text{tpy}$ ). The final report shall contain all calculations and shall specify the source of the emission rate. When reporting source test results each separate test run shall be listed in the final report and the test runs shall be averaged. The averaged test results shall then be compiled into a one page summary.

The annual performance tests shall be conducted at the maximum landfill gas flow rate. Compliance shall be determined using the following test methods:

- a. Sample and Traverse Velocity - USEPA Method 1

- b. Velocity and Volumetric Flow Rate - USEPA Method 2
- c. Stack Gas Oxygen (O<sub>2</sub>)- USEPA Method 3 or 3A
- d. Carbon Dioxide (CO<sub>2</sub>) - USEPA Method 3 or 3A
- e. Moisture Content - USEPA Method 4
- f. PM-10 - USEPA Method 5
- g. Sulfur Dioxide - USEPA Method 6
- h. Oxides of Nitrogen (NO<sub>x</sub>) - USEPA Method 7 or 7E
- i. Carbon Monoxide (CO) - USEPA Method 3A or 10
- j. Total Hydrocarbons - Organic Gases as NMOC - USEPA Method 18 or 25A calculated as hexane at 3% oxygen, dry basis

Testing shall include, but not be limited to, the determination of the following parameters:  
[District Rules 7:1 and 4:33]

- k. Oxides of Nitrogen as NO<sub>2</sub>: lb/MMBtu, lb/MMcf, ppmv dry @ 3% O<sub>2</sub>, and lbm/hr.
- l. Carbon Monoxide: lb/MMbtu, lb/MMcf, ppmv dry @ 3% O<sub>2</sub>, and lbm/hr.
- m. Carbon Dioxide: lb/MMbtu, lb/MMcf, ppmv dry @ 3% O<sub>2</sub>, and lbm/hr.
- n. Oxides of Sulfur as SO<sub>2</sub>: percentage by volume.
- o. Total Hydrocarbons (THC) destruction efficiency.

and the following process parameters:

- p. Landfill gas flow rate to flare: dscfm
- q. Landfill gas heating value: Btu/scf
- r. Landfill gas concentration of total Sulfur as Hydrogen Sulfide: lb/day
- s. Flare exhaust stack gas temperature: degrees Fahrenheit
- t. Flare exhaust stack gas flow rate: dscfm

where lb/MMBtu = pounds per Million British thermal units  
 lb/MMcf = pounds per Million cubic feet  
 ppmv = parts per million volume  
 lbm/hr = pounds mass per hour  
 lb/day = pounds per day  
 dscfm = dry standard cubic feet per minute  
 Btu/scf = British thermal units per standard cubic foot  
 scf = standard cubic foot

- 20. No later than thirty (30) months after the first report required by Condition 31 in which the NMOC emission rate equals or exceeds fifty (50) megagrams, the Tehama County/City of Red Bluff Landfill shall cause monitoring or testing to be conducted to verify compliance with Conditions 11 and 17 as follows: [District Rule 4:33 and 40 CFR 60.755(c) and 40 CFR 60.756(a) and (b)]

on a monthly basis:

- a. Visually inspect the bypass valves to ensure that they are closed and that landfill gas is not diverted through the bypass line. Measure the gauge pressure and monitor the temperature and nitrogen or oxygen content at each well head. The nitrogen level shall be determined using USEPA Method 3C, or the oxygen level shall be determined using USEPA Method 3A.

On a quarterly basis:

- b. Monitor the surface concentrations of methane along the entire perimeter of the collection area and along a serpentine pattern within the collection area at thirty (30) meter intervals. This surface monitoring shall be performed in accordance with section 4.3.1 of USEPA Method 21, except that the probe shall be placed within five (5) to ten (10) centimeters of the ground. The portable analyzer shall meet the instrument specifications provided in section 3 of USEPA Method 21 except that “methane” shall replace all references to VOC and the instrument evaluation procedures in section 4.4 of USEPA Method 21 shall be used to meet the performance evaluation requirements of section 3.1.3. The calibration procedures in section 4.1 of USEPA Method 21 shall be followed immediately before commencing a surface monitoring survey, and the calibration gas shall be methane diluted to a nominal concentration of 500 ppm.

Any reading of 500 ppm or greater above background shall be recorded as a monitored exceedance. The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least thirty (30) meters from the perimeter wells. A monitored exceedance is not a violation of the operational requirement contained in Condition 10(F) as long as the following specified actions are taken:

- i. The location of each monitored exceedance shall be marked and the location recorded.
- ii. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be remonitored within ten (10) calendar days of detecting the exceedance; and
- iii. If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within ten (10) days of the second exceedance. If the remonitoring shows a third exceedance for the same location, the action specified in section v) of this Condition shall be taken.
- iv. Any location that initially showed an exceedance but has a methane concentration less than 500 ppm above the background concentration at the 10-day remonitoring specified in section ii) or iii) of this Condition shall be remonitored one (1) month

from the initial exceedance. If the one (1) month remonitoring shows a concentration less than 500 ppm above background, no further monitoring is required until the next quarterly monitoring period. If the one (1) month remonitoring shows an exceedance, the actions specified in sections iii) or v) of this Condition shall be taken.

- v. For any location where monitored methane concentration equals or exceeds 500 ppm above background three (3) times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance and a corresponding time line for installation may be submitted to the District for approval.

## **RECORD KEEPING REQUIREMENTS**

21. The Tehama County/City of Red Bluff Landfill shall maintain up-to-date records of the maximum design capacity, the current amount of solid waste in place, the year-by-year waste acceptance rate, and the nature, date of deposition, amount and location of asbestos-containing or nondegradable waste excluded from gas collection as provided by 40 CFR 60.759(a)(3)(i) as well as any nonproductive areas excluded from gas collection as provided by 40 CFR 60.759(a)(3)(ii). These records shall be retained on site or be available within four (4) hours if stored off site. [District Rule 4:33 and 40 CFR 60.759]
22. The Tehama County/City of Red Bluff Landfill shall keep for at least 5 years up-to-date, readily accessible continuous records of all applicable recordkeeping requirements of 40 CFR 60.758, and the following data as measured during the initial performance test or compliance determination: [District Rule 4:33 and 40 CFR 60.757 and 40 CFR 60.758]
  - a. The maximum expected gas generation flow rate as calculated in 40 CFR 60.755(a)(1); and
  - b. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60.759(a)(1).
23. The Tehama County/City of Red Bluff Landfill shall keep for at least five (5) years up-to-date, readily accessible continuous records of all data required by Condition 20. [District Rule 4:33 and 40 CFR 60.758]
24. The Tehama County/City of Red Bluff Landfill shall maintain the following general records of required monitoring information: [District Rule 7:1 and 40 CFR 70.6(a)(3)(C)(ii)]
  - 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.
25. The Tehama County/City of Red Bluff Landfill 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 7:1 and 40 CFR 70.6(a)(3)(ii)]
26. The Tehama County/City of Red Bluff Landfill 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 7:1 and 40 CFR 70.6(a)(3)(ii)]

#### **REPORTING REQUIREMENTS**

27. The Tehama County/City of Red Bluff Landfill shall report all breakdowns to the Air Pollution Control Officer (APCO) within one (1) hour of the occurrence. If the breakdown occurs when the APCO cannot be contacted, the report of the breakdown shall be made at the commencement of the next regular working day

As soon as the occurrence has been corrected, but no later than ten (10) calendar days after correction, the owner or operator shall submit a written report to the APCO. This report shall include at a minimum: [District Rule 4:17, Not Federally Enforceable]

- 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.

28. The Tehama County/City of Red Bluff Landfill 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 7:1 and 40 CFR 70.6(a)(3)(ii) and ATC 753-239 condition 37]

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 preventive 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 pollution 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.
29. The Tehama County/City of Red Bluff Landfill shall submit an annual report due no later than 30 months after the first report required by Condition 31 in which the NMOC emission rate equals or exceeds 50 megagrams per year, with the following required information: [District Rule 4:33 and 40 CFR 60.752 and 40 CFR 60.757(f) and (g)]

- a. The value and length of time for exceedances of applicable parameters monitored as required in Condition 12; and
- b. A description and the duration of all periods when the gas stream is diverted from the enclosed ground flare; and
- c. A description and the duration of all periods when the enclosed ground flare was not operating for any period exceeding one (1) hour and the length of time the enclosed ground flare was not operating; and
- d. All periods when the enclosed ground flare was not operating in excess of five (5) days; and
- e. The location and concentration of each exceedance of Condition 12(f) as monitored by Condition 20(b); and
- f. The date of installation and the location of each well or collection system expansion added pursuant to Condition 20(b)(v).

In addition to the above, the initial report shall include:

- g. The performance test required under Condition 19; and
  - h. A diagram of the collection systems showing collection systems positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion; and
  - i. The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based; and
  - j. The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material; and
  - k. The sum of gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculation of gas generation flow for each excluded area; and
  - l. The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and
  - m. The provisions for the control of off-site migration.
30. The Tehama County/City of Red Bluff Landfill shall submit an annual compliance certification report to the District and USEPA, 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 7:1 and 40 CFR 70.6(c)(5)(iii)]

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.

31. The Tehama County/City of Red Bluff Landfill shall submit an annual emission report to the District as specified in 40 CFR 60.752(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 4:33 and 40 CFR 60.752]
32. The Tehama County/City of Red Bluff Landfill 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 4:33 and 40 CFR 60.757]
33. The Tehama County/City of Red Bluff Landfill shall submit an equipment removal report to the District 30 days prior to removal or cessation of operation of the landfill gas control equipment. The equipment removal report shall contain the following: [District Rule 4:33 and 40 CFR 60.757]
  - a. A copy of the closure report submitted in accordance with Condition 32; and
  - b. A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and
  - c. Dated copies of three successive annual NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.
34. By February 15<sup>th</sup> of each year, the permitted source owner or operator shall submit a chronological report, by month, that is summarized into an annual report for the previous operating year. [40 CFR 60.757(f) and ATC 753-239 condition 38]
  - a. The amount of landfill gas combusted in the LFG&E International flare. The report shall be in cubic feet.
  - b. Hours of operation of the LFG&E International flare.
  - c. The amount of NO<sub>x</sub>, CO, CO<sub>2</sub>, and Total Hydrocarbons (as NMOC) emitted during combustion of landfill gas.
  - d. Notification of all dates and duration of time, as well as the estimated amount of landfill gas that has bypassed the LFG&E International flare. This includes an estimate of NMOC emitted during periods that the landfill gas was through the bypass line.

## **GENERAL CONDITIONS**

35. The Tehama County/City of Red Bluff Landfill 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 7:1 and 40 CFR 70.6(a)(6)(i)]

36. In an enforcement action, the fact that the Tehama County/City of Red Bluff Landfill 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 7:1 and 40 CFR 70.6(a)(6)(ii)]
37. 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 Tehama County/City of Red Bluff Landfill 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 7:1 and 40 CFR 70.6(a)(6)(iii)]
38. Fugitive dust emissions generated from access roads, internal driveways, yards and stockpiles, equipment use areas, parking areas, etc., shall be controlled at all times by the use of dust suppression techniques that may include but are not limited to the following methods [ATC condition 17.]:
  - a. Reduced driving speeds;
  - b. Watering;
  - c. Palliative dust agents;
  - d. Paving and/or chipsealing.
39. Repairs or replacement of any part of the active gas collection system shall be performed pursuant to Code of Federal Regulations 40 CFR Part 60 Standards of Performance for New Stationary Sources and Guidelines for Control of Existing Sources. Municipal Solid Waste Landfills: Subpart WWW and Cc §60.752 Standards for air emissions from municipal solid waste landfills.[40 CFR 60.752(b)and ATC 753-239 condition 13, 36]

The repaired active collection system shall:

- a. Be 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 control or treatment system equipment.
- b. Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been in place for a period of;
  - i. 5 years or more if active; or
  - ii. 2 years or more if closed or at final grade;
  - iii. Collect gas at a sufficient extraction rate;
  - iv. Be designed to minimize off-site migration of subsurface gas;

- v. Route all the collected gas through the gas collection system to the LFG&E International, model Triton 500 enclosed flare control system.

All equipment, including both process and air pollution control equipment, shall be maintained at regular intervals to ensure minimal discharge of emissions. Manufacturers' recommended maintenance procedures shall be adhered to at all times.

40. 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 7:1 and 40 CFR 70.6(a)(6)(iv)]
41. The Tehama County/City of Red Bluff Landfill 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 Tehama County/City of Red Bluff Landfill shall also furnish to the District copies of records required to be retained by this permit. [District Rule 7:1 and 40 CFR 70.6(a)(6)(v) ]
42. For applicable requirements that will become effective during the permit term, the Tehama County/City of Red Bluff Landfill shall meet such requirements on a timely basis unless a more detailed schedule is expressly required by the applicable requirement. [District Rule 7:1 and 40 CFR 70.5(c)(8)(iii)(B) ]
43. 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. The Tehama County/City of Red Bluff Landfill shall promptly, upon discovery, report to the District a material error or omission in these records, reports, plans or other documents. [District Rule 7:1 and 40CFR70.5(d) ]
44. The Tehama County/City of Red Bluff Landfill 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 7:1 and 40 CFR 70.6(a)(3)(iii)(B)]
45. Upon any administrative or judicial challenge, all emission limits, specific and general conditions, record keeping and reporting requirements of this permit, except those being challenged, remain valid and must be complied with. [District Rule 7:1 and 40 CFR 70.6(a)(5)]

46. For this federal operating permit to remain valid through the permit term of five (5) years from the date of issuance, the Tehama County/City of Red Bluff Landfill shall pay an annual emission fee based upon the requirements of District Rule 7:1. [District Rule 7:1 and 40 CFR 70.6(a)(7)]
47. The Tehama County/City of Red Bluff Landfill shall have available at the facility at all times a copy of this federal operating permit. [District Rule 7:1 and 40 CFR 70.6(c)(2) ]
48. For protection from enforcement action based upon an emergency, as defined in District Rule 7:1, the responsible official for the Tehama County/City of Red Bluff Landfill shall submit to the District within two weeks of an emergency event relevant evidence which demonstrates: [District Rule 7:1 and 40 CFR 70.6(g) ]
  - a. An emergency occurred; and
  - b. The Tehama County/City of Red Bluff Landfill can identify the cause(s) of the emergency; and
  - c. The facility was being properly operated at the time of the emergency; and
  - d. All steps were taken to minimize the emissions resulting from the emergency; and
  - e. Within two (2) working days of the emergency event, the Tehama County/City of Red Bluff Landfill provided the District with a description of the emergency and any mitigating or corrective actions taken.
49. Upon presentation of credentials, the Tehama County/City of Red Bluff Landfill shall allow the District, the ARB, the USEPA, or an authorized representative, to perform the following: [District Rule 7:1 and 40 CFR 70.6(c)(2)]
  - 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. Inspection of the stationary source, including equipment, work practices, operations, and emission-related activity;
  - c. Inspection and duplication of records required by the permit to operate; and
  - d. Source sampling and other monitoring activities.