Bay Area Air Quality Management District

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Engineering Evaluation
and
Statement of Basis
for
MAJOR FACILITY REVIEW PERMIT
SIGNIFICANT REVISION

for

Waste Management of Alameda County
Facility #A2066

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Application: 9527

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ENGINEERING EVALUATION and STATEMENT of BASIS

Waste Management of Alameda, Inc.; PLANT # 2066

APPLICATION # 9527

This document includes two reports concerning a Change of Permit Conditions request from Waste Management of Alameda County (Plant # 2066 / Site # A2066). Waste Management requested to add an alternative compliance demonstration method that would apply to VOC-Laden soil handling operations at the S-2 Altamont Landfill. This request requires both a modification of the District permit (Application # 9527) and a modification of the Major Facility Review (MFR) permit (also Application # 9527). The Engineering Evaluation of Application # 9527 is presented in Section I of this report. The Statement of Basis explaining the proposed changes to the MFR permit is presented in Section II of this report.

I. ENGINEERING EVALUATION FOR APPLICATION # 9527

Section I of this document concerns Waste Management of Alameda's request to modify District Permit Condition # 19235, Part 20 pursuant to Application # 9527. The engineering analysis of this proposed condition change is presented below.

A. BACKGROUND

Site Description:

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

Aeration of Petroleum Contaminated Soils and other VOC-Laden Solid Wastes:

The permit for the S-2 Altamont Landfill includes emissions that occur during on-site transport, handling, reuse, and disposal of wastes and cover materials and emissions arising from the waste decomposition process. For most wastes and cover materials, the on-site transport, handling, reuse, and/or disposal operations result in particulate matter emissions. However, wastes containing volatile organic compounds (VOC) will also emit organic compounds during these activities.

Waste Management accepts petroleum contaminated soils and other solid wastes that contain VOC. Any exposure of solid wastes that contain VOCs to the atmosphere will result in VOC emissions and is defined as aeration (even if the aeration happens unintentionally). Aeration may occur from the time the delivery trucks arrive on-site (during hauling of wastes to storage or disposal locations, each time that the material is transferred into or out of a delivery truck or stockpile, whenever stockpiles of these wastes are left exposed to the atmosphere, during spreading of wastes for cover or final disposal) until the wastes are completely covered with other materials. VOC emissions from these aeration points are subject to District regulations and permit conditions.

Project Description:

Soils that contain more than 50 ppmw of VOC are defined as "contaminated" wastes. Emissions due to the aeration of contaminated soil are subject to BAAQMD Regulation 8, Rule 40 and BAAQMD Condition # 19235, Part 21. Emissions due to aerating VOC-laden wastes, which contain some VOC but less than 50 ppmw, are currently subject to BAAQMD Regulation 8, Rule 2 and BAAQMD Condition # 19235, Part 20. This application concerns only VOC-laden wastes and not contaminated soils.

When the initial Title V permit was issued for this site, the District imposed Condition # 19235, Part 20 on activities that result in the aeration of VOC-laden materials as a method for demonstrating compliance with BAAQMD Regulation 8, Rule 2. BAAQMD Regulation 8-2-301 limits total carbon emissions from any miscellaneous operation to either 15 pounds per day OR to a concentration of 300 ppm or less, dry basis. The test method specified in Regulation 8-2-601 applies to the measurement of total carbon concentration in a stack gas and cannot be used to measure fugitive emissions such as those that are emitted from an aeration operation. Since compliance with the Regulation 8-2-301 concentration limit cannot be verified by the approved test method, the District determined that the alternative limit on daily total carbon emissions should apply to this operation. The District imposed the waste throughput limits and record keeping requirements identified in Condition # 19235, Part 20 to ensure that the aeration of VOC-laden materials would comply with the 15 pound per day total carbon emission rate limit in Regulation 8-2-301.

Waste Management submitted this application to request a change of permit conditions and a permit shield that would provide an alternative compliance demonstration method to the requirements of Condition # 19235, Part 20 and would replace the Regulation 8-2-601 test method with an alternative test method. This proposed test method would allow the facility to demonstrate compliance with Regulation 8-2-301 by complying with the total carbon concentration limit instead of the total carbon emission rate limit. Specifically, Waste Management proposes to screen each lot of soil according to the testing procedures identified in Regulation 8-40-604. Total organic concentration (expressed as C_1) will be measured using an organic vapor analyzer at three inches above the surface of the soil.

If the measured concentration is greater than 50 ppmv (expressed as C_1), then the soil is considered contaminated and the soil aeration operations are subject to Regulation 8, Rule 40 and Condition # 19235, Part 21. The only aeration operations that will be subject to Regulation 8, Rule 2 are those from soil emitting less than or equal to 50 ppmv (expressed as C_1) from the surface of the soil. Since all VOC-laden soil aeration operations will result in surface emissions of less than 50 ppmv, it is reasonable to assume that the total carbon concentration from these operations will also be less 300 ppmv. Since the aeration of VOC-laden soil will comply with the total carbon concentration limit, this proposed monitoring method will demonstrate compliance with Regulation 8-2-301.

B. EMISSIONS

The VOC emission rate that occurs due to aeration during on-site transport, handling, reuse, and disposal of VOC laden wastes is influenced by many factors. Site operational practices have a major influence on the VOC emission rate. Some operational practices, such as the number of times the soil waste is transferred to/and from stockpiles during the day and the reuse of this soil as cover material, encourage aeration; while other practices, such as covering soil loads and stockpiles and using water sprays, discourage aeration. The amount of VOC that will evaporate from the waste into the atmosphere will also depend on the amount, type, and age of the VOC contamination, soil conditions (porosity, temperature, compressibility, moisture content, etc.), and ambient air conditions (temperature, humidity, wind speed, etc.).

There are no standard emission factors available for estimating the amount of VOC emitted to the atmosphere compared to the amount of VOC available in the soil, due to the many different operational practices, contamination factors, soil conditions, and ambient conditions that may influence this emission rate. No empirical methods of determining a VOC emission rate based on a surface concentration

measurement are available either. Therefore, for this site, the District calculated the VOC emission rate to the atmosphere based on a worst-case assumption that 100% of the VOC in the wastes will evaporate into the atmosphere during one single day. The actual VOC emissions from aeration of VOC-laden wastes are probably not more than 50% of the reported amount of VOC in the waste, and these VOC emissions are likely spread over several days.

To demonstrate compliance with Regulation 8-2-301, the current permit conditions limit emissions from the aeration of VOC-laden wastes to 15 pounds/day as total carbon. The VOC-laden soils accepted at this site are typically from sources with petroleum leaks or spills such as gasoline stations. These VOCs generally consist of C5 to C8 alkanes with low percentages of alkenes and aromatics. The average molecular weight for the VOC is estimated to be 100 lbs/lbmol, the average chain length is 7 carbons, and the average vapor pressure of these VOCs is about 85 mm Hg at 35 °C. The current permitted VOC emission rate is estimated to be:
(15 pounds C/day)/(12.011 lbs C/lbmol C)/(7 lbmol C/lbmol VOC)*(100 lbs VOC/lbmol VOC)
= 17.84 lbs/day of VOC = (17.84 lbs/day)*(365 days/year)/(2000 lbs/ton) = 3.256 tons/year VOC

Waste Management has been demonstrating compliance with the Regulation 8-2-301 limit by using waste acceptance records to show that the total amount of VOC available for aeration is less than 15 pounds of total carbon per day (see equation in Condition # 19235, Part 20). For 2004, the maximum VOC acceptance rates were 13.4 pounds/day (36 ppmw of VOC in 186.1 tons of soil) and 0.202 tons/year.

For this facility, VOC-laden soil is often used as daily cover material. The maximum amount of soil that will be used as cover material at this site is 2000 tons/day. The maximum VOC concentration in soil that may be used as cover is 50 ppm by weight. Using both of these worst-case limits, the maximum amount of VOC available for aeration from cover soil is 200 pounds/day. However, it is extremely unlikely that the entire 2000 pounds of cover material that is used in a day would have a VOC concentration of 50 ppmw. Typical soil lot sizes, VOC concentrations, the resulting daily VOC acceptance rates, and the maximum expected total carbon emission rates are summarized in the table below.

Table 1. Typical Data for VOC-Laden Wastes Accepted at Altamont Landfill in 2004

VOC - Laden Waste Lot Size	VOC Concentration	VOC Acceptance Rate	Total Carbon Emission Rate
1500-2000 tons	< 4 ppmw	16.0 pounds/day	13.45 pounds/day
1000-1500 tons	4 – 5 ppmw	15.0 pounds/day	12.61 pounds/day
500-1000 tons	5 – 7 ppmw	14.0 pounds/day	11.77 pounds/day
200-500 tons	7 – 15 ppmw	15.0 pounds/day	12.61 pounds/day
100-200 tons	15 – 40 ppmw	16.0 pounds/day	13.45 pounds/day
<100 tons	40 – 50 ppmw	10.0 pounds/day	8.41 pounds/day

Historically, the average amount of VOC in VOC-laden cover material has been less than 4 ppmw. Using this average VOC concentration and the maximum cover material usage rate, the maximum amount of VOC in cover material is expected to be no more than:
(2000 tons/day)*(365 days/year)*(4 tons VOC/10^6 tons soil) = 2.92 tons/year of VOC in cover soil

Based on historical waste acceptance rates and VOC concentration data, maximum potential VOC emissions are not expected to exceed the current emission limits, regardless of the method used to show compliance with the Regulation 8-2-301 limits. Furthermore, the entire amount of VOC available in the cover material will not be emitted to the atmosphere, and the VOC will not be emitted in a single day. Therefore, actual VOC emissions are expected to be well below the permitted emission rates discussed above.

C. STATEMENT OF COMPLIANCE

Regulation 2, Rule 1:

This application is for a change of permit conditions at an existing source, S-2 Altamont Landfill, that does not involve any increases in emissions or physical modifications. Therefore, this application is categorically exempt from CEQA review pursuant to Regulation 2-1-312. 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:

This permit application is for a change of conditions that will allow Waste Management to demonstrate compliance with Regulation 8-2-301 using an alternative monitoring procedure. This change of conditions is not expected to result in any emission increases. Therefore, this application is not subject to new source review. BACT, Offsets, and PSD do not apply.

New Source Review for Toxic Air Contaminants:

This application will not result in any emission increases of Toxic Air Contaminants (TACs). Therefore, the District's Risk Management Policy does not 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 NOx and CO emissions and also because it is a designated facility (since it is subject to the control requirements of the Emission Guidelines for MSW Landfills). Therefore, this facility is required to have an MFR permit pursuant to Regulations 2-6-301 and 2-6-304.

The initial MFR Permit for this facility was issued on December 1, 2003. The MFR Permit was revised on February 5, 2004, December 21, 2004, and April 5, 2005.

The Applicant's request to modify permit conditions will require a revision of the current MFR permit. The proposed revision of the MFR Permit is discussed in the Statement of Basis for Application # 9527 (see Section II below).

Regulation 8, Rule 2:

As discussed above, BAAQMD Regulation 8-2-301 limits total carbon emissions from any miscellaneous operation to either 15 pounds per day OR to a concentration of 300 ppmv or less, dry basis. Waste Management will demonstrate compliance with these limits by either:

(a) using daily records of the amount of VOC-laden waste accepted and the VOC concentration in each lot of waste and calculations to show that the total amount of VOC in the wastes accepted will not exceed 15 pounds of total carbon per day; or
(b) using an OVA to measure the VOC concentration above the surface of each lot or truck load of VOC-laden waste accepted at the site to show that this surface VOC concentration will not exceed 50 ppmv (expressed as C_1).

It is reasonable to assume that a concentration measurement of 50 ppmv of VOC as C_1 at 3 inches above the soil surface will also result in VOC emissions of less 300 ppmv of total carbon (dry basis). Therefore, the proposed monitoring procedure revisions will demonstrate compliance with Regulation 8-2-301. The OVA testing will be conducted on representative samples of each soil lot received per day (usually every

truckload). Therefore, monitoring will be conducted at least as frequently as the current monitoring procedure using daily records and calculations.

Federal Requirements:

The on-site handling and reuse of VOC-laden wastes at a landfill are not subject to any federal requirements.

D. RECOMMENDATION

The District recommends issuance of a Change of Conditions for Condition # 19235 and the following equipment:

S-2 Altamont Landfill

signed by Carol S. Allen — July 7, 2005

By: Carol S. Allen — Date

Senior Air Quality Engineer

II. STATEMENT OF BASIS FOR APPLICATION # 9527

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 NOx and CO emissions and also because it is a designated facility (since it is subject to the control requirements of the Emission Guidelines for MSW Landfills). Therefore, this facility is required to have an MFR permit pursuant to Regulations 2-6-301 and 2-6-304.

The initial MFR Permit for this facility was issued on December 1, 2003. The MFR Permit was revised on February 5, 2004, December 21, 2004, and April 5, 2005.

This action proposes to modify permit conditions and allow an alternative monitoring procedure; therefore, it requires a revision of the current MFR permit. The definition of significant revision is discussed below to determine if this application constitutes a significant MFR revision.

- Regulation 2-6-226.1 and 226.2: This application does not involve the incorporation of a change considered to be a major modification, or a modification under NSPS, NESHAPs, or Section 112 of the CAA.
- Regulation 2-6-226.3: This application does involve a change in the monitoring procedures used to demonstrate compliance with District Regulation 8-2-301. The proposed permit revision includes the addition of a permit shield that will allow this facility to use an alternative but comparable monitoring procedure to demonstrate compliance with the Regulation 8-2-301 total carbon concentration limit instead of using waste acceptance records to demonstrate compliance with the Regulation 8-2-301 total carbon emission rate limit. The proposed alternative monitoring procedure will continue to require monitoring (either by keeping waste acceptance records or by testing for VOC surface emissions) for each lot of VOC-laden waste accepted at the site. Therefore, this alternative procedure does not relax the frequency of the monitoring demonstration.
- Regulation 2-6-226.4: This application does not involve any changes to permit terms or conditions that will allow the facility to avoid an applicable requirement.
- Regulation 2-6-226.5: This application does not involve the establishment of or change to a case-by-case emission limit or standard.
- Regulation 2-6-226.7: This application does not involve the incorporation of any requirements promulgated by the EPA.

This application will not result in any emission increases and does not involve any new federal requirements, avoidance of standards, or case-by-case determinations. However, this application will change monitoring procedures for a federally enforceable requirement. While the proposed procedures will not relax the frequency of the monitoring, the proposed procedures will require a permit shield. Consequently, this proposed revision is considered significant pursuant to Regulation 2-6-226.3 and will be processed as a significant MFR permit revision.

A. PROPOSED MFR PERMIT MODIFICATIONS

The proposed MFR permit revisions related to Application # 9527 are described below.

Sections I-V:

No changes are proposed to these sections.

Section VI:

This MFR Permit revision will modify Condition # 19235, Part 20 by adding an alternative monitoring procedure as requested by the applicant. All text changes are shown below in strikeout and underline

format.

Condition # 19235
FOR: S-2 ALTAMONT LANDFILL WITH LANDFILL GAS COLLECTION SYSTEM, AND A-15 LANDFILL GAS FLARE:

(no changes to Parts 1-19)

20. ~~The Permit Holder shall limit the quantity of VOC laden soil handled per day so that no more than 15 pounds of total carbon could be emitted to the atmosphere per day.~~ This Part applies to the acceptance, handling, storage, and on-site reuse of VOC-laden soil and other VOC-laden wastes. VOC-laden soil and VOC-laden wastes ~~is any~~ are material~~s~~ that contain~~s~~ volatile organic compounds, as defined in Regulation 8-40-213, ~~at a concentration of 50 ppm by weight or less~~ other than contaminated soil. As defined in Regulation 8-40-205, contaminated ~~S~~soil contain~~ings~~s more than 50 ppmw of VOC or has a surface concentration greater than 50 ppmv of VOC as C1, ~~is considered to be "contaminated soil"~~ and contaminated soil is subject to Part 21 below instead of this part. Materials containing only non-volatile hydrocarbons and materials meeting the requirements of Regulation 8-40-113 are not subject to this part. For each lot of VOC-laden waste accepted at this site, the Permit Holder shall comply with the limits and monitoring procedures identified in either subpart a or subpart b below to demonstrate compliance with the total carbon limits in Regulation 8-2-301.

    a. Unless the Permit Holder demonstrates compliance with Regulation 8-2-301 in accordance with subpart b below, the Permit Holder shall limit the quantity of VOC laden wastes handled per day such that no more than 15 pounds of total carbon could be emitted to the atmosphere per day. In order to demonstrate compliance with this ~~condition~~ subpart, the Permit Holder shall maintain the following records in a District approved log for all VOC-laden soil accepted at the landfill.

        ~~a~~i. Record on a daily basis the amount of VOC laden soil ~~handled at the landfill~~ accepted for each truckload or each soil lot, as appropriate. This ~~total~~ amount (in units of pounds per day) is Q in the equation in subpart ~~c.~~a(iii) below.

        ~~b~~ii. Record on a daily basis the VOC content ~~of all soils handled at the landfill~~ for each truckload or each soil lot, as appropriate. This VOC Content (C in the equation below) should be expressed as parts per million by weight as total carbon (or C1).

        ~~c~~iii. Calculate and record on a daily basis the VOC Emission Rate (E) using the following equation: E = Q * C / 1E6

        This equation may be applied to each truckload or to each soil lot received per day depending on the amount of soil that is represented by the VOC Content data. If the equation is applied to multiple loads per day, the VOC Emission Rate shall be totaled for all loads received each day.

        ~~d~~iv. Summarize all daily emission rates on a monthly and calendar year basis.

        v. All records shall be maintained on site or shall be made readily available to District staff upon request for at least 5 years from the date of entry.

    b. Unless the Permit Holder demonstrates compliance with Regulation 8-2-301 in accordance with subpart a above, the Permit Holder shall screen each lot of VOC laden waste accepted per day for VOC surface emissions to show that each lot of VOC laden waste is not contaminated soil.

i. The Permit Holder shall use the testing procedures outlined in Regulation 8-40-604.

ii. The screening test shall be representative of the entire lot of VOC-laden waste. The soil surface shall be disturbed prior to screening to ensure that the screening is representative of the entire load.

iii. The Permit Holder shall maintain records of all testing conducted to satisfy this subpart and shall record the amount of VOC-laden waste accepted and the highest surface concentration measured pursuant to this subpart. These records shall be maintained for each truckload or each soil lot accepted, as appropriate, provided that the records are made or summarized on at least a daily basis.

iv. Summarize the daily waste acceptance rates and the weighted average of the surface concentration records on a monthly basis and for each calendar year.

v. All records shall be maintained on site or shall be made readily available to District staff upon request for at least 5 years from the date of entry.

(Basis: Regulation 8-2-301)

(no changes to Parts 21-23)

Section VII:

The Regulation 8-2-301 limits and Condition # 19235, Part 20 limits and monitoring requirements are identified in Table VII-E below. The new monitoring procedures are identified by underline formatting. The proposed new monitoring procedures will require daily testing and records for any days that VOC-laden wastes are accepted. These proposed procedures are at least as stringent as the current monitoring frequency and are adequate for demonstrating compliance with the Regulation 8-2-301 concentration limit.

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-2 ALTAMONT LANDFILL WITH LANDFILL GAS COLLECTION SYSTEM AND A-15 LANDFILL GAS FLARE

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
...							
Total Carbon Emissions	BAAQMD 8-2-301 and BAAQMD Condition # 19235, Part 20	Y		Applies to Aeration of VOC-Laden Soil Only: 15 pounds/day OR 300 ppmv, dry basis ~~(applies only to aeration of or use as cover soil of VOC-laden soil containing ≤ 50 ppmw of VOC)~~	BAAQMD Condition # 19235, Part 20	P/D OR P/D	Records and Emission Calculations OR Surface Screening and Records
...							

Section VIII:

The testing procedures described in Condition # 19235, Part 20 and Section IX below will be referenced in Table VIII.

Table VIII
Test Methods

Applicable Requirement	Description of Requirement	Acceptable Test Methods
...		
BAAQMD 8-2-301	Organic Compound Emission Limitation for Miscellaneous Operations	For Operations Other Than Aeration of VOC-Laden Soil at S-2: Manual of Procedures, Volume IV, ST-7, Organic Compounds; or EPA Reference Method 25 or 25A For Aeration of VOC Laden Soil at S-2: BAAQMD Regulation 8-40-604 measurement procedures and EPA Method 21 (or any method determined to be equivalent by the US EPA and approved by the APCO)
...		
BAAQMD Condition # 19235, Parts 20 and 21	Testing to Determine if Waste is Contaminated Soil or VOC Laden Waste: VOC Concentration in Soils; OR Surface VOC Concentration	BAAQMD 8-40-601 and EPA Reference Methods 8015B and 8021B~~; or EPA Reference Method 21~~ (or any method determined to be equivalent by the US EPA and approved by the APCO); OR BAAQMD Regulation 8-40-604 measurement procedures and EPA Method 21 (or any method determined to be equivalent by the US EPA and approved by the APCO)
BAAQMD Condition # 19235, Part 20a	Total Carbon Emissions from Aeration of VOC Laden Soils	APCO approved equation identified in Condition # 19235, Part 20a with VOC Content determined as described above for VOC Concentration in Soils.
...		

Section IX:

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 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.

The District added the second type of permit shield for the S-2 Altamont Landfill, subsuming the Regulation 8, Rule 2 VOC test procedure with the Regulation 8, Rule 40 VOC test procedure. This was done so that the Regulation 8-2-601 VOC test procedure, which is not well suited to monitoring fugitive emissions, would not have to be used to monitor surface emissions of VOC-laden soil.

Regulation 8, Rule 2 "Miscellaneous Operations" only applies to sources of precursor organic compounds that are not otherwise limited by Regulation 8 or Regulation 10 rules. In the case of the S-2 Altamont Landfill, Regulation 8, Rule 2 would apply only to operations involving aeration of VOC-laden soil, which is soil that contains some VOC but is not "contaminated soil", as defined in 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.

Regulation 8-2-301 places a 15 pounds per day limit on VOC emissions having a concentration greater than 300 ppmv (total carbon, dry basis). Since soil found not to be contaminated using the procedures of Regulation 8-40-604 would have a surface VOC concentration less than 50 ppmv (expressed as methane, C1), it is reasonable to conclude that the concentration would also be less than 300 ppmv (total carbon, dry basis) as determined by the procedures of Regulation 8-2-601. Therefore, this monitoring is sufficient to assure compliance with Regulation 8-2-301.

The following subsumed requirements will be added to Section IX of the MFR Permit.

IX. Permit Shield

~~Not applicable.~~

A. SUBSUMED REQUIREMENTS

Pursuant to District Regulations 2-6-233.2 and 2-6-409.12, as of the date this permit is issued, the federally enforceable monitoring, recordkeeping, and reporting requirements cited in the following table for the source or group of sources identified at the top of the table are subsumed by the monitoring, recordkeeping, and reporting for more stringent requirements or by a "hybrid" monitoring scheme. The District has determined that compliance with the requirements listed below and elsewhere in this permit will assure compliance with the substantive requirements of the subsumed monitoring requirements. Enforcement actions and litigation may not be initiated against the source or group of sources covered by this shield based on the subsumed monitoring requirements cited.

Table IX-A
S-2 ALTAMONT LANDFILL

Subsumed Requirement Citation	Title or Description	Streamlined Requirements	Title or Description
8-2-601	Determination of Compliance (for organic compound emissions as total carbon)	8-40-604	Measurement of Organic Concentration (to classify soil as "contaminated" or "not contaminated")

The Regulation 8, Rule 2 total carbon test procedure is subsumed by the Regulation 8, Rule 40 VOC test procedure for the Redwood Landfill (S-5), because testing performed pursuant to Regulation 8-40-604 will rule out the need to test in accordance with Regulation 8-2-601.

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, Regulation 8, Rule 2 would apply to storage, handling, reuse (such as for cover material), and disposal of 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.

Regulation 8-2-301 limits organic compound emissions (expressed as total carbon) from an operation to 15 pounds per day, if the emission from the operation has an organic compound concentration greater than 300 ppmv (expressed as total carbon, dry basis). 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 total carbon concentration limit (< 300 ppmv), it complies with Regulation 8-2-301.

In summary, measurements conducted under Regulation 8-40-604 that show surface VOC concentrations are less than 50 ppmv (expressed as methane, C1) are conclusive to demonstrate compliance with Regulation 8-2-301.

Section X:

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

X. Revision History

...

Significant Revision (Application # 9527): [insert approval date]

- Modify Condition # 19235, Part 20 by adding VOC surface concentration limits and monitoring procedures, which will ensure that VOC-laden wastes are not contaminated soil and that aeration of VOC-laden wastes will comply with the total carbon concentration limit in Regulation 8-2-301.
- Reference the new VOC surface concentration monitoring procedures in Table VII-A.
- In Table VIII, identify test methods for VOC surface concentration measurements and VOC emission limits that apply to the aeration of VOC-laden wastes.
- Add a permit shield in Section IX that applies to the aeration of VOC-laden wastes and the resulting fugitive organic emissions. The permit shield subsumes a stack test method for total carbon and replaces it with a VOC surface concentration measurement.
- Update Section X, Revision History.

Sections XI-XII:

No changes are proposed to these sections.

B. SUMMARY OF PROPOSED ACTIONS

The District recommends approval of a proposed significant revision of the MFR Permit for Site # A2066 and issuance of a public notice for this proposed revision that will:

- Modify Condition # 19235, Part 20 by identifying VOC surface concentration limits and monitoring procedures that will ensure that VOC-laden wastes are not contaminated soil and will comply with the total carbon concentration limit in Regulation 8-2-301.
- Modify Table VII-A by referencing these new monitoring procedures.
- Modify Section IX by adopting a permit shield that will subsume the Regulation 8-2-601 testing procedure and replace it with the Regulation 8-40-604 testing procedure.
- Modify Table VIII by referencing this new testing procedure.