Bay Area Air Quality Management District

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Permit Evaluation
and
Statement of Basis
for
RENEWAL of

MAJOR FACILITY REVIEW PERMIT

for

Browning-Ferris Industries of CA, Inc.
Facility #A2266

Facility Address:
12310 San Mateo Road
Half Moon Bay, CA 94019

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Application Engineer: Carol Allen
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Application: 24335

December 2013

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TITLE V STATEMENT OF BASIS

Browning-Ferris Industries of CA, Inc.; PLANT # A2266

APPLICATION # 24335

A. BACKGROUND

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Title 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review, because it is a major facility as defined by BAAQMD Regulation 2-6-212.1. It is a major facility because it has the "potential to emit," as defined by BAAQMD Regulation 2-6-218, of more than 100 tons per year of a regulated air pollutant (in this case, carbon monoxide). Therefore, this facility is required to have an MFR permit pursuant to Regulation 2-6-301.

In addition, it is a designated facility as defined by BAAQMD Regulation 2-6-204. The Standards of Performance for Municipal Solid Waste Landfills (40 CFR Part 60, Subpart WWW) require the owner or operator of a landfill that is subject to this part and that has a design capacity of greater than or equal to 2.5 million megagrams and 2.5 million cubic meters to obtain an operating permit pursuant to Part 70. This facility is subject to this NSPS because it commenced construction after May 30, 1991 and has design capacities that are larger than 2.5 million Mg and larger than 2.5 million m^3. Therefore, this facility is required to have an MFR permit pursuant to Regulation 2-6-304.

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR Part 70 as contained in BAAQMD Regulation 2, Rule 6. The permits must contain all applicable requirements (as defined in BAAQMD Regulation 2-6-202), monitoring requirements, recordkeeping requirements, and reporting requirements. The permit holders must submit reports of all monitoring at least every six months and compliance certifications at least every year.

In the Bay Area, state and District requirements are also applicable requirements and are included in the permit. These requirements can be federally enforceable or non-federally enforceable. All applicable requirements are contained in Sections I through VI of the permit.

Each facility in the Bay Area is assigned a facility identifier that consists of a letter and a 4-digit number. This identifier is also considered to be the identifier for the permit. The identifier for this facility is A2266.

This facility received its initial Title V permit on October 1, 2001. The permit was renewed on October 1, 2007. After this renewal, the permit was revised on October 20, 2009, May 18, 2010, and March 26, 2012. This application is for a permit renewal and also incorporates two minor revisions of the permit. Although the current permit expired on September 30, 2012, it continues in force until the District takes final action on the permit renewal. The standard sections of the

permit have been upgraded to include new standard language used in all Title V permits. The proposed renewal permit clearly shows all proposed changes to the permit in strikeout/underline format.

B. FACILITY DESCRIPTION

Browning-Ferris Industries of CA, Inc. (BFI) operates the Los Trancos Canyon Landfill Facility located on Ox Mountain in Half Moon Bay, CA. This facility includes an active landfill (S-1, S-21, and S-22), three landfill gas flares (A-7, A-8, and A-9), a non-retail gasoline dispensing facility (S-5), and stockpiles of green waste (S-12).

The Los Trancos Canyon Landfill (S-1) has two distinct fill areas. The upper canyon area has reached full capacity and has been inactive since 1995, while the lower canyon area is actively accepting waste (at an average rate of about 500,000 tons/year). The two fill areas combined contain about 22 million tons of decomposable refuse. In December 2013, the District approved a permit condition change for this landfill that increased the limit on the cumulative waste in place from 22.74 million tons to 26.5 million tons. Thus, the landfill has reached about 83% of its new maximum capacity. Each fill area is equipped with a landfill gas collection system. For 2012, BFI reported that the collection system captured 2.02E9 scf of landfill gas, which is equal to an average collection rate of 3843 scfm of landfill gas.

Most of this collected landfill gas (about 97% of the total gas collected in 2012) is delivered to an on-site but independently owned energy company (Ameresco Half Moon Bay, LLC, Site # B7040) that uses the landfill gas as fuel for its IC engines. Ameresco Half Moon Bay is also subject to Title V permitting requirements, but the Title V permit for this independent company is being evaluated under a separate permit application (Application # 21226).

The remainder of the collected landfill gas is vented to one or more of BFI's three enclosed flares (A-7, A-8, and A-9) for abatement. The three flares combined are limited to an annual average landfill gas flow rate of 7244 scfm of landfill gas at 50% methane, which is equivalent to a combined annual firing rate limit of 1,892,160 MM BTU/year. However, the flares only burned an average of 104 scfm of landfill gas in 2012, which is less than 2% of the maximum flare capacity.

The S-5 Non-Retail Gasoline Dispensing Facility (GDF # 8524) located at Site # A2266 includes one 1000 gallon capacity above-ground gasoline tank equipped with one 10 gpm gasoline nozzle. This facility also has two diesel fuel storage tanks (with capacities of 1000 gallons and 10,000 gallons) and two diesel fuel nozzles (8 gpm and 35.3 gpm) that are exempt from District permit requirements. These diesel fuel tanks and nozzles are not significant sources of emissions.

The BFI facility has Stockpiles of Green Waste (S-12) that are permitted to accept up to 70,000 tons/year of waste material for recycling. For 2012, BFI reported that S-12 accepted 38,686 tons/year of materials.

Two sources, S-21 and S-22, represent various particulate emitting activities at the landfill. S-21 is for waste and cover material dumping. BFI accepted 740,831 tons of waste in 2012 and used 169,500 tons of cover material in 2011. S-22 is for bulldozing, compacting, and excavating activities. BFI typically uses 1 excavator, 4 bulldozers, 2 compactors, and 1 scraper for waste disposal activities. These machines were operated for 11,688 hours during 2011.

District Permit Applications Included In This Proposed Permit:

In September 2003, the District modified the gasoline throughput limit for the S-5 Non-Retail Gasoline Dispensing Facility pursuant to NSR Application # 8229 (see Engineering Evaluation Report for Application # 8229 in Appendix C). The District increased the throughput limit from 400,000 gallons/year to 940,000 gallons/year in accordance with standard District procedures for this type of source. Note that the actual gasoline throughput rate for S-5 is never expected to reach either of these throughput limits. Although this permit application was discussed in the October 2007 Title V permit renewal for this facility, the new throughput limit for this gasoline dispensing facility was inadvertently omitted from the October 2007 Title V renewal permit. This previously approved permit condition change is being incorporated in this current Title V renewal application.

After the Title V permit for this facility was renewed in October 2007, the District processed two NSR applications (Application # 20027 and 23391) related to landfill gas collection system alterations and permit condition modifications necessary to allow landfill gas to be sent to the new energy plant, which is owned and operated by a separate company: Ameresco Half Moon Bay, LLC. These permit condition changes were incorporated into the Title V permit pursuant to an administrative amendment (Application # 19939) in May 2010 and a minor revision (Application # 23392) in March 2012.

In December 2013, the District approved a permit condition change for the S-1 Los Trancos Canyon Landfill that increased the limit on the cumulative amount of decomposable waste that could be placed in the landfill pursuant to NSR application # 25645. The limit was increased from 22.74 million tons of waste in place to 26.5 million tons (see Condition # 10164, Part 2). As discussed in the Engineering Evaluation report for this application, this change did not result in an increase in the amount of landfill gas projected to be generated by the landfill compared to the current permitted level of 9600 scfm of landfill gas generated. Therefore, this cumulative waste in place limit change did not result in any increases in permitted emission levels for this site.

The District is also currently evaluating an NSR permit application (Application # 25612) for two existing portable waste tipper engines. The source numbers for these portable engines have been noted in Table II-D, but as noted in Table II-D, portable engines are exempt from Title V permitting requirements pursuant to BAAQMD Regulation 2-6-114.

Emission Changes for Site # A2266:

The only increase in maximum permitted emission levels after the October 2007 Title V permit renewal was a 0.4 ton/year increase in maximum permitted precursor organic compound (POC) emissions for the S-5 Non-Retail Gasoline Dispensing Facility. As discussed above, this POC emission increase was due to a throughput increase approved in 2003 that was erroneously left out of the 2007 permit renewal.

As discussed in the Statements of Basis for Applications # 19939 and # 23392), the May 2010 and March 2012 Title V permit revisions did not result in any increases in permitted emission levels for this site. Likewise, the Application # 25645 Change of Conditions for the S-1 Landfill did not result in any increases in permitted emission levels.

The current maximum permitted emission levels for Site # A2266 are presented in Table 1.

Table 1. Maximum Permitted Emissions for Site # A2266

Device Number and Description	Emissions (tons/year)				
	CO	PM_{10}	NO_x	POC	SO_2
S-1 Los Trancos Canyon Landfill – Waste Decomposition Process				34.7	
S-5 Non-Retail GDF				0.7	
S-12 Stockpiles of Green Waste		0.1			
S-21 Los Trancos Canyon Landfill – Waste and Cover Material Dumping		70.8			
S-22 Los Trancos Canyon Landfill – Bulldozing, Compacting, and Excavating Activities					
A-7 Landfill Gas Flare A-8 Landfill Gas Flare A-9 Landfill Gas Flare	141.9	16.2	49.2	13.2	47.3
Facility Wide Permitted Emissions	141.9	87.1	49.2	48.3	47.3

The changes in actual emissions from this facility since the permit was last renewed are presented in Table 2. Combustion emissions at this facility dropped substantially due to the transfer of landfill gas to the Ameresco Half Moon Bay Energy Plant, which began operating in 2009. The on-site landfill gas combustion rate decreased from 1940 million scf/year in 2007 to 55 million scf/year in 2012. Fugitive POC emissions from the landfill increased by about 15% due to the increase in the total amount of waste disposed of in the landfill. The cumulative amount of waste in place in the landfill increased from 19.5 million tons in 2007 to 22.4 million tons in 2012.

Table 2. Changes in Actual Emissions for Site # A2266 Since Last Renewal

Facility Wide Actual Emissions	Emissions (tons/year)				
	CO	PM_{10}	NO_x	POC	SO_2
as of December 31, 2007	72.8	67.3	25.6	46.1	3.6
as of December 31, 2012	2.1	63.2	1.1	46.8	0.1
Actual Emission Changes	- 70.7	- 4.1	- 24.5	+ 0.7	- 3.5

C. PERMIT CONTENT

The legal and factual basis for the permit follows. The permit sections are described in the order that they are presented in the permit. Routine changes to the standard permit text in Sections I "Standard Conditions", III "Generally Applicable Requirements", and X "Glossary" are not considered part of the Title V permit renewal process, but may be made at the discretion of the District during the term of this permit.

I. Standard Conditions

This section contains administrative requirements and conditions that apply to all facilities. If the Title IV (Acid Rain) requirements for certain fossil-fuel fired electrical generating facilities or the accidental release (40 CFR § 68) programs apply, the section will contain a standard condition pertaining to these programs. This permit does not include Title IV or accidental release provisions.

Many of these conditions derive from 40 CFR § 70.6, Permit Content, which dictates certain standard conditions that must be placed in the permit. The language that the District has developed for many of these requirements has been adopted into the BAAQMD Manual of Procedures, Volume II, Part 3, Section 4, and therefore must appear in the permit.

The standard conditions also contain references to BAAQMD Regulation 1 and Regulation 2. These are the District's General Provisions and Permitting rules.

Changes to Permit, Title Page and Section I:

- The District is correcting the Facility Contact information.
- The District is updating the amendment dates for several BAAQMD rules in Standard Condition 1.A.
- The District is updating the permit issuance date, expiration data, and renewal application due dates in Standard Condition I.B.1.
- The District is removing obsolete report submittal dates from Standard Condition I.F.

II. Equipment

This section of the permit lists all permitted or significant sources. Each source is identified by an S and a number (e.g., S24).

Permitted sources are those sources that require a BAAQMD operating permit pursuant to BAAQMD Rule 2-1-302.

Significant sources are those sources that have a potential to emit of more than 2 tons of a "regulated air pollutant," as defined in BAAQMD Rule 2-6-222, per year or 400 pounds of a "hazardous air pollutant," as defined in BAAQMD Rule 2-6-210, per year. This facility has no unpermitted significant sources.

All abatement (control) devices that control permitted or significant sources are listed. Each abatement device whose primary function is to reduce emissions is identified by an A and a number (e.g., A-24). If a source is also an abatement device, such as when an engine controls VOC emissions, it will be listed in the abatement device table but will have an "S" number. An abatement device may also be a source (such as a thermal oxidizer that burns fuel) of secondary emissions. If the primary function of a device is to control emissions, it is considered an abatement (or "A") device. If the primary function of a device is a non-control function, the device is considered to be a source (or "S").

The equipment section is considered to be part of the facility description. It contains information that is necessary for applicability determinations, such as fuel types, contents or sizes of tanks, etc. This information is part of the factual basis of the permit.

Each of the permitted sources has previously been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. These permits are issued in accordance with state law and the District's regulations. The capacities in the permitted sources table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

Between the date that the Title V permit was last renewed (October 1, 2007) and the permit proposal date, there have been no major changes to the permitted source list or abatement device list. As noted below, the District is making minor changes to the descriptions of several existing sources. The District has included two new tables in this section to identify significant sources and exempt equipment to clarify the status for these types of sources. This facility current has no significant sources. One registered portable engine was listed in the exempt equipment list. This engine is exempt from Title V permit requirements because it is a non-road engine that has been registered with the state-wide portable equipment registration program and meets the exemption requirements of Regulation 2-6-113.

<u>Changes to Permit, Section II:</u>

- The District is updating the cumulative waste in place limits cited in Table II-A in accordance with the permit condition change approved by the District in December 2013 pursuant to NSR Application # 25645.

- The gas collection system description for S-1 is being updated in Table II-A. A number of gas collection system alterations were previously authorized by the District pursuant to NSR Application # 23391. The collection system description is being updated to reflect all gas collection system alterations that have been completed to date.
- The District is adding additional information to the descriptions for S-21 and S-22 to clarify these operations.
- The District added Table II-C to identify any significant sources for a facility. However, this facility does not have any significant sources at this time.
- The District added Table II-D to identify equipment that is specifically exempt from Title V permitting requirements. This facility uses a PERP registered diesel engine to power a portable green waste grinder. Since this engine is a PERP registered engine, it is exempt from Title V permit requirements pursuant to BAAQMD Regulation 2-6-113.
- The District also added two portable waste tipper engines to Table II-D. These on-site portable engines require District permits, but they are exempt from Title V permit requirements pursuant to BAAQMD Regulation 2-6-114.

III. Generally Applicable Requirements

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District permit. If a generally applicable requirement applies specifically to a source that is permitted or significant, the standard will also appear in Section IV and the monitoring for that requirement will appear in Sections IV and VII of the permit. Parts of this section apply to all facilities (e.g., particulate, architectural coating, odorous substance, and sandblasting standards). In addition, standards that apply to insignificant or unpermitted sources at a facility (e.g., refrigeration units that use more than 50 pounds of an ozone-depleting compound) are placed in this section.

Unpermitted sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Title V permit if they are considered ***significant sources*** pursuant to the definition in BAAQMD Rule 2-6-239. This facility has no unpermitted significant sources.

Changes to Permit, Section III:

- For Table III, the District is amending dates of adoption or approval of the rules, correcting the "federal enforceability" status for these rules, and adding or deleting rules and standards to conform to current practice. The rules that are being amended, added, or removed are listed below:
    - Updating amendment date for Regulation 2, Rule 1, General Requirements
    - Updating amendment dates for EPA Regulation 40 CFR, Part 61, Subparts A and M
    - Removing California Code of Regulations Title 17, Section 93115 et seq., Airborne Toxic Control Measure for Stationary Compression Ignition Engines, because any engines subject to this requirement will be required to have a District permit and will be described specifically in Section IV.

IV. Source-Specific Applicable Requirements

This section of the permit lists the applicable requirements that apply to permitted or significant sources. These applicable requirements are contained in tables that pertain to one or more sources that have the same requirements. The order of the requirements is:

- District Rules
- SIP Rules (if any) are listed following the corresponding District rules. SIP rules are District rules that have been approved by EPA for inclusion in the California State Implementation Plan. SIP rules are "federally enforceable" and a "Y" (yes) indication will appear in the "Federally Enforceable" column. If the SIP rule is the current District rule, separate citation of the SIP rule is not necessary and the "Federally Enforceable" column will have a "Y" for "yes". If the SIP rule is not the current District rule, the SIP rule or the necessary portion of the SIP rule is cited separately after the District rule. The SIP portion will be federally enforceable; the non-SIP version will not be federally enforceable, unless EPA has approved it through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions. The text of Federal permit conditions, if any, is found in Section VI of the permit.

Section IV of the permit contains citations to all of the applicable requirements. The text of the requirements is found in the regulations, which are readily available on the District's or EPA's websites, or in the permit conditions, which are found in Section VI of the permit. All monitoring requirements are cited in Section IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of monitoring is included in Section C.VII of this permit evaluation/statement of basis.

Complex Applicability Determinations:

S-1 Los Trancos Canyon Landfill – Waste Decomposition Process

The landfill at this site is subject to BAAQMD Regulation 8, Rule 34, because the Los Trancos Canyon Landfill has accepted waste within the last 30 years and contains more than 1,000,000 tons of decomposable refuse. The landfill is also subject to the NSPS for MSW Landfills (40 CFR, Part 60, Subpart WWW) and the NESHAP for MSW Landfills (40 CFR, Part 63, Subpart AAAA), because (1) it commenced construction on a landfill expansion after May 30, 1991, (2) it has accepted waste after November 8, 1987, (3) it has a design capacity of greater than 2.5 million cubic meters and greater than 2.5 million megagrams, and (4) the uncontrolled NMOC generation rate from the landfill exceeds 50 Mg/year. There have been no significant changes to the applicable requirements since the Title V permit was last renewed. The District is updating amendment dates for several applicable requirements.

S-5 Non-Retail Gasoline Dispensing Facility - G # 8524

Gasoline dispensing facilities include both the gasoline dispensing nozzles as well as the associated gasoline storage tank. BAAQMD Regulation 8, Rule 7 contains requirements for both the dispensing equipment and the associated storage tanks. Prior to October 18, 2006, above ground gasoline storage tanks were also subject to requirements in BAAQMD Regulation 8, Rule 5. In the October 18, 2006 amendment of Regulation 8, Rule 5, an exemption was added to Section 8-5-110 for above ground gasoline storage tanks to indicate that these tanks were exempt from BAAQMD Regulation 8 Rule 5 and subject only to the requirements in BAAQMD Regulation 8 Rule 7. However, this regulatory change has not been adopted into the District's SIP yet. Thus, the storage tank for S-5 must continue to comply with requirements in both SIP Regulation 8, Rule 5 and BAAQMD/SIP Regulation 8, Rule 7.

Changes to Permit, Section IV:

- In Table IV-A, the District is updating amendment dates for 40 CFR Part 60 Subpart A and 40 CFR Part 63 Subpart A
- In Table IV-B, the District is adding several missing sections of SIP Regulation 8, Rule 5 that apply to the above ground gasoline storage tank located at this site.
- In Table IV-B, the District is removing Section 8-7-501 for consistency with other Title V permits that include a non-retail gasoline dispensing facility. This section simply informs the owner that the burden of proof of eligibility for an exemption is on the applicant. In the event the applicant is seeking an exemption from any of the requirements of this rule, the applicant should keep sufficient records to demonstrate that the exemption is applicable. This section was removed from other permits because it contains no on-going monitoring or record keeping requirements.
- In Table IV-B, the District is adding the new NESHAP requirements for GDFs: 40 CFR Part 63 Subparts A and CCCCCC.
- In Table IV-B, the District is replacing BAAQMD Permit Conditions # 7523 and # 16516 with Conditions # 14098 and # 25107 pursuant to the Application # 8229 permit condition revisions approved in 2003.

V. Schedule of Compliance

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10 which provides that a major facility review permit shall contain the following information and provisions:

"409.10 A schedule of compliance containing the following elements:

10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;

10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and

10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan

> was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted."

Since the District has not determined that the facility is out of compliance with an applicable requirement, the schedule of compliance for this permit contains only sections 2-6-409.10.1 and 2-6-409.10.2.

Changes to Permit, Section V:

- None

VI. Permit Conditions

During the Title V permit development, the District has reviewed the existing permit conditions, deleted the obsolete conditions, and, as appropriate, revised the conditions for clarity and enforceability. Each permit condition is identified with a unique numerical identifier, up to five digits.

When necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting has been added to the permit.

All changes to existing permit conditions are clearly shown in "strike-out/underline" format in the proposed permit. When the permit is issued, all 'strike-out" language will be deleted and all "underline" language will be retained, subject to consideration of comments received.

The existing permit conditions are derived from previously issued District Authorities to Construct (A/C) or Permits to Operate (P/O). Permit conditions may also be imposed or revised as part of the annual review of the facility by the District pursuant to California Health and Safety Code (H&SC) § 42301(e), through a variance pursuant to H&SC § 42350 et seq., an order of abatement pursuant to H&SC § 42450 et seq., or as an administrative revision initiated by District staff. After issuance of the Title V permit, permit conditions are revised using the procedures in Regulation 2, Rule 6, Major Facility Review.

Conditions that are obsolete or that have no regulatory basis have been deleted from the permit.

The regulatory basis is listed following each condition. The regulatory basis may be a rule or regulation. The District is also using the following terms for regulatory basis:

- BACT: This term is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology in Regulation 2-2-301.
- Cumulative Increase: This term is used for a condition imposed by the APCO which limits a source's operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.

- PSD: This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to Regulation 2, Rule 2.
- TRMP: This term is used for a condition imposed by the APCO to ensure compliance with limits that arose from the District's Toxic Risk Management Policy and that were imposed prior to adoption of Regulation 2, Rule 5 NSR for Toxic Air Contaminants.

Under previous Title V permit applications, parameter monitoring was added for each abatement device. Additional monitoring was added, where appropriate, to assure compliance with the applicable requirements.

As discussed above, the District replaced Conditions # 7523 and # 16516 for the S-5 Non-Retail GDF with Conditions # 14098 and # 25107 in 2003 pursuant to Application # 8229. These changes were inadvertently left out of the 2007 Title V permit renewal and are being incorporated now.

In addition, the District is revising Parts 17 and 18b(i) of Condition #10164 for the S-1 Los Trancos Canyon Landfill – Waste Decomposition Process to reflect landfill gas collection system alterations that have been completed to date. These collection system alterations were previously discussed in the March 2012 minor revision of the Title V permit for this site.

The proposed permit changes are explained in more detail below.

<u>Changes to Permit, Section VI:</u>

- The District is replacing the gasoline throughput limit identified in Condition # 7523 with a new standard throughput limit in Condition # 14098.
- The District is replacing the old static pressure performance test requirements in Condition # 16516 with the new standard language for this testing requirement as identified in Condition # 25107.
- Condition # 10164, Part 2: The District is increasing the cumulative limit on decomposable materials placed in the landfill to 26.5 million tons as approved in BAAQMD Application # 25645.
- Condition # 10164, Part 13: The District is adding alternative VOC emission limits to the VOC-laden soil acceptance limits in Part 13b in response to the Applicant's comments on the preliminary draft of this Title V permit.
- Condition # 10164, Part 17: The District is revising the gas collection system description in Part 17a by incorporating recently completed collection system alterations identified in notification letters submitted to the District by the facility. In subpart 17b(i), the District is updating the list of authorized collection system alterations completed to date.
- Condition # 10164, Part 18: The District is removing any decommissioned wells from Part 18b(i).

VII. Applicable Limits and Compliance Monitoring Requirements

This section of the permit is a summary of numerical limits and related monitoring requirements for each source. The summary includes a citation for each monitoring requirement, frequency of monitoring, and type of monitoring. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

The District has reviewed all monitoring and has determined that the existing monitoring is adequate. The tables below contain only the federally enforceable limits for which there is no monitoring in the applicable requirements. The District has examined the monitoring for other limits and has determined that monitoring is adequate to provide a reasonable assurance of compliance. Calculations for potential to emit will be provided in the discussion when no monitoring is proposed due to the size of a source.

Monitoring decisions are typically the result of a balancing of several different factors including: 1) the likelihood of a violation given the characteristics of normal operation, 2) degree of variability in the operation and in the control device, if there is one, 3) the potential severity of impact of an undetected violation, 4) the technical feasibility and probative value of indicator monitoring, 5) the economic feasibility of indicator monitoring, and 6) whether there is some other factor, such as a different regulatory restriction applicable to the same operation, that also provides some assurance of compliance with the limit in question.

These factors are the same as those historically applied by the District in developing monitoring for applicable requirements**.** It follows that, although Title V calls for a re-examination of all monitoring**,** there is a presumption that these factors have been appropriately balanced and incorporated in the District's prior rule development and/or permit issuance. It is possible that, where a rule or permit requirement has historically had no monitoring associated with it, no monitoring may still be appropriate in the Title V permit if, for instance, there is little likelihood of a violation**.** Compliance behavior and associated costs of compliance are determined in part by the frequency and nature of associated monitoring requirements. As a result, the District will generally revise the nature or frequency of monitoring only when it can support a conclusion that existing monitoring is inadequate**.**

SO_2 Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
A-7 Landfill Gas Flare, A-8 Landfill Gas Flare, and A-9 Landfill Gas Flare	BAAQMD 9-1-301	Property Line Ground Level Limits: ≤ 0.5 ppm for 3 minutes, AND ≤ 0.25 ppm for 60 minutes, AND ≤0.05 ppm for 24 hours	None

SO_2 Discussion:

Potential to Emit Calculations for the A-7, A-8, and A-9 Landfill Gas Flares:

Maximum potential SO_2 emissions are based on the maximum permitted total reduced sulfur compound concentration of 150 ppmv as H_2S from BAAQMD Condition # 10164, Part 21 and the maximum permitted landfill gas usage limits in BAAQMD Condition # 10164, Part 20 (3807.6 MM scf/year). All calculations assume that the landfill gas contains 50% methane with an HHV of 497 BTU/scf LFG and that the standard volume of gas at 70 °F is 387 scf/lbmol. The calculation equations are shown below for the three flares combined.

A-7, A-8, and A-9 Landfill Gas Flares:
(3807.6 E6 scf/year)*(150 scf H_2S/1 E6 scf LFG)/(387 scf H_2S/lbmol H_2S)*
(1 lbmol SO_2/1 lbmol H_2S)*(64.06 pounds SO_2/lbmol SO_2)/(2000 pounds SO_2/ton SO_2)
= 47.3 tons SO_2/year
Based on the theoretical flue gas generation rate of 4.785 scf of flue gas per scf of landfill gas containing 50% methane and the landfill gas H_2S limit above, the maximum SO_2 concentration in the exhaust gases from the flares will be: 31 ppmv of SO_2 at 0% oxygen. At typical exhaust gas oxygen concentrations of 10% or higher, the outlet SO_2 concentration will be less than 17 ppmv.

BAAQMD Regulation 9-1-301: This facility is subject to federally enforceable limits that will ensure compliance with the Regulation 9-1-302 gas stream emission limit of 300 ppmv of SO_2 in the exhaust from each flare. Based on modeling analyses conducted at another landfill site, sources complying with the Regulation 9-1-302 limit are not expected to result in an excess of the ground level concentration limits listed in Regulation 9-1-301. As shown above, the flares are subject to limits that will result in SO_2 outlet concentrations that are no more than 10% of this 9-1-302 limit. Therefore, the SO_2 emissions from these flares are expected to result in ground level SO_2 concentrations that are far below the Regulation 9-1-301 ground level SO_2 limits. Monitoring for ground level SO_2 concentrations in addition to the existing quarterly landfill gas sulfur content monitoring, annual source testing, and record keeping requirements would not be appropriate.

PM Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
A-7 Landfill Gas Flare, A-8 Landfill Gas Flare, and A-9 Landfill Gas Flare	BAAQMD 6-1-301 and SIP 6-301	≤ Ringelmann No. 1 for 3 minutes in any hour	None
A-7 Landfill Gas Flare, A-8 Landfill Gas Flare, and A-9 Landfill Gas Flare	BAAQMD 6-1-310 and SIP 6-310	≤ 0.15 grains/dscf	None

PM Discussion:

Potential to Emit Calculations for the A-7, A-8, and A-9 Landfill Gas Flares:

Maximum permitted PM emissions for A-7, A-8, and A-9 were based on the AP-42 emission factor for landfill gas fired flares (17 lbs PM_{10}/MM dscf of methane). Maximum potential PM emissions were determined using this factor and the maximum permitted landfill gas flow rate. This factor has also been converted to units of lbs/MM BTU and grains/dscf of exhaust as shown below. All calculations assume that the landfill gas contains 50% methane with an HHV of 497 BTU/scf LFG and that this landfill gas produces 4.773 sdcf of exhaust at 0% oxygen per scf of landfill gas burned.

(3807.6 MM scf LFG/year)*(0.50 MM scf CH_4/MM scf LFG)*
(17 lbs PM_{10}/MM dscf CH_4)/(2000 pounds PM_{10}/ton PM_{10})
= 16.2 tons PM_{10}/year

(17 lbs PM_{10}/MM dscf CH_4)/(1E6 scf CH_4/MM dscf CH_4)*(0.50 scf CH_4/scf LFG)/
(497 BTU/scf LFG)*(1E6 BTU/MM BTU) = 0.0171 lbs PM_{10}/MM BTU

(0.0171 lbs PM_{10}/MM BTU)*(7000 grains PM/lb PM)/(1E6 BTU/MM BTU)*
(497 BTU/scf LFG)/(4.773 sdcf exhaust/scf LFG) = 0.0125 grains/dscf exhaust at 0% O_2

BAAQMD 6-1-301 and SIP 6-301: Visible particulate emissions are not normally associated with combustion of gaseous fuels, such as natural gas, propane, or landfill gas. Since particulate emissions from these flares are not substantial (16.2 tons/year total from all three flares combined), and it is highly unlikely that violations of the Ringelmann 1.0 limit would occur, periodic monitoring for the Ringelmann 1.0 limit is not justified.

BAAQMD Regulation 6-1-310 and SIP 6-310: Regulations 6-1-310 and 6-310 limit filterable particulate (FP) emissions from any source to 0.15 grains per dry standard cubic foot (gr/dscf) of exhaust volume. As shown above in the potential to emit calculations for these devices, the flares will emit less than 0.02 gr/dscf of exhaust at 0% oxygen. The actual flare exhaust will contain at least 10% O_2. The ratio of exhaust volumes for 10% O_2 versus 0% O_2 is 1.913:1. Therefore, the grain loading in the actual flare exhaust will be: (0.0125/1.913) < 0.007 gr/dscf for exhaust at 10% oxygen. The compliance ratio (limit/emissions or 0.15/0.007) for the landfill gas flares is more than 20 to 1. Since the Regulation 6-1-310 and 6-310 grain loading limits are far above any expected PM emissions and total potential PM emissions from the flares are fairly low, it would not be appropriate to add periodic monitoring for this standard.

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1 Los Trancos Canyon Landfill	BAAQMD 8-40-117	Soil Contaminated by Accidental Spillage of ≤ 5 gallons of Liquid Organic Compounds	None

POC Discussion:

Potential to Emit Calculations for S-1: During the aeration of soil, all organic compounds are assumed to be emitted into the atmosphere. For a maximum spill volume of five gallons and an average density for organic liquids of 7.0 pounds/gallon, the maximum potential to emit per aeration event is:
(5 gals/event)*(7.0 pounds POC/gal)/(2000 pounds POC/ton POC) = 0.018 tons of POC/event
The aeration of soil contaminated by small spills is expected to be a rare occurrence (no more than once per year). Therefore the annual potential to emit associated with BAAQMD 8-40-117 is 0.02 tons/year of POC.

BAAQMD 8-40-117: If this facility plans to employ the Regulation 8-40-117 exemption to allow the aeration of soil that has been contaminated by a spill, the spill volume cannot exceed five gallons. For such rare and unpredictable aeration events, it may be difficult to obtain accurate records of spill volumes and maintaining such records would be burdensome. In addition, the maximum potential emissions from such an event are very small (0.02 tons/year of POC). Since the likelihood of non-compliance is low and the consequences of non-compliance are insignificant, it would not be appropriate to add periodic monitoring for this spill volume limit.

Changes to Permit, Section VII:

- In Table VII-A, the District is adding alternative VOC emission limits to the VOC-laden soil acceptance limits in response to the Applicant's comments on the preliminary darft of this permit.
- In Table VII-A, the District is revising the cumulative waste-in-place limit for the landfill pursuant to NSR Application #25645.
- In Table VII-B, the District is correcting a throughput limit and permit condition number citations pursuant to the permit condition changes approved in 2003 under NSR Application #8229.
- In Table VII-B, the District is adding a number of missing requirements and monitoring citations from BAAQMD Regulation 8, Rule 7 and SIP Regulation 8, Rule 5.
- In Table VII-B, the District is adding the missing monitoring citations from the CARB certification procedures for gasoline dispensing facilities.
- In Table VII-B, the District is adding monitoring citations from the new NESHAP (40 CFR Part 63, Subpart CCCCCC).

VIII. Test Methods

This section of the permit lists test methods that are associated with standards in District or other rules. It is included only for reference. In most cases, the test methods in the rules are source test methods that can be used to determine compliance but are not required on an ongoing basis. They are not applicable requirements.

If a rule or permit condition requires ongoing testing, the requirement will also appear in Section IV of the permit.

Changes to Permit, Section VIII:

- The District is adding the applicable EPA test methods for several regulatory limits including SIP 6-301, SIP 8-2-301, and SIP 8-5-303.
- The District is adding the applicable CARB test methods for several gasoline dispensing facility limits.
- The District is adding the missing test methods for SIP 8-5-303.2 and 40 CFR Part 60.758(c)(1)(i).
- The District is correcting a permit condition citation for S-5.
- The District is clarifying the descriptions of several citations.

IX. Permit Shield:

The District rules allow two types of permit shields. The permit shield types are defined as follows: (1) A provision in a major facility review permit explaining that specific federally enforceable regulations and standards do not apply to a source or group of sources, or (2) A provision in a major facility review permit explaining that specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting are subsumed because other applicable requirements for monitoring, recordkeeping, and reporting in the permit will assure compliance with all emission limits.

The second type of permit shield is allowed by EPA's White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program. The District uses the second type of permit shield for all streamlining of monitoring, recordkeeping, and reporting requirements in Title V permits. The District's program does not allow other types of streamlining in Title V permits.

This facility has no permit shields. This permit has no streamlining.

Changes to Permit, Section IX:

- None

X. Revision History

This section of the permit summarizes each revision to the permit.

Changes to Permit, Section X:

- The District is adding the permit revisions associated with this MFR Renewal Permit (Application # 24335) to Section X.

XI. Glossary

This section of the permit defines and explains acronyms, abbreviations, and other terms that are used in this permit.

Changes to Permit, Section XI:

- The District is updating the Section XI Glossary by clarifying explanations and adding numerous new terms.

D. ALTERNATIVE OPERATING SCENARIOS

No alternate operating scenarios have been requested for this facility.

E. COMPLIANCE STATUS

An August 22, 2013 office memorandum from the Director of Compliance and Enforcement, to the Director of Engineering, presents a review of the compliance record of Browning-Ferris Industries of CA, Inc. (Site # A2266). The Compliance and Enforcement Division staff has reviewed the records for Browning-Ferris Industries of CA, Inc. for the period from October 1, 2007 through August 22, 2013. This review was initiated as part of the District evaluation of an application by renewal of a Title V permit. During the period subject to review, activities known to the District include:

- The District issued zero (0) Notices of Violation.
- The District did not receive any alleged complaints.
- The facility is not operating under a Variance or an Order of Abatement from the District Board.
- There were no reportable compliance activities received by District staff.

The owner certified that all equipment was operating in compliance on December 11, 2013 by submitting a signed and dated certification statement form.

The Compliance and Enforcement Division has determined that for the five-year period reviewed (from 10/1/07 to 8/22/13), BFI was in continuous compliance. There is no evidence of on-going

non-compliance and no recurring pattern of violations that would warrant consideration of a Title V permit compliance schedule.

F. DIFFERENCES BETWEEN THE APPLICATION AND THE PROPOSED PERMIT

The Title V permit application for renewal was originally submitted on May 27, 2011. This version is the basis for constructing the proposed Title V permit.

Since May 2011, the applicant has completed upgrades to the landfill gas collection system, which the District has incorporated into this draft proposed renewal permit.

In August 2013, the applicant identified two portable diesel fueled engines that require District permits and submitted a permit application for this equipment; however, such portable engines are exempt from Title V permitting requirements pursuant to Regulation 2-6-114. Thus, these proposed engines are identified in Table II-D, but are otherwise not included in this draft proposed Title V renewal permit.

In December 2013, the District approved a Change of Conditions for the landfill pursuant to NSR Application # 25645 to raise the cumulative waste-in-place limit for the landfill. This recent permit condition change has been incorporated into the proposed draft Title V permit. This revision of the waste-in-place limit did not result in any increases in permitted emission levels.

The District is proposing changes to several standard language sections, updates of regulatory amendment dates, inclusions of new generally applicable regulatory requirements, revisions to equipment descriptions, inclusions of new or missing source specific requirements, modifications of permit conditions, removal of non-applicable requirements, and clarifications of numerous limit descriptions. These revisions were not identified by the applicant.

APPENDIX A

BAAQMD COMPLIANCE REPORT

COMPLIANCE & ENFORCEMENT DIVISION

Inter-Office Memorandum

August 22, 2013

TO: JIM KARAS – DIRECTOR OF ENGINEERING

FROM: WAYNE KINO – DIRECTOR OF COMPLIANCE & ENFORCEMENT

SUBJECT: REVIEW OF COMPLIANCE RECORD OF:

A2266 BROWNING-FERRIS INDUSTRIES OF CA, INC.

Background

This review was initiated as part of the District evaluation of an application by BROWNING-FERRIS INDUSTRIES OF CA, INC. (BFI) for a Title V Permit Renewal. It is standard practice of the Compliance and Enforcement Division to undertake a compliance record review in advance of a renewal of a Title V Permit. The purpose of this review is to assure that any non-compliance problems identified during the prior five-year permit term have been adequately addressed, or, if non-compliance persists, that a schedule of compliance is properly incorporated into the Title V permit compliance schedule. In addition, the review checks for patterns of recurring violation that may be addressed by additional permit terms. Finally, the review is intended to recommend, if necessary, any additional permit conditions and limitations to improve compliance.

Compliance Review

Compliance records were reviewed for the time period from October 1, 2007 through August 22, 2013. The results of this review are summarized as follows.

1. Violation History

Staff reviewed BFI Annual Compliance Certifications and found no ongoing non-compliance and no recurring pattern of violations.

Staff also reviewed the District compliance records for the review period. During this period BFI activities known to the District include:

District-issued 0 Notices of Violation (NOV).

2. Complaint History

The District received 0 air pollution complaints alleging BFI as the source.

3. Reportable Compliance Activity

Reportable Compliance Activity (RCA), also known as "Episode" reporting, is the reporting of compliance activities involving a facility as outlined in District Regulations and State Law. Reporting covers breakdown requests, indicated monitor excesses, pressure relief device releases, inoperative monitor reports and flare monitoring.

Within the review period, the District received 0 notifications for Reportable Compliance Activities (RCA). No NOV's were issued as a result of RCA's.

4. Enforcement Agreements, Variances, or Abatement Orders

There were no enforcement agreements, variances, or abatement orders for BROWNING-FERRIS INDUSTRIES OF CA, INC. over the review period.

Conclusion

Following its review of all available facility and District compliance records from 10/1/2007 through 8/22/2013 , the District's Compliance and Enforcement Division has determined that BROWNING-FERRIS INDUSTRIES OF CA, INC. was in continuous compliance during this period. BROWNING-FERRIS INDUSTRIES OF CA, INC. has demonstrated no evidence of ongoing noncompliance and no recurring pattern of violations that would warrant consideration of a Title V permit compliance schedule for this facility.

Based on this review and analysis of all the violations for the review period, the District has concluded that no schedule of compliance or change in permit terms is necessary beyond what is already contained in the facility's current Title V permit.

APPENDIX B

GLOSSARY

ACT
Federal Clean Air Act

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

API
American Petroleum Institute

ARB
Air Resources Board (same as CARB)

ASTM
American Society for Testing and Materials

ATC
Authority to Construct

ATCM
Airborne Toxic Control Measure

BAAQMD
Bay Area Air Quality Management District

BACT
Best Available Control Technology

BARCT
Best Available Retrofit Control Technology

Basis
The underlying authority that allows the District to impose requirements.

BFI
Browning-Ferris Industries

C1
An organic chemical compound with one carbon atom, for example: methane

C3
An organic chemical compound with three carbon atoms, for example: propane

C5
An Organic chemical compound with five carbon atoms

C6
An Organic chemical compound with six carbon atoms

CAA
The federal Clean Air Act

CAAQS
California Ambient Air Quality Standards

CAPCOA
California Air Pollution Control Officers Association

CARB
California Air Resources Board (same as ARB)

CCR
California Code of Regulations

CEC
California Energy Commission

CEQA
California Environmental Quality Act

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

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

CH4 or CH_4
Methane

CO
Carbon Monoxide

CO2 or CO_2
Carbon Dioxide

CT
Combustion Zone Temperature

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

District
The Bay Area Air Quality Management District

E 6, E 9, E 12
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, 4.53 E 6 equals (4.53) x (10^6) = (4.53) x (10 x 10 x 10 x 10 x 10 x 10) = 4,530,000. Scientific notation is used to express large or small numbers without writing out long strings of zeros.

EG
Emission Guidelines

EO
Executive Order

EPA
The federal Environmental Protection Agency.

ETP
Effluent Treatment Plant

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), and also including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

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

FR
Federal Register

GDF
Gasoline Dispensing Facility

GLM
Ground Level Monitor

grains
1/7000 of a pound

H2S or H_2S
Hydrogen Sulfide

H2SO4
Sulfuric Acid

H&SC
Health and Safety Code

HAP
Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by both 40 CFR Part 63, and District Regulation 2, Rule 5.

Hg
Mercury

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

LFG
Landfill gas

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

Long ton
2200 pounds

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 or Max.
Maximum

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

MIN or Min.
Minimum

MOP
The District's Manual of Procedures.

MSDS
Material Safety Data Sheet

MSW
Municipal solid waste

MTBE
methyl tertiary-butyl ether

MW
Molecular weight

N2 or N_2
Nitrogen

NA
Not Applicable

NAAQS
National Ambient Air Quality Standards

NESHAPs
National Emission Standards for Hazardous Air Pollutants. Contained in 40 CFR Part 61.

NMHC
Non-methane Hydrocarbons (same as NMOC).

NMOC
Non-methane Organic Compounds (same as NMHC).

NOx or NO_x
Oxides of nitrogen.

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

NSR
New Source Review. A federal program for pre-construction review and permitting of new and modified sources of air pollutants for which the District is classified "non-attainment". Mandated by Title I of the Clean Air Act and implemented by 40 CFR Parts 51 and 52 as well as District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

O2 or O_2
Oxygen

Offset Requirement
A New Source Review requirement to provide federally enforceable emission offsets at a specified ratio for the emissions from a new or modified source and any pre-existing cumulative increase minus any onsite contemporaneous emission reduction credits. Applies to emissions of POC, NO_x, PM_{10}, and SO_2.

Phase II Acid Rain Facility
A facility that generates electricity for sale through fossil-fuel combustion and by virtue of certain other characteristics (defined in Regulation 2, Rule 6) is subject to Titles IV and V of the Clean Air Act.

POC
Precursor Organic Compounds

PM
Total Particulate Matter

PM10 or PM_{10}
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 air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

PV or P/V Valve
Pressure/Vacuum Valve

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

RMP
Risk Management Plan

S
Sulfur

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

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

SO2 or SO_2
Sulfur dioxide

SO3 or SO_3
Sulfur trioxide

SSM
Startup, Shutdown, or Malfunction

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

TAC
Toxic Air Contaminant (as identified by CARB)

THC
Total Hydrocarbons includes all NMHC plus methane (same as TOC).

therm
100,000 British Thermal Unit

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

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

TPH
Total Petroleum Hydrocarbons

TRMP
Toxic Risk Management Policy

TRS
Total Reduced Sulfur, which is a measure of the amount of sulfur-containing compounds in a gas stream, typically a fuel gas stream, including, but not limited to, hydrogen sulfide. The TRS content of a fuel gas determines the concentration of SO_2 that will be present in the combusted fuel gas, since sulfur compounds are converted to SO_2 by the combustion process.

TSP
Total Suspended Particulate

TVP
True Vapor Pressure

VMT
Vehicle Miles Traveled

VOC
Volatile Organic Compounds

Symbols:

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

Units of Measure:

atm	=	atmospheres
bbl	=	barrel of liquid (42 gallons)
bhp	=	brake-horsepower
btu	=	British Thermal Unit
BTU	=	British Thermal Unit
°C	=	degrees Centigrade
cfm	=	cubic feet per minute
dscf	=	dry standard cubic feet
°F	=	degrees Fahrenheit
ft^3	=	cubic feet
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
gr	=	grains
hp	=	horsepower
hr	=	hour
in=	inches	
kW	=	kilowatts

lb=	pound	
lbmol	=	pound-mole
in=	inches	
m^2	=	square meters
m^3	=	cubic meters
Mg	=	mega grams
min	=	minute
mm	=	millimeter
mm Hg	=	millimeters of mercury (pressure)
MM	=	million
MM BTU	=	million BTU
M cf	=	one thousand cubic feet
MM cf	=	million cubic feet
MW	=	megawatts
ppb	=	parts per billion
ppbv	=	parts per billion, by volume
ppm	=	parts per million
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
scf	=	standard cubic feet
scfm	=	standard cubic feet per minute
sdcf	=	standard dry cubic feet
sdcfm	=	standard dry cubic feet per minute
yd	=	yard
yd^3	=	cubic yards
yr	=	year

APPENDIX C

ENGINEERING EVALUATION FOR APPLICATION # 8229

Evaluation Report
A/N 8229
G# 8524
BFI, 12310 San Mateo Rd., Half Moon Bay

Accutite, on behalf of BFI, has submitted this application to replace the existing coaxial Phase I on an existing AST with two point equipment. All other equipment will remain unchanged

This will result in a station equipped with a 1000 gallon aboveground gas tank, with 2-point Phase I, balance Phase II, and a single EW 4005 nozzle. Equipment should comply with Executive Orders G-70-97, 52AM, and 162

This station is not within 1000' of a school. It will be conditioned to 940,000 gal/yr under condition #14098 and for annual leak testing under condition #16516.

All fees have been paid. Recommend that an A/C be issued for the above project.

By: signed by Scott Owen date: September 17, 2003

Scott Owen
Supervising AQ Engineer

APPENDIX D

ENGINEERING EVALUATION FOR APPLICATION # 25645

ENGINEERING EVALUATION

Browning-Ferris Industries; PLANT # 2266
APPLICATION # 25645

BACKGROUND

Cornerstone Environmental Group, LLC, on behalf of Browning-Ferris Industries of California (BFI), has submitted an application for a Change of Permit Conditions at the

Ox Mountain Sanitary Landfill

located at

12310 San Mateo Road
Half Moon Bay, CA 94019

for sources:

S-1 Los Trancos Canyon Landfill - Waste Decomposition Process;
Abated by: A-7 Landfill Gas Flare; A-8 Landfill Gas Flare; and A-9 Landfill Gas Flare;
S-21 Los Trancos Canyon Landfill - Waste and Cover Material Dumping; and
S-22 Los Trancos Canyon Landfill - Excavating, Bulldozing, and Compacting Activities

Browning Ferris Industries (BFI) owns and operates the Los Trancos Canyon Landfill Facility located on Ox Mountain in Half Moon Bay, CA. This landfill site has two fill areas. The upper canyon area has reached full capacity and has been inactive since 1995, while the lower canyon area is actively accepting waste. Each fill area is equipped with an independently operating landfill gas collection and control system.

BFI wishes to increase the current maximum waste-in-place (WIP) limit without triggering a New Source Review (NSR) modification, by demonstrating that the landfill meets existing permit condition limits on waste acceptance and that landfill gas (LFG) generation and fugitive emission limits established in BAAQMD Application Number (A/N) 18429 are not exceeded.

BFI requested to remove the current permitted solid waste acceptance limit of 22,740,000 tons in place in the Title V Permit Condition # 10164, Part 2. Since this tons-in-place weight limit is used to track NSR increases, the District will respond to the request to change the Title V Permit Condition #10164, Part 2, by amending the current permitted solid waste acceptance limit from 22,740,000 tons to an amount that will result in no emissions increase.

Waste Acceptance Limits

In addition to the limit of 22,740,000 tons, Title V Permit Condition 10164, Part 2 requires the following:

Ox Mountain does not accept more than 3,598 tons per day (tpd) nor 835,000 tons per year (tpy); and
Ox Mountain has less than 49 million cubic yards (CY) of total waste and cover materials.

Based on records maintained by BFI, Ox Mountain asserts that they did not exceed the waste acceptance rate limits noted in Title V Permit Condition #10164 Part 2. In addition an aerial survey conducted by Cooper Aerial Surveys Co. on March 4, 2013, indicates that the airspace volume consumed to date is 45,257,783 CY, which is less than the 49 million CY limit on total waste and cover materials.

Daily waste acceptance records for the period of January 1, 2012 through August 21, 2013, were submitted by Ox Mountain to demonstrate compliance with Ox Mountain's Title V permit maximum waste acceptance limit of 22,740,000 tons.

Landfill gas Generation and Fugitive Emissions

As noted in Application 18429, previous organic emissions were based on an assumed maximum LFG generation rate of 9,600 standard cubic feet per minute (scfm) of LFG at 50 percent methane, with 75 percent assumed to be collected and abated by the gas collection and control system (GCCS) (7,200 scfm of collected LFG) and 25 percent assumed to be fugitive emissions from the landfill surface (2,400 scfm of fugitive LFG).

In addition to the waste acceptance requirements noted above, BFI must meet the following LFG generation and fugitive emission rates noted in Application #18429:

LFG generation does not exceed 9,600 scfm
Fugitive emissions of Non-Precursor Organic Compounds (NPOC) do not exceed 49,072 tpy; and
Fugitive emissions of Precursor Organic Compounds (POC) do not exceed 34.734 tpy.

The AP-42 Landfill Gas Emissions Model (LandGEM) Version 3.02 was used to determine the revised permit condition limiting the maximum waste-in-place without triggering a New Source Review modification.

The historical annual waste acceptance rates from the landfill through December 31, 2012, were used in the LandGEM model to determine the peak waste acceptance limit that would not exceed the assumed maximum LFG generation rate of 9,600 scfm of LFG at 50 percent methane.

Based on the LandGEM results, shown in **Attachment A**, the revised maximum waste-in-place limit is **26,500,000 short tons**.

Scott McGourty of Republic Services stated that BFI would prefer to maintain the current annual waste acceptance limit of 835,000 tons per year. (Reducing the annual waste acceptance limit would allow additional increase in the maximum waste-in-place limit above 26,500,000 tons.

A maximum LFG generation rate of 9,600 scfm is associated with the following generation rates of methane, NMOC, and 1,1,1 Trichloroethane:

Projected Methane Generation rate assuming 50% methane in LFG**: 4.783E+3 ft3/min**

Uncontrolled methane emissions:

4.783 E+3 ft3/min (60 min/hr) (24 hr/day) (365 days/yr) (1/386 lb mole/ft3) (16.04 lbs/lb mole) = 1.0454E+8 lb/yr = 5.22E+4 tons/yr

The evaluation for Application # 18429 did not estimate methane emissions. However, the basis for the maximum LFG generation rate of 9,600 scfm is the same.

Projected NMOC Generation rate: 4.209 ft3/min

Uncontrolled NMOC emissions:

4.209 ft3/min (60 min/hr) (24 hr/day) (365 days/yr) (1/386 lb mole/ft3) (86.16 lbs/lb mole) = 4.94E+5 lb/yr = 2.47E+2 tons/yr

Projected 1,1,1 – Trichloroethane (methyl chloroform) – HAP: 4.592E-3 ft3/min

Uncontrolled 1,1,1 - Trichloroethane emissions:

4.592E-3 ft3/min (60 min/hr) (24 hr/day) (365 days/yr) (1/386 lb mole/ft3) (133.4 lbs/lb mole) = 8.34E+2 lb/yr = 4.17E-1 tons/yr

STATEMENT OF COMPLIANCE

The proposed changes to the permit condition # 10164 do not result in emission increases for any pollutant above previously permitted levels. Therefore, no regulations applicable to operation of the Ox Mountain Los Trancos Sanitary Landfill will result in additional requirements.

CEQA Requirements (Regulation 2, Rule 1):

The proposed changes to permit conditions in this application were evaluated in accordance with the objective measurements and standard procedures described in District Engine Permitting Guidance Manual. This application does not involve any discretionary decisions. Therefore, the change in conditions is considered ministerial pursuant to Regulation 2-1-311. No further CEQA review is required.

PERMIT CONDITIONS

The proposed Title V Permit Condition changes to Condition # 10164, Part 2 are shown below in red:

COND# 10164 ----------

For: S-1 Los Trancos Canyon Landfill - Waste Decomposition Process; Abated by: A-7 Landfill Gas Flare; A-8 Landfill Gas Flare; and A-9 Landfill Gas Flare; S-21 Los Trancos Canyon Landfill - Waste and Cover Material Dumping; and S-22 Los Trancos Canyon Landfill - Excavating, Bulldozing, and Compacting Activities:

*1. Landfill operations at the Los Trancos Canyon (Ox

Mountain) Landfill (S-1), including the acceptance and placement of waste, earthmoving, and construction activities, shall be restricted to six days per week, Monday through Saturday. (Basis: CEQA)

2. Total waste accepted and placed at the Los Trancos Canyon Landfill (S-1) shall not exceed 835,000 tons during any consecutive twelve-month period; nor 3,598 tons during any one day. The total cumulative amount of all wastes placed in the landfill shall not exceed ~~22,740,000 tons~~ 26,500,000 tons. The maximum design capacity of S-1 (total volume of all wastes and cover materials placed in the landfill, excluding final cover) shall not exceed 49,000,000 cubic yards. To confirm compliance with this part, the Permit Holder of S-1 shall maintain daily records, summarized on a monthly basis, of the amount of waste accepted and placed in each area of the landfill. (Basis: Cumulative Increase)

*3. All waste shall be covered with compacted materials meeting the requirements of the State of California. The cover frequency shall be increased as necessary to control odors and litter. (Basis: Regulation 1-301)

4. All on-site parking and maintenance areas for vehicles and mobile equipment shall be either paved, or provided with a gravel surface and maintained as necessary to prevent dust emissions. (Basis: Regulation 6-1-301)

5. All on-site roadways shall be paved, except for a segment of road from the end of the paved haul road to the working face. This unpaved segment shall not exceed 1200 feet in length. Limited use access roads may also remain unpaved. Limited use access roads include fire roads and other on-site roads that are traveled infrequently for the purpose of site patrol, maintenance, or monitoring of the landfill cover, landfill gas collections system, and landfill gas control system. (Basis: Cumulative Increase)

6. The speed of vehicles on unpaved roads shall not exceed 10 mph. (Basis: Cumulative Increase)

7. All unpaved roads (excluding limited use access roads) shall be treated with 10% (wt) magnesium chloride dust suppressant solution at a rate of at least 0.5 gallons per square yard. This dust suppressant solution shall be applied at least once per calendar month, during May through October. During November through April, dust suppressant shall be applied after any dry period consisting of 30 consecutive days with less than 0.09 inches of rain per day. In addition, water shall be applied to all unpaved roads at least four times per working day. This watering schedule may be reduced

during periods when there is sufficient precipitation to minimize dust emissions. (Basis: Cumulative Increase)

8. The Permit Holder of S-1 shall sweep and wash down all paved roadways at least twice per week or as necessary to maintain a clean road surface. (Basis: Cumulative Increase)

9. On-site vehicle traffic volume shall not exceed the number of round trips described below during any one day:
   a. Transfer Trucks - 178 round trips per day
   b. Packer Trucks - 52 round trips per day
   c. Water Trucks - 36 round trips per day
   d. Soil Trucks - 200 round trips per day
   e. Misc. Heavy Equipment - 60 round trips per day
   f. Light Duty Vehicles - 250 round trips per day
   The Permit Holder shall apply to the District for a modification of S-1 to add any other vehicles or to increase the number of daily round trips. The Permit Holder shall maintain daily traffic records to confirm compliance with this part, except that the Permit Holder may omit the employee light duty vehicle trips from these recordkeeping requirements. (Basis: Cumulative Increase)

10. Except for the vehicles listed below, the on-site one way distance traveled by any heavy-duty vehicle (on paved roads only) shall not exceed 8,000 feet. This limitation does not apply to the following vehicle traffic, which may travel up to a maximum of 11,700 feet (one-way distance) on paved roads.
    a. Water Trucks - 36 round trips per day
    b. Fuel Trucks - 2 round trips per day
    c. Employee Light-Duty Vehicles- 20 round trips per day
    (Basis: Cumulative Increase)

*11. All completed landfill phases shall be revegetated in accordance with the final EIR. (Basis: CEQA)

12. The Permit Holder shall maintain appropriate records (including but not limited to: operating times, refuse acceptance rates, water and/or chemical dust suppressant application times, traffic volumes, site maps showing all paved and unpaved road lengths, etc.) to verify compliance with parts 1-11. These records shall be kept on site for at least 5 years from the date of entry and shall be made available to District personnel upon request. (Basis: Cumulative Increase)

13. The Permit Holder of the S-1 Active Landfill shall not handle soil containing volatile organic compounds (VOCs) or use soil containing VOCs as cover material,

unless the following provisions are met.

a. The Permit Holder satisfies all requirements of Part 14 below; or
(Basis: Regulation 8-40-301)

b. The Permit Holder can demonstrate that the soil is VOC-laden soil (soil containing VOCs that is not "contaminated"), or other materials for which the Permit Holder has appropriate documentation demonstrating that either the organic content of the soil or the organic concentration above the soil is below the contaminated level as defined in Regulation 8-40-205 (contains less than or equal to 50 ppmw of VOCs); and the Permit Holder places no more than 118.75 tons/day and no more than 31,800 tons/year of such VOC-laden soil in the landfill (disposal and cover use combined). These placement limits do not apply to the placement of soil that has no known contamination of VOCs or to contaminated soil. (Basis: Cumulative Increase and Regulation 8-2-301)

14. Handling Procedures for Soil Containing Volatile Organic Compounds

a. The procedures listed below in subparts b-l do not apply if the following criteria are satisfied. However, the record keeping requirements in subpart m below are applicable.

i. The Permit Holder has appropriate documentation demonstrating that either the organic content of the soil or the organic concentration above the soil is below the "contaminated" level (as defined in Regulation 8, Rule 40, Sections 205, 207, and 211). The handling of soil containing VOCs in concentrations below the "contaminated" level is subject to Part 13 above.

ii. The Permit Holder has no documentation to prove that soil is not contaminated, but source of the soil is known and there is no reason to suspect that the soil might contain organic compounds.

b. The Permit Holder shall provide notification to the Compliance and Enforcement Division of the Permit Holder's intention to accept contaminated soil at the facility at least 24 hours in advance of receiving the contaminated soil. The Permit Holder shall provide an estimate of the amount of contaminated soil to be received, the degree of contamination (range and average VOC Content), and the type or source of contamination.

c. Any soil received at the facility that is known or suspected to contain volatile organic compounds (VOCs) shall be handled as if the soil were contaminated, unless the Permit Holder receives

test results proving that the soil is not contaminated. To prove that the soil is not contaminated, the Permit Holder shall collect soil samples in accordance with Regulation 8-40-601 within 24 hours of receipt of the soil by the facility. The organic content of the collected soil samples shall be determined in accordance with Regulation 8-40-602.

i. If these test results indicate that the soil is still contaminated or if the soil was not sampled within 24 hours of receipt by the facility, the Permit Holder must continue to handle the soil in accordance with the procedures subparts d-l below, until the soil has completed treatment or has been placed in a final disposal location and adequately covered. Storing soil in a temporary stockpile or pit is not considered treatment. Co-mingling, blending, or mixing of soil lots is not considered treatment.

ii. If these test results indicate that the soil - as received at the facility - has an organic content of 50 ppmw or less, then the soil may be considered to be not contaminated and need not be handled in accordance with the procedures listed in subparts d-l below, but shall be handled in accordance with Part 13 above.

d. Any contaminated soil received at the facility shall be clearly identified as contaminated soil, shall be handled in accordance with subparts e-l below, and shall be segregated from non-contaminated soil. Contaminated soil lots may not be co-mingled, blended, or otherwise mixed with non-contaminated soil lots prior to treatment, reuse, or disposal. Mixing soil lots in an attempt to reduce the overall concentration of the contaminated soil or to circumvent any requirements or limits is strictly prohibited.

e. On-site handling of contaminated soil shall be limited to no more than two on-site transfers per soil lot. For instance, unloading soil from off-site transport vehicles into a temporary storage pile is considered one transfer. Moving soil from a temporary storage to a staging area is considered one transfer. Moving soil from a temporary storage pile to a final disposal site is considered one transfer. Moving soil from a staging area to a final disposal site is considered one transfer. Therefore, unloading soil from off-site transport into a temporary storage pile and then moving the soil from that temporary storage pile to the final disposal site is allowed. Unloading soil from off-site

transport into a staging area and then moving the soil from that staging area to the final disposal site is allowed. However, unloading soil from off-site transport to a temporary storage pile, moving this soil to a staging area, and then moving the soil again to a final disposal site is three on-site transfers and is not allowed.

f. If the contaminated soil has an organic content of less than 500 ppmw, the contaminated soil shall either be treated or deposited in a final disposal site or transported off-site for treatment, within 90 days of receipt at the facility.
g. If the contaminated soil has an organic content 500 ppmw or more, the contaminated soil shall either be treated or deposited in a final disposal site or transported off-site for treatment, within 45 days of receipt at the facility.
h. All active storage piles shall meet the requirements of Regulation 8-40-304 by using water sprays, vapor suppressants or approved coverings to minimize emissions. The exposed surface area of any active storage pile (including the active face at a landfill) shall be limited to 6000 ft2. The types of storage piles that may become subject to these provisions include (but are not limited to) truck unloading areas, staging areas, temporary stockpiles, soil on conveyors, bulldozers or trucks, the active face of a landfill, or other permanent storage pile at the final disposal location.
i. All inactive storage piles shall meet the requirements of Regulation 8-40-305 including the requirement to cover contaminated soil during periods of inactivity longer than one hour. The types of storage piles that may become subject to these provisions include (but are not limited to) soil on trucks or other on-site equipment, staging areas, temporary stockpiles, and the permanent storage pile at the final disposal location. District approved coverings for inactive storage piles include continuous heavy-duty plastic sheeting (in good condition, joined at the seams, and securely anchored) or encapsulating vapor suppressants (with re-treatment as necessary to prevent emissions).
j. The Permit Holder must:
    i. Keep contaminated soil covered with continuous heavy-duty plastic sheeting (in good condition, joined at the seams, and securely anchored) whenever soil is to be stored in temporary stockpiles or during on-site transport in trucks. Soil in trucks shall not be left uncovered for more than 1 hour.

ii. Establish a tipping area for contaminated soils near the active face that is isolated from the tipping area for other wastes.
iii. Spray contaminated soil with water or vapor suppressant immediately after dumping the soil from a truck at the tipping area.
iv. Ensure that all contaminated soil is transferred from the tipping area to the active face immediately after spraying with water or vapor suppressant.
v. Ensure that contaminated soil in the tipping area is not disturbed by subsequent trucks. Trucks shall not drive over contaminated soil in the tipping area or track contaminated soil out of the tipping area on their wheels.
vi. Spray contaminated soil on the active face with water or vapor suppressant (to keep the soil visibly moist) until the soil can be covered with an approved covering.
vii. Limit the area of exposed soil on the active face to no more than 6000 ft2.
viii. Ensure that contaminated soil spread on the active face is completely covered on all sides with one of the following approved coverings: at least 6 inches of clean compacted soil, at least 12 inches of compacted garbage, or at least 12 inches of compacted green waste.
ix. Ensure that covering of soil on the active face is completed within one hour of the time that the soil was first dumped from a truck at the tipping area.

k. Contaminated soil shall not be used as daily, intermediate, or final cover material for landfill waste operations unless the requirements of Regulation 8, Rule 40, Sections 116 or 117 have been satisfied.

l. Contaminated soil is considered to be a decomposable solid waste pursuant to Regulation 8, Rule 34. All contaminated soil disposed of at a site shall be included in any calculations of the amount of decomposable waste in place for annual reporting requirements or for purposes of 8-34-111 or 8-34-304.

m. The Permit Holder shall keep the following records for each lot of soil received, in order to demonstrate on-going compliance with the applicable provisions of Regulation 8, Rule 40.
i. For all soil received by the facility (including soil with no known contamination), record the arrival date at the facility, the soil lot number, the amount of soil in the lot, the organic content or organic concentration of the lot (if known), the type

of contamination (if any), and keep copies of any test data or other information that documents whether the soil is contaminated (as defined in 8-40-205) or not contaminated, with what, and by how much.

ii. If the soil is tested for organic content after receipt by the facility, a report with the sampling date, test results, and the date results were received.

iii. For all on-site handling of contaminated soil, use a checklist or other approved method to demonstrate that appropriate procedures were followed during all on-site handling activities. One checklist shall be completed for each day and for each soil lot (if multiple lots are handled per day).

iv. For soil aerated in accordance with 8-40-116 or 117 record the soil lot number, the amount of soil in the lot, the organic content, the final placement date, the final placement location, and describe how the soil was handled or used on-site.

v. For final disposal at a landfill, record on a daily basis the soil lot number, the amount of soil placed in the landfill, the disposal date, and the disposal location.

All records shall be retained for at least 5 years from the date of entry and shall be made available for District inspection upon request.

(Basis: Regulations 8-40-301, 8-40-304 and 8-40-305)

15. In order to demonstrate compliance with Regulation 8, Rule 34, Section 304, the Permit Holder shall maintain the following records for each area or cell that is not controlled by a landfill gas collection system.
    a. Record the date that waste was initially placed in each uncontrolled area or cell.
    b. Record the cumulative amount of waste placed in each uncontrolled area or cell on a monthly basis.
    c. For any areas or cells that are excluded from the collection system requirements, record the types and amounts of all non-decomposable waste placed in the area and the percentage (if any) of decomposable waste placed in the area.
    d. Record the initial operation date for each new landfill gas well and collector.
    e. Maintain an accurate map of the landfill, which indicates the locations of all refuse boundaries and the locations of all wells and collectors using unique identifiers. Any areas containing only non-decomposable waste shall be clearly identified. This map shall be updated at least every six months to indicate changes in refuse boundaries and to include any newly installed

wells and collectors.
These records shall be kept on site for at least 5 years from the date of entry and shall be made available to District personnel upon request. (Basis: Regulation 8-34-304)

16. [deleted and combined with Part 17]

17. The Permit Holder of S-1 shall have a properly operated and properly maintained landfill gas collection system in both the Lower and Upper Canyon Fill Areas. (Basis: Regulations 2-1-301, 8-34-301.1, 8-34-305, and NSPS: 40 CFR 60.752(b)(2)(ii), 60.755(a) and 60.759)
    a. The authorized number of landfill gas collection system components is the baseline count listed below plus any components installed and minus any components decommissioned pursuant to subpart 17b, as evidenced by start-up and decommissioning notification letters submitted to the District.
        - 188 vertical wells
        - 15 monitoring points for horizontal collectors
    b. The Permit Holder has been authorized to perform the landfill gas collection system alterations listed below pursuant to Permit Application # 23391. All collection system alterations shall comply with subparts 17b(i-vii) below. Wells installed pursuant to Part 17b shall be added to Part 17a in accordance with the procedures identified in Regulations 2-6-414 or 2-6-415.
        i. The authorized collection system alterations are:
            - Install up to 79 vertical gas collection wells.
            - Permanently decommission up to 115 vertical wells
            - Install up to 19 horizontal collectors
            - Permanently decommission up to 12 horizontal collectors
        ii. The Permit Holder shall apply for and receive a Change of Conditions from the District before implementing any changes to the landfill gas collection system described in subpart 17a other than those allowed pursuant to subpart 17b(i). Installing, decommission-ing, and relocating vertical wells and horizontal collectors are alterations that are subject to this requirement, unless this change constitutes a replacement as defined in subpart 17b(iii) below.
        iii. Replacement of landfill gas collection system components with identical or functionally equivalent components will not be deemed an alteration and will not subject to the Authority to Construct requirement under the

following circumstances. If a well or collector will be shut down and replaced by a new well or collector in essentially the same location as the old component and this decommission/installation will be accomplished in accordance with Regulations 8-34-117 and 8-34-118, then this activity shall be considered a component replacement that is not subject to the Authority to Construct requirement. For each individual well or collector replacement, this subpart authorizes a maximum vacuum disconnection time of five consecutive days for compliance with Regulation 8-34-117.5. The disconnected component and the new component shall not be counted toward the subpart 17b(i) limits; the numbers of replacement wells and replacement collectors are not limited. Alterations, repairs, or replacements of non-perforated piping sections (such as risers, laterals, or header pipes), piping connectors, or valves are not subject to the Authority to Construct requirement.

iv. At least three days prior to initiating operation of a well or collector installed pursuant to subpart 17b, the Permit Holder shall submit a start-up notice to the District that contains the component ID number for each new well or collector and the anticipated initial start-up date for each new component.

v. For each well or collector that is permanently decommissioned after June 19, 2007, the Permit Holder shall submit a decommissioning notice to the District within no later than three working days after the component was disconnected from vacuum system. This decommissioning notice shall contain the component ID for each well or collector that was decommissioned, the date and time that each component was disconnected from the vacuum system, and the reason the component was decommissioned.

vi. Within six months of installing a new component or permanently decommissioning an existing component, the Permit Holder shall prepare an updated map of the landfill gas collection system that identifies the ID numbers and locations of all operable wells and collectors. On this map or in accompanying documentation, the Permit Holder shall summarize all component changes that were made since the last map was prepared. The previous collection system map, the

updated collection system map, and the component change summary shall be provided to District staff upon request.

vii. If the Permit Holder has a net reduction (number of decommissioned components minus the number of installed components) of more than five components within a 120-day period, the Permit Holder shall submit a more comprehensive decommissioning notice to the District. In addition to the information required by subpart 17b(v), this comprehensive decommissioning notice shall include the maps and documentation required by subpart 17b(vi), shall identify all component changes that have occurred but that are not included on the most recently updated map, shall identify any components that are temporarily disconnected from vacuum pursuant to subpart 18c, shall provide estimated vacuum reconnection dates for these components, shall include a list of all well installations that are expected to occur within the next 120 days, and shall discuss the reasons why this reduction in gas collection components is not expected to result in surface emission leaks. Upon request, the Permit Holder shall provide wellhead monitoring data, surface leak monitoring data, records of repair attempts made to date, and other information to support the need for a net collection component reduction of more than five wells. The District may require additional surface monitoring to verify that this net component reduction is not causing landfill surface leaks. The District will notify the Permit Holder in writing of any additional surface monitoring that is required pursuant to this subpart.

18. Operating Requirements for Landfill Gas Collection Systems and Collection System Components:
    a. The landfill gas collection systems described in Part 17a shall be operated continuously, unless the Permit Holder complies with all applicable provisions of Regulation 8, Rule 34, Section 113. Individual wells shall not be disconnected or removed, nor isolation valves shut completely off, unless the Permit Holder complies with all applicable requirements of Regulation 8, Rule 34, Sections 113, 116, and 117 or with Part 18c below. (Basis: Regulations 8-34-301.1 and 8-34-404)
    b. Each landfill gas collection system component listed in Part 17a shall be operated in compliance

with the wellhead limits of Regulation 8-34-305, unless an alternative wellhead limit has been approved for that component, as identified in subpart b(i), and the Permit Holder complies with all of the additional requirements for that component, as identified in subparts b(ii-vii). (Basis: Regulations 8-34-303, 8-34-304, 8-34-305, 40 CFR 60.755(a) and 60.759)

i. The nitrogen and oxygen concentration limits in Regulation 8-34-305.3 and 8-34-305.4 shall not apply to the landfill gas collection wells listed below, provided that the oxygen concentration in each of the following wells does not exceed 15% by volume.

EW-W04	EW-PEW01
EW-W10	EW-PEW02
EW-W13	EW-PEW03
EW-W17	EW-PEW04
EW-W38	EW-PEW06
EW-W-1-L	HC-F06

ii. The Permit Holder shall demonstrate compliance with the alternative wellhead oxygen limit in subpart b(i) by monitoring each wellhead for oxygen on a monthly basis, in accordance with the provisions of Regulations 8-34-505 and 8-34-604.

iii. All test dates, wellhead oxygen concentration data, any deviations from the subpart b(i) limit, repair actions, repair dates, re-monitoring dates and results, and compliance restoration dates shall be recorded in a District approved log and made available to District staff upon request in accordance with Regulations 8-34-34-501.4, 8-34-501.9, and 8-34-414.

iv. To demonstrate that the alternative wellhead oxygen limit in subpart b(i) will not cause surface emission leaks, the Permit Holder shall conduct additional surface emission monitoring in the vicinity of each component listed in subpart b(i). For each component in subpart b(i), the Permit Holder shall maintain a map showing the location of the buried collection component and identifying the approximate radius of influence for the component. For each component in subpart b(i), the Permit Holder shall monitor for landfill surface emissions - in accordance with Regulations 8-34-506 and 8-34-607 - at three representative points on the landfill surface that are within the radius of influence of the component and that are not more than 15 meters from the surface location of the component. This additional surface

emission monitoring shall be conducted on a monthly basis for a period of at least six consecutive months.

v. If no excesses of the Regulation 8-34-303 surface emission limit are detected in the vicinity of a component for six consecutive months, the Permit Holder may discontinue the additional monthly surface emission monitoring in the vicinity of that component and shall continue with the routine quarterly surface emission monitoring requirements in the vicinity of that component.

vi. If one or more excesses of the Regulation 8-34-303 surface emission limit are detected in the vicinity of a component during a six consecutive month period, the Permit Holder shall follow all applicable requirements for recording and reporting the excess and shall follow the Regulation 8-34-415 repair schedule for landfill surface leak excesses. The additional monthly surface emission monitoring in the vicinity of that component shall continue until either the no surface excess requirements of subpart b(v) have been achieved or the repair and compliance restoration requirements of subpart b(vii) have been satisfied.

vii. If excesses of the Regulation 8-34-303 surface emission limit are detected in the vicinity of a component for three or more monitoring events during a six consecutive month period, the subpart b(i) alternative wellhead oxygen limit shall be revoked for that component. The Permit Holder shall conduct all necessary repairs to the landfill gas collection well, to any piping associated with the well or the remote wellhead monitoring system, to valves, flanges, or other connectors, and to any test ports or other openings that are necessary to eliminate air intrusion into the well or the monitoring point, to prevent impairment of vacuum application or vacuum adjustment at the collection well, and to restore the collection well and associated monitoring point to proper function. The Permit Holder shall complete all of the above repairs and any necessary landfill surface repairs and shall restore compliance with the Regulation 8-34-303 surface emission limit (in the vicinity of that component) and the Regulation 8-34-305.4 wellhead oxygen concentration limit by the earlier of the following dates: (a) within 120 days of the

date that the first excess was discovered if the three excess events are discovered within a single quarterly period pursuant to the re-monitoring requirements of 8-34-415 or (b) within 60 days of detection of the third excess.

c. The Permit Holder may temporarily disconnect individual wells or collectors from the vacuum system, provided that all requirements of this subpart are satisfied. (Basis: Regulation 8-34-404)
   i. No more than five (5) landfill gas collection system components (wells or collectors) may be temporarily disconnected from the vacuum system at any one time pursuant to subpart 18c.
   ii. For each individual well or collector that is disconnected from the vacuum system pursuant to subpart 18c, the total vacuum system disconnection time shall not exceed 120 days during any 12-month period.
   iii. Collection system components that are disconnected from the vacuum system are not subject to wellhead limits (Regulation 8-34-305 or subpart 18b above) or to monthly wellhead monitoring requirements (Regulation 8-34-505) during this vacuum disconnection time.
   iv. Wells or collectors that are temporarily disconnected from the vacuum system continue to be subject to the component leak limit (Regulation 8-34-301.2) and the quarterly leak testing requirement (Regulation 8-34-503) at all times. In addition, the Permit Holder shall conduct the following component leak monitoring at each component that has been disconnected from the vacuum system pursuant to subpart 18c: test for component leaks using the procedures identified in Regulation 8-34-602 within 10 calendar days of disconnection from vacuum and again within 1 month of disconnection from vacuum. If a component leak is detected at the well, the Permit Holder shall take all steps necessary to reduce the leak below the applicable limit, including reconnecting the well to the vacuum system, if no other corrective action measures are successful within the time frames allowed by Rule 34.
   v. For each well disconnection event, the Permit Holder shall record each affected well ID number, all well disconnection dates and times, all well reconnection dates and times, all related monitoring dates and monitoring

results in a District approved log. This log shall also include an explanation of why the temporary well shut down was necessary and shall describe all adjustments or repairs that were made in order to allow this well to operate continuously, to reduce leaks, or to achieve compliance with an applicable limit. All records shall be retained for a minimum of five years and shall be made available to District staff upon request.

19. All collected landfill gas shall be abated by the on-site Landfill Gas Flares (A-7, A-8, or A-9) or shall be vented to the Ameresco Half Moon Bay LLC facility (Site # B7040). Landfill gas may be vented to any combination of the approved control devices (the three on-site flares, the off-site flare, and the six off-site IC engines), provided that a sufficient amount of landfill gas is collected at all times to prevent violation of the applicable surface leak limits. 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 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. (Basis: Regulations 8-34-301 and 8-34-303 and 40 CFR Parts 60.752(b)(2)(ii-iii) and 60.753(d-f))

20. The combined landfill gas flow rate to all the Flares (A-7, A-8, and A-9) shall not exceed 3807.6 million standard cubic feet during any consecutive 12-month period. For comparison to this limit, the landfill gas flow rate shall be corrected to 50% methane (dry basis), 70 degrees F, and 1 atmosphere. In order to demonstrate compliance with this part, the Permit Holder shall:
    a. determine and record, on a monthly basis, the methane content (dry basis) of the landfill gas in each landfill gas collection system header (upper canyon header and lower canyon header),
    b. calculate and record, on a monthly basis, the total landfill gas flow rate (expressed as 50% methane, dry basis, at 70 degrees F and 1 atmosphere) for each landfill gas collection system,
    c. calculate and record, on a monthly basis, the total landfill gas flow rate to all flares (expressed as 50% methane, dry basis, at 70 degrees F and 1 atmosphere), and
    d. maintain records of all calculation procedures and measured values that were used to determine the

total corrected landfill gas flow rate to the flares.

All records shall be maintained on site in an APCO approved logbook or shall be made readily available to District staff upon request for a period of at least 5 years from the date of entry. These record keeping requirements do not replace the record keeping requirements contained in any applicable rules or regulations. (Basis: Offsets and Cumulative Increase)

21. The concentration of total reduced sulfur compounds in the collected landfill gas shall not exceed an average of 150 ppmv as H2S. Total reduced sulfur compounds in the collected landfill gas shall be monitored as a surrogate for monitoring sulfur dioxide in control systems exhaust. Total reduced sulfur compounds in the landfill gas shall be determined on an annual basis pursuant to Part 31. (Basis: Cumulative Increase and Regulation 2-6-503)

*22. The Permit Holder shall submit a permit application for a Change of Permit Conditions, if any site-specific landfill gas characterization test indicates that the average measured concentration for any one of the toxic air contaminants (TACs) listed below is greater than the concentration limit listed below. The Permit Application shall be submitted to the District, within 45 days of receipt of test results indicating a concentration above the levels listed below. (Basis: Regulation 2-5-302)

Compound	Concentration (ppbv)
Acrylonitrile	500
Benzene	10,000
Carbon Tetrachloride	100
Chloroform	100
1,4 Dichlorobenzene	500
Ethylene Dibromide	100
Ethylene Dichloride	500
Ethylidene Dichloride	10,000
Methylene Chloride	30,000
Perchloroethylene	10,000
1,1,2,2 Tetrachloroethane	500
Trichloroethylene	5,000
Vinyl Chloride	5,000

23. Each Flare (A-7, A-8, and A-9) shall operate at the minimum combustion zone temperature indicated in subparts a-c below. If a source test demonstrates compliance with all applicable requirements at a different temperature, the APCO may revise the minimum combustion zone temperature limit in accordance with the procedures identified in Regulations 2-6-414 or 2-6-415 and the following criteria. The minimum combustion zone temperature for a flare shall be

equal to the average combustion zone temperature determined during the most recent complying source test minus 50 degrees F, provided that the minimum combustion zone temperature is not less than 1400 degrees F.

a. The A-7 Landfill Gas Flare shall operate at a minimum combustion zone temperature of at least 1400 degrees F, averaged over any 3-hour period.
b. The A-8 Landfill Gas Flare shall operate at a minimum combustion zone temperature of at least 1400 degrees F, averaged over any 3-hour period.
c. The A-9 Landfill Gas Flare shall operate at a minimum combustion zone temperature of at least 1400 degrees F, averaged over any 3-hour period.

(Basis: Regulations 2-5-301 and 8-34-301.3 and NSPS: 40 CFR 60.752(b)(2)(iii)(B) and 60.758(c)(1)(i))

24. Each Flare (A-7, A-8, and A-9) shall be equipped with a temperature monitor with readout display and a continuous temperature recorder. One or more thermocouples shall be placed in the primary combustion zone of the flare and shall accurately indicate flare combustion zone temperature at all times. (Basis: Regulations 8-34-501.3 and 8-34-507, and NSPS: 40 CFR 60.756(b)(1))

25. Each Flare (A-7, A-8, and A-9) shall be equipped with automatic combustion air controls. (Basis: Regulation 8-34-301.3 and RACT for CO)

26. Each Flare (A-7, A-8, and A-9) shall be equipped with a properly maintained and properly calibrated flow meter to measure gas flow into each flare. Gas flow shall be recorded at least every 15 minutes. (Basis: Regulations 8-34-501.10 and 8-34-508, and NSPS: 40 CFR 60.756(b)(2)(i))

27. Each Flare (A-7, A-8, and A-9) shall be equipped with an automatic gas shutoff valve, local and remote alarms, and an automatic restart system. (Basis: Regulation 8-34-301)

28. Nitrogen Oxide (NOx) emissions from Flares A-7, A-8, or A-9 shall not exceed 0.052 pounds of NOx (calculated as NO2) per million BTU. The Permit Holder may demonstrate compliance with this emission rate limit by having a nitrogen oxide concentration in the flare exhaust of no more than 39 ppmv of NOx, corrected to 3% oxygen, dry basis. An exhaust concentration measurement of more than 39 ppmv of NOx shall not be deemed a violation of this part, if the Permit Holder can demonstrate that NOx emissions did not exceed 0.052 lbs/MM BTU during the test period. (Basis: RACT and Offsets)

29. Carbon Monoxide (CO) emissions from Flares A-7, A-8, or A-9 shall not exceed 0.15 pounds of CO per million BTU. The Permit Holder may demonstrate compliance with this emission rate limit by having a carbon monoxide concentration in the flare exhaust of no more than 184 ppmv of CO, corrected to 3% oxygen, dry basis. An exhaust concentration measurement of more than 184 ppmv of CO shall not be deemed a violation of this part, if the Permit Holder can demonstrate that CO emissions did not exceed 0.15 lbs/MM BTU during the test period. (Basis: RACT, Cumulative Increase, and avoidance of Regulation 2-2-305.2)

30. In order to demonstrate compliance with Parts 28 and 29 above, Regulation 8, Rule 34, Section 301.3 and 40 CFR 60.752(b)(2)(iii)(B), the Permit Holder shall ensure that a District approved source test is conducted annually on each Landfill Gas Flare (A-7, A-8, and A-9). The source tests shall be conducted no sooner than 9 months and no later than 12 months after the previous source test. Each annual source test shall determine the following:
    a. landfill gas flow rate to the flare (dry basis);
    b. concentrations (dry basis) of carbon dioxide (CO2), nitrogen (N2), oxygen (O2), methane (CH4), and total non-methane hydrocarbons (NMOC) in the landfill gas;
    c. landfill gas flow rate (sdcfm) and heat input rate (MM BTU/hour) to the flare;
    d. stack gas flow rate from the flare (dry basis);
    e. concentrations (dry basis) of NOx, CO, CH4, NMOC, and O2 in the flare stack gas;
    f. emission rate per heat input (pounds/MM BTU) for NOx and CO
    g. NMOC destruction efficiency achieved by the flare; and
    h. average combustion zone temperature in the flare during the test period.

    The Source Test Section of the District shall be contacted to obtain approval of the source test procedures at least 14 days in advance of each source test. The Source Test Section shall be notified of the scheduled test date at least 7 days in advance of each source test. The source test report shall be submitted to the Compliance and Enforcement Division and the Source Test Section within 45 days of the test date. (Basis: Regulations 2-6-503, 8-34-301.3, 8-34-412, and 40 CFR 60.752(b)(2)(iii)(B))

31. The Permit Holder shall conduct a characterization of the landfill gas at the site on an annual basis. The landfill gas samples shall be drawn from the main landfill gas header for each flare concurrent with the

annual source test required by Part 30 above. In addition to the compounds listed in Part 30b, the landfill gas shall be analyzed for the organic and sulfur compounds listed below. All concentrations shall be reported on a dry basis. For comparison to the limits in Parts 21 and 22, the Permit Holder shall calculate the flow weighted average TRS concentration and the flow weighted average concentration for each TAC listed in Part 22 using the measured TRS and TAC concentrations in landfill gas at the inlet to each flare and the landfill gas flow rate to each flare during the test. The test report shall be submitted to the Compliance and Enforcement Division and the Source Test Section within 45 days of the test date. (Basis: Cumulative Increase and Regulations 2-5-302, 8-34-412 and 9-1-302)

Organic Compounds
acrylonitrile
benzene
carbon tetrachloride
chlorobenzene
chloroethane
chloroform
1,1 dichloroethane
1,1 dichlorethene
1,2 dichlorethane
1,4 dichlorbenzene
ethylbenzene
ethylene dibromide
hexane
isopropyl alcohol
methyl ethyl ketone
methylene chloride
perchloroethylene
toluene
1,1,1 trichloroethane
1,1,2,2 tetrachloroethane
trichloroethylene
vinyl chloride
xylenes

Sulfur Compounds
carbon disulfide
carbonyl sulfide
dimethyl sulfide
ethyl mercaptan
hydrogen sulfide
methyl mercaptan

32. The Permit Holder shall retain all records related to compliance with parts 18-31 for a minimum of 5 years. Such records include source test reports, continuous temperature records, gas flow rate records, and start-up and shut-down dates and times. All records shall be

kept on site and made available to District staff upon request. (Basis: Regulations 8-34-501 and 2-6-501)

33. The annual report required by BAAQMD Regulation 8-34-411 shall be submitted in two semi-annual increments. The reporting period for the first increment of the Regulation 8-34-411 annual report that is submitted subsequent to the issuance of the MFR Permit for this site shall be from December 1, 2002 through September 30, 2003. This first increment report shall be submitted by October 31, 2003. The reporting periods and report submittal due dates for all subsequent increments of the Regulation 8-34-411 report shall be synchronized with the reporting periods and report submittal due dates for the semi-annual MFR Permit monitoring reports that are required by Section I.F. of the MFR Permit for this site. (Basis: Regulation 8-34-411 and 40 CFR Part 63.1980(a))

RECOMMENDATION

Issue a Change of Conditions for the following sources subject to revised **Condition # 10164:**

S-1 Los Trancos Canyon Landfill - Waste Decomposition Process;
Abated by: A-7 Landfill Gas Flare; A-8 Landfill Gas Flare; and A-9 Landfill Gas Flare;
S-21 Los Trancos Canyon Landfill - Waste and Cover Material Dumping; and
S-22 Los Trancos Canyon Landfill - Excavating, Bulldozing, and Compacting Activities

By: Judith Cutino, PE Date
Senior Air Quality Engineer