

Bay Area Air Quality Management District

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

Final

MAJOR FACILITY REVIEW PERMIT

Issued To:

Guadalupe Energy Holdings, LLC
Facility #B1669

Facility Address:

15999 Guadalupe Mines Road
San Jose, CA 95120

Mailing Address:

5087 Junction Road
Lockport, NY 14094

Responsible Official

Anthony J. Falbo
VP and General Manager
(716) 439-1004

Facility Contact

Suparna Chakladar
Senior Director – EH&S
(951) 883-4153

Type of Facility: Landfill Gas
Primary SIC: 4911
Product: Electrical Power

BAAQMD Permit Division Contact:
Tamiko Endow

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

March 29, 2011
Date

TABLE OF CONTENTS

I.	STANDARD CONDITIONS	3
II.	EQUIPMENT LIST	8
III.	GENERALLY APPLICABLE REQUIREMENTS.....	9
IV.	SOURCE-SPECIFIC APPLICABLE REQUIREMENTS	12
V.	SCHEDULE OF COMPLIANCE.....	21
VI.	PERMIT CONDITIONS	22
VII.	APPLICABLE LIMITS AND COMPLIANCE MONITORING REQUIREMENTS	26
VIII.	TEST METHODS.....	35
IX.	PERMIT SHIELD.....	38
X.	REVISION HISTORY.....	39
XI.	GLOSSARY	41

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 3/4/09);

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 – New Source Review of Toxic Air Contaminants

(as amended by the District Board on 1/6/10)

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 March 29, 2011 and expires on March 28, 2016. The permit holder shall submit a complete application for renewal of this Major Facility Review Permit no later than September 28, 2015 and no earlier than March 28, 2015. **If a complete application for renewal has not been submitted in accordance with this deadline, the facility may not operate after March 28, 2016.** If the permit renewal has not been issued by March 28, 2016, 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)

I. Standard Conditions

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 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 which 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)

I. Standard Conditions

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 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 which 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. 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

I. Standard Conditions

Bay Area Air Quality Management District
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 January 1st through December 31st. The certification shall be submitted by January 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 should 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

I. Standard Conditions

of a variance will not provide relief from federal enforcement. (MOP Volume II, Part 3, §4.8)

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 LIST

A. Permitted Source List

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.

Table II A

S-#	Description	Make or Type	Model	Capacity
2	Internal Combustion Engine, Landfill Gas (landfill gas)	Superior, Rich Burn	8G825	750 HP 6.75 MM BTU/hour
3	Internal Combustion Engine, Landfill Gas (landfill gas)	Superior, Rich Burn	8G825	750 HP 6.75 MM BTU/hour
4	Internal Combustion Engine, Landfill Gas (landfill gas)	Superior, Rich Burn	8G825	750 HP 6.75 MM BTU/hour
5	Internal Combustion Engine, Landfill Gas (landfill gas)	Waukesha GL Series Lean Burn	7042 GL	1547 HP 13.5 MM BTU/hour
7	Landfill Gas Condensate Storage Tank	Fixed Roof		6500 Gallons

B. Abatement Device List

Table II B

A-#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Limit or Efficiency
	None				

III. GENERALLY APPLICABLE REQUIREMENTS

The permit holder shall comply with all applicable requirements, including those specified in the BAAQMD and State Implementation Plan (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. For BAAQMD regulation(s): The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors
2. For 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 rule and the version of the rule 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 (3/4/09)	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 (1/6/10)	N

III. Generally Applicable Requirements

Table III
Generally Applicable Requirements

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
BAAQMD Regulation 4	Air Pollution Episode Plan (3/20/91)	N
SIP Regulation 4	Air Pollution Episode Plan (8/6/90)	Y
BAAQMD Regulation 5	Open Burning (7/9/08)	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 and Visible Emissions (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 (7/1/09)	Y
SIP Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (1/2/04)	Y
BAAQMD Regulation 8, Rule 4	Organic Compounds – General Solvent and Surface Coating Operations (10/16/02)	Y
BAAQMD Regulation 8, Rule 5	Organic Compounds – Storage of Organic Liquids (10/18/06)	N
SIP Regulation 8, Rule 5	Organic Compounds – Storage of Organic Liquids (6/5/03)	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

III. Generally Applicable Requirements

**Table III
 Generally Applicable Requirements**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
BAAQMD Regulation 11, Rule 2	Hazardous Pollutants - Asbestos Demolition, Renovation and Manufacturing (10/7/98)	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	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	N
California Health and Safety Code Title 17, Subchapter 10, Article 2, Sections 95100 through 95109	Mandatory Greenhouse Gas Emissions Reporting	N
40 CFR Part 61, Subpart M	National Emission Standards for Hazardous Air Pollutants – National Emission Standard for Asbestos (6/19/95)	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. For BAAQMD regulation(s): The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors
2. For 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>. All other text may be found in the regulations themselves.

**Table IV – A
 Source-Specific Applicable Requirements
 S-2, S-3 & S-4 INTERNAL COMBUSTION ENGINES,
 RICH-BURN, LANDFILL GAS FIRED, 750 HP EACH**

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	Y	
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 of monitors	N	
SIP Regulation 1	General Provisions and Definitions (6/28/99)		
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	
1-523.3	Reporting requirement for violations of any applicable limits	Y	
BAAQMD Regulation 6, Rule 1	Particulate Matter – General Requirements (12/5/07)		

IV. Source-Specific Applicable Requirements

Table IV – A
Source-Specific Applicable Requirements
S-2, S-3 & S-4 INTERNAL COMBUSTION ENGINES,
RICH-BURN, LANDFILL GAS FIRED, 750 HP EACH

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
6-1-301	Ringelmann No. 1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particle Weight Limitation	N	
6-1-401	Appearance of Emissions	N	
SIP Regulation 6	Particulate Matter and Visible Emissions (12/19/90)		
6-301	Ringelmann No. 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particle 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	
8-34-113.2	Shutdown Time Limitation	Y	
8-34-113.3	Recordkeeping Requirement	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	
8-34-301.4	Limits for Other Emission Control Systems	Y	
8-34-412	Compliance Demonstration Tests	Y	
8-34-413	Performance Test Report	Y	
8-34-501	Operating Records	Y	
8-34-501.2	Emission Control System Downtime	Y	
8-34-501.4	Testing	Y	
8-34-501.6	Leak Discovery and Repair Records (Permit holder is responsible only for collection system components that are owned by the permit holder)	Y	
8-34-501.10	Gas Flow Rate Records for All Emission Control Systems	Y	
8-34-501.11	Key emission control system operating parameters	Y	
8-34-501.12	Records Retention for 5 Years	Y	

IV. Source-Specific Applicable Requirements

**Table IV – A
 Source-Specific Applicable Requirements
 S-2, S-3 & S-4 INTERNAL COMBUSTION ENGINES,
 RICH-BURN, LANDFILL GAS FIRED, 750 HP EACH**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
8-34-503	Landfill Gas Collection and Emission Control System Leak Testing (Permit holder is responsible only for collection system components that are owned by the permit holder)	Y	
8-34-504	Portable Hydrocarbon Detector	Y	
8-34-508	Gas Flow Meter	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	
BAAQMD Regulation 9 Rule 8	Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (7/25/07)		
9-8-302	Emission Limits – Waste Derived Fuel Gas	Y	
9-8-302.2	Rich-Burn Engines: NOx Emission Limit 210 ppmv corrected to 15% oxygen, dry basis	Y	
9-8-302.2	Rich-Burn Engines: NOx Emission Limit 70 ppmv corrected to 15% oxygen, dry basis	N	1/1/2012
9-8-302.3	CO Emission Limit 2000 ppmv corrected to 15% oxygen, dry basis	Y	
9-8-401	Compliance Schedule	N	
9-8-501	Initial Demonstration of Compliance	N	
9-8-502	Recordkeeping	N	
9-8-502.3	Compliance Demonstration Records	N	
9-8-503	Quarterly Demonstration of Compliance	N	
SIP Regulation 9 Rule 8	Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (12/15/97)		
9-8-302	Emission Limits – Waste Derived Fuel Gas	Y	

IV. Source-Specific Applicable Requirements

Table IV – A
Source-Specific Applicable Requirements
S-2, S-3 & S-4 INTERNAL COMBUSTION ENGINES,
RICH-BURN, LANDFILL GAS FIRED, 750 HP EACH

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
9-8-302.2	Rich-Burn Engines: NO _x Emission Limit 210 ppmv corrected to 15% oxygen, dry basis	Y	
9-8-302.3	CO Emission Limit 2000 ppmv corrected to 15% oxygen, dry basis	Y	
BAAQMD Condition # 17777			
Part 1	Fuel Restrictions (Plant Cumulative Increase)	Y	
Part 3	Exhaust Gas NO _x Concentration Limit (BACT and Regulation 9-8-302.2)	Y	
Part 4	Exhaust Gas CO Concentration Limit (BACT and Plant Cumulative Increase)	Y	
Part 7 a-f	Annual source test (Regulations 8-34-114, 8-34-301.4, 8-34-412, 8-34-509, 9-8-302.1, 9-8-302.2, and 9-8-302.3, BACT, and Plant Cumulative Increase)	Y	
Part 8	Landfill Gas Sulfur Content Limit and Monitoring Requirements (Regulation 9-1-302)	Y	
Part 9	Annual throughput limit (Regulation 2-1-301)	Y	
Part 10 a-g	Recordkeeping for throughput limit and destruction efficiency (Regulation 2-1-301)	Y	
Part 11	Information for design plans and annual reports (Regulation 1-441)	Y	
Part 12 a-b	Monitoring Requirements for Exhaust Gas CO and O ₂ Concentrations Using Portable Analyzers (Regulations 2-6-501, 8-34-301.4, 8-34-501.4, 8-34-509)	Y	

IV. Source-Specific Applicable Requirements

**Table IV – B
 Source-Specific Applicable Requirements
 S-5 INTERNAL COMBUSTION ENGINE,
 LEAN-BURN, LANDFILL GAS FIRED, 1547 HP**

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	Y	
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 of monitors	N	
SIP Regulation 1	General Provisions and Definitions (6/28/99)		
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	
1-523.3	Reporting requirement for violations of any applicable limits	Y	
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	Particle Weight Limitation	N	
6-1-401	Appearance of Emissions	N	
SIP Regulation 6	Particulate Matter and Visible Emissions (12/19/90)		
6-301	Ringelmann No. 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particle 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	
8-34-113.2	Shutdown Time Limitation	Y	
8-34-113.3	Recordkeeping Requirement	Y	
8-34-301	Landfill Gas Collection and Emission Control System Requirements	Y	

IV. Source-Specific Applicable Requirements

**Table IV – B
 Source-Specific Applicable Requirements
 S-5 INTERNAL COMBUSTION ENGINE,
 LEAN-BURN, LANDFILL GAS FIRED, 1547 HP**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
8-34-301.1	Continuous Operation	Y	
8-34-301.2	Collection and Control Systems Leak Limitations	Y	
8-34-301.4	Limits for Other Emission Control Systems	Y	
8-34-412	Compliance Demonstration Tests	Y	
8-34-413	Performance Test Report	Y	
8-34-501	Operating Records	Y	
8-34-501.2	Emission Control System Downtime	Y	
8-34-501.3	Continuous Temperature Records for Enclosed Combustors	Y	
8-34-501.4	Testing	Y	
8-34-501.6	Leak Discovery and Repair Records (Permit holder is responsible only for collection system components that are owned by the permit holder)	Y	
8-34-501.10	Gas Flow Rate Records for All Emission Control Systems	Y	
8-34-501.11	Key emission control system operating parameters	Y	
8-34-501.12	Records Retention for 5 Years	Y	
8-34-503	Landfill Gas Collection and Emission Control System Leak Testing (Permit holder is responsible only for collection system components that are owned by the permit holder)	Y	
8-34-504	Portable Hydrocarbon Detector	Y	
8-34-508	Gas Flow Meter	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	
BAAQMD Regulation 9 Rule 8	Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (7/25/07)		
9-8-302	Emission Limits – Waste Derived Fuel Gas	Y	

IV. Source-Specific Applicable Requirements

**Table IV – B
 Source-Specific Applicable Requirements
 S-5 INTERNAL COMBUSTION ENGINE,
 LEAN-BURN, LANDFILL GAS FIRED, 1547 HP**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
9-8-302.1	Lean-Burn Engines: NOx Emission Limit 140 ppmv corrected to 15% oxygen, dry basis	Y	
9-8-302.1	Lean Burn Engines: NOx Emission Limit 70 ppmv corrected to 15% oxygen, dry basis	N	1/1/2012
9-8-302.3	CO Emission Limit 2000 ppmv corrected to 15% oxygen, dry basis	Y	
9-8-401	Compliance Schedule	N	
9-8-501	Initial Demonstration of Compliance	N	
9-8-502	Recordkeeping	N	
9-8-502.3	Compliance Demonstration Records	N	
9-8-503	Quarterly Demonstration of Compliance	N	
SIP Regulation 9 Rule 8	Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (12/15/97)		
9-8-302	Emission Limits – Waste Derived Fuel Gas	Y	
9-8-302.1	Lean-Burn Engines: NOx Emission Limit 140 ppmv corrected to 15% oxygen, dry basis	Y	
9-8-302.3	CO Emission Limit 2000 ppmv corrected to 15% oxygen, dry basis	Y	
BAAQMD Condition # 1777			
Part 1	Fuel Restrictions (Plant Cumulative Increase)	Y	
Part 2	Engine Operating Priorities (S-2, S-3 and S-4) (Plant Cumulative Increase)		
Part 5	Exhaust Gas NO _x Concentration Limit (BACT)	Y	
Part 6	Exhaust Gas CO Concentration Limit (BACT and Plant Cumulative Increase)	Y	
Part 7 a-f	Annual source test (Regulations 8-34-114, 8-34-301.4, 8-34-412, 8-34-509, 9-8-302.1, 9-8-302.2, and 9-8-302.3, BACT, and Plant Cumulative Increase)	Y	
Part 8	Landfill Gas Sulfur Content Limits and Monitoring Requirements (Regulation 9-1-302)	Y	
Part 9	Annual throughput limit (Regulation 2-1-301)	Y	
Part 10 a-g	Recordkeeping for throughput limit and destruction efficiency (Regulation 2-1-301)	Y	

IV. Source-Specific Applicable Requirements

Table IV – B
Source-Specific Applicable Requirements
S-5 INTERNAL COMBUSTION ENGINE,
LEAN-BURN, LANDFILL GAS FIRED, 1547 HP

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
Part 11	Information for design plans and annual reports (Regulation 1-441)	Y	
Part 12	Monitoring Requirements for Exhaust Gas CO and O ₂ Concentrations Using Portable Analyzers (Regulations 2-6-501, 8-34-301.4, 8-34-501.4, 8-34-509)	Y	

IV. Source-Specific Applicable Requirements

Table IV – C
Source-Specific Applicable Requirements
S-7 LANDFILL GAS CONDENSATE STORAGE TANK, 6500 GALLONS

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (7/20/05)		
8-2-301	Miscellaneous Operations	Y	
BAAQMD Condition # 18306			
Part 1	Annual condensate throughput limit (Cumulative Increase)	Y	
Part 2	Restriction on materials stored in S-7 (Cumulative Increase)	Y	
Part 3	Limit on toxic compound emissions (Regulation 2-5-110)	N	
Part 4	Record keeping requirements (Cumulative Increase and Regulation 2-6-501)	Y	

V. SCHEDULE OF COMPLIANCE

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

VI. PERMIT CONDITIONS

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

Condition # 17777

For S-2, S-3, S-4, S-5, Internal Combustion Engines, Landfill Gas Fired

1. The Permit Holder shall ensure that the Internal Combustion Engines (S-2, S-3, S-4, and S-5) are fired on landfill gas exclusively. (Basis: Plant Cumulative Increase)
2. The Permit Holder shall ensure that the operation of S-5 Waukesha Internal Combustion Engine is given priority over all other engines (S-2, S-3 and S-4) at all times that a sufficient quantity of landfill gas exists to operate S-5. (Basis: Plant Cumulative Increase)
3. The Permit Holder shall ensure that the Nitrogen Oxide (NO_x) emissions from each Internal Combustion Engine (S-2, S-3 and S-4) do not exceed 210 ppmv, dry basis, corrected to 15% O₂. (Basis: BACT and Regulation 9-8-302.2)
4. The Permit Holder shall ensure that the Carbon Monoxide (CO) emissions from each Internal Combustion Engine (S-2, S-3 and S-4) do not exceed 740 ppmv, dry basis, corrected to 15% O₂. (Basis: BACT and Plant Cumulative Increase)
5. The Permit Holder shall ensure that the Nitrogen Oxide (NO_x) emissions from S-5 do not exceed 130 ppmv, dry basis, corrected to 15% O₂. (Basis: BACT)
6. The Permit Holder shall ensure that the Carbon Monoxide (CO) emissions from S-5 do not exceed 260 ppmv, dry basis, corrected to 15% O₂. (Basis: BACT and Plant Cumulative Increase)
7. In order to demonstrate compliance with Parts 3, 4, 5 and 6 above; Regulation 8, Rule 34, Sections 301.4, and 412; Regulation 9, Rule 8, Sections 302.1, 302.2, and 302.3; the Permit Holder shall ensure that a District approved source test is conducted annually on each Internal Combustion Engine (S-2, S-3, S-4, and S-5). The annual source tests shall determine the following:
 - a. landfill gas flow rate to each engine (dry basis);
 - b. concentrations (dry basis) of carbon dioxide (CO₂), nitrogen (N₂), oxygen (O₂), methane (CH₄), and total non-methane organic compounds (NMOC) in the landfill gas;
 - c. exhaust gas flow rate from each engine (dry basis);
 - d. concentrations (dry basis) of NO_x, CO, CH₄, NMOC, and O₂ in the exhaust gas from each engine;
 - e. the CH₄ and NMOC destruction efficiencies achieved by each engine; and

VI. Permit Conditions

Condition # 17777

For S-2, S-3, S-4, S-5, Internal Combustion Engines, Landfill Gas Fired

- The source tests for each engine shall be conducted no sooner than 9 months and no later than 12 months after the previous source test. The Permit Holder shall contact the District's Source Test Section to obtain approval of the source test procedures at least 14 days in advance of each source test and shall notify the Source Test Section of the scheduled test date at least 7 days in advance of each source test. The source test report shall be submitted to the District's Compliance and Enforcement Division within 45 days of the test date. (Basis: BACT or Plant Cumulative Increase, Regulations 8-34-301.4, 8-34-412, 9-8-302.1, 9-8-302.2, 9-8-302.3)
8. The Permit Holder shall monitor total reduced sulfur compounds in the collected landfill gas as a surrogate for monitoring sulfur dioxide in the exhaust from the Internal Combustion Engines. The concentration of total reduced sulfur compounds in the collected landfill gas shall not exceed 1300 ppmv (dry), reported as hydrogen sulfide (H₂S). In order to demonstrate compliance with this Part, the Permit Holder shall measure the total sulfur content in collected landfill gas on a quarterly basis using a draeger tube. The landfill gas sample shall be taken from the main landfill gas header. The Permit Holder shall follow the manufacturer's recommended procedures for using the draeger tube and interpreting the results. (Basis: Regulation 9-1-302)
 9. The Permit Holder shall ensure that the heat input to each Internal Combustion Engine (S-2, S-3 or S-4) does not exceed 162 million BTU during any one day. The Permit Holder shall ensure that the heat input to S-5 does not exceed 324 million BTU during any one day. The Permit Holder shall ensure that the combined heat input to the four Internal Combustion Engines (S-2, S-3, S-4, and S-5) does not exceed 295,650 million BTU during any rolling consecutive 12-month period. (Basis: Regulation 2-1-301)
 10. In order to demonstrate compliance with Parts 8 and 9, the Permit Holder shall maintain the following records in a District approved log. These records shall be kept on site and made available for District inspection for a period of at least five years from the date on which a record is made. (Basis: Regulations 2-1-301 and 2-6-501)
 - a. Daily records of operating hours for each engine (S-2, S-3, S-4, and S-5), summarized on a monthly basis,
 - b. Monthly records of the amount sold of energy produced at S-5 and monthly records of the amount of sold energy produced at S-2, S-3 and S-4 (kW-hr/month),
 - c. Deleted
 - d. Deleted

VI. Permit Conditions

Condition # 17777

For S-2, S-3, S-4, S-5, Internal Combustion Engines, Landfill Gas Fired

- e. Monthly records of the heat input to S-5 and monthly records of the combined heat input to S-2, S-3 and S-4, calculated as the kW-hr/month produced (from part b), adjusted for 5% losses and multiplied by the 13,320 BTU/kW-hr for S-2, S-3, and S-4 and adjusted for 10% losses and multiplied by 12,210 BTU/kW-hr for S-5.
 - f. Records of the date and the measured H₂S concentration for all landfill gas sulfur content analyses.
11. The Permit Holder shall supply any information required by BAAQMD Regulation 8-34-411, EPA Regulations 40 CFR 60.757(c), 40 CFR 60.757(f)(1), (2), and (3) to the permit holder of the Guadalupe Mines Road Landfill and to the District within 30 days of a request from said landfill or the District. (Basis: Regulation 1-441)
12. In order to demonstrate compliance with the NMOC emission limits in Regulation 8-34-301.4, the Permit Holder shall measure and record the following for each engine (S-2, S-3, S-4, S-5):
- a. Exhaust gas oxygen content: Weekly CO and oxygen content measurements shall be made with a LAND Instruments Lancom III portable flue gas analyzer or District-approved equivalent, calibrated according to the manufacturer's specifications using a certified reference calibration gas.
 - b. Reportable exceedances: A CO concentration level, corrected to 15% O₂, dry, in excess of the limit in Part 3 shall be considered a reportable CO exceedance and also a violation of Regulation 8-34-301.4 and shall be included in the semi-annual monitoring report required by Section I.F. of this permit.
 - c. Corrections: Exceedance of the CO concentration limit in Part 4 shall be corrected upon discovery through adjustment of the engine.
 - d. Monitoring frequency: If the measured CO concentration, corrected to 15% O₂, dry, is 80% of the limit in Part 4, or less, then the CO and oxygen measurements in Part 12a may be performed on a calendar month basis, instead of a weekly basis. The interval between required monthly monitoring events shall be at least 15 days. In the event of a reportable exceedance, the CO and oxygen content monitoring frequency shall return to weekly monitoring

All calibration and monitoring records shall be maintained onsite or shall be made readily available to District staff upon request for at least 5 years from the date of entry. (Basis: Regulations 2-6-501, 8-34-301.4, 8-34-501.4, 8-34-509)

VI. Permit Conditions

Condition # 18306

For S-7, Landfill Gas Condensate Storage Tank

1. The Permit Holder shall ensure that the total throughput of landfill gas condensate at Landfill Gas Condensate Storage Tank (S-7) does not exceed 90,000 gallons during any consecutive 12-month period. (Basis: Cumulative Increase)
2. The Permit Holder shall ensure that only landfill gas condensate is stored in tank S-7. (Basis: Cumulative Increase)
- *3. The Permit Holder shall ensure that storage of landfill gas condensate at S-7 does not result in emissions exceeding any risk screening trigger level, as specified in Table 2-5-1 of Regulation 2, Rule 5. (Basis: Regulation 2-5-110)
4. To demonstrate compliance with above conditions, the Permit Holder shall record the type of liquid stored and the monthly throughput for S-7 in a District approved log. These records shall be kept on site and made available for District inspection for a period of at least 5 years from the date on which a record is made. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (Basis: Cumulative Increase and Regulation 2-6-501)

VII. APPLICABLE LIMITS AND COMPLIANCE MONITORING REQUIREMENTS

This section has been included only 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.

This section is only a summary of the limits and monitoring requirements. In the case of a conflict with any requirement in Sections I-VI and Section VII, the preceding sections take precedence over Section VII.

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-2, S-3 & S-4 INTERNAL COMBUSTION ENGINES,
RICH-BURN, LANDFILL GAS FIRED, 750 HP EACH

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 6-1-301	N		Ringelmann No. 1 for < 3 minutes in any hour	NA	N	none
FP	BAAQMD 6-1-310	N		≤ 0.15 grains/dscf	NA	N	none
Opacity	SIP 6-301	Y		Ringelmann No. 1 for < 3 minutes in any hour	NA	N	none
FP	SIP 6-310	Y		≤ 0.15 grains/dscf	NA	N	none
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 8-34-503	P/Q	Quarterly Inspection and Records

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-2, S-3 & S-4 INTERNAL COMBUSTION ENGINES,
RICH-BURN, LANDFILL GAS FIRED, 750 HP EACH

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Non-Methane Organic Compounds (NMOC)	BAAQMD 8-34-301.4	Y		≥ 98% removal by weight OR < 120 ppmv dry @ 3% O ₂ , expressed as methane	BAAQMD 8-34-412 and 8-34-501.4 and BAAQMD Condition # 17777, Parts 7 and 12	P/A and P/W or M	Annual Source Tests and Exhaust Gas Testing with Portable Analyzers and Records
SO ₂	BAAQMD 9-1-301	Y		Property Line Ground Level Limits ≤ 0.5 ppm for 3 minutes, ≤ 0.25 ppm for 60 minutes, and ≤ 0.05 ppm for 24 hours	NA	N	none
SO ₂	BAAQMD 9-1-302	Y		≤ 300 ppm (dry)	BAAQMD Condition # 17777, Parts 8 and 9	P/ Q	Sulfur Analysis of Landfill Gas and Records
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	NA	N	none
Total Sulfur Content in Landfill Gas	BAAQMD Condition # 17777, Part 8	Y		≤ 1300 ppmv (dry)	BAAQMD Condition # 17777, Parts 8 and 9	P/ Q	Sulfur Analysis of Landfill Gas and Records

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-2, S-3 & S-4 INTERNAL COMBUSTION ENGINES,
RICH-BURN, LANDFILL GAS FIRED, 750 HP EACH

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 and SIP 9-8-302.2 and BAAQMD Condition # 17777, Part 3	Y		≤ 210 ppmv dry, expressed as NO ₂ , corrected to 15% O ₂	BAAQMD 9-8-503 and 9-8-502.3 and BAAQMD Condition # 17777, Part 7	P/Q and P/A	Exhaust Gas Testing with Portable Analyzers and Annual Source Test and Records
NO _x	BAAQMD 9-8-302.2	N	1/1/12	≤ 70 ppmv dry, expressed as NO ₂ , corrected to 15% O ₂	BAAQMD 9-8-503 and 9-8-502.3 and BAAQMD Condition # 17777, Part 7	P/Q and P/A	Exhaust Gas Testing with Portable Analyzers and Annual Source Test and Records
CO	BAAQMD and SIP 9-8-302.3	Y		≤ 2000 ppmv dry, corrected to 15% O ₂	BAAQMD 9-8-503 and 9-8-502.3 and BAAQMD Condition # 17777, Parts 7 and 12	P/Q/M or W and P/A	Exhaust Gas Testing with Portable Analyzers and Annual Source Test and Records
CO	BAAQMD Condition # 17777, Part 4	Y		≤ 740 ppmv dry, corrected to 15% O ₂	BAAQMD 9-8-503 and 9-8-502.3 And BAAQMD Condition # 17777, Parts 7 and 12	P/Q/M or W and P /A	Exhaust Gas Testing with Portable Analyzers and Annual Source Test and Records

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-2, S-3 & S-4 INTERNAL COMBUSTION ENGINES,
RICH-BURN, LANDFILL GAS FIRED, 750 HP EACH

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Emission Control System Shutdown Time	BAAQMD 8-34-113.2	Y		≤ 240 hours/year	BAAQMD 8-34-501.2	P/D	Records
Gas Flow	BAAQMD 8-34-301 and 301.1;	Y		Vent all collected gases to a properly operating control system and operate control system continuously.	BAAQMD 8-34-501.10 and 508	C	Gas Flow Meter and Recorder (every 15 minutes)
Periods of Inoperation for Parametric Monitors	BAAQMD 1-523.2	Y		≤ 15 consecutive days per incident and ≤ 30 calendar days per 12 month period	BAAQMD 1-523.4	P/D	Records of occurrence and duration
Heat Input	BAAQMD Condition # 17777, Part 9	Y		≤ 162 MM BTU/day/engine and ≤ 177,390 MM BTU per 12-month period for all 3 engines combined	BAAQMD Condition # 17777, Part 10a-e	P/D and P/M	Records

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – B
Applicable Limits and Compliance Monitoring Requirements
S-5 INTERNAL COMBUSTION ENGINE,
LEAN-BURN, LANDFILL GAS FIRED, 1547 HP

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 6-1-301	N		Ringelmann No. 1 for < 3 minutes in any hour	NA	N	none
FP	BAAQMD 6-1-310	N		≤ 0.15 grains/dscf	NA	N	none
Opacity	SIP 6-301	Y		Ringelmann No. 1 for < 3 minutes in any hour	NA	N	none
FP	SIP 6-310	Y		≤ 0.15 grains/dscf	NA	N	none
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 8-34-503	P/Q	Quarterly Inspection and Records
Non-Methane Organic Compounds (NMOC)	BAAQMD 8-34-301.4	Y		≥ 98% removal by weight OR < 120 ppmv dry @ 3% O ₂ , expressed as methane	BAAQMD 8-34-412 and 8-34-501.4 and BAAQMD Condition # 17777, Parts 7 and 12	P/A and P/W or M	Annual Source Tests and Exhaust Gas Testing with Portable Analyzers and Records
SO ₂	BAAQMD 9-1-301	Y		Property Line Ground Level Limits ≤ 0.5 ppm for 3 minutes, ≤ 0.25 ppm for 60 minutes, and ≤ 0.05 ppm for 24 hours	NA	N	none
SO ₂	BAAQMD 9-1-302	Y		≤ 300 ppm (dry)	BAAQMD Condition # 17777, Parts 8 and 9	P/ Q	Sulfur Analysis of Landfill Gas and Records

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – B
Applicable Limits and Compliance Monitoring Requirements
S-5 INTERNAL COMBUSTION ENGINE,
LEAN-BURN, LANDFILL GAS FIRED, 1547 HP

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	NA	N	none
Total Sulfur Content in Landfill Gas	BAAQMD Condition # 17777, Part 8	Y		≤ 1300 ppmv (dry)	BAAQMD Condition # 17777, Parts 8 and 9	P/ Q	Sulfur Analysis of Landfill Gas and Records
NO _x	BAAQMD and SIP 9-8-302.1	Y		≤ 140 ppmv dry, expressed as NO ₂ , corrected to 15% O ₂	BAAQMD 9-8-503 and 9-8-502.3 and BAAQMD Condition # 17777, Part 7	P/Q and P/A	Exhaust Gas Testing with Portable Analyzers and Annual Source Test and Records
NO _x	BAAQMD Condition # 17777, Part 5	Y		≤ 130 ppmv dry, expressed as NO ₂ , corrected to 15% O ₂	BAAQMD 9-8-503 and 9-8-502.3 and BAAQMD Condition # 17777, Part 7	P/Q and P/A	Exhaust Gas Testing with Portable Analyzers and Annual Source Test and Records

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – B
Applicable Limits and Compliance Monitoring Requirements
S-5 INTERNAL COMBUSTION ENGINE,
LEAN-BURN, LANDFILL GAS FIRED, 1547 HP

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 9-8-302.1	N	1/1/12	≤ 70 ppmv dry, expressed as NO ₂ , corrected to 15% O ₂	BAAQMD 9-8-503 and 9-8-502.3 and BAAQMD Condition # 17777, Part 7	P/Q and P/A	Exhaust Gas Testing with Portable Analyzers and Annual Source Test and Records
CO	BAAQMD and SIP 9-8-302.3	Y		≤ 2000 ppmv dry, corrected to 15% O ₂	BAAQMD 9-8-503 and BAAQMD Condition # 17777, Parts 7 and 12	P/Q/M or W and P/A	Exhaust Gas Testing with Portable Analyzers and Annual Source Test and Records
CO	BAAQMD Condition # 17777, Part 6	Y		≤ 260 ppmv dry, corrected to 15% O ₂	BAAQMD 9-8-503 and 9-8-502.3 and BAAQMD Condition # 17777, Parts 7 and 12	P/Q/M or W and P/A	Exhaust Gas Testing with Portable Analyzers and Annual Source Test and Records
Emission Control System Shutdown Time	BAAQMD 8-34-113.2	Y		≤ 240 hours/year	BAAQMD 8-34-501.2	P/D	Records

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – B
Applicable Limits and Compliance Monitoring Requirements
S-5 INTERNAL COMBUSTION ENGINE,
LEAN-BURN, LANDFILL GAS FIRED, 1547 HP

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Gas Flow	BAAQMD 8-34-301 and 301.2;	Y		Vent all collected gases to a properly operating control system and operate control system continuously.	BAAQMD 8-34-501.10 and 508	C	Gas Flow Meter and Recorder (every 15 minutes)
Periods of Inoperation for Parametric Monitors	BAAQMD 1-523.2	Y		≤ 15 consecutive days per incident and ≤ 30 calendar days per 12 month period	BAAQMD 1-523.4	P/D	Records of occurrence and duration
Heat Input	BAAQMD Condition # 17777, Part 9	Y		≤ 324 MM BTU per day and ≤ 118,260 MM BTU per 12-month period	BAAQMD Condition # 17777, Part 10a-e	P/D and P/M	Records

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – C
Applicable Limits and Compliance Monitoring Requirements
S-7 LANDFILL GAS CONDENSATE STORAGE TANK, 6500 GALLONS

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
TOC	BAAQMD 8-2-301	Y		≤ 15 pounds/day or ≤ 300 ppm, dry basis	BAAQMD Condition # 18306, Part 4	P/D	Records
Through-put	BAAQMD Condition # 18306, Part 1	Y		≤ 90,000 gallons of landfill gas condensate per 12-month period	BAAQMD Condition # 18306, Part 4	P/D	Records

VIII. TEST METHODS

The test methods associated with the emission limit of a District regulation are generally referenced 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 Emission Limits & Compliance Monitoring Requirements, of this permit.

**Table VIII
 Test Methods**

Applicable Requirement	Description of Requirement	Acceptable Test Methods
BAAQMD 6-1-301 and SIP 6-301	Ringelmann No. 1 Limitation	Manual of Procedures, Volume I, Evaluation of Visible Emissions; or US EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources
BAAQMD 6-1-310 and SIP 6-310	Particulate Weight Limitation	Manual of Procedures, Volume IV, ST-15, Particulate Sampling or US EPA Method 5, Determination of Particulate Matter Emissions from Stationary Sources
BAAQMD 8-2-301	Total Organic Compound Mass and Concentration Limitations	Manual of Procedures, Volume IV, ST-7, Non-Methane Organic Carbon Sampling; or EPA Reference Method 25, or 25A
BAAQMD 8-34-301.2	Collection and Control System Leak Limitations	EPA Reference Method 21, Determination of Volatile Organic Compound Leaks
BAAQMD 8-34-301.4	Limits for Other Emission Control Systems	For Source Tests: Manual of Procedures, Volume IV, ST-7, Organic Compounds and ST-14, Oxygen, Continuous Sampling; or EPA Reference Method 18, 25, 25A, or 25C For Weekly or Monthly Compliance Checks: Portable CO and O ₂ Analyzers calibrated and used in accordance with manufacturer's recommended procedures
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 9-1-302	General Emission Limitation	Manual of Procedures, Volume IV, ST-19A, Sulfur Dioxide, Continuous Sampling,

VIII. Test Methods

**Table VIII
 Test Methods**

Applicable Requirement	Description of Requirement	Acceptable Test Methods
BAAQMD 9-8-302.1 and SIP 9-8-302.1	Waste Derived Fuel Gas NO _x Limits for Lean Burn Engines	For Source Tests: Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling; and For Quarterly Compliance Checks Pursuant to BAAQMD Regulation 9-8-503: Portable NO _x and O ₂ Analyzers calibrated and used in accordance with manufacturer's recommended procedures with NO _x readings averaged over a consecutive 15-minute period
BAAQMD 9-8-302.2 and SIP 9-8-302.2	Waste Derived Fuel Gas NO _x Limits for Rich Burn Engines	For Source Tests: Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling; or For Quarterly Compliance Checks Pursuant to BAAQMD Regulation 9-8-503: Portable NO _x and O ₂ Analyzers calibrated and used in accordance with manufacturer's recommended procedures with NO _x readings averaged over a consecutive 15-minute period
BAAQMD 9-8-302.3 and SIP 9-8-302.3	Waste Derived Fuel Gas CO Limits	For Source Tests: Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling; and For Quarterly Compliance Checks Pursuant to BAAQMD Regulation 9-8-503: Portable CO and O ₂ Analyzers calibrated and used in accordance with manufacturer's recommended procedures
BAAQMD Condition # 17777, Parts 3 & 5	NO _x Limit	For Source Tests: Manual of Procedures, Volume IV, Oxides of Nitrogen, Continuous Sampling, and ST-14, Oxygen, Continuous Sampling; and For Quarterly Compliance Checks Pursuant to BAAQMD Regulation 9-8-503: Portable NO _x and O ₂ Analyzers calibrated and used in accordance with manufacturer's recommended procedures with NO _x readings averaged over a consecutive 15-minute period
BAAQMD Condition # 17777, Parts 4 & 6	CO Limit	For Source Tests: Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling, and ST-14, Oxygen, Continuous Sampling; and For Weekly or Monthly Compliance Checks: Portable CO and O ₂ Analyzers calibrated and used in accordance with manufacturer's recommended procedures

VIII. Test Methods

Table VIII
Test Methods

Applicable Requirement	Description of Requirement	Acceptable Test Methods
BAAQMD Condition # 17777, Part 8	Limit for Total Reduced Sulfur Compounds in Landfill Gas	Draeger Tube: used in accordance with manufacturer's recommended procedures
BAAQMD Condition # 17777, Part 9	Heat Input Limit	Calculation procedure identified in BAAQMD Condition # 17777, Part 10e
BAAQMD Condition # 17777, Part 12	CO Limit as a Surrogate for Demonstrating On-Going Compliance with NMOC Limits	Portable CO and O ₂ Analyzers calibrated and used in accordance with manufacturer's recommended procedures

IX. PERMIT SHIELD

Not applicable.

X. REVISION HISTORY

Initial Title V Permit Issuance (Application #25927): **November 30, 2001**

Minor Revision (Application #25927): **July 15, 2002**

- Correct an erroneous future effective date for continuous temperature monitoring at landfill gas fired IC engines in Tables IV-A, IV-B, VII-A, and VII-B
- Correct the corresponding future effective dates for parametric monitoring requirements in Tables IV-A, IV-B, VII-A, and VII-B
- Correct the basis for the annual source testing requirement for landfill gas fired IC engines in Permit Condition # 17777, Part 7
- Correct the landfill name referenced in Permit Condition # 17777, Part 11
- Clarify in Tables VII-A and VII-B that the future IC engine temperature limits will be determined during the first performance test after permit issuance rather than during the District's review of the collection and control system design plan
- Correct an erroneous future effective date for the IC engine temperature limits in Tables VII-A and VII-B

Renewal (Application 14529): **March 29, 2011**

- Update the plant mailing address, Responsible Official, Facility Contact, APCO and District Engineer for this permit
- Update standard conditions, generally applicable requirements, dates of regulations and SIP references
- Remove obsolete abatement devices from Section II
- Delete expired sections, future effective dates which have passed, and obsolete monitoring requirements
- Correct citations for BAAQMD Regulation 1 and SIP Regulation 1
- Renumber Regulation 6 to Regulation 6, Rule 1
- Remove SIP version of Regulation 8, Rule 34
- Delete NSPS Subparts A and WWW, which do not apply to end users of treated landfill gas
- For engines, change the key emission control system operating parameter from exhaust gas temperature to exhaust gas CO concentration and replace temperature

X. Revision History

monitoring with monitoring of exhaust gas CO and O₂ content

- Change heat input compliance calculations to be based on energy produced at engines
- Include new NO_x, CO, and O₂ monitoring requirements and new future effective NO_x emission limits for the engines from Regulation 9, Rule 8
- Make editorial corrections to permit conditions, the descriptions of these conditions, and the bases of these conditions
- Add symbols and text to clarify limits
- Add applicable EPA test methods to Table VIII
- Remove obsolete test methods (ST19B) from Table VIII
- Add test methods for new applicable NO_x, CO, and O₂ monitoring requirements
- Add terms to the Section XI Glossary
- Delete Section XII

XI. GLOSSARY

ACT

Federal Clean Air Act

APCO

Air Pollution Control Officer

ARB

Air Resources Board

ATCM

Airborne Toxic Control Measure

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

Basis

The underlying authority that allows the District to impose requirements.

CAA

The federal Clean Air Act

CAAQS

California Ambient Air Quality Standards

CARB

California Air Resources Board (same as ARB)

CCR

The California Code of Regulations

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.

CEQA

California Environmental Quality Act

XI. Glossary

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.

CI

Compression Ignition

CO

Carbon Monoxide

CO₂

Carbon Dioxide

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.

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 (HAP), 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.

XI. Glossary

FP

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

FR

Federal Register

Grains

1/7000 of a pound

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.

H₂S

Hydrogen Sulfide

H&SC

Health and Safety Code

Hg

Mercury

LFG

Landfill gas

Major Facility

A facility with potential emissions of: (1) at least 100 tons per year of any regulated air pollutant, (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

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

Minimum

XI. Glossary

MOP

The District's Manual of Procedures.

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

NMOC

Non-methane Organic Compounds (same as NMHC)

NO₂

Nitrogen Dioxide

NO_x

Oxides of nitrogen.

NSPS

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

NSR

New Source Review is 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

Oxygen

XI. Glossary

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

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.

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

Sulfur dioxide

TAC

Toxic Air Contaminant

TBACT

Best Available Control Technology for Toxics

XI. Glossary

THC

Total Hydrocarbons include all non-methane hydrocarbons plus methane and are the same as TOC.

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 include all non-methane organic compounds plus methane and are the same as THC.

TRMP

Toxic Risk Management Policy. The District's TRMP was replaced by Regulation 2, Rule 5 in 2005.

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

VOC

Volatile Organic Compounds

Symbols:

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

XI. Glossary

Units of Measure:

atm	=	atmospheres
bhp	=	brake-horsepower
btu or 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	=	kilowatt
lb	=	pound
max	=	maximum
m ²	=	square meter
m ³	=	cubic meter
min	=	minute
mm	=	millimeter
MM	=	million
MM BTU	=	million Btu
MW	=	megawatts
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 ³	=	cubic yards
yr	=	year