

**Bay Area Air Quality Management District**

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**Permit Evaluation  
and  
Statement of Basis  
MAJOR FACILITY REVIEW PERMIT  
RENEWAL**

**for  
TriCities Waste Management  
Facility #A2246**

**Facility Address:**  
7010 Auto Mall Parkway  
Fremont, CA 94538

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7010 Auto Mall Parkway  
Fremont, CA 94538

Application #014588  
April 2007

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# **Title V Permit Evaluation and Statement of Basis**

## **A. Background**

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Volume 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a designated facility as defined by BAAQMD Regulation 2-6-204. The New Source Performance Standards (NSPS) for Municipal Solid Waste Landfills (40 CFR Part 60, Subpart Cc) 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 mega grams and 2.5 million cubic meters to obtain an operating permit pursuant to Part 70. As discussed in more detail below in Section C.IV of this report, this facility is subject to this NSPS and meets the designated facility criteria listed in 40 CFR § 60.32c(c).

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR Part 70. 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 number that consists of a letter and a 4-digit number. This facility number is also considered to be the identifier for the permit.

This facility received its initial Title V permit on November 28, 2001 with an expiration date of October 31, 2006. The permit has been revised five times since the initial issuance; this proposed permit renewal represents the sixth revision. Details of the previous revisions can be found in Section X of the permit "Revision History".

In addition to the standard updates to the permit pertaining to renewal Tri-Cities Waste Management has requested a change of permit conditions relating to the requirements for handling VOC laden soil received at the landfill. This request is discussed in detail in Part VI of this evaluation "Permit Conditions". All permit revisions are clearly shown in strikeout and underline formatting in the proposed renewal permit.

## **B. Facility Description**

TriCities Waste Management owns and operates the TriCities Recycling and Disposal Facility (Site # A2246) located in Fremont, CA. The permitted property encompasses about 225 acres. Of the total site area, 115 acres are permitted for solid waste (MSW) disposal in a Class II/III

landfill. This facility also includes a landfill gas flare, wood waste recycling operations, (5) portable diesel IC engines and a parts cleaning unit.

The S-1 Landfill has been accepting waste since 1968. The site currently accepts non-hazardous municipal solid waste, green waste, and some designated wastes such as petroleum-contaminated soils. In May 1994, the landfill was issued a revised Solid Waste Facility Permit that approved an increase to the design capacity of the landfill. In accordance with 40 CFR § 60.751, this 1994 design capacity expansion is considered a modification of the landfill. Therefore, the landfill is subject to the NSPS for MSW Landfills (40 CFR, Part 60, Subpart WWW). The landfill now has a maximum permitted capacity of 19.271 million cubic yards (about 13.49 million tons) and accepts a maximum of 2,628 tons/day of refuse. The landfill has 11.4 million tons of refuse in place as of October 2005 and is expected to reach full capacity in 2007.

The landfill is equipped with an active continuously operated landfill gas collection system. Currently, all collected landfill gas is burned in the A-3 Landfill Gas Flare. A-3 is an enclosed ground flare with a maximum capacity of 41.8 MM BTU/hour or about 1,375 scfm of landfill gas.

The main source of air emissions at this facility is the S-1 Landfill. This active landfill generates significant fugitive particulate matter emissions due to waste disposal activities, vehicle traffic, cover material handling operations, and wind erosion. In addition, the waste decomposition process generates landfill gas. Landfill gas contains mainly methane, carbon dioxide, and small amounts of non-methane organic compounds (<1%) and sulfur compounds (<400 ppmv). Many of the non-methane organic compounds (NMOCs) found in landfill gas are precursor organic compounds (POC), and some NMOCs are hazardous air pollutants (HAP). Various local, state, and federal regulations require that landfill gas be collected and controlled to reduce POC and HAP emissions to the atmosphere. In order to meet these requirements, the landfill at this site is equipped with an active landfill gas collection system and a landfill gas control system.

Active landfill gas collection systems consist of perforated pipes that are buried in the refuse at numerous locations, solid pipes referred to as laterals and headers, and blowers. The perforated pipes are called horizontal collectors or vertical wells, depending on the orientation of the pipes within the refuse. The solid pipes connect the horizontal collectors and vertical wells to the blowers. The blowers collect landfill gas by creating a vacuum in the buried refuse that draws landfill gas into the pipes. The blowers vent this collected landfill gas to the landfill gas control system.

The landfill gas control system at this site currently includes the A-3 Landfill Gas Flare. Currently, all collected landfill gas is vented to this flare. The flare destroys most of the methane, organic compounds, sulfur compounds, and HAPs in the landfill gas, but also produces secondary combustion pollutants including: nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM<sub>10</sub>), formaldehyde, and hydrogen chloride.

The wood waste recycling operations are an additional source of particulate matter emissions. The portable diesel fired internal combustion engines produce combustion emissions including NO<sub>x</sub>, CO, POC, SO<sub>2</sub>, PM<sub>10</sub>, and HAPs. The parts cleaning operation generates a small amount

of POC emissions through the use of a low volatility organic solvent to clean equipment parts needing maintenance or repair.

## **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.

### **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. 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:

- The applicable dates in parts B, F, and G will be updated to reflect the issuance date of the renewal permit.
- Standard Condition I.B.12 will be added to clarify that 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.

### **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., S-1).

Permitted sources are those sources that require a BAAQMD operating permit pursuant to BAAQMD Regulation 2-1-302. There are currently (8) permitted sources at this facility.

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 Regulation 2-6-222, per year or 400 pounds of a "hazardous air pollutant," as defined in BAAQMD Regulation 2-6-210, per year. There are no 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-3). Some equipment, such as the landfill gas fired engine generator sets, are both sources and abatement devices. However, if the primary function of the equipment is something other than abating air pollutants, it will have an "S" number and will be listed in Table II A "Permitted Sources".

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

Each of the listed 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.

#### Equipment Changes

The District previously issued an Authority to Construct to TriCities (Permit Application #009222) for (3) landfill gas fired engine generator sets (S-18, S-19, and S-20). These sources were added to the Title V permit as "proposed equipment". However, the Authority to Construct has expired and the engines were never installed. Therefore, they will be removed from the permit as part of the renewal.

The District has issued an Authority to Construct for modifications to the landfill gas collection system under Authority to Construct #15345. The modifications will potentially increase the number of vertical gas collection wells from 25 to 37. This will be reflected in the Title V renewal permit.

#### Changes to Permit:

- Proposed landfill gas fired IC Engine/Generators S-18, S-19, and S-20 will be removed from Table II A.
- The description of the TriCities Landfill (S-1) given in Table II A will be changed to include the well construction activities authorized under Authority to Construct #15345.

### **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.

#### Changes to Permit:

- Table III was modified to reflect new and updated versions of Generally Applicable Requirements.

#### **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 and Regulations
- SIP Rules (if any) are listed following the corresponding District regulations. SIP rules are District regulations 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 is federally enforceable; the non-SIP version are not federally enforceable, unless EPA has approved it through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions. The text of Federal permit conditions, if any, is found in Section VI of the permit.

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

#### **Complex Applicability Determinations**

Landfills and landfill gas combustion equipment are subject to BAAQMD Regulation 8, Rule 34. This regulation requires landfills that have more than 1 million tons of refuse in place to collect and control the landfill gas that is generated by waste decomposition and specifies numerous operating, monitoring, and reporting requirements for subject operations. Regulation 8, Rule 34 has required that the TriCities Landfill (S-1) be controlled by an active landfill gas collection system and a landfill gas control system since 1987. The current landfill gas control system includes the A-3 Landfill Gas Flare.

Landfills and landfill gas combustion equipment may also be subject to either the federal New Source Performance Standards (NSPS) for Municipal Solid Waste (MSW) Landfills or the Emission Guidelines (EG) for MSW Landfills. The federal NSPS for MSW Landfills (40 CFR Part 60, Subpart WWW) applies to landfills that have had a design capacity modification after May 30, 1991. As discussed previously, the 1994 design capacity increase to the landfill at this site was considered a modification pursuant to 40 CFR § 60.751. Therefore, the S-1 Landfill is subject to this NSPS (40 CFR, Part 60, Subpart WWW). The design capacity of the landfill is now 19.271 million cubic yards (14.734 million m<sup>3</sup>) and about 13.5 million tons (12.25 million Mg) of waste.

In accordance with 40 CFR, Part 60, Subpart WWW and BAAQMD Regulation 8, Rule 34, large landfills (with a design capacity greater than or equal to 2.5 million Mg and greater than or equal to 2.5 million m<sup>3</sup>) must be equipped with landfill gas collection and control systems. Subject landfills and the associated collection and control systems were required to meet numerous operating, monitoring, and reporting requirements pursuant to Subpart WWW and Regulation 8, Rule 34. These requirements are specified in detail in Section IV of the permit. Landfill operations and landfill gas combustion devices are also subject to numerous other BAAQMD regulations and permit conditions. Regulation 6 is listed as a source-specific applicable requirement for the landfill (S-1), because the landfill is operating and will produce particulate emissions due to waste deposition, cover material application, and vehicle traffic. All applicable requirements are described in Section IV of the permit.

The NESHAP for Municipal Solid Waste Landfills (40 CFR 63, Subpart AAAA) was adopted in November 2002 with an effective date of January 16, 2003. Any landfills that are subject to the MSW Landfill NSPS or Emission Guidelines landfill gas collection and control requirements are also subject to this NESHAP. For landfills subject to the NESHAP at the date of adoption, the requirements became effective on January 16, 2004. This NESHAP did not add any new control requirements, but it did require the preparation of a Startup, Shutdown, Malfunction Plan (to be retained on-site at all times) and added new reporting requirements. These requirements were added to Section IV of the permit.

None of the other sources at this facility are subject to any federal requirements. However, these sources are subject to several BAAQMD regulations and permit conditions. All applicable requirements are described in Section IV of the permit.

#### Changes to Permit:

- Table IV-C for the Portable Diesel Engine S-9 will be removed. The Applicable Requirements for all (5) Portable Diesel Engines will be consolidated into a single table (Table IV-D).
- The applicable requirements of the Airborne Toxic Control Measures (ATCM) for Portable Diesel Engines will be added to Table IV-D.
- The permit condition requirements for the Portable Diesel Engines in Table IV-D will be updated to reflect consolidation and new ATCM requirements.
- The Applicable requirements for the proposed landfill gas fired IC Engine Generator Sets (Table IV-F) will be removed from the permit because the engines will not be installed.

## **V. Schedule of Compliance**

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

“409.10 A schedule of compliance containing the following elements:

- 10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;
- 10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and



- 10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.”

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

There has been no change to the compliance status at this facility.

Changes to Permit:

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.

While the District has authority to revise the existing permits, and is doing so here concomitantly with the Title V process, it also has authority to supplement the terms of existing permits through the Title V process itself. 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; all “underline” language will be retained.

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 will be revised using the procedures in Regulation 2, Rule 6, Major Facility Review.

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 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 that limits a source to the operations described in the permit application pursuant to BAAQMD Regulation 2-1-403.

- Offsets: This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- PSD: This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit pursuant to Regulation 2, Rule 2.
- TRMP: This term is used for a condition imposed by the APCO to ensure compliance with limits that arise from the District’s Toxic Risk Management Policy.

Additional monitoring has been added, where appropriate, to assure compliance with the applicable requirements.

## Changes to Permit Conditions

### Condition #8366, Part 2

TriCities has applied for and received an Authority to Construct for landfill gas well modifications under Permit Application #15345. As a result of this Authority to Construct, Condition #8366, Part 2 will be modified as follows:

2. The Permit Holder shall apply for and receive an Authority to Construct before modifying the landfill gas collection system described. Increasing or decreasing the number of wells or collectors, or significantly changing the length of collectors or the locations of wells or collectors are modifications that are subject to the Authority to Construct requirement.

The Permit Holder has been issued a Permit to Operate for the landfill gas collection system components listed below. Well and collector locations, depths, and lengths are as described in detail in Permit Applications # 3515 and 10998.

	<u>Required Components</u>
Total Number of Vertical Wells:	25

In addition, the Permit Holder has been issued an Authority to Construct for modifications to the gas collection system, the details of which are included in Permit Application #15345. The landfill is now authorized for up to a total of 38 vertical gas extraction wells.

(Basis: Regulations 2-1-301, 8-34-301.1, and 8-34-305)

### Condition #8366, Part 17

TriCities Waste Management has requested a change of permit conditions as follows:

17. Low VOC soil (soil that contains 50 ppmw or less of VOC) is not considered to be “contaminated soil” and may be used as daily, intermediate, or final cover material for landfill waste operations if the organic concentration above the soil does not exceed 50 ppmv (expressed as methane, C1). To demonstrate compliance with this requirement, each lot of soil to be used as cover material shall be subject to either Subpart A or B of this condition. ~~randomly screened for VOC surface emissions (in such a manner as to be representative of the entire lot) using the testing procedures outlined in Regulation 8-40-~~

604. ~~The Permit Holder shall keep the following records for each lot of soil subject to this requirement:~~

A. Each lot of VOC laden soil to be used as cover material shall be randomly screened for VOC surface emissions (in such a manner as to be representative of the entire lot) using the testing procedures outlined in Regulation 8-40-604. The Permit Holder shall keep the following records for each lot of soil subject to this requirement:

- a. The soil lot number as established in part 18m.i. (below).
- b. The time and date of the soil screening.
- c. The name and affiliation of the person performing the monitoring.
- d. The results of the screening and an acknowledgement that the procedures outlined in Regulation 8-40-604 were used.

B. In order to demonstrate compliance with this condition, the Permit Holder shall maintain daily records of the VOC content of all VOC laden soils handled at the landfill in a District approved log. These records shall be maintained on-site or shall be readily available to District staff upon request for a minimum of 5 years from the date on which a record was made.

Soil presumed to be low VOC soil that is found to have a surface VOC concentration greater than 50 ppmv or to contain a VOC concentration of 50 ppmw or greater as described determine by Subpart A or B above shall be considered contaminated soil and will be subject to the requirements of ~~part 2 Part 18 of these conditions~~ this condition. (basis: Regulations 8-40-205, 8-40-604)

#### Discussion:

The way the condition is currently worded, VOC laden soil may only be used as daily, intermediate, or final cover material for landfill waste operations if the organic concentration above the soil does not exceed 50 ppmv (expressed as methane, C1). All other VOC laden soil, regardless of the concentration of VOC by weight (ppmw) is considered to be “contaminated soil” and subject to special handling under Part 18 of this condition.

The proposed changes to this condition would allow the permit holder to use either the current requirement (VOC concentration above the soil (ppmv)) **or** the organic content of the soil from analytical testing (ppmw) as criteria for exempting VOC laden soil from contaminated soil handling procedures (Part 18). This would allow the facility some degree of flexibility, because they would not have to screen soil for VOC concentration (ppmv) if they already have analytical test results (ppmw). Although this approach is in accordance with the definition of “contaminated soil” in Regulation 8-40-205 ( $\leq 50$  ppmw organics in the soil; **or**  $\leq 50$  ppmv organic concentration above the soil), it is contradictory to the permit shield included in the Title V permit (see Part IX, A. “Subsumed Requirements”).

The permit currently includes a permit shield that subsumes the applicable monitoring requirements of Regulation 8-2-601 with the streamlined monitoring requirements of Regulation 8-40-604 as follows:

*Regulation 8, Rule 2 “Miscellaneous Operations” is only applicable to sources of precursor organic compounds that are not otherwise limited by Regulation 8 or Regulation 10 rules. In the case of the Landfill S-1, Regulation 8, Rule 2 would apply only to cover soil that contains some VOC, but is not defined as “contaminated soil” by Regulation 8-40-205. Soil which has an organic content exceeding 50 ppmw or that registers an organic concentration greater than 50 ppmv (expressed as methane, C1) is subject to Regulation 8, Rule 40. Since soil found not to be contaminated using the procedures of Regulation 8-40-604 will have a surface VOC concentration of less than 50 ppmv (expressed as methane, C1) it can reasonably be assumed that the concentration is also less than 300 ppmv (total carbon, dry basis) as determined by the procedures of Regulation 8-2-601. Since the operation complies with the 300 ppmv limit, it complies with Regulation 8-2-301.*

In short, if Regulation 8-40-604 monitoring verifies that soil is not contaminated (i.e.  $\leq 50$  ppm by volume VOC), there is no need to monitor under Regulation 8-2-601. Conversely, if Regulation 8-40-604 monitoring shows that soil is contaminated, it is then subject to the requirements of Regulation 8-40 and not to Regulation 8-2. In either case, Regulation 8-2-601 monitoring would not be required to demonstrate compliance with the 300 ppmv limit.

The basis for the condition is a demonstration of compliance with both Regulation 8-40-301 and Regulation 8-2-301. Regulation 8-40-301 explicitly prohibits “contaminated soil” as defined by 8-40-205 from being used as cover material at landfills. However, Regulation 8-2-301 is more subtle. It prohibits the discharge into the atmosphere from any miscellaneous operation an emission containing a concentration of more than 300 ppmv (as C1), but only if the emission rate exceeds 15 lb/day of POC. Therefore, compliance with the regulation is achieved by either emitting no more than 15 lb/day POC or emitting a concentration of POC that does not exceed 300 ppmv.

If it is known that VOC laden soil contains no more than 50 ppmw, any amount of soil up to 150 tons/day\* can be used as cover material without creating an emission that is greater than 15 lb/day POC, thereby demonstrating compliance with Regulation 8-2-301. Screening for surface emissions in accordance with Regulation 8-40-604 would be required only for those days that more than 150 tons of VOC laden soil is to be used as cover material.

\*  $(15 \text{ lb POC/day}) / (50 \text{ E-6 lb POC/lb soil}) / 2000 \text{ lb soil/ton soil} = 150 \text{ tons/day (soil)}$

**Recommendation:**

It is recommended that a 150 ton/day allowance for VOC laden soil for use as cover material be added to the permit conditions for the landfill. This will effectively provide the facility with the monitoring relief they have requested while continuing to demonstrate compliance with Regulation 8-2-301. Screening for surface emissions in accordance with Regulation 8-40-604 would be required only for those days that more than 150 tons of VOC laden soil is to be used as cover material.

The District recommends that Condition #8366, Part 17 be rewritten as follows to allow for an alternate way to demonstrate compliance with Regulation 8-2-301 as discussed above:

17. Contaminated soil as defined by Regulation 8-40-205 shall not be used as daily, intermediate, or final cover material for landfill waste operations. Soil that contains small amounts of volatile organic compounds (VOC), but does not meet the definition of “contaminated soil” is considered to be “VOC laden soil” and may be used as cover material providing that the Permit Holder complies with the limits and monitoring procedures identified in either subpart a or subpart b below. (basis: Regulation 8-2-301, Regulation 8-40-301)
- a. Randomly screen each lot of VOC laden soil to be used as cover material for VOC surface emissions (in such a manner as to be representative of the entire lot) using the testing procedures outlined in Regulation 8-40-604. The Permit Holder shall keep the following records for each lot of soil subject to this requirement:
- i. The soil lot number as established in part 18m.i. (below).
  - ii. The time and date of the soil screening.
  - iii. The name and affiliation of the person performing the monitoring.
  - iv. The results of the screening and an acknowledgement that the procedures outlined in Regulation 8-40-604 were used.
- b. Limit the quantity of VOC laden soil used as cover material to 150 tons/day. To demonstrate compliance with this limit, the permit holder shall maintain daily records of the amount (tons) and VOC content (as determined using the testing procedures outlined in Regulation 8-40-602) of all VOC laden soils subject to this requirement.
- Records shall be maintained on site in a District approved log and shall be made readily available to District staff upon request for at least 5 years from the date on which a record was made.

**Condition #21617**

To eliminate redundancy, the permit conditions for the Portable Diesel Engine S-9 (Condition #17680) will be deleted. S-9 is subject to Condition #21617 “Portable Diesel Engines”. Condition #21617 will be updated to reflect new ATCM requirements for portable diesel engines. The condition will be modified as follows:

**Condition # 21617**

For S-9, S-14, S-15, S-16, S-17: ~~Small~~ Portable Diesel IC Engines

1. The Diesel Engines S-9, S-14, S-15, S-16, and S-17 shall each be limited to 1,456 hours per year of operation. Each engine shall be equipped with a non-resettable totalizing meter that measures and records the hours of operation for the engine. (basis: Offsets)
2. ~~Only low sulfur fuel (<0.5% sulfur by weight) shall be combusted at these engines. The maximum sulfur content of the fuel shall be demonstrated by vendor certification. (basis: Regulation 9-1-304)~~ Only CARB Diesel Fuel (<0.05% sulfur by weight) or approved alternative shall be combusted by these engines. The maximum sulfur content of the fuel shall be demonstrated by vendor certification. (basis: CCR Section 93116.3(a))
3. The exhaust of these engines shall be observed for visible smoke during all periods of operation. If persistent smoke is detected, the operator of the source shall take the necessary corrective action to stop the emissions. (basis: Regulation 6-303.1, Regulation 2-1-403)

4. In order to demonstrate compliance with the above requirements, the operator of these engines shall keep the following records in a District approved log. These records shall be updated on at least a monthly basis, kept on-site, and be available for District inspection for at least 5 years from the date on which a record was made. (basis: CCR Section 93116.3(a), Offsets, Regulation 9-1-304 1-441)
  - a. operating hours for each engine
  - b. fuel usage
  - ~~b.c.~~ vendor certified fuel sulfur content

Changes to the permit:

- Permit Condition #8366, part 2 will be modified to account for proposed landfill gas well modifications.
- Permit Condition #8366, part 17 will be rewritten as shown above to streamline monitoring requirements.
- Permit Condition #17680 will be deleted.
- Permit Condition #21617 will be updated to reflect new ATCM requirements for Portable Diesel Engines.

## **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 contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

The District has reviewed all monitoring and has determined the existing monitoring is adequate with the exceptions below. This Statement of Basis addresses only the changes made in the proposed Significant Revision.

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) the 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) 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. When 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.

Changes to Permit:

- Table VII-C for the Portable Diesel Engine S-9 will be removed. The applicable limits and monitoring requirements for all (5) Portable Diesel Engines will be consolidated into a single table (Table VII-D).
- The applicable limits and monitoring requirements of the Airborne Toxic Control Measures (ATCM) for Portable Diesel Engines will be added to Table VII-D.
- The applicable limits and monitoring requirements for the proposed landfill gas fired IC Engine Generator Sets (Table VII-F) will be removed from the permit because the engines will not be installed.

### **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:

- All test methods associated with Permit Conditions #17680 and #21619 will be removed from Table VIII because the conditions will be deleted from the permit.

### **IX. Permit Shield**

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

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

In an effort to streamline monitoring the requirements for VOC laden soil to be used as landfill cover material as discussed above in Section C, Part VI "Permit Conditions", the facility has requested a revision to their existing permit shield. They requested that monitoring in accordance

with Regulation 8-40-602 be included (along with 8-40-604) as a streamlined requirement to subsume Regulation 8-2-601 monitoring.

#### District's Position

The request to subsume 8-2-601 monitoring with 8-40-602 is denied. 8-2-601 monitoring is for gaseous concentrations of VOC (ppm by volume) while 8-40-602 is for VOC concentrations by weight and has no bearing on demonstrating compliance with the 300 ppmv total carbon POC concentration limit of Regulation 8-2-301. 8-40-602 can certainly be used to demonstrate compliance with the 15 lb/day standard of 8-2-301 as previously discussed in Section C. VI. "Permit Conditions", but only 8-40-604 subsumes monitoring for the 300 ppmv standard.

The proposed changes to Permit Condition #8366, Part 17, should produce the desired result of streamlined monitoring without changes to the permit shield.

#### Changes to Permit:

None.

### **D. Alternate Operating Scenarios**

No alternate operating scenario has been requested for this facility.

### **E. Compliance Status:**

As of the date of submittal of the renewal Title V permit application (4/27/06); Tri-Cities Waste Management certified that they are in compliance with all applicable requirements of their Title V permit.

#### BAAQMD Compliance Review

A March 26, 2007 office memorandum from the Director of Compliance and Enforcement, to the Director of Engineering, presents a review of the compliance record of the Tri-Cities Landfill. The review was initiated as part of the District evaluation of an application for a renewal Title V permit at this facility. During the period subject to review, activities known to the District include:

- No ongoing non-compliance and no recurring pattern of violations, based on the Annual Compliance Certifications submitted by Tri-Cities Waste Management since the initial Title V permit was issued.
- No Notices of Violation issued by the District in the previous 12-months.
- One unconfirmed air pollution complaint alleging Tri-Cities Landfill as the source in the previous 12-months.
- One reportable compliance activity for an inoperative monitor in the previous 12-months.
- No enforcement agreements, open variances, or open abatement orders.

The BAAQMD Compliance and Enforcement Division has stated that ongoing compliance for this facility can be reasonably assured based on their past compliance record. A copy of this review is included in Appendix B of this Evaluation.



## **F. Differences between the Application and the Proposed Permit:**

The renewal Title V permit application was submitted on March 28, 2006. This version is the basis for constructing the proposed Title V permit. All differences between the renewal Title V application and the proposed permit have been discussed in this Permit Evaluation and Statement of Basis.

H:\Engineering\TITLE V Permit Appls\1 ALL T5 Application Files here\A2246\Renew - 14588\Workingdocs\A2246SOBF.doc

APPENDIX A  
GLOSSARY

**ACT**

Federal Clean Air Act

**APCO**

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

**API**

American Petroleum Institute

**ARB**

Air Resources Board (same as CARB)

**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.

**C5**

An Organic chemical compound with five carbon atoms

**C6**

An Organic chemical compound with six carbon atoms

**CAA**

The federal Clean Air Act

**CAAQS**

California Ambient Air Quality Standards

**CAPCOA**

California Air Pollution Control Officers Association

**CARB**

California Air Resources Board (same as ARB)

**CCR**

California Code of Regulations

**CEC**

California Energy Commission

**CEQA**

California Environmental Quality Act

**CEM**

A "continuous emission monitor" is a monitoring device that provides a continuous direct measurement of some pollutant (e.g. 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. Used to determine whether threshold-based requirements are triggered.

**District**

The Bay Area Air Quality Management District

**dscf**

Dry Standard Cubic Feet

**dscm**

Dry Standard Cubic Meter

**E 6, E9, E12**

Very large or very small number values are commonly expressed in a form called scientific notation, which consists of a decimal part multiplied by 10 raised to some power. For example, 4.53 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

**EGT**

Exhaust Gas Temperature

**EO**

Executive Order

**EPA**

The federal Environmental Protection Agency.

**Excluded**

Not subject to any District regulations.

**Federally Enforceable, FE**

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

**FP**

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

**FR**

Federal Register

**GDF**

Gasoline Dispensing Facility

**GLC**

Ground level concentration.

**GLM**

Ground Level Monitor

**grains**

1/7000 of a pound

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

Hydrogen Sulfide

**HAP**

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

**Hg**

Mercury

**HHV**

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

**LFG**

Landfill gas

**LHV**

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

**Major Facility**

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

**MAX or Max.**

Maximum

**MFR**

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

**MIN or Min.**

Minimum

**MOP**

The District's Manual of Procedures.

**MSDS**

Material Safety Data Sheet

**MSW**

Municipal solid waste

**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. See in 40 CFR Parts 61 and 63

**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 Federal Clean Air Act, and implemented by 40 CFR Part 60 and District Regulation 10.

**NSR**

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

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

Oxygen

**Offset Requirement**

A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of POC, NO<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 is not exempted by 40 CFR 72 from Titles IV and V of the Clean Air Act.

**POC**

Precursor Organic Compounds

**PM**

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

**PV or P/V Valve**

Pressure/Vacuum Valve

**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

**SSM**

Startup, Shutdown, or Malfunction

**SSM Plan**

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

**TAC**

Toxic Air Contaminant (as identified by CARB)

**THC**

Total Hydrocarbons (NMHC + Methane)

**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 (NMOC + Methane, Same as THC)

**TPH**

Total Petroleum Hydrocarbons

**TRMP**

Toxic Risk Management Policy



**TRS**

Total Reduced Sulfur

**TSP**

Total Suspended Particulate

**TVP**

True Vapor Pressure

**VOC**

Volatile Organic Compounds

**VMT**

Vehicle Miles Traveled

**Symbols:**

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

**Units of Measure:**

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 (7000 grains = 1 pound)
hp	=	horsepower
hr	=	hour
in=		inches
kg	=	kilograms
lb=		pound
lbmol	=	pound-mole
M	=	thousand
m <sup>2</sup>	=	square meter
m <sup>3</sup>	=	cubic meters
Mg	=	mega-grams (1000 kg)
min	=	minute

mm	=	millimeter
MM	=	million
MMBTU	=	million BTU
MMcf	=	million cubic feet
mm Hg	=	millimeters of mercury (pressure)
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
therms	=	1 therm = 100,000 BTU
yd	=	yard
yd <sup>3</sup>	=	cubic yards
yr	=	year

**APPENDIX B**  
**BAAQMD COMPLIANCE REPORT**

**COMPLIANCE & ENFORCEMENT DIVISION**

## Inter-Office Memorandum

March 26, 2007

TO: BRIAN BATEMAN – DIRECTOR OF ENGINEERING

FROM: KELLY WEE – DIRECTOR OF ENFORCEMENT

SUBJECT: REVIEW OF COMPLIANCE RECORD OF:

**TriCities Waste Management (Site# A2246)**

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### Background

This review was initiated as part of the District evaluation of an application by TriCities Waste Management 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 TriCities' Annual Compliance Certifications for March 27, 2002 to March 26, 2007 and found no ongoing non-compliance and no recurring pattern of violations.

Staff also reviewed the District compliance records for TriCities for March 27, 2006 to March 26, 2007. During this period TriCities' activities known to the District include:

The District issued no Notices of Violation.

The District received one air pollution complaint alleging TriCities as the source. The complaint was unconfirmed.

The District received one Reportable Compliance Activity (RCA) for a landfill gas. inoperative monitor. This RCA is pending evaluation.

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

## Conclusion

The Compliance and Enforcement Division has made a determination that for the five year period TriCities 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.