

Bay Area Air Quality Management District

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

**Permit Evaluation
and
Statement of Basis
for
MAJOR FACILITY REVIEW PERMIT
MINOR REVISION**

**for
Waste Management of Alameda County
Facility #A2066**

Facility Address:
10840 Altamont Pass Road
Livermore, CA 94550

Mailing Address:
10840 Altamont Pass Road
Livermore, CA 94550

Application Engineer: Carol Allen
Site Engineer: Carol Allen

Application: 10013

TABLE OF CONTENTS

A.	BACKGROUND	3
B.	COMPLIANCE ISSUES	4
C.	DISTRICT PROPOSED LIMITS	5
D.	EMISSIONS	6
E.	STATEMENT OF COMPLIANCE	6
	Regulation 2, Rule 1:.....	6
	Regulation 2, Rule 2:.....	6
	New Source Review for Toxic Air Contaminants:	6
	Regulation 2, Rule 6:.....	6
	Regulation 8, Rule 34:.....	7
	Regulation 9, Rule 1:.....	8
	Regulation 9, Rule 8:.....	8
	Federal Requirements:	8
F.	MFR PERMIT MODIFICATIONS.....	8
	Section I:	8
	Section II:.....	8
	Section III:	9
	Section IV:.....	9
	Section V:	13
	Section VI:.....	13
	Section VII:	17
	Section VIII:	21
	Section IX:	21
	Section X:	21
	Sections XI-XII:.....	23
G.	RECOMMENDATION	23

ENGINEERING EVALUATION and STATEMENT of BASIS

Waste Management of Alameda, Inc.; PLANT # 2066

APPLICATION # 10013

A. BACKGROUND

Waste Management of Alameda, Inc. operates the Altamont Landfill and Resource Recovery Facility in Livermore, CA. This facility includes the Bay Area's largest active landfill (S-2 with more than 30 million tons of refuse in place), two 3 MW Gas Turbines (S-6 and S-7, landfill gas fired) equipped with Fogging Systems (A-6 and A-7), two 1877 bhp IC Engines (S-23 and S-24, landfill gas fired), one 71 MM BTU/hour Landfill Gas Flare (A-15), waste water treatment operations (permitted: S-19, S-140, and S-141; exempt: S-12, S-20, S-28, S-130, A-130, and S-180), a non-retail gasoline dispensing facility (S-99), and nine diesel engines providing portable or standby power (S-190, S-191, S-192, S-193, S-194, and S-195, S-196, S-197, and S-198).

Waste Management submitted this application to request a modification of Condition # 19237 for the landfill gas fired IC Engines (S-23 and S-24) at Plant # 2066. Specifically, Waste Management is requesting to increase the surrogate CO limit, which is the key emission control system operating parameter for the IC engines. This condition change will also require a revision of the MFR Permit for this site.

In addition to the condition changes related to the surrogate CO limit, the MFR Permit will be revised to delete the S-25 and S-26 Liquefied Natural Gas (LNG) Plants. These LNG Plants were never installed, and the Authority to Construct for S-25 and S-26 expired on June 6, 2004. Therefore, S-25 and S-26 are being removed from the MFR Permit for Site # A2066.

A separate facility operator, CryoEnergy International, Inc. (District Site # B6406) has submitted Permit Application # 16406 for very similar LNG Plants to the S-25 and S-26 LNG Plants. This application is still under review by the Bay Area Air Quality Management District. These recently proposed LNG Plants would be located at the same address as the Altamont Landfill and Resource Recovery Facility on property that will be leased to CryoEnergy International. The proposed LNG Plants will receive gas from a pipeline connection to the Altamont Landfill Gas Collection System. The gas will be cleaned, compressed, and separated into three streams: methane, carbon dioxide, and waste gas. The methane stream will be sold in compressed form (as liquefied natural gas) for use by vehicle fleets such as garbage trucks. The carbon dioxide stream will either be vented to the atmosphere or processed further for sale. The waste gas steam will be piped back to Waste Management for abatement by the IC engines (S-23 or S-24), Gas Turbines (S-6 or S-7), or Landfill Gas Flare (A-15). Permit conditions will be revised to reflect that S-25 and S-26 are being deleted but that another LNG Facility may be sending waste gas to S-23, S-24, S-5, S-6, or A-15. Since the new LNG Facility will be operated by a separate entity from Waste Management, a Title V permit is not required for CryoEnergy International, Inc. unless it will have emissions over the major facility thresholds. Since the emissions from the proposed LNG Plants are expected to be low¹, a Title V permit is not expected to be required for Site # B6406.

¹ Emissions from the proposed LNG Plants are expected to include fugitive NMOCs from compressors, pumps, valves, and flanges plus a non-detectable NMOC concentration in the carbon dioxide stream.

B. COMPLIANCE ISSUES

In accordance with Regulation 8-34-509, a key emission control system operating parameter(s) must be established and routinely monitored for any landfill gas fired emission control equipment other than flares.² Monitoring of this key parameter demonstrates compliance with the Regulation 8-34-301.4 NMOC limit between annual source tests. Under Application # 8324, the District designated carbon monoxide concentration (when measured using a portable flue gas analyzer and corrected to 15% oxygen) as the key emission control system operating parameter for the S-23 and S-24 IC Engines. Based on very limited data for identical engines at other sites, the District choose a conversion factor to compare the CO concentration (corrected to 15% oxygen) measured by a portable analyzer to the NMOC outlet concentration (corrected to 3% oxygen) measured by source testing. The conversion factor was 1.8:1 and is listed in Condition # 19237, Part 10. Using this conversion factor, the District established a maximum acceptable CO limit (when measured by a portable analyzer) of 215 ppmv of CO at 15% oxygen in Condition # 19237, Part 9. Part 9 initially requires daily measurements of CO using a portable analyzer, and allows the testing frequency to be reduced to weekly and then later to monthly, if all compliance criteria are satisfied. Note that the CO limit in Part 9 is a surrogate for demonstrating compliance with the Regulation 8-34-301.4 NMOC limit and is a separate unrelated limit from the CO emissions limit that is specified in Part 7. The approved test methods for the surrogate CO concentration limit in Part 9 and the CO emission limit in Part 7 are different. Compliance/non-compliance with the Part 7 surrogate CO limit cannot be demonstrated using the Part 9 CO emissions test method; and likewise, compliance/non-compliance with the Part 9 CO emissions limit cannot be demonstrated using the Part 7 portable analyzer.

Waste Management began testing S-23 and S-24 using the portable CO analyzer on April 13, 2004. Waste Management collected 12 daily CO measurements for S-23 and 17 daily CO measurements for S-24. The average measured CO concentrations were 274 ppmv of CO at 15% O₂ for S-23 and 275 ppmv of CO at 15% O₂ for S-24. All of the CO concentrations measured at S-23 and S-24 using the portable analyzer exceeded the concentration level allowed by Part 9 (215 ppmv of CO). However, the standard deviation of the portable analyzer measurements was less the allowable variation of 10 ppmv.

On April 22, 2004, Waste Management conducted a source test at these engines and simultaneously measured CO using the portable analyzer. This test is the first available direct comparison of portable analyzer data versus approved source test data for the S-23 and S-24 IC Engines. The test results are summarized in Table 1. below.

Table 1. Comparison of Source Test and Portable Analyzer Data for Altamont IC Engines

	4/22/04 Source Test Data					Portable Analyzer Data		
	% O ₂	at 3% O ₂ ppmv NMOC	NMOC Limit	at 15% O ₂ ppmv CO	CO Equivalen t	% O ₂	at 15% O ₂ ppmv CO	CO Limit
S-23	7.9	112	120	253	207	8.2	277	215
S-24	7.6	101	120	234	207	8.2	279	215
		NMOC g/bhp-hr		CO g/bhp-hr	CO Limit			
S-23		0.16		1.92	2.1			
S-24		0.15		1.89	2.1			

The source test indicated that the NMOC emissions were meeting the Regulation 8-34-301.4 limit even though the portable analyzer CO readings were far above the Part 9 limit. The data also shows that the portable analyzer was measuring CO at 9–17% higher concentrations than the CO concentrations measured using the approved source test method for the Part 7 limit. The source test shows that the engines were in

² Instead of an undefined parametric monitoring parameter, flares are required to continuously monitor temperature per 8-34-507.

compliance with the Part 7 CO limit of 2.1 grams/bhp-hour, even though the measured CO concentrations at 15% O₂ were 25%-34% higher than the expected equivalent CO concentration.³

Based on the above source test data, Waste Management requested to establish separate surrogate CO limits and conversion factors for each IC engine. For S-23, Waste Management requested to increase the Part 9 surrogate CO limit from 215 ppmv CO to 296 ppmv CO (corrected to 15% O₂) and to increase the Part 10 surrogate CO concentration: NMOC concentration ratio from 1.8 to 2.47. For S-24, Waste Management requested to increase the Part 9 surrogate CO limit from 215 ppmv CO to 333 ppmv CO (corrected to 15% O₂) and to increase the Part 10 surrogate CO concentration: NMOC concentration ratio from 1.8 to 2.78.

Operation of these engines has been discontinued pending a revision of the surrogate CO limit in Part 9.

C. DISTRICT PROPOSED LIMITS

Waste Management's proposed CO concentration limits were based on a single data point for each engine. The District evaluated all available source test data for these two IC engines, in order to gain a better understanding about the relationship between CO concentration and NMOC concentration. This data compares CO concentration that was measured using the approved source test method for CO emissions and not the portable CO analyzer. However, the trends should be the same, regardless of the method used to analyze CO. As illustrated in Figure 1, the outlet CO concentration measured during the source tests follows the same trends as the outlet NMOC concentration.

As illustrated in Figure 2, there is no significant difference between the two engines. Both engines showed a direct straight-line relationship between CO outlet concentration and NMOC outlet concentration. The CO/NMOC relationship was more variable at lower NMOC concentrations, but this could be due to NMOC detection level limitations. At the NMOC limit of 120 ppmv, the outlet CO concentration is expected to be 255 ppmv CO, ± 25 ppmv of CO (for both engines). Until more data is available, any limits should be based on the maximum CO level (255+25) that is expected to ensure compliance with the NMOC limit, or 280 ppmv of CO (measured using the approved method for CO emissions).

As discussed above in Section B of this report, the portable analyzer CO concentrations were 9-17% higher than the CO concentrations measured during the source test. Again using the maximum difference (because of limited data), the maximum CO concentration (measured using a portable analyzer) that will demonstrate compliance with the NMOC limit is: $280 \times 1.17 = 330$ ppmv of CO. The District is proposing to modify Part 9 accordingly (see Section F for specific language).

For S-23 and S-24, the margin of compliance with the proposed CO limit of 330 ppmv is fairly low ($279/330=0.85$). In order to assure compliance when the margin of compliance is low, the daily portable analyzer measurements of CO (required by Part 9a) should continue for at least 3 months. The less frequent monitoring described in Parts 9b (weekly) and 9c (monthly) are justified only if the margin of compliance is consistently higher than was found during the April 2004 source test. Therefore, staff

³ The CO concentration that is equivalent to the Part 7 CO emission limit of 2.1 grams/bhp-hour was calculated using an average landfill gas heat content of 547 BTU/scf and an average F-Factor of 9422 dscf/MM BTU. During the source test the heat content was determined to be 575 BTU/scf and the F-Factor was found to be 9278 dscf/MM BTU. As the landfill gas heat content increases, the CO concentration that is equivalent to 2.1 grams/bhp-hour of CO will also increase. However, the difference between the source test measured heat content and F-Factor and the calculation basis for the CO concentration limit accounts for only about a 7% increase in the equivalent CO concentration. The CO concentrations measured by the source test were 34% higher than the expected CO equivalent concentration for S-23 and 25% higher for S-24. Measured NO_x concentrations were also higher than the expected equivalent NO_x concentrations by about the same percentages.

recommends adding additional criteria to Parts 9a-c that must be satisfied before monitoring could be reduced to a weekly or monthly basis.

The minimum correlation ratio (CO concentration/NMOC concentration) is listed in Part 10. This ratio will be determined based on the minimum CO concentration that is expected to equal the NMOC compliance limit: (255-25) or 230 ppmv CO measured by source test. Using the minimum ratio of portable analyzer CO/source test CO (1.09:1.0), the minimum CO concentration that is equal to the NMOC limit is 250 ppmv of CO when measured by a portable analyzer. The minimum CO/NMOC correlation ratio is: $250/120 = 2.1:1.0$. The District is proposing to modify Part 10 accordingly (see Section F for specific language).

The limits in Parts 9 and 10 should be reevaluated each year as more source test data becomes available. Since only one test per engine was available to compare the portable analyzer CO concentration to the NMOC outlet concentration, the appropriate surrogate CO limit cannot be determined with much accuracy. The expected error range for this limit is ± 40 ppmv of CO. The District's proposed portable analyzer CO limit and minimum correlation ratio are expected to bracket the upper and lower bounds of the surrogate CO limit that is equal to the maximum NMOC outlet concentration. As more source test data becomes available, the District should be able to refine these limits and pinpoint the surrogate CO limit with more assurance. Therefore, the Part 9 and 10 limits may be revised in the future.

D. EMISSIONS

Since the District is not proposing to revise either the NMOC or CO emission limits for these engines, the proposed change to the surrogate CO concentration will not result in any emission increases.

E. STATEMENT OF COMPLIANCE

Regulation 2, Rule 1:

This application is for a change of permit conditions at the IC engines, which does not involve any physical modifications of the engines or any emission increases. Therefore, this application is categorically exempt from CEQA review pursuant to Regulation 2-1-312.1.

The project is over 1000 feet from the nearest school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

Regulation 2, Rule 2:

Since this application does not result in any emission increases, this project is not subject to New Source Review (NSR). No new BACT, Offset or PSD requirements will apply.

New Source Review for Toxic Air Contaminants:

This application does not result in any increases of Toxic Air Contaminants (TACs). Therefore, NSR for TACs is not triggered, and no new T-BACT requirements will apply.

Regulation 2, Rule 6:

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act (40 CFR, Part 70) and BAAQMD Regulation 2, Rule 6, Major Facility Review (MFR), because it is a major facility for NO_x and CO emissions and also because it is a designated facility (since it is subject to the control requirements of the Emission Guidelines for MSW Landfills). Therefore, this facility is required to have an MFR permit pursuant to Regulations 2-6-301 and 2-6-304.

The initial MFR Permit for this facility was issued on December 1, 2003 and was revised on February 5, 2004. A minor revision of the MFR permit (related to the gas turbines) was proposed on September 1, 2004. A significant revision (also related to the gas turbines) is currently under review by District management. Staff anticipates that the public notice for this significant revision will be issued in October 2004.

This application will modify permit conditions and will therefore require a revision of the current MFR permit. The definition of significant revision is discussed below to determine if this application constitutes a significant MFR revision.

- Regulation 2-6-226.1 and 226.2: This application does not involve the incorporation of a change considered to be a major modification, or a modification under NSPS, NESHAPs, or Section 112 of the CAA.
- Regulation 2-6-226.3: This application does change the maximum limit for a monitoring parameter based on complying source test data, and staff is adding additional criteria that need to be met before monitoring could be reduced from daily to weekly or monthly frequency. This revision does not change the parameter being monitored, the monitoring procedures, or reduce the frequency of the required monitoring. Therefore, this limit revision is not considered to be a “significant” change. This application does not involve the relaxation of any monitoring, record keeping or reporting requirements.
- Regulation 2-6-226.4: This application does not establish or change any limits to avoid applicable requirements.
- Regulation 2-6-226.5: The surrogate CO concentration limit in Part 9 constitutes a key emission control system operating parameter. Once the type of monitoring parameter has been established, Regulation 8, Rule 34 requires that the limit for this monitoring parameter be updated based on the most recent complying source test data. If the source test shows compliance with the NMOC limit at a particular monitoring parameter level, the applicant is allowed to operate the control device when the monitoring parameter level is maintained within a reasonable range of this source tested operating level. As discussed in Section C above, the operating level for the proposed surrogate CO limit is reasonable given the available test data. Changing this CO limit is not considered to be a case-by-case decision, because the decision about the limit is based on the facts of source test and not on arbitrary or subjective criteria. Although the appropriate monitoring parameter operating level for each control device may be unique, the NMOC emission standard that this operating level is protecting is the same for all landfill gas fired control equipment in the District. In particular, the NMOC emission standard for S-23 and S-24 was not established pursuant to a case-by-case determination. Therefore, this application does not involve the establishment of or change to a case-by-case emission limit or standard.
- Regulation 2-6-226.7: This application does not involve the incorporation of any requirements promulgated by the EPA.

Since this application does not meet any of the above criteria for a significant revision, this application will be handled as a minor revision to the MFR Permit.

The proposed MFR permit revisions related to this application are described later in this document.

Regulation 8, Rule 34:

The S-23 and S-24 IC Engines are subject to Regulation 8, Rule 34 “Solid Waste Disposal Sites”. Regulation 8-34-301.4 limits the organic emissions from landfill gas combustion operations (other than flares) and requires S-23 and S-24 to achieve 98% destruction of non-methane hydrocarbons (NMHC) or to emit no more than 120 ppmv of NMHC, expressed as methane, at 3% oxygen. From the April 2004 source test in Table 1, S-23 and S-24 are each emitting 112 ppmv and 101 ppmv, respectively, of NMOC, expressed as methane and corrected to 3% O₂ dry basis and are complying with Regulation 8-34-301.4. The Permit Holder will comply with Regulation 8-34-509 by monitoring the CO and O₂ outlet concentrations on a daily basis using a portable analyzer.

Regulation 9, Rule 1:

Regulation 9-1-302 limits sulfur dioxide in the exhaust from the IC Engines to 300 ppmv. At the maximum expected landfill gas sulfur content of 150 ppmv, the exhaust from these devices will contain less than 30 ppmv of SO₂. Therefore, this equipment will comply with 9-1-302. Since this equipment will comply with 9-1-302, it is also expected to comply with the ground level SO₂ limits of 9-1-301.

Regulation 9, Rule 8:

Each IC Engine (S-23 and S-24) is also subject to Regulation 9, Rule 8. These engines will only be burning waste derived fuel gases (no fossil fuels). Therefore, Section 9-8-301 is not applicable. Regulation 9-8-302.2 only applies to rich burn engines and is not applicable to S-23 and S-24. These IC Engines will comply with the Regulation 9-8-302.1 NO_x limit of 140 ppmv at 15% O₂, because the BACT requirement (0.6 grams NO_x/bhp-hour) is equivalent to about 36 ppmv of NO_x at 15% O₂. These IC Engines will also comply with the Regulation 9-8-302.3 CO limit of 2000 ppmv at 15% O₂, because the BACT requirement (2.1 grams CO/bhp-hour) is equivalent to about 207 ppmv of CO at 15% O₂. Sections 330 and 331 (concerning standby emergency engines) are not applicable.

Federal Requirements:

EG for MSW Landfills: The landfill at this facility is subject to the 40 CFR Part 60, Subpart Cc Emission Guidelines (EG) for Municipal Solid Waste (MSW) Landfills. Effective November 19, 2001, the District's Regulation 8, Rule 34 was approved into the State Plan for MSW Landfills (40 CFR 62.1115). Regulation 8, Rule 34 is now the approved method for implementing this federal EG. Since the S-23 and S-24 IC Engines are expected to comply with Regulation 8-34-301.4, these engines will also comply with 40 CFR, Part 60, Subpart Cc and 40 CFR 62.1115.

NESHAPs for MSW Landfills: Any landfills that are subject to the landfill gas collection and control requirements of either the NSPS for MSW Landfills or the EG for MSW Landfills are also subject to the NESHAPs for MSW Landfills (40 CFR, Part 63, Subpart AAAA). This NESHAP requires that subject facilities prepare and implement startup, shutdown, malfunction plans and additional reporting requirements. All applicable requirements are contained in the existing MFR permit, and this facility is expected to comply with these requirements.

F. MFR PERMIT MODIFICATIONS

Section I:

No changes are proposed to this section.

Section II:

As discussed in Section A of this report, the S-25 and S-26 Liquefied Natural Gas (LNG) Plants were never installed, and the Authority to Construct for S-25 and S-26 expired on June 6, 2004. Therefore, S-25 and S-26 are being removed from the MFR Permit.

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-25	Liquefied Natural Gas Plant (not constructed yet, ATC was issued 6/7/02)	Cryofuel	LW50	treating 1150 scfm of landfill gas and producing 7000-gallons/day of LNG
S-26	Liquefied Natural Gas Plant (not constructed yet, ATC was issued 6/7/02)	Cryofuel	LW50	treating 1150 scfm of landfill gas and producing 7000-gallons/day of LNG
...				

Section III:

No changes are proposed to this section.

Section IV:

Since S-25 and S-26 are being removed from the MFR Permit, Table IV-E will be deleted and all subsequent tables in Section IV of the MFR Permit will be renumbered.

Table IV—E
Source-Specific Applicable Requirements
S-25 LIQUEFIED NATURAL GAS PLANT
S-26 LIQUEFIED NATURAL GAS PLANT

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future-Effective Date
BAAQMD-Regulation 8, Rule 34	Organic Compounds—Solid Waste Disposal Sites (10/6/1999)		Upon Start-Up of S-25 or S-26
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	Record keeping 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	

Table IV—E
Source-Specific Applicable Requirements
S-25 LIQUEFIED NATURAL GAS PLANT
S-26 LIQUEFIED NATURAL GAS PLANT

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future-Effective Date
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	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 Parameters	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	
8-34-508	Gas Flow Meter	Y	
8-34-509	Key emission control system operating parameters	Y	
BAAQMD-Regulation 9, Rule 2	Inorganic Gaseous Pollutants—Hydrogen Sulfide (10/6/99)		Upon Start-Up of S-25 or S-26
9-2-301	Limitations on Hydrogen Sulfide	N	
40 CFR Part 60, Subpart A	Standards of Performance for New Stationary Sources—General Provisions (5/4/98)		Upon Start-Up of S-25 or S-26
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)	Good air pollution control practice	Y	
60.12	Circumvention	Y	
60.13	Monitoring Requirements	Y	
60.13(a)	Applies to all continuous monitoring systems	Y	
60.13(b)	Monitors shall be installed and operation 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	

Table IV—E
Source-Specific Applicable Requirements
S-25 LIQUEFIED NATURAL GAS PLANT
S-26 LIQUEFIED NATURAL GAS PLANT

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future-Effective Date
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)		Upon Start-Up of S-25 or S-26
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	Approval and Promulgation of State Plans for Designated Facilities and Pollutants (6/9/03)		Upon Start-Up of S-25 or S-26
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 (3/16/94)		Upon Start-Up of S-25 or S-26
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	
40 CFR Part 63, Subpart AAAA	National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills (1/16/03)		Upon Start-Up of S-25 or S-26
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	

Table IV—E
Source-Specific Applicable Requirements
~~S-25 LIQUEFIED NATURAL GAS PLANT~~
~~S-26 LIQUEFIED NATURAL GAS PLANT~~

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future-Effective Date
63.1955(e)	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 # 19238			Upon Start-Up of S-25 or S-26
Part 1	Production Rate Limits (Regulation 2-1-301)	Y	
Part 2	NMOC Emission Limit on CO ₂ Exhaust Stream (Cumulative Increase)	Y	
Part 3	Control Requirements for Exhaust Stream from Carbon Bed-Regeneration Equipment (Cumulative Increase and Toxic Risk Management Policy)	Y	
Part 4	Production Rate Records (Regulation 2-1-301)	Y	
Part 5	Source Test Requirements for CO ₂ Exhaust Stream (Cumulative Increase)	Y	

Table IV – FE
Source-Specific Applicable Requirements
S-99 NON-RETAIL GASOLINE DISPENSING FACILITY G # 7123

Table IV – ~~GF~~
Source-Specific Applicable Requirements
S-140 SBR 1, AERATED BIOLOGICAL REACTOR
S-141 SBR 2, AERATED BIOLOGICAL REACTOR

Table IV – ~~HG~~
Source-Specific Applicable Requirements
S-190 DIESEL ENGINE (FOR EMERGENCY STANDBY GENERATOR AT WWTP)

Table IV – ~~IH~~
Source-Specific Applicable Requirements
S-191 DIESEL ENGINE (FOR PRIMARY WATER PUMP)
S-192 DIESEL ENGINE (FOR BOOSTER WATER PUMP)
S-193 DIESEL ENGINE (FOR FIRE PUMP AT GAS PLANT)
S-197 DIESEL ENGINE (FOR PORTABLE GENERATOR AT BREAK TRAILER)
S-198 DIESEL ENGINE (FOR VACUUM TRUCK PUMP)

Table IV – ~~JI~~
Source-Specific Applicable Requirements
S-194 DIESEL ENGINE (FOR EMERGENCY STANDBY GENERATOR AT FLARE STATION)
S-195 DIESEL ENGINE (FOR EMERGENCY STANDBY GENERATOR AT MAINTENANCE FACILITY)
S-196 DIESEL ENGINE (FOR EMERGENCY STANDBY GENERATOR AT SCALE HOUSE)

Section V:

No changes are proposed to this section.

Section VI:

This MFR Permit revision will modify Condition # 19235, Parts 2 and 16; modify Condition # 19237, Parts 1, 9, and 10; and delete Condition # 19238. All text changes are shown below in strikeout and underline format.

Condition # 19235, Parts 2 and 16 will be revised to reflect that the S-25 and S-26 LNG Plants were never installed but that landfill gas may in the future be piped to an LNG Plant owned by a different operator or to other facilities for off-site processing.

Condition # 19235

**FOR: S-2 ALTAMONT LANDFILL WITH LANDFILL GAS COLLECTION SYSTEM,
AND A-15 LANDFILL GAS FLARE:**

... (No changes to Part 1)

2. All collected landfill gas shall be vented to properly operating landfill gas control equipment as described below in Part 2a. Raw landfill gas shall not be vented to the atmosphere, except for unavoidable landfill gas emissions that occur during collection system installation, maintenance, or repair that is performed in compliance with Regulation 8, Rule 34, Sections 113, 116, 117, or 118 and for inadvertent component or surface leaks that do not exceed the limits specified in 8-34-301.2 or 8-34-303.

a. The Permit Holder may operate any combination of landfill gas control devices, including: A-15 Landfill Gas Flare, S-6 Gas Turbine, S-7 Gas Turbine, S-23 Internal Combustion Engine, or S-24 Internal Combustion Engine, ~~S-25 Liquefied Natural Gas Plant, and S-26 Liquefied Natural Gas Plant~~; or may send landfill gas to another facility for additional processing and control; provided that adequate landfill gas control/removal capacity is available at all times to ~~control~~ achieve the target landfill gas collection rate of 2381 scfm. Any time period that the total landfill gas flow rate to all control devices and off-site pipelines (measured pursuant to Regulation 8-34-508) is less than the target landfill gas collection rate shall be deemed a violation of 8-34-301.1, unless the Permit Holder is complying with the requirements of Regulations 8-34-113, 8-34-116, 8-34-117, or 8-34-118 during this time period.

b. In order to determine the target landfill gas collection rate, the Permit Holder shall measure and record (in accordance with Regulation 8-34-508) the total landfill gas flow rate to all control devices and off-site pipelines during each landfill surface monitoring event (conducted in accordance with Regulation 8-34-506). The Permit Holder shall determine the average landfill gas flow rate (in scfm) for each surface monitoring event by dividing the total measured flow rate (in cubic feet) by the time required to conduct the surface monitoring test and correcting to a temperature of 68 degrees F and a pressure of 1 atmosphere. This average landfill gas flow rate shall become the target landfill gas collection rate, if the measured surface emission leaks comply with the limit in Regulation 8-34-303. A new target landfill gas collection rate may be established based on any complying surface monitoring event and shall be updated at least once per year until waste acceptance at the landfill ceases. After issuance of the MFR Permit, the target landfill gas collection rate shall be revised in accordance with the procedures identified in Regulations 2-6-414 or 2-6-415.

(Basis: Regulations 8-34-301 and 8-34-303)

... (No changes to Parts 3-15)

16. Any emission reductions that may occur due to the shut-down or modification of ~~any of the following equipment (S-23 IC Engine, or S-24 IC Engine, S-25 LNG Plant, or S-26 LNG Plant)~~ cannot be banked or used to generate contemporaneous on site emission reduction credits for other projects. All such emission reductions shall be used to reimburse the District Small Facility Banking Account (SFBA) for the emission reduction credits provided from the SFBA to offset NOx and POC emission increases from this equipment. Furthermore, the Permit Holder shall use any NOx or POC emission reduction credits generated at any of the Permit Holder's facilities, which are located within the District, to reimburse the SFBA for all emission reduction credits provided from the SFBA on behalf of the Permit Holder, before any of these credits could become eligible for banking.

(Basis: Regulation 2-4-303.5)

... (No changes to Parts 17-23)

Condition # 19237 Part 1 will be revised to reflect that the S-25 and S-26 LNG Plants were never installed but that the S-23 and S-24 IC engines may in the future burn waste gas from an LNG Plant owned by a different operator. The derivation of the proposed limits in Parts 9 and 10 is discussed in detail in Section C of this report.

Condition # 19237

FOR: S-23 INTERNAL COMBUSTION ENGINE AND

FOR: S-24 INTERNAL COMBUSTION ENGINE

1. The S-23 and S-24 Internal Combustion (IC) Engines may be fired on landfill gas, liquefied natural gas ~~produced on site at the S-25 or S-26 Liquefied Natural Gas (LNG) Plants~~, or LNG Plant waste gas ~~from S-25 or S-26~~.
(Basis: Cumulative Increase)

... (No changes to Parts 2-8)

9. Carbon monoxide (CO) concentration in the engine exhaust shall be used as the key emission control system operating parameter in order to demonstrate compliance with the Regulation 8-34-301.4 NMOC emission limit between annual source tests at S-23 and S-24. For the purpose of this part only, the CO concentration in the exhaust from S-23 and S-24 shall not exceed ~~215-330~~ ppmv at 15% oxygen (O₂), dry basis. Any CO concentrations that are measured using the procedures described in this part shall not be used to evaluate compliance with the CO emission limits in Part 7. CO and O₂ concentrations shall be measured according to the monitoring schedule in subparts a-c below using a portable flue gas analyzer capable of measuring CO concentrations within +/- 2% accuracy and O₂ concentrations within +/- 1% accuracy. The monitoring schedule in subparts a-c below shall become effective for each engine (S-23 or S-24) upon the first date that the engine is operated after February 5, 2004.
 - a. The Permit Holder shall measure the concentrations of CO and O₂ in the exhaust of each engine once per operating day for at least ~~fifteen~~ ninety operating days for each engine. The Permit Holder shall calculate the average and standard deviation of the corrected CO concentration measurements (dry basis CO concentrations after correction to 15% O₂) ~~twice~~ once per calendar month (or after ~~each fifteen-thirty~~ daily measurements if the engine is not operated each day during the month). If none of the daily corrected CO concentrations measurements do not exceed the limit in this part, each average corrected CO concentration is no more than 75% of the limit, and the standard deviation of these measurements does not exceed 10 ppmv, then the Permit Holder may use the monitoring schedule described in subpart b for that engine.
 - b. The Permit Holder shall measure the concentrations of CO and O₂ in the exhaust of each engine once per operating week for at least ~~thirteen~~ fifty-two operating weeks for each engine. The Permit Holder shall calculate the average and standard deviation of the corrected CO concentration measurements (dry basis CO concentrations after correction to 15% O₂) once per calendar quarter (or after thirteen weekly measurements if the engine is not operated each week during the quarter). If none of the weekly corrected CO concentrations measurements do not exceed the limit in this part, each average corrected CO concentration is no more than 50% of the limit, and the standard deviation of these ~~corrected~~ measurements does not exceed 10 ppmv, then the Permit Holder may use the monitoring schedule described in subpart c. If a corrected CO ~~measurement~~ concentration exceeds the limit in this part, or if the average

-
- ~~exceeds 75% of the limit, or if the standard deviation calculated pursuant to this subpart exceeds 10 ppmv, the Permit Holder shall revert to the subpart a monitoring frequency.~~
- c. The Permit Holder shall measure the concentrations of CO and O₂ in the exhaust of each engine once per operating month ~~for at least twelve operating months for each engine.~~ The Permit Holder shall calculate the average and standard deviation of the corrected CO concentration measurements (dry basis CO concentrations after correction to 15% O₂) once per calendar year (or after twelve monthly measurements if the engine is not operated each month during the year). If a corrected CO measurement concentration exceeds the limit in this part, ~~or if the average exceeds 50% of the limit, or if the standard deviation calculated pursuant to this subpart exceeds 10 ppmv,~~ the Permit Holder shall revert to the subpart b monitoring frequency.
- (Basis: BACT and Regulations 8-34-301.4, 8-34-501.11, and 8-34-509)
10. In order to demonstrate compliance with Parts 6 through 9 above and Regulations 8-34-301.4, 9-8-302.1, and 9-8-302.3, the Permit Holder shall ensure that a District approved source test is conducted annually on each IC Engine (S-23 and S-24). Source tests shall be conducted no sooner than 6 months and no later than 12 months after the previous 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 60 days of the test date. The annual source tests shall determine the following:
- a. total flow rate of all gaseous fuel to each IC 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 combined gaseous fuel burned in each IC Engine
 - c. exhaust gas flow rate from each IC Engine (dry basis);
 - d. concentrations (dry basis) of NO_x, CO, CH₄, NMOC, and O₂ in the exhaust gas from each IC Engine;
 - e. emission rate of formaldehyde in the exhaust from each IC Engine (once every four years);
 - f. NMOC destruction efficiency achieved by each IC Engine; and
 - g. CO and O₂ concentrations in the exhaust from each engine shall be measured using the portable flue gas analyzer method described in Part 9 above. The Permit Holder shall determine a correlation ratio by dividing the corrected CO concentration (at 15% O₂ dry) measured by the portable analyzer by the corrected NMOC outlet concentration (at 3% O₂ dry) determined from subpart d. If this correlation ratio is less than ~~1.82.1~~, the Permit Holder shall submit a permit application for a change of conditions within 45 days of receiving the test results.
- (Basis: BACT, Offsets, Cumulative Increase, Toxic Risk Management Policy, and Regulations 8-34-301.4, 8-34-412, 9-8-302.1, and 9-8-302.3)

... (No changes to Part 11)

Condition # 19238 will be deleted entirely to reflect that the S-25 and S-26 LNG Plants are being deleted from this facility's permits.

Condition # 19238

**~~FOR: S-25 LIQUEFIED NATURAL GAS PLANT AND
FOR: S-26 LIQUEFIED NATURAL GAS PLANT~~**

1. ~~The production rate of Liquefied Natural Gas (LNG) at each LNG Plant (S-25 or S-26) shall not exceed 7000 US gallons per day nor 2,555,000 US gallons per year of LNG. (Basis: Regulation 2-1-301)~~
2. ~~The carbon dioxide exhaust streams from the S-25 and S-26 LNG Plants shall contain no detectable non-methane organic compounds, where a measurement of less than 5 ppmv of NMOC is considered non-detectable. (Basis: Cumulative Increase)~~
3. ~~LNG Plant waste gas generated at the carbon bed regeneration equipment (part of the S-25 and S-26 LNG Plants) shall be vented to an approved control device during all times that this waste gas is being produced. Approved control devices include: S-23 or S-24 Internal Combustion Engines, S-6 or S-7 Gas Turbines, or A-15 Landfill Gas Flare. (Basis: Cumulative Increase and Toxic Risk Management Policy)~~
4. ~~In order to demonstrate compliance with Part 1, the Permit Holder shall maintain daily records of the amount of LNG produced by each LNG Plant in an APCO approved log book. All records shall be kept on site and shall be made available to the District staff upon request. All records shall be retained for at least 5 years from the date of entry. (Basis: Regulation 2-1-301)~~
5. ~~In order to demonstrate compliance with Part 2, the Permit Holder shall conduct a District approved source test of the carbon dioxide vent stream within 60 days of initial start up of S-25 and S-26 and once every 5 years thereafter. The Source Test Section of the District shall be contacted to obtain their 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 Source Test Section within 60 days of the test date. The source tests shall determine the following:
 - a. ~~exhaust gas flow rate (dry basis);~~
 - b. ~~concentrations (dry basis) of total hydrocarbons (THC), methane (CH₄), and total non-methane organic compounds (NMOC) in the exhaust gas;~~(Basis: Cumulative Increase)~~

Section VII:

The revised surrogate CO limit in Condition # 19237, Part 9 will be identified in Table VII-D for the IC Engines. The condition changes do not involve any new monitoring requirements or a change in the monitoring frequency, but do place additional restrictions on when the monitoring frequency may be reduced. The CO and O₂ concentration at the IC engines' outlets will continue to be monitored on a daily basis using a portable flue gas analyzer. Since the average CO concentration from the engines is about 85% of the limit, additional daily monitoring is necessary to ensure that the CO limit will not be exceeded under a variety of operating conditions. Therefore, the District is extending the daily monitoring requirement from a minimum of 15 days/engine to a minimum of 90 days/engine. As is currently allowed, this monitoring frequency may be reduced to weekly and then to monthly, if the corrected CO concentration measurements comply with the limit and do not have a standard deviation of more than 10 ppmv. However, the District is adding the additional criteria that the average CO concentration may not

exceed 75% of the limit in order to reduce the monitoring frequency to a weekly basis and that the average CO concentration may not exceed 50% of the limit in order to reduce the monitoring frequency to a monthly basis. These reduced monitoring frequencies are only justifiable when the source is operating with a substantial margin of compliance. Since data suggests that the margin of compliance is fairly low (<1.2:1.0), more frequent monitoring is needed to assure compliance.

Table VII – D
Applicable Limits and Compliance Monitoring Requirements
S-23 INTERNAL COMBUSTION ENGINE
S-24 INTERNAL COMBUSTION ENGINE

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
...							
Corrected CO Concentration	BAAQMD Condition # 19237, Part 9	Y		≤ 245 -330 ppmv of CO at 15% O ₂ , dry basis	BAAQMD 8-34-501.11 and 509 and BAAQMD Condition # 19237, Part 9	P / D, W, or M	Daily, Weekly, or Monthly Measurement of CO and O ₂ in Engine Exhaust Using a Portable Flue Gas Analyzer
...							

Table VII-E for the LNG Plants will be deleted and all subsequent tables in Section VII will be renumbered.

Table VII – E
Applicable Limits and Compliance Monitoring Requirements
~~S-25 LIQUEFIED NATURAL GAS PLANT~~
~~S-26 LIQUEFIED NATURAL GAS PLANT~~

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
---------------	-------------------	--------	-----------------------	-------	---------------------------------	------------------------------	-----------------

Table VII – E
Applicable Limits and Compliance Monitoring Requirements
~~S-25 LIQUEFIED NATURAL GAS PLANT~~
~~S-26 LIQUEFIED NATURAL GAS PLANT~~

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Collection and Control Systems Shutdown Time	BAAQMD-8-34-113.2	Y		240 hours/year and 5 consecutive days	BAAQMD-8-34-501.2	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)
TOC (Total Organic Compounds Plus Methane)	BAAQMD-8-34-301.2	Y		Component Leak Limit: 1000 ppmv as methane	BAAQMD-8-34-501.6 and 503	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 # 19238, Parts 2, 3, 5	P/E	Control Requirements, Source Test, and Records
NMOC	BAAQMD-Condition # 19238, Part 2	Y		No Detectable NMOC in CO ₂ Exhaust Stream, where <5 ppmv is considered non-detectable	BAAQMD-Condition # 19238, Part 5	P/every 5 years	Source Test 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	None	N	NA

Table VII – E
~~Applicable Limits and Compliance Monitoring Requirements~~
~~S-25 LIQUEFIED NATURAL GAS PLANT~~
~~S-26 LIQUEFIED NATURAL GAS PLANT~~

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Production Rate	BAAQMD Condition # 19238, Part 1	Y		7000 gallons per day (from each LNG Plant) -and- 2,555,000 gallons per year (from each LNG Plant)	BAAQMD Condition # 19238, Part 4	P/D	Records

Table VII – FE
Applicable Limits and Compliance Monitoring Requirements
S-99 NON-RETAIL GASOLINE DISPENSING FACILITY

Table VII – GF
Applicable Limits and Compliance Monitoring Requirements
S-140 SBR 1, AERATED BIOLOGICAL REACTOR
S-141 SBR 2, AERATED BIOLOGICAL REACTOR

Table VII – HG
Applicable Limits and Compliance Monitoring Requirements
S-190 DIESEL ENGINE (FOR EMERGENCY STANDBY GENERATOR AT WWTP)

Table VII – IH
Applicable Limits and Compliance Monitoring Requirements
S-191 DIESEL ENGINE (FOR PRIMARY WATER PUMP)
S-192 DIESEL ENGINE (FOR BOOSTER WATER PUMP)
S-193 DIESEL ENGINE (FOR FIRE PUMP AT GAS PLANT)
S-197 DIESEL ENGINE (FOR PORTABLE GENERATOR AT BREAK TRAILER)
S-198 DIESEL ENGINE (FOR VACUUM TRUCK PUMP)

Table VII – JI
Applicable Limits and Compliance Monitoring Requirements
S-194 DIESEL ENGINE (FOR EMERGENCY STANDBY GENERATOR AT FLARE STATION)
S-195 DIESEL ENGINE (FOR EMERGENCY STANDBY GENERATOR AT MAINTENANCE FACILITY)
S-196 DIESEL ENGINE (FOR EMERGENCY STANDBY GENERATOR AT SCALE HOUSE)

Section VIII:

The acceptable test methods for demonstrating compliance with limits in Condition # 19238 for the LNG Plants are no longer necessary and will be deleted.

Table VIII
Test Methods

Applicable Requirement	Description of Requirement	Acceptable Test Methods
•••		
BAAQMD Condition # 19238, Part 2	NMOC Limit for CO ₂ Exhaust Stream	Manual of Procedure, Volume IV, ST 7, Organic Compounds, OR EPA Reference Method 18, 25, or 25A
BAAQMD Condition # 19238, Part 5	Source Test on CO ₂ Exhaust Stream	Manual of Procedure, Volume IV, ST 7, Organic Compounds, OR EPA Reference Method 18, 25, or 25A
•••		

Section IX:

No changes are proposed to this section.

Section X:

These above revisions are summarized in the revision history section as shown below.

X. Revision History

Title V Permit Issuance (Application # 25828): **December 1, 2003**

Significant Revision (Application # 8324): **February 5, 2004**

- Modify Permit Condition # 19237, Parts 4, 9, 10, and 11 to revise monitoring procedures for the internal combustion engines (S-23 and S-24).
- Revise Tables IV-D, VII-D, and VIII to reflect revisions to Condition # 19237.

-
- Make minor corrections to requirements in Tables III, IV-A, IV-B, IV-D, and IV-E.

Minor Revision (Application # 9326): **[insert approval date]**

- Revise minimum combustion chamber discharge temperature in Permit Condition # 18773, Part 9 and in Table VII-B.

Significant Revision (Application # 8583): **[insert approval date]**

- In Table II-A, add maximum firing capacity to the equipment descriptions for the S-6 and S-7 Gas Turbines.
- In accordance with the July 2004 amendments of 40 CFR Part 60, Subpart GG, delete the Custom Schedule of Compliance in Section V.B. Update citation references, monitoring requirements, and test methods in Tables IV-B, VII-B, and VIII.
- Amend the turbine NO_x and CO emission limits in Section VI, Condition # 18773, Parts 1 and 2 and in Table VII-B. Revise the basis for Parts 1 and 2 in Table IV-B.
- Delete the turbine NMOC concentration limit from Section VI, Condition # 18773, Part 3 and from Tables IV-B and VII-B.
- Add daily and annual heat input limits for the turbines to Section VI, Condition # 18773, Part 8, and to Table IV-B and VII-B.
- Add the BACT fuel sulfur content limit for the turbines to Section VI, Condition # 18773, Part 10 and to Tables IV-B and VII-B.
- Clarify turbine source testing requirements and calculation procedures in Section VI, Condition # 18773, Part 11, and in Tables VII-B and VIII.
- Correct citations in Tables IV-A, IV-B, IV-D, VII-A, VII-B, and VII-D.
- Change the Responsible Official to Mr. Ken Lewis pursuant to a July 20, 2004 petition from the facility.
- Update Section X, Revision History.

Minor Revision (Application # 10013): **[insert approval date]**

-
- For the S-23 and S-24 IC Engines, revise the maximum CO concentration (when measured using a portable analyzer) and the CO/NMOC correlation ratio in Condition # 19237, Parts 9 and 10g and in Table VII-D based on recent source test data, which showed compliance with the NMOC outlet concentration limit at a higher CO concentration and a higher correlation ratio. Revise monitoring procedures in Parts 9a-c by requiring daily monitoring for a longer period of time and adding restrictions on when monitoring may be reduced to weekly or monthly frequency.
 - Delete the S-25 and S-26 LNG Plants from Table II, delete all of Tables IV-E and VII-E, delete Condition # 19238, and remove related test methods from Table VIII, because the LNG Plants were never installed and the Authority to Construct has expired.
 - Revise Condition # 19235, Parts 2 and 16 and Condition # 19237, Part 1 to reflect the deletion of S-25 and S-26 from this permit but continue to allow for the possibility of landfill gas treatment in an off-site LNG Plant with on-site combustion of LNG Plant waste gas.
 - Renumber Tables IV-F-J and VII-F-J as Tables IV-E-I and VII-E-I.
 - Update Section X, Revision History.

Sections XI-XII:

No changes are proposed to these sections.

G. RECOMMENDATION

Issue a Change of Permit Conditions for the following equipment:

S-2 Altamont Landfill
S-23 Internal Combustion Engine
S-24 Internal Combustion Engine

Archive the S-25 and S-26 LNG Plants and archive Condition # 19238.

By: signed by Carol S. Allen
Carol S. Allen

September 24, 2004
Date

Permit Evaluation and Statement of Basis: Site A2066, Waste Management of Alameda County,
Application # 10013, 10840 Altamont Pass Road, Livermore, Ca 94550
Modify Surrogate CO Limit for S-23 and S-24 IC Engines

Senior Air Quality Engineer

H:\Pub_Data\TitleV Permit Appls\A2066\M Revision - 10013\1.0 Working docs\A2066D-10013.doc