

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT
 1947 Galileo Court, Suite 103; Davis, CA 95618
 Phone (530) 757-3650 Fax (530) 757-3670

FACILITY NUMBER: 05341
SIC CODE: 4953

**AUTHORITY TO CONSTRUCT
 C-09-87
 IS HEREBY GRANTED TO**

**RECOLOGY HAY ROAD
 6426 Hay Road
 Vacaville, CA 95688**

EQUIPMENT LOCATION: 6426 Hay Road; Vacaville, CA

TO CONSTRUCT

PROCESS DESCRIPTION: Municipal solid waste (MSW) landfill fugitive emissions; Proposed modification of P-85-06(a1) to replace the existing control equipment with a single enclosed flare and increase the maximum number of gas collection wells.

EQUIPMENT INVENTORY: MSW landfill not to exceed a total maximum design capacity of 35.6 million cubic yards (17.0 million megagrams)

- **Total Billing: Schedule 8, Misc.** -

CONTROL EQUIPMENT INVENTORY:

Negative pressure landfill gas collection system serving up to 100 collection wells (equipped with a 1500 CFM blower at 30 HP) and a routed to a 45.6 MMBtu/hr enclosed flare with a minimum combustion zone residence time of 0.6 seconds

PERMITTED EMISSION LIMITS:

Pollutant	Daily [lb]	Qtr #1 (Jan 1-Mar 31) [lb]	Qtr #2 (Apr 1-June 30) [lb]	Qtr #3 (July 1-Sept 30) [lb]	Qtr #4 (Oct 1-Dec 31) [lb]	Yearly [tons]
VOC	194.7	17,520	17,714	17,909	17,909	35.53
CO	218.9	19,699	19,918	20,137	20,137	39.95
NO _x	54.7	4,925	4,980	5,034	5,034	9.99
SO _x	78.8	7,095	7,174	7,253	7,253	14.39
PM ₁₀	18.4	1,655	1,673	1,692	1,692	3.36

PERMITTED PROCESS LIMITS:

	Daily	Qtr #1 (Jan 1-Mar 31)	Qtr #2 (Apr 1-June 30)	Qtr #3 (July 1-Sept 30)	Qtr #4 (Oct 1-Dec 31)	Yearly
Municipal Solid Waste Received [tons]	2,400	108,000	109,200	110,400	110,400	438,000
Landfill Gas to Flare [million cubic feet]	2.432	218.9	221.3	223.7	223.7	887.7

The following information is included to inform and assist the Permit Holder in achieving compliance with applicable provisions of Federal, State, and District Rules and Regulations. The following set of referenced regulations are not intended to be either comprehensive or exclusive, nor are they intended to be emission limiting permit conditions, but they are still applicable rules of the District. Occasionally laws are amended. The amended versions of the referenced rules shall be deemed to be in effect. **It is the Permit Holder's responsibility to comply with all applicable Rules and Regulations.**

1. After construction of all listed process and control equipment is complete, as determined by the District, the ATC Holder shall have 45 calendar days to conduct tests and perform other necessary initial adjustments on the equipment. During this time, this Authority to Construct and its conditions shall function as a temporary Permit to Operate. Any operation of the equipment beyond this period without either District receipt of a valid Permit to Operate Notification Card or written extension from the District, will be considered operation without a permit and subject to enforcement action. The ATC Holder shall provide the District, in writing, a notice prior to commencing the 45-day start-up period. [District Rule 3.1, §402]
2. The District requires an inspection of the equipment after completion of the construction and prior to the issuance of the Permit to Operate. [District Rule 3.1, §402]
3. An authorization to construct shall remain in effect only until the application for Permit to Operate is granted or denied; however, such an authorization shall not remain in effect beyond two years from the date of issuance unless the District finds that the time required for construction requires an extension and grants one or more extensions, for a total time not to exceed five years from the date of issuance. [District Rule 3.1, §407]

The following set of conditions are established by the District to provide enforceable operating parameters as authorized by California Health and Safety Code Section 42301 and District Rule 3.1, Section 402. If any of the rules and regulations referenced below are amended subsequent to the issuance date of this permit, resulting in the amended rule differing from or superseding the corresponding condition, then the Permit Holder shall be required to comply with the amended rule or regulation and shall no longer be required to comply with the superseded condition.

4. Solid waste throughput shall not exceed 1,200 tons per day, as averaged on a calendar week basis. [District Rule 3.4]
5. The Permit Holder shall not discharge into the atmosphere from any single source of emissions whatsoever, any air contaminant for a period or periods aggregating more than three (3) minutes in any one hour which is:
 - a. As dark or darker in shade than No. 1 on the Ringelmann Chart; or
 - b. Greater than 20% opacity. [District Rule 3.4]
6. The Permit Holder shall operate the enclosed flare with a minimum combustion zone residence time of 0.6 seconds, and shall equip the flare with automatic temperature controls designed to control the average minimum temperature, on a rolling 3-hour average basis, at or above the minimum temperature established in the initial startup testing. The enclosed flare shall also be equipped with an automatic shutoff gas valve and an automatic re-start system. [District Rule 3.4]
7. The Permit Holder shall determine during the initial startup testing, the minimum flare operating temperature required to achieve compliance with the VOC emission concentration limit. The flare combustion flame temperature shall be measured in units of degrees Fahrenheit ($^{\circ}$ F) and shall be monitored at the most appropriate thermal couple in the exhaust stack as determined through the initial source test. Flame temperature shall be monitored with a continuous reading temperature sensor. [District Rule 3.4]
8. Only landfill gas shall be burned in the flare. No supplemental fuel may be burned in the flare, excluding pilot gas. [District Rule 3.4]
9. A non-resettable, totalizing gaseous fuel flow meter shall be installed and utilized to measure the quantity (in cubic feet) of landfill gas combusted in the flare. The meter shall be accurate to plus or minus five percent and shall be calibrated at least once every twelve (12) months. [District Rule 3.4]
10. The Permit Holder shall maintain a written log of all maintenance work performed that requires the shutdown of the gas collection system. The log shall include a description of work, the date work was performed, and the amount of time needed to complete the maintenance work. Emissions of landfill gas to the atmosphere shall be minimized during each shutdown. [District Rule 3.4]
11. The Permit Holder shall install and maintain such facilities on the flare stack as are necessary for sampling and testing purposes. The number, size, and location of sampling ports shall be in accordance with Air Resources Board Test Method 1. The location and access to the sampling platform shall be in accordance with the General Industry Safety Orders of the State of California. [District Rule 3.4]
12. The hydrogen sulfide (H_2S) content of the landfill gas shall not exceed 195.0 ppmv. [District Rule 3.4]

13. The Permit Holder shall analyze the fuel's higher heating value (wet basis) and sulfur content (as H₂S) at least once every twelve (12) consecutive month period. [District Rule 3.4]
14. The emission concentrations for the flare shall not exceed the following:
 - a. VOC (measured as hexane): 31.4 ppmv @ 3% oxygen;
 - b. CO: 0.200 lb/MMBtu; and
 - c. NO_x (as NO₂): 0.050 lb/MMBtu. [District Rule 3.4]
15. The Permit Holder shall perform a source test on the flare within 45 days of startup and at least once every twelve (12) months thereafter in order to demonstrate compliance with the VOC, CO, and NO_x emission limits. [District Rule 3.4]
16. Source testing shall be conducted using the following test methods:
 - a. VOC - EPA Method 18;
 - b. CO - EPA Method 10 or CARB Method 100;
 - c. NO_x (as NO₂) - EPA Method 7E or CARB Method 100; and
 - d. Stack gas oxygen - EPA Method 3A or CARB Method 100. [District Rule 3.4]
17. The Permit Holder is prohibited from adding any liquid (other than leachate and landfill gas condensate) in a controlled fashion to any waste mass in order to accelerate or enhance the anaerobic biodegradation of the waste. [District Rule 3.4]
18. The Permit Holder shall submit a NMOC report to the District using the procedures specified in 40 CFR Part 60.754(a) at least once every twelve (12) months, except as provided in 40 CFR Part 60.757(b)(1)(ii) or 40 CFR Part 60.757(b)(3). [District Rule 3.4]
19. The District must be notified prior to any emissions testing event (including NMOC related sampling or flare source testing) and a protocol must be submitted for approval 30 days prior to testing. The results of an emissions testing event shall be submitted to the District within 60 days of the test date. The protocol and report shall be mailed to the attention of the Supervising Air Quality Engineer. [District Rule 3.4]
20. Upon achieving a calculated NMOC emission rate of 50 megagrams or greater per year, the Permit Holder shall comply with the requirements of 40 CFR Part 60.752(b)(2). The landfill's NMOC emission rate shall be calculated in accordance with the requirements of 40 CFR Part 60.754(a). [District Rule 3.4]
21. The Permit Holder shall comply with the applicable requirements for active disposal sites for asbestos-containing materials as set forth in 40 CFR Part 61, Subpart M - National Emission Standard for Asbestos. [40 CFR Part 61.140]
22. The Permit Holder shall comply with the applicable requirements for the handling and the disposal of the affected appliances and equipment containing ozone depleting substances, as set forth in 40 CFR Part 82, Subpart F - Recycling and Emission Reduction. [40 CFR Part 82.150]

23. The Permit Holder shall maintain daily records (in tons) of the total amount of MSW accepted at the landfill. [District Rule 3.4]
24. The Permit Holder shall monitor and record on a quarterly basis the cumulative quarterly and annual landfill gas fuel usage (in cubic feet) from the totalizing meter serving the flare. [District Rule 3.4]
25. The Permit Holder shall maintain all records on site for a period of five (5) years from the date of entry and these records shall be made readily available to District personnel upon request. [District Rule 3.8, §302.6(b)]

This permit does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the Health & Safety Codes of the State of California or the Rules and Regulations of the Yolo-Solano Air Quality Management District.

Mat Ehrhardt, P.E.
AIR POLLUTION CONTROL OFFICER

By: _____

Date of Issuance: _____