

**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: 14391

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## **TITLE V STATEMENT OF BASIS**

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

APPLICATION # 14391

### **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<sup>3</sup>. 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 revised on March 7, 2002, August 12, 2003, January 5, 2004, May 6, 2005, March 16, 2006, and April 26, 2007. This application is for a permit renewal and also incorporates a minor revision of the permit. Although the current permit expired on September 30, 2006, it continues in force until

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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), 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 (about 900,000 tons/year). The two fill areas combined contain about 18 million tons of decomposable refuse (about 80% of maximum capacity). Each fill area is equipped with a landfill gas collection system.

Currently, all of the collected landfill gas is vented to the three 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. For 2006, the flares burned an average of 3283 cfm of landfill gas.

An independently owned company (Ameresco Half Moon Bay, LLC, Site # B7040) has applied for an Authority to Construct for six 2677 bhp internal combustion engines that will be fueled on landfill gas collected from the S-1 Los Trancos Canyon Landfill and that will be located on BFI property. This project is being evaluated pursuant to BAAQMD Permit Application # 12649. If this project is constructed, Ameresco Half Moon Bay, LLC will obtain the necessary Title V operating permit for these landfill gas fired engines.

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 2004, BFI reported that S-12 accepted 19,353 tons/year of materials.

All emission increases for this facility were discussed in detail in the Statements of Basis for the Title V permit revisions that were issued in 2002, 2003, 2004, 2005, 2006, and 2007 (Applications #3221, #4801, #7841, #8229, #12700, and #14066). Since the Title V permit was

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first issued in 2001, the most significant changes to facility-wide emissions were the CO, NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and POC emission increases that occurred due to the permitting of three replacement flares (A-7, A-8, and A-9) pursuant to Application # 7841 (January 5, 2004 revision). The current facility wide maximum permitted emission rates for each source are summarized in Table 1.

Table 1. Maximum Permitted Emissions for Site # A2266

Device Number and Description	Emissions (tons/year)				
	CO	PM <sub>10</sub>	NO <sub>x</sub>	POC	SO <sub>2</sub>
S-1 Los Trancos Canyon Landfill		70.8		34.6	
S-5 Non-Retail GDF				0.3	
S-12 Stockpiles of Green Waste		0.1			
A-7, A-8, and A-9 Combined	141.9	16.2	49.2	13.2	47.3
Facility Wide Permitted Emissions	141.9	87.1	49.2	48.2	47.3

## 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, Section I:

- The District is updating the dates of adoption and approval of rules in Standard Condition 1.A.

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- The District is adding the following language to Standard Condition I.B.1: "If the permit renewal has not been issued by [5<sup>th</sup> anniversary of issue date], but a complete application for renewal has been submitted in accordance with the above deadlines, the existing permit will continue in force until the District takes final action on the renewal application." This is the "application shield" pursuant to BAAQMD Regulation 2-6-407.
- The basis for Standard Condition I.B.11 is being amended by adding "Regulation 2-6-409.20" to conform to changes in Regulation 2, Rule 6.
- The following language is added as Standard Condition I.B.12: "The permit holder is responsible for compliance, and certification of compliance, with all conditions of the permit, regardless whether it acts through employees, agents, contractors, or subcontractors. (Regulation 2-6-307)." The purpose is to reiterate that the Permit Holder is responsible for ensuring that all activities at the facility comply with all applicable requirements.
- The District is correcting errors in the bases for Standard Conditions I.E.2 and I.F by deleting "Regulation 3;" from these bases.
- The District is clarifying the certification period in Standard Condition I.G by changing it from "October 1<sup>st</sup> to September 30<sup>th</sup>" to "October 1<sup>st</sup> through September 30<sup>th</sup>".

## **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.

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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.

Following are explanations of the differences in the equipment list between the time that the facility was originally issued a Title V permit (September 2001) and the permit proposal date: the S-12 Stockpiles of Green Waste was added pursuant to Title V Permit Application # 4801 and the A-4, A-5, and A-6 Landfill Gas Flares were replaced by the A-7, A-8, and A-9 Landfill Gas Flares pursuant to Title V Permit Application # 7841. In Table II-A, the number of gas collection wells for S-1 was corrected and the description of the equipment associated with S-5 was updated. These changes were previously discussed in the Statements of Basis for Applications # 3221, # 4801, # 7841, and # 8229.

Changes to Permit, Section II:

- The gas collection system description for S-1 is being updated in Table II-A. These collection system changes were authorized by the District pursuant to NSR Applications # 14976 and # 15190 and are discussed in detail in the Engineering Evaluation for Application # 15190 in Appendix C.

### **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:

- The District is adding language to Section III to clarify that this section contains requirements that may apply to temporary sources. This provision allows contractors that have "portable" equipment permits that require them to comply with all applicable requirements to work at the facility on a temporary basis, even if the permit does not specifically list the temporary source. Examples are temporary sand-blasting, wood chipping, or soil-vapor extraction equipment.
- The District is adding EPA's website address for the SIP standards to Section III.

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- 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:
  - Regulation 2, Rule 1, General Requirements
  - Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
  - Regulation 4, Air Pollution Episode Plan
  - Regulation 8, Rule 2, Miscellaneous Operations
  - Regulation 8, Rule 15, Emulsified and Liquid Asphalts
  - Regulation 8, Rule 40, Aeration of Contaminated Soil and Removal of Underground Storage Tanks
  - Regulation 8, Rule 47, Air Stripping and Soil Vapor Extraction Operations
  - Regulation 9, Rule 1, Sulfur Dioxide
  - Regulation 9, Rule 2, Hydrogen Sulfide
  - California Health and Safety Code Section 41750 et seq., Portable Equipment
  - California Code of Regulations Title 17, Section 93105 et seq., Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations
  - California Code of Regulations Title 17, Section 93106 et seq., Airborne Toxic Control Measure for Asbestos Containing Serpentine
  - California Code of Regulations Title 17, Section 93115 et seq., Airborne Toxic Control Measure for Stationary Compression Ignition Engines
  - California Code of Regulations Title 17, Section 93116 et seq., Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater
  - EPA Regulation 40 CFR Part 82, Subpart F, Sections 156, 161, and 166.
- The District is deleting the footnote to Table III, because it is not necessary. The applicability of SIP requirements is discussed elsewhere in the MFR permit.

#### **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.

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- 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:

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. The only significant change to the applicable requirements that has occurred since the Title V permit was first issued was the addition of the NESHAP for MSW Landfills to Table IV-A. The Statement of Basis for Application # 4801 describes the applicability determination for the S-1 Los Trancos Canyon Landfill in detail.

District Permit Applications Included In This Proposed Permit:

This facility sends a large number of permit applications to the District every year. The most recent submittal (Application # 15190) concerns permit condition revisions related to the description and operation of the landfill gas collection system. The District's Engineering Evaluation for this application and approved permit condition revisions are contained in Appendix C. All MFR Permit revisions that resulted from the District's approval of Application # 15190 are included in this proposed renewal permit. No other permit applications have been submitted to the District at this time. When applications are submitted in the future, the Title V permit will be revised to incorporate permit revisions following the procedures in Regulation 2, Rule 6, Major Facility Review.

Changes to Permit, Section IV:

- Section IV is being modified by adding EPA's website address for the SIP standards.
- In Table IV-A, the amendment dates for BAAQMD Regulation 1 and BAAQMD Regulation 8, Rules 2, 34, and 40 are being updated. Since the most recent revisions to these to rules involved changes to a definition and a description that had no impact on the applicability or execution of any of the S-1 specific requirements cited in Table IV-A, all cited sections of Regulation 8, Rules 2, 34, and 40 remain federally enforceable.

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- The District is adding BAAQMD Regulation 8-34-404 to Table IV-A, because the permit condition revisions approved pursuant to Application # 15190 trigger these less than continuous operation provisions for individual landfill gas collection system components.
- The District is removing BAAQMD Regulation 11, Rules 1, 3, and 14 from Table IV-A. Regulation 11, Rule 3 is removed because it applies only to the incineration or processing of beryllium containing wastes and this landfill is not expected to accept such beryllium containing wastes. Regulation 11, Rules 1 and 14 are deleted, because these requirements are temporary in nature and only apply to the landfill facility as a whole rather than to the waste disposal operation itself. Rules 1 and 14 are more appropriately characterized as generally applicable requirements and are already contained in Table III.
- In Table IV-A, the District is updating amendment dates for the following federal requirements: 40 CFR Part 60, Subparts A and WWW and 40 CFR Part 63, Subparts A and AAAA.
- As discussed in Appendix C, the District has approved permit condition revisions that will combine BAAQMD Condition # 10164, Parts 16 and 17 into a new Part 17 and that will add less than continuous operation provisions to Part 18c. These changes will be reflected in Table IV-A by deleting Part 16 and adding Regulation 8-34-404 to the basis of Part 18.
- The District is deleting the footnote to Table IV-A, because it is not necessary. The applicability of SIP requirements is discussed elsewhere in the MFR permit.
- In Table IV-B, the District is updating the provisions of Regulation 8, Rule 5 (Storage of Organic Liquids) that apply to the S-5 Non-Retail Gasoline Dispensing Facility based on regulatory amendments approved by the District in October 2006. Previously, Regulation 8-34-116 exempted only underground gasoline storage tanks from the provisions of rule 5. Since the gasoline storage tank associated with S-5 is an above ground tank, S-5 was subject to Regulation 8, Rule 5, Sections 301, 303, and 501. The October 2006 amendment revised Section 8-34-116, such that now, any gasoline storage tank is exempt from Rule 5. The SIP provisions of Regulation 8, Rule 5, Sections 301, 303, and 501 still apply to S-5.

## 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

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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.

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- 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.

In the April 26, 2007 revision of this permit, the District inadvertently omitted the March 16, 2006 revisions associated with Application # 12700. These revisions involved clarifications of requirements in Condition # 10164, Parts 13 and 17 and included a description of these changes in Section X. The District is correcting the permit by reinstating these previously issued revisions. The revisions to Part 13 are shown by strike through and underline formatting in the proposed permit. The corrections to Part 17 have been incorporated; however, as discussed below, Part 17 will be replaced by a new Part 17. Therefore, the corrections to Part 17 are not marked with strike through and underline formatting in the proposed permit.

The District is proposing to modify BAAQMD Condition # 10164, Parts 15-18 for consistency with the permit condition revisions that the District approved pursuant to Application # 15190. As discussed in Appendix C, these permit condition revisions will: update the current gas collection system description; clarify authority to construct, record keeping, and notification requirements; and add less than continuous operation provisions for individual landfill gas collection system components. All proposed changes to Parts 15-18 associated with Application # 15190 are marked with through and underline formatting in the proposed permit.

The proposed changes to each part of Condition # 10164 are explained in more detail below.

#### Changes to Permit, Section VI:

- Condition # 10164, Part 13: The District is reinstating the March 16, 2006 revisions that were approved pursuant to Application # 12700. These changes clarify the applicability of the Part 13 requirements for VOC-laden soil, which contains some VOCs but does not contain a high enough concentration of VOCs for the soil to be considered "contaminated" soil.
- Condition # 10164, Part 15: The District is deleting the following text from Part 15 to prevent conflicts with subsequent parts: "... that are required to be operating continuously pursuant to Parts 16a and 17a below." The purpose of Part 15 is to require the site to maintain an accurate map of the landfill boundaries and of the locations of landfill gas collection system components. However, the text in Part 15 mentions continuous operation, which is more appropriately discussed in Part 18, and contains a reference to part 16, which is being deleted. This text in Part 15 is confusing and potentially contradictory; therefore, the District is removing it.
- Condition # 10164, Part 16: The District is deleting Part 16 and adding these requirements to a new Part 17.

- Condition # 10164, Part 17: The District is deleting the current Part 17 and replacing it with a new Part 17. The District is revising the gas collection system description in Part 17a by including Part 16a and incorporating recently completed collection system modifications. In subpart 17b(i), the District is adding the list of authorized collection system alterations and that were approved pursuant to Application # 15190. Authority to Construct requirements and component replacements are clarified in subparts 17b(ii and iii). The District is improving the notification and record keeping procedures related to collection system component installations in subparts 17b(iv and vi). The District is adding new notification and record keeping procedures for component decommissioning activities to subparts 17b(v-vii).
- Condition # 10164, Part 18: The District is clarifying the gas collection system operating requirements in Parts 18a and 18b and is removing a decommissioned well from Part 18b. For Part 18c, the District is adding provisions that will allow the site to operate up to five collection system components on a less than continuous basis for up to 120 days and that will require additional component leak monitoring at these temporarily disconnected components. Less than continuous operation of individual collection system components is allowed by Regulation 8-34-404.

## **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,

Renewal of Title V Permit for Browning-Ferris Industries of CA, Inc., Site # A2266

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<sub>2</sub> 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<sub>2</sub> Discussion:**

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

Maximum potential SO<sub>2</sub> emissions are based on the maximum permitted total reduced sulfur compound concentration of 150 ppmv as H<sub>2</sub>S 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:

$$(3807.6 \text{ E6 scf/year}) * (150 \text{ scf H}_2\text{S}/1 \text{ E6 scf LFG}) / (387 \text{ scf H}_2\text{S}/\text{lbmol H}_2\text{S}) * (1 \text{ lbmol SO}_2/1 \text{ lbmol H}_2\text{S}) * (64.06 \text{ pounds SO}_2/\text{lbmol SO}_2) / (2000 \text{ pounds SO}_2/\text{ton SO}_2) = 47.3 \text{ tons SO}_2/\text{year}$$

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<sub>2</sub> 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. Monitoring for ground level SO<sub>2</sub> concentrations in addition to the existing quarterly landfill gas monitoring, annual source testing, and record keeping requirements would not be appropriate.

**PM Sources**

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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 6-310	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<sub>10</sub>/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.

$$(3807.6 \text{ MM scf LFG/year}) \cdot (0.50 \text{ MM scf CH}_4/\text{MM scf LFG}) \cdot (17 \text{ lbs PM}_{10}/\text{MM dscf CH}_4) / (2000 \text{ pounds PM}_{10}/\text{ton PM}_{10}) = 16.2 \text{ tons PM}_{10}/\text{year}$$

$$(17 \text{ lbs PM}_{10}/\text{MM dscf CH}_4) / (1\text{E}6 \text{ scf CH}_4/\text{MM dscf CH}_4) \cdot (0.50 \text{ scf CH}_4/\text{scf LFG}) / (497 \text{ BTU}/\text{scf LFG}) \cdot (1\text{E}6 \text{ BTU}/\text{MM BTU}) = 0.0171 \text{ lbs PM}_{10}/\text{MM BTU}$$

$$(0.0171 \text{ lbs PM}_{10}/\text{MM BTU}) \cdot (7000 \text{ grains PM}/\text{lb PM}) / (1\text{E}6 \text{ BTU}/\text{MM BTU}) \cdot (497 \text{ BTU}/\text{scf LFG}) / (4.773 \text{ sdcf exhaust}/\text{scf LFG}) = 0.0125 \text{ grains}/\text{dscf exhaust at 0\% O}_2$$

BAAQMD Regulation 6-310: Regulation 6-310 limits 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 sources, 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<sub>2</sub>. The ratio of exhaust volumes for 10% O<sub>2</sub> versus 0% O<sub>2</sub> is 1.913:1. Therefore, the grain loading in the actual flare exhaust will be: (0.0125/1.913) < 0.007 gr/dscf of 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 6-310 grain loading limit is 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
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**POC Sources**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
S-1 Los Trancos Canyon Landfill	BAAQMD 8-40-117	Soil Contaminated by Accidental Spillage of ≤ 5 gallons of Liquid Organic Compounds	None
S-5 Non Retail Gasoline Dispensing Facility GDF # 8524	SIP 8-5-303.1 and BAAQMD 8-7-316	Pressure Setting: 10% of maximum working pressure or at least 0.5 psig	None
S-5 Non Retail Gasoline Dispensing Facility GDF # 8524	BAAQMD 8-7-301.2	All Phase I Systems Shall Meet the Emission Limitations of the Applicable CARB Certification	None
S-5 Non Retail Gasoline Dispensing Facility GDF # 8524	BAAQMD 8-7-302.8	Liquid Removal Rate: ≥ 5 ml per gallon dispensed, when dispensing rate > 5 gallons/minute	None
S-5 Non Retail Gasoline Dispensing Facility GDF # 8524	BAAQMD 8-7-302.12	Liquid Retain From Nozzles: ≤ 100 ml per 1000 gallons dispensed	None
S-5 Non Retail Gasoline Dispensing Facility GDF # 8524	BAAQMD 8-7-302.13	Nozzle Spitting: ≤ 1.0 ml per nozzle per test	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:

$$(5 \text{ gals/event}) * (7.0 \text{ pounds POC/gal}) / (2000 \text{ pounds POC/ton POC}) = 0.018 \text{ tons of POC/event}$$

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.

Potential to Emit Calculations for S-5: The California Air Pollution Control Officers' Association (CAPCOA) has developed emission factors for Gasoline Dispensing Facilities (GDFs) that the BAAQMD uses for all evaluations. From the 1997 "CAPCOA Gasoline Service

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Station Industry-Wide Risk Assessment Guidelines”, the emission factors for a GDF with an above ground storage tank equipped with vent valves and employing Phase I and Phase II controls are as follows:

Tank Filling Losses (with Phase I):	0.420 pounds/M gallon (assumes 95% control)
Tank Breathing Losses (with vent valves):	0.053 pounds/M gallon (assumes 75% control)
Vehicle Refueling Losses (with Phase II):	0.630 pounds/M gallon (assumes 90% control)
<u>Spillage:</u>	<u>0.420 pounds/M gallon (assumes 0% control)</u>
Total Emission Factor (S-5 as equipped):	1.523 pounds/M gallon transferred

For comparison, the emission rate for this GDF with no controls at all is estimated to be 15.33 pounds/M gallon of gasoline transferred.

The maximum permitted throughput rate for S-5 is 400,000 gallons per year (400 M gals/year) of gasoline. Maximum potential emissions are:  
 $(400 \text{ M gals/year}) \times (1.523 \text{ pounds/M gal}) / (2000 \text{ pounds/ton}) = 0.305 \text{ tons/year of POC}$

Based on historical data, the throughput at this tank is not expected to exceed 50,000 gallons/year (50 M gals/year) of gasoline. Maximum expected emissions are therefore:  
 $(50 \text{ M gals/year}) \times (1.523 \text{ pounds/M gal}) / (2000 \text{ pounds/ton}) = 0.038 \text{ tons/year of POC}$

SIP 8-5-303.1 and BAAQMD 8-7-316, 8-7-301.2, 8-7-302.8, 8-7-302.12, and 8-7-302.13: The pressure/vacuum valve settings, Phase I system emission limits, liquid removal rate, liquid retention rate, and nozzle spitting limits are all intended to minimize POC emissions associated with the storage and transfer of gasoline at GDFs and will ensure compliance with the POC emission factors discussed. The tanks, nozzles, and associated equipment must be certified by CARB that the equipment will meet these regulatory limits. In addition, the expected throughput rate for the GDF is far below the maximum limit. Therefore, the likelihood of non-compliance with a POC emission rate limit is extremely low. In the unlikely event that none of the control measures were working at all, uncontrolled emissions would be no more than:  
 $(50 \text{ M gals/year}) \times (15.33 \text{ pounds/M gal}) / (2000 \text{ pounds/ton}) = 0.383 \text{ tons/year of POC}$ , which is only 156 pounds/year greater than the maximum permitted emission rate. Therefore, the consequences of non-compliance are insignificant. Since the likelihood of non-compliance is very low and the consequences of non-compliance are insignificant (< 0.1 tons/year of excess emissions), monitoring to demonstrate compliance with these equipment specification limits is not justifiable.

Changes to Permit, Section VII:

- A note is being added at the beginning of the section to clarify that this section is a summary of the limits and monitoring, and that in the case of a conflict between Sections I-VI and Section VII, the preceding sections take precedence.
- In Tables VII-A, VII-B, and VII-C, the District is adding symbols ( $\leq$  or  $\geq$ ) and text to clarify whether limits were maximum or minimum limits and to clarify the applicability of the limit.

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- In Table VII-A, the District is adding text to wellhead limits (pressure, temperature, nitrogen, and oxygen concentrations) to indicate that these wellhead limits do not apply to wells that have been temporarily or permanently disconnected from the vacuum system.
- The District is adding limits on the number of components and the duration of the disconnection time for temporarily disconnected gas collection system components to Table VII-A.
- For the total aeration project emission limit in Table VII-A, the appropriate regulatory table for TAC emission limits is corrected as a consequence of the adoption of Regulation 2, Rule 5.
- In Table VII-A, the District is deleting the limits that derived from Regulation 11 requirements, because the District is removing these limits from Table IV-A.
- In Table VII-B, the District is correcting the regulatory citations related to Regulation 8, Rule 5 due to the adoption of amendments to this rule.
- In Table VII-C, the District is correcting the description of the BAAQMD 6-301 opacity limit by adding the appropriate time reference: “< Ringelmann No. 1 for 3 minutes in any hour”.

### **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 introductory text to Section VIII is being corrected.
- Regulation 11, Rules 1, 3, and 14 are being removed from Table VIII, because these are no longer source-specific requirements.
- Condition # 10164, Part 18c requires additional component leak monitoring to verify that temporarily disconnecting the component will not result in leaks. The existing component leak test procedure is being added to Table VIII.
- The District is making several editorial corrections to Condition # 10164 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

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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 correcting the permit by reinstating the description of the March 16, 2007 revisions that were issued pursuant to Application # 12700 and that were inadvertently removed from this permit during the issuance of the April 16, 2007 revisions.
- The District is adding the permit revisions associated with this MFR Renewal Permit (Application # 14391) 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.

**XII. Applicable State Implementation Plan**

Changes to Permit, Section XII:

- The District is deleting this section. The address for EPA's website is now found in Sections III and IV.

**D. ALTERNATIVE OPERATING SCENARIOS**

No alternate operating scenarios have been requested for this facility.

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## **E. COMPLIANCE STATUS**

A November 20, 2006 office memorandum from the Director of Compliance and Enforcement, to the Director of Permit Services, 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 between October 1, 2005 through October 1, 2006. 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 one Notice of Violation on July 10, 2006 for failure to submit 10 and 30 day deviation notices as specified by BAAQMD Regulation 2-6-307. The violation was returned to compliance before the end of the review period.
- 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 monitor excesses or equipment breakdowns reported or documented by District staff.

The owner certified that all equipment was operating in compliance on March 21, 2006.

The Compliance and Enforcement Division has determined that for the five-year period reviewed (from October 1, 2001 to October 1, 2006), BFI was in intermittent compliance. However, 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 March 24, 2006. This version is the basis for constructing the proposed Title V permit. 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, 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

November 20, 2006

TO: BRIAN BATEMAN – DIRECTOR OF ENGINEERING

FROM: KELLY WEE – DIRECTOR OF ENFORCEMENT 

SUBJECT: REVIEW OF COMPLIANCE RECORD OF

BROWNING FERRIS INDUSTRIAL OF CALIFORNIA, HALF MOON BAY  
(FACILITY #A2266)

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### Background

This review was initiated as part of the District evaluation of an application by Browning Ferris Industries of California (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 to Operate. 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

Staff reviewed BFI's Annual Compliance Certifications for October 1, 2001 to October 1, 2006 and found no ongoing non-compliance and no recurring pattern of violations.

Staff also reviewed the District compliance records for BFI for October 1, 2005 through October 1, 2006. During this period BFI's activities known to the District include:

The District issued one Notice of Violation. The violation was issued on July 10, 2006 for failure to submit 10 and 30 deviation notifications, as specified by District Regulation 2-6-307. The violation was returned to compliance before the end of the review period.

The District received no air pollution complaints alleging BFI as the source.

The District received no notification of a Reportable Compliance Activity (RCA).

There are no enforcement agreements, open variances, or open abatement orders for BFI.

### **Conclusion**

The Compliance and Enforcement Division has made a determination that for the five year period BFI was in intermittent 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.

APPENDIX B  
GLOSSARY

Renewal of Title V Permit for Browning-Ferris Industries of CA, Inc., Site # A2266

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**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

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**CAA**

The federal Clean Air Act

**CAAQS**

California Ambient Air Quality Standards

**CAPCOA**

California Air Pollution Control Officers Association

**CARB**

California Air Resources Board (same as ARB)

**CCR**

California Code of Regulations

**CEC**

California Energy Commission

**CEQA**

California Environmental Quality Act

**CEM**

A "continuous emission monitor" is a monitoring device that provides a continuous direct measurement of some pollutant (e.g. NO<sub>x</sub> 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.

**CH<sub>4</sub> or CH<sub>4</sub>**

Methane

**CO**

Carbon Monoxide

**CO<sub>2</sub> or CO<sub>2</sub>**

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.

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**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  $(4.53) \times (10^6) = (4.53) \times (10 \times 10 \times 10 \times 10 \times 10 \times 10) = 4,530,000$ . Scientific notation is used to express large or small numbers without writing out long strings of zeros.

**EG**

Emission Guidelines

**EO**

Executive Order

**EPA**

The federal Environmental Protection Agency.

**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

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**H<sub>2</sub>S or H<sub>2</sub>S**

Hydrogen Sulfide

**H<sub>2</sub>SO<sub>4</sub>**

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

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**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<sub>2</sub>**

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).

**NO<sub>x</sub> or NO<sub>x</sub>**

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.)

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**O<sub>2</sub> or O<sub>2</sub>**

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<sub>x</sub>, PM<sub>10</sub>, and SO<sub>2</sub>.

**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

**PM<sub>10</sub> or PM<sub>10</sub>**

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 NO<sub>x</sub> 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 NO<sub>x</sub> 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.

**SO<sub>2</sub> or SO<sub>2</sub>**

Sulfur dioxide

**SO<sub>3</sub> or SO<sub>3</sub>**

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

Renewal of Title V Permit for Browning-Ferris Industries of CA, Inc., Site # A2266

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**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<sub>2</sub> that will be present in the combusted fuel gas, since sulfur compounds are converted to SO<sub>2</sub> 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
bbbl	=	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 <sup>3</sup>	=	cubic feet
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
gr	=	grains
hp	=	horsepower
hr	=	hour
in=	=	inches
kW	=	kilowatts

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lb=		pound
lbmol	=	pound-mole
in=		inches
m <sup>2</sup>	=	square meters
m <sup>3</sup>	=	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 <sup>3</sup>	=	cubic yards
yr	=	year

APPENDIX C  
ENGINEERING EVALUATION FOR APPLICATION # 15190

**Engineering Evaluation**  
**for**  
**Landfill Gas Collections System Alterations**  
**at S-1 Los Trancos Canyon Landfill**  
Browning Ferris Industries of CA, Inc.; PLANT # 2266  
APPLICATION # 15190

**A. BACKGROUND**

**Site 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, three landfill gas flares, a non-retail gasoline dispensing facility (GDF), and stockpiles of green waste.

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. Up to 835,000 tons of waste may be disposed of in the landfill per year. The two fill areas combined contain 19.0 million tons of decomposable refuse (about 84% of maximum capacity). Each fill area is equipped with a landfill gas collection system, and the collected landfill gas is vented to flares for abatement.

**Current Project:**

BFI initially submitted Application # 15190 to request an Authority to Construct to decommission one improperly functioning well (EW-W01). During the Title V permit renewal process, BFI requested the ability to decommission a few wells on short notice to handle the unanticipated problems that happen occasionally. The District agreed to combine this permit condition change request with the Application #15190 that was already in house.

The District has been working on similar requests from two other facilities (see Application # 15304 from Site # A4618 and Application # 15498 from Site # 2066). For this site, the District is proposing condition changes that are similar to the permit condition revisions that are being approved for these other facilities and that will (a) define component replacements that are not subject to the Authority to Construct requirement, (b) allow temporary shut down of a few wells pursuant to the Regulation 8-34-404 Less Than Continuous Operation provisions, and (c) clarify notification procedures and other applicable requirements related to landfill gas collection system alterations.

BFI notified the District in a June 7, 2007 letter that 13 wells were installed pursuant to Authority to Construct # 14976. The District will update the total well count in Condition # 10164, Part 17a to reflect these well installations. The remaining collection system changes that were authorized pursuant to Application # 14976 will be re-authorized under Application # 15190, and Application # 14976 will be closed.

Gas Collection System Alterations: Well Installation, Decommissioning, and Monitoring

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**B. EMISSIONS**

Maximum permitted landfill emissions that occur due to the waste decomposition process are determined using empirical equations and site specific factors including: the maximum permitted decomposable waste capacity for the site, historical and projected waste disposal rates, site specific landfill gas constituent data, an assumed landfill gas collection system capture efficiency, and maximum allowable emission rates from the authorized control devices. The District evaluates the efficacy of each site's landfill gas collection system design through the permit application process to ensure that the overall landfill gas collection system is adequate and will achieve the minimum landfill gas capture efficiency that was assumed for the site and will prevent surface leaks in excess of the Regulation 8-34-303 leak limit. Any alterations to the landfill gas collection system design that are authorized by the District are intended to ensure that the landfill gas collection system will continue to adequately control the landfill gas from a site and will not result in any emission increases for a site.

The potential emission impacts of the specific collection system alterations and permit condition revisions that are proposed for this site are discussed in more detail below.

**Impacts of Collection System Alterations:**

BFI has proposed to decommission one poorly functioning well. The remaining collectors have sufficient density to capture the projected landfill gas generation for the area in the vicinity of this well. Therefore, this alteration is not expected to cause any landfill surface emission increases.

**Impacts of Other Permit Condition Revisions:**

Since the waste decomposition process generates landfill gas continuously, operators must collect this landfill gas continuously in order to prevent excessive surface leaks. Continuous landfill gas collection is accomplished by continuously operating a vacuum system, by balancing the amount of vacuum that is applied to each particular well, and by appropriately distributing the wells throughout all of the decomposable waste areas. Each particular well and vacuum level is expected to be capable of controlling the landfill gas that is generated by a particular volume of refuse. The type of waste, type of cover material, compaction practices, moisture content of the waste and cover materials, and many other physical factors can influence the size and shape of the volume of waste that can be controlled by any particular well and vacuum level combination. Since the factors affecting gas transport within the waste can change throughout the volume of the landfill, the gas collection system must be designed conservatively with overlapping areas of expected vacuum influence to ensure that a sufficient amount of landfill gas will be captured by each well. These gas transport factors and the gas generation rate in any particular waste area may also change over time (seasonally and from year to year). Consequently, the well density and vacuum system must be frequently evaluated and rebalanced to ensure adequate landfill gas capture rates for each well.

### Gas Collection System Alterations: Well Installation, Decommissioning, and Monitoring

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Occasionally, landfill operators will encounter problems with a well (wellhead limit excesses, damaged or improperly functioning wells, loss of gas generation near the well, etc.) that cannot be fixed by adjusting the well vacuum or conducting routine repairs around the well casing. Possible courses of action for resolving such problems include replacing the well with a new well located in essentially the same location, permanently decommissioning the well and installing a new well in a substantially different location, permanently decommissioning the well with no well replacement (due to having too many wells with overlapping areas of influence in one area), or operating the individual well on a less than continuous basis (for example, turning the vacuum on to this well during wet months and turning it off during dry months when gas production is very low). Determining which of these possible actions is the best course of action is often not easy to ascertain. Temporarily turning off the problem well and observing changes at neighboring wells and adjacent surface areas can often help the operator determine the best course of action. In addition, well problems can occur on short notice, and the problem well may need to be shut down immediately for safety concerns. Regulation 8-34-117 allows temporary well shutdowns that are necessary to repair wells or maintain compliance with Regulation 8, Rule 34, but it only allows a maximum shutdown time of five consecutive days. This time is often insufficient for replacing wells (if a drilling rig is not immediately available) or for determining the appropriate course of action (if it is unclear what the root cause of the well problem is).

The Regulation 8-34-404 Less Than Continuous Operation provisions allow the District to establish procedures for operating individual wells on a less than continuous basis. The proposed permit condition revisions in part 18 are intended to give operators the flexibility of turning off up to 5 wells (less than 10% of the total number of collection components) for up to 120 days to allow landfill operators to quickly isolate leaking wells or to further evaluate the best course of action for resolving wellhead limit compliance issues that may be the result of uncontrollable gas production fluctuations. As explained earlier, landfill gas collection systems that are designed to meet the Bay Area's stringent Regulation 8, Rule 34 standards must have gas collection wells with overlapping areas of influence. As a result of this conservative design feature, neighboring wells located near a problem well normally provide sufficient vacuum to a nearby refuse volume long after a problem well has been disconnected from the vacuum system. Any landfill gas generated by that refuse volume will travel to one of these neighboring wells, but it will still be captured by the collection system. Therefore, shutting down these few landfill gas collection wells in different areas of the landfill will not result in any emission increases. Additional component monitoring will be required, to ensure that temporarily disconnected wells will not result in excess component leaks.

The other proposed changes to parts 15, 16, 17, and 18 are procedural in nature and are intended to clarify requirements and notification procedures. These procedural changes will have no impact on emissions.

Gas Collection System Alterations: Well Installation, Decommissioning, and Monitoring

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**C. STATEMENT OF COMPLIANCE**

**Regulation 2, Rule 1:**

This application is for a change of permit conditions at the S-1 Los Trancos Canyon Landfill with Gas Collection System that involves some physical alterations of the gas collection system, but that will not involve any modifications to the landfill source (S-1). The gas collection system is part of the landfill gas abatement systems for the landfill. The proposed alterations do not result in any emission increases. Therefore, this application is categorically exempt from CEQA review pursuant to Regulation 2-1-312.2. In addition, the Engineering Evaluation for this application uses fixed standards and objective measurements and does not involve any element of discretion. Consequently, no further CEQA review is required.

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

**Regulation 2, Rule 2:**

Since this project will not result in any increases of maximum permitted emissions from S-1, this project is not subject to New Source Review or the requirements of Regulation 2, Rule 2. No new BACT, Offset or PSD requirements will apply.

**New Source Review for Toxic Air Contaminants:**

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

**Regulation 2, Rule 6:**

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

The initial MFR Permit for this facility was issued on October 1, 2001 and was revised on March 7, 2002, August 12, 2003, January 5, 2004, May 6, 2005, March 16, 2006, and April 26, 2007. This application will require a minor revision of the current MFR permit to incorporate the proposed permit condition revisions. Since these condition changes arose out of comments submitted by the facility concerning a draft preliminary Title V renewal permit, these proposed permit condition revisions will be handled pursuant to the Title V renewal permit. The proposed MFR permit revisions related to Application # 15190 will be discussed in the Statement of Basis for the renewal permit under Application # 14391.

**Regulation 8, Rule 34:**

BFI's Los Trancos Canyon Landfill (S-1) is subject to Regulation 8, Rule 34. S-1 is expected to comply with Regulation 8-34-301 by:

### Gas Collection System Alterations: Well Installation, Decommissioning, and Monitoring

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- (a) continuously operating gas collection systems and continuously operating landfill gas flares,
- (b) having no leaks (exceeding 1000 ppmv) from the gas collection system, and
- (c) processing all collected gases in flares achieving at least 98% NMOC destruction efficiency (or emitting less than 5 ppmv of NMOC).

This permit application involves permit condition changes that will allow the operator to either temporarily or permanently disconnect a few wells from the vacuum system after notifying the District of the planned disconnections, the duration of the shut downs, and the reasons for the well disconnections. Currently, temporary well disconnections are only allowed for the specific instances that satisfy the limitations in Sections 113, 116, 117, or 414. The proposed revisions would also allow temporary disconnections of a few wells under the provisions of Section 404, provided the operator demonstrates that these temporary shut downs will not result in wellhead excesses or excess surface leaks.

The proposed permit condition revisions will also allow the operator to permanently disconnect wells from the vacuum system after notifying the District about the anticipated well shut downs and the reasons that permanent decommissioning is necessary. This permanent well shut down allowance is not intended to prevent the operators from receiving a violation if one is warranted. Instead, the proposed well decommissioning allowance is intended to allow the operator to minimize the time needed to return the landfill gas collection system to compliance, if the operator demonstrates that shutting down the malfunctioning well(s) will not result in excess surface leaks due to the inherent redundancy that is built into the gas collection system design for the facility.

The shut down of a well from the vacuum system followed by the replacement of that well at a later date (with a new well in substantially the same location) amounts to a temporary shutdown of an individual landfill gas collection system component. In some cases, a damaged well must be shut down to minimize excess emissions or to ensure proper operation of the control system even though a replacement well cannot be brought on-line in the time allowed by Section 117 and when Section 414 is not applicable (such as a case where the District and not the operator discovered the damaged well). If the operator can demonstrate that the temporary well shut will not result in excess surface leaks (because other nearby wells will collect the gas from this area), then this temporary shut down would be allowed pursuant to Section 404. The permit conditions will ensure that the number of wells allowed to be temporarily shut down pursuant to Section 404 is not excessive, will require the operator to submit sufficient information to satisfy the provisions of Sections 404.1-2, and will describe the operating, monitoring, and renewal requirements necessary to satisfy Sections 404.3-5.

The S-1 Los Trancos Canyon Landfill is also subject to Regulation 8-34-303, which limits leaks on the surface of the landfill to less than 500 ppmv as methane. This site has generally been complying with the surface leak requirements. However, surface leaks above the standard are occasionally discovered by the facility and are typically eliminated within a few days of discovery. The proposed collection system alterations will keep pace with the expected

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increases in gas production rate at this site and are expected to prevent excessive surface leaks at this landfill.

This site is complying with all applicable monitoring requirements (8-34-505-510).

**Federal Requirements:**

NSPS for MSW Landfills: The S-1 Los Trancos Canyon Landfill is subject to the New Source Performance Standards (NSPS) for Municipal Solid Waste (MSW) Landfills, 40 CFR, Part 60, Subpart WWW. This regulation limits surface leaks to 500 ppmv as methane (40 CFR 60.753(d)). It requires that a gas collection system be installed and operated in each area or cell, where MSW has been in place for two years or longer. The gas collection system must be designed with a sufficient density of collectors to prevent surface leaks. Gas wells and other collectors must be installed and operated in accordance with an approved collection system design plan. The Administrator must approve the gas collection system design plan and any changes to this design plan, such as the permanent decommissioning of wells.

Subpart WWW requires continuous operation of the entire landfill gas collection system, except during start-up, shut-down, and malfunction events, provided these events do not exceed 5 consecutive days. This regulation also requires that the gas collection system operate with negative pressure at each wellhead (40 CFR Part 60.753(b)), but it does allow permanently decommissioned wells to have a static positive pressure. It does not specifically prohibit temporarily or permanently disconnecting a well from the vacuum system as long as these changes are authorized by the collection and control system design plan. Within the District, the BAAQMD is the administrator, and the permit application process constitutes the collection system design plan approval and modification process. Design plan changes, including well decommissioning, are acceptable as long as the changes will ensure that a sufficient density of collectors is in place to maintain compliance with the surface leak standard.

The monitoring requirements in the proposed permit condition revisions will ensure that temporary and permanent well disconnections will not result in surface leak excesses. Therefore, these proposed changes will ensure compliance with the NSPS for MSW Landfills.

NESHAPs for MSW Landfills: This landfill is also subject to the NESHAPs for MSW Landfills (40 CFR, Part 63, Subpart AAAA). This NESHAP requires that subject facilities implement startup, shutdown, malfunction plans (SSM Plans) and comply additional reporting requirements. All applicable requirements are contained in the existing MFR permit. This facility is expected to continue to comply with these requirements. The proposed permit conditions will identify procedures that KCLC must follow, if surface leaks are found in the vicinity of a decommissioned well.

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**D. Permit Condition Revisions**

The District is proposing to revise Condition # 10164, Parts 15-18, as shown below in strike through and underline formatting. The proposed revisions to Part 17 will identify the collection system alterations that are authorized pursuant to this application, will clarify the authority to construct requirements for future collection system alterations, and will update the notification and record keeping procedures for these alterations. The proposed revisions to Part 18c will authorize this site to operate up to five wells less than continuously (as allowed by Regulation 8-34-404) for up to 120 days.

**Condition # 10164**

For S-1 LOS TRANCOS CANYON LANDFILL; A-7 LANDFILL GAS FLARE; A-8 LANDFILL GAS FLARE; AND A-9 LANDFILL GAS FLARE:

*No Changes to Parts 1-14*

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) ~~that are required to be operating continuously pursuant to Parts 16a and 17a below.~~ 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. The Permit Holder of S-1 shall have a properly operated and properly maintained landfill gas collection system in the Upper Los Trancos Canyon Fill Area. The Permit Holder shall apply for and receive an Authority to~~

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~~Construct from the District before implementing any changes to the Collection and Control System Design Plan. Increasing or decreasing the number of wells or collectors or significantly changing the locations, depths or lengths of wells or collectors are all considered to be modifications that are subject to the Authority to Construct requirement.~~

~~a. This gas collection system shall consist of 89 vertical wells.~~

~~(Basis: Regulations 2-1-301, 8-34-301.1, 8-34-305, and NSPS: 40 CFR 60.752(b)(2)(ii))~~

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 the Lower Los Trancos Canyon Fill Area. The Permit Holder shall apply for and receive an Authority to Construct from the District before implementing any changes to the Collection and Control System Design Plan. Increasing or decreasing the number of wells or collectors or significantly changing the locations, depths, or lengths of wells or collectors are all considered to be modifications that are subject to the Authority to Construct requirement.~~

~~a. This gas collection system shall consist of 47 horizontal collectors (monitored at 4 headers) and 48 vertical wells.~~

~~b. The Permit Holder has been issued an Authority to Construct for the additional landfill gas collection system components listed below. Specific well locations, depths, and lengths of associated piping are as described in detail in Permit Application # 14976. 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.~~

~~— Install 50 to 60 vertical gas collection wells.~~

~~(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)~~

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.

Upper Canyon Fill Area:

- 88 vertical wells

Lower Canyon Fill Area:

- 47 horizontal collectors (monitored at 4 headers)

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- 61 vertical wells

b. The Permit Holder has been issued an Authority to Construct for the landfill gas collection system alterations listed below pursuant to Permit Application # 15190. 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 62 vertical gas collection wells.
- Permanently decommission up to 15 vertical wells
- Install up to 5 horizontal collectors
- Permanently decommission up to 5 horizontal collectors

ii. The Permit Holder shall apply for and receive an Authority to Construct from the District before implementing any changes the landfill gas collection system that is described in subpart 17a. Installing, decommissioning, and relocating vertical wells and horizontal collectors are alterations that are subject to this Authority to Construct requirement, unless this change constitutes a replacement as define 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.

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- 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 [insert date of approval of this condition change], 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

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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 parts ~~16a~~ and 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, 117, and 118 or with Part 18c below. (Basis: Regulation 8-34-301.1 and 8-34-404)
- b. Each landfill gas collection system component listed in Parts ~~16a~~ and 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-1A	<del>EW-W01</del>	EW-W04	EW-W07
EW-W09	EW-W10	EW-W13	EW-W17
EW-W21	EW-W34	EW-W38	EWE-W40
EW-W41	EW-PEW01	EW-PEW02	EW-PEW03
EW-PEW04	EW-PEW06	EW-PEW15	EW-W-1L
EW-W-1-V	EW-W-1-W	EW-W-1-X	EW-W-2-A
and 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.

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- 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,

Gas Collection System Alterations: Well Installation, Decommissioning, and Monitoring

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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 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.

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- 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.

*No Changes to Parts 19-33*

**E. RECOMMENDATION**

Issue an Authority to Construct for the landfill gas collection system alterations described below and a Change of Conditions (Condition # 10164) for the following equipment.

**S-1 Los Trancos Canyon Landfill with Landfill Gas Collection System:**

Completed Alterations:

- Decommissioned one well (EW-W01)
- Installed thirteen wells (EW-99 through EW-111)

Authorized Future Alterations:

- Install up to 62 vertical gas collection wells.
- Permanently decommission up to 15 vertical wells
- Install up to 5 horizontal collectors
- Permanently decommission up to 5 horizontal collectors

By: signed by Carol S. Allen  
Carol S. Allen  
Senior Air Quality Engineer

June 18, 2007  
Date