

Bay Area Air Quality Management District

939 Ellis Street
San Francisco, CA 94109
(415) 771-6000

Final Proposed

MAJOR FACILITY REVIEW PERMIT

Issued To:
City of Mountain View (Shoreline)
Facility #A2740

Facility Address:
2600 Shoreline Boulevard
Mountain View, CA 94043

Mailing Address:
231 N. Whisman Rd.
Mountain View, CA 94043

Responsible Official

Kevin C. Duggan
City Manager

650-903-6301

Facility Contact

Tim Pike

Streets & Landfill Closure Manager
650-903-6092

Type of Facility: Landfill
Primary SIC: 4953
Product: Closed Solid Waste Disposal Facility

BAAQMD Engineering Division Contact:
Judith A. Cutino

ISSUED BY THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Signed by Jeff McKay for Jack P. Broadbent

Jack P. Broadbent, Executive Officer/Air Pollution Control Officer

_____ Date

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I. STANDARD CONDITIONS

A. Administrative Requirements

The permit holder shall comply with all applicable requirements in the following regulations:

- BAAQMD Regulation 1 - General Provisions and Definitions
(as amended by the District Board on 7/9/08);
- SIP Regulation 1 - General Provisions and Definitions
(as approved by EPA through 6/28/99);
- BAAQMD Regulation 2, Rule 1 - Permits, General Requirements
(as amended by the District Board on 7/19/06);
- SIP Regulation 2, Rule 1 - Permits, General Requirements
(as approved by EPA through 1/26/99);
- BAAQMD Regulation 2, Rule 2 - Permits, New Source Review
(as amended by the District Board on 6/15/05);
- SIP Regulation 2, Rule 2 - Permits, New Source Review and Prevention of Significant Deterioration
(as approved by EPA through 1/26/99);
- BAAQMD Regulation 2, Rule 4 - Permits, Emissions Banking
(as amended by the District Board on 12/21/04);
- SIP Regulation 2, Rule 4 - Permits, Emissions Banking
(as approved by EPA through 1/26/99);
- BAAQMD Regulation 2, Rule 5 – Permits, New Source Review of Toxic Air Contaminants
(as adopted by the District Board on 6/15/05; and
- BAAQMD Regulation 2, Rule 6 - Permits, Major Facility Review
(as amended by the District Board on 4/16/03); and
- SIP Regulation 2, Rule 6 – Permits, Major Facility Review
(as approved by EPA through 6/23/95).

B. Conditions to Implement Regulation 2, Rule 6, Major Facility Review

1. This Major Facility Review Permit was issued on July 16, 2009 and expires on July 15, 2014. The permit holder shall submit a complete application for renewal of this Major Facility Review Permit no later than January 15, 2014, and no earlier than July 15, 2013. **If a complete application for renewal has not been submitted in accordance with this deadline, the facility may not operate after July 15, 2014.** If the permit renewal has not been issued by July 15, 2014, but a complete application for renewal has been submitted in accordance with the above deadlines, the existing permit will continue in force until the District takes final action on the renewal application. (Regulation 2-6-307, 404.2, 407 & 409.6; MOP Volume II, Part 3, §4.2)
2. The permit holder shall comply with all conditions of this permit. The permit consists of this document and all appendices. Any non-compliance with the terms

I. Standard Conditions

and conditions of this permit will constitute a violation of the law and will be grounds for enforcement action; permit termination, revocation and re-issuance, or modification; or denial of a permit renewal application. (Regulation 2-6-307; MOP Volume II, Part 3, §4.11)

3. In the event any enforcement action is brought as a result of a violation of any term or condition of this permit, the fact that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with such term or condition shall not be a defense to such enforcement action. (MOP Volume II, Part 3, §4.11)
4. This permit may be modified, revoked, reopened and reissued, or terminated for cause. (Regulation 2-6-307, 409.8, 415; MOP Volume II, Part 3, §4.11)
5. The filing of a request by the facility for a permit modification, revocation and re-issuance, or termination, or the filing of a notification of planned changes or anticipated non-compliance does not stay the applicability of any permit condition. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
6. This permit does not convey any property rights of any sort, or any exclusive privilege. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
7. The permit holder shall supply within 30 days any information that the District requests in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. (Regulation 1-441, Regulation 2-6-409.4 & 501; MOP Volume II, Part 3, §4.11)
8. Any records required to be maintained pursuant to this permit that the permittee considers to contain proprietary or trade secret information shall be prominently designated as such. Copies of any such proprietary or trade secret information which are provided to the District shall be maintained by the District in a locked confidential file, provided, however, that requests from the public for the review of any such information shall be handled in accordance with the District's procedures set forth in Section 11 of the District's Administrative Code. (Regulation 2-6-419; MOP Volume II, Part 3, §4.11)
9. Proprietary or trade secret information provided to EPA will be subject to the requirements of 40 CFR Part 2, Subpart B - Public Information, Confidentiality of Business Information. (40 CFR Part 2)
10. The emissions inventory submitted with the application for this Major Facility Review Permit is an estimate of actual emissions or the potential to emit for the time period stated and is included only as one means of determining applicable requirements for emission sources. It does not establish, or constitute a basis for establishing, any new emission limitations. (MOP Volume II, Part 3, §4.11)
11. The responsible official shall certify all documents submitted by the facility pursuant to the major facility review permit. The certification shall state that based on information and belief formed after reasonable inquiry, the statements

I. Standard Conditions

and information in the document are true, accurate, and complete. The certifications shall be signed by a responsible official for the facility. (Regulation 2-6-409.20, MOP Volume II, Part 3, §4.11)

12. The permit holder is responsible for compliance, and certification of compliance, with all conditions of the permit, regardless whether it acts through employees, agents, contractors, or subcontractors. (Regulation 2-6-307)

C. Requirement to Pay Fees

The permit holder shall pay annual fees in accordance with District Regulation 3, including Schedule P. (Regulation 2-6-402 & 409.13, Regulation 3; MOP Volume II, Part 3, §4.12)

D. Inspection and Entry

Access to Facility: The permit holder shall provide reasonable access to the facility and equipment that is subject to this permit to the APCO and/or to his or her designee. (Regulation 1-440, Regulation 2-6-409.3; MOP Volume II, Part 3, §4.14)

E. Records

1. The permit holder must provide any information, records, and reports requested or specified by the APCO. (Regulation 1-441, Regulation 2-6-409.4)
2. Notwithstanding the specific wording in any requirement, all records for federally enforceable requirements shall be maintained for at least five years from the date of creation of the record. (Regulation 2-6-501, MOP Volume II, Part 3, §4.7)

F. Monitoring Reports

Reports of all required monitoring must be submitted to the District at least once every six months, except where an applicable requirement specifies more frequent reporting. The first reporting period for this permit shall be July 28, 2003 to December 31, 2003. The report shall be submitted by January 31, 2004. Subsequent reports shall be for the following periods: January 1st through June 30th and July 1st through December 31st, and are due on the last day of the month after the end of the reporting period. All instances of non-compliance shall be clearly identified in these reports. The reports shall be certified by the responsible official as true, accurate, and complete. In addition, all instances of non-compliance with the permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions. The reports shall be sent to the following address:

Director of Compliance and Enforcement
Bay Area Air Quality Management District

I. Standard Conditions

939 Ellis Street
San Francisco, CA 94109
Attn: Title V Reports

(Regulation 2-6-502, MOP Volume II, Part 3, §4.7)

G. Compliance Certification

Compliance certifications shall be submitted annually by the responsible official of this facility to the Bay Area Air Quality Management District and to the Environmental Protection Agency. The certification period will be July 1st through June 30th. The certification shall be submitted by July 31st of each year. The certification must list each applicable requirement, the compliance status, whether compliance was continuous or intermittent, the method used to determine compliance, and any other specific information required by the permit. The permit holder may satisfy this requirement through submittal of District-generated Compliance Certification forms. The certification should be directed to the District's Compliance and Enforcement Division at the address above, and a copy of the certification shall be sent to the Environmental Protection Agency at the following address:

Director of the Air Division
USEPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105
Attention: Air-3

(MOP Volume II, Part 3, §4.5 and 4.15)

H. Emergency Provisions

1. The permit holder may seek relief from enforcement action in the event of a breakdown, as defined by Regulation 1-208 of the District's Rules and Regulations, by following the procedures contained in Regulations 1-431 and 1-432. The District will thereafter determine whether breakdown relief will be granted in accordance with Regulation 1-433. (MOP Volume II, Part 3, §4.8)
2. The permit holder may seek relief from enforcement action for a violation of any of the terms and conditions of this permit by applying to the District's Hearing Board for a variance pursuant to Health and Safety Code Section 42350. The Hearing Board will determine after notice and hearing whether variance relief should be granted in accordance with the procedures and standards set forth in Health and Safety Code Section 42350 et seq. (MOP Volume II, Part 3, §4.8)
3. The granting by the District of breakdown relief or the issuance by the Hearing Board of a variance will not provide relief from federal enforcement. (MOP Volume II, Part 3, §4.8)

I. Standard Conditions

I. Severability

In the event that any provision of this permit is invalidated by a court or tribunal of competent jurisdiction, or by the Administrator of the EPA, all remaining portions of the permit shall remain in full force and effect. (Regulation 2-6-409.5; MOP Volume II, Part 3, §4.10)

J. Miscellaneous Conditions

1. The maximum capacity for each source as shown in Table II-A is the maximum allowable capacity. Exceedance of the maximum allowable capacity for any source is a violation of Regulation 2, Rule 1, Section 301. (Regulation 2-1-301)

II. EQUIPMENT

Table II A - Permitted Sources

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-301.

| S-# | Description | Make or Type | Model | Capacity |
|-----------------|--|--|-----------------|---|
| S-1 | Landfill (includes the 544-acre Landfill, Crittenden Landfill and the major portion of the Vista Landfill) Landfill Gas Collection System | Closed Solid Waste Disposal Site Active | | Maximum Design Capacity: 18,852,000 yd ³ (14,413,400 m ³); Maximum Cumulative Waste In Place: 12,725,000 tons; 7 horizontal collectors 264 vertical wells |
| S-11 | Diesel Engine for Emergency Standby Generator | Cummins | 6CTA8.3 G-2 | 207 bhp, 506 in ³ , 10.6 gallons/hour of diesel oil, 1.453 MM BTU/hour |
| S-12 | Microturbine, landfill gas fired | Ingersoll-Rand | 70LM | 71 kW nominal, 92 kW maximum at 0 °F, 1.6 MM BTU/hour |
| S-13 | Microturbine, landfill gas fired | Ingersoll-Rand | 70LM | 71 kW nominal, 92 kW maximum at 0 °F, 1.6 MM BTU/hour |
| S-14 | Diesel Engine for Emergency Standby Generator | Kohler | D300 12.1A65 | 469 bhp, 740 in ³ , 19.8 gallons/hour of diesel oil, 2.772 MM BTU/hour |
| S-16 | Microturbine | Capstone | CR65 | Maximum Firing Rate 1 MM Btu/Hr, 87 HP, 65 KW |
| S-17 | Microturbine | Capstone | CR65 | Maximum Firing Rate 1 MM Btu/Hr, 87 HP, 65 KW |

II. Equipment

Table II B - Abatement Devices

| A-# | Description | Source(s) Controlled | Applicable Requirement | Operating Parameters | Limit or Efficiency |
|-----|--|-------------------------|---|--|---|
| A-3 | Landfill Gas Flare (33 MM BTU/hour) | S-1 | BAAQMD 8-34-301.3, see also Table IV-A | Minimum combustion zone temperature of: 1400 °F (3-hour average), see also Table VII-A | Either 98% destruction of NMOC or < 30 ppmv of NMOC, as CH ₄ , at 3% O ₂ , dry |
| A-4 | Landfill Gas Flare (48 MM BTU/hour) | S-1 | BAAQMD 8-34-301.3, see also Table IV-A | Minimum combustion zone temperature of: 1400 °F (3-hour average), see also Table VII-A | Either 98% destruction of NMOC or < 30 ppmv of NMOC, as CH ₄ , at 3% O ₂ , dry |
| A-5 | Landfill Gas Flare (48 MM BTU/hour) | S-1 | BAAQMD 8-34-301.3, see also Table IV-A | Minimum combustion zone temperature of: 1400 °F (3-hour average), see also Table VII-A | Either 98% destruction of NMOC or < 30 ppmv of NMOC, as CH ₄ , at 3% O ₂ , dry |

III. GENERALLY APPLICABLE REQUIREMENTS

The permit holder shall comply with all applicable requirements, including those specified in the BAAQMD and SIP Rules and Regulations and other federal requirements cited below. These requirements apply in a general manner to the facility and/or to sources exempt from the requirement to obtain a District Permit to Operate. The District has determined that these requirements will not be violated under normal, routine operations, and that no additional periodic monitoring or reporting to demonstrate compliance is warranted. In cases where a requirement, in addition to being generally applicable, is also specifically applicable to one or more sources, the requirement and the source are also included in Section IV, Source-Specific Applicable Requirements, of this permit. This section also contains provisions that may apply to temporary sources.

The dates in parentheses in the Title column identify the versions of the regulations being cited and are, as applicable:

1. BAAQMD regulation(s): The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors
2. Any federal requirement, including a version of a District regulation that has been approved into the SIP: The most recent date of EPA approval of any portion of the rule, encompassing all actions on the rule through that date

The full language of SIP requirements is on EPA Region 9's website. The address is:

<http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=Bay+Area+Air+Quality+Management+District-Agency-Wide+Provisions>

NOTE:

There are differences between the current BAAQMD rules and the versions of the rules in the SIP. All sources must comply with both versions of the rule until US EPA has reviewed and approved the District's revision of the regulation.

**Table III
 Generally Applicable Requirements**

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) |
|-------------------------------|---|------------------------------------|
| BAAQMD Regulation 1 | General Provisions and Definitions (7/9/08) | N |
| SIP Regulation 1 | General Provisions and Definitions (6/28/99) | Y |
| BAAQMD Regulation 2, Rule 1 | Permits – General Requirements (7/19/06) | N |
| BAAQMD 2-1-429 | Federal Emissions Statement (12/21/04) | N |
| SIP Regulation 2, Rule 1 | Permits – General Requirements (1/26/99) | Y |
| SIP Regulation 2-1-429 | Federal Emissions Statement (4/3/95) | Y |
| BAAQMD Regulation 2, Rule 5 | Permits – New Source Review of Toxic Air Contaminants (6/15/05) | N |

III. Generally Applicable Requirements

**Table III
 Generally Applicable Requirements**

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) |
|-------------------------------|--|------------------------------------|
| BAAQMD Regulation 5 | Open Burning (3/6/02) | N |
| SIP Regulation 5 | Open Burning (9/4/98) | Y |
| BAAQMD Regulation 6, Rule 1 | Particulate Matter– General Requirements (12/5/07) | N |
| SIP Regulation 6 | Particulate Matter (9/4/98) | Y |
| BAAQMD Regulation 7 | Odorous Substances (3/17/82) | N |
| BAAQMD Regulation 8, Rule 1 | Organic Compounds – General Provisions (6/15/94) | Y |
| BAAQMD Regulation 8, Rule 2 | Organic Compounds – Miscellaneous Operations (7/20/05)) | N |
| SIP Regulation 8, Rule 2 | Organic Compounds – Miscellaneous Operations (3/22/95) | Y |
| BAAQMD Regulation 8, Rule 3 | Organic Compounds – Architectural Coatings (11/21/01) | Y |
| BAAQMD Regulation 8, Rule 4 | Organic Compounds – General Solvent and Surface Coating Operations (10/16/02) | Y |
| BAAQMD Regulation 8, Rule 15 | Organic Compounds – Emulsified and Liquid Asphalts (6/1/94) | Y |
| BAAQMD Regulation 8, Rule 16 | Organic Compounds – Solvent Cleaning Operations (10/16/02) | Y |
| BAAQMD Regulation 8, Rule 40 | Organic Compounds – Aeration of Contaminated Soil and Removal of Underground Storage Tanks (6/15/05) | N |
| SIP Regulation 8, Rule 40 | Organic Compounds – Aeration of Contaminated Soil and Removal of Underground Storage Tanks (4/19/01) | Y |
| BAAQMD Regulation 8, Rule 47 | Organic Compounds – Air Stripping and Soil Vapor Extraction Operations (6/15/05) | N |
| SIP Regulation 8, Rule 47 | Organic Compounds – Air Stripping and Soil Vapor Extraction Operations (4/26/95) | Y |
| BAAQMD Regulation 8, Rule 49 | Organic Compounds – Aerosol Paint Products (12/20/95) | N |
| SIP Regulation 8, Rule 49 | Organic Compounds – Aerosol Paint Products (3/22/95) | Y |
| BAAQMD Regulation 8, Rule 51 | Organic Compounds – Adhesive and Sealant Products (7/17/02) | N |
| SIP Regulation 8, Rule 51 | Organic Compounds – Adhesive and Sealant Products (2/26/02) | Y |
| BAAQMD Regulation 9, Rule 1 | Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95) | N |
| SIP Regulation 9, Rule 1 | Inorganic Gaseous Pollutants – Sulfur Dioxide (6/8/99) | Y |
| BAAQMD Regulation 9, Rule 2 | Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99) | N |
| BAAQMD Regulation 11, Rule 2 | Hazardous Pollutants – Asbestos Demolition, Renovation and Manufacturing (10/7/98) | N |
| BAAQMD Regulation 11, Rule 14 | Hazardous Pollutants – Asbestos Containing Serpentine (7/17/91) | N |

III. Generally Applicable Requirements

Table III
Generally Applicable Requirements

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) |
|--|---|------------------------------------|
| BAAQMD Regulation 12, Rule 4 | Miscellaneous Standards of Performance – Sandblasting (7/11/90) | N |
| SIP Regulation 12, Rule 4 | Miscellaneous Standards of Performance – Sandblasting (9/2/81) | Y |
| California Health and Safety Code Section 41750 et seq | Portable Equipment | N |
| California Health and Safety Code Section 44300 et seq. | Air Toxics “Hot Spots” Information and Assessment Act of 1987 | N |
| California Health and Safety Code, Title 17, Section 93115 | Airborne Toxic Control Measure for Stationary Compression Ignition Engines (10/18/07) | N |
| California Health and Safety Code, Title 17, Section 93116 | Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater (9/12/07) | N |
| 40 CFR Part 61, Subpart A | National Emission Standards for Hazardous Air Pollutants – General Provisions (5/16/07) | Y |

IV. SOURCE-SPECIFIC APPLICABLE REQUIREMENTS

The permit holder shall comply with all applicable requirements, including those specified in the BAAQMD and SIP Rules and Regulations and other federal requirements cited below. The requirements cited in the following tables apply in a specific manner to the indicated source(s).

The dates in parentheses in the Title column identify the versions of the regulations being cited and are, as applicable:

1. BAAQMD regulation(s): The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors
2. Any federal requirement, including a version of a District regulation that has been approved into the SIP: The most recent date of EPA approval of any portion of the rule, encompassing all actions on the rule through that date

The full text of each permit condition cited is included in Section VI, Permit Conditions, of this permit. The full language of SIP requirements is on EPA Region 9's website. The address:

<http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=Bay+Area+Air+Quality+Management+District-Agency-Wide+Provisions>

All other text may be found in the regulations themselves.

Table IV – A
Source-Specific Applicable Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|----------------------------|---|-----------------------------|-----------------------|
| BAAQMD Regulation 1 | General Provisions and Definitions (7/9/08) | | |
| 1-523 | Parametric Monitoring and Recordkeeping Procedures | N | |
| 1-523.1 | Reporting requirement for periods of inoperation > 24 hours | Y | |
| 1-523.2 | Limit on duration of inoperation | Y | |
| 1-523.3 | Reporting requirement for violations of any applicable limits | N | |
| 1-523.4 | Records of inoperation, tests, calibrations, adjustments, & maintenance | Y | |
| 1-523.5 | Maintenance and calibration | N | |

IV. Source-Specific Applicable Requirements

Table IV – A
Source-Specific Applicable Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|-------------------------------------|--|-----------------------------|-----------------------|
| SIP Regulation 1 | General Provisions and Definitions (6/28/1999) | | |
| 1-523 | Parametric Monitoring and Recordkeeping Procedures | Y | |
| 1-523.3 | Reports of Violations | Y ⁺ | |
| 1-523.5 | Maintenance and Calibration | Y ⁺ | |
| BAAQMD Regulation 6, Rule 1 | Particulate Matter – General Requirements (12/5/07) | | |
| 6-1-301 | Ringelmann No. 1 Limitation (applies to A-3, A-4, and A-5 Landfill Gas Flares only) | N | |
| 6-1-305 | Visible Particles (applies to A-3, A-4, and A-5 Landfill Gas Flares only) | N | |
| 6-1-310 | Particle Weight Limitation (applies to A-3, A-4, and A-5 Landfill Gas Flares only) | N | |
| 6-1-401 | Appearance of Emissions (applies to A-3, A-4, and A-5 Landfill Gas Flares only) | N | |
| SIP Regulation 6 | Particulate Matter and Visible Emissions (9/4/98) | | |
| 6-301 | Ringelmann No. 1 Limitation (applies to A-3, A-4, and A-5 Flares only) | Y | |
| 6-305 | Visible Particles (applies to A-3, A-4, and A-5 Flares only) | Y | |
| 6-310 | Particle Weight Limitation (applies to A-3, A-4, and A-5 Flares only) | Y | |
| 6-401 | Appearance of Emissions (applies to A-3, A-4, and A-5 Flares only) | Y | |
| BAAQMD Regulation 8, Rule 34 | Organic Compounds – Solid Waste Disposal Sites (6/15/05) | | |
| 8-34-113 | Limited Exemption, Inspection and Maintenance | Y | |
| 8-34-113.1 | Emission Minimization Requirement | Y | |
| 8-34-113.2 | Shutdown Time Limitation | Y | |
| 8-34-113.3 | Recordkeeping Requirement | Y | |
| 8-34-117 | Limited Exemption, Gas Collection System Components | Y | |
| 8-34-117.1 | Necessity of Existing Component Repairs/Adjustments | Y | |
| 8-34-117.2 | New Components are Described in Collection and Control System Design Plan | Y | |
| 8-34-117.3 | Meets Section 8-34-118 Requirements | Y | |

IV. Source-Specific Applicable Requirements

Table IV – A
Source-Specific Applicable Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|------------------------|---|-----------------------------|-----------------------|
| 8-34-117.4 | Limits on Number of Wells Shutdown | Y | |
| 8-34-117.5 | Shutdown Duration Limit | Y | |
| 8-34-117.6 | Well Disconnection Records | Y | |
| 8-34-118 | Limited Exemption, Construction Activities | Y | |
| 8-34-118.1 | Construction Plan | Y | |
| 8-34-118.2 | Activity is Required to Maintain Compliance with this Rule | Y | |
| 8-34-118.3 | Required or Approved by Other Enforcement Agencies | Y | |
| 8-34-118.4 | Emission Minimization Requirement | Y | |
| 8-34-118.5 | Excavated Refuse Requirements | Y | |
| 8-34-118.6 | Covering Requirements for Exposed Refuse | Y | |
| 8-34-118.7 | Installation Time Limit | Y | |
| 8-34-118.8 | Capping Required for New Components | Y | |
| 8-34-118.9 | Construction Activity Records | Y | |
| 8-34-301 | Landfill Gas Collection and Emission Control System Requirements | Y | |
| 8-34-301.1 | Continuous Operation | Y | |
| 8-34-301.2 | Collection and Control Systems Leak Limitations | Y | |
| 8-34-301.3 | Limits for Enclosed Flares (applies to A-3, A-4, and A-5 Flares only) | Y | |
| 8-34-303 | Landfill Surface Requirements | Y | |
| 8-34-304 | Gas Collection System Installation Requirements | Y | |
| 8-34-304.1 | Based on Waste Age For Inactive or Closed Areas | Y | |
| 8-34-304.4 | Based on NMOC Emission Rate | Y | |
| 8-34-305 | Wellhead Requirements | Y | |
| 8-34-305.1 | Operate Under Vacuum | Y | |
| 8-34-305.2 | Temperature < 55 °C (except as specified in Condition # 16065, Part 5) | Y | |
| 8-34-305.3 | Nitrogen < 20% (except as specified in Condition # 16065, Part 5) or | Y | |
| 8-34-305.4 | Oxygen < 5% (except as specified in Condition # 16065, Part 5) | Y | |
| 8-34-405 | Design Capacity Reports | Y | |
| 8-34-408 | Collection and Control System Design Plans | Y | |
| 8-34-408.2 | Sites With Existing Collection and Control Systems | Y | |
| 8-34-411 | Annual Report | Y | |
| 8-34-412 | Compliance Demonstration Tests | Y | |

IV. Source-Specific Applicable Requirements

Table IV – A
Source-Specific Applicable Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|-------------------------------|---|------------------------------------|------------------------------|
| 8-34-413 | Performance Test Report | Y | |
| 8-34-414 | Repair Schedule for Wellhead Excesses | Y | |
| 8-34-414.1 | Records of Excesses | Y | |
| 8-34-414.2 | Corrective Action | Y | |
| 8-34-414.3 | Collection System Expansion | Y | |
| 8-34-414.4 | Operational Due Date for Expansion | Y | |
| 8-34-415 | Repair Schedule for Surface Leak Excesses | Y | |
| 8-34-415.1 | Records of Excesses | Y | |
| 8-34-415.2 | Corrective Action | Y | |
| 8-34-415.3 | Re-monitor Excess Location Within 10 Days | Y | |
| 8-34-415.4 | Re-monitor Excess Location Within 1 Month | Y | |
| 8-34-415.5 | If No More Excesses, No Further Re-Monitoring | Y | |
| 8-34-415.6 | Additional Corrective Action | Y | |
| 8-34-415.7 | Re-monitor Second Excess Within 10 days | Y | |
| 8-34-415.8 | Re-monitor Second Excess Within 1 Month | Y | |
| 8-34-415.9 | If No More Excesses, No Further Re-monitoring | Y | |
| 8-34-415.10 | Collection System Expansion for Third Excess in a Quarter | Y | |
| 8-34-415.11 | Operational Due Date for Expansion | Y | |
| 8-34-416 | Cover Repairs | Y | |
| 8-34-501 | Operating Records | Y | |
| 8-34-501.1 | Collection System Downtime | Y | |
| 8-34-501.2 | Emission Control System Downtime | Y | |
| 8-34-501.3 | Continuous Temperature Records for Enclosed Combustors (applies to A-3, A-4, and A-5 Flares only) | Y | |
| 8-34-501.4 | Testing | Y | |
| 8-34-501.6 | Leak Discovery and Repair Records | Y | |
| 8-34-501.7 | Waste Acceptance Records | Y | |
| 8-34-501.8 | Non-decomposable Waste Records | Y | |
| 8-34-501.9 | Wellhead Excesses and Repair Records | Y | |
| 8-34-501.10 | Gas Flow Rate Records for All Emission Control Systems | Y | |
| 8-34-501.12 | Records Retention for 5 Years | Y | |
| 8-34-503 | Landfill Gas Collection and Emission Control System Leak Testing | Y | |
| 8-34-504 | Portable Hydrocarbon Detector | Y | |

IV. Source-Specific Applicable Requirements

Table IV – A
Source-Specific Applicable Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|------------------------------------|---|-----------------------------|-----------------------|
| 8-34-505 | Well Head Monitoring | Y | |
| 8-34-506 | Landfill Surface Monitoring | Y | |
| 8-34-506.1 | Criteria for Annual Monitoring: Closed Landfill | Y | |
| 8-34-506.2 | Criteria for Annual Monitoring: No Excess in 3 Quarters | Y | |
| 8-34-506.3 | Criteria for Annual Monitoring: Revert to Quarterly Monitoring if an Excess is Detected | Y | |
| 8-34-507 | Continuous Temperature Monitor and Recorder (applies to A-3, A-4, and A-5 Flares only) | Y | |
| 8-34-508 | Gas Flow Meter | Y | |
| 8-34-510 | Cover Integrity Monitoring | Y | |
| BAAQMD Regulation 9, Rule 1 | Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95) | | |
| 9-1-301 | Limitations on Ground Level Concentrations (applies to A-3, A-4, and A-5 Flares only) | Y | |
| 9-1-302 | General Emission Limitations (applies to A-3, A-4, and A-5 Flares only) | Y | |
| BAAQMD Regulation 9, Rule 2 | Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99) | | |
| 9-2-301 | Limitations on Hydrogen Sulfide | N | |
| 40 CFR Part 60, Subpart A | Standards of Performance for New Stationary Sources – General Provisions (6/13/07)) | | |
| 60.4(b) | Requires Submission of Requests, Reports, Applications, and Other Correspondence to the Administrator | Y | |
| 60.7 | Notification and Record Keeping | Y | |
| 60.8 | Performance Tests | Y | |
| 60.11 | Compliance with Standards and Maintenance Requirements | Y | |
| 60.11(a) | Compliance determined by performance tests | Y | |
| 60.11(d) | Control devices operated using good air pollution control practice | Y | |
| 60.12 | Circumvention | Y | |
| 60.13 | Monitoring Requirements | Y | |

IV. Source-Specific Applicable Requirements

Table IV – A
Source-Specific Applicable Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|-----------------------------------|---|------------------------------------|------------------------------|
| 60.13(a) | Applies to all continuous monitoring systems | Y | |
| 60.13(b) | Monitors shall be installed and operational before performing performance tests | Y | |
| 60.13(e) | Continuous monitors shall operate continuously | Y | |
| 60.13(f) | Monitors shall be installed in proper locations | Y | |
| 60.13(g) | Requires multiple monitors for multiple stacks | Y | |
| 60.14 | Modification | Y | |
| 60.15 | Reconstruction | Y | |
| 60.19 | General Notification and Reporting Requirements | Y | |
| 40 CFR Part 60, Subpart Cc | Standards of Performance for New Stationary Sources – Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills (2/24/99) | | |
| 60.36c(a) | Collection and Control Systems in Compliance by 30 months after Initial NMOC Emission Rate Report Shows NMOC Emissions \geq 50 MG/year | Y | |
| 40 CFR Part 62, Subpart F | Approval and Promulgation of State Plans for Designated Facilities and Pollutants: California (6/9/03) | | |
| 62.1100 | Identification of Plan | Y | |
| 62.1115 | Identification of Sources | Y | |
| 40 CFR Part 63, Subpart A | National Emission Standards for Hazardous Air Pollutants: General Provisions (-4/20/06) | | |
| 63.4 | Prohibited activities and circumvention | Y | |
| 63.5(b) | Requirements for existing, newly constructed, and reconstructed sources | Y | |
| 63.6(e) | Operation and maintenance requirements and SSM Plan | Y | |
| 63.6(f) | Compliance with non-opacity emission standards | Y | |
| 63.10(b)(2)(i-v) | Records for startup, shutdown, malfunction, and maintenance | Y | |
| 63.10(d)(5) | Startup, Shutdown, and Malfunction (SSM) Reports | Y | |

IV. Source-Specific Applicable Requirements

Table IV – A
Source-Specific Applicable Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|-------------------------------------|---|-----------------------------|-----------------------|
| 40 CFR Part 63, Subpart AAAA | National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills (4/20/06) | | |
| 63.1945 | When do I have to comply with this subpart? | Y | |
| 63.1945(b) | Compliance date for existing affected landfills | Y | |
| 63.1955 | What requirements must I meet? | Y | |
| 63.1955(a)(2) | Comply with State Plan that implements 40 CFR Part 60, Subpart Cc | Y | |
| 63.1955(b) | Comply with 63.1960-63.1985, if a collection and control system is required by 40 CFR Part 60, Subpart WWW or a State Plan implementing 40 CFR Part 60, Subpart Cc | Y | |
| 63.1955(c) | Comply with all approved alternatives to standards for collection and control systems plus all SSM requirements and 6 month compliance reporting requirements | Y | |
| 63.1960 | How is compliance determined? | Y | |
| 63.1965 | What is a deviation? | Y | |
| 63.1975 | How do I calculate the 3-hour block average used to demonstrate compliance? | Y | |
| 63.1980 | What records and reports must I keep and submit? | Y | |
| 63.1980(a) | Comply with all record keeping and reporting requirements in 40 CFR Part 60, Subpart WWW or the State Plan implementing 40 CFR Part 60, Subpart Cc, except that the annual report required by 40 CFR 60.757(f) must be submitted every 6 months | Y | |
| 63.1980(b) | Comply with all record keeping and reporting requirements in 40 CFR Part 60, Subpart A and 40 CFR Part 63, Subpart A, including SSM Plans and Reports | Y | |
| BAAQMD Condition # 16065 | | | |
| Part 1 | Design capacity and waste acceptance limits (Regulation 2-1-301) | Y | |
| Part 2 | Landfill gas control system requirements (Regulation 8-34-301) | Y | |
| Part 3 | Landfill gas collection system operating requirements (Regulation 8-34-301.1) | Y | |

IV. Source-Specific Applicable Requirements

Table IV – A
Source-Specific Applicable Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|-------------------------------|---|------------------------------------|------------------------------|
| Part 4 | Landfill gas collection system description (Regulations 2-1-301, 8-34-301.1, 8-34-303, 8-34-304, and 8-34-305) | Y | |
| Part 5 | Alternative well head requirements limits for specific wells (Regulation 8-34-305) | Y | |
| Part 6 | Alarm and equipment requirements for flares (Regulation 8-34-301) | Y | |
| Part 7 | Combustion zone temperature limits for flares (Toxic Risk Management Policy and Regulations 8-34-301.3) | Y | |
| Part 8 | [deleted] | Y | |
| Part 9 | NO _x emission limits for flares (Cumulative Increase) | Y | |
| Part 10 | CO emission limits for flares (Cumulative Increase and RACT) | Y | |
| Part 11 | [deleted] | N | |
| Part 12 | Landfill gas sulfur content limit (Regulation 9-1-302) | Y | |
| Part 13 | Annual source test requirements (Cumulative Increase, Toxic Risk Management Policy, and Regulations 8-34-301.3, 8-34-412, and 9-1-302) | Y | |
| Part 14 | Annual landfill gas characterization analyses (AB-2588 Air Toxics Hot sports Act , Toxic Risk Management Policy and Regulation 8-34-412, and 9-1-302) | Y | |
| Part 15 | Record keeping requirements (Cumulative Increase and Regulations 2-1-301, 2-6-501, 8-34-301, 8-34-303, 8-34-305, 8-34-412, 8-34-414, 8-34-415, 8-34-501, 8-34-503, 8-34-505, 8-34-506, and 9-1-302) | Y | |
| Part 16 | Reporting periods and report submittal due dates for the Regulation 8, Rule 34 report (Regulation 8-34-411 and 40 CFR 63.1980(a)) | Y | |

IV. Source-Specific Applicable Requirements

Table IV – B
Source-Specific Applicable Requirements
S-11 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR AND
S-14 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|------------------------------------|--|-----------------------------|-----------------------|
| BAAQMD Regulation 6, Rule 1 | Particulate Matter – General Requirements (12/5/07) | | |
| 6-1-303 | Ringelmann No. 2 Limitation | N | |
| 6-1-303.1 | For Internal Combustion Engines Less Than 1500 in ³ Displacement, or For Standby Engines | N | |
| 6-1-305 | Visible Particles | N | |
| 6-1-310 | Particulate Weight Limitation | N | |
| 6-1-401 | Appearance of Emissions | N | |
| SIP Regulation 6 | Particulate Matter and Visible Emissions (9/4/98) | | |
| 6-303 | Ringelmann No. 2 Limitation | Y | |
| 6-305 | Visible Particles | Y | |
| 6-310 | Particulate Weight Limitation | Y | |
| 6-401 | Appearance of Emissions | Y | |
| BAAQMD Regulation 9, Rule 1 | Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95) | | |
| 9-1-301 | Limitations on Ground Level Concentrations | Y | |
| 9-1-304 | Fuel Burning (Liquid and Solid Fuels) | Y | |
| BAAQMD Regulation 9 Rule 8 | Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (7/25/07) | | |
| 9-8-110 | Exemptions | N | |
| 9-8-110.1 | For <250 hp Engines | N | Expires 1/1/12 |
| 9-8-110.3 | For Liquid Fuel Fired Engines | N | Expires 1/1/12 |
| 9-8-110.5 | For Emergency Standby Engines | N | |
| 9-8-330 | Emergency Standby Engines, Hours of Operation | N | |
| 9-8-330.1 | For Emergency Use | N | |
| 9-8-330.2 | For Reliability-Related Activities | N | Expires 1/1/12 |

IV. Source-Specific Applicable Requirements

Table IV – B
Source-Specific Applicable Requirements
S-11 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR AND
S-14 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|-------------------------------------|---|-----------------------------|-----------------------|
| 9-8-330.3 | For Reliability-Related Activities | N | 1/1/12 |
| 9-8-502 | Recordkeeping | N | |
| 9-8-502.1 | For Exempt Engines | N | |
| 9-8-530 | Emergency Standby Engines and Low Usage Engines, Monitoring and Recordkeeping | N | |
| 9-8-530.1 | Hours of Operation (total) | N | |
| 9-8-530.2 | Hours of Operation (emergency) | N | |
| 9-8-530.3 | Nature of Each Emergency Condition | N | |
| CCR, Title 17, Section 93115 | Airborne Toxic Control Measure for Stationary Compression Ignition Engines (10/18/07) | | |
| §93115.3 | Exemption (applies to S-14 only) | N | |
| §93115.3(d) | For In-Use Engines Permitted Before 1/1/05 Pursuant to Risk Management Guidance (applies to S-14 only) | N | |
| §93115.5 | Fuel and Fuel Additive Requirements for New and In-Use Stationary CI Engines That Have a Rated Brake Horsepower of Greater Than (>50 bhp) | N | |
| §93115.5(b) | For In-Use Emergency Standby CI Engines | N | |
| §93115.6 | Emergency Standby Diesel-Fueled CI Engine (>50 bhp) Operating Requirements and Emission Standards | N | |
| §93115.6(b) | For In-Use Emergency Standby Diesel Fueled CI Engines | N | |
| §93115.6(b)(1) | Operating Restrictions For Rotating Outages | N | |
| §93115.6(b)(3) | Emission Standards and Operating Requirements (applies to S-11 only) | N | |
| §93115.6(b)(3)(A) | Diesel PM Standard and Hours of Operating Limitations (applies to S-11 only) | N | |
| §93115.6(b)(3)(A)(1) | General Requirements (applies to S-11 only) | N | |
| §93115.6(b)(3)(A)(1)(b) | For Engines That Emit Less Than or Equal to 0.40 g/bhp-hp (applies to S-11 only) | N | |
| §93115.10 | Recordkeeping, Reporting and Monitoring Requirements | N | |
| §93115.10(e) | Monitoring Equipment | N | |
| §93115.10(e)(1) | Non-Resettable Hour Meter | N | |
| §93115.10(g) | Reporting Requirements for Emergency Standby-Engines | N | |
| §93115.10(g)(1) | Records and Monthly Summary | N | |

IV. Source-Specific Applicable Requirements

Table IV – B
Source-Specific Applicable Requirements
S-11 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR AND
S-14 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|--------------------------|--|-----------------------------|-----------------------|
| §93115.10(g)(2) | Records Retention and Availability | N | |
| BAAQMD Condition # 24175 | | | |
| Part 1 | For S-11 only: Operating Time Limitation for Reliability-Related Testing (CCR Title 17, Section 93115.6(b)(3)(A)(1)(b)) | N | |
| Part 2 | For S-14 only: Operating Time Limitation for Reliability-Related Testing (Cumulative Increase, Offsets, Toxic Risk Management Policy, CCR Title 17, Section 93115.3(d), and Regulations 9-8-330.2 and 9-8-330.3) | N | |
| Part 3 | Operating Restrictions (CCR Title 17, Section 93115.6(b)(1 and 3) and Regulation 9-8-330) | N | |
| Part 4 | Hour Meter Monitoring Requirement (CCR Title 17, Section 93115.10(e)(1) and Regulation 9-8-530) | N | |
| Part 5 | Records (CCR Title 17, Section 93115.10(e and g) and Regulations 2-6-501, 9-1-304, and 9-8-530) | Y | |

IV. Source-Specific Applicable Requirements

Table IV – C
Source-Specific Applicable Requirements
S-162 MICROTURBINE AND S-173 MICROTURBINE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|-------------------------------------|---|-----------------------------|-----------------------|
| BAAQMD Regulation 6, Rule 1 | Particulate Matter – General Requirements (12/5/07) | | |
| 6-1-301 | Ringelmann No. 1 Limitation | N | |
| 6-1-305 | Visible Particles | N | |
| 6-1-310 | Particulate Weight Limitation | N | |
| 6-1-401 | Appearance of Emissions | N | |
| SIP Regulation 6 | Particulate Matter and Visible Emissions (9/4/98) | | |
| 6-301 | Ringelmann No. 1 Limitation | Y | |
| 6-305 | Visible Particles | Y | |
| 6-310 | Particulate Weight Limitation | Y | |
| 6-401 | Appearance of Emissions | Y | |
| BAAQMD Regulation 8, Rule 34 | Organic Compounds - Solid Waste Disposal Sites (6/15/05) | | |
| 8-34-113 | Limited Exemption, Inspection and Maintenance | Y | |
| 8-34-113.1 | Emission Minimization Requirement | Y | |
| 8-34-113.3 | Records | Y | |
| 8-34-301 | Landfill Gas Collection and Emission Control System Requirements | Y | |
| 8-34-301.2 | Collection and Control Systems Leak Limitations | Y | |
| 8-34-301.4 | Limits for Other Emission Control Systems | Y | |
| 8-34-411 | Annual Report | Y | |
| 8-34-412 | Compliance Demonstration Tests | Y | |
| 8-34-413 | Performance Test Report | Y | |
| 8-34-501 | Operating Records | Y | |
| 8-34-501.4 | Testing | Y | |
| 8-34-501.6 | Leak Discovery and Repair Records | Y | |
| 8-34-501.10 | Gas Flow Rate Records for All Emission Control Systems | Y | |
| 8-34-501.11 | Records of Key Emission Control System Operating Parameter Monitoring | Y | |
| 8-34-501.12 | Records Retention for 5 Years | Y | |
| 8-34-503 | Landfill Gas Collection and Emission Control System Leak Testing | Y | |

IV. Source-Specific Applicable Requirements

Table IV – C
Source-Specific Applicable Requirements
S-162 MICROTURBINE AND S-173 MICROTURBINE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|--|---|-----------------------------|-----------------------|
| 8-34-504 | Portable Hydrocarbon Detector | Y | |
| 8-34-509 | Key Emission Control System Operating Parameter(s) | Y | |
| BAAQMD Regulation 9, Rule 1 | Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95) | | |
| 9-1-301 | Limitations on Ground Level Concentrations | Y | |
| 9-1-302 | General Emission Limitations | Y | |
| BAAQMD Regulation 9, Rule 2 | Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99) | | |
| 9-2-301 | Limitations on Hydrogen Sulfide | N | |
| <u>BAAQMD Regulation 9, Rule 9</u> | <u>Small Gas Turbines (12/6/06)</u> | | |
| <u>9-9-110</u> | <u>Exemption, Small Gas Turbines</u> | <u>Y</u> N | |
| <u>SIP Regulation 9 Rule 9</u> | <u>Inorganic Gaseous Pollutants- Nitrogen Oxides from Stationary gas Turbines (12/15/97)</u> | | |
| <u>9-9-110</u> | <u>Exemption- Small Gas Turbines</u> | <u>Y</u> | |
| <u>CCR, Title 17, Section 94200-94214</u> | <u>Distributed Generation Certification Program (4/18/08(10/19/2006)</u> | | |
| <u>§94203(c)</u> | <u>Requirements- Waste Gas Emission Standards Microturbines State Certification Executive Order DG-020</u> | <u>N</u> | |
| <u>40 CFR Part 60, Subpart GG</u> | <u>Standards of Performance for New Stationary Sources – Emission Guidelines for Stationary Gas Turbines (2/24/06)</u> | | |
| <u>60.330(a)</u> | <u>Stationary Gas Turbines with a heat input at peak load of 1 MM Btu/Hr are not subject to this NSPS</u> | <u>Y</u> | |
| BAAQMD Condition # <u>2357924989</u> | | | |
| Part 1 | NO _x , VOC, CO, and NMOC Emissions Limits (Offsets) | Y | |
| Part 2 | CO Emissions Limit (Cumulative Increase) | Y | |

IV. Source-Specific Applicable Requirements

Table IV – C
Source-Specific Applicable Requirements
S-1~~62~~ MICROTURBINE AND S-1~~73~~ MICROTURBINE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|-------------------------------|--|------------------------------------|------------------------------|
| Part 23 | Source Testing Requirements (Cumulative Increase, Offsets, and Regulations 8-34-301.4, 8-34-412, and 8-34-509) | Y | |
| Part 34 | Records (Regulations 2-6-501, 8-34-301.4, 8-34-412, 8-34-501.11, 8-34-501.12, and 8-34-509) | Y | |

V. SCHEDULE OF COMPLIANCE

The permit holder shall comply with all applicable requirements cited in this permit. The permit holder shall also comply with applicable requirements that become effective during the term of this permit on a timely basis.

VI. PERMIT CONDITIONS

Any condition that is preceded by an asterisk is not federally enforceable.

Condition # 16065

FOR: S-1 LANDFILL AND GAS COLLECTION SYSTEM; A-3 LANDFILL GAS FLARE; A-4 LANDFILL GAS FLARE; AND A-5 LANDFILL GAS FLARE;

1. The S-1 Landfill is closed. The Permit Holder shall apply for and receive a Change of Permit Conditions before accepting any solid waste for disposal at S-1. The total cumulative amount of all wastes placed in the landfill areas controlled by the Permit Holder shall not exceed 12,725,000 tons. The maximum design capacity of the landfill (total volume of all wastes and cover materials placed in the landfill area controlled by the Permit Holder, excluding final cover) shall not exceed 18,852,000 cubic yards. (Basis: Regulation 2-1-301)
2. All landfill gas collected by the Landfill Gas Collection Systems for S-1 shall be: abated by the Landfill Gas Flares (A-3, A-4, or A-5); burned in the Microturbines (S-~~1216~~ or S-~~1317~~); or sold for off-site combustion in one or more of the following devices: [S-29 IC Engine Genset at Facility # A5081](#), [S-2 IC Engine Genset at Facility # B3816](#), or [S-4 IC Engine Genset at Facility # B3817](#)[Facility #15982 Google, Sources S-20, S-29, and S-30, IC Engines](#). The Permit Holder may use any combination of the landfill gas control devices listed above, provided that sufficient landfill gas is collected and controlled to prevent violations of the Regulation 8-34-303 surface leak limit and provided that all of the following operating requirements are satisfied. (Basis: Regulation 8-34-301)
 - a. Operation of the microturbines (~~S-1216 and S-1317~~) is optional and is not required for landfill gas abatement. When the microturbines are burning landfill gas, other approved control devices (such as one flare or three engines) must be operated concurrently with the microturbines to achieve the necessary control system capacity for the landfill.
 - b. Raw or untreated landfill gas shall not be vented to the atmosphere, except for unavoidable landfill gas emissions that occur during collection system installation, maintenance, or repair (which is performed in compliance with Regulation 8, Rule 34, Sections 113, 117, and/or 118) and inadvertent component or surface leaks that do not exceed the limits specified in 8-34-301.2 or 8-34-303.

VI. Permit Conditions

Condition # 16065

FOR: S-1 LANDFILL AND GAS COLLECTION SYSTEM; A-3 LANDFILL GAS FLARE; A-4 LANDFILL GAS FLARE; AND A-5 LANDFILL GAS FLARE;

3. The landfill gas collection system described below in Part 4a shall be operated continuously, as defined in Regulation 8-34-219. Wells and adjustment valves shall not be disconnected, removed, or completely closed, without prior written authorization from the District, unless the Permit Holder Complies with all applicable provisions of Regulation 8, Rule 34, Sections 113, 117, and 118. (Basis: Regulation 8-34-301.1)
4. The Permit Holder shall apply for and receive a Change of Conditions before altering the landfill gas collection system described in Part 4a below. Increasing or decreasing the number of wells or collectors are considered to be alterations that are subject to this requirement. Redrilling or replacement of an existing well does not require a Change of Conditions provided the replacement well is close to the location of the existing well. Adding or modifying risers, laterals, or header pipes are not subject to this Change of Condition requirement. (Basis: Regulations 8-34-301.1, 8-34-303, 8-34-304, and 8-34-305)
 - a. The Permit Holder has been issued a Permit to Operate for the landfill gas collection system components listed below. Well and collector locations, depths, and lengths are as described in detail in Permit Application # 1009.

| <u>Area Description</u> | <u>Required Components</u> |
|-------------------------|----------------------------|
| 544 Acre Site | 140 vertical wells |
| 544 Acre Site | 6 horizontal collectors |
| Vista Site | 88 vertical wells |
| Vista Site | 1 horizontal collector |
| Crittenden Site | 36 vertical wells |
5. The gas collection system operating requirements listed below shall replace the well head requirements identified in Regulation 8-34-305.2 through 8-34-305.4 for the specified wells and collectors. All wells and collectors remain subject to the Regulation 8-34-305.1 requirement to maintain vacuum on each well head. In addition, part 5c clarifies the applicable limits for vaults containing gas collection system components. (Basis: Regulations 8-34-301.2, 8-34-303, and 8-34-305)

VI. Permit Conditions

Condition # 16065

FOR: S-1 LANDFILL AND GAS COLLECTION SYSTEM; A-3 LANDFILL GAS FLARE; A-4 LANDFILL GAS FLARE; AND A-5 LANDFILL GAS FLARE;

- a. The Regulation 8-34-305.2 temperature limit shall not apply to the wells listed below. The landfill gas temperature in each of the wells listed below shall not exceed 140 degrees F.

Vista Landfill: VE-6, VE-9, VF-3, VF-11, VG-3, VG-3A, VG-4, VH-4, VH-5, VH-10, VJ-3, VJ-4, VJ-04A (13 wells)

544-Acre Landfill: NEA-08 (1 vertical well)

- b. The Regulation 8-34-305.3 nitrogen concentration limit and the Regulation 8-34-305.4 oxygen concentration limit shall not apply to the wells listed below, provided that the oxygen concentration in the landfill gas at the main header does not exceed 5% O₂ by volume (dry basis) and the methane concentration in the landfill gas at the main header is not less than 35% CH₄ by volume (dry basis). The permit holder shall monitor the landfill gas from the main header for oxygen and methane on a monthly basis to demonstrate compliance with this part.

Crittenden Landfill: CRA-1, CRA-2R, CRA-3, CRA-4, CRA-5R, CRA-6, CRA-7, CRA-8, CRA-9, CRA-10, CRA-13, CRB-1, CRB-2, CRB-3, CRB-4, CRB-5, CRB-6, CRB-7R, CRB-8, CRD-1, CRD-3, CRD-5, CRD-8, CRD-9, CRD-10, and CRD-11 (26 vertical wells)

Vista Landfill: VA-HZ, VA-1, VA-01A, VA-2, VA-3, VA-3A, VA-4, VB-1, VB-2R, VB-3A, VB-4, VB-5R, VB-5A, VB-6, VB-7, VB-8, VC-1, VC-2, VC-3, VC-5, VC-6, VC-7, VC-8, VE-1, VE-4R, VE-5, VE-6, VE-7, VE-8, VE-9, VE-10, VF-1, VF-2, VF-4, VF-5R, VF-7, VF-8R, VH-3, VJ-2R, VJ-3R, VJ-4A, VJ-4R, VJ-5R, VJ-6, VJ-7R, VJ-8, VJ-9R, VJ-10, VJ-11R, VK-3, VK-4, VK-5 (1 horizontal collector and 51 vertical wells)

VI. Permit Conditions

Condition # 16065

FOR: S-1 LANDFILL AND GAS COLLECTION SYSTEM; A-3 LANDFILL GAS FLARE; A-4 LANDFILL GAS FLARE; AND A-5 LANDFILL GAS FLARE;

544-Acre Landfill: WA-1, WA-02, WA-5, WA-6, WA-8, WA-9, WA-13, WA-14, WA-15, WA-16, WA-18, WA-19, WA-20, WA-21, WA-22, WA-24, WA-25, WA-26, WA-27, WA-28, WA-29, WB-1, WB-2, WB-3, WB-4, WB-5, WB-5A, WB-6, WB-6A, WB-7, WB-7A, WB-8, WB-9, WB-10, WB-11, WB-12, WB12-A, WB-16, WB-17, WD-3, WN-1, WN-2, WN-3R, WN-4, WN-4A, WN-5, WN-6, WN-7, WN-8, WN-9, WN-10, WN-11, WN-12, WN-13 (54 vertical wells)
A-16, B-2, B-3, B-20, B-24, B-28, Y-01, Y-02, Y-03, Y-04, Y-05, Y-06, LE-1, LE-2, LE-3, LE-4, FHZ-1, FHZ-2, FHZ-3, FHZ-4, FHZ-5, and MPHZ (6 horizontal collectors and 16 vertical wells)
NEA-01, NEA-02, NEA-03, NEA-04, NEA-05, NEA-06, NEA-07, NEA-08, NEA-09, NEA-11, NEA-13, NEA-15, NEA-16, NEB-01, NEB-02, NEB-03, NEB-04, NEB-05, NEB-06, NEB-07, NEB-08, NEB-10, NEB-11, NEB-12, NEB-13, NEB-14, NEC-01, NEC-02, NEC-03, NED-01, NEE-02, NEE-03, NEE-04, NEE-05, NEE-06. (35 vertical wells)

- c. This subpart applies to vaults containing gas collection system equipment, where the top of the vault is located at or near the surface of the landfill. The vault shall be monitored at both 1 cm from the vault (for comparison to the component leak limit of Regulation 8-34-301.2) and 2 inches above the vault (for comparison to the surface leak limit of Regulation 8-34-303).
 - i. If during an inspection the District's monitored readings show compliance with both the component leak limit and the surface leak limit, the vault and components within shall be deemed to be in compliance with Regulations 8-34-301.2 and 8-34-303. No further testing is necessary.

VI. Permit Conditions

Condition # 16065

FOR: S-1 LANDFILL AND GAS COLLECTION SYSTEM; A-3 LANDFILL GAS FLARE; A-4 LANDFILL GAS FLARE; AND A-5 LANDFILL GAS FLARE;

- ii. If the District's monitored readings show an excess of either the component leak limit or the surface leak limit, the operator shall comply with the Regulation 8-34-415 Repair Schedule for Landfill Surface Leak Excesses, until the source of the leak can be identified. The vault shall be opened and allowed to air out for at least 10 minutes. The collection system components within the vault shall be re-monitored at 1 cm from the components and the landfill surface surrounding the vault shall be re-monitored at 2 inches above the surface.
 - iii. If the re-monitoring (after airing the vault for 10 minutes) shows no component leaks and no surface leaks, the vault and components within shall be deemed to be in compliance with Regulations 8-34-301.2 and 8-34-303.
 - iv. If the re-monitoring shows a component leak, or the operator's further evaluation determines that the source of the emissions excess was a collection system component, then a violation of 8-34-301.2 shall be deemed to have occurred; and the operator shall take all necessary corrective action and shall comply with all applicable reporting requirements.
 - v. If the re-monitoring shows a surface leak but not a component leak, the operator shall continue to comply with all applicable provisions of the Regulation 8-34-415 Repair Schedule for Landfill Surface Leak Excesses.
6. Each flare shall be equipped with auto restart capability and both local and remote alarm systems. (Basis: 8-34-301.1)
7. The combustion zone temperature of each flare (A-3, A-4, and A-5) shall be maintained at a minimum of 1400 degrees F, averaged over any three-hour period. If a source test demonstrates compliance with all applicable requirements at a different temperature, the APCO will revise the minimum combustion zone temperature limit in accordance with the procedures identified in Regulations 2-6-414 or 2-6-415 and the following criteria. The minimum combustion zone temperature for a flare shall be equal to the average combustion zone temperature measured during the most recent complying source test minus 50 degrees F, provided that the minimum combustion zone temperature shall not be less than 1400 degrees F. (Basis: Toxic Risk Management Policy and Regulation 8-34-301.3)

VI. Permit Conditions

Condition # 16065

FOR: S-1 LANDFILL AND GAS COLLECTION SYSTEM; A-3 LANDFILL GAS FLARE; A-4 LANDFILL GAS FLARE; AND A-5 LANDFILL GAS FLARE;

8. [deleted]
9. Nitrogen oxide (NO_x) emissions from the flares shall not exceed the concentration limits listed below, except as provided by source test results demonstrating a NO_x emission rate within the specified limit. (Basis: Cumulative Increase)
 - a. For A-3: 33 ppmv of NO_x, corrected to 15% oxygen, dry basis. If the NO_x limit of 33 ppmv is exceeded, the flare will remain in compliance if source test results indicate a NO_x emission rate of 0.13 pounds per MMBTU or less;
 - b. For A-4: 15 ppmv of NO_x, corrected to 15% oxygen, dry basis. If the NO_x limit of 15 ppmv is exceeded, the flare will remain in compliance if source test results indicate a NO_x emission rate of 0.06 pounds per MMBTU or less;
 - c. For A-5: 15 ppmv of NO_x, corrected to 15% oxygen, dry basis. If the NO_x limit of 15 ppmv is exceeded, the flare will remain in compliance if source test results indicate a NO_x emission rate of 0.06 pounds per MMBTU or less;
10. Carbon monoxide (CO) emissions from the flares shall not exceed the concentration limits listed below, except as provided by source test results demonstrating a CO emission rate within the specified limit. (Basis: Cumulative Increase and RACT)
 - a. For A-3: 83 ppmv of CO, corrected to 15% oxygen, dry basis. If the CO limit of 83 ppmv is exceeded, the flare will remain in compliance if source test results indicate a CO emission rate of 0.20 pounds per MMBTU or less.
 - b. For A-4: 83 ppmv of CO, corrected to 15% oxygen, dry basis. If the CO limit of 83 ppmv is exceeded, the flare will remain in compliance if source test results indicate a CO emission rate of 0.20 pounds per MMBTU or less.
 - c. For A-5: 83 ppmv of CO, corrected to 15% oxygen, dry basis. If the CO limit of 83 ppmv is exceeded, the flare will remain in compliance if source test results indicate a CO emission rate of 0.20 pounds per MMBTU or less.

VI. Permit Conditions

Condition # 16065

FOR: S-1 LANDFILL AND GAS COLLECTION SYSTEM; A-3 LANDFILL GAS FLARE; A-4 LANDFILL GAS FLARE; AND A-5 LANDFILL GAS FLARE;

- *11. [deleted]
12. If the total reduced sulfur compound concentration in the collected landfill gas is monitored as a surrogate for monitoring sulfur dioxide in the flare exhaust, the concentration of total reduced sulfur compounds in the collected landfill gas shall not exceed 1300 ppmv (dry). (Basis: Regulation 9-1-302)
13. In order to demonstrate compliance with Parts 7, 9, 10, and 12 above and Regulations 8-34-301.3, 8-34-412, and 9-1-302, the Permit Holder shall ensure that a District approved source test is conducted annually on each flare (A-3, A-4, and A-5). Each annual source test shall determine the following:
- landfill gas flow rate to the flare (dry basis);
 - concentrations (dry basis) of carbon dioxide (CO₂), nitrogen (N₂), oxygen (O₂), total hydrocarbons (THC), methane (CH₄), and total non-methane organic compounds (NMOC) in the landfill gas;
 - stack gas flow rate from the flare (dry basis);
 - concentrations (dry basis) of NO_x, CO, THC, CH₄, NMOC, and O₂ in the flare stack gas;
 - the NMOC destruction efficiency achieved by the flare; and
 - the average combustion zone temperature in the flare during the test period.
 - concentration (dry basis) of SO₂ in the flare stack gas, unless the Permit Holder is meeting the requirements of Part 12 and tests for all sulfur compounds listed in EPA's AP-42 Table 2.4-1 pursuant to Part 14.

Each annual source test shall be conducted no later than 12 months after the previous annual source test. The Source Test Section of the District shall be contacted to obtain approval of the source test procedures at least 14 days in advance of each source test. The Source Test Section shall be notified of the scheduled test date at least 7 days in advance of each source test. The source test report shall be submitted to the Compliance and Enforcement Division and the Source Test Section within 45 days of the test date.

(Basis: Cumulative Increase, Toxic Risk Management Policy, and Regulations 8-34-301.3, 8-34-412, and 9-1-302.)

VI. Permit Conditions

Condition # 16065

FOR: S-1 LANDFILL AND GAS COLLECTION SYSTEM; A-3 LANDFILL GAS FLARE; A-4 LANDFILL GAS FLARE; AND A-5 LANDFILL GAS FLARE;

14. The Permit Holder shall conduct a characterization of the landfill gas concurrent with the annual source test required by Part 13 above. The landfill gas sample shall be drawn from the main landfill gas header. In addition to the compounds listed in Part 13b, the landfill gas shall be analyzed for all the organic compounds listed in the most recent version of EPA's AP-42 Table 2.4-1. Sulfur compound testing is not required, if the Permit Holder is satisfying Part 13g by conducting annual SO₂ testing at the flare exhaust. All concentrations shall be reported on a dry basis. The test report shall be submitted to the Compliance and Enforcement Division within 45 days of the test date. After conducting three annual landfill gas characterization tests, the Permit Holder may request to remove specific compounds from the list of compounds to be tested, if the compounds have not been detected, have no significant impact on the cancer risk determination for the site, and have no significant impact on the hazard index determination for the site. (Basis: AB-2588 Air Toxics Hot Spots Act, Toxic Risk Management Policy and Regulation 8-34-412 and 9-1-302.)

15. In order to demonstrate compliance with the above conditions, the Permit Holder shall maintain the following records. All records shall be maintained on site in an APCO approved logbook or shall be made readily available to District staff upon request for a period of at least 5 years from the date of entry. These recordkeeping requirements do not replace the record keeping requirements contained in any applicable rules or regulations. (Basis: Cumulative Increase and Regulations 2-1-301, 2-6-501, 8-34-301, 8-34-303, 8-34-305, 8-34-412, 8-34-414, 8-34-415, 8-34-501, 8-34-503, 8-34-505, 8-34-506, and 9-1-302.
 - a. Maintain an accurate map of the landfill that indicates the locations of all refuse boundaries and the locations of all wells and collectors (using unique identifiers) that are required to be operating continuously pursuant to Part 4a;
 - b. Record the initial startup date for any new wells or collectors;
 - c. Maintain records of all test dates and test results performed to maintain compliance with Parts 12-14 above, Regulations 8-34-301, 8-34-303, 8-34-305, 8-34-412, 8-34-414, and 8-34-415, or any other applicable rule or regulation.

VI. Permit Conditions

Condition # 16065

FOR: S-1 LANDFILL AND GAS COLLECTION SYSTEM; A-3 LANDFILL GAS FLARE; A-4 LANDFILL GAS FLARE; AND A-5 LANDFILL GAS FLARE;

16. The annual report required by BAAQMD Regulation 8-34-411 shall be submitted in two semi-annual increments. The reporting period for the first increment of the Regulation 8-34-411 annual report that is submitted subsequent to the issuance of the MFR Permit for this site shall be from December 1, 2002 through December 31, 2003. This first increment report shall be submitted by January 31, 2004. The reporting periods and report submittal due dates for all subsequent increments of the Regulation 8-34-411 report shall be synchronized with the reporting periods and report submittal due dates for the semi-annual MFR Permit monitoring reports that are required by Section I.F. of the MFR Permit for this site. (Basis: Regulation 8-34-411 and 40 CFR Part 63.1980(a))

VI. Permit Conditions

Condition # 24175

FOR: S-11 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR AND S-14 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR

- *1. The owner/operator shall not exceed 30 hours per year for reliability-related testing at the S-11 Diesel Engine. (Basis: CCR Title 17, Section 93115.6(b)(3)(A)(1)(b))
- 2. a. Until January 1, 2012, the owner/operator shall not exceed 100 hours per year for reliability-related testing at the S-14 Diesel Engine. (Basis: Cumulative Increase, Offsets, Toxic Risk Management Policy, Regulation 9-8-330.2, and CCR Title 17, Section 93115.3(d))
 - *b. Effective January 1, 2012, the owner/operator shall not exceed 50 hours per year for reliability-related testing at the S-14 Diesel Engine. (Basis: Regulation 9-8-330.3)
- *3. The owner/operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, State, or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating while mitigating emergency conditions or while emission testing to show compliance with District, State or Federal emission limits is not limited. (Basis: CCR Title 17, Section 93115.6(b)(1 and 3) and Regulation 9-8-330)
- *4. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained. (Basis: CCR Title 17, Section 93115.10(e)(1) and Regulation 9-8-530)

VI. Permit Conditions

Condition # 24175

FOR: S-11 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR AND S-14 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR

5. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 60 months from the date of entry. Log entries shall be retained on-site, either at a central location or at the date of entry. Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request. (Basis: CCR Title 17, Section 93115.10(e and g) and Regulation 2-6-501, 9-1-304, and 9-8-530)
 - a. Hours of operation for reliability-related activities (maintenance and testing).
 - b. Hours of operation for emission testing to show compliance with emission limits.
 - c. Hours of operation for emergencies.
 - d. For each emergency, the nature of the emergency condition.
 - e. Fuel usage for the engine.
 - f. Records of the vendor-certified sulfur content for fuel burned in this engine.

VI. Permit Conditions

~~Condition # 23579~~

~~FOR: S-12 MICROTURBINE AND S-13 MICROTURBINE;~~

- ~~1. The nitrogen oxide (NO_x) emissions from each Microturbine (S-12 and S-13) shall not exceed 10.0 pounds per day calculated as NO₂. Compliance with this emission limit may be demonstrated by having no emissions exceeding 62 ppmv of NO_x at 15% oxygen, dry basis. (Basis: Offsets)~~
- ~~2. The carbon monoxide (CO) emissions from each Microturbine (S-12 and S-13) shall not exceed 10.0 pounds per day. Compliance with this emission limit may be demonstrated by having no emissions exceeding 100 ppmv of CO at 15% oxygen, dry basis. (Basis: Cumulative increase)~~
- ~~3. To demonstrate compliance with Parts 1 and 2 above and Regulation 8, Rule 34, Sections 301.4, 412, and 509, the Permit Holder shall conduct annual compliance demonstration tests on the S-12 and S-13 Microturbines. In order to allow this facility to synchronize the source test dates for the landfill gas flares and the microturbines, the microturbine source tests that would normally have been conducted in January 2008 may be delayed, provided the 2008 microturbine source tests are conducted no later than September 30, 2008. The Source Test Section of the District shall be contacted to obtain approval of the source test procedures at least 14 days in advance of each source test. The Source Test Section shall be notified of the scheduled test date at least 7 days in advance of each source test. The source test report shall be submitted to the Source Test Section within 45 days of the test date. The source tests shall determine the following:
 - ~~a. landfill gas flow rate (dry basis) and heat input rate to the microturbine;~~
 - ~~b. concentrations (dry basis) of carbon dioxide (CO₂), nitrogen (N₂), oxygen (O₂), and methane (CH₄) in the landfill gas;~~
 - ~~c. stack gas flow rate from the microturbine (dry basis); and~~
 - ~~d. concentrations (dry basis) of NO_x, CO, CH₄, NMOC, and O₂ in the stack gas.~~(Basis: Cumulative Increase, Offsets, and Regulations 8-34-301.4, 8-34-412, and 8-34-509)~~
- ~~4. The Permit Holder shall maintain records of all test dates and test results for any tests that are conducted to demonstrate compliance with these conditions or any other applicable rule or regulation. All records shall be maintained on-site in an APCO approved logbook or shall be made readily available to District staff upon request for a period of at least 5 years from the date of entry. These record keeping requirements do not replace the record keeping requirements contained in any applicable rules or regulations. (Basis: Cumulative Increase, Offsets, and Regulations 2-6-501, 8-34-301.4, 8-34-412, 8-34-501.11, 8-34-501.12, and 8-34-509)~~

VI. Permit Conditions

Condition # 24989

For: S-16 Microturbine and S-17 Microturbine

1. The Permit Holder shall ensure that each microturbine does not exceed the emission levels listed below:

a. NO_x = 0.5 lbs/MW-hr

b. VOC = 1.0 lb/MW-hr

c. CO = 6.0 lb/MW-hr

(basis for a through c: CARB Certification, H&SC Title 17, Section 94203c)

d. NMOC less than 120 ppm by volume on a dry basis, expressed as methane and corrected to 3% oxygen or the amount of NMOC in the collected gases is reduced by at least 98% by weight
(Basis: Regulation 8-34-301.4)

2. To demonstrate compliance with Part 1 above and Regulation 8, Rule 34, Sections 301.4, 412, and 509, the Permit Holder shall conduct an initial compliance Demonstration test within 60 days of start-up of each microturbine and annual compliance demonstration tests on S-16 and S-17 Microturbines.

The Source Test Section of the District shall be contacted to obtain approval of the source test procedures at least 14 days in advance of each source test. The Source Test

Section shall be notified of the scheduled test date at least 7 days in advance of each Source test. The source test report shall be submitted to the Source Test Section within

45 days of the test date. The source tests shall determine the following:

a. landfill gas flow rate (dry basis) and heat input rate to the microturbine;

b. concentrations (dry basis) of carbon dioxide (CO₂), nitrogen (N₂), oxygen (O₂), and methane (CH₄) in the landfill gas;

c. stack gas flow rate from the microturbine (dry basis); and

d. concentrations (dry basis) of CH₄, NMOC, and O₂ in the stack gas.

(Basis: Cumulative Increase, Offsets, and Regulations 8-34-301.4, 8-34-412, and 8-34-509)

3. The Permit Holder shall maintain records of all test dates and test results for any tests

VI. Permit Conditions

that are conducted to demonstrate compliance with these conditions or any other applicable rule or regulation. All records shall be maintained on site in an APCO approved logbook or shall be made readily available to District staff upon request for a period of at least 5 years from the date of entry. These record keeping requirements do not replace the record keeping requirements contained in any applicable rules or regulations. (Basis: Cumulative Increase, Offsets, and Regulations 2-6-501, 8-34-301.4, 8-34-412, 8-34-501.11, 8-34-501.12, and 8-34-509)

VII. APPLICABLE LIMITS & COMPLIANCE MONITORING REQUIREMENTS

This section has been included to summarize the applicable emission limits contained in Section IV, Source-Specific Applicable Requirements, of this permit. The following tables show the relationship between each emission limit and the associated compliance monitoring provisions, if any. The monitoring frequency column indicates whether periodic (P) or continuous (C) monitoring is required. For periodic monitoring, the frequency of the monitoring has also been shown using the following codes: annual (A), quarterly (Q), monthly (M), weekly (W), daily (D), or on an event basis (E). No monitoring (N) has been required if the current applicable rule or regulation does not require monitoring, and the operation is unlikely to deviate from the applicable emission limit based upon the nature of the operation.

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|--------------------------|-------------------------------------|--------|-----------------------|---|--|------------------------------|--|
| Amount of Waste Accepted | BAAQMD Condition # 16065, Part 1 | Y | | 0 tons/day and $\leq 12,725,000$ tons (cumulative amount of all wastes) and $\leq 18,852,000$ yd ³ (cumulative amount of all wastes and cover materials) | BAAQMD 8-34-501.7 | P/A | Records |
| Gas Flow | BAAQMD 8-34-301 and 301.1 | Y | | Landfill gas collection system shall operate continuously and all collected gases shall be vented to a properly operating control system | BAAQMD 8-34-501.10 and 508 | C | Gas Flow Meter and Recorder (every 15 minutes) |
| Gas Flow | BAAQMD Condition # 16065, Parts 2-3 | Y | | Landfill gas collection system shall operate continuously and all collected gases shall be vented to a properly operating control system | BAAQMD 8-34-501.1, 501.2, 501.10, and 508 and BAAQMD Condition # 16065, Part 6 | C,P/E | Gas Flow Meter, Flare Alarms, and Records of Collection and Control Systems Downtime |

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|--|-------------------|--------|-----------------------|--|---|------------------------------|---|
| Collection System Installation Dates | BAAQMD 8-34-304.1 | Y | | For Inactive/Closed Areas: collection system components must be installed and operating by 2 years + 60 days after initial waste placement | BAAQMD 8-34-501.7 and 501.8 and BAAQMD Condition # 16065, Parts 15a-b | P/E | Records |
| Collection and Control Systems Shutdown Time | BAAQMD 8-34-113.2 | Y | | ≤ 240 hours/year and ≤ 5 consecutive days | BAAQMD 8-34-501.1 | P/D | Operating Records |
| Startup Shutdown or Malfunction Procedures | 40 CFR 63.6(e) | Y | | Minimize Emissions by Implementing SSM Plan | 40 CFR 63.1980(a-b) | P/E | Records (all occurrences, duration of each, corrective actions) |
| Periods of Inoperation for Parametric Monitors | BAAQMD 1-523.2 | Y | | ≤ 15 consecutive days/incident and ≤ 30 calendar days/12 month period | BAAQMD 1-523.4 | P/D | Operating Records for All Parametric Monitors (for gas flow and temperature monitors) |

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|--------------------------------|-----------------------------------|--------|-----------------------|--|---|------------------------------|---|
| Continuous Monitors | 40 CFR 60.13(e) | Y | | Requires Continuous Operation except for breakdowns, repairs, calibration, and required span adjustments | 40 CFR 60.7(b) | P/D | Operating Records for All Continuous Monitors (for gas flow and temperature monitors) |
| Wellhead Pressure | BAAQMD 8-34-305.1 | Y | | < 0 psig | BAAQMD 8-34-414, 501.9, and 505.1 | P/M | Monthly Inspection and Records |
| Temperature of Gas at Wellhead | BAAQMD 8-34-305.2 | Y | | < 55 °C (131 °F) (Wells listed in BAAQMD Condition # 16065, Part 5a are excluded from this limit.) | BAAQMD 8-34-414, 501.9 and 505.2 and | P/M | Monthly Inspection and Records |
| Temperature of Gas at Wellhead | BAAQMD Condition # 16065, Part 5a | Y | | ≤ 140 °F (This limit applies only to wells listed in BAAQMD Condition # 16065, Part 5a) | BAAQMD 8-34-414, 501.9 and 505.2 and | P/M | Monthly Inspection and Records |
| Gas Concentrations at Wellhead | BAAQMD 8-34-305.3 or 305.4 | Y | | N ₂ < 20% OR O ₂ < 5% (Wells listed in BAAQMD Condition # 16065, Part 5b are excluded from these limits.) | BAAQMD 8-34-414, 501.9 and 505.3 or 505.4 | P/M | Monthly Inspection and Records |
| Gas Concentrations at Header | BAAQMD Condition # 16065, Part 5b | Y | | O ₂ ≤ 5% by volume, dry basis AND CH ₄ ≥ 35% by volume, dry basis | BAAQMD Condition # 16065, Part 5b | P/M | Monthly Inspection and Records |
| Well Shutdown Limits | BAAQMD 8-34-117.4 | Y | | No more than 5 wells at a time or 10% of total collection system, whichever is less | BAAQMD 8-34-117.6 and 501.1 | P/D | Records |

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|--|-------------------|--------|-----------------------|---|---|------------------------------|--|
| Well Shutdown Limits | BAAQMD 8-34-117.5 | Y | | ≤ 24 hours per well | BAAQMD 8-34-117.6 and 501.1 | P/D | Records |
| TOC (Total Organic Compounds Plus Methane) | BAAQMD 8-34-301.2 | Y | | Component Leak Limit: ≤ 1000 ppmv as methane at 1 cm from component (see BAAQMD Condition # 16065, Part 5c for clarifications about vaults) | BAAQMD 8-34-501.6 and 503 and BAAQMD Condition # 16065, Part 15c | P/Q | Quarterly Inspection of collection and control system components with Portable Analyzer and Records |
| TOC | BAAQMD 8-34-303 | Y | | Surface Leak Limit: ≤ 500 ppmv as methane at 2 inches above surface (see BAAQMD Condition # 16065, Part 5c for clarifications about vaults) | BAAQMD 8-34-415, 416, 501.6, 506 and 510 and BAAQMD Condition # 16065, Part 15c | P/M, Q, and E | Monthly Visual Inspection of Cover, Quarterly Inspection of Surface with Portable Analyzer, Reinspections as Needed, and Records |
| Non-Methane Organic Compounds (NMOC) | BAAQMD 8-34-301.3 | Y | | ≥ 98% removal by weight OR < 30 ppmv, dry basis @ 3% O ₂ , expressed as methane (applies to flares only) | BAAQMD 8-34-412 and 501.4 and BAAQMD Condition # 16065, Parts 13 and 15c | P/A | Source Tests and Records |

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|-------------------------------------|-----------------------------------|--------|-----------------------|--|---|------------------------------|--|
| Temperature of Combustion Zone (CT) | BAAQMD Condition # 16065, Part 7 | Y | | CT \geq 1400 °F, averaged over any 3-hour period (applies to each flare, A-3, A-4, and A-5) | BAAQMD 8-34-501.3 and 507 | C | Temperature Sensor and Recorder |
| Opacity | BAAQMD 6-1-301 | Y | | Ringelmann No. 1 for < 3 minutes/hour (applies to flares only) | None | N | NA |
| FP | BAAQMD 6-1-310 | Y | | \leq 0.15 grains/dscf (applies to flares only) | None | N | NA |
| SO ₂ | BAAQMD 9-1-301 | Y | | Property Line Ground Level Limits: \leq 0.5 ppm for 3 minutes and \leq 0.25 ppm for 60 min. and \leq 0.05 ppm for 24 hours (applies to flares only) | None | N | NA |
| SO ₂ | BAAQMD Regulation 9-1-302 | Y | | \leq 300 ppm (dry basis) (applies to flares only) | BAAQMD Condition # 16065, Parts 13g and 15c or 14 and 15c | P/A | Annual Source Test at Flare or Sulfur Analysis of Landfill Gas and Records |
| Landfill Gas Sulfur Content | BAAQMD Condition # 16065, Part 12 | Y | | \leq 1300 ppmv, expressed as H ₂ S (applies if SO ₂ testing is not conducted at flare exhaust) | BAAQMD Condition # 16065, Parts 14 and 15c | P/A | Sulfur Analysis of Landfill Gas and Records |
| H ₂ S | BAAQMD 9-2-301 | N | | Property Line Ground Level Limits: \leq 0.06 ppm, averaged over 3 minutes and \leq 0.03 ppm, averaged over 60 minutes | None | N | NA |

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 LANDFILL AND GAS COLLECTION SYSTEM, A-3 LANDFILL GAS FLARE,
A-4 LANDFILL GAS FLARE, AND A-5 LANDFILL GAS FLARE

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|-----------------|--------------------------------------|--------|-----------------------|---|--|------------------------------|--------------------------|
| NO _x | BAAQMD Condition # 16065, Part 9a | Y | | ≤ 0.13 lbs/MMBTU or ≤ 33 ppmv, at 15% O ₂ , dry basis (applies to A-3 Flare only) | BAAQMD Condition # 16065, Parts 13 and 15c | P/A | Source Tests and Records |
| NO _x | BAAQMD Condition # 16065, Part 9b-c | Y | | ≤ 0.06 lbs/MMBTU or ≤ 15 ppmv, at 15% O ₂ , dry basis (applies to A-4 and A-5 Flares only) | BAAQMD Condition # 16065, Parts 13 and 15c | P/A | Source Tests and Records |
| CO | BAAQMD Condition # 16065, Part 10a-c | Y | | < 0.20 lbs/MMBTU or ≤ 83 ppmv, at 15% O ₂ , dry basis (applies to A-3, A-4, and A-5 Flares only) | BAAQMD Condition # 16065, Parts 13 and 15c | P/A | Source Tests and Records |

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – B
Applicable Limits and Compliance Monitoring Requirements
S-11 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR AND
S-14 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|----------------------------|---|--------|-----------------------|--|----------------------------------|------------------------------|----------------------|
| Opacity | BAAQMD Regulation 6-1-303 | Y | | Ringelmann No. 2 for < 3 minutes/hour | None | N | NA |
| FP | BAAQMD Regulation 6-1-310 | Y | | ≤ 0.15 grains/dscf | None | N | NA |
| SO ₂ | BAAQMD Regulation 9-1-301 | Y | | Property Line Ground Level Limits: ≤ 0.5 ppm for 3 minutes and ≤ 0.25 ppm for 60 min. and ≤ 0.05 ppm for 24 hours | None | N | NA |
| Liquid Fuel Sulfur Content | BAAQMD Regulation 9-1-304 | Y | | Fuel Sulfur Limit: ≤ 0.5% S, by weight | BAAQMD Condition #24175, Part 5f | P/E | Vendor Certification |
| Liquid Fuel Sulfur Content | CCR Title 17, Section 93115.5 (b) and CCR Title 13, Section 2281(a) (1-5) | N | | Standby Engines must use CARB Diesel Fuel or other CARB Approved Alternative Fuel, which has Fuel Sulfur Limits of: ≤ 500 ppmw of S (≤ 0.05% S, by weight) or ≤ 15 ppmw of S (for fuel sold after 6/1/06) | BAAQMD Condition #24175, Part 5f | P/E | Vendor Certification |

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – B
Applicable Limits and Compliance Monitoring Requirements
S-11 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR AND
S-14 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|-----------------|--|--------|-----------------------|---|--|------------------------------|------------------------|
| Operating Hours | BAAQMD Condition # 24175, Part 1 and CCR Title 17, Section 93115.6(b) (3)(A)(1)(b) | N | | For S-11 Diesel Engine: Operating Hours for Reliability-Related Activities: ≤ 30 hours in a calendar year | BAAQMD Regulation 9-8-530 and BAAQMD Condition #24175, Parts 4 and 5a-d and CCR Title 17, Section 93115.10(e) (1)&(g)(1) | P/C, M | Hour Meter and Records |
| Operating Hours | BAAQMD Regulation 9-8-330.2 and BAAQMD Condition #24175, Part 2a | N | Expires 1/1/12 | For S-14 Diesel Engine: Operating Hours for Reliability-Related Activities: ≤ 100 hours in a calendar year | BAAQMD Regulation 9-8-530 and BAAQMD Condition #24175, Parts 4 and 5a-d and CCR Title 17, Section 93115.10(e) (1)&(g)(1) | P/C, M | Hour Meter and Records |

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – B
Applicable Limits and Compliance Monitoring Requirements
S-11 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR AND
S-14 DIESEL ENGINE FOR EMERGENCY STANDBY GENERATOR

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|-----------------|--|--------|-----------------------|---|---|------------------------------|------------------------|
| Operating Hours | BAAQMD Regulation 9-8-330.3 and BAAQMD Condition #24175, Part 2b | N | Effective 1/1/12 | For S-14 Diesel Engine: Operating Hours for Reliability-Related Activities: ≤ 50 hours in a calendar year | BAAQMD Regulation 9-8-530 and BAAQMD Condition #24175, Parts 4 and 5a-d and CCR Title 17, Section 93115.10(e)(1)&(g)(1) | P/C, M | Hour Meter and Records |

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – C
Applicable Limits and Compliance Monitoring Requirements
S-~~1216~~ MICROTURBINE AND S-~~1317~~ MICROTURBINE

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|--|---------------------------|--------|-----------------------|--|--|------------------------------|---|
| TOC (Total Organic Compounds Plus Methane) | BAAQMD 8-34-301.2 | Y | | ≤ 1000 ppmv as methane (component leak limit) | BAAQMD 8-34-501.6 and 503 and BAAQMD Condition # 16065, Part 15c | P/Q | Quarterly Inspection of control system components with Portable Analyzer and Records |
| Non-Methane Organic Compounds (NMOC) | BAAQMD 8-34-301.4 | Y | | ≥ 98% removal by weight OR < 120 ppmv, dry basis @ 3% O ₂ , expressed as methane | BAAQMD 8-34-412 and 501.4 and BAAQMD Condition # 2357924989 , Parts 3-2 and 43 | P/A | Source Tests and Records |
| Opacity | BAAQMD 6-1-301 | Y | | Ringelmann No. 1 for < 3 minutes/hour | None | N | NA |
| FP | BAAQMD 6-1-310 | Y | | ≤ 0.15 grains/dscf | None | N | NA |
| SO ₂ | BAAQMD 9-1-301 | Y | | Property Line Ground Level Limits: ≤ 0.5 ppm for 3 minutes and ≤ 0.25 ppm for 60 min. and ≤ 0.05 ppm for 24 hours | None | N | NA |
| SO ₂ | BAAQMD Regulation 9-1-302 | Y | | ≤ 300 ppm (dry basis) | BAAQMD Condition # 16065, Parts 13 and 15c or Parts 14 and 15c | P/A | Annual Source Test at Flare; or Sulfur Analysis of Landfill Gas at Header and Records |

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – C
Applicable Limits and Compliance Monitoring Requirements
S-~~1216~~ MICROTURBINE AND S-~~1317~~ MICROTURBINE

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|------------------|--|--------|-----------------------|---|--|------------------------------|---|
| H ₂ S | BAAQMD 9-2-301 | N | | Property Line Ground Level Limits: ≤ 0.06 ppm, averaged over 3 minutes and ≤ 0.03 ppm, averaged over 60 minutes | None | N | NA |
| NO _x | BAAQMD Condition # 23579 , 24989 , Part 1 | Y | | ≤ 0.5 lbs/MW-hr 10 pounds per day or ≤ 62 ppmv, at 15% O ₂ , dry basis | none BAAQM D-Condition # 23579 , Parts 3 and 4 | NP/A | Source Tests and Records CA RB Certification |
| CO | BAAQMD Condition # 23579 , 24989 , Part 2 1 | Y | | ≤ 6 lbs/MW-hr 10 pounds per day or ≤ 100 ppmv, at 15% O ₂ , dry basis | none BAAQM D-Condition # 23579 , Parts 3 and 4 | NP/A | CARB Certification Source Tests and Records |

VIII. TEST METHODS

The test methods associated with the emission limit of a District regulation are generally found in Section 600 et seq. of the regulation. The following table indicates only the test methods associated with the emission limits included in Section VII, Applicable Limits & Compliance Monitoring Requirements, of this permit.

**Table VIII
 Test Methods**

| Applicable Requirement | Description of Requirement | Acceptable Test Methods |
|-------------------------------|---|--|
| BAAQMD 6-1-301 | Ringelmann No. 1 Limitation | Manual of Procedures, Volume I, Evaluation of Visible Emissions; or EPA Reference Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources |
| BAAQMD 6-1-303 | Ringelmann No. 2 Limitation | Manual of Procedures, Volume I, Evaluation of Visible Emissions; or EPA Reference Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources |
| BAAQMD 6-1-310 | Particulate Weight Limitation | Manual of Procedures, Volume IV, ST-15, Particulate; or EPA Reference Method 5, Determination of Particulate Matter Emissions from Stationary Sources |
| BAAQMD 8-34-301.2 | Collection and Control System Leak Limit | EPA Reference Method 21, Determination of Volatile Organic Compound Leaks |
| BAAQMD 8-34-301.3 | NMOC Emission Limits for Flares | Manual of Procedures, Volume IV, ST-14, Oxygen, Continuous Sampling; and Manual of Procedures, Volume IV, ST-7, Organic Compounds; or EPA Reference Method 18, 25, 25A, or 25C |
| BAAQMD 8-34-301.4 | NMOC Emission Limits for Other Emission Control Systems | Manual of Procedures, Volume IV, ST-14, Oxygen, Continuous Sampling; and Manual of Procedures, Volume IV, ST-7, Organic Compounds; or EPA Reference Method 18, 25, 25A, or 25C |
| BAAQMD 8-34-303 | Landfill Surface Leak Limit | EPA Reference Method 21, Determination of Volatile Organic Compound Leaks |
| BAAQMD 8-34-305.1 | Gauge Pressure Limit at Wellheads | APCO Approved Device |
| BAAQMD 8-34-305.2 | Temperature Limit for Gas at Wellheads | APCO Approved Device |
| BAAQMD 8-34-305.3 | Nitrogen Concentration in Gas at Wellheads | EPA Reference Method 3C, Determination of Carbon Dioxide, Methane, Nitrogen, and Oxygen from Stationary Sources |
| BAAQMD 8-34-305.4 | Oxygen Concentration in Gas at Wellheads | EPA Reference Method 3C, Determination of Carbon Dioxide, Methane, Nitrogen, and Oxygen from Stationary Sources |

VIII. Test Methods

**Table VIII
 Test Methods**

| Applicable Requirement | Description of Requirement | Acceptable Test Methods |
|--|---|---|
| BAAQMD 8-34-412 | Compliance Demonstration Test | EPA Reference Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography, Method 25, Determination of Total Gaseous Nonmethane Organic Emissions as Carbon, Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer, or Method 25C, Determination of Nonmethane Organic Compounds (NMOC) in MSW Landfill Gases |
| BAAQMD 9-1-301 | Limitations on Ground Level Concentrations (SO ₂) | Manual of Procedures, Volume VI, Part 1, Ground Level Monitoring for Hydrogen Sulfide and Sulfur Dioxide |
| BAAQMD 9-1-302 | General Emission Limitation (SO ₂) | Manual of Procedures, Volume IV, ST-19A, Sulfur Dioxide, Continuous Sampling, or ST-19B, Total Sulfur Oxides, Integrated Sample |
| BAAQMD 9-1-304 | Liquid Fuel Sulfur Content Limit | Manual of Procedures, Volume III, Method 10, Determination of Sulfur in Fuel Oil, or ASTM D2622-94 or CARB Approved Equivalent |
| BAAQMD 9-2-301 | Limitations on Hydrogen Sulfide | Manual of Procedures, Volume VI, Part 1, Ground Level Monitoring for Hydrogen Sulfide and Sulfur Dioxide |
| 40 CFR 60.8 | Performance Tests | EPA Reference Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography, Method 25, Determination of Total Gaseous Nonmethane Organic Emissions as Carbon, Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer, or Method 25C, Determination of Nonmethane Organic Compounds (NMOC) in MSW Landfill Gases |
| CCR, Title 13, Section 2281 (a)(1 and 2) | Liquid Fuel Sulfur Content Limit | ASTM D2622-94 or CARB Approved Equivalent |
| BAAQMD Condition # 16065, Part 5a | Temperature Limit for Gas at Wellheads | APCO Approved Device |
| BAAQMD Condition # 16065, Part 5b | Oxygen Concentration Limit for Landfill Gas at Main Header | EPA Reference Method 3C, Determination of Carbon Dioxide, Methane, Nitrogen, and Oxygen from Stationary Sources |
| BAAQMD Condition # 16065, Part 5b | Methane Concentration Limit for Landfill Gas at Main Header | EPA Reference Method 3C, Determination of Carbon Dioxide, Methane, Nitrogen, and Oxygen from Stationary Sources |

VIII. Test Methods

**Table VIII
 Test Methods**

| Applicable Requirement | Description of Requirement | Acceptable Test Methods |
|---|---|--|
| BAAQMD Condition # 16065, Part 7 | Combustion Zone Temperature Limits for Flares | APCO Approved Device |
| BAAQMD Condition # 16065, Part 9 | NO _x Emission Limits for Flares | Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling; or EPA Reference Method 20, Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines |
| BAAQMD Condition # 16065, Part 10 | CO Emission Limits for Flares | Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling; or EPA Reference Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources |
| BAAQMD Condition # 16065, Part 12 | Landfill Gas Sulfur Content Limit | Manual of Procedures, Volume III, Method 5 Determination of Total Mercaptans in Effluents and Method 25 Determination of Hydrogen Sulfide in Effluents, or Method 44 Determination of Reduced Sulfur Gases and Sulfur Dioxide in Effluent Samples by Gas Chromatographic Methods |
| BAAQMD Condition # 16065, Part 13 | Compliance Demonstration Test | Manual of Procedures, Volume IV, ST-17, Stack Gas Velocity and Volumetric Flow Rate; ST-23 Water Vapor; ST-14, Oxygen, Continuous Sampling; ST-13A, Oxides of Nitrogen, Continuous Sampling; ST-6, Carbon Monoxide, Continuous Sampling; and Manual of Procedures, Volume IV, ST-7, Organic Compounds or EPA Reference Methods 10 and 20; and Methods 18, 25, 25A, or 25C; and Method 44 |
| BAAQMD Condition # 16065, Part 14 | Gas Characterization Analyses | EPA Reference Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography; and Method 44 Determination of Reduced Sulfur Gases and Sulfur Dioxide in Effluent Samples by Gas Chromatographic Methods |
| BAAQMD Condition # 23579, Part 1 | NO_x Emission Limits for Microturbines | Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling; or EPA Reference Method 20, Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines |
| BAAQMD Condition # 23579, Part 2 | CO Emission Limits for Microturbines | Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling; or EPA Reference Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources |

VIII. Test Methods

Table VIII
Test Methods

| Applicable Requirement | Description of Requirement | Acceptable Test Methods |
|--|-------------------------------|---|
| BAAQMD Condition # 2357924989 , Part 32 | Compliance Demonstration Test | Manual of Procedures, Volume IV, ST-17, Stack Gas Velocity and Volumetric Flow Rate; ST-23 Water Vapor; ST-14, Oxygen, Continuous Sampling; ST-13A, Oxides of Nitrogen, Continuous Sampling; ST-6, Carbon Monoxide, Continuous Sampling; and Manual of Procedures, Volume IV, ST-7, Organic Compounds or EPA Reference Methods 18, 25, 25A, or 25C; and Methods 10 and 20 |

IX. PERMIT SHIELD

Not applicable

X. REVISION HISTORY

Title V Permit Issuance (Application # 2620): **July 28, 2003**

Administrative Revision (no application): **September 10, 2003**

- Add applicable permit term dates and due dates to Sections I.B, I.F, and I.G

Administrative Revision (Application # 8445): **April 1, 2004**

- Update standard text in Section I.B.1 and Section III
- Switch the order of Sections IX and X for consistency with other MFR permits

Minor Revision (Application # 8445): **June 17, 2004**

- Add S-14 to Table II-A in Section II
- Add Table IV-D for S-14 in Section IV
- Add Condition # 21195 for S-14 in Section VI
- Add Table VII-D for S-14 in Section VII
- Delete future effective dates that have passed from Tables IV-A, IV-C, VII-A, and VII-C
- Update Revision History in Section X

Minor Revision (Application # 11467): **March 16, 2006**

- Delete future effective dates and other text in Tables II-A, IV-C, and VII-C to reflect that the S-12 and S-13 Microturbines are now installed and operating.
- Update the Regulation 8, Rule 34 amendment date in Tables IV-A and IV-C.
- Add a custom Schedule of Compliance to Section V for the gas collection system shutdown events that are necessary to complete the installation and initial commissioning of the ALZA landfill gas treatment and compression station and associated process control systems.
- Modify Condition # 16065, Part 2 to allow landfill gas to be burned in off-site IC engines.
- Modify Condition # 20297, Part 1, Table VII-C, and Table VIII to clarify the applicability of the landfill gas throughput limit and to correct the related monitoring requirements and calculation procedures.
- Revise Condition # 20297, Parts 5-7 and Table VII-C by inserting the specific combustion zone temperature limit established by the initial compliance demonstration tests and by deleting obsolete text.

X. Revision History

- Update Revision History in Section X.
- Update website address in Section XII.

Significant Revision (Application # 15609):

September 19, 2007

- In Table II-A, increase the maximum firing rate for the S-12 and S-13 Microturbines from 1.27 MM BTU/hr to 1.6 MM BTU/hr.
- Revise the NO_x and CO outlet concentration limits that results from this firing capacity increase in Condition # 20297 Parts 3 and 4 (renumbered as Condition # 23579 Parts 1 and 2) and in Table VII-C.
- Delete all federal requirements (40 CFR Part 60, Subparts A and Cc; Part 62, and Part 63, Subparts A and AAAA) from Tables IV-C and VII-C, because this site is meeting the requirements of 40 CFR Part 60,752(b)(2)(iii) by using an EPA approved landfill gas treatment system upstream of the microturbines.
- Remove the BAAQMD Regulation 8-34-508 landfill gas flow rate monitoring requirement from Table IV-C, because this monitoring requirement applies to the whole landfill gas control system and not to each individual control device.
- Remove the BAAQMD and SIP Regulation 1 parametric monitoring requirements from Table IV-C and Table VII-C, because all monitoring requirements that triggered this regulation will be removed from the applicable requirements for S-12 and S-13.
- Delete the Part 1 landfill gas flow rate limit and monitoring requirements from Condition # 20297 and from Tables IV-C, VII-C, and VIII, because this limit is unnecessary.
- Delete the Part 4 NMOC emission limit from Condition # 20297 and from Tables IV-C, VII-C, and VIII, because this limit is redundant.
- Delete the Parts 5 and 7 combustion zone temperature limit and monitoring requirements from Condition # 20297 and from Tables IV-C, VII-C, and VIII, because this requirement is burdensome and should be replaced by the existing annual source test requirement for NMOC outlet concentration. Add Regulation 8-34-509 to the basis of Condition # 20297 Parts 6 and 8 (renumbered as Condition # 23579 Parts 3 and 4).

X. Revision History

- Renumber the remaining parts of Condition # 20297 as Condition # 23579 Parts 1-4. Correct all related citations in Section VI and in Tables IV-C, VII-C, and VIII.
- Remove unnecessary source testing requirements from Condition # 23579 Part 3.
- Correct the descriptions for sulfur dioxide limits in Table VII-C.
- Delete the custom schedule of compliance from Section V, because it expired in July 2006 and is now obsolete.
- Update the revision history.

Title V Permit Renewal (Application # 17127):

July 16, 2009

- Correct Mailing Address and Facility Contact on the Title Page.
- Correct and update regulatory amendment dates in Section I.
- Add and revise text in Sections I, III, IV, VII, and VIII to conform to current standard text, and remove Section XII to conform to current standard MFR permit format.
- Update regulatory amendment dates, remove obsolete SIP citations, and add additional applicable requirements to Table III.
- In Table III, delete EPA Reg 40, CFR 82, Subpart F, 82.156, 82.161, and 82.166. This landfill is closed and waste containing ozone depleting refrigerant can no longer be disposed at this site.
- Update regulatory amendment dates and descriptions and delete unnecessary future effective dates in Tables IV-A, IV-B, IV-C, VII-A, VII-B, VII-C, and VIII.
- In Condition #16065, Part 2a, clarify that operation of the microturbines is optional.
- In Condition #16065, Part 4, clarify that adding and removing wells are alterations that require a Change of Conditions rather than an Authority to Construct and that redrilling and replacement of an existing well does not require a Change of Conditions.
- In Condition #16065, Part 5, add wells to the list of wells subject to alternative temperature and O₂/N₂ concentration limits.

X. Revision History

- Delete the Condition #16065, Part 8 gas flow rate limit to the flares, because it is redundant. This flow rate limit is equivalent to the three flares operating at maximum capacity. Remove this limit from Tables IV-A, VII-A, and VIII.
- In Condition #16065, Parts 9 and 10, add alternative NO_x and CO limits, expressed as emission rates in lbs/MMBTU, which are equivalent to the exhaust concentration limits listed in these parts. Add these alternative emission limits to Table VII-A.
- Delete the Condition #16065, Part 11 vinyl chloride limit and Part 13d vinyl chloride testing requirement, because the vinyl chloride limit is unnecessary. Test results for vinyl chloride at the flare outlet have been non-detect for vinyl chloride, and the inlet vinyl chloride concentration is far below this outlet limit. Remove the vinyl chloride limit from Tables IV-A, VII-A, and VIII.
- In Condition #16065, Part 12, reduce the frequency of the total reduced sulfur content monitoring requirement for landfill gas from quarterly to annual, based on test data that shows that the LFG sulfur content is very low. Remove the Draeger Tube monitoring requirements from Part 12 and from Tables VII-A and VIII, and clarify the applicable annual monitoring procedures.
- In Condition #16065, Parts 13g and 14, add annual sulfur dioxide testing at the flare exhaust as an optional compliance demonstration alternative to annual sulfur content testing of the landfill gas. Add appropriate SO₂ test methods to Table VIII.
- Make editorial corrections to Condition #16065, Part 15.
- For the S-11 and S-14 Diesel Engines for Emergency Standby Generators: combine Tables IV-B and IV-D into Table IV-B, combine Tables VII-B and VII-D into Table VII-B, delete Tables IV-D and VII-D, and combine the permit conditions for these engines by deleting Condition #19210 for S-11, deleting Condition #21195 for S-14, and adding Condition #24175 for both engines.
- For the S-11 and S-14 Diesel Engines, add new applicable provisions of BAAQMD Regulation 9, Rule 8 to Tables IV-B and VII-B and to the bases for Condition #24175, Parts 2-5.

X. Revision History

- For S-11 and S-14, add the applicable provisions of the CARB ATCM for Stationary Compression Ignition Engines to Tables IV-B and VII-B and to the bases of Condition # 24175, Parts 1-5.
- In Condition #24175, Part 1 for S-11: Revise the operating hour limit for reliability-related testing from 100 hours/year to 30 hours/year based on the CARB ATCM and a CARB certified PM emission rate of 0.4 g/bhp-hr, and correct this limit in Table VII-B.
- In Condition #24175, Part 2 for S-14: Include the current CARB ATCM exemption for this engine and the future effective provision of Regulation 9-8-330.3 that reduces operating hours for reliability-related activities from 100 hours/year to 50 hours/year, effective January 1, 2012. Add these limits to Table VII-B.
- Replace the obsolete definitions in Conditions #19210 and #21195 with the Condition #24175, Part 3 operating restrictions that are consistent with the CARB ATCM.
- Remove the optional meters and fuel records in Conditions #19210 and #21195, and add the CARB ATCM required hour meter to Condition #24175, Part 4.
- Remove the record keeping requirements in Condition #19210, Part 5 and Condition #21195, Part 4. Add new record keeping provisions to Condition #24175, Part 5, for consistency with the CARB ATCM and Regulation 9, Rule 8. In Part 5f, include the vendor fuel sulfur content certification that is necessary to demonstrate compliance with Regulation 9-1-304.
- Add the CARB diesel fuel sulfur content limits to Table VII-B and the CARB test method for diesel fuel sulfur content to Table VIII.
- Add symbols (< and >) to Tables VII-A, VII-B, and VII-C to clarify applicable limits.
- Add several missing EPA reference methods to Table VIII.
- In Section X, update the revision history adding a description of these renewal permit revisions.
- In Section XI, add numerous terms to the glossary.
- Remove Section XII from the permit and from the Table of Contents.

Minor Revision (Application # 24259):

March 5, 2012

X. Revision History

- Delete Sources S-12 and S-13 and Add S-16 and S-17 to Table II-A in Section II
- Revise Table IV-C to Delete S-12 and S-13, and to add S-16 and S-17 in Section IV
- Changed Y to N in Table IV-C for BAAQMD Regulation 9, Rule 9
- Included in Table IV-C SIP Regulation 9, Rule 9,
- Revise Condition 16065, Part 2, to correct the microturbine source numbers and the facility reference for the offsite IC Engines.
- Delete Condition # 23579 for S-12 and S-13 in Section VI
- Add Condition # 24989 for S-16 and S-17 in Section VI
- Revise Table VII-C to Delete S-12 and S-13, and to add S-16 and S-17 in Section VII
- Revise Table VIII to delete requirements for deleted Condition #23579
- Update Revision History in Section X

XI. GLOSSARY

ACT

Federal Clean Air Act

AP-42

An EPA Document “Compilation of Air Pollution Emission Factors” that is used to estimate emissions from numerous source types. It is available electronically from EPA’s web site at: <http://www.epa.gov/ttn/chief/ap42/index.html>

APCO

Air Pollution Control Officer: Head of Bay Area Air Quality Management District

ARB

Air Resources Board

ASTM

American Society for Testing and Materials

ATC

Authority to Construct

ATCM

Airborne Toxic Control Measure

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

BARCT

Best Available Retrofit Control Technology

Basis

The underlying authority that allows the District to impose requirements.

C1

An organic chemical compound with one carbon atom, for example: methane

C3

An organic chemical compound with three carbon atoms, for example: propane

C5

An organic chemical compound with five carbon atoms, for example: pentane

C6

An organic chemical compound with six carbon atoms, for example: hexane

CAA

The federal Clean Air Act

CAAQS

California Ambient Air Quality Standards

CAPCOA

California Air Pollution Control Officers Association

CARB

California Air Resources Board (same as ARB)

CCR

California Code of Regulations

CEC

California Energy Commission

CEQA

California Environmental Quality Act

CEM

A “continuous emission monitor” is a monitoring device that provides a continuous direct measurement of some pollutant (e.g. NO_x concentration) in an exhaust stream.

CFR

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

CH₄ or CH₄

Methane

CI

Compression Ignition

CIWMB

California Integrated Waste Management Board

CO

Carbon Monoxide

CO₂ or CO₂

Carbon Dioxide

CT

Combustion Zone Temperature

Cumulative Increase

The sum of permitted emissions from each new or modified source since a specified date pursuant to BAAQMD Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 2-1-403, Permit Conditions (as approved by EPA on 6/23/95). Used to determine whether threshold-based requirements are triggered.

District

The Bay Area Air Quality Management District

E6, E9, E12

Very large or very small number values are commonly expressed in a form called scientific notation, which consists of a decimal part multiplied by 10 raised to some power. For example, 4.53E6 equals $(4.53) \times (10^6) = (4.53) \times (10 \times 10 \times 10 \times 10 \times 10 \times 10) = 4,530,000$. Scientific notation is used to express large or small numbers without writing out long strings of zeros.

EG

Emission Guidelines

EO

Executive Order

EPA

The federal Environmental Protection Agency.

Excluded

Not subject to any District regulations.

Federally Enforceable, FE

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPs), Part 63 (MACT), and Part 72 (Permits Regulation, Acid Rain), including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

FP

Filterable Particulate as measured by BAAQMD Method ST-15, Particulate.

FR

Federal Register

GDF

Gasoline Dispensing Facility

GLM

Ground Level Monitor

Grains

1/7000 of a pound

H₂S or H₂S

Hydrogen Sulfide

H₂SO₄ or H₂SO₄

Sulfuric Acid

H&SC

Health and Safety Code

HAP

Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by 40 CFR Part 63.

Hg

Mercury

HHV

Higher Heating Value. The quantity of heat evolved as determined by a calorimeter where the combustion products are cooled to 60F and all water vapor is condensed to liquid.

LFG

Landfill gas

LHV

Lower Heating Value. Similar to the higher heating value (see HHV) except that the water produced by the combustion is not condensed but retained as vapor at 60°F.

Long ton

2200 pounds

Major Facility

A facility with potential emissions of: (1) at least 100 tons per year of regulated air pollutants, (2) at least 10 tons per year of any single hazardous air pollutant, and/or (3) at least 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as determined by the EPA administrator.

MAX or Max.

Maximum

MFR

Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Federal Clean Air Act and implemented by District Regulation 2, Rule 6.

MIN or Min.

Minimum

MOP

The District's Manual of Procedures.

MSDS

Material Safety Data Sheet

MSW

Municipal solid waste

MTBE

Methyl tertiary-butyl ether

MW

Molecular weight

N2 or N₂

Nitrogen

NA

Not Applicable

NAAQS

National Ambient Air Quality Standards

NESHAPS

National Emission Standards for Hazardous Air Pollutants. See in 40 CFR Parts 61 and 63.

NMHC

Non-methane Hydrocarbons (Same as NMOC)

NMOC

Non-methane Organic Compounds (Same as NMHC)

NO₂ or NO₂

Nitrogen Dioxide

NO_x or NO_x

Oxides of nitrogen.

NSPS

Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Federal Clean Air Act, and implemented by 40 CFR Part 60 and District Regulation 10.

NSR

New Source Review. A federal program for pre-construction review and permitting of new and modified sources of pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the Federal Clean Air Act and implemented by 40 CFR Parts 51 and 52 and District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

O2 or O₂

Oxygen

Offset Requirement

A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of POC, NO_x, PM₁₀, and SO₂.

Phase II Acid Rain Facility

A facility that generates electricity for sale through fossil-fuel combustion and is not exempted by 40 CFR 72 from Titles IV and V of the Clean Air Act.

POC

Precursor Organic Compounds

PM

Particulate Matter

PM10 or PM₁₀

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns.

PSD

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of those air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

PV or P/V Valve

Pressure / Vacuum Valve

Regulated Organic Liquid

“Regulated organic liquids” are those liquids which require permits, or which are subject to some regulation, when processed at a liquid-handling operation. For example, for refinery marine terminals, regulated organic liquids are defined as “organic liquids” in Regulation 8, Rule 44.

RMP

Risk Management Plan

RWQCB

Regional Water Quality Control Board

S

Sulfur

SCR

A “selective catalytic reduction” unit is an abatement device that reduces NOx concentrations in the exhaust stream of a combustion device. SCRs utilize a catalyst, which operates within a specific temperature range, and injected ammonia to promote the conversion of NOx compounds to nitrogen gas.

Short ton

2000 pounds

SIP

State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act.

SO₂ or SO₂

Sulfur dioxide

SO₃ or SO₃

Sulfur trioxide

SSM

Startup, Shutdown, or Malfunction

SSM Plan

A plan, which states the procedures that will be followed during a startup, shutdown, or malfunction, that is prepared in accordance with the general NESHAP provisions (40 CFR Part 63, Subpart A) and maintained on site at the facility.

TAC

Toxic Air Contaminant (as identified by CARB)

THC

Total Hydrocarbons NMHC plus methane (same as TOC).

therm

100,000 British Thermal Units

Title V

Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

TOC

Total Organic Compounds includes all NMOC methane (same as THC).

TPH

Total Petroleum Hydrocarbons

TRMP

Toxic Risk Management Policy

TRS

Total Reduced Sulfur, which is a measure of the amount of sulfur-containing compounds in a gas stream, typically a fuel gas stream, including, but not limited to, hydrogen sulfide. The TRS content of a fuel gas determines the concentration of SO₂ that will be present in the combusted fuel gas, since sulfur compounds are converted to SO₂ by the combustion process.

TSP

Total Suspended Particulate

TVP

True Vapor Pressure

VMT

Vehicle Miles Traveled

VOC

Volatile Organic Compounds

Symbols:

| | | |
|---|---|--------------------------|
| < | = | less than |
| > | = | greater than |
| ≤ | = | less than or equal to |
| ≥ | = | greater than or equal to |

Units of Measure:

| | | |
|-----------------|---|-------------------------------|
| atm | = | atmospheres |
| bbl | = | barrel of liquid (42 gallons) |
| bhp | = | brake-horsepower |
| btu | = | British Thermal Unit |
| BTU | = | British Thermal Unit |
| °C | = | degrees Centigrade |
| cfm | = | cubic feet per minute |
| dscf | = | dry standard cubic feet |
| °F | = | degrees Fahrenheit |
| ft ³ | = | cubic feet |
| g | = | grams |
| gal | = | gallon |
| gpm | = | gallons per minute |
| gr | = | grains |
| hp | = | horsepower |
| hr | = | hour |
| in | = | inches |
| kW | = | kilowatts |
| lb | = | pound |
| lbmol | = | pound-mole |
| m ² | = | square meter |
| m ³ | = | cubic meters |
| Mg | = | mega grams |
| min | = | minute |
| mm | = | millimeter |
| MM | = | million |
| MM BTU | = | million BTU |
| M cf | = | one thousand cubic feet |
| MMcf | = | one million cubic feet |
| MW | = | megawatts |
| ppb | = | parts per billion |
| ppbv | = | parts per billion, by volume |

| | | |
|-----------------|---|------------------------------------|
| ppm | = | parts per million |
| ppmv | = | parts per million, by volume |
| ppmw | = | parts per million, by weight |
| psia | = | pounds per square inch, absolute |
| psig | = | pounds per square inch, gauge |
| scf | = | standard cubic feet |
| scfm | = | standard cubic feet per minute |
| sdcf | = | standard dry cubic feet |
| sdcfm | = | standard dry cubic feet per minute |
| yd | = | yard |
| yd ³ | = | cubic yards |
| yr | = | year |