CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2010-0094
WASTE DISCHARGE REQUIREMENTS
FOR
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
FOR
OPERATION AND CONSTRUCTION
WESTLAKE FARMS COMPOSTING FACILITY
KINGS COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board) finds that:

1. The County Sanitation Districts of Los Angeles County (hereafter Discharger), plans to construct and operate a 177-acre composting facility (facility) that will use, as a feedstock, treated municipal sewage sludge meeting the requirements specified in Part 503 in Title 40 of the United States Code of Federal Regulations (40 CFR Part 503) (hereafter referred to as biosolids). The proposed facility will be located in southern Kings County approximately 2.5 miles east of Interstate Highway 5 and five miles southeast of Kettleman City, in Section 35, T22S, R19E, MDB&M, as shown in Attachment A, which is incorporated herein and made part of this Order.

2. When completed, the facility will be elevated by approximately 5-feet above existing grade with a perimeter soil berm to prevent run-on to and run-off from the facility. The facility will be constructed in up to 5 phases. It will be comprised of up to 103 acres of aerated static piles, up to 42 acres of storm water retention basins, and 32 acres of campus area, consisting of feedstock wetting basins, and mixing, maintenance and administration buildings. The proposed facility at build-out is shown in Attachment B, which is incorporated herein and made part of this Order. A map showing the groundwater monitoring system and the areas being considered for future expansion phases is shown in Attachment C, which is incorporated herein and made part of this Order. The facility is located within Assessor's Parcel Number (APN) 042-180-19. The proposed composting unit has not been constructed and no wastes have been accepted.

3. On June 30, 2006, the Discharger completed the purchase of the 14,562-acre property from Westlake Farms, Inc, within which the proposed 177-acre facility will be constructed. A report of waste discharge (RWD) for the proposed facility was submitted by Westlake Farms Inc., dated 9 March 2005. Subsequently, the Discharger submitted an RWD in compliance with the California Water Code, Section 13000 et seq. (CWC) and Title 27 of the California Code of Regulations, Section 20005 et seq. (Title 27) in the form of a Joint Technical Document (JTD) dated 2 June 2008 and supplemental information to complete the JTD on 17 December 2008 and 19 August 2009. In subsequent letters to the Discharger,

dated 11 March 2009 and 29 December 2009, the JTD was found to be complete and adequate for the development of waste discharge requirements (WDRs).

4. The U.S. Environmental Protection Agency (USEPA) has promulgated biosolids reuse regulations in 40 CFR Part 503, *Standards for the Use or Disposal of Sewage Sludge*, 19 February 1993, which establish management criteria for protection of ground and surface waters, set application rates for heavy metals, and establish stabilization and disinfection criteria for biosolids reuse. These waste discharge requirements are consistent with the federal regulations.

5. The Central Valley Water Board is utilizing the standards contained in 40 CFR Part 503 as guidelines in establishing this Order, but the Central Valley Water Board is not the implementing agency for 40 CFR Part 503. The Discharger may have permitting, reporting, and other compliance responsibilities with the USEPA. Compliance with this Order does not confer either full or partial compliance with 40 CFR Part 503.

6. The proposed finished compost product would not exceed the pollutant limits identified in 40 CFR Part 503.13(a)(3), would satisfy Class A pathogen requirements as required in 40 CFR Part 503.32(a), and would satisfy vector attraction/reduction requirements, as defined in 40 CFR Part 503.33(a) (hereafter exceptional quality compost). Processed compost that does not meet the exceptional quality compost specifications will be reprocessed.

7. According to 40 CFR Part 503, the exceptional quality compost can be sold or given away in bags, boxes, or a vehicle or trailer with a load capacity of one metric ton (1.1 tons) or less and it can be applied in bulk to agricultural land, forest land, reclamation sites, lawns, and home gardens.

8. The California Department of Resources Recycling and Recovery (CalRecycle), formerly the California Integrated Waste Management Board, has adopted regulations governing the composting of green material, animal material, sewage sludge, and municipal solid waste under Title 14 of the California Code of Regulations, Division 30, Chapter 3.1. There are significant differences in the scope, authority and focus of CalRecycle's regulations governing composting and the requirements necessary, under this Order, for the protection of water quality. The CalRecycle regulations for composting are administered by the Local Enforcement Agency under a Compostable Materials Handling Facility Permit pending concurrence by CalRecycle.

9. At full build-out, the annual input processing capacity of composting materials will be 900,000 tons. This includes 500,000 tons of anaerobically digested and dewatered biosolids and 400,000 tons of bulking agents (agricultural feedstock, green waste from recycling programs, wood chips and shredded tires).

10. The Discharger owns and operates 14,562 acres of farmland in Kings County on which most of the finished compost will be used as a soil amendment. The finished compost will be applied to the farmland in accordance with 40 CFR Part 503 and State Water Resources Control Board Order No. 2004-0012-DWQ, *General Waste Discharge Requirements for the Discharge of Biosolids to Land For Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities (General Order)* or separately-issued WDRs.

SITE DESCRIPTION

11. The subsurface geologic materials at the site are mostly recent Tulare Lake Bed and Tulare Formation materials consisting predominately of fat to lean clays locally interbedded with lenses and layers of silt and silty-sand. Compacted and moisture-conditioned native soils have hydraulic conductivities lower than 1×10^{-6} centimeters per second (cm/sec).

12. The Great Valley 13, Great Valley 14 and Cholame-Carrizo segment of the San Andreas Fault are the closest Holocene faults and are approximately 10 kilometers (km) to 44.5 km from the facility. Seismic hazard at the site may be governed either by a Magnitude 6.4 event on the Great Valley 14 blind thrust fault, termed the near-field design event, or a Magnitude 7.8 event on the San Andreas Fault, termed the far-field design event on the Richter Scale. The estimated peak ground acceleration from an event occurring on the Great Valley 14 Fault at its closest approach to the site is 0.33g.

13. Land uses within 1,000 feet of the facility are agricultural, including confined animal facilities and agri-service businesses.

14. The climate in the area is semi-arid, with hot, dry summers and cool winters. The facility receives an average of approximately seven inches of precipitation per year as reported by the County of Kings in the Environmental Impact Report. The annual pan evaporation rate is approximately 56 inches as measured at the Kettleman City Station.

15. The 100-year, 24-hour precipitation event is estimated to be 6.6 inches as reported in the Joint Technical Document.

16. The facility is within an area protected from the 100-year flood by levees and is subject to inundation by the 500-year flood based on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, Community-Panel Number: 060086 0300 B. Two levees protect the facility: South Central Levee three miles to the east and Cohn Levee one mile to the east. Berms will be constructed around the lined storm water basins for protection from the 100-year, 24-hour precipitation event.

17. There are no known municipal, domestic, industrial, or agricultural groundwater supply wells within one mile of the site. No surface springs or other sources of groundwater supply have been observed.

18. State Water Resources Control Board Order No. 97-03-DWQ, National Pollutant Discharges Elimination System (NPDES), General Permit No. CAS000001, specifies waste discharge requirements for discharges of stormwater associated with industrial activities, excluding construction activities, and requiring submission of a Notice of Intent by industries to be covered under the permit. Waste disposal for storage and treatment, including composting facilities, is considered an industrial activity requiring submission of a Notice of Intent for coverage under the General Permit if stormwater is to be discharged off-site to jurisdictional waters of the United States.

    To be consistent with State and federal law regarding stormwater, the Discharger needs to either:

    a. Comply with the State Water Resources Control Board Order No. 97-03-DWQ, NPDES, General Permit No. CAS000001 (General Permit), or;

    b. Comply with an individual Order issued pursuant to the CWC, or;

    c. Provide sufficient evidence that all stormwater will be retained without discharge from land owned or controlled by the Discharger. This evidence may be provided by submitting a *Notice of Non-Applicability* form associated with the General Permit.

    The Discharger submitted a Notice of Non-Applicability dated 15 July 2010.

19. For new construction greater than one acre, the Discharger must comply with the requirements set forth in State Water Resources Control Board Order No. 2009-0009-DWQ, NPDES, General Permit No. CAS000002 for storm water discharges associated with construction activity. This permit is needed prior to commencement of construction activities.

SURFACE AND GROUND WATER CONDITIONS

20. The *Water Quality Control Plan for the Tulare Lake Basin,* Second Edition, revised January 2004 (hereafter Basin Plan), designates beneficial uses, establishes narrative and numerical water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates, by reference, plans and policies of the State Water Resources Control Board. Pursuant to Section 13263(a) of the CWC, these requirements implement the Basin Plan.

21. Surface drainage is toward the Tulare Lake Bed in the Lake Sump Hydrologic Area 558.30 of the Tulare Lake Basin.

22. The facility is on the floor of the southern San Joaquin Valley. The designated beneficial uses of Valley Floor Waters, as specified in the Basin Plan, are agricultural supply, industrial service and process supply, water contact and non-contact water recreation, warm fresh water habitat, preservation of rare, threatened and endangered species, and groundwater recharge.

23. The facility is in the Tulare Lake Basin Hydrologic Unit, Detailed Analysis Unit (DAU) 241. The designated beneficial uses of the groundwater, as specified in the Basin Plan for DAU 241, are municipal and domestic water supply, agricultural supply, and industrial service supply.

24. The first encountered groundwater beneath the facility or the uppermost aquifer occurs in sediments under confined to semi-confined conditions at about 3.5 feet below the native ground surface or at an approximate elevation of 183 feet above mean sea level.

25. Groundwater from the monitoring wells at the facility has total dissolved solids (TDS) concentrations ranging from about 3,400 to 27,000 milligrams per liter (mg/L) and an electrical conductivity of 8,000 to 26,000 micromohs per centimeter.

26. Deeper groundwater was investigated in an attempt to develop a potable water source. A groundwater well was constructed at the site to a depth of 600 feet below ground surface. The well emitted natural gas, had a low yield and slow recharge rate, and exhibited artesian characteristics; therefore, the well was determined to be unacceptable for its intended purpose and was abandoned.

COMPOSTING METHODS

27. Biosolids to be processed will originate from wastewater treatment plants regulated by orders adopted by regional water boards both outside and within the Central Valley Region. The biosolids will be tested by the generator prior to shipping to the facility. Only biosolids that meet the requirements for nonhazardous biosolids specified in Title 22, California Code of Regulations, Division 4.5, Chapter 11, Article 3, will be accepted.

28. Typically, biosolids that will be processed are generated by facilities owned by the Discharger. Biosolids from wastewater treatment plants, including those in the San Joaquin Valley, which are not owned by the Discharger, may be composted if the biosolids are compatible with the composting process and facility permits. Delivered biosolids will typically meet the guidelines for Class B biosolids in accordance with Title 40 CFR Part 503.

29. Raw composting materials will be delivered by truck. The materials will be mixed on-site with bulking agents consisting of agricultural feedstock and green waste feedstock from recycling programs.

30. Liquid biosolids received from wastewater treatment plants that do not have the capability to fully dewater their sludge may be processed. In such cases the liquid biosolids will be mixed with and fully absorbed by feedstock before the mixture is placed in windrows. Liquid biosolids will not be allowed to pond on the ground surface or come in direct contact with the composting pad.

31. The Discharger will employ the aerated static pile (ASP) composting method, which is also prescribed in 40 CFR Part 503, Appendix B, Section 1. Using the ASP composting method, the temperature of the compost mixture is maintained at 55 °C or higher for three days. The composting period generally requires 30 to 60 days to complete. Engineered, waterproof fabric covers on the ASPs will control odors and other emissions, which may otherwise be released from the composting materials into the atmosphere.

32. Composting operations may produce residual wastes, such as leachate, precipitation that has come in contact with composting material, and escaped or fugitive raw material and compost. The residual wastes, if any, would be collected and recycled onto the raw feedstocks or aerated static piles. Proper construction and management of the recycling operation and climatic conditions should minimize such residual waste generation.

33. As a soil amendment, the finished composted material will be exempt from Title 27, California Code of Regulations, Section 20005 et seq. (Title 27) provided best management practices are established for its use pursuant to Section 20090(f) of Title 27.

TITLE 27 AND ANTIDEGRADATION

34. Section 13273 of the CWC, defines designated waste 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, or hazardous waste that has been granted a variance from hazardous waste management requirements pursuant to Section 25143 of the Health and Safety Code.

35. The State Water Resources Control Board has adopted a body of regulations, under Title 27, consisting of requirements, waste classifications, and waste management unit classifications designed to provide protection to the beneficial uses of waters of the state for projects involving the discharge of solid or liquid waste to land for treatment, storage, or disposal at landfills, surface impoundments, waste piles, and land treatment units. Biosolids composting operations, where wastes pose a threat to water quality, would normally be regulated under the Title 27 regulations as Class II waste piles and surface impoundments that treat and contain designated waste.

36. Section 20090 of Title 27 exempts discharges of designated waste to land from Title 27 containment standards provided the following conditions are met:

    a. The applicable regional water board has issued waste discharge requirements, or waived such issuance;

    b. The discharge is in compliance with the applicable basin plan; and

    c. The waste is not hazardous waste and need not be managed according to Title 22, CCR, Division 4.5, Chapter 11, as a hazardous waste.

37. In a 14 April 2005 letter and memorandum, based on the site conditions exhibiting very poor native groundwater found beneath the proposed facility (Finding Nos. 25 and 26), Central Valley Water Board staff concluded that the threat to the beneficial uses of surface water or groundwater posed by the composting operation is not commensurate with stringent design and construction standards applicable to Class II waste piles or surface impoundments pursuant to Title 27 regulations, so long as a lesser design and operation would comply with the Basin Plan.

38. The Discharger has submitted a report titled *Background Groundwater Data Summary and Evaluation of Potential Effects of Compost Affected Stormwater on Groundwater, Westlake Farms Composting Facility, Kings County, California*, dated 19 August 2009, prepared by AMEC Geomatrix, Inc. (Groundwater Report), that summarized the extremely poor quality of native groundwater beneath the proposed facility and recommended a variance from Title 27 prescriptive standards for the design of surface impoundments, due to these site-specific conditions. The Groundwater Report indicated that the deep and shallow groundwater was of very poor quality, exceeding the primary MCL of selenium, and with TDS concentrations ranging from 3,400 to 27,000 mg/L. The Groundwater Report assessed the impact to shallow groundwater from stormwater that would come in contact with waste, assuming no liner for the surface impoundments and a deeper storm water basin design than allowed by Title 27 Section 20240(c), which prescribes a minimum 5-foot separation between groundwater and the base of waste piles or surface impoundments. The Groundwater Report also assessed the performance of the Discharger's proposed three-component liner system (Construction Specification D.3 of this Order), if constructed as a deeper basin than what would be allowed by Title 27. The Groundwater Report found that the proposed three-component liner system and deeper design would be protective of water quality.

39. Based on the representations made in the Groundwater Report (Finding No. 38), in a 29 December 2009 letter and memorandum, Central Valley Water Board staff concluded that: (1) stormwater stored in a basin with the proposed three-component liner system will be protective of groundwater (2) and maintaining the five-foot separation between the proposed lined storm water basin and groundwater (as

prescribed in Title 27 Section 20240(c)) is not necessary for protection of groundwater quality.

40. In accordance with Finding Nos. 37, 38, and 39, and based on site-specific characteristics exhibiting very poor native groundwater (Finding Nos. 25 and 26) beneath the facility, the low threat to beneficial uses of surface water or groundwater posed by the facility is not commensurate with the stringent construction, design and monitoring standards applicable to composting facilities under Title 27 regulations. Therefore, the facility is found to be exempt from regulation by Title 27.

41. This order requires total containment of wastes and does not permit degradation of surface water or groundwater. Further antidegradation analysis is therefore not needed. The discharge will be consistent with the antidegradation provisions of State Water Resources Control Board Resolution No. 68-16.

GROUNDWATER MONITORING

42. The existing detection monitoring system consists of four groundwater monitoring wells: MW-11, MW-12, and MW-13 are used to monitor the point of compliance and well MW-9 is used to establish background groundwater quality.

43. Monitoring wells MW-4 through MW-7 are utilized as piezometers and, in conjunction with the groundwater monitoring wells, are used to define the potentiometric surface in the vicinity of the facility.

44. Based on site-specific characteristics, the low threat to beneficial uses of surface water and groundwater posed by the facility is not commensurate to the stringent monitoring standards applicable to a Class II waste pile or surface impoundment pursuant to Title 27 regulations. As such, the Detection Monitoring Specifications and Monitoring and Reporting Program No. R5-2010-0094 are developed based on generally accepted Title 27 criteria as it provides a usable platform for evaluating monitoring data to determine compliance with waste discharge requirements.

CONSTRUCTION

45. A liner consisting of a minimum of one foot of compacted clay with a maximum hydraulic conductivity of 1×10^{-6} cm/sec will be placed beneath all areas of the facility on which waste materials will be placed, including the aerated static pile composting areas.

46. The aerated static pile composting areas will have a liner system consisting of the following three layers (thicknesses will be established by the design report) in ascending order:

    a. A layer of compacted clay (see Finding No. 45);

b. A layer of lime-stabilized soil; and

c. A layer of soil cement.

47. Retention basins for stormwater that has the potential to come into contact with wastes will have a liner system consisting, at a minimum, of the following, in ascending order:

a. A 12-inch thick compacted clay layer exhibiting a maximum hydraulic conductivity of 1×10^{-6} cm/sec, compacted to 90 percent dry density;

b. A 12-inch thick lime treated soil layer, compacted to 90 percent dry density; and

c. A 12-inch thick soil cement layer, compacted to 90 percent dry density.

48. Stormwater that has come into contact with waste may be used on compost piles for moisture conditioning.

49. The Discharger proposes to construct unlined storm water retention basins for rainwater that has not come in contact with biosolids. The water from these basins can be used for landscaping irrigation, dust control, and compost moisture conditioning.

CEQA AND OTHER CONSIDERATIONS

50. The Kings County Board of Supervisors certified the environmental impact report for the facility on 20 April 2004, and filed a Notice of Determination on 21 April 2004 in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and CEQA guidelines (14 CCR Section 15000 et seq.). The Central Valley Water Board considered the environmental impact report and incorporated mitigation measures from the environmental impact report into these waste discharge requirements designed to prevent potentially significant impacts to the environment and water quality.

51. The USEPA is the enforcing agency for 40 CFR Part 503. The Discharger must comply with all applicable provisions of 40 CFR Part 503.

52. Section 13267(b) of the CWC provides that, in conducting an investigation specified in subdivision (a), a Regional Board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposed to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who had discharged, discharges, or is suspected of discharging, or who proposed to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the

reports and the benefits to be obtained from the reports. The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. R5-2010-0094 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

PROCEDURAL REQUIREMENTS

53. The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

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

55. Any person affected by this action of the Central Valley Water Board may petition the State Water Resources Control Board to review the action in accordance with Sections 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Water Resources Control Board, Office of Chief Counsel, P.O. Box 100, Sacramento, California 95812, within 30 days of the date of issuance of this Order. Copies of the laws and regulations applicable to the filing of a petition are available on the Internet at http://www.waterboards.ca.gov/laws_regulations/index.shtml and will be provided on request.

IT IS HEREBY ORDERED, pursuant to Sections 13263 and 13267 of the California Water Code, that County Sanitation Districts of Los Angeles County, its agents, successors, and assigns, in order to meet the provisions of Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The discharge of 'hazardous waste' is prohibited. For the purposes of this Order, the term 'hazardous waste' is as defined in Title 23, California Code of Regulations, Section 2510 et seq.

2. The discharge and storage of biosolids, feedstocks, and other additives and wastes at locations other than the designated locations within the composting Unit specifically designed for their containment is prohibited, except for short-term storage of composted biosolids prior to application in accordance with the General Order or individually issued WDRs.

3. The landfilling of any waste at the facility is prohibited.

4. The release of pollutants or waste constituents to geologic materials in a manner that could cause a condition of nuisance, degradation, contamination, or pollution of surface or groundwater is prohibited.

5. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or groundwater is prohibited.

6. Discharge of wastes or composting, stockpiling, storing, or placing raw composting materials or compost within 100 feet of surface waters or surface water drainage courses is prohibited.

7. Composting, stockpiling, or otherwise accepting raw (untreated) sewage, septic tank pumpings, incinerator ash, grit or screenings generated from primary treatment of domestic sewage, is prohibited.

8. Selling or providing a finished product other than exceptional quality compost, as described in Finding Nos. 6 and 7, is prohibited.

9. Discharge of wastes or liquids from surface impoundments to off-site property is prohibited.

10. The ponding of water around waste storage areas, between compost windrows, adjacent to interior roads, and within the composting Unit(s) precipitation runoff collection channels, is prohibited.

B. DISCHARGE SPECIFICATIONS

1. Discharged wastes shall be limited to biosolids that are compostable residuals from municipal wastewater treatment facilities. These wastes shall be mixed with bulking agents consisting of agricultural feedstock and green waste feedstock from recycling programs. Other compostable bulking agents can be used following approval by the Executive Officer.

2. The discharge shall remain within the designated disposal area at all times.

3. The annual input/capacity of biosolids and bulking agents for composting shall not exceed 900,000 wet tons.

4. Biosolids which have not undergone active composting shall be physically isolated from other site activities to prevent cross contamination of feedstocks, composting materials, and finished product.

5. Liquids removed from a surface impoundment may be recycled to the feedstock chip wetting basins or aerated static piles.

6. Solids, which accumulate in the surface impoundment(s), shall be periodically removed to maintain minimum freeboard requirements and to maintain sufficient capacity for waste pile pad runoff of residual wastes and stormwater.

7. Materials that are screened out of the finished compost, commonly referred to as 'overs', and that are not recycled into the compost, shall be disposed of at an appropriate waste management unit.

C. FACILITY SPECIFICATIONS

1. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order.

2. The Discharger shall immediately notify the Central Valley Water Board of any flooding, unpermitted discharge of waste off-site, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.

3. Water used for facility maintenance shall be limited to the minimum amount necessary for dust control (biosolids windrows and unpaved roads) and construction.

4. The duration of finished product storage on-site shall not exceed six months.

5. The Discharger shall maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with these waste discharge requirements.

6. The Discharger shall maintain a *Storm Water Pollution Prevention Plan* and *Monitoring Program and Reporting Requirements* in accordance with State Water Resources Control Board Order No. 97-03-DWQ, or obtain an individual Order issued pursuant to the CWC, or retain all storm water on-site.

D. CONSTRUCTION SPECIFICATIONS

1. The Discharger shall submit, for Executive Officer review and approval at least **90 days prior** to construction, design plans and specifications for the unit that include the following:

   a. A Design Report for the new Unit that includes detailed plans, specifications, and descriptions for the liner components. The Design Report shall incorporate design rationale, with supporting calculations, for all components of the proposed containment system;

   b. A Construction Quality Assurance Plan consistent with the requirements of Section 20324 of Title 27;

c. A geotechnical evaluation of the area soils, evaluating their use as the base layer; and

d. A grading and drainage plan to prevent ponding and infiltration.

2. The Discharger shall construct a liner system beneath the compost pads and feedstock wetting basins consisting of a compacted native clay layer that is a minimum of one foot thick with a maximum hydraulic conductivity of 1×10^{-6} cm/sec, compacted to 90 percent dry density.

3. The aerated static pile composting areas shall have a liner foundation system consisting of the following in ascending order:

   a. A layer of compacted clay;

   b. A layer of lime-stabilized soil; and

   c. A layer of soil cement.

4. Retention basins for stormwater that has the potential to come into contact with wastes shall have a liner system consisting, at a minimum, of the following, in ascending order:

   a. A 12-inch thick compacted native clay layer exhibiting a maximum hydraulic conductivity of 1×10^{-6} cm/sec, compacted to 90 percent dry density;

   b. A 12-inch thick lime treated soil layer, compacted to 90 percent dry density; and

   c. A 12-inch thick soil cement layer, compacted to 90 percent dry density.

5. Surface impoundments shall be designed, constructed, and operated to maintain a freeboard of two (2) feet plus the rainfall and residual waste produced from a 100-year, 24-hour precipitation event or 2 feet plus the 100-year wet season precipitation, whichever is greater. At no time shall the freeboard of an impoundment be less than two feet.

6. Surface impoundments shall be designed, constructed, and maintained to prevent scouring and/or erosion of the liner(s) and other containment features at points of discharge to the impoundment and by wave action at the waterline.

7. The Discharger may propose changes to the liner system design prior to construction, provided that approved components are not eliminated, the engineering properties of the components are not substantially reduced, and the proposed liner system results in the protection of water quality equal to or greater than the design prescribed by this Order. The proposed changes may be made

following approval by the Executive Officer. Substantive changes to the design require reevaluation and approval by the Central Valley Water Board.

8. Construction shall proceed only after all applicable construction quality assurance plans have been approved by Executive Officer.

9. A third party independent of both the Discharger and the construction contractor shall perform all of the construction quality assurance monitoring and testing during the construction of a liner system.

10. Following the completion of construction of a Unit or portion of a Unit, and prior to discharge onto the newly constructed liner system, a final construction report shall be submitted to the Executive Officer for review and approval. The report shall be certified by a registered civil engineer or a certified engineering geologist. It shall contain sufficient information and test results to verify that construction proceeded in accordance with the design plans and specifications of this Order and the Construction Quality Assurance Plan.

11. Closure shall not proceed in the absence of closure waste discharge requirements.

E. DETECTION MONITORING SPECIFICATIONS

1. The Discharger shall submit for review and approval a groundwater detection monitoring program for any expansion of the composting subunit(s) beyond the phases described in the December 2008 Joint Technical Document.

2. The Discharger shall provide Central Valley Water Board staff a minimum of **one week** notification prior to commencing any field activities related to the installation, repair, or abandonment of monitoring devices, and a minimum 48 hour notification prior to the collection of samples associated with a detection monitoring program, evaluation monitoring program, or corrective action program.

3. The Discharger shall comply with the Water Quality Protection Standard as specified in Monitoring and Reporting Program No. R5-2010-0094.

4. The point of compliance for the water quality protection standard shall be a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the Unit.

5. The concentrations of the constituents of concern in waters passing the point of compliance shall not exceed the concentration limits established pursuant to Monitoring and Reporting Program No. R5-2010-0094.

6. For each monitoring event, the Discharger shall determine whether the composting facility is in compliance with the Water Quality Protection Standard using procedures specified in Monitoring and Reporting Program No. R5-2010-0094.

7. The Discharger shall submit for Executive Officer review and approval a Sample Collection and Analysis Plan. The Sample Collection and Analysis Plan shall at a minimum include:

   a. Sample collection procedures describing purging techniques, sampling equipment, and decontamination of sampling equipment;

   b. Sample preservation information and shipment procedures;

   c. Sample analytical methods and procedures;

   d. Sample quality assurance/quality control (QA/QC) procedures; and

   e. Chain of Custody control.

8. For any given monitored medium, the samples taken from all monitoring points and background monitoring points to satisfy the data analysis requirements for a given reporting period shall all be taken **within a span not to exceed 30 days**, unless the Executive Officer approves a longer time period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible. Specific methods of collection and analysis must be identified. Sample collection, storage, and analysis shall be performed according to the most recent version of USEPA Methods, such as the latest editions, as applicable, of: (1) Methods for the Analysis of Organics in Water and Wastewater (USEPA 600 Series), (2) Test Methods for Evaluating Solid Waste (SW-846, latest edition), and (3) Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020), and in accordance with the approved Sample Collection and Analysis Plan.

9. If methods other than USEPA-approved methods or Standard Methods are used, the exact methodology shall be submitted for review and approval by the Executive Officer prior to use.

10. The **methods of analysis and the detection limits** used shall be appropriate for the expected concentrations. For the monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e., "trace" or "ND") in data from background monitoring points for that medium, the analytical method having the lowest method detection limit (MDL) shall be selected from among those methods which would provide valid results in light of any matrix effects or interferences.

11. **"Trace" results** - results falling between the MDL and the practical quantitation limit (PQL) - shall be reported as such, and shall be accompanied both by the estimated MDL and PQL values for that analytical run.

12. **MDLs and PQLs** shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. These MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. In relatively interference-free water, laboratory-derived MDLs and PQLs are expected to closely agree with published USEPA MDLs and PQLs.

13. If the laboratory suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the results shall be flagged accordingly, along with estimates of the detection limit and quantitation limit actually achieved. The **MDL shall always be calculated such that it represents the lowest achievable concentration associated with a 99% reliability of a nonzero result**. The PQL shall always be calculated such that it represents the lowest constituent concentration at which a numerical value can be assigned with reasonable certainty that it represents the constituent's actual concentration in the sample. Normally, PQLs should be set equal to the concentration of the lowest standard used to calibrate the analytical procedure.

14. All **QA/QC data** shall be reported, along with the sample results to which they apply, including the method, equipment, analytical detection and quantitation limits, the percent recovery, an explanation for any recovery that falls outside the QC limits, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and qualifications of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recoveries. In cases where contaminants are detected in QA/QC samples (i.e., field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged.

15. Unknown chromatographic peaks shall be reported, flagged, and tracked for potential comparison to subsequent unknown peaks that may be observed in future sampling events. Identification of unknown chromatographic peaks that recur in subsequent sampling events may be required.

16. The statistical method shall account for data below the practical quantitation limit (PQL) with one or more statistical procedures that are protective of human health and the environment. Any PQL validated consistent with Title 27 CCR Section 20415(e)(7) that is used in the statistical method shall be **the lowest concentration (or value) that can be reliably achieved** within limits of precision and accuracy specified in the WDRs for routine laboratory operating

conditions that are available to the facility. The Discharger's technical report shall consider the PQLs listed in Appendix IX to Chapter 14 of Division 4.5 of Title 22, CCR, for guidance when specifying limits of precision and accuracy. For any given constituent monitored at a background or downgradient monitoring point, a trace detection shall be identified and used in appropriate statistical or nonstatistical tests. Nevertheless, for a statistical method that is compatible with the proportion of censored data (trace and ND indications) in the data set, the Discharger can use the laboratory's concentration estimates in the trace range (if available) for statistical analysis, in order to increase the statistical power by decreasing the number of "ties".

17. The Discharger may propose an alternate statistical method for review and approval by the Executive Officer.

F. PROVISIONS

1. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.

2. The Discharger shall comply with Monitoring and Reporting Program No. R5-2010-0094, which is incorporated into and made part of this Order.

3. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.

4. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.

5. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

   a. Violation of any term or condition contained in this order;

   b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;

   c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge; or

   d. A material change in the character, location, or volume of discharge.

6. Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the

Central Valley Water Board. A material change includes, but is not limited to, the following:

a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements;

b. A significant change in disposal method, location or volume, e.g., change from land disposal to land treatment;

c. The addition of a major industrial, municipal or domestic waste discharge facility; or

d. The addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

7. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Central Valley Water Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.

8. The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.

9. The discharger shall permit representatives of the Central Valley Water Board and the State Water Resources Control Board, upon presentation of credentials, to:

   a. Enter premises where wastes are treated, stared, or disposed of and facilities in which any records are kept;

   b. Copy any records required to be kept under terms and conditions of this Order;

   c. Inspect at reasonable hours, monitoring equipment required by this Order; and

   d. Sample, photograph and videotape any discharge, waste, waste management unit or monitoring device.

10. For any electrically operated equipment at the site, the failure of which could cause loss of control or containment of waste materials, or violation of this Order, the discharger shall employ safeguards to prevent loss of control over wastes.

Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.

11. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the CWC, Section 13050.

12. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the CWC. Failing to furnish the reports by the specified deadlines and falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the discharger.

13. In the event the Discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the Discharger shall notify the appropriate Central Valley Water Board office by telephone **as soon as** it or its agents have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing **within two weeks**. The written notification shall state the nature, time, and cause of noncompliance, and shall describe the measures being taken to prevent recurrences and shall include a timetable for corrective actions.

14. The composting operation shall comply with the static aerated pile composting or windrow composting requirements specified in 40 CFR Part 503, for the production of exceptional quality compost.

15. The Discharger shall apply for coverage under State Water Resources Control Board Order No. 2004-0012-DWQ, *General Waste Discharge Requirements for the Discharge of Biosolids to Land For Use as a Soil Amendment in agricultural, Silvicultural, Horticultural, and Land Reclamation Activities (General Order)* or separately-issued WDRs for the application of finished compost to the land owned by the Discharger.

16. At least **90 days** prior to the cessation of composting operations at the facility, the Discharger shall submit a work plan, subject to approval of Central Valley Water Board staff, for assessing the extent, if any, of contamination of natural geologic materials. By **120 days** following work plan approval, the Discharger shall submit an engineering report presenting the results of the contamination assessment.

17. Upon ceasing composting operations at the facility, all wastes, natural geologic materials contaminated by wastes (as determined pursuant to Provision F.6), and surplus or unprocessed composting materials shall be completely removed from the site and disposed of in a manner approved by Central Valley Water Board staff.

18. All reports and transmittal letters shall be signed by persons identified below:

a. For a corporation: by a principal executive officer of at least the level of senior vice-president.

b. For a partnership or sole proprietorship: by a general partner or the proprietor.

c. For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected or appointed official.

d. A duly authorized representative of a person designated in a, b or c above if;

1) The authorization is made in writing by a person described in a, b, or c of this provision;

2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a Unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

3) The written authorization is submitted to the Central Valley Water Board.

e. Any person signing a document under this Section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

19. The Discharger shall take all reasonable steps to minimize any adverse impact to the waters of the State resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature, extent, and impact of the noncompliance.

20. The owner of the waste management facility shall have the continuing responsibility to assure protection of waters of the state from discharged wastes and from gases and leachate generated by discharged waste during the active life, closure, and post-closure maintenance period of the Unit(s) and during subsequent use of the property for other purposes.

21. The fact that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order shall not be regarded as a defense for the Discharger's violations of the Order.

22. To assume ownership or operation under this Order, the succeeding owner or operator must apply in writing to the Central Valley Water Board requesting transfer of the Order within 14 days of assuming ownership or operation of this facility. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory requirements contained in Provision F.18 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer of this Order shall be approved or disapproved by the Central Valley Water Board.

23. The Discharger shall maintain financial assurance for corrective action. The Discharger shall, **by 3 January 2011**, submit for approval by the Executive Officer, a report with detailed cost estimates and a demonstration of assurances of financial responsibility for initiating and completing corrective action for all known and reasonably foreseeable releases from the waste management unit. The assurances of financial responsibility shall name the Central Valley Water Board as beneficiary and shall provide that funds for corrective action shall be available to the Central Valley Water Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.

24. The Discharger shall maintain financial assurance for clean closure (see Provisions F.16 and F.17). The Discharger shall, **by 3 January 2011**, submit for approval by the Executive Officer, a report with detailed cost estimates and a demonstration of assurances of financial responsibility to ensure closure of each waste management unit. The assurances of financial responsibility shall provide that funds for closure with respect to water quality shall name the Central Valley Water Board as beneficiary and shall be available to the Central Valley Water Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.

25. All financial assurances must be submitted and in effect **prior to the acceptance of any** composting feedstock.

26. The Discharger shall conduct an annual review of the financial assurances specified in Provisions F.23 and F.24, and **by 30 June each year**, submit a

report for Executive Officer review and approval. If a single mechanism of financial assurance is used for both corrective action and closure, the financial assurance shall be sufficient for both requirements.

27. The Discharger shall complete the tasks contained in these waste discharge requirements in accordance with the following time schedule:

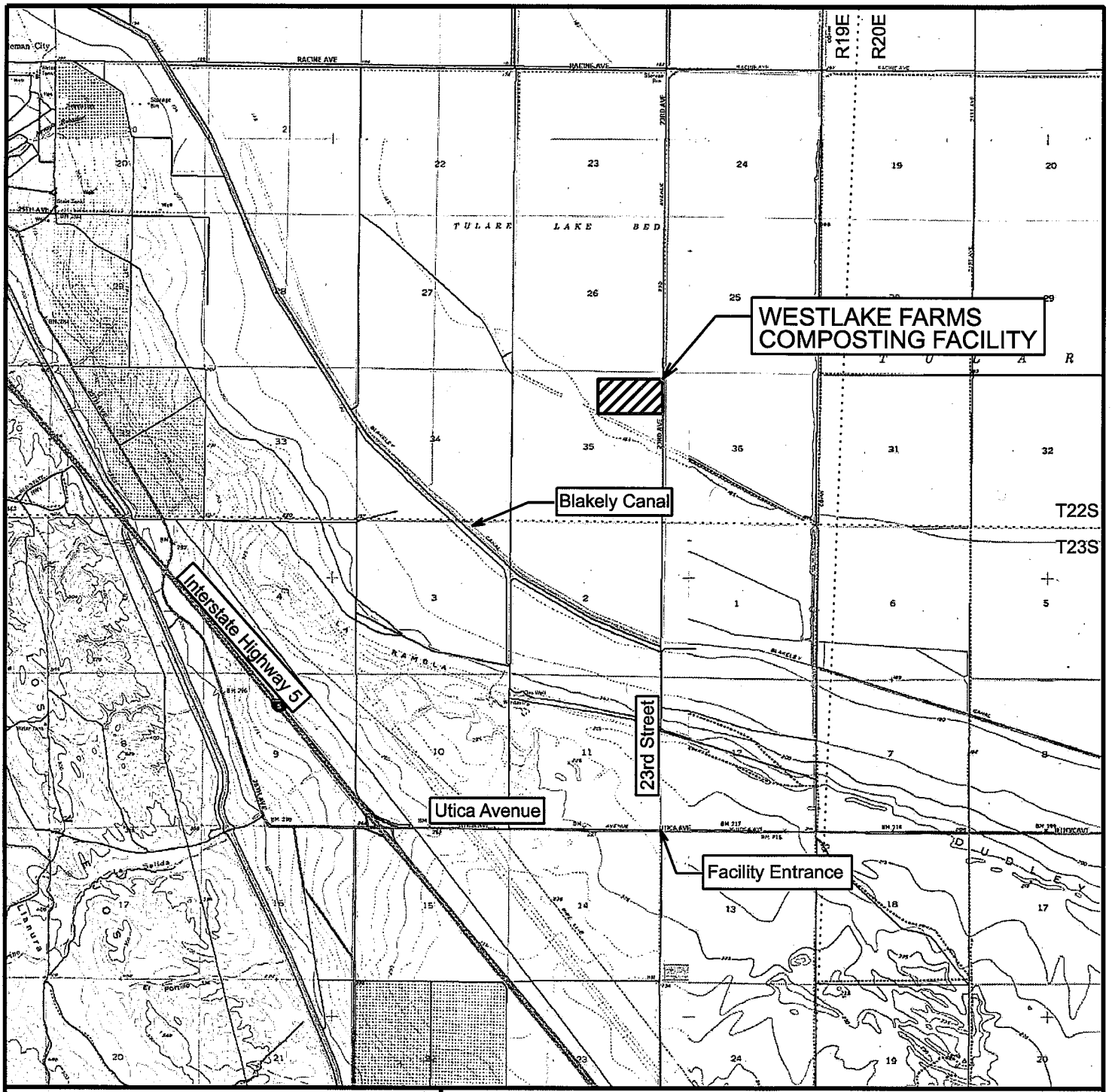
Task	Compliance Date
A. Construction Plans Submit construction and design plans for Executive Officer review and approval. (see Construction Specification D.1)	**At least 90 days Prior to construction**
B. Construction Report Submit a construction report upon completion demonstrating construction was in accordance with approved construction plans for Executive Officer review and approval. (see Construction Specification D.10)	**At least 90 days Prior to discharge**
C. Financial Assurance Submit a detailed cost estimates and financial responsibility for corrective action, and closure. (see Provisions F.23 and F.24)	**3 January 2011**
D. Financial Assurance Review Annual Review of Financial Assurance for initiating and completing corrective action and closure. (see Provisions F.26)	**30 June each year**

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provision of this Order, the Executive Officer may apply to the Attorney General for judicial enforcement or issue a complaint for Administrative Civil Liability.

I, PAMELA C. CREEDON, 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 Control Board, Central Valley Region, on 22 September 2010.

for PAMELA C. CREEDON, Executive Officer

REH: 9/22/10



EXPLANATION

Composting Facility Boundry

APPROXIMATE SCALE IN FEET
0 2500 5000
0 750 1500
APPROXIMATE SCALE IN METERS

Base Map Source: USGS 7.5' Los Viejos, Dudley Ridge Quadrangles (5/18/2010)

LOCATION MAP

Order Number: R5-2010-0094

WASTE DISCHARGE REQUIREMENTS FOR

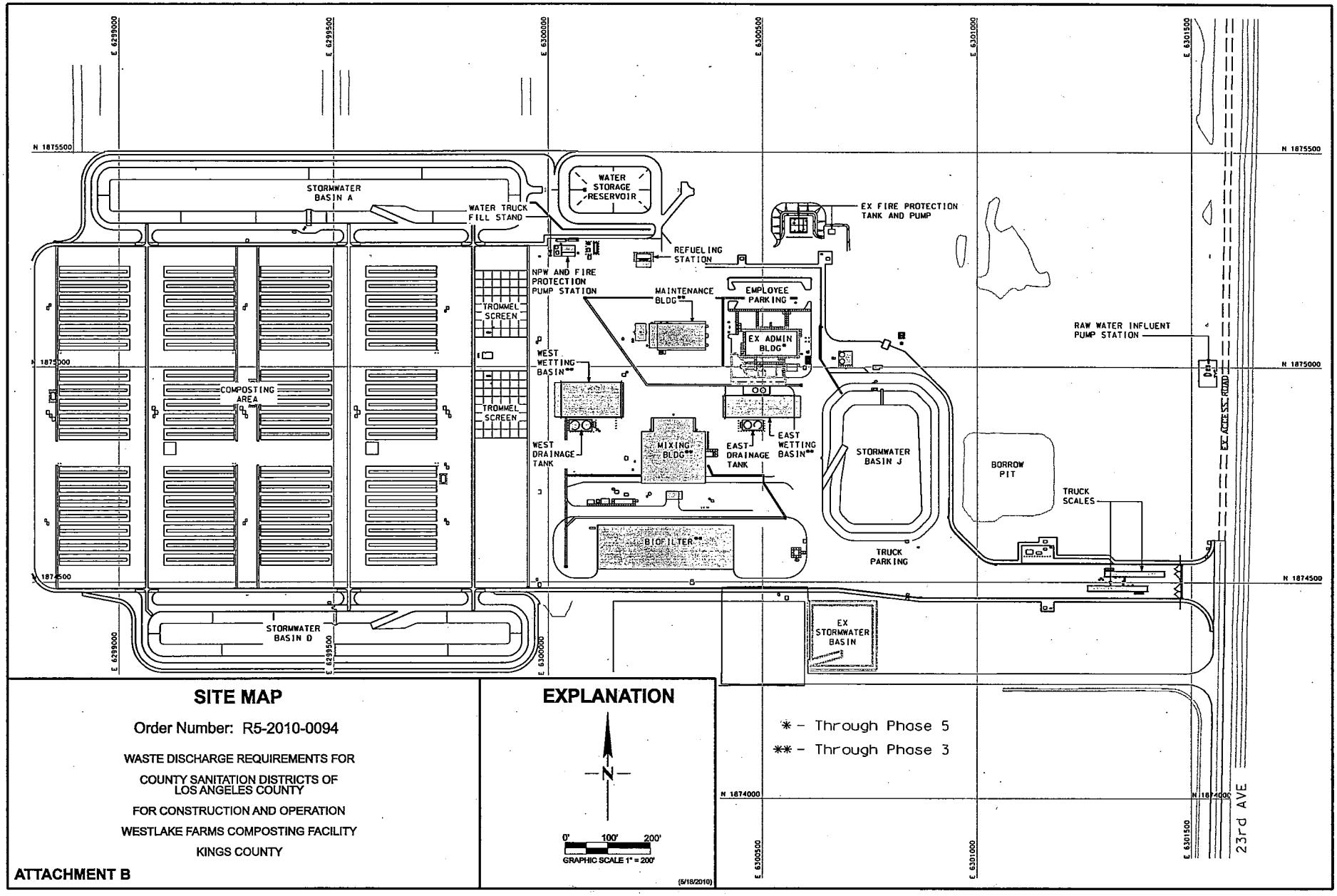
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

FOR CONSTRUCTION AND OPERATION

WESTLAKE FARMS COMPOSTING FACILITY

KINGS COUNTY

ATTACHMENT A



SITE MAP

Order Number: R5-2010-0094

WASTE DISCHARGE REQUIREMENTS FOR

COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

FOR CONSTRUCTION AND OPERATION

WESTLAKE FARMS COMPOSTING FACILITY

KINGS COUNTY

ATTACHMENT B

EXPLANATION

N

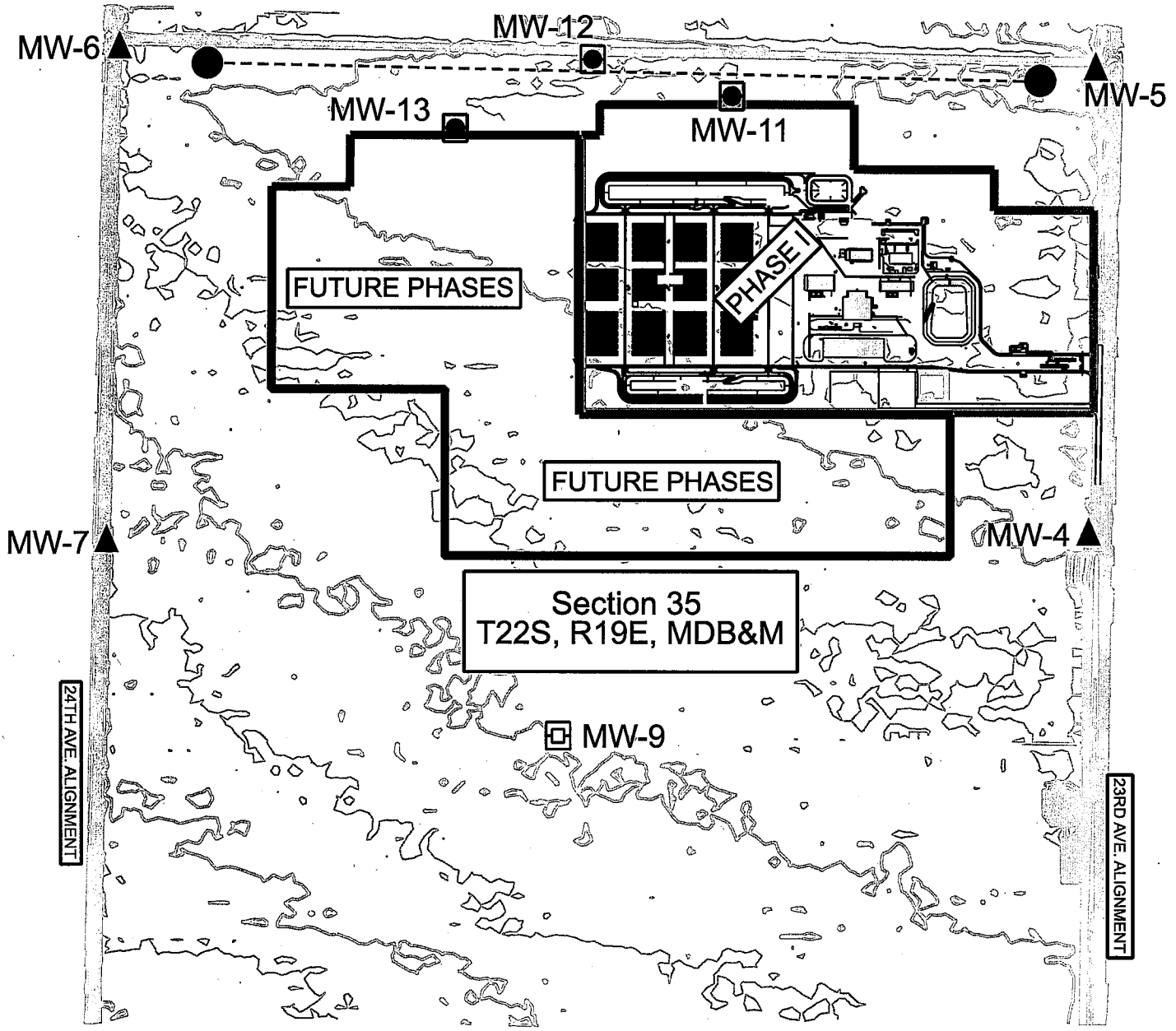
0' 100' 200'

GRAPHIC SCALE 1" = 200'

(5/18/2010)

* - Through Phase 5

** - Through Phase 3



EXPLANATION

- Point of Compliance
- Point of Compliance Wells
- Upgradient Well
- Piezometers

N

0' 400' 800'

GRAPHIC SCALE 1" = 800'

(5/18/2010)

GROUNDWATER SYSTEM MONITORING MAP

Order Number: R5-2010-0094

WASTE DISCHARGE REQUIREMENTS FOR

COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

FOR CONSTRUCTION AND OPERATION

WESTLAKE FARMS COMPOSTING FACILITY

KINGS COUNTY

ATTACHMENT C

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2010-0094
FOR
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
FOR
OPERATION AND CONSTRUCTION
WESTLAKE FARMS COMPOSTING FACILITY
KINGS COUNTY

Compliance with this Monitoring and Reporting Program (MRP) is ordered by Waste Discharge Requirements Order R5-2010-0094.

A. REQUIRED MONITORING REPORTS

1. Groundwater Monitoring (Section D.1)
2. Annual Monitoring Summary Report
3. Surface Impoundment Monitoring (Section D.2)
4. Compost Temperature Monitoring (Section D.3)
5. Quantities (Section D.4)
6. Biosolids Monitoring (Section D.5)
7. Facility Monitoring (Section D.6)

B. REPORTING

The County Sanitation Districts of Los Angeles County (hereafter Discharger) shall report monitoring data and information as required in this MRP and as required in Order R5-2010-0094. Reports which do not comply with the required format will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the waste discharge requirements. In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, constituents, concentrations, and units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly compliance with waste discharge requirements or the lack thereof. Data shall also be submitted in a digital format acceptable to the Executive Officer. Each monitoring report shall include a compliance evaluation summary as specified in "E. Reporting Requirements", in this MRP.

Report Due Dates

Field and laboratory tests shall be reported in each monitoring report. Monitoring reports shall be submitted to the Central Valley Water Board in accordance with the following schedule for the calendar period in which samples were taken or observations made.

Sampling Frequency	Reporting Frequency	Reporting Period Ends	Report Date Due
Semiannually	Semiannually	June 30 December 31	July 31 January 31
Annually	Annually	December 31	January 31

The Discharger shall submit an **Annual Monitoring Summary** with the semiannual report due on 31 January to the Central Valley Water Board. The Annual Monitoring Summary shall contain the information specified in "E. Reporting Requirements", in this MRP, and a discussion of compliance with the waste discharge requirements and the Water Quality Protection Standard.

The results of all monitoring conducted at the site shall be reported to the Central Valley Water Board in accordance with the reporting schedule above for the calendar period in which samples were taken.

C. WATER QUALITY PROTECTION STANDARD

The Discharger submitted a report titled *Proposed Water Quality Protection Standard, Westlake Farms Composting Facility, Kings County, California*, dated 2 April 2010 (Water Quality Protection Standard Report), that provides the basis for the following monitoring system that will be used to detect a release from the facility.

1. Point of Compliance

The point of compliance for the water quality protection standard is a vertical surface located at the hydraulically downgradient limit of the waste management unit (Unit) that extends through the uppermost aquifer underlying the Unit. The uppermost aquifer of the Unit is the water table, which is monitored by a number of shallow wells. The general gradient across the site is to the north, which places the downgradient edge of the Unit along the northern boundary of Section 35 as shown in Attachment C of Order R5-2010-0094.

2. Monitoring Parameters

Monitoring parameters are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from the Unit. The monitoring parameters are those listed in Table I. The Discharger shall monitor all monitoring parameters semiannually.

3. Constituents of Concern

The constituents of concern (COC) include all the waste constituents, the reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the Unit. The COC for the Unit are those listed in Table II. Because these constituents will not provide a reliable indication of a release from the Unit, the Discharger shall monitor all COC every five years.

4. Concentration Limits

With the exception of field parameters, a concentration limit shall be calculated for each monitoring parameter at each point of compliance well utilizing a groundwater statistical analysis computer program (such as Sanitas™). The concentration limit for each monitoring parameter shall be the intra-well prediction limit determined from all data collected prior to the commencement of composting operations at the facility.

The concentration limits for naturally occurring monitoring parameters shall be reassessed annually and shall be listed in the Annual Monitoring Summary Report.

The Discharger has proposed to collect and analyze additional samples from each point of compliance well prior to the operation of the facility for each monitoring parameter to improve the statistical reliability of the concentration limits. The Discharger shall submit a report that is acceptable to the Executive Officer that documents the background data collected for each monitoring parameter and proposes concentration limits based on the data. This report shall be submitted prior to commencement of facility operations.

D. MONITORING

The Discharger shall monitor groundwater, compost temperature, the quantity of finished compost and raw materials shipped and received, and the quality of incoming biosolids as described in the following sections.

1. Groundwater

Groundwater samples shall be collected from the point of compliance wells and upgradient wells. Samples shall be collected and analyzed for the monitoring parameters in accordance with the methods and frequencies specified in Tables I and II. The first Five-Year COC event shall be conducted during the first monitoring period after the facility begins operation. Subsequent Five-Year COC scanning events shall be conducted concurrently with first semiannual sampling event of the appropriate year.

All monitoring shall be conducted in accordance with a sample collection and analysis plan in accordance with Monitoring Specification E.8 of the WDRs.

Groundwater sampling shall also include an accurate determination of the groundwater surface elevation and field parameters (temperature, electrical conductivity, pH, and turbidity) for that monitoring point.

Water elevations shall be collected from all point of compliance and upgradient wells and all piezometers quarterly and shall be used for determining the groundwater gradient, elevation, and direction as required in Sections E.5.b and c of this MRP. Groundwater elevations shall be collected prior to any sampling activities (i.e. purging the well).

2. Surface Impoundment Monitoring

At any time during a semiannual monitoring period, if water is present in a storm water surface impoundment for longer than 14 days, the water shall be sampled and analyzed for total concentrations of metals listed in Title 22 CCR §66261.24(a)(2)(A). Samples do not need to be obtained more often than once during any semiannual monitoring period.

The freeboard on the storm water surface impoundments shall not be less than two feet measured vertically from the water surface to the point on the surrounding lined berm having the lowest elevation. Permanent markers shall be placed in each storm water surface impoundment with calibrations indicating the water level at design capacity and that the available operational freeboard is at least two feet. The freeboard on the surface impoundments shall be observed **monthly** from April though September and **weekly** from November through April. This information shall be **reported annually**.

3. Compost Temperature Monitoring

Compost temperatures from active and intermediate Aerated Static Piles shall be measured and recorded on a daily basis. Temperature monitoring shall be conducted in accordance with United States Environmental Protection Agency (USEPA) and Department of Resources Recycling and Recovery (CalRecycle) composting guidelines and requirements.
The following information shall be reported **Semiannually**:

Constituent	Units	Monitoring Frequency
Aerated Static Pile Temperatures	°C	Daily[1]
Length of Aerated Static Pile	Feet	Daily[1]

[1]Each operating day, but not less than 5 days per calendar week.

4. Quantities

Quantities of the following shall be reported **semiannually**:

Constituent	Units	Monitoring Frequency
Biosolids Received	Tons (wet)	Monthly
Bulking Agents Received	Tons (wet)	Monthly
Exceptional Quality Compost Shipped Offsite[1]	Tons (wet)	Monthly
Precipitation	Inches[2]	Monthly

[1]Information including the name of the generator, and amount (tons) shipped. These records are to be maintained by the Discharger and made available for inspection by staff at the site offices.
[2]Based on measurements recorded at the nearest rain gauging station operated by a governmental entity.

5. Biosolids Monitoring

For each source of municipal biosolids received the Discharger shall provide analytical results for the following constituents:

Total Kjeldahl Nitrogen
Nitrogen
Nitrates
Title 22, CCR, Priority Pollutant Metals[1]
Percent Solids
pH
Fecal Coliforms

[1]Soluble concentrations using the Waste Extraction Test (WET).

For each source of municipal biosolids, the above analyses shall be performed at least on a semi-annual basis, and **reported semiannually**. Accompanying the analytical results shall be verification of biosolids as nonhazardous in accordance with Title 22, California Code of Regulations (CCR), Division 4.5, Chapter 11, Article 3, §66261.24(a)(2)(A) Table II (Priority Pollutant Metals), or by other tests approved by Central Valley Water Board staff. This verification shall include a statement from the generator stating that sludge has been tested and meets criteria for nonhazardous sludge specified in Title 22, CCR, Division 4.5, Chapter 11, Article 3, §66261.24(a)(2)(A) Table II (Priority Pollutant Metals).

6. Facility Monitoring

a. **Facility Inspection**

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall assess damage to the drainage control system, groundwater monitoring equipment (including wells, etc.), and shall include the Standard Observations contained in Section E.4.f., of this MRP. Any necessary construction, maintenance, or repairs shall be completed by **31 October**. By **15 November** of each year, the Discharger shall submit an Annual Report describing the results of the inspection and any repair measures implemented, including photographs of the problem and the repairs.

b. **Storm Events**

The Discharger shall inspect all precipitation, diversion, and drainage facilities for damage **within 7 days** following *major storm events* (i.e., a storm that causes continuous runoff for at least one hour). Necessary repairs shall be completed **within 30 days** of the inspection. The Discharger shall report any damage and subsequent repairs **within 45 days** of completion of the repairs, including photographs of the problem and the repairs.

E. REPORTING REQUIREMENTS

1. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this MRP, and records of all data used to complete the application for this MRP. Records shall be maintained throughout the life of the facility.

   Such legible records shall show the following for each sample:

a. Sample identification and the monitoring point or background monitoring point from which it was taken, along with the identity of the individual who obtained the sample;

b. Date, time, and method of sampling;

c. Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;

d. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;

e. Calculation of results; and

f. Results of analyses, and the MDL and PQL for each analysis.

2. A transmittal letter explaining the essential points shall accompany each report. At a minimum, the transmittal letter shall identify any violations found since the last report was submitted, and if the violations were corrected. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. The transmittal letter shall also state that a discussion of any violations found since the last report was submitted, and a description of the actions taken or planned for correcting those violations, including any references to previously submitted time schedules contained in the accompanying report.

3. The following information shall be included on all monitoring and annual reports, as well as report transmittal letters, submitted to the Central Valley Water Board:

a. Discharger name,

b. Facility name,

c. MRP number, and

d. Contact information (telephone number and e-mail).

4. The Discharger shall establish and maintain an approved Sample Collection and Analysis Plan. The Sample Collection and Analysis Plan shall at a minimum include:

a. Sample collection procedures describing purging techniques, sampling equipment, and decontamination of sampling equipment;

b. Sample preservation information and shipment procedures;

c. Sample analytical methods and procedures;

d. Sample quality assurance/quality control (QA/QC) procedures; and

e. Chain of Custody control.

5. Each monitoring report shall include a compliance evaluation summary. The summary shall at a minimum include:

   a. For each monitoring point and background monitoring point addressed by the report, a description of:

      1) The time of water level measurement;

      2) The type of pump - or other device - used for purging and the elevation of the pump intake relative to the elevation of the screened interval;

      3) The method of purging (the pumping rate; the equipment and methods used to monitor field pH, temperature, and conductivity during purging; the calibration of the field equipment; results of the pH, temperature, conductivity, and turbidity testing; and the method of disposing of the purge water) to remove all portions of the water that was in the well bore before the sample was taken;

      4) The type of pump - or other device - used for sampling, if different than the pump or device used for purging; and

      5) A statement that the sampling procedure was conducted in accordance with the approved Sample Collection and Analysis Plan.

   b. A map or aerial photograph showing the locations of observation stations, monitoring points, and background monitoring points.

   c. For each groundwater body, a description and graphical presentation of the gradient and direction of groundwater flow under/around the Unit(s), and the groundwater flow rate, based upon water level elevations taken prior to the collection of the water quality data submitted in the report.

   d. Laboratory statements of results of all analyses evaluating compliance with requirements.

   e. An evaluation of the effectiveness of runoff/runon control facilities.

   f. A summary and certification of completion of all **Standard Observations** for the Unit and for the perimeter of the Unit. Standard observations for the Unit shall be conducted **monthly** during the wet season (1 October to 30 April) and **quarterly** during the dry season (1 May to 30 September). The Standard Observations shall include:

1) For the Unit(s):

   a) Evidence of ponded water at any point on the facility (show affected area on map); and

   b) Evidence of erosion.

2) Along the perimeter of the Unit(s):

   a) Evidence of liquid leaving or entering the Unit, estimated size of affected area, and flow rate (show affected area on map); and

   b) Evidence of erosion.

6. The Discharger shall report by telephone any seepage from the Unit(s) **immediately** after it is discovered. A written report shall be filed with the Central Valley Water Board **within seven days**, containing at least the following information:

   a. A map showing the location(s) of seepage;

   b. An estimate of the flow rate;

   c. A description of the nature of the discharge (e.g., all pertinent observations and analyses);

   d. Verification that samples have been submitted for analyses of the monitoring parameters and constituents of concern listed in Table I of this MRP, and an estimated date that the results will be submitted to the Central Valley Water Board; and

   e. Corrective measures underway or proposed, and corresponding time schedule.

7. The Discharger shall submit an **Annual Monitoring Summary Report** to the Central Valley Water Board covering the reporting period of the previous monitoring year. This report shall contain:

   a. All monitoring parameters and constituents of concern shall be graphed so as to show historical trends at each monitoring point and background monitoring point, for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents for the period of record for a given monitoring point or background monitoring point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for background plots shall be the same as

that used to plot downgradient data. Graphical analysis of monitoring data may be used to provide significant evidence of a release.

b. Data for the previous year shall be submitted in tabular form as well as in a digital file format. The Central Valley Water Board regards the submittal of data in hard copy and in digital format as "...the form necessary for..." statistical analysis in that this facilitates periodic review by the Central Valley Water Board.

c. A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the waste discharge requirements.

d. A written summary of the monitoring results, indicating any changes made or observed since the previous annual report.

The Discharger shall implement the above monitoring program effective on the date below.

Ordered by: _____
for PAMELA C. CREEDON, Executive Officer

22. September 2010
(Date)

REH: 09/22/10

TABLE I

GROUNDWATER DETECTION MONITORING PROGRAM

Parameter	Units	Frequency
Field Parameters		
Groundwater Elevation	Ft. & hundredths, M.S.L.[1]	Quarterly
Temperature	^oC[2]	Semiannually
Electrical Conductivity	µmhos/cm[3]	Semiannually
pH	pH units	Semiannually
Turbidity	NTU[4]	Semiannually
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L[5]	Semiannually
Nitrate (NO_3)	mg/L	Semiannually
Nitrate as Nitrogen (NO_3-N)	mg/L	Semiannually
Nitrite (NO_2-N)	mg/L	Semiannually
Total Kjeldahl Nitrogen	mg/L	Semiannually
Total Nitrogen	mg/L	Semiannually
Ammonia (NH_3-N)	mg/L	Semiannually
Chloride	mg/L	Semiannually
Carbonate	mg/L	Semiannually
Bicarbonate	mg/L	Semiannually
Phosphorous	mg/L	Semiannually
Sulfate	mg/L	Semiannually
Calcium	mg/L	Semiannually
Magnesium	mg/L	Semiannually
Potassium	mg/L	Semiannually
Sodium	mg/L	Semiannually

TABLE II

GROUNDWATER DETECTION MONITORING PROGRAM

Constituents of Concern

Parameter	USEPA Method	Units	Frequency
Total Organic Carbon		mg/L	Every 5 Years
Inorganics (dissolved)			
Aluminum	6010	mg/L	Every 5 Years
Antimony	6010	mg/L	Every 5 Years
Barium	6010	mg/L	Every 5 Years
Beryllium	6010	mg/l	Every 5 Years
Boron	6010	mg/L	Every 5 Years
Chromium	6010	mg/L	Every 5 Years
Cobalt	6010	mg/L	Every 5 Years
Copper	6010	mg/L	Every 5 Years
Manganese	6010	mg/L	Every 5 Years
Silver	6010	mg/L	Every 5 Years
Vanadium	6010	mg/L	Every 5 Years
Zinc	6010	mg/L	Every 5 Years
Arsenic	7062	mg/L	Every 5 Years
Cadmium	7131A	mg/L	Every 5 Years
Lead	7421	mg/L	Every 5 Years
Mercury	7470A	mg/L	Every 5 Years
Nickel	7521	mg/L	Every 5 Years
Selenium	7742	mg/L	Every 5 Years
Thallium	7841	mg/L	Every 5 Years
Cyanide	9010	mg/L	Every 5 Years
Sulfide	9030	mg/L	Every 5 Years

1. Feet and hundredths of a foot above mean sea level.
2. Degrees Celsius.
3. Micromhos per centimeter.
4. Nephalometric turbidity units.
5. Milligrams per liter.

INFORMATION SHEET

WASTE DISCHARGE REQUIREMENTS ORDER R5-2010-0094
FOR COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
FOR OPERATION AND CONSTRUCTION
WESTLAKE FARMS COMPOSTING FACILITY
KINGS COUNTY

The County Sanitation Districts of Los Angeles County (Discharger), plans to construct and operate a 177.5-acre composting facility (facility) that will use, as a feedstock, treated municipal sewage sludge meeting the requirements specified in Part 503 in Title 40 of the United States Code of Federal Regulations (biosolids). The proposed facility will be located in southern Kings County approximately 2.5 miles east of Interstate Highway 5 and five miles southeast of Kettleman City. The finished product will qualify as Exceptional Quality Biosolids and will mostly be used as a soil amendment on 14,562 acres of farmland in Kings County owned by the Discharger.

The Discharger will compost municipal biosolids with bulking agents using the aerated static pile method. The biosolids originate from wastewater treatment plants regulated by orders adopted by various regional water boards and transported to the facility by truck. Typically, biosolids that will be processed are generated by facilities owned by the Discharger. Biosolids from other wastewater treatment plants may be composted if the biosolids are compatible with the composting process and facility permits. Only biosolids that meet the requirements for nonhazardous biosolids specified in Title 22, California Code of Regulations, Division 4.5, Chapter 11, Article 3, will be accepted. The bulking agents will consist of agricultural feedstock, green waste feedstock from recycling programs, wood chips, and shredded tires. The permitted maximum annual receipt of all combined composting feedstocks is 900,000 tons. The wastes that will be treated at the facility are classified as non-hazardous solid waste. Liquid residual wastes (such as leachate and precipitation that comes into contact with composting material) will be collected in composite-lined impoundments and used in the composting process.

The facility is on the floor of the southern San Joaquin Valley. The designated beneficial uses of Valley Floor Waters, as specified in the *Water Quality Control Plan for the Tulare Lake Basin,* Second Edition, revised January 2004, are agricultural supply, industrial service and process supply, water contact and non-contact water recreation, warm fresh water habitat, preservation of rare, threatened and endangered species, and groundwater recharge.

The first encountered groundwater beneath the facility or the uppermost aquifer occurs in sediments under confined to semi-confined conditions at about 3.5 feet below the native ground surface or at elevation of 183.2 feet mean sea level. Groundwater from the monitoring wells at the facility has total dissolved solids concentrations ranging from about 3,400 to 27,000 milligrams per liter and an electrical conductivity of 8,000 to 26,000 micromohs per second. The facility is in the Tulare Lake Basin Hydrologic Unit, Detailed Analysis Unit (DAU) 241. The designated beneficial uses of the

groundwater, as specified in the Basin Plan for DAU 241, are municipal and domestic water supply, agricultural supply, and industrial service supply. The quality of the first encountered groundwater is not suitable for these designated beneficial uses.

The existing detection monitoring system consists of four groundwater monitoring wells: MW-11, MW-12, and MW-13 are used to monitor the point of compliance and well MW-9 is used to establish background groundwater quality. Monitoring wells MW-4 through MW-7 are utilized as piezometers and, in conjunction with the groundwater monitoring wells, are used to define the potentiometric surface in the vicinity of the facility.

Based on site-specific characteristics, the low threat to beneficial uses of surface water and groundwater posed by the facility is not commensurate to the stringent monitoring standards applicable to a Class II waste pile or surface impoundment pursuant to Title 27, California Code of Regulations, Section 20005 et seq. As such, the Detection Monitoring Specifications and Monitoring and Reporting Program were developed based on some generally accepted Title 27 criteria as it provides a usable platform for evaluating monitoring data to determine compliance with waste discharge requirements.

A liner consisting of a minimum of one foot of compacted clay with a maximum hydraulic conductivity of 1×10^{-6} centimeters per second (cm/sec) will be placed beneath all areas of the facility on which waste materials will be placed. The aerated static pile composting areas will have a liner foundation system consisting of the following in ascending order:

- A layer of compacted clay;
- A layer of lime-stabilized soil; and
- A layer of soil cement.

Retention basins for stormwater that has the potential to come into contact with wastes will have a liner system consisting, at a minimum, of the following, in ascending order:

- A 12-inch thick compacted clay layer exhibiting a maximum hydraulic conductivity of 1×10^{-6} cm/sec, compacted to 90 percent dry density;
- A 12-inch thick lime treated soil layer, compacted to 90 percent dry density; and
- A 12-inch thick soil cement layer, compacted to 90 percent dry density.

The State Water Resources Control Board has adopted a body of regulations, under Title 27, consisting of requirements, waste classifications, and waste management unit classifications designed to provide protection to the beneficial uses of waters of the state for projects involving the discharge of solid waste to land for treatment, storage, or disposal at landfills, surface impoundments, waste piles, and land treatment units. Biosolids composting operations, where wastes pose a threat to water quality, would normally be regulated under the Title 27 regulations as Class II waste piles and surface impoundments that treat and contain designated waste. In a 14 April 2005 letter and memorandum, based on the site conditions exhibiting very poor native groundwater found beneath the proposed facility, Central Valley Water Board staff found that the threat to the beneficial uses of surface water or groundwater posed by the composting operation is not commensurate with stringent design and construction standards applicable to Class II waste piles or surface impoundments pursuant to Title 27 regulations, so long as the operation continues to meet the requirements of these waste discharge requirements.

The Discharger submitted a report titled *Background Groundwater Data Summary and Evaluation of Potential Effects of Compost Affected Stormwater on Groundwater, Westlake Farms Composting Facility, Kings County, California*, dated 19 August 2009, (Groundwater Report), that summarized the extremely poor quality of native groundwater beneath the proposed facility and recommended a variance from Title 27 prescriptive standards for the design of surface impoundments, due to these site-specific conditions. The Groundwater Report indicated that the deep and shallow groundwater was of very poor quality, exceeding the primary MCL of selenium, and with TDS concentrations ranging from 3,400 to 27,000 mg/L. The Groundwater Report assessed the impact to shallow groundwater from stormwater that had come in contact with waste, assuming no liner for the surface impoundments and a deeper storm water basin design than allowed by Title 27 Section 20240(c), which prescribes a minimum 5-foot separation between groundwater and the base of waste piles or surface impoundments. The Groundwater Report also assessed the performance of the Discharger's proposed three-component liner system (Construction Specification D.3 of this Order), if constructed as a deeper basin than what would be allowed by Title 27 Section 20240(c). The Groundwater Report found the potential degradation of shallow groundwater by stormwater that had come into contact with waste and that was stored in a hypothetical unlined surface impoundment was remote. The Groundwater Report also found that the proposed three-component liner system and deeper design would be protective of water quality.

Based on the representations made in the Groundwater Report, in a 29 December 2009 letter and memorandum, Central Valley Water Board staff found that: (1) the

quality of the groundwater beneath the proposed facility would not be degraded by stormwater stored in a hypothetical unlined basin; (2) stormwater stored in the storm water basin with the proposed three-component liner system will not reach groundwater; (3) and maintaining the five-foot separation between the proposed lined storm water basin and groundwater (as prescribed in Title 27 Section 20240(c)) is not necessary for protection of groundwater quality.

The WDRs require total containment of wastes and do not permit degradation of surface water or groundwater. Further antidegradation analysis is therefore not needed. The discharge will be consistent with the antidegradation provisions of State Water Resources Control Board Resolution No. 68-16.

The WDRs require the Discharger to provide assurances of financial responsibility for corrective action and for clean closure.

The Kings County Board of Supervisors certified the final environmental impact report for the facility on 20 April 2004, and filed a Notice of Determination on 21 April 2004 in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and CEQA guidelines (14 CCR Section 15000 et seq.). The Central Valley Water Board considered the environmental impact report and incorporated mitigation measures from the environmental impact report into these waste discharge requirements designed to prevent potentially significant impacts to the environment and to water quality.

REH: 7/9/10