

May 16, 2002

ALAMEDA COUNTY
Roberta Cooper
Scott Haggerty
(Vice-Chairperson)
Nate Miley
Shelia Young

West Contra Costa Sanitary Landfill, Inc.
3260 Blume Drive, Suite 200
Richmond, CA 94806

Attention: Mr. Larry Burch, Environmental Compliance Manager

CONTRA COSTA COUNTY
Mark DeSaulnier
Mark Ross
Gayle Uilkema

RE: Response to Comments on the Proposed MFR Permit and Statement of Basis for Facility # A1840, West Contra Costa Sanitary Landfill, Inc.

MARIN COUNTY
Harold C. Brown, Jr.

Dear Mr. Burch:

NAPA COUNTY
Brad Wagenknecht

This letter is being submitted in response to your April 29, 2002 comment letter on the District's proposed Major Facility Review (MFR) Permit and the accompanying Statement of Basis and Permit Evaluation for the West Contra Costa Sanitary Landfill, Inc. (Facility # A1840). The District's proposed revisions to these documents are attached. The revisions are illustrated by strike-out formatting for text that will be deleted and underline formatting for text that will be added. The District's reasons for either incorporating or not incorporating a requested change are discussed below. The item numbers below refer to the numbered comments in your April 29, 2002 letter.

SAN FRANCISCO COUNTY
Chris Daly
(Vacant)
(Vacant)

SAN MATEO COUNTY
Jerry Hill
Marland Townsend
(Secretary)

1. This comment concerns the date when this site is expected to reach full capacity. The date was corrected in the Statement of Basis, Section B. Facility Description, second paragraph.

2. This comment concerns Permit Condition # 7463, Part 10 and the FID monitoring frequency for the Carbon Adsorbers (A-1, A-2, A-3, A-4, A-5, and A-6) that are abating leachate treatment equipment (S-22, S-23, S-24, S-25, S-26, S-27, S-28, S-29, S-30, S-38, S-39, and S-40). WCCSL requested to reduce the current monitoring frequency for FID monitoring of the carbon adsorber exhaust streams from daily to monthly. The applicable regulations (Regulation 8, Rules 2, 8, and 47) do not specify minimum monitoring frequency for the measurement of organic emissions from carbon adsorbers. Maximum uncontrolled emissions from all leachate treatment equipment is only expected to be 12.2 tons/year of POC. After control by the carbon adsorbers, the emissions are reduced to 0.61 tons/year (<3.5 pounds/day) of POC. Since the applicable regulations do not require daily monitoring and emissions from these sources are quite low, a reduced monitoring frequency is appropriate. The monitoring frequency was changed to a stratified frequency

SANTA CLARA COUNTY
Randy Attaway
(Chairperson)
Liz Kniss
Julia Miller
Dena Mossar

SOLANO COUNTY
(Vacant)

SONOMA COUNTY
Tim Smith
Pamela Torliatt

Ellen Garvey
**AIR POLLUTION
CONTROL OFFICER**

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To: Larry Burch, West Contra Costa Sanitary Landfill, Inc.

(monthly, weekly, or daily) as the time of predicted hydrocarbon breakthrough draws nearer, similar to the monitoring schedule described in a 6/5/96 letter from the District. The monitoring frequency was changed in the following locations: Statement of Basis (Section C.VI. Permit Conditions, Condition #7463, paragraph 6; Section C.VII. Applicable Limits and Compliance Monitoring Requirements, Sources of Organics table) and MFR Permit (Condition # 7463, Part 10 and Tables VII-C and VII-E).

3. This comment concerns the sizes of three treated leachate storage tanks, which are discussed in the Statement of Basis, Section B. Facility Description, paragraph 5. In District Permit Application # 7707, WCCSL indicated that they planned to store treated leachate in three 7000 gallon tanks (identified as S-34, S-35, and S-36). These tanks were determined to be exempt from District permit requirements pursuant to Regulation 2-1-123.2. The District has no record of being notified that these three 7000 gallon tanks were replaced by three 90,000 gallon tanks. However, Regulation 2-1-123.2 is still expected to be applicable because treated leachate contains essentially no organic compounds and the tanks are not expected to have any detectable emissions. The size of the tanks will be corrected in the Statement of Basis and source S-34, S-35, and S-36 will be archived from the facility's list of current exempt equipment.
4. I believe this comment is referring to Condition # 17821, Part 14.e., which requires WCCSL to keep records on the dates, locations, and frequency of water applications and other dust mitigation operations. These record keeping requirements were added as a method of demonstrating compliance with the Regulation 6-301 and 6-305 Ringelmann and visible emissions limits for the landfill, haul roads, and stockpiles. The District is not requiring the preparation of maps of on a daily basis. WCCSL should keep daily records that note which areas where watered and how many times a day that water was applied (and dust suppressants, if applicable). This requirement could be satisfied with a dust mitigation plan that describes the types of site areas that need watering (such as unpaved haul roads, active filling areas, stockpiles, etc.) and a map showing the approximate location of these areas. The map would only need to be updated to show significant changes. The daily records could consist of log sheets with descriptions of the areas needing watering as column headers. The log could list the date and time that water was applied with checks in each column to indicate where the water was applied. No changes to the MFR Permit or Statement of Basis have been made in response to this comment.
5. I believe this comment is referring to the requirements to continuously collect and control landfill gas that are contained in Regulation 8-34-301.1 and Condition # 17821, Parts 5-7. The District understands that construction projects at landfills may require that collection and control systems be shut down for short periods of time. The exemptions in Regulation 8-34-113, 116, 117, and 118 were intended to allow most routine short term construction projects to occur without the need for applying for a variance, because emission impacts were expected to be negligible. However, final cap construction projects are often not routine short term projects. Most final cap projects are one time projects that require long periods of down time (more than the 5 consecutive days allowed by the exemptions) and that can result

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in potentially significant amounts of excess emissions. Therefore, final cap projects often require a variance from the District's Hearing Board. If your planned final cap project can be performed in compliance with 8-34-117 and 8-34-118, then nothing in Condition #17821, Parts 5-7 would prohibit you from shutting down the collection system for that purpose. However, if the down time required for the final cap construction is longer than 5 consecutive days, then a variance would be required. No changes to the MFR Permit or Statement of Basis have been made in response to this comment.

6. The fuel gas flow rates for S-5, S-6, and S-37 are listed in the MFR Permit, Table II-A. All fuel gas flow rates in this table are referenced to a heat content value (X cfm of landfill gas at 550 BTU/scf), which implies that the fuel gas flow rate varies with heat content. The heat content varies with the oxygen dilution in the landfill gas and is usually between 400-600 BTU/scf. For S-5 and S-6, the maximum landfill gas flow rate could range from 300-450 scfm of landfill gas depending on the heat content. These fuel gas flow rate ranges have been clarified in Table II-A.
7. The NO_x, CO, and NMHC limits (in units of grams/bhp-hour) for S-5 and S-6, which are listed on page 10 of the Statement of Basis and in the original Condition # 5771, Parts 4-6 (see pages 33-34 of the MFR Permit), are the BACT limits for these sources that were imposed when the original Authority to Construct and Permit to Operate were issued in 1992 pursuant to Application # 6276. These limits are federally enforceable BACT limits that cannot be relaxed. The District's most recent source test data indicated that S-5 and S-6 were complying with these NO_x, CO, and NMHC BACT limits. No changes to the MFR Permit or Statement of Basis have been made in response to this comment.
8. This comment is related to WCCSL's Comment #2. Apparently, the District did approve an alternative monitoring schedule in 1996, but this new schedule was never incorporated into the permit conditions. The changes identified above in Response # 2 correct this error.
9. The S-4 IC Engine was replaced by the S-37 IC Engine pursuant to Application # 27193. Using the standard calculation procedures in Regulation 2-2-604 and 2-2-605, this replacement would have triggered NO_x and POC offset requirements. In order to avoid the need to supply offsets, WCCSL opted to use the alternative emission calculation procedures for replacement sources (Regulation 2-2-608 as adopted on June 15, 1994, note that this section was deleted in the May 17, 2000 amendments to Regulation 2, Rule 2). Regulation 2-2-608 required that the replacement source be conditioned at the emission level of the replaced source such that there is no increase in the maximum production capacity, throughput, output, or other rating of the replaced source. The revised permit condition # 17812, Part 2 reflects these Regulation 2-2-608 requirements. The true rated horsepower for the S-37 IC Engine was reported to be 1585 bhp on the Data Form C for S-37. This true rated horsepower is reflected in Table II-A, even though permit conditions limit the maximum daily and maximum annual heat input for S-37, in order to ensure compliance with Regulation 2-2-608. WCCSL may submit a permit application to increase these maximum heat input limits; however, all emission increases would now need to be calculated in

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accordance with Regulations 2-2-604 and 2-2-605 and any applicable offsets would need to be provided. No changes to the MFR Permit or Statement of Basis have been made in response to this comment.

10. See Response # 7 and # 9 above. The District's most recent source test data indicated that S-37 was complying with the NO_x, CO, and NMHC BACT limits listed in the Statement of Basis and Permit Conditions. No changes to the MFR Permit or Statement of Basis have been made in response to this comment.
11. The BACT limit for POC emissions was correctly listed as 0.6 grams/bhp-hour as discussed in Permit Application # 27193.
12. The District agrees that in order to provide maximum flexibility in maintaining compliance with Regulation 8, Rule 34, the A-8 Flare should be able to be operated at all times (including when all 3 engines are operating) and at maximum capacity. However, the original Permit to Operate for the flare was not structured with this flexibility. The proposed permit conditions are consistent with the original Permit to Operate and cannot be changed pursuant to this Title V permit. However, WCCSL can and should request that this condition be modified pursuant to the District's review of their Collection and Control System Design Plan (Permit Application # 2417). The District will then evaluate the CO emission increases that would occur with concurrent operation of the Flare and all three engines and determine if the prohibition against operating the flare and all three engines concurrently could be removed.
13. This item was corrected, see Response # 2 above.
14. This item was corrected, see Response # 2 above.
15. The official name of this facility has been changed to West Contra Costa Sanitary Landfill, Inc. (as shown on the letter head of the 4/29/02 comment letter). The addresses, names, titles, and phone numbers of the responsible official and plant contact have been corrected as indicated.
16. This item was corrected, see Response #6.
17. No changes were made, see Response #9.
18. The District standard for maximum firing capacity is to use the maximum gross combustion capacity of the source (see Regulation 3, Schedule B), which is the higher heating value (HHV) of the fuel. All heat input limits in the permit conditions are HHV. If the maximum firing capacity for any source was reported incorrectly, WCCSL may submit a permit application to increase these heat input limits. All associated emission increases will be subject to BACT and Offsets if applicable.

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19. The appropriate key emission control system operating parameter or parameters (if more than one is needed) should be proposed in the Collection and Control System Design Plan and the appropriate operating ranges for each parameter (needed to maintain compliance with all applicable emission limits) should be established during the first compliance demonstration source test. The permit conditions (Condition #5771, Part 10 and Condition # 17812, Part 12) suggest using cylinder temperature as one of the key emission control system operating parameters, but these conditions do allow for the establishment of other appropriate parameters and operating ranges pursuant to the source test. WCCSL should submit detailed descriptions of their proposals for appropriate key emission control system operating parameters to the Permit Services Division (pursuant to Application # 2417) and to the Source Test Section (along with the other proposed source testing procedures for the initial and annual source tests).
20. If full scale operation of the HWMF leachate treatment operation requires any throughput increases above the levels listed in Condition #7463, then WCCSL should submit a permit application to change these throughput limits. If full scale operation can be accomplished within these limits, then District agrees to delete the words "pilot-scale operation" from Condition # 7463, Part 12.
21. This item was corrected, see Response # 2 above.
22. No changes were made, see Response #9.
23. The increase in the height or area of a solid waste disposal site triggers the federal new source performance standards (40 CFR Part 60 Subpart WWW) for MSW Landfills. This type of change is subject to the Authority to Construct requirement of Regulation 2, Rule 1, Section 301 and requires the submittal of a permit application and the approval of the District before implementing the change. The increase in the total tonnage of waste disposed in a landfill or an increase in the maximum amount of waste received per day are both changes that constitute a modification of a source and that require an Authority to Construct and Permit to Operate from the District. Please submit a permit application for the proposed modifications of your landfill that were described in Comment # 23.
24. Concerning Condition # 17821, Part 2, the appropriate test methods for determining the volatile organic content of soil shows that most constituents of oils and greases are not volatile and these compounds are not included in the "VOC Content" of the soil. Diesel contains very low percentages (which vary depending on the age of the spill) of compounds that are considered volatile. However, it is my understanding from people who are experienced in testing for soil contamination that most soil containing only diesel spills will not be considered "contaminated" meaning that it would most likely contain less than 50 ppmw of VOC. However, many spill sites contain both diesel and gasoline spills or leaks. WCCSL should ensure that each soil lot from a spill area or leaking tank site has been tested appropriately.

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25. As discussed in Response # 7 above, the District cannot relax BACT limits or Rule limitations. The District has recently issued Authorities to Construct for several new IC Engines that are subject to emission limits that are even lower than those that currently apply to S-37. I do not know whether or not the manufacturer "guaranteed" that these emission limits would be achieved throughout the life of the engine, but the limit as low as 0.6 grams of NOx/bhp-hour, 1.6 grams of CO/bhp-hour, and compliance with 8-34-301.4 were provided by the manufacturer.
26. See Response # 19 above.
27. Daily preparation of maps is not required by Condition # 17821, Part 14.e. See also Response # 4 above.
28. Increasing the maximum permitted heat input to the flare requires review for compliance with new source review requirements, because the flare was originally permitted as a back-up unit only. This request will be included in the District's review of Permit Application # 2417. See also Response # 12.
29. These limits were taken from the current Condition #5771, Part 9 for S-5 and S-6 and were established pursuant to Permit Application # 6276. These limits ensured that emissions from the engines would not result in increased cancer risks of more than 10 in a million, which is the risk allowed by the District's Toxic Risk Management Policy for projects that use Best Available Control Technology for Toxic Compounds. Exceedance of these limits will require you submit a permit application so that the District can update the risk analysis for your facility. As long as the increased cancer risk stays below 10 in a million for the maximally exposed receptor, then no additional requirements will be imposed.

The District will modify the Statement of Basis and draft MFR Permit as indicated in the enclosed documents and this letter. Since no other comments have been received on this proposed permit, the District plans to proceed with issuing the final MFR Permit for this facility. You will be notified under separate cover of the final issuance date and the final terms of the MFR Permit.

Please contact me if you have any further questions on this matter. I can be reached by telephone (415-749-4702), fax (415-749-4949), or email (callen@BAAQMD.gov).

Sincerely,

Carol S. Allen
Senior Air Quality Engineer
Permit Services Division

ATTACHMENT 1

Significant Changes to Statement of Basis

Bay Area Air Quality Management District

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

STATEMENT OF BASIS and PERMIT EVALUATION

for

MAJOR FACILITY REVIEW PERMIT

for

West Contra Costa Sanitary ~~District~~ Landfill, Inc.
Facility #A1840

Facility Address:

Foot of Parr Boulevard
Richmond, CA 94801

Mailing Address:

~~P.O. Box 41003260~~ Blume Drive, Suite 300
Richmond, CA 94804₆

Title V 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 major facility as defined by BAAQMD Regulation 2-6-212. 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.

Major Facility Operating permits (Title V permits) must meet specifications contained in Regulation 2, Rule 6, Major Facility Review (MFR). The permits must contain all applicable requirements (as defined in 40 CFR § 70.2), monitoring requirements, recordkeeping requirements, and reporting requirements. 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.

B. Facility Description

The West Contra Costa Sanitary Landfill, [Inc.](#) (WCCSL) site includes a landfill, landfill gas combustion equipment (three internal combustion engines and an enclosed ground flare), and leachate treatment equipment. The site has also received an Authority to Construct for a fourth engine and for four micro-turbines (all burning landfill gas), which are not included in this initial Title V permit. The Title V permit will need to be modified upon construction of any of this proposed equipment.

The landfill (S-15) at this site includes two waste disposal units on contiguous property. One disposal unit is an active Class II landfill and is currently accepting municipal solid waste, non-hazardous industrial waste, construction debris, and demolition debris. The second disposal unit is a closed Class I site, which operated from the 1950s until 1985. Hazardous waste was disposed of in this closed area between 1973 and 1985. The entire contiguous landfill has a maximum design capacity of 18.2 million cubic yards (13.9 million cubic meters) and will contain 10.92 million tons of waste materials when the landfill reaches full capacity. As of December 31, 2000, WCCSL reported that the landfill contained 9.98 million tons (17.4 million cubic yards) of waste material. The landfill can accept up to 2500 tons/day of wastes and is expected to reach full capacity by ~~the end of the first quarter in 2003~~ late 2004 or early 2005.

As required by various local, state, and federal regulations, the landfill at this site is equipped with an active landfill gas collection system. Landfill gas collection systems are perforated pipes that are buried in the refuse at numerous locations. For active collection systems, the perforated pipes are connected to blowers by solid pipes (referred to as laterals and headers). The blowers

maintain a vacuum in the buried refuse and draw landfill gas into the perforated pipes. The blowers then vent this collected landfill gas to control equipment. For active landfills, the perforated pipes are often placed horizontally in the refuse as filling progresses. Perforated pipes can also be installed vertically by drilling holes into refuse areas and placing the perforated pipes within these wells. WCCSL's gas collection system currently includes 16 horizontal gas collectors and 53 vertical gas collection wells. WCCSL has submitted two permit applications for numerous modifications and improvements to their current gas collection system. The District is currently reviewing these proposals. Any approved collection system changes will require a modification of the Title V permit for this site.

Collected landfill gas is mainly vented to three internal combustion engines (S-5, S-6, and S-37). These engines both produce electricity by using the landfill gas as a fuel and serve as abatement equipment for the landfill by reducing precursor organic compound and toxic compound emissions to the atmosphere. The engines are also sources of secondary pollutants (nitrogen oxides, carbon monoxide, sulfur dioxide, particulate matter, formaldehyde, and polycyclic aromatic hydrocarbons) due to the combustion process. When one or more of these engines are not operating, any collected landfill gas that exceeds the capacity of the operating engines is vented to an enclosed ground flare (A-8). This flare destroys methane and organic compounds in the landfill gas, but also generates secondary combustion emissions.

Many landfills are required to collect any liquid runoff or "leachate" from the landfill. This leachate contains small amounts of precursor organic compounds and toxic compounds and must often be treated before it can be disposed of or discharged. In accordance with their closure plans, WCCSL is required to collect and treat the leachate from the closed hazardous waste section of this landfill site. The leachate is collected in a 5000 gallon tank (S-40). The leachate is then treated by a series of conventional physical, chemical, and biological processes (S-21, S-22, S-23, S-24, S-25, S-26, S-27, S-28, S-29, S-30, S-31, S-32, S-33, S-38, and S-39) to remove heavy metals and toxic organic compounds from the water. Some equipment (S-21, S-31, S-32, and S-33) are exempt from District permit requirements and were not included in the MFR permit, because these sources are not significant sources of air emissions (as defined below in Section II.) Air emissions from the permitted leachate treatment equipment are controlled by Carbon Adsorbers (A-1, A-2, A-3, A-4, A-5, and A-6). Treated leachate is stored in three ~~7000~~90,000 gallons tanks (S-34, S-35, and S-36). These three tanks are exempt from District permit requirements and are not included in the MFR permit, because they are not significant sources of air emissions.

Condition # 7463 for: S-22, S-23, S-24, S-25, S-26, S-27, S-28, S-29, S-30, S-38, S-39, S-40, A-1, A-2, A-3, A-4, A-5, and A-6

The original Part 1 (The wastewater stream shall not bypass...) is really a RCRA requirement related to the closure of the hazardous waste area of the landfill. Since this part was not required for compliance with any air permitting requirements, it was deleted.

The basis "Toxic Risk Management Policy" was added to Parts 1, 2, 7, 8, 9, 10, 11, and 12, because the Carbon Adsorbers were required for control of toxic emissions in addition to POC and total organic emissions. Minor text changes were also made to these parts to add clarity, to reference the correct part number, to reflect the proper parameter for record keeping, etc.

Under Permit Application #844, WCCSL requested to increase the capacity of the leachate treatment system, to add several new tanks, and to replace the original Secondary Oil/Water Separator (S-23) with a larger Secondary Oil/Water Separator (S-38). During the evaluation of this Title V permit, WCCSL revealed that the capacity of S-23 has to date been sufficient and that S-38 had not been operated yet. WCCSL requested to retain both sources (S-23 and S-38) in their permit. Part 3 was added to ensure that there would be no cumulative emission increases as a result of retaining both sources in the permit.

Part 4 was based on the superceded part 12. The source numbers for the oil/water separators were added for clarity and the basis was updated for consistency with the current Regulation 8, Rule 8 requirements.

The leachate treatment system was originally limited to 5 gpm, 8 hours/day, and 5 days/week of operation. These limits were increased to 20 gpm, 24 hours/day, and 7 days/week under Application #844. Since the allowable operating times are the same as the maximum possible operating times, operating time limits are not necessary. The wastewater throughput limits reflect the maximum possible throughput rates at 20 gpm.

The ~~daily~~ monitoring requirement for the Carbon Adsorbers was moved from the superceded part 11 to the new Part 10, and the FID monitoring frequency was changed from daily monitoring to a stratified monitoring scheduled (monthly, weekly, daily) depending of the time period remaining until carbon breakthrough is predicted. The record keeping requirements for the Carbon Adsorber monitoring (superceded part 10) were combined with other record keeping requirements in the new Part 11.

The requirement to report any Carbon Adsorber limit excesses to Permits and Enforcement (superceded part 14) was deleted, because these requirements are contained in the standard conditions of the MFR permit and in Regulation 1 requirements. There was no need to restate these reporting requirements in a specific permit condition.

VII. Applicable Limits and Compliance Monitoring Requirements

Sources of Organics

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-5, S-6, Engines	BAAQMD 8-34-114	90% removal by weight	Annual Source Test
S-5, S-6, Engines	SIP 8-34-114	90% removal by weight	Annual Source Test
S-15, Landfill	BAAQMD 8-2-301	15 pounds/day or 300 ppm, dry basis (applies only to aeration of or use as cover soil of soil containing < 50 ppmw of volatile organic compounds)	Records
S-15, Landfill	BAAQMD Condition # 17821, Part 2	Facility shall not accept soil containing more than 50 ppmw of VOC	Records
S-22, S-23, S-38, Separators, A-1, A-2, Carbon Adsorbers	BAAQMD 8-8-301.3	combined collection and removal efficiency of at least 95% by weight	Monthly/Weekly/Daily FID Measure-ments at Carbon Adsorbers and Daily Records of Wastewater Throughput
S-30, Air Stripper, A-3-A6, Carbon Adsorbers	BAAQMD 8-47-301 and 8-47-302	control device shall reduce total organic compound emissions to the atmosphere by at least: 90% by weight	Monthly/Weekly/Daily FID Measure-ments at Carbon Adsorbers, Daily Records of Wastewater Throughput and Monthly Records of Water Analyses
S-37, Engine	BAAQMD 8-34-301.4a	97% removal by weight	Annual Source Test
S-37, Engine	SIP 8-34-301.3	97% removal by weight	Annual Source Test
A-8, Landfill Gas Flare	BAAQMD 8-34-301.3a	98% removal by weight	Annual Source Test
A-8, Landfill Gas Flare	SIP 8-34-301.2	98% removal by weight	Annual Source Test

ATTACHMENT 2

Significant Changes to draft MFR Permit

Bay Area Air Quality Management District

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

ProposedFinal

MAJOR FACILITY REVIEW PERMIT

Issued To:

West Contra Costa Sanitary ~~District~~Landfill, Inc.
Facility #A1840

Facility Address:

Foot of Parr Boulevard
Richmond, CA 94801

Mailing Address:

~~P.O. Box 41003~~260 Blume Drive, Suite 200
Richmond, CA 948046

Responsible Official

Mr. ~~Caesar Nuti~~Larry Burch, ~~General~~Environmental Compliance
~~Plant~~Manager of Landfill Gas Plant and Leachate Treatment Plant
510-~~620-0133~~262-1662

Facility Contact

Manager Mr. Gary Ponder,
510-620-0133

Type of Facility: Landfill/Power Producer
Primary SIC: 4953
Product: Electricity

BAAQMD Permit Division Contact:
Carol Allen

ISSUED BY THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Ellen Garvey, Air Pollution Control Officer

Date

II. EQUIPMENT

Table II A - Permitted Sources

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-301.

S-#	Description	Make or Type	Model	Capacity
S-5	Internal Combustion Lean Burn Engine, fired exclusively on landfill gas	Waukesha Lean Burn	7042 GL	1478 hp, 975 kW, 7040 in ³ , 10.8 E6 BTU/hour, 327300-450 scfm of landfill gas, based on heat contents of 559600-400 BTU/scf, respectively
S-6	Internal Combustion Lean Burn Engine, fired exclusively on landfill gas	Waukesha Lean Burn	7042 GL	1478 hp, 975 kW, 7040 in ³ , 10.8 E6 BTU/hour, 327300-450 scfm of landfill gas, based on heat contents of 559600-400 BTU/scf, respectively
S-15	West Contra Costa Sanitary Landfill Active Solid Waste Disposal Site with Active Gas Collection System Landfill gas collection system	Type of waste accepted are MSW, Commercial, Industrial, and Construction Horizontal Collectors Vertical Wells		Max. Design Capacity = 18.2 E6 yd ³ (13.9 E6 m ³) Max. Acceptance Rate = 2500 tons/day Max. Cumulative Waste In Place = 10.92 E6 tons 16 collectors and 53 wells
S-22	Primary Oil/Water Separator, TK-2	Polycal Plastics	SP-084-4	1,850 Gallon Capacity, 1200 Gallons/Hour
S-23	Secondary Oil/Water Separator, TK-4	AFL Industries	VTC-5	450 Gallon Capacity, 300 Gallons/Hour
S-24	Load Equalization Tank, TK-7	Polycal Plastics	SPC-52	500 Gallon Capacity, 1200 Gallons/Hour
S-25	Photo-Oxidizer Tank, TK-5	Ryan Herco	7353-030	300 Gallon Capacity, 1200 Gallons/Hour
S-26	Neutralization Tank, TK-9	Polycal Plastics	SPC-52	500 Gallon Capacity, 1200 Gallons/Hour
S-27	First Stage Clarifier, TK-8	Great Lakes	IPC-2-110	1200 Gallons/Hour
S-28	Air Stripper Sump	Polycal Plastics	SP-724-U	550 Gallon Capacity, 1200 Gallons/Hour

II. Equipment

Table II A - Permitted Sources

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-301.

S-#	Description	Make or Type	Model	Capacity
S-29	Flocculation/Mixing Tank, TK-8A	Custom Made	Custom made	20,300 Gallon Capacity, 1200 Gallons/Hour
S-30	Air Stripper	Terraqua		1200 Gallons/Hour, 200 cfm
S-37	Internal Combustion Lean Burn Engine, fired exclusively on landfill gas	Waukesha Lean Burn	7042 GL	1585 hp, 1050 kW, 7040 in ³ , 9.55 E6 BTU/hour, <u>290265-398</u> scfm of landfill gas, <u>based on heat contents of at 550600-400</u> BTU/scf, <u>respectively</u> .
S-38	Secondary Oil/Water Separator, TK-4	Custom Made	Custom Made	780 Gallon Capacity, 1200 Gallons/Hour
S-39	Sludge Storage Tank, TK-3	Custom Made	Custom Made	1100 Gallon Capacity, 1200 Gallons/Hour
S-40	Equalization Tank, TK-1	Custom Made	Custom Made	5000 Gallon Capacity, 1200 Gallons/Hour

Table II B – Abatement Devices

A-#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Limit or Efficiency
A-1	Carbon Adsorber (in series with A-1 first followed by A-2)	S-22, <u>S-23</u> , S-24, S-25, S-26, S-27, S-28, S-29, S-38, S-39, and S-40	BAAQMD Condition # 7463, Part 2	NMHC in inlet and in A-1 exhaust	Replace carbon when NMHC removal efficiency is less than 90% by volume
A-2	Carbon Adsorber (in series with A-1 first followed by A-2)	S-22, <u>S-23</u> , S-24, S-25, S-26, S-27, S-28, S-29, S-38, S-39, and S-40	BAAQMD Condition # 7463, Part 2	NMHC in A-2 exhaust	Replace carbon upon detection of 6 ppmv of NMHC

II. Equipment

Table II B – Abatement Devices

A-#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Limit or Efficiency
A-3	Carbon Adsorber (in series with A -3 first followed by A-4)	S-30	BAAQMD Condition # 7463, Part 3	NMHC in inlet and in A -3 exhaust	Replace carbon when NMHC removal effi- ciency is less than 90% by volume
A-4	Carbon Adsorber (in series with A -3 first followed by A-4)	S-30	BAAQMD Condition # 7463, Part 3	NMHC in A -4 exhaust	Replace carbon upon detection of 6 ppmv of NMHC
A-5	Carbon Adsorber (in series with A -5 first followed by A-6)	S-30	BAAQMD Condition # 7463, Part 3	NMHC in inlet and in A -5 exhaust	Replace carbon when NMHC removal effi- ciency is less than 90% by volume
A-6	Carbon Adsorber (in series with A -5 first followed by A-6)	S-30	BAAQMD Condition # 7463, Part 3	NMHC in A -6 exhaust	Replace carbon upon detection of 6 ppmv of NMHC
A-8	Landfill Gas Flare	S-15	BAAQMD 8-34-301.3, see also Table IV-B	Minimum combustion zone temperature of 1400 °F, see also Table VII-B	98% destruction of THC and either 98% destruction of NMOC or < 30 ppmv of NMOC, as CH ₄ , at 3% O ₂ , dry

VI. Permit Conditions

Condition # 7463

For S-22, PRIMARY OIL/WATER SEPARATOR, TK-2;

For S-23, SECONDARY OIL/WATER SEPARATOR, TK-4;

For S-24, LOAD EQUALIZATION TANK, TK-7;

For S-25, PHOTO-OXIDIZER TANK, TK-5;

For S-26, NEUTRALIZATION TANK, TK-9;

For S-27, FIRST STAGE CLARIFIER, TK-8;

For S-28, AIR STRIPPER SUMP;

For S-29, FLOCCULATION/MIXING TANK, TK-8A;

For S-30, AIR STRIPPER;

For S-38, SECONDARY OIL/WATER SEPARATOR, TK-4;

For S-39, SLUDGE STORAGE TANK, TK-3;

For S-40, EQUALIZATION TANK, TK-1;

For A-1, CARBON ADSORBER;

For A-2, CARBON ADSORBER;

For A-3, CARBON ADSORBER;

For A-4, CARBON ADSORBER;

For A-5, CARBON ADSORBER; and

For A-6, CARBON ADSORBER:

1. The emissions of precursor organic compounds (POC) from the sources S-22, S-23, S-24, S-25, S-26, S-27, S-28, S-29, S-38, S-39, and S-40 shall be abated by the Carbon Adsorbers, A-1 and A-2 arranged in series, during all periods of operations. (Basis: Cumulative Increase and Toxic Risk Management Policy)
2. The emissions of POC from the Air Stripper (S-30) shall be abated by the Carbon Adsorbers, either A-3 and A-4 arranged in series, or A-5 and A-6 arranged in series, during all periods of operations. (Basis: Cumulative Increase and Toxic Risk Management Policy)
3. The two Secondary Oil/Water Separators (S-23 and S-38) shall not operate concurrently. (Basis: Cumulative Increase)
4. The Oil/Water Separators (S-22, S-23, and S-38) shall have all the openings kept closed at all times except when the opening is used for the inspection and maintenance of the separators. (Basis: Regulations 8-8-301 and 8-8-303)
5. The wastewater throughput rate to the leachate collection, recovery, and treatment system (LCRTS) shall not exceed 1200 gallons per hour; nor 28,800 gallons per day; nor 10,512,000 gallons per year. (Basis: Cumulative Increase)

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6. The detectable POC leak emissions, as measured by a District approved portable monitor, shall not exceed 100 ppm above background at a distance of 1 cm from any of the valves, flanges, or pumps of LCRTS. (Basis: Cumulative Increase)
7. The second to last Carbon Adsorber, A-1 and either A-3 or A-5, shall be replaced with fresh carbon upon the detection of 10% of the inlet stream to the Carbon Adsorber as measured by a flame ionization detector (OVA-FID) or other method approved in writing by the APCO. (Basis: Cumulative Increase and Toxic Risk Management Policy)
8. The last Carbon Adsorber, A-2 and either A-4 or A-6, shall be replaced with fresh carbon upon the detection of break-through of 6 ppm as measured with a flame ionization detector (OVA-FID) or other method approved in writing by the APCO. (Basis: Cumulative Increase and Toxic Risk Management Policy)
9. The limit set forth in parts 7 and 8 shall apply to non-methane hydrocarbon emissions. To determine the presence of methane in the exhaust stream, a reading shall be taken with and without a carbon filter tip fitted on the OVA-FID probe. Concentrations measured with the carbon filter tip in place shall be considered methane for the purposes of these permit conditions. (Basis: Cumulative Increase and Toxic Risk Management Policy)
10. The operator of this system shall monitor with an FID, or other method approved in writing by the APCO, at the following locations ~~on a daily basis~~ and on the schedule described in subpart d. below:
 - a. at the inlet of A-1 and either A-3 or A-5;
 - b. at the exhaust of A-1 and either A-3 or A-5;
 - c. at the exhaust of A-2 and either A-4 or A-6.
 - d. If the time until predicted hydrocarbon breakthrough from the last carbon adsorber (calculated pursuant to Part 11.d. below) is greater than 30 days, then monitoring shall be conducted on a monthly basis. If the time until predicted hydrocarbon breakthrough is between 7 days and 30 days, then monitoring shall be conducted on a weekly basis. If the time until predicted hydrocarbon breakthrough is less than 7 days, then monitoring shall be conducted on a daily basis until the carbon is replaced.
(Basis: Cumulative Increase and Toxic Risk Management Policy)
11. The operator of the LCRTS shall maintain, in a District approved logbook, the following information:
 - a. daily records of wastewater throughput to the LCRTS;
 - b. each monitoring reading and analysis results for the day of operation they were taken;

VI. Permit Conditions

- c. calculate and record the frequency of carbon change out necessary to maintain compliance with part 7;
 - d. calculate and record the time of predicted hydrocarbon breakthrough from the last Carbon Adsorbers, to demonstrate compliance with part 8;
 - e. the dates and locations of all carbon bed replacements.
(Basis: Cumulative Increase and Toxic Risk Management Policy)
12. The project is ~~a pilot-scale operation and is~~ restricted to emission limits set forth in part 8, and throughput rates stipulated in part 5. Any relaxation of these conditions that increase the emissions and/or throughput of wastewater will be subject to a full permit review as though construction at the site had not yet commenced. (Basis: Cumulative Increase and Toxic Risk Management Policy)

VII. APPLICABLE LIMITS & COMPLIANCE MONITORING REQUIREMENTS

**Table VII – C
 Applicable Limits and Compliance Monitoring Requirements
 S-22 PRIMARY OIL/WATER SEPARATOR, TK-2
 S-23 SECONDARY OIL WATER SEPARATOR, TK-4
 S-38 SECONDARY OIL WATER SEPARATOR, TK-4
 A-1 CARBON ADSORBER
 A-2 CARBON ADSORBER**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Organic Compounds	BAAQMD 8-8-301.3	Y		combined collection and removal efficiency of at least 95% by weight	BAAQMD Condition # 7463, Parts 10.a.-c. and 11.a.-e.	P/D, <u>W, M</u>	<u>Monthly, Weekly, or</u> Daily FID Measurements at Carbon Adsorbers and Daily Records of Wastewater Throughput
Organic Compounds	BAAQMD 8-8-303	Y		all gauging and sampling devices shall have vapor tight covers, seals, or lids		N	
NMOC	BAAQMD Condition # 7463, Part 7	Y		carbon replacement upon detection of an outlet NMOC concentration (from A-1) that is 10% or more of the inlet NMOC concentration	BAAQMD Condition # 7463, Parts 10.a., 10.b., 11.b., 11.c., and 11.e.	P/D, <u>W, M</u>	<u>Monthly, Weekly, or</u> Daily FID Measurements at Carbon Adsorber (inlet and outlet) and Records

Table VII – C
Applicable Limits and Compliance Monitoring Requirements
S-22 PRIMARY OIL/WATER SEPARATOR, TK-2
S-23 SECONDARY OIL WATER SEPARATOR, TK-4
S-38 SECONDARY OIL WATER SEPARATOR, TK-4
A-1 CARBON ADSORBER
A-2 CARBON ADSORBER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NMOC	BAAQMD Condition # 7463, Part 8	Y		carbon replacement upon detection of an outlet NMOC concentration (from A-2) of 6 ppmv	BAAQMD Condition # 7463, Parts 10.c., 11.b., 11.d., and 11.e.	P/D, <u>W, M</u>	<u>Monthly, Weekly, or</u> Daily FID Measure - ment at Carbon Adsorber (outlet) and Records
POC	BAAQMD Condition # 7463, Part 6	Y		Leak Limit for Valves, Flanges, and Pumps of: 100 ppmv of POC above background at 1 cm from any component		N	
Waste-water Through-put Limits	BAAQMD Condition # 7463, Part 5	Y		1200 Gallons/Hour 28,800 Gallons/Day 10,512,000 Gallons/Year	BAAQMD Condition # 7463, Part 11.a.	P/D	Records

Table VII – E
Applicable Limits and Compliance Monitoring Requirements
S-30 AIR STRIPPER
A-3 TO A-6, CARBON ADSORBERS

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Total Organic Compounds (TOC)	BAAQMD 8-47-301 and 8-47-302	Y		control device shall reduce total organic compound emissions to the atmosphere by at least: 90% by weight	BAAQMD 8-47-501.1, 8-47-501.2, and 8-47-601 and BAAQMD Condition # 7463, Parts 10.a.-c. and 11.a.-e.	P/D, <u>W</u> , <u>M</u>	<u>Monthly</u> , <u>Weekly</u> , or Daily FID Measurements at Carbon Adsorbers, Daily Records of Wastewater Throughput and Monthly Records of Water Analyses
NMOC	BAAQMD Condition # 7463, Part 7	Y		carbon replacement upon detection of an outlet NMOC concentration (from A-3 or A-5) that is 10% or more of the inlet NMOC concentration	BAAQMD Condition # 7463, Parts 10.a., 10.b., 11.b., 11.c., and 11.e.	P/D, <u>W</u> , <u>M</u>	<u>Monthly</u> , <u>Weekly</u> , or Daily FID Measurements at Carbon Adsorbers (inlet and outlet) and Records
NMOC	BAAQMD Condition # 7463, Part 8	Y		carbon replacement upon detection of an outlet NMOC concentration (from A-4 or A-6) of 6 ppmv	BAAQMD Condition # 7463, Parts 10.c., 11.b., 11.d., and 11.e.	P/D, <u>W</u> , <u>M</u>	<u>Monthly</u> , <u>Weekly</u> , or Daily FID Measurements at Carbon Adsorbers (outlet) and Records

Table VII – E
Applicable Limits and Compliance Monitoring Requirements
S-30 AIR STRIPPER
A-3 TO A-6, CARBON ADSORBERS

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
POC	BAAQMD Condition # 7463, Part 6	Y		Leak Limit for Valves, Flanges, and Pumps of: 100 ppmv of POC above background at 1 cm from any component		N	
Waste-water Through-put Limits	BAAQMD Condition # 7463, Part 5	Y		1200 Gallons/Hour 28,800 Gallons/Day 10,512,000 Gallons/Year	BAAQMD Condition # 7463, Part 11.a.	P/D	Records