

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-13-02

IS HEREBY GRANTED TO

RECOLOGY HAY ROAD

6426 Hay Road

Vacaville, CA 95687

EQUIPMENT LOCATION: 6426 Hay Road; Vacaville, CA

TO CONSTRUCT

PROCESS DESCRIPTION: Municipal solid waste (MSW) landfill fugitive emissions; modification of P-85-06(a4) to adjust the operating conditions for the enclosed flare and to increase the process limits for receiving municipal solid waste

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 routed to 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	218.5	19,667	19,885	20,104	20,104	39.88
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	150.0	13,600	13,600	13,600	13,600	27.20
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	216,000	218,400	220,800	220,800	876,000
Landfill Gas to Flare [million cubic feet]	2.432	218.9	221.3	223.7	223.7	887.7
SO _x Emissions [lb]	150.0	13,600	13,600	13,600	13,600	54,400

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.** In the event that the District is named as a defendant in a lawsuit, administrative hearing, or other legal proceeding as a result, in whole or part, of this Authority to Construct/Permit to Operate ("Permit"), the District shall notify the applicant/permit holder ("Permit Holder") in writing within ten (10) calendar days of receiving service of the complaint in such lawsuit. The Permit Holder shall have thirty (30) calendar days from the receipt of such notice from the District to cancel or modify the Permit, and the Permit Holder will have no further obligation to the District. If the Permit Holder does not cancel or modify the Permit within thirty (30) calendar days of receiving such notice from the District, the Permit Holder shall hold harmless and defend the District, its Board members, Hearing Board members, APCO, officers, agents, employees, and representatives from liability for any award, damages, costs, and fees incurred by the District and/or awarded to any plaintiff named in the complaint, excepting loss, injury or damage caused by the negligence or willful misconduct of the District. However, the Permit Holder shall be entitled to assume the defense of the lawsuit at its expense with counsel reasonably satisfactory to both the District and Permit Holder and to lawfully settle and compromise any such lawsuit. Permit Holder shall provide District with the terms of any settlement thirty (30) calendar days prior to executing an agreement or entering into a stipulation. District's agreement to the settlement shall be required when the settlement binds the District to expend un-reimbursed District funds or to take a specified action which is reasonably unacceptable to the District, such as the modification of this Permit or District Rules and Regulations. Should Permit Holder elect not to assume the defense of the lawsuit at its expense, District shall invoice Permit Holder for reimbursement of all reasonable and documented costs related to District providing said defense.

1. The Permit Holder shall submit the Permit Notification Card after completing construction, installation, initial adjustment, or shakedown, and no later than 48 hours after beginning actual operation of the equipment listed in the Authority to Construct (ATC). For modifications of existing permits not requiring a physical change, the Permit Holder shall submit the Permit Notification Card no later than 48 hours after beginning operation of the equipment under the revised conditions of this ATC. The Permit Notification Card serves as the Permit to Operate (PTO) application, while the ATC and

its conditions shall function as a temporary PTO until the final PTO is issued or denied. Operation beyond the shakedown period and the allowable 48 hours of actual operation without the submission of a Permit Notification Card will be considered operation without a valid permit and may be subject to enforcement action. [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. 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 (1) 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]
5. The Permit Holder shall operate the landfill Gas Collection and Control System (GCCS) and route collected gas to the control system continuously except:
 - a. for individual wells involved in well raising provided that new waste is being added or compacted in the immediate vicinity around the well and installed gas collection well extensions are sealed or capped until the raised well is reconnected to a vacuum source, or
 - b. for individual GCCS system components that must be temporarily shut down in order to repair them due to catastrophic events, to connect new GCCS components, to extinguish landfill fires, or to perform construction activities provided that any new components are included in the most recent GCCS design plan and landfill gas emissions are minimized during the shutdown. [Title 17 CCR, Section 95464(b)(1)(A)]
6. The Permit Holder shall operate the GCCS so that there is no landfill gas leak that exceeds 500 ppmv (as methane) at any component under positive pressure. [Title 17 CCR, Section 95464(b)(1)(B)]
7. The GCCS shall be designed and operated to draw all landfill gas toward the VOC control device. [Title 17 CCR, Section 95464(b)(1)(C)]

8. The flare (or other VOC control device) shall reduce methane emissions by 99% (by weight). [Title 17 CCR, Section 95464(b)(2)(A)(1)]
9. 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. The enclosed flare shall also be equipped with an automatic shutoff gas valve and an automatic re-start system. [District Rule 3.4]
10. The minimum flare operating temperature shall be 1,380 degrees Fahrenheit (°F), as determined on a rolling three (3) hour basis. The flare combustion flame temperature shall be measured in units of degrees F and shall be monitored at the thermocouple in the exhaust stack. Flame temperature shall be monitored with a continuous recording temperature sensor, which has an accuracy of $\pm 1\%$ of the temperature range, which is installed, calibrated, maintained, and operated according to manufacturer's specifications. [Title 17 CCR, Section 95469(b)(1)(A) and District Rule 3.4]
11. At least one gas flow rate measuring device, which records the flow to the control device(s) at least every 15 minutes, must be used to monitor the landfill gas control system. [Title 17 CCR, Section 95469(b)(1)(B)]
12. The flare shall operate continuously to control emissions from the landfill gas collection system, except for shutdowns necessary for inspection and maintenance activities or due to mechanical breakdown, or when landfill gas from the landfill gas collection system is fully diverted to another device with a minimum VOC control efficiency of 98% (by weight). [District Rule 3.4]
13. The flare shall be operated within the parameter ranges established during the most recent performance test. [Title 17 CCR, Section 95464(b)(2)(A)(4)]
14. Periods of flare shutdown for inspection and maintenance activities or periods of mechanical breakdown shall not exceed five (5) consecutive days and 240 hours in any calendar year and emission of raw landfill gas to the atmosphere shall be minimized during such periods. Periods during which landfill gas from the landfill gas collection system is fully diverted to another VOC control device shall not be included in the five (5) day or 240 hour limit. [District Rule 3.4]
15. The flare shall be equipped with automatic dampers, an automatic shutdown device, a flame arrester, and continuous recording temperature sensors. [Title 17 CCR, Section 95464(b)(2)(A)(2)]
16. 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]
17. During restart or startup there must be a sufficient flow of pilot gas to the burners to prevent unburned collected methane from being emitted to the atmosphere. [Title 17 CCR, Section 95464(b)(2)(A)(3)]
18. A non-resettable, totalizing gaseous fuel flow meter shall be installed 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]

19. Each wellhead in the GCCS shall be operated under a vacuum except:
 - a. for individual wells involved in well raising provided that new waste is being added or compacted in the immediate vicinity around the well and installed gas collection well extensions are sealed or capped until the raised well is reconnected to a vacuum source
 - b. for individual GCCS system components that must be temporarily shut down in order to repair them due to catastrophic events, to connect new GCCS components, to extinguish landfill fires, or to perform construction activities provided that any new components are included in the most recent design plan and landfill gas emissions are minimized during the shutdown
 - c. for use of a geomembrane or synthetic cover for which acceptable pressure limits for the included wellheads have been developed and included in the GCCS design plan, or
 - d. for decommissioned wells. [Title 17 CCR, Section 95464(c)]

20. No location on the landfill surface may exceed a methane concentration of 500 ppmv (other than non-repeatable, momentary readings) as determined by instantaneous surface emissions monitoring, or an average of 25 ppmv as determined by integrated surface emissions monitoring except:
 - a. for individual wells involved in well raising provided that new waste is being added or compacted in the immediate vicinity around the well and installed gas collection well extensions are sealed or capped until the raised well is reconnected to a vacuum source
 - b. for individual GCCS system components that must be temporarily shut down in order to repair them due to catastrophic events, to connect new GCCS components, to extinguish landfill fires, or to perform construction activities provided that any new components are included in the most recent design plan and landfill gas emissions are minimized during the shutdown
 - c. for the working face of the landfill, or
 - d. for areas of the landfill surface where the landfill cover material has been removed and refuse has been exposed for the purpose of installing, expanding, replacing, or repairing components of the landfill gas, leachate, or gas condensate collection and removal system, or for law enforcement activities requiring excavation. [Title 17 CCR, Section 95465]

21. Components containing landfill gas and under positive pressure must be monitored quarterly for leaks. Any component leak must be tagged and repaired within ten (10) calendar days. [Title 17 CCR, Section 95469(b)(3)]

22. 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]

23. 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]

24. The Permit Holder shall analyze the fuel's hydrogen sulfide (H₂S) content at least once every 30 consecutive calendar days and shall use the results of the analysis to calculate and record the SO_x emissions for the corresponding time period. The calculation methodology shall be approved by the District and shall assume that 100% of the sulfur from H₂S is converted and emitted as SO_x. [District Rule 3.4]
25. The Permit Holder shall analyze the fuel's higher heating value (wet basis) at least once every twelve (12) consecutive month period. [District Rule 3.4]
26. The Permit Holder shall calculate the landfill gas heat input capacity using:
Heat Input Capacity = SCFM * 60 min/1hr * CE * GHV * 1 MMBtu/1,000,000 Btu
Where:
SCFM = methane gas generation, standard cubic feet per minute,
CE = landfill gas collection efficiency, 75%, and
GHV = gross heating value of methane, 1,012 Btu/scf. [Title 17 CCR, Section 95470(b)(5)]
27. 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]
28. The Permit Holder shall perform a source test on the flare at least once every twelve (12) months in order to demonstrate compliance with the VOC, CO and NO_x emission limits. [District Rule 3.4]
29. 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]
30. Unless otherwise approved by the APCO, EPA Method 25, 25A, 25C, or 18 shall be used to determine the efficiency of the control device using the formula:
Destruction efficiency = [1 – (mass of methane at control device outlet / mass of methane at control device inlet)] x 100%. [Title 17 CCR, Section 95471(f)(1)]
31. 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]
32. The Permit Holder shall monitor each individual wellhead monthly to determine the gauge pressure. If there is any positive pressure reading other than as provided for well raising or repairs or temporary shutdowns of GCCS components in Title 17 CCR Section 95464 (d) and (e) the Permit Holder shall initiate corrective action within five (5) calendar days of the positive pressure measurement. If the problem cannot be corrected

within fifteen (15) days of the date the positive pressure was first measured, the owner or operator must initiate further corrective action. Corrective actions must be completed and any new wells must be operating with 120 days of the date the positive pressure was first measured. [Title 17 CCR, Section 95469(c)]

33. Gauge pressure shall be determined using a hand-held manometer, magnahelic gauge, or other pressure measuring device approved by the APCO that is calibrated and operated in accordance with manufacturer's specifications. [Title 17 CCR, Section 95471(g)]
34. Any instrument used for the measurement of methane must be a gas detector or other equivalent instrument approved by the APCO that meets the calibration, specifications, and performance criteria of EPA Reference Method 21, Determination of Volatile Organic Compound Leaks. For the purposes of demonstrating compliance with this permit methane replaces all references to volatile organic compounds (VOC) in Method 21 and methane shall be used as the calibration gas for the detector. [Title 17 CCR, Section 95471(a)]
35. In conducting measurements of landfill surface methane concentration the entire landfill must be divided into individually identified 50,000 square foot grids. The grids must be used for both instantaneous and integrated surface emissions monitoring. Testing must be performed by holding the hydrocarbon detector's probe within 3 inches of the landfill surface while traversing the grid. The walking pattern must be no more than a 25-foot spacing interval and must traverse each monitoring grid. If there are no exceedances of the surface methane concentration standards of this permit after any four (4) consecutive quarterly monitoring periods, the walking patten spacing may be increased to 100-foot intervals. The Permit Holder must return to a 25-foot spacing interval upon any exceedances that cannot be remediated within ten (10) calendar days or upon exceedances detected during a compliance inspection. Surface testing must be terminated when the average wind speed exceeds five (5) miles per hour or the instantaneous wind speed exceeds ten (10) miles per hour. The APCO may approve alternatives to this wind speed surface testing termination for landfills consistently having measured winds in excess of these specified limits. Average wind speed must be determined on a 15-minute average using an on-site anemometer with a continuous recorder for the entire duration of the monitoring event. Surface emissions testing must be conducted only when there has been no measurable precipitation in the preceding seventy-two (72) hours. [Title 17 CCR, Section 95471(c)(1)]
36. In conducting instantaneous surface emissions monitoring the Permit Holder shall record any instantaneous readings of methane 200 ppmv or greater (other than non-repeatable, momentary readings). Surface areas of the landfill that exceed a methane concentration of 500 ppmv must be marked and remediated as required by this permit. The wind speed must be recorded during the sampling period. Landfill surface areas with cover penetrations, distressed vegetation, cracks or seeps must be inspected visually and with a hydrocarbon detector. [Title 17 CCR, Section 95471(c)(2)]
37. In conducting integrated surface emissions monitoring the Permit Holder shall record readings and then average them for each grid. Individual monitoring grids that exceed an average methane concentration of 25 ppmv must be identified and remediated as required by this permit. The wind speed must be recorded during the sampling period. [Title 17 CCR, Section 95471(c)(3)]

38. When any monitoring reading exceeds the instantaneous surface methane concentration limit the Permit Holder shall record the date, location, and value of each exceedance, along with re-test dates and results. The location of each exceedance must be clearly marked and identified on a topographic map of the landfill, drawn to scale with the location of both the grids and the gas collection system clearly identified. The Permit Holder shall take corrective action and re-monitor the location within ten (10) calendar days of the measured exceedance. If re-monitoring shows a second exceedance, additional corrective action must be taken and the location re-monitored again no later than ten (10) calendar days of the second exceedance. If the re-monitoring shows a third exceedance the Permit Holder shall install a new or replacement well as determined to achieve compliance no later than 120 days after detecting the third exceedance. [Title 17 CCR, Section 95469(a)(1)(A) and (B)]
39. When any monitoring reading exceeds the integrated surface methane concentration limit the Permit Holder shall record the average surface concentration for each grid along with re-test dates and results. The location of the grids and the gas collection system must be clearly marked and identified on a topographic map of the landfill drawn to scale. The Permit Holder shall take corrective action and re-monitor the location within ten (10) calendar days of the measured exceedance. If re-monitoring shows a second exceedance, additional corrective action must be taken and the location re-monitored again no later than ten (10) calendar days of the second exceedance. If the re-monitoring shows a third exceedance the Permit Holder shall install a new or replacement well as determined to achieve compliance no later than 120 days after detecting the third exceedance. [Title 17 CCR, Section 95469(a)(2)(A) and (B)]
40. The Permit Holder shall conduct instantaneous and integrated monitoring of surface methane concentrations every calendar quarter. If the landfill has no monitored exceedances of the surface methane concentration limits specified in this permit after four consecutive quarterly monitoring periods, then any closed or inactive areas may be monitored annually. Any exceedances detected during annual monitoring that cannot be remediated within ten (10) calendar days or any exceedances detected during any compliance inspections will result in a return to quarterly monitoring of the location. [Title 17 CCR, Section 95469(a), Section 95469(a)(1)(C) and (D), and Section 95469(2)(C) and (D)]
41. The Permit Holder shall calculate a VOC emission rate for the landfill annually until such time as the calculated VOC emission rate is equal to or greater than 50 megagrams per year, or until the landfill is closed. If the calculated VOC emission rate is less than 50 megagrams per year, the Permit Holder shall submit an annual emission report to the APCO. If the emission rate is equal to or greater than 50 megagrams per year, the Permit Holder shall install a collection and control system in compliance with 40 CFR 60.752(b)(2). If the landfill is permanently closed, the Permit Holder shall submit a closure notification to the APCO as provided in 40 CFR 60.757(d). [40 CFR 60.752(b)(1)]
42. The Permit Holder shall calculate the VOC emission rate using either:
- a. $M_{VOC} = \sum_{i=1}^n 2 k L_o M_i (e^{-kt_i})(C_{VOC})(3.6 \times 10^{-9})$, if the year-to-year solid waste acceptance rate is known
 - or

- b. $M_{VOC} = 2 L_o R (e^{-kc} - e^{-kt})(C_{VOC})(3.6 \times 10^{-9})$, if the year-to-year solid waste acceptance rate is unknown, Where:

M_{VOC} = mass emission rate of VOC, megagrams per year,
 M_i = mass of solid waste in the i th section, megagrams,
 L_o = methane generation potential, cubic meters per megagram solid waste = 170,
 k = methane generation rate constant, $\text{year}^{-1} = 0.05$ (0.02 for landfills located where the thirty year annual average precipitation is less than 25 inches, as measured at the nearest representative official meteorologic site),
 t = age of landfill at gas collection system installation plus the intended time of use of the system, years,
 t_i = age of i th section, years,
 R = average annual acceptance rate, megagrams per year (the mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R if documentation of the nature and amount of such waste is maintained),
 c = time since closure, years; for active landfill $c = 0$,
 C_{VOC} = VOC concentration, parts per million by volume as hexane = 4,000. [40 CFR 60.754(a)(1)]

43. The District must be notified prior to any emissions testing event (including VOC 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]
44. The Permit Holder shall operate and maintain the affected source at all times, including periods of startup, shutdown, and malfunction, in a manner consistent with safety and good air pollution control practices. During a period of startup, shutdown, or malfunction the Permit Holder shall reduce emissions to the greatest extent which is consistent with safety and good air pollution control practices. The Permit Holder shall develop a written startup, shutdown, and malfunction plan that details procedures for operating and maintaining the source during such periods. The Permit Holder must maintain any prior versions of the plan for the same period as other required records. [40 CFR 63.6(e) and Rule 3.4]
45. 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]
46. 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]
47. The Permit Holder may request alternatives to the compliance measures, monitoring requirements, test methods, and procedures of Sections 95464, 95469, and 95471 of Title

17 of the California Code of Regulations by submitting a written application to the APCO. [Title 17 CCR, Section 95468]

48. The Permit Holder shall submit an annual report to the APCO for the period of January 1 through December 31 by March 15 of the following year. The report must contain the following information:
- a. landfill name, owner and operator, address, and Solid Waste Information System (SWIS) identification number,
 - b. total volume of landfill gas collected (in standard cubic feet),
 - c. average composition of the landfill gas collected over the reporting period (reported in % methane and % carbon dioxide),
 - d. emission control device type, year of installation, rating, fuel type, and total amount of landfill gas combusted in each control device,
 - e. the date that the GCCS was installed and in full operation,
 - f. the % methane destruction efficiency of each control device,
 - g. type and amount of pilot fuels burned in each control device,
 - h. total volume of landfill gas shipped off-site, the composition of the landfill gas collected (reported in % methane and % carbon dioxide by volume), and the recipient of the gas,
 - i. the most recent topographic map of the site showing the areas with final cover and a geomembrane and the areas with final cover without a geomembrane with corresponding percentages over the landfill surface, and
 - j. gas collection or control system downtime required to be recorded, expected gas generation flow rate, landfill surface methane concentrations required to be recorded, positive wellhead gauge pressure measurements required to be recorded, annual solid waste acceptance rate and the current amount of waste-in-place, source test results, and equipment monitoring parameters required to be recorded including periods of operation during which the parameter boundaries established during the most recent source test are exceeded. [Title 17 CCR, Section 95470(b)(3)]
49. The Permit Holder shall maintain daily records (in tons) of the total amount of MSW accepted at the landfill. [District Rule 3.4]
50. 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]
51. The Permit Holder must maintain records of each startup, shutdown, or malfunction in the operation of the landfill gas collection system of the VOC control device (and any periods during which a required monitoring device is inoperative) including the date and duration of the event, the actions taken, and whether or not such actions are consistent with the startup, shutdown, or malfunction plan. The Permit Holder must also maintain records of all maintenance performed on the air pollution control and monitoring equipment. [40 CFR 60.7(b), 40 CFR 63.6(b)(2)(i)-(v), 40 CFR 63.10(d)(5), and Rule 3.4]
52. The Permit Holder shall maintain the following records:
- a. all gas collection system downtime exceeding five (5) calendar days, including individual well shutdown and disconnection times, and the reason for the

- downtime,
 - b. all emission control system downtime in excess of one hour, the reason for the downtime, and the length of time the gas control system was shutdown,
 - c. expected gas generation flow rate calculations,
 - d. all instantaneous landfill surface readings of 200 ppmv of methane or greater, all leaks from components under positive pressure greater than 500 ppmv (as methane) , all instantaneous surface monitoring readings greater than 500 ppmv, all integrated surface monitoring readings greater than 25 ppmv, the location of the leak (or affected grid), leak concentration in ppmv, date and time of measurement, the action taken to repair the leak, date of repair, date of any required re-monitoring and the re-monitored concentration in ppmv, wind speed during surface sampling, and the installation date and location of each well installed in a GCCS expansion,
 - e. records of any positive wellhead gauge pressure measurements, the date of the measurements, the well identification number, and the corrective action taken,
 - f. annual solid waste acceptance rate and current amount of waste-in-place,
 - g. records of the nature, location, amount, and date of deposition of non-degradable waste for any landfill areas excluded from the GCCS,
 - h. results of any source tests,
 - i. records describing the mitigation measures taken to prevent the release of methane or other emission into the atmosphere: when solid waste was brought to the surface during the installation or preparation of wells, piping, or other equipment; during repairs or temporary shutdown of gas collection system components; or when solid waste was excavated and moved,
 - j. records of any construction activities including: a description of the actions being taken, the areas of the landfill affected by these actions, the reason the actions are required, and any landfill gas collection system components affected by these actions; construction start and finish dates, projected equipment installation dates, and projected shut down times for individual gas collection system components; a description of the mitigation measures taken to minimize methane emissions and other potential air quality impacts, and
 - k. records of the emission control device operating parameters required to be monitored as well as periods of operation during which the parameter boundaries established during the most recent source test are exceeded including: all three (3) hour periods of operation during which the average flare temperature was more than 50 °F below the average combustion temperature during the most recent source test. [Title 17 CCR, Section 95470(a)(1)]
53. The Permit Holder shall maintain the following records for the life of the emissions control device:
- a. the control device vendor specifications,
 - b. the gas generation flow rate measured during the initial source test, and
 - c. the percent reduction of methane achieved by the control device during the initial source test. [Title 17 CCR, Section 95470(a)(2)]
54. The Permit Holder shall keep for at least five (5) years up-to-date, readily accessible, on-site records of the initial design capacity report, the current amount of solid waste in place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within four (4) hours. [40 CFR 60.758(a) and Rule 3.4]

55. 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)]
56. The Permit Holder shall submit a VOC emission rate report to the APCO at least once every twelve (12) calendar months. The report shall contain an annual estimate of the VOC emission rate calculated according to 40 CFR 60.754(a)(1). If the estimated VOC emission rate is less than 50 megagrams per year in each of the next five (5) consecutive years, the Permit Holder may elect to submit an estimate of the VOC emission rate for the next five (5) year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the five (5) years for which a VOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided. This estimate shall be revised at least once every five (5) years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five (5) year estimate, a revised five (5) year estimate shall be submitted to the APCO. The revised estimate shall cover the five (5) year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate. The report shall include all the data, calculations, sample reports, and measurements used to estimate the annual of five (5) year emissions. [40 CFR 60.757(b) and Rule 3.4]
57. The Permit Holder shall submit a Closure Notification to the APCO within thirty (30) days of waste acceptance cessation. The Closure Notification must include the last day solid waste was accepted, the anticipated closure date of the landfill, and the estimated waste-in-place. The APCO may request additional information to confirm that the landfill has been permanently closed. [Title 17 CCR, Section 95470(b)(1)]
58. Upon closure of the landfill the GCCS may be capped or removed provided:
 - a. the GCCS was in operation for at least 15 years, unless the Permit Holder can demonstrate to the satisfaction of the APCO that due to declining methane rates the landfill will be unable to operate the gas collection and control system for a 15-year period,
 - b. surface methane concentration measurements do not exceed the limits specified in this permit, and
 - c. the Permit Holder submits an Equipment Removal Report as required by this permit. [Title 17 CCR, Section 95467]
59. The Permit Holder shall submit a GCCS Equipment Removal Report to the APCO thirty (30) days prior to well capping, removal or cessation of operation of the gas collection, treatment, or control system equipment. The report must contain all of the following information:
 - a. a copy of the Closure Notification required by Title 17 CCR, Section 95470(b)(1),
 - b. a copy of the documentation demonstrating that the gas collection and control system has been installed and operated for a minimum of 15 years, unless the Permit Holder can demonstrate to the satisfaction of the APCO that due to declining methane rates the landfill is unable to operate the gas collection and control system for a 15-year period, and
 - c. surface emissions monitoring results needed to verify that landfill surface methane concentrations do not exceed either the instantaneous or integrated monitoring limits. [Title 17 CCR, Section 95470(b)(2)]

60. The Permit Holder shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. [40 CFR 60.7(f)]
61. Any report, or information submitted by the Permit Holder must contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification required under this subarticle, must state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. [Title 17 CCR, Section 95470(b)(6) and Rule 3.4]
62. Prior to implementing ATC C-13-02 into a Permit to Operate, the Permit Holder must surrender the following quantity of Emission Reduction Credits (ERCs). [District Rule 3.4]

ERCs generated on-site (1.0 to 1.0 ratio)

Pollutant	1 st Quarter [lb]	2 nd Quarter [lb]	3 rd Quarter [lb]	4 th Quarter [lb]
VOC	2151	2175	2199	2199

ERCs generated within 15-mile radius (1.2 to 1.0 ratio)

Pollutant	1 st Quarter [lb]	2 nd Quarter [lb]	3 rd Quarter [lb]	4 th Quarter [lb]
VOC	2581	2610	2639	2639

ERCs generated greater than 15 miles but within 50 mile-radius (1.5 to 1.0 ratio)

Pollutant	1 st Quarter [lb]	2 nd Quarter [lb]	3 rd Quarter [lb]	4 th Quarter [lb]
VOC	3227	3263	3299	3299

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: _____

ADM