

TITLE V OPERATING PERMIT STATEMENT OF BASIS

Facility Name: Otay Landfill Gas, LLC

Title V Application Number: APCD2012-APP-002026

Title V Permit Number: APCD2012-TVP-00029

Facility ID: APCD1984-SITE-03438

Equipment Address: 1600 Maxwell Road
Chula Vista, CA 91911

Facility Contact: Tony Wetzel, Environmental Manager

Contact Phone: 916-802-2706

Permit Engineer: Doug Erwin

1. Introduction/Description

The purpose of this statement of basis is to describe the facility, operations, and applicable requirements for an initial Title V permit.

Otay Landfill Gas is a facility located adjacent to the Otay Landfill, from which landfill gas is taken to run six (6) internal combustion (IC) engines. These six engines comprise the emission units (EUs) of this facility. One of the engines is a new installation as of late 2015. This newest engine is a replacement (nearly identical) for one of two engines previously covered under PTO-040247. This engine (engine #1) has been issued an authority to construct and a start-up authorization. Table 1 below gives a summary of these EUs.

Table 1 – Emission Units		
Engine Ref. #	District Permit #	Description
1	PTO-002265	Cooper Superior Model 16SGTA (4 stroke SI), 2650 bhp, lean burn, w/ landfill gas dehydration system including Oran cross exchanger
2	PTO-040247	Cooper Superior Model 16SGTA (4 stroke SI), 2650 bhp, lean burn, w/ landfill gas dehydration system including Oran cross exchanger
3 & 4	PTO-979979	2 Engines: Cooper Superior Model 16SGTA (4

		stroke SI), 2650 bhp, lean burn, turbocharged, each driving a 1875-KW generator
5	PTO-001910	Caterpillar, Model G3520C (4 stroke SI), 2233 bhp, driving a 1600-kW generator.
6	PTO-001911	Caterpillar, Model G3520C (4 stroke SI), 2233 bhp, driving a 1600-kW generator.

2. Federal Program Applicability

Rule 1401 - Title V (Permitting) Applicability

Rule 1412 - Title IV (Acid Rain) Applicability

2.1 Site Emissions and Title V Applicability:

Table 2 below summarizes annual facility-wide emissions and highlights title V major source thresholds. The federal hazardous air pollutant (HAP) accounting for the highest single HAP emissions is formaldehyde, based on the District's emissions inventory of the site in 2015. Based on the emissions comparison of Table 2, this facility is a major source of CO and a major source of HAP pursuant District Rule 1401 and 40 CFR Part 70. Being a major source of HAP affects the below determinations relating to the federal rules applicable to reciprocating internal combustion engines (RICE), particularly 40 CFR 63 Subpart ZZZZ.

Table 2 – Annual Emissions & Title V Major Source Thresholds			
Pollutant	Estimated Actual Emissions (tons/yr)	Title V Thresholds (tons/yr)	Title V Major Source? (Y/N)
NO _x	49	100	N
VOC	51	100	N
PM10	22	100	N
SO ₂	14	100	N
CO	268	100	Y
Single HAP	44	10	Y
Combined HAPs	67	25	Y

2.2 Title IV (Acid Rain) Applicability:

This facility is not subject to the Acid Rain program under title IV of the CAA. Title IV, codified at 40 CFR §72.6, states that specified “utility units” are subject to acid rain provisions. Per 40 CFR §72.2, a “utility unit” is a fossil fuel-fired combustion device that serves a generator in any State, and that produces electricity for sale. Because these engines are fired on landfill gas and not fossil fuel, they are not utility units. Therefore, title IV does not apply.

3. Summary of Applicable Requirements

The requirements from each of the following listed rules are incorporated into the District and Title V permits accordingly.

Table 3 - Generally Applicable Requirements		
Regulation	Rule Citation	Title
SDAPCD Reg. II	10	Permits Required
SDAPCD Reg. II	19	Provision of Sampling & Testing Facilities
SDAPCD Reg. II	19.3	Emission Information
SDAPCD Reg. II	21	Permit Conditions
SDAPCD Reg. IV	60	Circumvention
SDAPCD Reg. V	98	Breakdown Conditions: Emergency Variance

Table 4 - Specific Requirements		
SDAPCD Reg. II	10(a)	Permits Required – (a) Authority to Construct
SDAPCD Reg. II	10(b)	Permits Required – (b) Permit to Operate
SDAPCD Reg. II	19	Provision of Sampling & Testing Facilities
SDAPCD Reg. II	19.3	Emission Information
SDAPCD Reg. II	20.2	New Source Review- Non-Major Sources
SDAPCD Reg. II	20.3	New Source Review- Major Sources
SDAPCD Reg. II	21	Permit Conditions
SDAPCD Reg. IV	50	Visible Emissions
SDAPCD Reg. IV	51	Nuisance
SDAPCD Reg. IV	52	Particulate Matter
SDAPCD Reg. IV	53	Specific Contaminants
SDAPCD Reg. IV	59	Control of Waste Disposal – Site Emissions
SDAPCD Reg. IV	62	Sulfur Content of Fuels
SDAPCD Reg. IV	69.4	Stationary Reciprocating Internal Combustion Engines - RACT
SDAPCD Reg. IV	69.4.1	Stationary Reciprocating Internal Combustion Engines - BARCT
SDAPCD Reg. XII	1200	Toxic Air Contaminants – New Source Review
SDAPCD Reg. X	40 CFR Part 60, Subpart WWW	Standards of Performance for Municipal Solid Waste Facilities
SDAPCD Reg. XI	40 CFR Part 63, Subpart ZZZZ	NESHAPS – Stationary Reciprocating Internal Combustion Engines

4. Federal Requirements

40 CFR 63 Subpart ZZZZ

This regulation applies to any stationary reciprocating internal combustion engine (RICE) operated at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand. As given in the above Section 2, Otay LF Gas is a major source of HAP due to the emissions of formaldehyde. Engines 1, 2, 3 and 4 are *existing* engines under §63.6590 of this rule, and are therefore exempt from all rule requirements pursuant §63.6590(b)(3)(v). Engines 5 and 6 are *new* engines under the rule (i.e., commenced construction on or after 12/19/2002), and therefore are subject to the requirements at §63.6590(a)(2). However, pursuant §63.6590(b)(2), these stationary RICE do not have to meet the emission limitations and operating limitations of this subpart. Therefore, only conditions pertaining to monitoring, record-keeping and reporting have been included in the Title V permit.

40 CFR 60 Subpart JJJJ

Engines 5 and 6 were determined to be subject to Subpart JJJJ during construction review based on the times of construction and manufacture in accordance with §60.4230(a)(4), (5), and (6) (i.e., commenced construction on or after 6/12/06).

Engine 1 was also installed after this date, but because it replaced an existing engine, it was determined not to constitute a “modified” or “reconstructed” unit. The installation dates of Engines 2, 3, and 4 predate all of the applicability dates, and therefore they are not subject to this rule.

District permits for Engines 5, and 6 include conditions that address applicable requirements under this rule. Emission limits for NO_x, CO and VOC established pursuant District NSR under Rule 20.2 exceed the stringency of the emission standards of Subpart JJJJ. Conditions are also included for applicable monitoring, record-keeping and reporting requirements, which again ensure compliance with the requirements of subpart JJJJ.

40 CFR 60 Subpart WWW

The provisions of this subpart apply to each municipal solid waste landfill that commenced construction, reconstruction or modification on or after May 30, 1991. Otay Landfill is subject to this subpart. Although Otay LF Gas does not meet the definition of *municipal solid waste landfill*, the engines comprising this facility operate as control devices pursuant subpart WWW §60.752(b)(2)(iii), and therefore are required to be operated in accordance with this section of the rule, as well as §§60.753(e) and (f).

5. Monitoring, Record-keeping and Reporting

The permit includes conditions requiring periodic inspections and maintenance of the engines and associated equipment, operating hours tracking requirements, and documentation of inspections and maintenance. These conditions are based on District

Rules 20.2 and 69.4. Source testing for NO_x and CO emissions is required every 24 months for Engine 2, and every 12 months for the other engines. Additionally, fuel metering is required by 40 CFR 63 Subpart ZZZZ as described in this report (see also Section III. D. of the front section of the permit).

40 CFR Part 64 – Compliance Assurance Monitoring

Compliance Assurance Monitoring (CAM) applicability was considered pursuant to 40 CFR Part 64. The engines are not subject to CAM based on 40 CFR § 64.2(a)(1), since no control device exists. In addition, the individual engines do not emit an amount greater than the major source thresholds, another requirement for applicability given in §64.2(a)(2).

6. Public Notice and EPA Review

In accordance with District Rule 1415, the District will provide notice to the public, the Environmental Protection Agency, and affected states.

7. Conclusions / Recommendations

The source is expected to comply with all applicable requirements including, and most notably for this review, those requirements cited under District Regulation XIV and 40 CFR Part 70. Therefore, the recommendation of this report is for the subject initial Title V permit to be issued following public notice, EPA review, and response to comments, if necessary.