

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION
MEETING OF JUNE 8-9, 2016
BISHOP**

ITEM 13

Revised Waste Discharge Requirements for Athens Services American Organics Victor Valley Regional Composting Facility, San Bernardino County, WDID 6B369912001

CHRONOLOGY

July 12, 2000	Waste Discharge Requirements – Adopted (Board Order No. 6-00-65)
June 12, 2002	Amended Waste Discharge Requirements – Adopted (Board Order No. R6V-2000-65A1)

BACKGROUND

The Water Board is requested to revise Board Order No. 6-00-65 (as amended), which currently regulates the American Organics Victor Valley Regional Composting Facility. Revising the Board Order is Water Board staff’s recommended response to recent waste characterization information that demonstrates the material discharged to the onsite storm water pond is a designated waste and should be contained in a Class II waste management unit.

ISSUES

Should the Water Board adopt Revised Waste Discharge Requirements (WDRs) for the American Organics Victor Valley Regional Composting Facility to allow construction of a surface impoundment and waste piles to be compliant with the requirements of California Code of Regulations, title 27?

DISCUSSION

Athens Services operates a compost facility on land owned by Victor Valley Wastewater Reclamation Authority. The waste piles (composting pads), surface impoundment, the finished product storage area, and the receiving, grinding, and screening area are referred to as the Facility. The Facility is located in the City of Victorville in San Bernardino County.

Wastewater from the Facility currently drains to an unlined stormwater detention pond. Recent waste characterization efforts demonstrate that the material discharged to the pond is a designated waste and should be contained in a Class II waste management unit, in compliance with California Code of Regulations, title 27. The WDRs are being revised to allow the construction to retrofit the existing composting area as waste piles and the stormwater detention pond as a Class II surface impoundment. Water Board staff have evaluated the design and conclude the proposal is protective of water quality.

Therefore, it is in the public’s interest to revise Board Order No. 6-00-65 (as amended) and adopt Board Order No. R6V-2016-PROPOSED.

PUBLIC OUTREACH/INPUT

Water Board staff contacted Athens Services representatives and other interested persons to inform them of staff's proposal to revise the waste discharge requirements. Comments were received on Board Order No. R6V-2016-TENTATIVE from the Mojave Desert Air Quality Management District. These comments and Water Board staff's responses are included as Enclosure 3. No comments opposing the Board Order were received.

RECOMMENDATION

Adoption of Order as proposed.

ENCLOSURE	ITEM	BATES NUMBER
1	Board Order No. R6V-2016-PROPOSED	13-5
2	Staff Presentation	13-101
3	Comments on Tentative Order and Board Staff Responses to Comments	13-115

ENCLOSURE 1

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**BOARD ORDER NO. R6V-2016-PROPOSED
WDID NO. 6B369912001**

REVISED WASTE DISCHARGE REQUIREMENTS

FOR

**ATHENS SERVICES
AMERICAN ORGANICS VICTOR VALLEY REGIONAL COMPOSTING FACILITY**

San Bernardino County

The California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. Dischargers

On December 29, 2015, Athens Services submitted a revised Report of Waste Discharge (RWD) for the American Organics Victor Valley Regional Composting Facility (Facility). Victor Valley Wastewater Reclamation Authority (VWVRA) owns the land underlying the Facility. For the purpose of these Waste Discharge Requirements (Order), Athens Services and VWVRA are referred to as the "Dischargers."

2. Definitions

Compost-specific terms used within this Order are included in Attachment A, which is made part of this Order.

3. Facility

The Dischargers currently operate a 24-acre composting Facility in the City of Victorville as shown on Attachment B, which is made part of this Order. The purpose of the Facility is to recycle green material, manure, food material, agricultural solid waste, paper waste, drywall, liquid waste, and construction and demolition material into compost.

Material collected on site for composting will be processed at the receiving area. The processed material will be placed in piles for initiation of composting. The composting process includes aeration through either turning on a periodic basis or controlling the air flow through the piles through positive or negative air pressure. The objective is to maintain the active compost under aerobic conditions at a temperature of 131 degrees Fahrenheit, or higher, for a pathogen reduction period of 15 days or longer. When the compost process is complete, the piles will be processed through screening equipment to remove larger wood

pieces, and the finished compost product will be placed in a storage area for sale.

The composting pad, which is classified as a Class II waste pile, will be sloped such that all stormwater within the Facility will run off through the composting area and collect in a surface impoundment. The Facility will be completely bermed such that stormwater from a 100-year, 24-hour storm event will not run on to the Facility. Stormwater that falls on the Facility, including that which is commingled with the constituents transported from the composting piles, will be discharged to and contained in the Class II surface impoundment. Water collected within the surface impoundment may be allowed to evaporate or will be pumped out and recycled within the composting process on the Facility.

For the purposes of this Order, the Facility consists of 1) office space; 2) parking area; 3) scale; 4) composting pad area (waste pile); 5) surface impoundment; 6) receiving, grinding, and screening area; 7) equipment; 8) finished product storage area; and 9) any related piping and appurtenances.

4. Order History

Board Order No. 6-00-65 was adopted on July 12, 2000, for windrow composting activities at the Facility. Board Order No. 6-00-65 was amended on June 12, 2002, to allow the Dischargers to accept Class A biosolids in the composting process.

5. Facility Location

The Facility is located in San Bernardino County in the northern portion of Victorville on Shay Road (Attachment C, which is made part of this Order).

6. Waste Classification

The materials to be stored at the Facility include green waste, bulking agents and amendments, and in-process and finished compost. The typical daily tonnage to be received on any single day will be 400 tons per day (tpd) of green material; 50 tpd of drywall, agricultural solid waste, and biosolids; 250 tpd of pre-consumer, post-consumer, and mixed waste; and 200 tpd of liquid waste. The maximum volume of compost to be produced on Facility is not to exceed 700 tpd or 214,000 tons per year.

All residual solids and liquids generated during composting operations, and precipitation that has come in contact with bulking agents, amendments, green material, or compost, are defined as "wastes," pursuant to California Water Code (Water Code), section 13050, subdivision (d). The composting pad is regulated as a waste pile pursuant to CCR, title 27, section 20310, *et seq.* The material

discharged to the waste pile is classified as a designated waste. Designated waste is defined in Water Code, section 13173, subdivision (b), as “nonhazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state as contained in the appropriate state water quality control plan.” The predicted quality of material to be discharged to the waste pile is included in Attachment D. These data were derived by taking samples of representative material, filtering the sample, and analyzing the filtrate to determine the concentration of chemical constituents in the filtered liquid, thus providing empirical analytical data for the leachate using the Waste Extraction Test per CCR, title 22, Division 4.5, Chapter 11, Article 5, Appendix II. The waste discharged to the surface impoundment includes leachate generated during composting operations and stormwater commingled with constituents mobilized from material stored on the surface of the Facility. The wastewater is classified as a liquid designated waste. The predicted quality of wastewater discharged to the surface impoundment is included in Attachment D. These data were derived in the same manner as described for the characterization of the material to be discharged to the waste pile.

7. Waste Management Unit Classification

The waste pile and surface impoundment are classified as Class II waste management units, as defined in CCR, title 27, section 20250.

8. Description of the Waste Pile

The waste pile will be an area of prepared subgrade of no less than 12 inches of engineered native material. The engineered pad will be moisture conditioned and compacted to a minimum relative compaction of 90 percent per American Society of Testing and Materials (ASTM) Test Method D1557. The engineered pad will be sloped to prevent ponding such that all stormwater will flow to the surface impoundment. An additional area for aerated static pile is proposed to be constructed of concrete with a drain and liner system to collect any waste that could runoff from the piles. The collected waste can be reused for moisture in the piles, used for dust control at the Facility, or discharged to the surface impoundment.

In order for the Facility to continue operating while construction activities are ongoing, the waste pile is proposed to be constructed in phases. The initial phases will include improvements to the engineered soil pad at the Facility for windrow composting and construction of the surface impoundment (described further in Finding 9, below). The subsequent phases will include construction of a lined concrete pad for aerated static pile composting.

9. Description of the Surface Impoundment

Stormwater that falls onto the Facility and commingles with constituents from the materials stored on the ground surface of the Facility will be discharged into a lined Class II surface impoundment equipped with leak detection monitoring sumps (LDMS). The surface impoundment must contain the maximum volume of water anticipated to run off from the Facility for a 1,000-year, 24-hour event, in addition to the volume of rain which falls onto the surface impoundment areas in a 1,000-year, 24-hour storm event, while maintaining two feet of freeboard.

Residual solids, if present, are to be removed from the surface impoundment as part of routine maintenance. Solids removed may be used as a bulking agent to the feedstock materials used during the composting operations at the Facility or may be disposed at a waste management facility appropriate for solids disposal, which must be based upon the analytical characterization results for the solids. Leachate from the Facility may consist of liquid constituents discharged from the feedstock materials, in-process and finished compost stored on the composting pad of the Facility during the composting process. Feedstock materials include green waste and bulking agents or amendments.

Water collected in the surface impoundment may be allowed to evaporate, or may be pumped out and reused within the composting process at the Facility.

The liner system of the surface impoundment is proposed to be constructed in ascending order as follows:

- a. A 6-inch re-compacted native subgrade below the bottom liner, which is moisture conditioned and compacted to 90 percent of the maximum dry density per ASTM Standard D1557.
- b. A leak detection monitoring sump (LDMS) under the lower-most part of the surface impoundment that consists of a composite liner of geosynthetic clay and 60-mil high density polyethylene (HDPE) with a non-woven geotextile and granular drainage material.
- c. A geosynthetic clay and 60-mil HDPE liner with a filter fabric and ultraviolet protection.

The geomembranes will be installed, tested, and inspected in accordance with an accepted Construction Quality Assurance Plan.

Wastewater generated primarily as a result of stormwater runoff through the composting materials must be disposed to the Class II surface impoundment, designed to completely contain the waste. The surface impoundment is to be

lined, as noted above, and must have no less than 1×10^{-6} cm/sec permeability. The surface impoundment will be equipped with a LDMS directly underneath the deepest portion of the surface impoundment. The LDMS is designed to monitor the liner of the surface impoundment, and to provide the earliest possible detection of a leak in the liner of the surface impoundment. The surface impoundment will be equipped with an unsaturated zone monitoring system beneath the LDMS. The surface impoundment, as specified in CCR, title 27, section 20320, Table 4.1, must withstand seismic shaking from a maximum credible earthquake, as defined in CCR, title 27, section 20164. The Dischargers must demonstrate in the design plans that the Facility will be able to withstand seismic shaking from a maximum credible earthquake. A map of the project Facility, including the surface impoundment, is shown in Attachment C.

10. Engineered Alternative to Prescriptive Standard for the Waste Pile and Surface Impoundment

California Code of Regulations (CCR), title 27, includes prescriptive standards for waste management unit construction, and allows for engineered alternatives to such standards. CCR, title 27, section 20080, subdivision (b), requires that alternatives shall only be approved where the Dischargers demonstrate that: (1) the construction of prescriptive standard is not feasible because it is unreasonably and unnecessarily burdensome and will cost substantially more than alternatives, which meet the criteria, or is impractical and will not promote attainment of applicable performance standards; and (2) there is a specific engineered alternative that is consistent with the performance goal of the prescriptive standard and affords equivalent protection against water quality impairment.

The Dischargers proposed engineered alternatives to the CCR, title 27 prescriptive standards for the construction and monitoring of the Class II waste pile and surface impoundment.

The prescriptive standard for construction of a waste pile requires either a clay liner or a synthetic liner and a leachate collection and removal system. The Dischargers propose an engineered alternative for the waste pile which includes an alternative for the construction and monitoring of the engineered pad. Construction of a prescriptive clay liner is not feasible at the Facility as under expected conditions and operations of the Facility, with repeated wetting and drying cycles, a prescriptive compacted clay liner would desiccate and crack. The cracking would compromise a clay liner and not achieve the required performance standard. An alternate prescriptive synthetic liner is also considered infeasible due to damages expected to be received from ultraviolet rays and from equipment to be used during composting processes, and would, thus, not achieve the performance standard for water quality. Additionally, the

cost of the prescriptive synthetic liner is unnecessarily burdensome, based on estimates of synthetic liner costs.

The engineered alternative for the proposed construction of the windrow portion of the waste pile pad is a pad composed of compacted native soil. The Dischargers have proposed to slope the pad such that all stormwater and leachate will flow into a Class II surface impoundment. As an alternative to unsaturated zone monitoring below the waste pile pad, the Dischargers have proposed to collect soil samples through the pad itself to native soils beneath the pad to show that the pad and surrounding native environment is not affected by the Facility processes and provides proper containment. Annual sampling of the pad and soils beneath the pad negates the need for a leachate collection and removal system to be installed and monitored under the waste pile.

The engineered alternative for the proposed construction of the aerated static pile portion of the waste pile pad consists of a concrete slab on top of compacted native soil. Because sampling through the concrete is impractical, the Discharger has proposed to install a double-lined system under the concrete area with two HDPE liners and a leachate collection system with accessible sampling ports to determine if there has been a release from the concrete area to the underlying environment.

Water Board staff has evaluated the proposed alternatives and has determined that the alternatives meets the CCR, title 27 requirements.

The prescriptive standard for a surface impoundment is a single clay liner or a double-lined system with a leachate collection and removal system, and a hydraulic conductivity of 1×10^{-6} cm/sec. The Discharger proposes a prescriptive double-lined system with a leachate collection and removal system, or leak detection monitoring sump (LDMS), for construction of the surface impoundment. Construction of a prescriptive clay liner is not feasible at this Facility as under expected conditions and operations of the Facility with repeated wetting and drying cycles, a prescriptive compacted clay liner would desiccate and crack. The cracking would compromise the clay liner and not achieve the performance standard. The liner system includes a layer of powdered bentonite clay, which is expected to mitigate downward migration of water from the surface impoundment. The bentonite clay has a hydraulic conductivity of no greater than 1×10^{-8} cm/sec, which provides a hydraulic conductivity that is two orders of magnitude lower than prescriptive liner requirements and, thus, is more protective. LDMS, which is a lined sump installed below the lowest portion of the surface impoundment, allows for detection of the vertical migration of liquids and removal of a water sample for testing.

11. Dust Control and Recycled Water Use

The Dischargers use tertiary-treated disinfected municipal wastewater treatment plant effluent from VVWRA or the liquid from the surface impoundment for dust suppression, as necessary, to prevent the release of airborne particulates from the Facility. The effluent from VVWRA or the liquid in the surface impoundment may also be used to moisten the compost material in the piles as necessary.

12. Authorized Disposal Site

The authorized disposal locations for wastewater at the Facility is the surface impoundment.

13. Technical and Monitoring Reports

The Dischargers must submit technical and monitoring reports in compliance with this Order as described in Monitoring and Reporting Program (MRP) No. R6V-2016-PROP, which is attached to and made part of this Order.

14. Water Quality Protection Standard

The Water Quality Protection Standard (WQPS) consists of monitoring parameters, constituents of concern (COCs), concentration limits, Monitoring Points, and the Point of Compliance. The WQPS applies over the active life of the Facility, closure and post-closure maintenance period, and the compliance period. The constituents of concern, Monitoring Points, and Point of Compliance are described in MRP No. R6V-2016-PROP. This Order includes a time schedule for the Dischargers to propose concentration limits for all COCs.

15. Statistical and Non-Statistical Methods

Statistical and non-statistical analyses of groundwater monitoring data are necessary for the earliest possible detection of measurably significant evidence of a release of waste from the Facility. CCR, title 27, section 20415, subdivision (e)(7), requires statistical data analyses to determine when there is "measurably significant" evidence of a release from the Unit. CCR, title 27, section 20415, subdivision (e)(8) allows non-statistical data analyses methods that can achieve the goal of the monitoring program at least as well as the most appropriate statistical method. MRP No. R6V-2016-PROP includes methods for statistical analyses. The monitoring parameters listed in MRP No. R6V-2016-PROP are believed to be the best indicators of a release from the Facility.

16. Detection Monitoring Program

Pursuant to CCR, title 27, sections 20385 and 20420, the Dischargers have proposed a detection monitoring program (DMP) for the Facility. The DMP for the Facility consists of monitoring: (1) the composting pad (as an accepted engineered alternative to monitoring the unsaturated zone at the waste pile), (2) the LDMS (as part of the system to monitor leaks from the surface impoundment), (3) unsaturated zone monitoring beneath the surface impoundment (to be proposed by the Dischargers), and (4) groundwater monitoring wells for the presence of constituents of concern from the Facility. The program to monitor the waste pile pad, LDMS, and water-bearing media for evidence of a release, as well as the monitoring frequency, is specified in MRP No. R6V-2016-PROP. This Order requires the Dischargers to submit a program to monitor the unsaturated zone of the surface impoundment **no later than 60 days** following Water Board acceptance of the Final Design Plan (see section V.C.3 of this Order).

17. Evaluation Monitoring Program

An evaluation monitoring program (EMP) may be required, pursuant to CCR, title 27, sections 20385 and 20425, in order to evaluate evidence of a release if detection monitoring and verification procedures indicate evidence of a release. The Dischargers must monitor groundwater and the unsaturated zone to evaluate changes in water quality and/or physical parameters that indicate a release from the Facility. If the EMP confirms measurably significant evidence of a release, then the Dischargers must submit an engineering feasibility study for a corrective action program within 180 days of determination pursuant to CCR, title 27, section 20425, and MRP No. R6V-2016-PROP.

18. Corrective Action Program

A corrective action program (CAP) to remediate released wastes from the Facility may be required pursuant to CCR, title 27, sections 20385 and 20430, if results of an EMP prove the presence of a measurably significant release from the Facility.

19. Waste Pile and Surface Impoundment Closure Specifications

The Dischargers plan to clean-close the waste pile, pursuant to CCR, title 27, section 21410, and the surface impoundment, pursuant to CCR, title 27, section 21400, at closure, at which time any residual water remaining in the surface impoundment will be allowed to evaporate and all residual wastes, including liquids, sludges, precipitates, settled solids, and liner materials will be completely removed, transported, and disposed to a facility permitted to accept such wastes.

This Order requires that a Closure Plan and adequate financial assurance mechanisms for closure be submitted by the Dischargers **no later than 90 days** following Water Board acceptance of the Final Design Plan.

20. Site Geology

The Facility is located adjacent to the Mojave River channel in the Mojave Desert. Native materials at the site are primarily fine-grained silty sands and coarse grained alluvial sands with silty sand layers.

21. Site Hydrogeology and Hydrology

The Facility is located in the Upper Mojave Hydrologic Area of the Mojave Hydrologic Unit. The Mojave River floodplain adjacent to the Facility is generally 0.5 mile wide with most of the water flow in the subsurface. Surface water flow does occur in the vicinity of the Upper and Lower Mojave narrows, seasonally, and for about 8 miles downstream of the VVWRA discharge location.

The Facility is also located in the Upper Mojave River Valley Groundwater Basin (Department of Water Resources [DWR] Basin Number 6-42). On November 23, 2015, depth to groundwater was measured in the groundwater monitoring wells at the Facility. Depth to water ranged from approximately 22 feet below ground surface (bgs) upgradient of the Facility to 7.5 feet bgs downgradient of the Facility.

22. Groundwater Quality

Groundwater samples were collected by the Dischargers from the groundwater monitoring wells on August 20, 2015. Results are presented in Table 1, Groundwater Quality Results, below.

Table 1. Groundwater Quality Results

Constituent	Units	Upgradient Groundwater Sample Concentration (MW-1)	Downgradient Groundwater Sample Concentration (MW-3)	MCL
Antimony	mg/L	0.00088	0.00097	0.006
Arsenic	mg/L	0.013	0.050	0.01
Cadmium	mg/L	0.00051	0.00030	0.005
Chloride	mg/L	74	73	250
Chromium – Total	mg/L	0.0073	0.0085	0.050
Coliform – Total	MPN/100mL	1.1	1.1	1.1
Copper	mg/L	0.011	0.0059	0.2
E. Coli	MPN/100mL	1.1	1.1	1.1
Fecal Coliform	MPN/100mL	1.1	1.1	1.1
Lead	mg/L	0.0011	0.009	0.015
Nickel	mg/L	0.0061	0.0065	0.1
Nitrate as N	mg/L	8.9	0.14	10
Ortho-phosphate Phosphorus	mg/L	1.3	0.13	NE
pH	pH units	6.38	6.98	6.5-8.5
Specific Conductance	mS/cm	0.504	0.567	0.900*
Sulfate	mg/L	33	55	250
Total Dissolved Solids (TDS)	mg/L	420	440	500*
Zinc	mg/L	0.014	0.017	5*

* Secondary MCL
 MCL = Maximum contaminant level
 mg/L = Milligrams per liter
 mS/cm = MilliSiemens per centimeter
 MPN/100mL = Most probable number of coliform bacteria per 100 milliliters
 NE = Not established
 Bolded values indicate results above MCL

23. Receiving Waters

The receiving waters are the groundwaters of the Upper Mojave River Valley Groundwater Basin (DWR, Groundwater Basin Number 6-42).

24. Lahontan Basin Plan

The Water Board adopted a *Water Quality Control Plan for the Lahontan Region* (Basin Plan), which became effective on March 31, 1995. This Order implements the Basin Plan.

25. Beneficial Groundwater Uses

The present and potential beneficial uses of the groundwaters of Upper Mojave River Valley Groundwater Basin (DWR Basin No. 6-42), as set forth and defined in the Basin Plan, are:

- a. (MUN) - Municipal and Domestic Supply,
- b. (AGR) - Agricultural Supply,
- c. (IND) - Industrial Service Supply,
- d. (FRSH) - Freshwater Replenishment, and
- e. (AQUA) - Aquaculture.

26. Protection from Storm Events

The Dischargers must provide information to demonstrate that the Facility must contain the volume of water from a 1,000-year, 24-hour storm event over the Facility, pursuant to CCR, title 27, section 20320, Table 4.1.

The Dischargers have proposed to manage stormwater runoff by diverting all non-Facility stormwater around the Facility and preventing all on-site stormwater from leaving the Facility. The berm must be constructed, per CCR, title 27, section 20250, subdivision (c), to divert non-Facility stormwater from a 100-year, 24-hour event. The composting area will be graded such that all Facility stormwater will flow to the surface impoundment.

27. Storm Contingency Plan

High intensity short duration precipitation (HISDP) events may occur in the Mojave Desert region during the rainy season and occasionally during summers. In order to ensure adequate protection against overtopping of the surface impoundment at this Facility, the Dischargers must submit a Storm Contingency Plan that provides a narrative description of the procedures that Facility personnel will follow if maintenance of at least 2 feet of freeboard may be violated with the addition of expected stormwater in the surface impoundment. It is anticipated that during the rainy season, saturated conditions may occur that prevent the application of surface impoundment water on the windrows for dust control. The plan must specify how the water will be removed and where the water may be taken. Monitoring and reporting prior to, during, and after such removal activities is also required.

28. Site Topography

The topography of the site is gently sloping downward to the east, with elevations ranging from approximately 2,635 feet above mean sea level (msl) to approximately 2,610 feet above msl. Site topography is shown on Attachment C.

29. Climate

The area typically has hot summers and mild winters. The annual average precipitation in the vicinity of the Facility is approximately 5.52 inches. The net

evaporation rate for the area is approximately 111.59 inches annually (per Western Regional Climate Center).

30. Land Uses

The land to the west of the Facility is used as effluent discharge ponds for VVWRA. The land to the north of the Facility is occupied by the VVWRA Facility. The Mojave River is to the east of the Facility. Remaining land in the vicinity is former George Air Force Base.

31. Action Leakage Rate

The Dischargers have not proposed an action leakage rate (per United States Environmental Protection Agency [U.S. EPA] *Action Leakage Rates for Leak Detection Systems, Supplemental Background Document for the Final Double Liners and Leak Detection Systems Rule for Hazardous Waste Landfills, Waste Piles, and Surface Impoundments*, 1992), because the waste is not a hazardous waste. Furthermore, it is not anticipated, based on the Facility characteristics, that there will be a measurable build-up of head in the LDMS, due to the fact that the surface impoundment will only contain stormwater and/or leachate.

This Order requires the Dischargers to immediately take steps to locate and repair leak(s) in the liner system and notify the Water Board if there is measurable volume of leachate in the LDMS and to cease discharge and submit a time schedule for repair of the liner.

32. Known or Reasonably Foreseeable Release from the Waste Pile or Surface Impoundment

The Dischargers have not submitted a corrective action estimate (CAE) to address a known or reasonably foreseeable release (KRFR), including a workup of the total likely maximum cost of remediation for a known or reasonably foreseeable release, pursuant to CCR, title 27, section 20380, subdivision (b). The analysis must also include a proposed corrective action financial assurance mechanism (to cover the estimated corrective action cost) meeting the requirements of CCR, title 27, sections 22220 through 22222 and 22225 *et seq.* This Order requires the Dischargers to submit a CAE for a KRFR.

If there is measurably significant evidence of a release, the Dischargers must submit an engineering feasibility study for corrective action pursuant to CCR, title 27, section 20420, subdivision (k)(6) and must conduct a COC scan meeting the requirements of CCR, title 27, section 20420, subdivision (k)(1). The Dischargers must also submit an amended Report of Waste Discharge pursuant to CCR, title 27, section 20420, subdivision (k)(5), that proposes suitable revisions to the MRP to establish an EMP meeting CCR, title 27, section 20425. If necessary, the

amended Report of Waste Discharge must include the justification for any extension beyond the 90 days allowed prior to making the submittals required under CCR, title 27, section 20425, subdivisions (b), (c), and (d).

33. Financial Assurance

No more than 90 days following Water Board acceptance of the Final Design Plan, the Dischargers are required to provide two separate sureties to cover the costs of closure and corrective action (for a reasonably foreseeable release) in accordance with CCR, title 27, sections 22207 and 22222, respectively.

This Order requires the Dischargers to obtain and maintain financial instruments and to report yearly to the water board the amount of money available in the financial instruments. Annually, the Dischargers must report that the amount of financial assurance is adequate, or increase the amount of financial assurance as required under CCR, title 27, sections 22207 and 22222.

34. Other Considerations and Requirements for Discharge

Pursuant to California Water Code, section 13241, the requirements of this Order take into consideration:

- a. Past, present, and probable future beneficial uses of water.

This Order identifies existing groundwater quality and past, present, and probable future beneficial uses of water, as described in Finding Nos. 21, 22, and 25. The proposed discharge will not adversely affect present or probable future beneficial uses of water including MUN, AGR, IND, FRSH, and AQUA, because the discharge is only authorized within a lined Facility and detection monitoring is required to ensure discharges do not reach groundwater.

- b. Environmental characteristics of the hydrographic unit under consideration including the quality of water available thereto.

Finding No. 22 describes the environmental characteristics and quality of water available.

- c. Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area.

The requirements of this Order will not affect groundwater quality. The Water Board will use its existing authority and these waste discharge requirements to ensure protection of water quality from these discharges.

d. Economic considerations.

Water Quality Objectives established in the Basin Plan for the Upper Mojave River Valley Groundwater Basin do not subject the Dischargers to economic disadvantage as compared to other similar discharges in the Region. This Order will require the Dischargers to submit proposals compliant with the requirements of CCR, title 27, and is reasonable.

e. The need for developing housing within the region.

The Dischargers are not responsible for developing housing within the region.

f. The need to develop and use recycled water.

The Dischargers use tertiary treated water from VVWRA for dust control and for additives in the composting process. Additionally, water collected in the surface impoundment may be reused within the active composting operations at the Facility.

35. Human Right to Water

It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to only be discharged to a lined surface impoundment designed to protect human health and ensure that nearby wells are protected and water is safe for domestic use.

36. California Environmental Quality Act

This project is subject to the provisions of the California Environmental Quality Act (CEQA, Public Resources Code Section 21000 et seq.) in accordance with Public Resources Code, section 21065. VVWRA is the CEQA Lead Agency for this project under the CEQA Guidelines.

On October 29, 1999, VVWRA, acting as lead agency, filed a Notice of Determination (NOD), which was revised December 5, 1999. VVWRA determined no significant adverse environmental impacts will occur with the implementation of adopted mitigation measures. Therefore, VVWRA adopted a Mitigated Negative Declaration in accordance with the provisions of CEQA. The City of Victorville issued a Conditional Use Permit to the Dischargers in a public meeting held on December 8, 1999.

The Water Board, acting as a CEQA Responsible Agency in compliance with CCR, title 14, section 15096, subdivision (g)(2), evaluated the potentially significant impacts to water quality from the discharge identified in the NOD and Mitigated Negative Declaration. The Water Board has concluded that a supplement or subsequent Mitigated Negative Declaration is not required. No changes have occurred in the project or in the project area that would cause impacts different in character or increase the severity of impacts already considered. The changes to the Facility will be within the project area analyzed in the Mitigated Negative Declaration, and the change to the design features are more protective of water quality and the environment. The Water Board has determined that additional mitigation measures are necessary to prevent potentially significant water quality impacts as a result of wastewater discharges to the surface impoundment. Mitigation measures include designing and constructing lined facilities in accordance with CCR, title 27, for a Class II waste pile and a surface impoundment to contain the discharges from the Facility. This Order also requires a groundwater and unsaturated zone monitoring program. Mitigation measures are also required to prevent a condition of nuisance, such as implementation of an Odor Impact Minimization Plan (per MRP No. R6V-2016-PROP, section II.D.) and limits on the duration water can remain in the surface impoundment. The Water Board finds these mitigation measures, as specified in this Order, are adequate to reduce water quality impacts to less than significant, and will file a Notice of Determination within five days from the issuance of this Order.

37. Notification of Interested Parties

The Water Board has notified the Dischargers and all known interested agencies and persons of its intent to adopt WDRs for the project.

38. Right to Petition

Any person aggrieved by this action of the Water Board may petition the State Water Board to review the action in accordance with California Water Code, section 13320, and CCR, title 23, sections 2050 et sec. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the internet at http://www.waterboards.ca.gov/public_notices/petitions/water_quality, or will be provided in hard copy or electronic format upon request.

39. Consideration of Public Comments

The Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Dischargers shall comply with the following:

I. RECEIVING WATER LIMITATIONS

The Dischargers shall not cause the existing water quality to be degraded. Under no circumstances shall the Dischargers cause the presence of the following substances or conditions in groundwaters of the Upper Mojave River Valley Groundwater Basin.

A. Bacteria – Groundwaters designated as MUN, the medium concentration of coliform organisms, over any seven-day period, must be less than 1.1 Most Probable Number per 100 milliliters (MPN/100 mL) in groundwaters.

B. Chemical Constituents – Groundwaters designated as MUN must not contain concentrations of chemical constituents in excess of the Maximum Contaminant Levels (MCL) or Secondary MCL (SMCL) based upon drinking water standards specified in the following provisions of CCR, title 22: Table 64431-A of section 64431 (Inorganic Chemicals), Table 64444-A of section 64444 (Organic Chemicals), Table 64449-A of section 64449 (SMCLs – Consumer Acceptance Contaminant Levels), and Table 64449-B of section 64449 (SMCLs – Consumer Acceptance Contaminant Level Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

Groundwaters designated as AGR must not contain concentrations of chemical constituents that adversely affect the water for beneficial uses (i.e., agricultural purposes).

Groundwaters must not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.

C. Radioactivity – Groundwater designated MUN must not contain concentrations of radionuclides in excess of limits specified in CCR, title 22, section 64442, Table 64442, and section 64443, Table 64443, including future changes as the changes take effect.

D. Taste and Odors – Groundwaters must not contain taste or odor-producing substances in concentrations that cause a nuisance or that adversely affect beneficial uses. For groundwaters designated as MUN, at a minimum, concentrations must not exceed adopted SMCLs as

specified in CCR, Title 22, Table 64449-A of section 64449 (SMCLs – Consumer Acceptance Contaminant Level) and Table 64449-B of section 64449 (SMCLs – Consumer Acceptance Contaminant Levels Ranges) including future changes as the changes take effect.

- E. Color – Groundwaters must not contain color-producing substances from tracers in concentrations that cause a nuisance or that adversely affect beneficial uses.
- F. Toxic Substances – Any presence of toxic substances in concentrations that individually, collectively, or cumulatively cause a detrimental physiological response in humans, plants, animals, or aquatic life is prohibited.

II. REQUIREMENTS AND PROHIBITIONS

A. General

1. The discharge must not cause or threaten to cause a condition of pollution or nuisance as defined in California Water Code, section 13050.
2. There must be no discharge, bypass, or diversion of wastewater from the collection, conveyance, or disposal facilities to adjacent land areas or surface waters.
3. Surface drainage within the Facility must be contained on-site. No water contained within the surface impoundments is to be discharged outside the Facility, unless it is in accordance with the accepted Storm Contingency Plan to a location approved by the Water Board Executive Officer. The Dischargers must maintain a Storm Water Pollution Prevention Plan (SWPPP) and Monitoring Program and Reporting Requirements in accordance with State Water Resources Control Board Order No. 2014-0057-DWQ, and future promulgated general industrial stormwater permits.
4. All facilities used for the collection, conveyance, or disposal of waste must be adequately protected against overflow, washout, inundation, structural damage, or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 1,000 years. The Facility must be bermed to divert the flow on to the Facility from a storm or flood having a recurrence interval of once in 100 years (CCR, title 27, section 20320, Table 4.1).

5. The discharge of hazardous waste to the waste pile or surface impoundment or generation of hazardous waste due to evaporation in the surface impoundment is prohibited.
6. The discharge of solid wastes, leachate, wastewater, or any other deleterious materials to the groundwaters of the Upper Mojave River Valley Groundwater Basin is prohibited.
7. The discharge of waste, except to the authorized waste pile or surface impoundment, is prohibited. Leachate collected from the leak detection monitoring sumps (LDMS) or wastewater collected from the surface impoundment may be reused for moisture in the piles or used for dust control on the engineered fill portion of the Facility.
8. The discharge of waste, as defined in CWC, section 13050, subdivision (d), that causes a violation of any narrative WQO contained in the Basin Plan, including the Nondegradation Objective, is prohibited.
9. Where any numeric or narrative WQO contained in the Basin Plan is already being violated, the discharge of waste that causes further degradation or pollution is prohibited.
10. The discharge must not cause any increase in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil, or other geologic materials outside of the waste pile or surface impoundment if such waste constituents could migrate to waters of the State – in either liquid or gaseous phase – and cause a condition of nuisance, degradation, contamination, or pollution.
11. The discharge of waste in a manner that does not maintain a five-foot separation between the waste and the seasonal high groundwater table is prohibited.
12. The integrity of the proposed waste pile and surface impoundment must be maintained throughout the life of the Facility and must not be diminished as a result of any maintenance operation.
13. The Dischargers must maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with these waste discharge requirements.
14. At closure, the Facility must be closed in accordance with a Final Closure Plan approved by the Water Board.

15. The Dischargers must at all times maintain adequate and viable financial assurances acceptable to the Water Board Executive Officer for costs associated with closure and corrective action for all known or reasonably foreseeable releases.
16. Best Management Practices, good housekeeping measures, and other measures implemented in accordance with an Odor Impact Minimization Plan, including but not limited to treating feedstocks with an odor-neutralizing agent, will be implemented to minimize the release of objectionable odors. If meteorological conditions cause objectionable off-site odors, the Dischargers must immediately take operational steps to mitigate the cause of such odors.
17. Wind speed and direction will be checked and logged daily and just prior to turning the windrows or performing other activities that could create nuisance dust. Activities at the Facility that could create nuisance dust must not be performed if wind speeds are in excess of 30 miles per hour.
18. The Facility must be watered, as necessary, to minimize production of dust. As such, potable water or tertiary treated effluent from VVWRA may be reused for dust control at the Facility. Wastewater collected from the surface impoundment may be used for dust control on the waste pile.
19. The moisture content of windrows will be monitored daily using a standard field test for moisture, as herein described, or alternate test as approved by Water Board staff. Moisture at each windrow will be determined by taking a representative sample of the windrow materials and forming the materials into a ball by hand; the material must hold together without crumbling. If material crumbles, water must be added to the windrow such that the material can be formed into a ball and maintain this shape. Leachate collected from the LDMS, wastewater collected from the surface impoundment, or tertiary treated effluent from VVWRA may be reused for moisture in the piles at the Facility.

B. Surface Impoundment

1. The surface impoundment freeboard, the vertical distance between the liquid surface elevation and the lowest part of the pond dike or the invert of an overflow structure, must be a minimum of two feet at all times, as specified in CCR, title 27, section 20375.

2. All lined facilities must be effectively sealed to prevent the exfiltration of liquids. For this project, "effectively sealed" facilities are Class II waste management units that are designed and constructed to meet the requirements of CCR, title 27.

C. Waste Piles

1. The waste piles must be effectively sealed to prevent the exfiltration of liquids. For this project, "effectively sealed" facilities are Class II waste management units that are designed and constructed to meet the requirements of CCR, title 27.
2. Based on the need to continue to operate the Facility, construction activities will be conducted in a phased approach. The expected phasing of the construction will commence with the surface impoundment, then grading of the soil waste pile. Once the soil waste pile has been completed, the subsequent phasing will include construction of the lined concrete waste piles.
3. Once the Final Construction Quality Assurance Report is found to be acceptable to the Water Board for a phase of waste pile construction, the Dischargers may only discharge to an unimproved portion of the Facility **for a period of 18 months**. After a period of 18 months, the Discharger must only discharge to the completed phase described in the accepted Final Construction Quality Assurance Report.

D. Leak Detection Monitoring Sumps

1. If a measurable quantity of leachate is detected in the LDMS of the surface impoundment or the LDMS of the lined portion of the aerated static pile portion of the waste pile pad, the Dischargers must immediately take steps to locate and repair leak(s) in the liner system and comply with the notice requirements presented in MRP No. R6V-2016-PROP, Section IV.G., "Unscheduled Reports to be Filed With the Water Board." The notification shall include a timetable for remedial action to repair the liner of the surface impoundment or waste pile.
2. The LDMS must be operated to function without clogging throughout the life of the project.

3. Any leachate collected in the LDMS must either be returned to the surface impoundment, reused in the composting process, or disposed at a Class II Waste Management Unit.

E. Detection Monitoring Program

The Dischargers must maintain a detection monitoring program as required in CCR, title 27, section 20420.

F. Evaluation Monitoring Program

The Dischargers must perform an evaluation monitoring program when there is a measurably significant evidence of release as required in CCR, title 27, section 20385, subdivision (a)(2) or (3), and section 20425. The EMP will be used to delineate the nature and extent of the release, as well as to develop, propose, and support corrective action measures to be implemented in a CAP.

G. Corrective Action Program

The Dischargers must institute a corrective action program as required in CCR, title 27, section 20430, following completion of the EMP, in response to measurably significant evidence of a release.

H. Electronic Submittal of Information

Pursuant to CCR, title 23, section 3890, the Dischargers must submit reports, including soil, vapor, and water data, prepared for the purpose of subsurface investigation or remediation of a discharge of waste to land subject to CCR, title 27, electronically over the internet to the State Water Board's Geotracker system. This requirement is in addition to, and not superseded by, any other applicable reporting requirement.

III. WATER QUALITY MONITORING AND RESPONSE PROGRAMS

A. Water Quality Protection Standard

1. The Dischargers must submit a report of waste discharge to the Water Board at least 140 days before initiating discharge of any new constituents of concern to the waste pile or surface impoundment. Before a new discharge commences, the Dischargers must estimate the concentration for such constituents within the wastewater stream and submit written statistical method(s) in order to detect a release of such constituents.

2. At any given time, the concentration limit for each monitoring parameter and COC must be equal to the background data set of that constituent. The background data set for each monitoring point/constituent pair should be comprised of at least eight data points, collected quarterly.
3. If the Dischargers or Water Board Executive Officer determine that concentration limits were or are exceeded, the Dischargers may immediately institute verification procedures upon such determination as specified below or submit an amended RWD within 90 days of such determination in order to establish an EMP. In the event of a release, unless the amended RWD (proposing an EMP) proposes and substantiates a longer period, the Discharger will only have 90 days, once the Water Board authorizes the initiation of the EMP, to complete the delineation, develop a suite of proposed corrective action measures, and submit a proposed CAP for adoption by the Water Board.
4. Monitoring wells and/or unsaturated zone samples must be used to obtain background data and to detect a release from the Facility.

B. Statistical Methods

1. The Dischargers must use approved statistical data analysis methods to evaluate Point of Compliance groundwater data in order to determine measurably significant evidence of a release from the waste pile or surface impoundment, as required by CCR, title 27, section 20415, subdivision (e). Approved methods may include intrawell statistical analyses.
2. The Dischargers must determine, within 45 days after completion of sampling, whether there is measurably significant evidence of a release from the waste pile or surface impoundment at each Monitoring Point. The analysis must consider all monitoring parameters and COCs. The Executive Officer may also make an independent finding that there is measurably significant evidence of a release or physical evidence of a release.
3. If there is measurably significant evidence of a release, the Dischargers must immediately notify the Water Board by certified mail (see notification procedures contained in MRP No. R6V-2016-PROP). Subsequently, the Dischargers may immediately initiate verification procedures as specified in Section III.D., below, whenever there is a determination by the Dischargers or Executive Officer that there is measurably significant evidence of a release.

C. Physical Evidence of a Release

The Dischargers must determine whether there is significant physical evidence of a release from the waste pile or surface impoundment. Significant physical evidence may include unexplained volumetric changes in the waste pile or surface impoundment, unexplained stress in biological communities, unexplained changes in soil characteristics, unexplained changes in soil moisture content, visible signs of leachate migration, unexplained water table mounding beneath or adjacent to the Facility, and/or any other change in the environment that could reasonably be expected to be the result of a release from the Facility (see Section IV.G., "Unscheduled Reports to be Filed With the Water Board," of MRP No. R6V-2016-PROP).

D. Verification Procedures

1. If the Discharger or Executive Officer verify evidence of a release, the Dischargers are required to submit a technical report to the Water Board, pursuant to California Water Code, section 13267, subdivision (b), within 90 days of such a determination that there is, or was, a release. The report must propose an evaluation monitoring program (see subsection, II.E., entitled, "Evaluation Monitoring Program"), or, make a demonstration to the Water Board that there is a source other than the Facility that caused evidence of a release (see notification procedures contained in MRP No. R6V-2016-PROP).
2. The verification procedure must only be performed for the constituent(s) that has shown a measurably significant evidence of a release and must be performed for those Monitoring Points at which a release is indicated.
3. The Dischargers must either conduct a composite retest using data from the initial sampling event with all data obtained from the resampling event or must conduct a discrete retest in which only data obtained from the resampling event must be analyzed to verify evidence of a release.
4. The Dischargers must report to the Water Board, by certified mail, the results of the verification procedure, as well as all concentration data collected for use in the retest, within seven days of the last laboratory analysis.

E. Technical Report Without Verification Procedures

If the Discharger do not use verification procedures to evaluate evidence of a release, and there is confirmation that there is measurably significant evidence of a release, then the Dischargers are required to submit, within 90 days of such confirmation, an amended RWD in order to establish an EMP or demonstrate to the Water Board that there is a source other than the waste pile or surface impoundment that caused evidence of a release (see Section IV.G., "Unscheduled Reports to be Filed With the Water Board," of MRP No. R6V-2016-PROP).

F. Monitoring and Reporting

1. Pursuant to California Water Code, section 13267, subdivision (b), the Dischargers must comply with the MRP as established in the attached MRP No. R6V-2016-PROP, and as specified by the Executive Officer. The MRP may be modified by the Water Board Executive Officer.
2. The Dischargers must comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of MRP No. R6V-2016-PROP.

IV. PROVISIONS

A. Standard Provisions

The Dischargers must comply with the "Standard Provisions for Waste Discharge Requirements," dated September 1, 1994, in Attachment E, which is made part of this Order.

B. Claim of Copyright or Other Protection

Any and all reports and other documents submitted to the Lahontan Water Board pursuant to this request will need to be copied for some or all of the following reasons: 1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, 2) any further proceedings of the Lahontan Water Board and the State Water Board, 3) any court proceeding that may involve the document, and 4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the Dischargers or its contractor(s) claim any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If

copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Lahontan Water Board's purposes and will result in the document being returned to the Dischargers as if the task had not been completed.

C. Modifications to the Facility

If the Dischargers intend to expand the Facility or the capacity of the waste pile or surface impoundments, a report must be filed **no later than 140 days prior** to the anticipated change, containing a detailed plan for Facility expansion. This plan must include, but is not limited to, a time schedule for studies, design, and other steps needed to provide additional capacity, and must be done in accordance with an accepted construction quality control plan.

D. Rescission of Waste Discharge Requirements

Board Order No. 6-00-65 as amended by Board Order No. R6V-2000-65A1, is hereby rescinded.

V. TIME SCHEDULE

A. Financial Assurance Documents

No more than 90 days following Water Board acceptance of the Final Design Plan, and yearly thereafter, the Dischargers must submit Instruments of Financial Assurance acceptable to the Water Board and adequate to cover the costs of closure and a reasonably foreseeable release from the Facility. An increase may be necessary due to inflation, a change in regulatory requirements, a change in the approved closure plan, or other unforeseen events.

B. Final Construction Quality Assurance Report

Following the completion of construction of the Facility, the final documentation required in CCR, title 27, section 20324, subdivision (d)(1)(C), must be submitted to the Water Board for review and acceptance. This report must be submitted to the Water Board **no later than 90 days** after completion of construction activities for each phase of construction. The first phase of construction activities must be completed **within one year** of receipt of the grading permit obtained after Water Board acceptance of the Final Design Plan, which may require a revision of the conditional use permit. Based on the need to continue to operate the Facility, construction activities will be conducted in a phased approach.

Final Construction Quality Assurance Reports are to be submitted **no later than 90 days** following each phase of construction activities. Once the Final Construction Quality Assurance Report is found to be acceptable to the Water Board for a phase of waste pile construction, the Dischargers may only discharge to an unimproved portion of the Facility for a period of 18 months. After a period of 18 months, the Dischargers must no longer discharge to any portion of the Facility that has not been found to be acceptable to the Water Board. The report must be certified by a registered civil engineer or a certified engineering geologist. It must contain sufficient information and test results to verify that construction was in accordance with the submitted design plans and specifications and with the accepted engineered alternative to the prescriptive standards and performance goals of CCR, title 27.

C. Submittal of Plans

1. Facility Design Plans

No more than 90 days following adoption of this Order, the Dischargers must submit design plans for the Facility in accordance with the requirements of CCR, title 27, sections 20310 and 20320, including a design capacity for containing the runoff from the Facility for a 1,000-year, 24-hour event; the Facility's berm designed to divert stormwater run-on from a 100-year, 24-hour storm event; Leak Detection Monitoring Sumps (LDMS) unsaturated zone monitoring system; and groundwater monitoring well locations, to be accepted by the Water Board's Executive Officer. The design plans submitted for the Facility must include a Construction Quality Assurance Plan, which meets the requirements of CCR, title 27, sections 20323 and 20324.

2. Closure Plan

No more than 90 days following Water Board acceptance of the Final Design Plan, the Dischargers must submit a Preliminary Closure Plan for the Facility in accordance with the requirements of CCR, title 27, sections 21400 and 21410. The Preliminary Closure Plan must include a cost estimate to implement the plan and a proposed financial assurance instrument meeting CCR, title 27, sections 22205 to 22207 and 22225 *et seq.* The Preliminary Closure Plan must be updated if there is a substantial change in operations or costs for closure. A report must be submitted annually indicating conformance with existing operations. Final plans must be submitted at least 140 days prior to beginning any partial or final closure activities, or prior to discontinuing the use of the Facility for

waste treatment, storage, or disposal. The preliminary and final plans must be prepared by or under the supervision of either a California registered civil engineer or a certified engineering geologist and be in compliance with CCR, title 27, sections 21400 and 21410.

3. Monitoring and Reporting Plan

No more than 60 days following Water Board acceptance of the Final Design Plan, the Dischargers must submit a Monitoring and Reporting Plan to be accepted by the Water Board's Executive Officer, including procedures for monitoring and reporting for the waste pile, surface impoundment, LDMS, unsaturated zone monitoring system, groundwater monitoring wells, native background soils, and odor at the Facility.

4. Sampling and Analysis Plan

No more than 60 days following Water Board acceptance of the Final Design Plan, the Dischargers must submit a Sampling and Analysis Plan to be accepted by the Water Board's Executive Officer, including procedures for sampling and analysis for the waste pile, including the product storage area, surface impoundment, LDMS, unsaturated zone monitoring system, groundwater monitoring wells, native background soils, and odor at the Facility.

5. Known or Reasonably Foreseeable Release Plan and Financial Assurance Instrument

No more than 90 days following Water Board acceptance of the Final Design Plan, the Dischargers must submit a plan for addressing a known or reasonably foreseeable release (KRFR Plan) from the waste pile and surface impoundment in accordance with the requirements in CCR, title 27, sections 20380, subdivision (b) and 22222. The KRFR Plan must include a cost estimate to implement the plan and a proposed financial assurance instrument meeting CCR, title 27, sections 22220 to 22222 and 22225 *et seq.* The KRFR Plan and cost estimate to implement the plan must be prepared by, or under the supervision of, a California registered professional geologist or a California registered professional engineer.

6. Storm Contingency Plan

No more than 60 days following Water Board acceptance of the Final Design Plan, the Dischargers must submit a Storm Contingency Plan that provides a narrative description of the procedures that Facility personnel must follow to lower the water levels in the surface impoundment such that the next anticipated storm event will not affect the requirement to maintain at least 2 feet of freeboard in the impoundment. The plan must specify how the water will be removed, where the water may be taken, how these processes will be monitored and documented. If storm events occur that triggers implementation of the Storm Contingency Plan, the Dischargers must document and report these activities to the Water Board in Quarterly Self-Monitoring Reports.

7. Odor Impact Minimization Plan

No more than 60 days following adoption of this Order, the Dischargers must submit an Odor Impact Minimization Plan to evaluate and mitigate potential releases of nuisance odors, as described in MRP No. R6V-2016-PROP, section II.D.

D. Monitoring Systems Installation Report

No later than 90 days following completion of construction of the monitoring system and **at least 60 days** prior to discharge, the Dischargers must submit a technical report discussing the installation of the monitoring systems. The report shall summarize all work activities associated with the installation of the monitoring systems. The report must be certified by a California registered civil engineer or a California registered professional geologist. It must contain sufficient information to verify that the construction was in accordance with State and/or County standards.

E. Water Quality Protection Standard

No later than 760 days following construction (8 quarters of monitoring, plus 30 days to generate the Water Quality Protection Standard), the Dischargers must propose for acceptance by the Water Board a list of monitoring parameters and COCs for the aquifer, including a data analysis method, and a Water Quality Protection Standard, which includes concentrations limits that define background water quality for all constituents of concern and for each Point of Compliance. The report must be certified by a California registered civil engineer or a California registered professional geologist.

I, Patty Z. Kouyoumdjian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Board, Lahontan Region, on June 9, 2016.

PATTY KOUYOUMDJIAN
EXECUTIVE OFFICER

Attachments: A. Definitions
B. Vicinity Map
C. Location Map
D. Leachate Sample Analytical Results
E. Standard Provisions for Waste Discharge Requirements

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PROPOSED

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ATTACHMENT A

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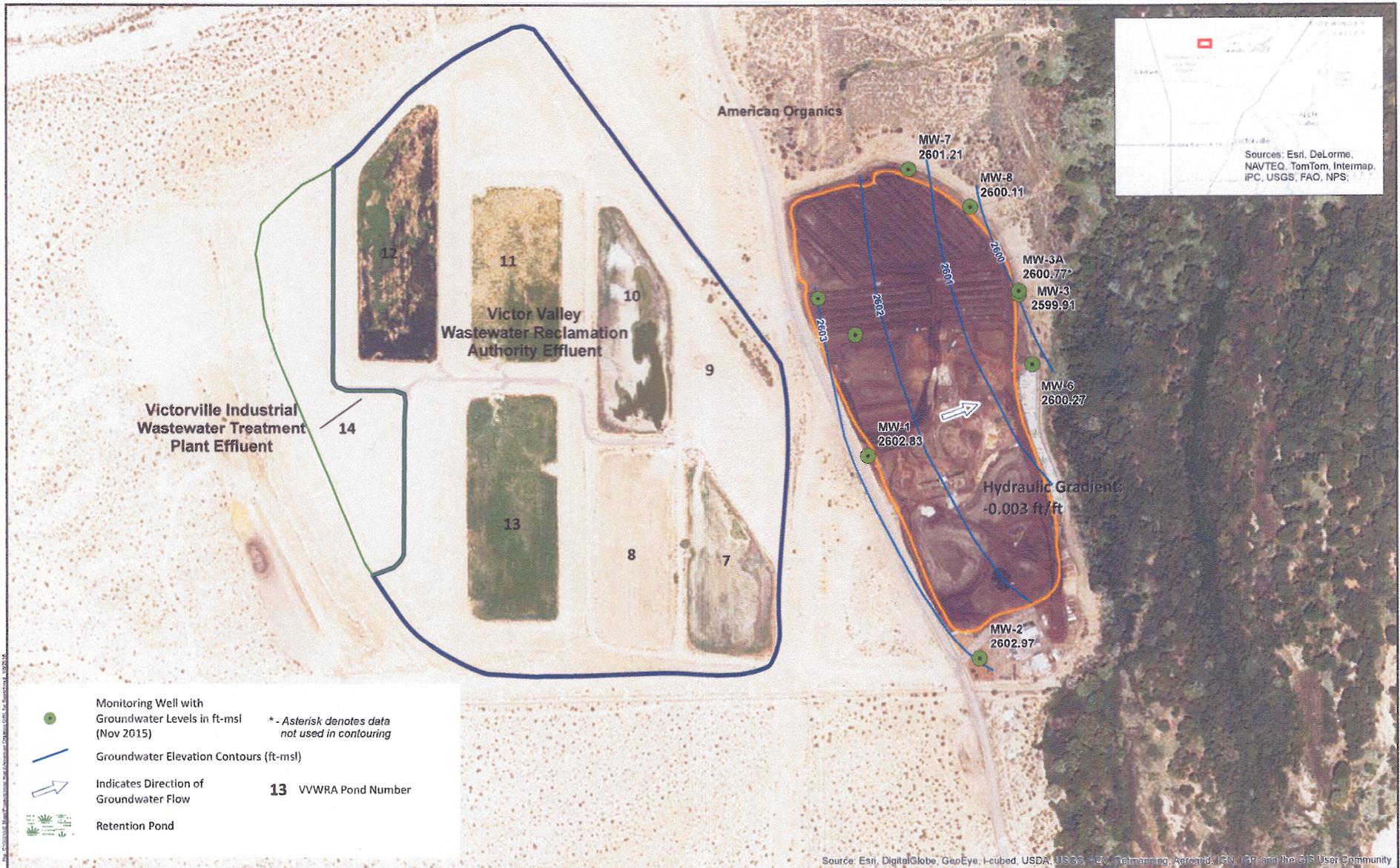
The following terms used within this Order, are defined by their respective code citations or policy references:

- a. **Aerated Static Pile Composting Process:** “a composting process that uses an air distribution system to either blow or draw air through the pile. Little or no pile agitation or turning is performed” (California Code of Regulations [CCR], title 14, section 17852). Athens Services is proposing a modified version, turned aerated static pile composting, in which aerated static piles may be mechanically turned in place to encourage additional aeration in the composting process.
- b. **Agricultural Solid Wastes:** “include wastes resulting from the production and processing of farm or agricultural products, including manures, prunings, and crop residues wherever produced” (CCR, title 27, section 20164).
- c. **Biosolids:** “solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Biosolids includes, but is not limited to, treated domestic septage and scum or solids removed in primary, secondary, or advanced wastewater treatment processes. Biosolids includes the residue solids resulting from the co-digestion of anaerobically digestible material with sewage sludge. Biosolids does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during the preliminary treatment of domestic sewage in a treatment works” (CCR, title 14, section 17852).
- d. **Construction and Demolition Wastes:** “include the waste building materials, packaging and rubble resulting from construction, remodeling, repair and demolition operations on pavements, houses, commercial buildings and other structures” (CCR, title 27, section 20164).
- e. **Drywall:** consists of new drywall waste from construction activities. This waste is crushed and added as an amendment.
- f. **Feedstock:** “any compostable organic material used in the production of compost or chipped and ground material including, but not limited to, agricultural material, green material, vegetative food material, food material, biosolids, digestate, and mixed material. Feedstocks shall not be considered as either additives or amendments” (CCR, title 14, section 17852).

- g. **Food Material:** “waste material of plant or animal origin that results from the preparation or processing of food for animal or human consumption; and that is separated from the municipal solid waste stream” (CCR, title 14, section 17852).
- h. **Green Material:** “any plant material except food material and vegetative food material that is separated at the point of generation, contains no greater than 1.0 percent of physical contaminants by dry weight, and meets the requirements of section 17868.5. Green material includes, but is not limited to, tree and yard trimmings, untreated wood wastes, natural fiber products, wood waste from silviculture and manufacturing, and construction and demolition wood waste. Green material does not include food material, vegetative food material, biosolids, mixed material, material processed from commingled solid waste collection or processing, wood containing lead-based paint or wood preservative, or mixed construction and demolition debris. Agricultural material, as defined in this section 17852 (a)(5), that meets this definition of ‘green material’ may be handled as either agricultural material or green material” (CCR, title 14, section 17852).
- i. **Liquid Waste:** consists of beer, milk, syrups, fruit juices, soft drinks, grease trap waste, and miscellaneous liquids. Grease trap waste typically ranges from 3 to 15% grease and 85 to 97% water. The grease materials taken from a grease trap are typically animal fat, lard, tallow, pieces of bone, and raw animal fat. Liquid waste also means “any waste materials which are not spadable” (CCR, title 27, section 20164).
- j. **Manure:** “an agricultural material ... accumulated herbivore or avian excrement. This definition shall include feces and urine, and any bedding material, spilled feed, or soil that is mixed with feces or urine” (CCR, title 14, section 17852).
- k. **Paper Waste:** consists primarily of paper as an accessory waste to curb-side green waste, restaurant, and organic waste from source separation activities.
- l. **Windrow Composting Process:** “the process in which compostable material is placed in elongated piles. The piles or ‘windrows’ are aerated and/or mechanically turned on a periodic basis” (CCR, title 14, section 17852).

ATTACHMENT B

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ATTACHMENT C

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ATTACHMENT D

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Constituent	Units	MCL	Sample 1 Concentration, 8/14/14	Sample 2 Concentration, 8/14/14	Sample 3 Concentration, 8/14/14
Antimony	mg/L	0.006	<0.200	<0.200	<0.200
Arsenic	mg/L	0.01	<0.200	<0.200	<0.200
Cadmium	mg/L	0.005	<0.0500	<0.0500	<0.0500
Carbonate	mg/L	NE	<1	<1	<1
Chloride	mg/L	250	610	480	590
Chromium	mg/L	0.05	<0.100	<0.100	<0.100
Lead	mg/L	0.015	0.235	<0.200	<0.200
Nickel	mg/L	0.1	0.221	0.147	0.152
Nitrate as Nitrogen	mg/L	0.45	<0.55	<0.55	<0.55
pH	pH Units	6.5-8.4	7.62	7.05	7.03
Phosphate as Phosphorus	mg/L	NE	44	55	52
Sulfate	mg/L	250	150	190	190
Zinc	mg/L	5	2.02	1.11	1.41

Constituent	Units	MCL	Sample A Concentration, 12/5/15	Sample B Concentration, 12/5/15	Sample C Concentration, 12/5/15	Sample D Concentration, 12/5/15
Arsenic	mg/L	0.01	0.055	0.177	0.0313	<0.010
E. Coli	MPN/100mL	1.1	<200	2300	46000	<200
Fecal Coliform	MPN/100mL	1.1	<200	2300	46000	<200
Total Coliform	MPN/100mL	1.1	<200	46000	110000	46000

Bolded values indicate sample concentration exceeds MCL.

MCL = Maximum contaminant level

mg/L = Milligrams per liter

MPN/g = Most probable number of bacteria per gram

NE = Not Established

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ATTACHMENT E

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

STANDARD PROVISIONS
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Board staff:

- a. to enter upon premises in which an effluent source is located or in which any required records are kept;
- b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements (WDRs);
- c. to inspect monitoring equipment or records; and
- d. to sample any discharge.

2. Reporting Requirements

- a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.
- b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.
- c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.
- d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.
- e. Reports required by the WDRs, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation.

- f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.

3. Right to Revise WDRs

The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.

7. Waste Discharge Requirement Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.

8. Property Rights

The WDRs do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the WDRs including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the WDRs shall be kept and maintained by the Discharger and be available at all times to operating personnel.

11. Severability

Provisions of the WDRs are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board's Executive Officer.

14. Definitions

- a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.
- b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**MONITORING AND REPORTING PROGRAM NO. R6V-2016-PROP
WDID NO. 6B369912001**

**FOR
ATHENS SERVICES
AMERICAN ORGANICS VICTOR VALLEY REGIONAL COMPOSTING FACILITY**

San Bernardino County

I. WATER QUALITY PROTECTION STANDARD

A Water Quality Protection Standard (WQPS) is required by California Code of Regulations (CCR), title 27, section 20390 through 20410, to ensure the earliest possible detection of a release from the waste pile or surface impoundment to the underlying soil, groundwater, and/or surface water. The WQPS shall consist of all constituents of concern (COCs), the concentration limit for each COC, the point of compliance, and all water quality monitoring points.

The Executive Officer shall review and approve the WQPS, or any modification thereto, for each monitored medium.

The WQPS shall:

- a. Identify all distinct bodies of groundwater that could be affected in the event of a release from the waste pile or surface impoundment. This list shall include all groundwater bearing zones.
- b. Include a map showing the monitoring points and background monitoring points for the detection monitoring program. The map shall show the surface trace of each waste management unit's point of compliance (along the downgradient boundary of the Unit), in accordance with CCR, title 27, section 20405.
- c. Evaluate the perennial direction(s) of groundwater movement within the groundwater bearing zones.

If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the s may request modification of the WQPS's concentration limits to provide season-specific concentration limits (background data sets) for each COC.

1. Constituents of Concern

The COCs include all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the waste pile or surface impoundments. The COCs are listed in Tables 1 through 4 (Attachments A through D), which are made part of this MRP.

Monitoring parameters are COCs that are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from the waste pile or surface impoundment. The monitoring parameters are listed in Tables 1 through 4 for the specified monitored medium.

2. Concentration Limits

For naturally occurring COCs or non-naturally occurring COCs whose background data set (concentration limit) exceeds its Practical Quantitation Limit (PQL), the concentration threshold for each constituent of concern shall be determined as follows:

- a. By calculation in accordance with a statistical method applied to the concentration limit (suite of background data) pursuant to CCR , title 27, section 20415; or
- b. By an alternate statistical method acceptable to the Water Board Executive Officer in accordance with CCR, title 27, section 20415.

For non-naturally occurring COCs that do not have background values, the concentration threshold for each constituent of concern shall be taken as the PQL of the analytical method used (e.g., US-EPA Methods 8260 and 8270) in accordance with the Detection Monitoring Program. Concentration limits shall be updated by the s every two years and reported in the Annual Monitoring Summary Report for the respective reporting period.

3. Point of Compliance

The point of compliance for the water standard is a vertical surface located at the hydraulically downgradient limit of the Facility that extends through the groundwater bearing zones underlying the Facility.

II. MONITORING

The s must monitor the surface impoundment, surface impoundment wastewater, the waste pile, the berm surrounding the Facility and the entire Facility for nuisance dust and odors. All monitoring and inspecting activities must be documented. All samples, with the exception of field parameters, are to be analyzed by a California state-certified laboratory. In addition to satisfying the monitoring requirements of CCR, title 27, sections 20385 through 20430, the must also perform the following monitoring:

A. Surface Impoundment Monitoring

1. Wastewater

All wastewater samples collected under this Monitoring and Reporting Program (MRP) must be analyzed to determine the concentrations of constituents listed in Table 1 (Attachment A).

Once each quarter, a minimum of three liquid grab samples from the surface impoundment must be collected from opposite the inlet, in a quiescent surface area. A composite sample consisting of three grab samples will be produced. Samples must be collected and analyzed in accordance with the accepted Sampling and Analysis Plan for the surface impoundment. If the surface impoundment is dry, then indicate that it is dry in the monitoring report.

2. Dikes and Liners

a. Monthly, the surface impoundment dikes and liners must be visually inspected to determine if there are any indications of loss of integrity. Should the inspection indicate that any unauthorized discharge has occurred, or may occur, the Water Board must be notified within 48 hours, followed by confirmation in writing within 7 days.

b. Daily, measure and record the freeboard, as measured from the top of the lowest part of the dike to the wastewater surface in the surface impoundment. Observations and measurements must be recorded in a permanent log book kept onsite. If the surface impoundment is dry, then indicate that it is dry in the log book and monitoring report.

c. The Dischargers must monitor the weather forecasts daily and whenever rain is forecast. The surface impoundment must be inspected, and the inspection results documented prior to each predicted event. If the Discharger determines

that the surface impoundment potentially does not have enough capacity to hold the contents of the surface impoundment and any rain that may fall, then the Storm Contingency Plan must be implemented. Monitoring must occur throughout all procedures for surface impoundment water removal activities.

3. Leak Detection Monitoring Sumps

The Dischargers must conduct the following inspections and testing of the leak detection monitoring sumps (LDMS):

- a. Weekly, inspect the LDMS for the presence of liquids. The result of these inspections must be recorded in a permanent log book kept onsite. If liquid is detected in a LDMS, the Water Board must be notified within 48 hours, followed by written confirmation within 7 days.
- b. The Dischargers must record in the LDMS inspection log book the volume pumped, pumping rate, date, start and end times, and discharge location of any liquid pumped from the LDMS.
- c. Upon detection of leachate in a previously dry LDMS that was dry during the prior week inspection (defined herein as an event), the Dischargers shall immediately collect a grab sample of the leachate and shall analyze the grab samples of leachate for all of the parameters identified in Table 2 (Attachment B).

4. Sludge Monitoring

Annually, in the last quarter of each year, collect a representative grab sample of the bottom sludge (if present) of the surface impoundment, and analyze each sample for the following constituents:

<u>Parameter</u>	<u>Units</u>	<u>Method</u>
Title 22 Metals	mg/L	CCR, title 22, section 66261.24 subdivision (a)(2)(A), Table II, list of inorganic persistent and bioaccumulative toxic substances and their soluble threshold limit concentrations (STLC) and total threshold limit concentration (TTLC) values.

5. Unsaturated Zone Monitoring

The Dischargers must develop an Unsaturated Zone Monitoring Plan that identifies procedures for monitoring the unsaturated zone beneath the surface impoundment to include a workplan to install the unsaturated zone monitoring devices **no more than 60 days following** Water Board acceptance of the Final Design Plan.

Quarterly, the Dischargers must monitor the unsaturated zone beneath the surface impoundment.

Quarterly, the Dischargers must graph time-series plots of the analytical results from the unsaturated zone monitoring at each monitoring point to show any trends in constituent concentrations through time. Time-series plots must also include, as horizontal lines, the constituent's maximum contaminant level (MCL) (if an MCL has been established), and the concentration threshold derived from the constituent's background data set (concentration limit) at that monitoring point.

B. Waste Pile Monitoring

1. Background Soils

The Dischargers must analyze the background soils to determine background concentrations for the monitoring parameters and COCs listed in Table 3 (Attachment C) prior to the construction of the composting pad. Plans for sampling native background soils must be submitted to Water Board staff as part of the required Monitoring and Reporting Plan and Sampling and Analysis Plan, per Board Order No. R6V-2016-PROP. The Dischargers will characterize soil constituents of concern below the waste pile disposal area prior to discharge and report these data in a Background Soils Report **no more than 180 days** following commencement of construction.

2. Unsaturated Zone – Engineered Soil Waste Pile

Annually, at a minimum of 10 locations within the native engineered fill of the waste pile footprint, soil samples must be collected at each sampling location to a depth of 18 inches. The soil samples collected from the 6-inch depth must be analyzed to determine the concentrations of constituents of concern identified in Table 3 (Attachment C). If the results of those analyses indicate a measurably significant release, per Section III, "Data Analyses," of this Monitoring and Reporting Program, the 12-inch interval samples must be analyzed for those constituents that indicated the

release. If the results of those analyses indicate a measurably significant release, per Section III, "Data Analyses," of this Monitoring and Reporting Program, notification procedures will be followed, per section IV.G., "Unscheduled Reports to be Filed With the Water Board," of this Monitoring and Reporting Program and measures will be taken to repair or replace the composting pad. All samples, with the exception of field parameters, are to be analyzed by a California state-certified laboratory. Samples must be collected in accordance with the accepted Sampling and Analysis Plan for the waste pile. Following sample collection, the void space will be backfilled with bentonite and compacted.

Every five years, the Dischargers must conduct sampling in the finished product storage area portion of the engineered soil for the same COCs and in the same manner as specified in this section. A visual inspection must be conducted for evidence of gross staining. Representative areas where gross staining is evident must be sampled; a minimum of at least two locations within the product storage area portion of the engineered soil must be sampled.

3. Unsaturated Zone – Lined Concrete Waste Pile

The Dischargers must conduct the following inspections and testing of the LDMS for the lined concrete portion of the waste pile:

- a. Weekly, inspect the LDMS for the presence of liquids. The result of these inspections must be recorded in a permanent log book kept onsite. If liquid is detected in a LDMS, the Water Board must be notified within 48 hours, followed by written confirmation within 7 days.
- b. The Dischargers must record in the LDMS inspection log book the volume pumped, pumping rate, date, start and end times, and discharge location of any liquid pumped from the LDMS.
- c. Upon detection of leachate in a previously dry LDMS that was dry during the prior week inspection (defined herein as an event), the Dischargers shall immediately collect a sample of the leachate and analyze the samples of leachate for all of the parameters identified in Table 2 (Attachment B).

C. Facility Storm Water Berm

Monthly, and before, during, and after any storm event that produces precipitation at the Facility, the berm around the Facility must be visually inspected to determine if there are any indications of loss of integrity.

Inspections, inspection results, and activities performed to correct deficiencies must be documented. Should the inspection indicate that any unauthorized discharge has occurred, or may occur, the Water Board must be notified within 48 hours, followed by confirmation in writing within 7 days.

D. Facility Odor Monitoring

An Odor Impact Minimization Plan must be developed by the Dischargers to evaluate and mitigate potential releases of nuisance odors. Daily, the Dischargers will assess the site conditions and evaluate potential sources of objectionable odors and document these inspections. Documentation shall include a description of any odors detected. Wind speed and direction will be checked and logged daily and just prior to any activities at the Facility that may produce nuisance dust. Odor control measures include odor screening and load-checking procedures; feedstock storage and processing measures; windrow management measures; good housekeeping procedures; and an odor complaint response system. Odor control activities at the Facility must be documented daily in a permanent log book kept onsite.

E. Operation and Maintenance

A brief summary of any operational problems and maintenance activities must be submitted to the Water Board with each monitoring report for American Organics operations.

F. Dust Control

The following mitigation measures must be implemented and monitored to ensure dust is controlled at this Facility:

1. Unpaved roads shall be watered, as necessary, to minimize visible dust. Alternatively, roads may be paved;
2. During episodes of high winds (with speeds of 30 miles per hour or greater), activities that may create nuisance dust may not be performed.
3. Daily, monitor the moisture content of windrows using a standard field test for moisture as herein described, or alternate test, as approved by Water Board staff. Moisture at each windrow will be determined by taking a representative sample of the windrow materials and forming the material into a ball by hand; the materials should hold together without crumbling. If material crumbles, water must be added. Moisture monitoring activities must be documented daily in a permanent log book kept onsite.

G. Detection Monitoring

The Dischargers must conduct a Detection Monitoring Program (DMP) to monitor groundwater and the unsaturated zone beneath the site and to provide the best assurance of the early detection of a release from the Facility. A Monitoring and Reporting Plan and Sampling and Analysis Plan must be submitted **no more than 60 days** following Water Board acceptance of the Final Design Plan. All samples, with the exception of field parameters, must be analyzed by a California state-certified laboratory. All samples must be analyzed with the method detection limit (MDL) sufficiently below the maximum contaminant level (MCL) for that constituent such that a release may be detected prior to exceeding the MCL.

1. Unsaturated Zone Monitoring

a. Waste Pile

The unsaturated zone beneath the waste pile must be monitored in accordance with section II.B.2 or II.B.3 of the MRP.

b. Surface Impoundment

The unsaturated zone beneath the surface impoundment must be monitored in accordance with Section II.A.5 of this MRP.

2. Groundwater Monitoring

a. Monitoring Points and Point of Compliance

The Point of Compliance, as defined in CCR, title 27, section 20405, subdivision (a), is “a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the Unit.”

Groundwater monitoring wells must be installed at monitoring points upgradient of the Facility and along the Point of Compliance as part of the DMP. The groundwater monitoring program will consist of a system of wells to adequately monitor groundwater beneath the Facility, per CCR, title 27, section 20415.

The Dischargers are required to collect background water quality data for the monitoring parameters and COCs listed in Table 4 (Attachment D). The Dischargers must collect at

least eight quarters of groundwater quality data to determine background concentration limits for the monitoring parameters and COCs. The Dischargers must submit a complete WQPS, which includes concentration limits that define background water quality for all COCs, and the Point of Compliance monitoring points. These data must be reported to the Water Board within 30 days following eight consecutive quarters of monitoring.

For any constituent that is naturally occurring at this site, its concentration threshold at a given monitoring point is the upper 99th Parametric Prediction Limit of the suite of at least eight background monitoring points collected pursuant to this subsection.

The concentration threshold for each man-made organic constituent that is not proven to have originated from a source other than the Facility is the laboratory MDL for that constituent.

b. Depth to Groundwater

Quarterly, prior to sampling and purging the monitoring wells, the Dischargers must measure and record the depth below the ground surface and elevation above mean sea level (msl) of the static groundwater surface in all groundwater monitoring wells. The Dischargers shall use these measurements, which shall be accurate to the nearest 0.01 foot, to determine the groundwater surface map, pursuant to section II.G.2.d, "Aquifer Characteristics," below, and the groundwater flow direction, pursuant to section II.G.2.e below, each quarter.

c. Groundwater Sampling and Purging

Quarterly, the Dischargers must collect samples from each groundwater monitoring well. The wells must be purged of at least three well volumes until temperature, electrical conductivity, and pH of extracted well water have stabilized to within +/- five (5) percent. As an alternative to purging three well volumes, the Dischargers may use hydrasleeve technology or micropurging. Samples must be collected and analyzed using U.S. EPA methods. The samples must be analyzed to determine the concentrations of parameters described in Table 1 (Attachment A).

d. Aquifer Characteristics

Quarterly, the most recent groundwater potentiometric surface must be illustrated on an 8.5" x 11" or an 11" x 17" copy of a Facility plan, showing the locations of the waste pile, surface impoundments, and monitoring wells, as well as the parameters listed below in the Table – Aquifer Characteristics.

Table – Aquifer Characteristics

Parameter	Units
Depth to Groundwater	Feet below ground surface
Static Water Level	Feet above mean sea level
Slope of Groundwater Gradient	Feet/Feet
Direction of Groundwater Flow	Degrees from true North
Velocity of Groundwater Flow	Feet/Year

- e. Quarterly, the Dischargers must calculate, record, and report the groundwater gradient, the direction of the gradient, and the velocity of groundwater flow.
- f. Quarterly, the Dischargers must graph time-series plots of the analytical results from the groundwater monitoring at each monitoring point to show any trends in constituent concentrations through time. Time-series plots must also include, as horizontal lines, the constituents' MCL (if an MCL has been established), and the concentration threshold derived from the constituent's background data set (concentration limit) at that monitoring point.
- g. Annually, water quality in monitoring wells constructed for groundwater monitoring of the Facility must be reported in the annual report in tabular and graphical form. Each table must summarize the historical and most recently detected constituent concentrations for all wells sampled, and compare these data to both the applicable concentration threshold and the Maximum Contaminant Level (MCL) established for each monitoring parameter/constituent of concern. Each such graph must be plotted using raw data, and at a scale appropriate to show trends or variations in water quality. For graphs showing the trends of similar constituents (e.g., volatile organic compounds), the scale must be the same.

III. DATA ANALYSES

All data analyses methods (statistical and non-statistical) must meet the requirements of the California Code of Regulations, title 27, sections 20415, subdivisions (e)(8) and (9).

A. Statistical Data Analysis Method

In order to determine if any new releases have occurred from the Facility, evaluation of data will be conducted using statistical methods. For Detection Monitoring, the Dischargers shall use statistical methods to analyze COCs and monitoring parameters that exhibit concentrations that equal or exceed their respective method detection limit in at least ten percent of applicable historical samples. The Dischargers may propose and use any data analyses that meets the requirements of California Code of Regulations, title 27, section 20415, subdivision (e)(7). The report titled "Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance" (USEPA, 2009) or subsequent versions may also be used to select the statistical test to use for comparing detection monitoring data to background monitoring data.

B. General Non-Statistical Data Analysis Method

In order to determine if any new releases have occurred from the Facility, evaluation of data will also be conducted using non-statistical methods. Non-statistical analyses shall be as follows:

1. Physical Evidence

Physical evidence can include unexplained stress in biological communities such as vegetation loss, soil discoloration, or groundwater mounding. Each quarterly report must comment on such physical elements.

2. Time-Series Plots

Quarterly, the Dischargers shall graph time-series plots of the historical and most recent analytical results from unsaturated zone and groundwater monitoring to show trends in constituent concentrations through time. Time-series plots must include the applicable MCL and both the mean and median of the WQPS for each respective constituent, or monitoring parameter. Time series plots are not required for parameters that have never been detected above their method detection limit (as specified by the applicable USEPA method) or if there are less than four quarters of data. Evidence of a release may include trends of increasing concentrations of one or more constituents over time.

IV. REPORTING REQUIREMENTS

The Dischargers must comply with the following reporting requirements:

A. General Provisions

The Dischargers must comply with Attachment E, "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made a part of this MRP.

B. Failure to Furnish Reports

Any person failing or refusing to furnish technical or monitoring reports or falsifying any information provided therein is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation pursuant to California Water Code, section 13268.

C. Violations

If monitoring data indicate violation of WDRs, the Dischargers must identify the violation and provide information indicating the cause of violation(s) and action taken or planned to bring the discharge into compliance.

D. Quarterly Monitoring Reports

Monitoring reports, including the preceding information, must be submitted electronically to the Water Board by uploading to the State Water Board's Geotracker system on the **30th day of the month following each quarter**, per the following schedule:

<u>Sampling and Reporting Frequency</u>	<u>Quarterly Period</u>	<u>Report Date Due</u>
Quarterly	January 1 – March 31	April 30
Quarterly	April 1 – June 30	July 30
Quarterly	July 1 – September 30	October 30
Quarterly	October 1 – December 31	January 30

Each quarterly report must include the following:

1. Results of sampling and laboratory analyses for each groundwater monitoring point, including statistical limits for each monitoring parameter and an identification of each sample that exceeds its respective statistical limit at any given monitoring point;

2. A description and graphical presentation of the velocity and direction of groundwater flow under/around the Facility, based upon water-level elevations taken during the collection of the water quality data submitted in the report;
3. A map and/or aerial photograph showing the locations of observation stations, monitoring points, and background monitoring points, and the Point of Compliance along the downgradient boundary of the Facility;
4. Surface impoundment monitoring including an evaluation of the effectiveness of the leachate monitoring and control facilities. Monitoring must include a summary of surface impoundment pumping activities for dust control mitigation measures;
5. If the Storm Contingency Plan is implemented during a quarter, the must report the volume of liquid removed and the location the liquid was taken to for disposal; to include the beginning and ending freeboard levels.
6. Monitoring of the Facility Berm including an evaluation of the effectiveness of the runoff/runon control facilities;
7. Data collected in accordance with the approved Sampling and Analysis Plan for the surface impoundments' unsaturated zone monitoring system and groundwater monitoring wells;
8. An assessment of odor impacts in accordance with an approved Odor Impact Minimization Plan, and mitigation measures implemented for nuisance odor control;
9. A summary of all daily wind monitoring data in tabular form with wind speeds in excess of 30 miles per hour highlighted in the table;
10. A summary of moisture monitoring measures for windrows, including any instances where water had to be added to the windrow;
11. A letter transmitting the essential points of each report, including a discussion of any violations found since the last report was submitted and describing actions taken or planned for correcting those violations; and,

12. If the Dischargers have previously submitted a detailed time schedule for correcting violations, a reference to the correspondence transmitting this schedule will be satisfactory. If no violations have occurred since the last submittal, this must be stated in the letter of transmittal.

E. Annual Monitoring Reports

Annual Monitoring Reports must be submitted to the Water Board no later than **April 30** of each year. The reports must include the items described in the General Provisions for Monitoring and Reporting (Attachment E), the information under Section IV.D., and the following information:

1. A list of all monitoring point/monitoring parameter (MPt/MPar) pairs, by medium, that have exhibited a verified measurably significant increase, together with the respective date (for each) when that increase occurred. Any MPt/MPar pairs that have shown an increase within that (prior) year shall be bolded-and-underlined. In addition, by medium, list any non-monitoring parameter COCs that, during testing that year (tested every five years), have exceeded their respective statistical limit and, as a result, have become monitoring parameters, together with the date when the transition occurred;
2. Time-series data plots of groundwater, soil gas, and soil moisture analysis. Time-series plots must also include appropriate MCL or concentration threshold established for each respective constituent that has not shown a verified release. For a pair that has a verified release indication, these plots must also include the cleanup goal;
3. Four maps, one for each quarter of the last reporting year, showing the groundwater elevation isocontours determined for that quarter, and showing the waste pile and surface impoundments perimeters and the groundwater monitoring point and background monitoring point locations for each waste management unit, and including the surface trace of the Facility's point of compliance;
4. Graphical and tabular data for the monitoring data obtained for the previous calendar year (January – December). Each table must summarize the historical and most recently detected constituents concentrations for all locations sampled, and compare these data to both the given monitoring point/COC pair's respective statistical limit and (if applicable) and MCL, and be labeled appropriately. Each such graph must be plotted using raw data, and at a scale appropriate to show trends or variations in water quality. For graphs showing trends of similar constituents (e.g., volatile organic compounds), the scale must be the same;

5. Calibration methods and any discrepancies of any meters used for field parameter evaluations after calibration is performed;
6. The compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the discharge requirements;
7. Evidence that adequate financial assurance for closure and corrective action for all known or reasonably foreseeable releases is still in effect. Evidence may include a copy of the renewed financial instrument or a copy of the receipt for payment of the financial instrument. Evidence of adequate financial assurance must be signed by the Corporate Officer;
8. Evidence that the financial assurance amount is adequate or increase the amount of financial assurance by an appropriate amount if necessary, due to inflation, a change in the approved closure plan, or other unforeseen events; and,
9. The Dischargers must review the preliminary closure plan and corrective action plan for all known or reasonably foreseeable releases annually to determine if significant changes in the operation of the Facility warrant an update to any of these plans. Changes to these plans must be submitted to the Water Board in the annual report.

F. Five-Year Non-Monitoring Parameter Constituent of Concern Monitoring Program

Pursuant to CCR, title 27, section 20420, subdivision (g), every five years the Dischargers must sample for non-monitoring parameter COCs with successive direct monitoring efforts being carried out alternatively during January 1 through June 30 of one five-year sampling event and July 1 through December 31 of the next five-year sampling event, and every fifth year, thereafter. The first five-year non-monitoring parameter COC sampling event must take place during **January 1 through June 30 of 2017**, and reported in the following quarterly monitoring report.

Additionally, every five years, the Dischargers must visually inspect the finished compost storage area for evidence of staining. If evidence of staining appears in the engineered soil portion of the finished compost storage area, soil samples are to be collected in the areas of staining in accordance with section II.B.2.

G. Unscheduled Reports to be Filed With the Water Board

The following reports must be submitted to the Water Board as specified below:

1. Release from the Waste Pile or Surface Impoundment

The Dischargers must perform the procedures contained in this subsection whenever there is evidence of a release from the Facility.

a. Physical or Measurably Significant Evidence of a Release from the Waste Pile or Surface Impoundment

The Dischargers must immediately notify the Water Board verbally whenever a determination is made that there is physical or “measurably significant” evidence of a release from the waste pile or surface impoundment. This verbal notification must be followed by written notification via certified mail within seven days of such determination. Upon such notification, the Dischargers may initiate verification procedures or demonstrate that another source other than the surface impoundment or waste pile caused evidence of a release (see below).

The notification must include the following information:

- i. Surface impoundment or waste pile that may be the source of the release;
- ii. General information including the date, time, location, and cause of the release;
- iii. An estimate of the flow rate and volume of waste involved;
- iv. A procedure for collecting samples and description of laboratory tests to be conducted;
- v. Identification of any water body or water-bearing media affected or threatened;
- vi. A summary of proposed actions; and,
- vii. For physical evidence of a release – physical factors that indicate evidence of a release.

b. Other Source That May Cause Evidence of a Release From the Waste Pile or Surface Impoundment

The Dischargers may make a demonstration that a source other than the waste pile or surface impoundment caused evidence of a release. For this case, the Dischargers must notify the Water Board of the intention to make this demonstration. The notification must be sent to the Water Board by certified mail within seven days of determining physical or measurably significant evidence of a release.

2. Evaluation Monitoring

The Dischargers must, within 90 days of verifying a “measurably significant” release, submit a technical report pursuant to California Water Code (CWC) section 13267, subdivision (b), proposing an Evaluation Monitoring Program (EMP). If the Dischargers decide not to conduct verification procedures, or decides not to make a demonstration that a source other than the surface impoundment is responsible for the release, the release will be considered verified.

The Dischargers must, within 90 days of determining a “measurably significant” evidence of a release, submit to the Water Board an amended report of waste discharge to establish an evaluation monitoring program meeting the provisions of CCR, title 27, section 20420, subdivision (k)(5). The report must include the following information:

- a. COC Concentrations – the maximum concentration of each COC at each Monitoring Point as determined during the most recent COC sampling event (i.e., under CCR, title 27, section 20420, subdivision (g) or (k)[1]). Any COC that exceeds its background limit is to be retested at that monitoring point. Should the results of the retest verify that the COC is above the background limit, then that COC will become a monitoring parameter at all monitoring points;
- b. Proposed Monitoring System Changes – any proposed changes to the water quality monitoring systems at the surface impoundment necessary to meet the provisions of CCR, title 27, section 20425;
- c. Proposed Monitoring Changes – any proposed additions or changes to the monitoring frequency, sampling and analytical procedures or methods, or statistical methods

used at the Facility necessary to meet the provisions of CCR, title 27, section 20425; and,

- d. Proposed Delineation Approach – a detailed description of the measures to be taken by the Dischargers to assess the nature and extent of the release from the waste pile or surface impoundment.

3. Engineering Feasibility Study Report

Within 180 days of verifying the existence of a release, the Dischargers shall submit an Initial Engineering Feasibility Study report meeting CCR, title 27, section 20420, subdivision (k)(6), proposing corrective action measures that could be taken to achieve background concentrations for all COCs involved in the release. This report will be the basis for a later expanded Engineering Feasibility Study, submitted under the Evaluation Monitoring Program, per CCR, title 27, section 20425, subdivision (b).

- H. Technical Reports

Pursuant to California Water Code, section 13267, subdivision (b):

1. Completion of Monitoring System Installation Report

No later than 90 days following completion of construction of the monitoring system, the Dischargers must submit a technical report discussing the installation of the monitoring system. The report shall summarize all work activities associated with the installation of the monitoring system. The report must be certified by a registered civil engineer or a registered professional geologist. It must contain sufficient information to verify that construction was in accordance with State and/or County standards.

2. Monitoring and Reporting Plan

No more than 60 days following Water Board acceptance of the Final Design Plan, the Dischargers must submit a Monitoring and Reporting Plan, to be accepted by the Water Board's Executive Officer, including procedures for monitoring and reporting for the waste pile, surface impoundment, the LDMS, the unsaturated zone monitoring system, the groundwater monitoring wells, native background soils, and odor at the Facility.

3. **Sampling and Analysis Plan**

No more than 60 days following Water Board acceptance of the Final Design Plan, the Dischargers must submit a Sampling and Analysis Plan, to be accepted by the Water Board's Executive Officer, including procedures for sampling and analysis of the waste pile, surface impoundment, the LDMS, the unsaturated zone monitoring system, the groundwater monitoring wells, native background soils, and odor at the Facility.

4. **Background Soils Report**

No more than 180 days following commencement of construction, the Dischargers must submit a Background Native Soils Report that characterizes the background constituents of concern listed in Table 3 (Attachment C) for native soils (background conditions) at the Facility and below the waste pile disposal area (pad) prior to any discharge activities.

5. **Unsaturated Zone Monitoring Plan**

No more than 60 days following Water Board acceptance of the Final Design Plan, the Dischargers must submit an Unsaturated Zone Monitoring Plan that identifies procedures for monitoring the unsaturated zone beneath the surface impoundment and lined concrete portion of the waste pile to include a Workplan to install the unsaturated zone monitoring devices.

6. **Water Quality Protection Standard**

No later than 760 days following construction, the Dischargers must submit for acceptance by the Water Board a proposed data analysis method and a proposed concentration limit (background data set) consisting of at least eight data points from an appropriate groundwater background data source for each COC at each monitoring point. The report must be certified by a registered civil engineer or a registered professional geologist.

Ordered by: _____

PATTY KOUYOUMDJIAN
EXECUTIVE OFFICER

Dated: June 9, 2016

- Attachments:
- A. Table 1, Surface Impoundment Monitoring Parameters and Constituents of Concern
 - B. Table 2, Leak Detection Monitoring Sumps Monitoring Parameters and Constituents of Concern
 - C. Table 3, Unsaturated Zone – Waste Pile Monitoring Parameters and Constituents of Concern
 - D. Table 4, Groundwater Monitoring Parameters and Constituents of Concern
 - E. General Provisions for Monitoring and Reporting, September 1, 1994

r6v-2016-proposed_American Organics_MRP_6B369912001

PROPOSED

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ATTACHMENT A

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**Table 1- SURFACE IMPOUNDMENT
Monitoring Parameters and Constituents of Concern**

Field Parameters	Units	Monitoring Frequency
Freeboard	Feet and tenths	Monthly and following storm events
Specific Conductance	µmhos/cm	Quarterly
Temperature	°F or °C	Quarterly
Turbidity	NTU	Quarterly
pH	Units	Quarterly
Monitoring Parameters	Units	Monitoring Frequency
Aluminum	mg/L	Quarterly
Antimony	mg/L	Quarterly
Arsenic	mg/L	Quarterly
Copper	mg/L	Quarterly
Iron	mg/L	Quarterly
Manganese	mg/L	Quarterly
MBAS	mg/L	Quarterly
Nickel	mg/L	Quarterly
Nitrate as Nitrogen	mg/L	Quarterly
Sulfate	mg/L	Quarterly
TDS	mg/L	Quarterly
Total and Fecal Coliform	MPN/100 mL	Quarterly
Constituents of Concern	Units	Monitoring Frequency
Barium	mg/L	Annually
Beryllium	mg/L	Annually
Bicarbonate	mg/L	Annually
Boron	mg/L	Annually
Bromide	mg/L	Annually
Cadmium	mg/L	Annually
Calcium	mg/L	Annually
Carbonate	mg/L	Annually
Chloride	mg/L	Annually
Chromium (hexavalent)	µg/L	Annually
Chromium (total)	µg/L	Annually
Cobalt	mg/L	Annually
Fluoride	mg/L	Annually
Total Kjeldahl Nitrogen	mg/L	Annually
Lead	mg/L	Annually
Magnesium	mg/L	Annually
Mercury	mg/L	Annually
Molybdenum	mg/L	Annually
Nitrite (as Nitrogen)	mg/L	Annually
Orthophosphate Phosphorous	mg/L	Annually
Phosphate	mg/L	Annually
Potassium	mg/L	Annually
Selenium	mg/L	Annually
Silver	mg/L	Annually
Sodium	mg/L	Annually
Thallium	mg/L	Annually

Table 1- SURFACE IMPOUNDMENT Continued

Constituents of Concern	Units	Monitoring Frequency
Total Alkalinity	mg/L	Annually
Total Anions	mg/L	Annually
Total Cations	mg/L	Annually
Total Hardness	mg/L	Annually
Total Phosphorus	mg/L	Annually
Vanadium	mg/L	Annually
Zinc	mg/L	Annually
VOCs	µg/L	Annually
SVOCs	µg/L	Annually
Organochlorine Pesticides	µg/L	Annually
Organophosphorus Pesticides	µg/L	Annually
Chlorinated Herbicides	µg/L	Annually
CCR, Title 22 Metals	mg/L	Annually

CCR = California Code of Regulations
 °C = Degrees Centigrade
 °F = Degrees Fahrenheit
 MBAS = Methylene Blue Active Substances
 µg/L = Micrograms per liter
 µmhos/cm = Micromhos per centimeter
 mg/L = Milligrams per liter
 NTU = Nephelometric Turbidity Units
 SVOC = Semi-Volatile Organic Compound
 TDS = Total Dissolved Solids
 VOC = Volatile Organic Compound

ATTACHMENT B

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**Table 2- LEAK DETECTION MONITORING SUMPS
Monitoring Parameters and Constituents of Concern**

Field Parameters	Units	Monitoring Frequency
Specific Conductance	µmhos/cm	Quarterly
Temperature	°F or °C	Quarterly
Turbidity	NTU	Quarterly
pH	Units	Quarterly
Monitoring Parameters	Units	Monitoring Frequency
Aluminum	mg/L	Quarterly
Antimony	mg/L	Quarterly
Arsenic	mg/L	Quarterly
Copper	mg/L	Quarterly
Iron	mg/L	Quarterly
Manganese	mg/L	Quarterly
MBAS	mg/L	Quarterly
Nickel	mg/L	Quarterly
Nitrate as Nitrogen	mg/L	Quarterly
Sulfate	mg/L	Quarterly
TDS	mg/L	Quarterly
Total and Fecal Coliform	MPN/100 mL	Quarterly
Constituents of Concern	Units	Monitoring Frequency
Barium	mg/L	Annually
Beryllium	mg/L	Annually
Bicarbonate	mg/L	Annually
Boron	mg/L	Annually
Bromide	mg/L	Annually
Cadmium	mg/L	Annually
Calcium	mg/L	Annually
Carbonate	mg/L	Annually
Chloride	mg/L	Annually
Chromium (hexavalent)	µg/L	Annually
Chromium (total)	µg/L	Annually
Cobalt	mg/L	Annually
Fluoride	mg/L	Annually
Total Kjeldahl Nitrogen	mg/L	Annually
Lead	mg/L	Annually
Magnesium	mg/L	Annually
Mercury	mg/L	Annually
Molybdenum	mg/L	Annually
Nitrite (as Nitrogen)	mg/L	Annually
Orthophosphate Phosphorous	mg/L	Annually
Phosphate	mg/L	Annually
Potassium	mg/L	Annually
Selenium	mg/L	Annually
Silver	mg/L	Annually
Sodium	mg/L	Annually
Thallium	mg/L	Annually

Table 2- LEAK DETECTION MONITORING SUMPS Continued

Constituents of Concern	Units	Monitoring Frequency
Total Alkalinity	mg/L	Annually
Total Anions	mg/L	Annually
Total Cations	mg/L	Annually
Total Hardness	mg/L	Annually
Total Phosphorus	mg/L	Annually
Vanadium	mg/L	Annually
Zinc	mg/L	Annually
VOCs	µg/L	Annually
SVOCs	µg/L	Annually
Organochlorine Pesticides	µg/L	Annually
Organophosphorus Pesticides	µg/L	Annually
Chlorinated Herbicides	µg/L	Annually
CCR, Title 22 Metals	mg/L	Annually

CCR = California Code of Regulations

°C = Degrees Centigrade

°F = Degrees Fahrenheit

MBAS = Methylene Blue Active Substances

µg/L = Micrograms per liter

µmhos/cm = Micromhos per centimeter

mg/L = Milligrams per liter

NTU = Nephelometric Turbidity Units

SVOC = Semi-volatile Organic Compound

TDS = Total Dissolved Solids

VOC = Volatile Organic Compound

ATTACHMENT C

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**Table 3- UNSATURATED ZONE - WASTE PILE
Monitoring Parameters and Constituents of Concern**

Field Parameters	Units	Monitoring Frequency
Composting Pad Thickness	Inches	Annually
Sample Locations	Northing and Easting	Annually
Wind Speed	Miles Per Hour	Daily
Wind Direction	Direction from North	Daily
Monitoring Parameters	Units	Monitoring Frequency
Aluminum	mg/kg	Annually
Antimony	mg/kg	Annually
Arsenic	mg/kg	Annually
Copper	mg/kg	Annually
Iron	mg/kg	Annually
Manganese	mg/kg	Annually
MBAS	mg/kg	Annually
Nickel	mg/kg	Annually
Nitrate as Nitrogen	mg/kg	Annually
Sulfate	mg/kg	Annually
TDS	mg/kg	Annually
Total and Fecal Coliform	MPN/100 mL	Annually
Constituents of Concern	Units	Monitoring Frequency
Barium	mg/kg	Annually
Beryllium	mg/kg	Annually
Bicarbonate	mg/kg	Annually
Boron	mg/kg	Annually
Bromide	mg/kg	Annually
Cadmium	mg/kg	Annually
Calcium	mg/kg	Annually
Carbonate	mg/kg	Annually
Chloride	mg/kg	Annually
Chromium (hexavalent)	µg/kg	Annually
Chromium (total)	µg/kg	Annually
Cobalt	mg/kg	Annually
Fluoride	mg/kg	Annually
Total Kjeldahl Nitrogen	mg/kg	Annually
Lead	mg/kg	Annually
Magnesium	mg/kg	Annually
Mercury	mg/kg	Annually
Molybdenum	mg/kg	Annually
Nitrite (as Nitrogen)	mg/kg	Annually
Orthophosphate Phosphorous	mg/kg	Annually
Phosphate	mg/kg	Annually
Potassium	mg/kg	Annually
Selenium	mg/kg	Annually
Silver	mg/kg	Annually
Sodium	mg/kg	Annually
Thallium	mg/kg	Annually
Total Alkalinity	mg/kg	Annually
Total Anions	mg/kg	Annually
Total Cations	mg/kg	Annually

Table 3- UNSATURATED ZONE - WASTE PILE, Continued

Constituents of Concern	Units	Monitoring Frequency
Total Hardness	mg/kg	Annually
Total Phosphorus	mg/kg	Annually
Vanadium	mg/kg	Annually
Zinc	mg/kg	Annually
VOCs	µg/kg	Annually
SVOCs	µg/kg	Annually
Organochlorine Pesticides	µg/kg	Annually
Organophosphorus Pesticides	µg/kg	Annually
Chlorinated Herbicides	µg/kg	Annually
CCR, Title 22 Metals	mg/kg	Annually

CCR = California Code of Regulations
MBAS = Methylene Blue Active Substances
µg/kg = Micrograms per kilogram
mg/L = Milligrams per kilogram
SVOC = Semi-Volatile Organic Compound
TDS = Total Dissolved Solids
VOC = Volatile Organic Compound

ATTACHMENT D

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**Table 4- GROUNDWATER
Monitoring Parameters and Constituents of Concern**

Field Parameters	Units	Monitoring Frequency
Groundwater Elevation	Feet and hundredths (mean sea level datum)	Quarterly
Specific Conductance	µmhos/cm	Quarterly
Temperature	°F or °C	Quarterly
Turbidity	NTU	Quarterly
pH	Units	Quarterly
Monitoring Parameters	Units	Monitoring Frequency
Aluminum	mg/L	Quarterly
Antimony	mg/L	Quarterly
Arsenic	mg/L	Quarterly
Copper	mg/L	Quarterly
Iron	mg/L	Quarterly
Manganese	mg/L	Quarterly
MBAS	mg/L	Quarterly
Nickel	mg/L	Quarterly
Nitrate as Nitrogen	mg/L	Quarterly
Odor		Quarterly
Sulfate	mg/L	Quarterly
TDS	mg/L	Quarterly
Total and Fecal Coliform	MPN/100 mL	Quarterly
Constituents of Concern	Units	Monitoring Frequency
Barium	mg/L	Annually
Beryllium	mg/L	Annually
Bicarbonate	mg/L	Annually
Boron	mg/L	Annually
Bromide	mg/L	Annually
Cadmium	mg/L	Annually
Calcium	mg/L	Annually
Carbonate	mg/L	Annually
Chloride	mg/L	Annually
Chromium (hexavalent)	µg/L	Annually
Chromium (total)	µg/L	Annually
Cobalt	mg/L	Annually
Fluoride	mg/L	Annually
Total Kjeldahl Nitrogen	mg/L	Annually
Lead	mg/L	Annually
Magnesium	mg/L	Annually
Mercury	mg/L	Annually
Molybdenum	mg/L	Annually
Nitrite (as Nitrogen)	mg/L	Annually
Orthophosphate Phosphorous	mg/L	Annually
Phosphate	mg/L	Annually
Potassium	mg/L	Annually
Selenium	mg/L	Annually

Table 4- GROUNDWATER Continued

Constituents of Concern	Units	Monitoring Frequency
Silver	mg/L	Annually
Sodium	mg/L	Annually
Thallium	mg/L	Annually
Total Alkalinity	mg/L	Annually
Total Anions	mg/L	Annually
Total Cations	mg/L	Annually
Total Hardness	mg/L	Annually
Total Phosphorus	mg/L	Annually
Vanadium	mg/L	Annually
Zinc	mg/L	Annually
VOCs	µg/L	Annually
SVOCs	µg/L	Annually
Organochlorine Pesticides	µg/L	Annually
Organophosphorus Pesticides	µg/L	Annually
Chlorinated Herbicides	µg/L	Annually
CCR, Title 22 Metals	mg/L	Annually

CCR = California Code of Regulations
°C = Degrees Centigrade
°F = Degrees Fahrenheit
MBAS = Methylene Blue Active Substances
µg/L = Micrograms per liter
µmhos/cm = Micromhos per centimeter
mg/L = Milligrams per liter
NTU = Nephelometric Turbidity Units
SVOC = Semi-Volatile Organic Compound
TDS = Total Dissolved Solids
VOC = Volatile Organic Compound

ATTACHMENT E

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

GENERAL PROVISIONS
FOR MONITORING AND REPORTING

1. SAMPLING AND ANALYSIS

- a. All analyses shall be performed in accordance with the current edition(s) of the following documents:
 - i. Standard Methods for the Examination of Water and Wastewater
 - ii. Methods for Chemical Analysis of Water and Wastes, EPA
- b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.
- c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.
- d. The Discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.
- e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.
- f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.
- g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

3. REPORTING

- a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.
- b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
- c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.
- d. Monitoring reports shall be signed by:
 - i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;
 - ii. In the case of a partnership, by a general partner;
 - iii. In the case of a sole proprietorship, by the proprietor; or

- iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
- e. Monitoring reports are to include the following:
 - i. Name and telephone number of individual who can answer questions about the report.
 - ii. The Monitoring and Reporting Program Number.
 - iii. WDID Number.
- f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation under Section 13268 of the Water Code.

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ENCLOSURE 2

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Item X

Revised Waste Discharge Requirements

American Organics Victor Valley Regional Composting Facility

Lahontan Regional Water Quality Control Board
June 9, 2016 – Victorville CA
Brianna St. Pierre, Engineering Geologist



1

TOPICS OF DISCUSSION

- 1. Facility Description**
- 2. History**
- 3. Characterization of Waste**
- 4. Facility Design**
- 5. Monitoring Requirements**
- 6. Conclusion & Recommendation**

2

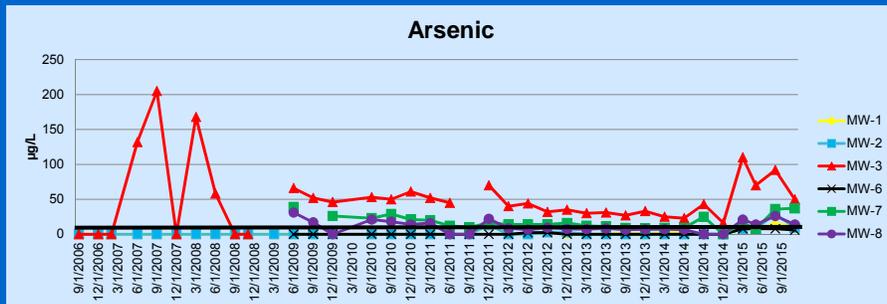
LOCATION American Organics Victor Valley Regional Composting Facility



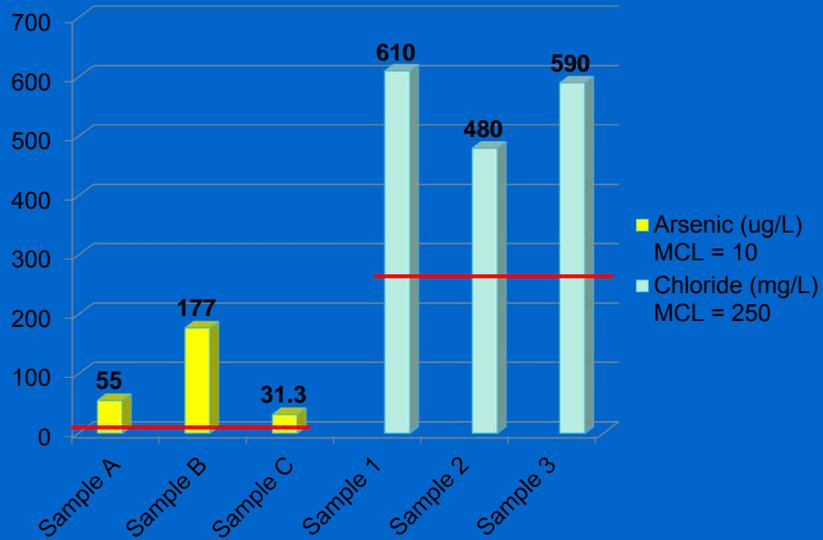
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HISTORY

- **July 12, 2000** – Waste Discharge Requirements adopted (Board Order No. 6-00-65)
- **June 12, 2002** – Amended Waste Discharge Requirements adopted (Board Order No. 6-00-65A1)
- **June 2, 2008** – Order to Submit Technical Report
- **December 29, 2015** – Revised Report of Waste Discharge Submitted
- **March 28, 2016** – Tentative Waste Discharge Requirements pursuant to California Code of Regulations, title 27, circulated for public comment



WASTE CHARACTERIZATION



5

REASON FOR ACTION

- Revise Waste Discharge Requirements
 - Class II Waste Pile
 - Class II Surface Impoundments
- Discharge is designated waste
 - High in arsenic, TDS
- Current practice has shown degradation of groundwater quality
- Runoff to Mojave River



FACILITY DESCRIPTION



STORMWATER



GROUNDWATER PROTECTION

Surface Impoundment

- Must contain the stormwater flow from the Facility from a 1,000-year, 24-hour event
- Must maintain two feet of freeboard
- Equipped with Leak Detection Monitoring Sumps
- Five foot separation between highest groundwater level and bottom of waste
- Wastewater samples collected from the Surface Impoundments quarterly
- Dikes and liners visually inspected monthly

9

GROUNDWATER PROTECTION

Waste Pile – Windrow Area

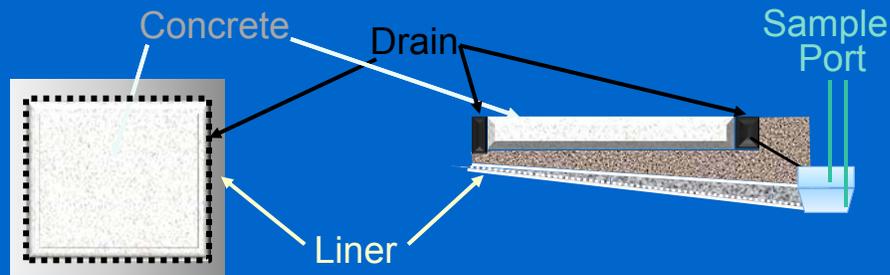
- Constructed of engineered compacted native fill
- No less than 12 inches thick
- Sloped to the surface impoundment
- Monitoring:
 - Soil samples to be collected directly from the pad
 - Samples to be analyzed at discrete depths from strategic locations

10

GROUNDWATER PROTECTION

Waste Pile – Turned Aerated Static Pile Area

- Constructed of concrete
- Drain and liner system
- Sloped to the surface impoundment
- Monitoring:
 - Samples to be collected from leachate sump



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ODOR CONTROL

- Compost operations generate VOCs, sulfur and nitrogen compounds that produce odors
- Mitigation Measures
 - Odor Impact Minimization Plan
 - Daily assessment of site conditions
 - Load checking procedures
 - Windrow management
 - Feedstock storage and processing measures
 - Odor complaint response system



12

CONCLUSION AND RECOMMENDATION

Regulation of this Facility under CCR, title 27, is appropriate to ensure the protection of water quality and beneficial uses of the waters of the State.

Water Board Staff recommend adoption of Revised Waste Discharge Requirements for American Organics Victor Valley Regional Composting Facility.

13

QUESTIONS?

14

DEFINITION OF NUISANCE

- Nuisance condition, CWC 13050(m)
 1. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
 2. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
 3. Occurs during, or as a result of, the treatment or disposal of wastes.

15

TECHNICAL REPORTS ORDERED

- **Final Design Plan** – 90 days after Order adoption
- **Closure Plan** – 90 days after Water Board acceptance of Final Design Plan
- **Financial Assurances** – 90 days after WB accept Final Design Plan
- **Odor Impact Minimization Plan** – 60 days after Order adoption
- **Construction Report** – 1 year after grading permit
- **Monitoring Systems Installation Report** – 90 days after construction
- **Background Soil Report** – 180 days after construction
- **Cease Discharge to Unimproved areas** – 18 months after construction

16

DUST CONTROL

- Unpaved roads to be watered or paved
- When wind speeds are 30 mph or greater, activities that may create a nuisance dust condition are not to be performed
- Moisture monitoring of windrows
- Water from Surface Impoundments can be used for dust control at the Facility

17

LEAK DETECTION SUMPS

- Sump beneath lowest portion of each Surface Impoundment
- Monitored for presence of liquid on a weekly basis
- If liquid is detected, collect sample immediately and quarterly thereafter

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SURFACE IMPOUNDMENTS

- Wastewater samples to be collected and analyzed quarterly
- Samples of any residual solids (sludge) in Surface Impoundment to be collected and analyzed annually
- Dikes and liners to be visually inspected monthly

19

REPORTING REQUIREMENTS

- Quarterly Reports
- Annual Reports
- Five-Year Reports
- Unscheduled Reports

20

QUARTERLY REPORTING

- Sampling results
- Statistical and Non-Statistical Data Analysis
 - Analysis of concentrations of COCs and Monitoring Parameters
 - Physical parameters
 - Stress on biological communities
 - Soil discoloration
- Results of monitoring performed during the quarter
 - Odor impacts
 - Wind speeds
 - Moisture monitoring

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ANNUAL REPORTING

- Time-series plots of analytical data
- Groundwater monitoring maps
- Graphical and tabular summarization of year's sampling data
- Calibration of field equipment
- Evidence of adequate financial assurance
- Review of preliminary closure plan

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FIVE-YEAR REPORTING

- Sampling of five-year constituents of concern

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UNSCHEDULED REPORTING

- Evidence of a release
- Immediate notification of physical or “measurably significant” evidence of a release
 - Information about the release
 - Procedures for collecting samples
 - Summary of proposed actions

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ENCLOSURE 3

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Lahontan Regional Water Quality Control Board

May 13, 2016

WDID No. 6B369912001

Bret S. Banks, Deputy Director
Mojave Desert Air Quality Management District
14306 Park Ave.
Victorville, CA 92392-2310
(Via Michelle Zumwalt: mzumwalt@mdaqmd.ca.gov)

Response to Comments, Tentative Revised Waste Discharge Requirements, American Organics Victorville Regional Composting Facility, Victorville, San Bernardino County

California Regional Water Quality Control Board, Lahontan Region (Water Board) staff received comments from the Mojave Desert Air Quality Management District (MDAQMD) on the tentative revised Waste Discharge Requirements for the American Organics Victor Valley Regional Composting Facility (Facility) located in the City of Victorville, circulated for public comment by the Water Board via email on April 28, 2016. Generally, the comments from MDAQMD focused on efforts to minimize fugitive dust from the Facility. Water Board staff reviewed the comments and have determined that no changes to the Board Order are required. Our response to comments is provided below. A copy of the MDAQMD's comment letter is enclosed for reference.

Finding 11 in our tentative Board Order is simply a statement regarding how American Organics may use tertiary-treated disinfected municipal wastewater treatment plant effluent and liquids from the surface impoundment for dust control at their Facility. Tentative Board Order, section II.A., numbers 16 through 19 discuss our requirements for odor impact minimization and reduction of nuisance dust conditions from the Facility (i.e., fugitive dust). In addition, Monitoring and Reporting Program, section II.F. requires mitigation measures be implemented and monitored to ensure dust is controlled at the Facility, including watering of unpaved roads, daily monitoring of moisture content of the windrows, and ceasing activities that may create nuisance dust conditions during periods of high winds. Water Board staff have determined that these requirements are sufficient for dust control.

Should MDAQMD staff become aware of, or observe, potential violations of our Board Order, please call our office to report these, and Water Board staff could then coordinate a joint inspection of the facility with MDAQMD staff. In addition, the Facility maintains a contact telephone number for citizens to call directly to voice their concerns during periods of impact from Facility operations. Water Board staff urge citizens to contact the Facility directly when impacted by odors or fugitive dust so that Facility

personnel may assess weather and operating activities on-going at the time of the impact to mitigate any current impacts and take steps to prevent future impacts.

We look forward to working with you in a manner that protects water quality and the environment. If you have any questions regarding this letter, please contact me at (760) 241-7305 (brianna.st.pierre@waterboards.ca.gov), or Patrice Copeland, Senior Engineering Geologist, at (760) 241-7404 (patrice.copeland@waterboards.ca.gov).



Brianna St. Pierre, P.G.
Engineering Geologist

Enc: Email and MDAQMD Comment Letter, Tentative Revised Waste Discharge Requirements for American Organics Victor Valley Regional Composting Facility (April 28, 2016)

cc: Anthony Bertrand, American Organics (ABertrand@athensservices.com)
Hal Houser, San Bernardino County LEA (hal.houser@dph.sbcounty.gov)

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St.Pierre, Brianna@Waterboards

From: Michelle Zumwalt <mzumwalt@mdaqmd.ca.gov>
Sent: Thursday, April 28, 2016 4:54 PM
To: Lahontan
Cc: St.Pierre, Brianna@Waterboards; Copeland, Patrice@Waterboards
Subject: American Organics WDID No. 6B369912001 Comments
Attachments: MDAQMD Comments - WDID 6B369912001.pdf

Good Afternoon –

Please see the attached comments from the Mojave Desert AQMD regarding dust control at American Organics.

Thank you for your consideration.

Michelle Zumwalt
Air Quality Specialist

Mojave Desert Air Quality Management District
14306 Park Avenue • Victorville, CA 92392
Phone: (760) 245-1661 x5756 • Fax: (760) 245-2022
Please visit our website: www.mdaqmd.ca.gov



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 Visit our web site: <http://www.mdaqmd.ca.gov>
 Eldon Heaston, Executive Director

Lahontan Regional Water Quality Control Board
 14440 Civic Drive
 Suite 200
 Victorville, CA 92392

RE: Tentative Revised Waste Discharge Requirements for American Organics Victor Valley Regional Composting Facility, WVID 6B369912001

On behalf of Mojave Desert Air Quality Management District (District), we respectfully submit comments regarding the above entitled action. As you are aware the District is the local agency with the primary responsibility for control of air pollution from all sources other than vehicular sources (Health & Safety Code §§39001, 40000), American Organic Victor Valley Regional Composting Facility (AO) is located within the District's jurisdiction and thus subject to its Rules and Regulations regarding air contaminants. AO currently holds permits with the District for various pieces of equipment, but not for their overall composting operation. However, their composting operation is still subject to District Rules 401 – *Visible Emissions*, 402 – *Nuisance*, 403 – *Fugitive Dust* and 403.2 – *Fugitive Dust Control for the Mojave Desert Planning Area*.

The District wishes to inform the board that it has received numerous citizen complaints regarding fugitive dust impacting the surrounding businesses and community around the AO facility. According to your proposed waste discharge requirements AO will be required to use tertiary-treated disinfected municipal wastewater treatment plant effluent from Victor Valley Wastewater Reclamation Authority (VWRA) or the liquid from the surface impoundment for dust suppression, as necessary, to prevent the release of airborne particulates from the Facility. The effluent from VWRA or the liquid in the surface impoundment may also be used to moisten the compost material in the piles as necessary (Item 11, page 8).

Unfortunately, District site inspections have shown that AO has consistently failed to use sufficient water to prevent fugitive dust from site haul roads and compost material piles from leaving the property boundaries. The District has also observed "track out" from the facility on the roadway that also becomes a sources of fugitive dust when dry. In addition, the turning of the windrows without sufficient water has been determined by the District to be a significant source of fugitive dust from this facility. Furthermore, complaints have indicated that AO may not cease dust creating operations when wind speeds are in excess of 25 miles per hour in violation of District rules.

While the District plans to pursue its own enforcement activities for violations of its own rules we respectfully request that you increase the specificity of item 11 on your discharge permit to reduce the potential for fugitive dust becoming entrained in the air stream and ending up precipitating out in or near other sensitive water resources such as the nearby Mojave River.

Thank you for the opportunity to provide comment.

Sincerely,

Bret S. Banks
 Deputy Director