STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
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WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2013-0047
Waste Discharger Identification No. 3 350300001
Proposed for Revision at the December 5 - 6, 2013 Board Meeting

FOR
JOHN SMITH ROAD CLASS I AND CLASS III LANDFILLS
SAN BENITO COUNTY

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

LANDFILL OWNER AND LOCATION

1. The City of Hollister owns the closed Class I Landfill, but under a cost sharing agreement, the County of San Benito Integrated Waste Management Department (SBCIWMD) oversees all Post-Closure maintenance and monitoring. The SBCIWMD owns the John Smith Road Class III Landfill (hereafter "Landfill" and "Class III Landfill", or "WMU" [Waste Management Unit], as defined below). The SBCIWMD has a contract with Waste Connections, Inc. to operate the Landfill. The SBCIWMD is hereafter "the Discharger."

2. The Landfill is located in San Benito County five miles southeast of Hollister, as shown on "Landfill Location" **Figure 1**. The Landfill's physical address is 2650 John Smith Road, Hollister, California 95023. The Class III Landfill is identified as Assessor Parcel Number 25-019-050 and is located in Sections 4, 5, 8, and 9, Township 13S, Range 6E, Mount Diablo Baseline and Meridian. The latitude of the Landfill is 36^{o} 49' 28.1750" North and the longitude is 121^{o} 19' 23.6614" West.

3. The Landfill property boundary is 95.16 acres, as shown on "Permitted Waste Disposal Footprint" **Figure 2**. A closed Class I (hazardous waste) Landfill lies within the Landfill property boundary on a 5.11-acre parcel and consists of two surface impoundments of 0.43 acres and 0.36 acres; Assessor's Parcel Number 025-019-051. The active Class III Landfill is comprised of a 90.05-acre parcel, Assessor's Parcel Number 025-019-050, with waste disposal limited to a 44-acre permitted waste disposal footprint. The Discharger proposes expanding the permitted waste disposal footprint by 14 acres to a new permitted waste disposal footprint of 58 acres.

PURPOSE OF ORDER

4. The Discharger submitted an updated Joint Technical Document (JTD) in May 2012, with revisions on October 6, 2012, December 20, 2012, and June 11, 2013. The Discharger provides support and rationale for Landfill expansion and describes updates to existing operations. The purpose of Waste Discharge Requirements Order No. R3-2013-0047 (hereafter "Order" or "Order No. R3-2013-0047") is to revise and update requirements for discharging waste to the Landfill.

5. The Discharger is currently regulated by Waste Discharge Requirements Order No. R3-2010-0021 (hereafter "Order No. R3-2010-0021"), adopted by the Water Board on May 13, 2010. Order No. R3-2013-0047 replaces Order No. R3-2010-0021

6. Order No. R3-2013-0047 includes the following elements:

    a. Updated Landfill property boundary reflecting lot line adjustments.
    b. Updated Landfill waste disposal footprint for laterally expanding landfilling operations.
    c. Updated Landfill characterization information.
    d. Updated Landfill Monitoring and Reporting requirements.

7. The Discharger will design, construct, and operate the Landfill pursuant to California Code of Regulations (CCR) Title 27, Solid Waste (hereafter "CCR Title 27") effective July 18, 1997, and pursuant to Code of Federal Regulations Title 40, Chapter I, Subchapter I, Parts 257 and 258 Solid Waste Facility Disposal Criteria, Final Rule, as promulgated on October 9, 1991 (hereafter "CFR Title 40 Part 258").

LANDFILL DESCRIPTION AND HISTORY

8. The Landfill property boundary (i.e., "waste management facility" as defined in CCR Title 27) encompasses 95.16 acres. Two parcels exist within the 95.16 acres consisting of a 5.11-acre closed Class I Landfill and a 90.05-acre active Class III Landfill. Previously, the Landfill property boundary encompassed 64.71 acres consisting of three parcels: one parcel with the 8.16-acre closed Class I Landfill and two parcels (25.12 acres and 31.43 acres) with an active 56.55-acre Class III Landfill. Within the active Class III Landfill is a 44-acre permitted waste disposal footprint. The Discharger applied for and received approval from the San Benito County Planning Department for lot line adjustments that expanded the Landfill property boundary from 64.71 acres to the present 95.16 acres. Correspondingly, the Landfill's permitted operational area expanded by 33.50 acres to the present 90.05 acres (i.e., 33.50 acres added to the existing 56.55 acres). The Landfill's 44-acre permitted waste disposal footprint remained the same during the lot line adjustments. As part of revised Order No. R3-2013-0047, the Discharger proposes expanding their 44-arce permitted waste disposal footprint by 14 acres (Modules 7 through 11) to a 58-acre permitted waste disposal footprint. **Figure 2** shows the

current waste disposal footprint in green and the proposed expanded waste disposal footprint in blue.

9. The 5.11-acre Class I Landfill is a closed, unlined disposal area that received wastes from 1977 to 1983. The closed Class I Landfill is proximal to the active Class III Landfill, but in a separate and distinct area with fencing and signs denoting the boundary. The Discharger's disposal operations for the Class III Landfill do not affect wastes within the closed Class I Landfill and the Discharger does not place any wastes over or adjacent to the Class I Landfill. The closed Class I Landfill boundary was originally 8.16 acres, but recent lot line adjustments reduced this to 5.11 acres. The lot line adjustments were to: a) accommodate an encroachment issue from landfilling operations related to new Modules 2 and 6 for the Class III Landfill, b) incorporate a gas-monitoring probe into the Class III Landfill area, and c) allow additional space for a perimeter access road for the Class III Landfill. Disposal to the closed Class I Landfill involved liquid hazardous wastes, mostly pesticides rinsates, in the 0.43-acre "Impoundment 1", with the 0.36-acre "Impoundment 2" serving as a stormwater overflow from Impoundment 1 (Impoundment 1 and Impoundment 2 are shown in yellow on "Monitoring Locations" **Figure 3**). In 1984, the Discharger removed all liquids from Impoundment 1 and placed a geomembrane cover over waste residues. In 1985, the Discharger and the City of Hollister were required to close the Class I Landfill under consent agreements with the California Department of Toxic Substances Control (DTSC) and the United States Environmental Protection Agency. The Discharger completed closure construction in 1992. DTSC issued a closure permit in June 1996 (Class I Hazardous Waste Facility Post-Closure Permit No. 03-SAC-006). The Discharger continues post-closure monitoring and maintenance for the Class I Landfill. There are no historical or present groundwater or surface water releases from the closed Class I Landfill. The Discharger is in the process of obtaining a Class 3 permit modification from DTSC to utilize the Class I Landfill area for staging and stockpiling soil to accommodate current and future construction activities for the Class III Landfill. The Discharger is concurrently in the process of a permit renewal for the Class I Landfill Post-Closure permit issued by DTSC. On June 4, 2013, DTSC issued a 'Temporary Authorization' letter for staging and stockpiling soil while they process the Discharger's permit renewal.

10. The 90.05-acre Class III Landfill has active waste disposal within a 44-acre permitted waste disposal footprint. Within the permitted waste disposal footprint are unlined (pre-Subtitle D) and lined areas, or "modules." CCR Title 27 §20164 defines a "Waste Management Unit" (WMU) as an area of land, or a portion of a waste management facility, at which waste is discharged. The term includes containment features and ancillary features for precipitation and drainage control, and for monitoring. For the Landfill, the WMU includes the permitted waste disposal footprint, stormwater conveyance ditches and culverts, and sediment retention basins. The WMU also includes the wider permitted operational area consisting of the main access road and an emergency exit road; an office building including a scale house and scale; the household hazardous waste and oil collection facilities,

heavy equipment maintenance areas; and soil borrow, stockpiling, and staging areas.

11. The Landfill has been in operation since 1968, therefore a majority of the Landfill's 44-acre permitted waste disposal footprint, 29 acres, is unlined (pre-Subtitle D liner requirements). A 15-acre area within the 44-acre permitted waste disposal footprint is subject to the liner requirements of CCR Title 27 for a WMU. The 15-acre area had not received wastes prior to the new regulations and thus, the Discharger must line this portion of the Landfill with a composite liner and leachate collection and removal system (LCRS) for continued disposal operations. The Discharger proposes expanding their permitted waste disposal footprint by 14 acres for new total of 58 acres for the WMU. The proposed 14-acre expansion area will also be subject to requirements for construction and installation of a liner and LCRS.

12. The current Landfill consists of six (6) modules within the 44-acre permitted waste disposal footprint, described as follows (the size of unconstructed modules are approximate and may change):

    a. Module 1 – 29 acres, unlined, pre-Subtitle D regulations; near capacity.
    b. Module 2 – 3.22 acres, composite liner with LCRS; active.
    c. Module 3A – 2.20 acres, composite liner with LCRS; active.
    d. Module 3B – 4.05 acres, composite liner with LCRS; active.
    e. Module 4 – 2.94 acres, composite liner with LCRS; active.
    f. Module 5 – 1.39 acres, composite liner and LCRS; future.
    g. Module 6 – 1.59 acres, composite liner and LCRS; future.

13. The Discharger's proposed expansion to a 58-acre permitted waste disposal footprint would consist of Modules 1 through 6 above and five (5) new lined modules, described as follows (the size of unconstructed modules are approximate and may change):

    a. Module 7 – 3.14 acres, composite liner and LCRS; future.
    b. Module 8 – 2.31 acres, composite liner and LCRS; future.
    c. Module 9 – 2.48 acres, composite liner and LCRS; future.
    d. Module 10 – 2.24 acres, composite liner and LCRS; future.
    e. Module 11 – 3.43 acres, composite liner and LCRS; future.

14. The Discharger proposes constructing future lined modules in seven phases for Modules 5 through 11. Modules 1 through 11 will encompass 58 acres and the Discharger estimates a remaining gross disposal capacity of 3,267,000 tons or 5,448,000 cubic yards with an estimated 28-year service life at current disposal rates. The Discharger estimates a maximum height of 915.5 feet above mean sea level (msl) at final closure of the Landfill (see "Final Closure Contours" **Figure 4**).

15. The Discharger operates the Landfill utilizing the cut and cover area and canyon fill methods for waste disposal. Unlined Module 1 and lined Modules 2, 3A, 3B, and 4

immediately abut, thus continued disposal operations will result in a waste "overlap" as disposal volume increases vertically and horizontally in the new lined units. In the overlap area, the Discharger constructed a Water Board approved engineered preferential leachate layer to facilitate leachate drainage to LCRS Sump LC 1 – 6 at the base of the new lined modules. LCRS Sump LC 1 – 6 collects leachate draining from lined Modules 2 through 6 and future LCRS Sump LC 7 – 11 will collect leachate draining from lined Modules 7 through 11.

16. Surrounding land uses and structures are rural in character and include agricultural and grazing lands. There are no residences or other structures located within 1,000 feet of the permitted landfill waste limits.

17. San Benito County zoned land within a one-mile radius of the Landfill for various uses as defined in the Land Use Element of the San Benito County General Plan, Plan Revision 1980, and in the County Zoning Ordinance, Revision of 1984. The properties surrounding the Landfill are zoned agricultural/rangeland and agricultural/productive with a 40-acre and 5-acre minimum lot size, respectively. San Benito County zoned land northwesterly of the Landfill as agricultural/rangeland, and remaining surrounding land as agricultural/productive land. San Benito County zoned land to the west of Best Road as rural land.

18. Rainfall is seasonal with the majority of the precipitation falling between November and April. The annual average precipitation for the area of the Landfill is 13.1 inches. The Landfill-specific 100-year, 24-hour storm is 3.95 inches.

CLASSIFICATION AND WASTE TYPE

19. The Landfill is classified by the Water Board as a Class III WMU, approved for discharge of Nonhazardous Municipal Solid Waste, pursuant to CCR Title 27 §20200.

20. The waste type allowed to be discharged at a Class III landfill, per CCR Title 27 §20220, is generally limited to "Nonhazardous Solid Waste", which is defined as:

    "All putrescible and non-putrescible solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction waste, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes and other discarded waste (whether of solid or semi-solid consistency); provided that such wastes do not contain waste which must be managed as hazardous wastes, or wastes which contain soluble pollutants in concentrations which exceed applicable water quality objectives, or could cause degradation of water of the state (i.e., designated waste)."

21. The Discharger accepts waste delivered to the Landfill from the cities of Hollister and San Juan Bautista, and from the unincorporated areas of the County. The

Discharger also accepts waste from surrounding counties. The Landfill currently receives approximately 105,000 tons of waste annually. An annual average of 250 tons of waste are disposed daily and the Discharger's limit is up to 1,000 tons per day. On March 22, 2013, the California Department of Resources Recycling and Recovery (CalRecycle) approved the Discharger's request to increase their disposal limit to an average of up to 1,000 tons of waste per day (from an average of 500 tons of waste per day) to accommodate daily flow fluctuations and the ability to accept additional out of county waste.

22. Wastes received at the Landfill include non-hazardous residential curbside waste, commercial and industrial waste, demolition/construction debris, non-hazardous sludge, non-hazardous petroleum contaminated soil, brine, non-friable asbestos, used tires, and treated wood waste. These wastes are suitable for disposal at a Class III landfill provided the Discharger complies with the provisions of this Order. The Landfill separates and recycles tires, inert materials, appliances, scrap metal, mattresses, electronic waste, wood waste, and green waste.

GEOLOGY/HYDROGEOLOGY

23. **Setting –** The Landfill is located in the southernmost part of the Santa Clara Valley between the Diablo Range to the west and the Gabilan range to the east. It lies along the southeastern margin of the Gilroy-Hollister groundwater basin. The Landfill is located in a small valley in a low range of hills between the Hollister Valley on the west and the Santa Ana Valley on the east.

24. **Topography –** Current elevations at the Landfill range between approximately 805 feet msl on the southeast edge of the Landfill to 662 feet msl on the west end of the Landfill. The maximum final fill elevation will be 915.5 feet above msl.

25. **Stratigraphy –** The Discharger identified three geologic units underlying the Landfill, which include: Cretaceous Panoche Formation, Pleistocene older terrace deposits, and Quaternary surficial deposits. The Panoche Formation consists of marine-deposited sandstone and shale, which crops out mostly on the south side of the canyon. The older terrace deposits are composed of sandy claystone, clayey sandstone, and conglomerate. The surficial deposits, which occur at the mouth of the canyon, consist primarily of clayey silts and silty clays with some silty sands. The Panoche Formation underlies the entire Landfill, lined and unlined, and the northern portions of the Landfill lie directly on the older terrace deposits. The Discharger describes the geologic units as follows:

    a. The Panoche Formation is the oldest unit at the Landfill. The Panoche Formation outcrops in ridges on the south, west, and north sides of the Landfill and is composed of interbedded sandstones, siltstones, claystones, and shales. The outcrops of sandstone are generally fine-grained and subangular to subrounded. Biotite and other minerals are minor constituents that are locally abundant. The sandstone is generally massive, but locally may be thin to thick

bedded. Cementation of the sandstone varies from moderate to poor. Jointing is common with the joints frequently containing iron staining or caliche. Outcrops of shale within the Panoche Formation range in color from olive gray to moderate olive brown. The color also changes with depth becoming light olive gray to dark gray. Generally, the shale is moderately indurated and is micaceous. At depth, the shale is less indurated. Bedding generally ranges from less than an inch to massive. In outcrops, the shale contains distinctive axial-plane cleavage with fractures ranging from 0.25 to 0.75-inch spacing, perpendicular to bedding. Jointing is common, locally containing iron staining or polished surfaces. The spacing of these fractures is variable, ranging from 0.25 inches up to several inches. Unlike the axial-plane cleavage, the orientation of joints is variable. Gypsum-filled joints are locally abundant in both the sandstone and shale.

b. Older terrace deposits unconformably overlie the Panoche Formation and are exposed on the north ridge of the Landfill. The older terrace deposits are composed of clayey sandstone, sandy claystone, and sandy conglomerate. The sandstone varies from thin-bedded to massive, with claystone intervals, and is typically weakly cemented and poorly indurated, but little fractured. The claystone is generally poorly indurated and closely to intensely fractured.
c. Surficial deposits are composed of younger alluvium, slopewash, and weathered bedrock. The younger alluvium is exposed at the mouth of the canyon and unconformably overlies the Panoche Formation and may possibly extend up into the canyon and underlie the landfill. The younger alluvium is predominately a silty clay, but is also gradational to a clayey silt and a sandy clayey silt. Interbedded at depth are lenses of coarse-grained sediments, composed of sand and sandy gravel, which appear to be aerially limited. The slopewash is located at the south side of the ridge near the southwest boundary of the landfill and consists of clay and sandy clay derived from the Panoche Formation. Clayey residual soil (i.e., weathered bedrock), is present in areas underlain by finer-grained facies of the Panoche Formation.

26. **Faulting –** Geologic studies including fault mapping commissioned by the Discharger did not identify any major fault traces within the Landfill, nor within the immediate area of the Landfill. However, several inactive and active faults associated with the San Andreas Fault system are located in the general vicinity. The Calaveras Fault lies approximately 3.5 miles west of the Landfill and the San Andreas Fault lies approximately 6.5 miles to the southwest of the Landfill. Both are associated with historic large magnitude earthquakes and are a potential source of strong shaking at the Landfill. Other minor faults include the Quien Sabe fault and the Bradley faults respectively about 2.5 and 2 miles east of the Landfill, and the Paicines fault about 3 miles to the west. The Maximum Probable Earthquake for a major earthquake is a Magnitude 7.9 on the San Andreas Fault. The Maximum Probable Earthquake for a near Landfill fault is a Magnitude 6.5 on the Calaveras Fault. In February 2008, and December 2011, the Discharger submitted revised seismic hazard evaluations as part of the slope stability analyses for the Landfill based on future construction of lined Modules 2 through 6 and subsequently, Modules 7 through 11. The reports provide the magnitudes of Maximum Probable

Earthquake and corresponding peak ground acceleration values for the most critical faults that may affect the Landfill. The design and construction of all new modules meet or exceed a factor of safety of 1.5, which is typical of industry performance standards.

27. After excavation work for Module 2, the Discharger conducted geologic mapping to determine the presence or absence of active faulting within the area in preparation for Module 2 construction. The mapping did not alter the Discharger's general understanding of Landfill geology, as described above, and the Discharger identified no additional faults. The Discharger performed another geologic study for the area of Module 3 (Modules 3A and 3B) and 4 with similar conclusions - the main differences identified were localized areas with slope instability. The Discharger is eliminating these areas as part of their on-going construction of new modules by cutting temporary slopes down to 3:1 (horizontal to vertical), thus increasing local and areal slope stabilities. The Discharger has determined that the area of future Modules 5 through 11 has similar geological conditions and as such, identification of new active faults is unlikely.

28. **Hydrogeology –** Groundwater beneath and near the Landfill occurs within three geologic units, the Cretaceous age Panoche Formation, Pleistocene age older terrace deposits, and Quaternary age surficial deposits. In locations where terrace deposits or younger alluvium overly the upper portion of the Panoche Formation, a hydraulic connection exists and the units behave as a single aquifer. Within the Panoche Formation, flow occurs primarily along fractures. Pumping test analyses show hydraulic conductivity of fractures are one to two orders of magnitude higher than rock. Within the terrace deposits and younger alluvium, groundwater flow is through the matrix.

29. The groundwater potentiometric surface occurs at elevations ranging from approximately 730 feet above msl in the northeast corner of the Class I facility to approximately 620 feet msl near the Landfill entrance (See "Groundwater Contours" **Figure 5**). In the field across from the Landfill entrance, the groundwater potentiometric surface occurs at elevations ranging from approximately 620 to 600 feet msl and drop to approximately 580 feet msl. Depth to first encountered groundwater varies across the Landfill from approximately 50 feet below ground surface (bgs) along ridges, to five feet bgs within the canyon. At some locations, groundwater is absent, as evidenced by dry boreholes during drilling for installation of new groundwater monitoring wells and/or piezometers. Where groundwater is present, there is minimal seasonal change in depth to groundwater given the low hydraulic conductivity of the geologic formation underlying the Landfill. Rising and falling groundwater elevations typically occur four to six months after seasonal changes, while longer-term trends in groundwater elevations are more distinct when viewed over five and 10-year periods.

30. A groundwater divide is present near the boundary of the closed Class I Landfill and Landfill waste footprint. Groundwater beneath the Class I area generally flows

toward the south and southeast, toward the relatively deep John Smith Road valley farther to the southeast, while groundwater beneath the Landfill waste footprint generally flows toward the west and southwest, toward the Landfill entrance within the relatively shallow valley occupied by the landfill.

31. The Discharger's analyses of aquifer tests in wells in the valley-fill alluvium resulted in hydraulic conductivity values ranging from 3.1×10^{-3} to 4.8×10^{-5} centimeters per second (cm/sec). Analyses of data from long-term pumping tests (as much as 72 days) collected during the initial extraction well evaluation resulted in calculated hydraulic conductivity values for the Panoche Formation ranging from 1.4×10^{-3} to 1.0×10^{-5} cm/sec. The Discharger obtained similar values for the Panoche Formation during hydraulic characterization of the Class I Landfill. Values ranged from 1.8×10^{-4} to 1.0×10^{-5} cm/sec. The Discharger also determined effective porosity based on storativity calculations. The effective porosity value for the valley-fill alluvium is 0.03 (3 percent). Effective porosity values for the Panoche Formation range from 0.09 to 0.10 (9 to 10 percent).

32. The groundwater potentiometric gradient ranges from approximately 0.3 foot per foot (ft/ft) off the southern ridge near well W-2 to approximately 0.01 ft/ft beneath the field across from the Landfill entrance.

SURFACE WATER, STORMWATER, AND GROUNDWATER

33. The Landfill is located above the 100-year flood plain. The Discharger identified flood elevation information in the Federal Emergency Management Agency Flood Insurance Rate Map for San Benito County. There are no designated wetlands within the Landfill boundary.

34. **Springs –** There are several developed springs near the facility (see "Well Survey Map" **Figure 6**). These springs are mainly used for watering of livestock.

35. **Surface Water –** There is an unnamed tributary to Santa Ana Creek bordering the southern Landfill property boundary. The length of the tributary between the Landfill and Santa Ana Creek is approximately 2.5 miles. The tributary runs west along the southern Landfill boundary, and then northwest away from the Landfill, and eventually north toward Santa Ana Creek. Flows are ephemeral and infiltrate to groundwater in low-lying areas prior to reaching Santa Ana Creek. The Landfill and tributary are located within the San Benito County hydrologic unit.

36. **Groundwater –** The Landfill is located along the southeast margin of the Gilroy-Hollister groundwater basin in rural San Benito County. The Landfill is underlain by marine sandstones, siltstones claystones, and shales of the Panoche Formation and older terrace deposits, as described previously. Neither geologic unit is a significant producer of groundwater and available groundwater is mineralized. Chloride, sulfate, manganese, total dissolved solids, and electric conductivity in groundwater from these units routinely exceed secondary drinking water standards.

37. **Groundwater Quality** – The Discharger has monitored groundwater at the Landfill since 1985. Volatile organic compounds (VOCs) impact an area of groundwater beneath and downgradient of Module 1, which is the unlined portion of the Landfill. VOCs were first recognized during the Solid Waste Assessment Test program in 1987. The source was leachate from the older unlined portion of the Landfill. The Discharger characterized the nature and extent of the pollutants and installed a groundwater extraction system on-site and off-site to capture groundwater impacted by the VOCs. The Discharger's operation of their groundwater extraction system has resulted in reduced concentrations of VOCs in groundwater and it achieved hydraulic capture of the VOCs plume. The overall declining concentrations of VOCs indicate that the on-site groundwater extraction system has been effective at capturing impacted groundwater. Improvements in Landfill operations have also reduced leachate production, thus reducing the source for the historic impact identified as originating from unlined Module 1. VOCs have also impacted groundwater in a limited area north of Module 1. The Discharger identified migration of landfill gas as the source of the VOCs. Recent improvements to the landfill gas extraction system has resulted in control and continued reduction in concentrations of VOCs. See "Groundwater VOCs" **Figure 7** for a depiction of the VOCs impacting groundwater from the two identified sources, leachate and landfill gas.

38. **Wells –** There are no municipal water supply wells within 5,000 feet hydraulically downgradient from the landfill. The nearest water supply well, Yates 1, is located hydraulically upgradient of the Landfill, approximately 900 feet southeast of the Landfill entrance. San Benito County owns Yates-1 and uses the water for livestock supply, and has plans to use the water for the future Resource Recovery Park. Water quality testing on August 22, 2013 indicated no water quality impacts related to Landfill operations.

39. **Groundwater Separation –** Proposed and existing excavation grades and liner designs provide separation between groundwater and waste (i.e., bottom of leachate collection system), thus meeting the requirement for maintaining a minimum five-foot separation [CCR Title 27, §20240(c)].

40. Historic groundwater elevations are available over a 24-year period. Hydrographs of historic groundwater elevations for most of the groundwater monitoring wells show a peak height in April 1998, following an approximately four-year "ramp up."

41. The San Benito County Water District has over 125 years of monthly rainfall data for Hollister. Based on the available rainfall data, the 1998 rain year (October 1998 – September 1999) had the greatest rainfall (28.61 inches) on record. Additionally, the four-year period ending with the 1998 rain year had the greatest rainfall (81.96 inches) on record. For comparison, the average annual rainfall is 13.07 inches and the average four-year rainfall is 52.51 inches. Based on the available rainfall record and resulting recharge, it is likely the April 1998 groundwater elevations represent the highest anticipated groundwater elevations for Landfill conditions.

42. Since 1998, Landfill construction has extensively modified topography, thus changing the hydrogeologic water balance. As a result, during a meeting on April 18, 2013, Water Board staff requested the Discharger submit information to reevaluate the estimated highest anticipated groundwater elevation. Water Board staff's request for the reassessment was based on the following changes to the Landfill:

    a. Construction and implementation of improved surface water drainage controls resulting in reduced infiltration and recharge to groundwater;
    b. Proposed future modification within the Landfill property boundary including grading and further improved drainage controls related to new lined Landfill modules, which will likely further reduce groundwater elevations;
    c. Anticipated construction of new Modules 7 through 11 over an area of the Landfill identified and acknowledged as the primary area for recharge to groundwater on the Landfill property;
    d. Groundwater elevation monitoring data from 1998 to present show groundwater elevations across the Landfill property declining to their present stabilized elevations; and
    e. Current groundwater elevations are showing 10 to 15 feet separation between groundwater and the base grades in new Module 4, which adjoins Modules 2 and 3 (Module 3 built in phases 3A and 3B), all of which represent the lowest base grades for the new lined areas of the Landfill WMU.

    The Discharger submitted their reassessment on August 9, 2013 providing information validating the above conditions and Water Board staff approved the findings of the Discharger's reassessment of highest anticipated groundwater on August 12, 2013. The Discharger had also previously determined that capillary rise in the bedrock below Module 2 was minimal and thus, was not a factor in establishing highest anticipated groundwater. These changes to the Landfill have resulted in a greater separation between lined modules and highest anticipated groundwater.

43. **Stormwater –** The Landfill is enrolled in the "Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities (General Storm Water Permit for Industrial Activities)," under State Water Resources Control Board (State Water Board) Water Quality Order No. 97-03-DWQ and National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS00001.

44. The Discharger maintains facilities necessary for collecting and diverting stormwater run-off from the Landfill. The Discharger does not need stormwater run-on controls because of the Landfill's location near the top of a surface water drainage divide. Run-off facilities include drainage diversion berms, various drainage ditches, corrugated steel pipe or high density polyethylene (HDPE) over-side drains and inlets, and energy dissipaters. The Discharger also uses rock-lined channels for over-side drains. The Discharger designed the drainage network to carry

stormwater at velocities that minimize ditch erosion. Side slope benches and access roads are equipped with drainage ditches for erosion control and drainage needs. The Discharger also maintains run-off controls in and around the permitted waste disposal footprint to minimize contact between surface water and waste. The Discharger has designed storm water conveyance features to direct run-off after rain events to natural drainage courses located to the southwest and outside of the Landfill property boundary. The Discharger captures stormwater runoff from interior portions of the Landfill's disposal areas and directs the run-off to sedimentation basins. There currently are three sedimentation basins at the Landfill: the western sedimentation basin collects most of the stormwater runoff from the Landfill; the southern sedimentation basin collects water from a bench along the edge of John Smith Road that collects water from the borrow area and undisturbed slopes south of the landfill. After Landfill build-out, the southern sedimentation basin will only collect water from undisturbed slopes. The eastern basin receives water from the construction staging area and soil stockpiles. The Discharger meters the bulk of this stormwater runoff to a drainage/culvert along John Smith Road, while using the balance, when available, for subsequent on-site dust control during the dry season. The Discharger used hydraulic calculations and flow rates for a 100-year, 24-hour storm event to design the final drainage control features for the Landfill. These improvements, combined with the proposed surface grading, will convey on-site surface water and protect the landfill from off-site run-on.

CONTROL SYSTEMS AND MONITORING

45. **Leachate/Groundwater Control Systems –** There are two existing LCRSs and one downgradient groundwater extraction system. The systems consist of:

    a. **Western Pit Area (Old Clay Liner Area Leachate Outfall) –** The Discharger constructed a LCRS as part of the area referred to as the Western Pit. The LCRS consisted of a perforated six-inch diameter high-density polyethylene pipe surrounded by a one-foot thick gravel blanket installed above the clay liner to channel, by gravity, all leachate that collected in the Western Pit Area to the sanitary sewer system. The line has not yielded leachate for several years and is no longer in use.
    b. **Lined Modules 2 through 6 –** The Discharger constructed Module 2 and Module 3 utilizing a LCRS consisting of a maximum 12-inch layer of drainage material underlain by systems of perforated 6-inch HDPE collection pipes placed in V-ditches and surrounded by gravel fill wrapped in geotextile. There is no LCRS on the interior side slopes. Liquids will flow along the operations layer or liner placed on the slopes and drain to the bottom area LCRS. The Discharger designed the liner system to contain the leachate collected and direct it to the LCRS Sump LC 1 – 6 located at the base of Module 3A. The purpose of the LCRS is to limit leachate build-up on the base liner to a maximum depth of 12 inches. The Discharger designed the liner and LCRS system to withstand permanent displacement of the foundation materials during an earthquake.

Leachate flows into the leachate collection pipes for conveyance to a leachate collection sump.

c. **Groundwater Extraction System –** The extraction system is comprised of five operational extraction wells consisting of three on-site wells that capture groundwater impacted by VOCs that migrated from beneath the older Landfill, and two off-site wells to capture VOCs in groundwater moving past the three on-site wells. The goal of the on-site extraction wells is to hydraulically contain the VOCs in groundwater to eliminate continued off-site migration and reduce the source of future groundwater pollution (leachate from Module 1). The goal of the off-site extraction system is to hydraulically contain the VOCs plume to stop downgradient migration, and to reduce the concentration of the VOCs to below maximum contaminant levels (MCLs). The Discharger began operating the groundwater extraction system in 1993 and has operated the system continuously since then with the exception of a two-year shut down period from December 1997 to December 1999 when completing modifications to the entrance of the Landfill, which disrupted extraction operations. The Discharger automated the system to maintain an inward flow of groundwater toward each well. The Discharger continues optimization of their groundwater extraction system to achieve enhanced capture of the groundwater VOCs plume, and the Discharger installed another extraction well, EW-5, in mid-2008 to capture a northerly component of the groundwater plume that may have been bypassing well EW-4. Since the startup of the groundwater extraction system, the Discharger has made significant progress toward achieving the groundwater cleanup goals with the on-site and off-site systems. Before system startup, VOCs routinely exceeded their MCL drinking water standards with total VOCs concentrations as high as 220 micrograms per liter in groundwater near the Landfill entrance. Since 2009, concentrations of VOCs have exceeded MCLs in off-site wells in close proximity to the Landfill property boundary (i.e., wells WA-12 and G-32). In response, the Discharger reduced the pumping interval in the on-site extraction well EW-4 to produce a larger capture zone to remove more impacted groundwater. VOCs concentrations in groundwater downgradient from the extraction wells approximately 500 feet from the Landfill entrance have been below two micrograms per liter (µg/L) since 2002, and waste has not impacted groundwater 1,500 feet downgradient from the Landfill entrance. The overall declining concentrations of VOCs indicate that the on-site groundwater extraction system has been effective at capturing impacted groundwater. Improvements in Landfill operations have reduced leachate production, thus reducing the source for the historic impact identified as originating from unlined Module 1.

d. **Future lined Modules 7 through 11 –** The Discharger proposes to construct an additional LCRS and associated collection sump as part of future lined Modules 7 through 11 in the new 14-acre expansion area of the Landfill WMU. The design and operation of this LCRS will be the same as the LCRS for Modules 2 through 6 described above. The Discharger will design the liner system to contain the leachate collected and direct it to the LCRS Sump LC 7 – 11 located at the base of Module 7.

46. **Landfill Gas Control System –** The Landfill gas control system consists of a network of 29 extraction wells piped to a landfill gas flare (**Figure 3**). The Discharger initially installed the system as corrective action to address VOCs impacts to groundwater resulting from landfill gas. The Discharger installed wells primarily along the north, west, and east sides of the Landfill in several phases. Phase 1 in 1997, included the installation of landfill gas extraction wells G-1 through G-5 and a pilot test flare along the center of the north Landfill perimeter. Phase 1B consisted of installation of the permanent landfill gas enclosed flare/blower skid in March 2001. Phase 2 in 2003, included the installation of gas extraction wells G-6 through G-16 at the west end of the Landfill, and G-17 through G-22 at the east end of the Landfill. Phase 2B included the replacement of the enclosed flare (upgraded to 250 cubic feet per minute [cfm]). Phase 3 in 2004, included the installation of extraction wells G-23 through G-28 along the northern edge of the Landfill. Phase 4 in 2008, included the installation of extraction well G-29 and replacement of damaged extraction wells G-6 and G-13. Phase 5 in 2010, included the installation of extraction wells G-35, G-36, and G-37 along the northern portion of top deck of the Landfill. In 2011, 2012, and 2013, the discharger installed a series of additional Landfill gas monitoring probes required by CalRecycle for additional monitoring of the gas extraction network. As the Discharger continues expanding their Landfill, they will add additional gas probes and extraction wells under subsequent installation plans at a rate of approximately one well per two acres to monitoring and control surface methane emissions prior to Landfill closure.

47. **Monitoring and Reporting Program –** Monitoring and Reporting Program No. R3-2013-0047 (hereinafter "MRP"), issued by the Water Board's Executive Officer, requires the Discharger to monitor and report on: groundwater, leachate collection and removal, landfill gas, stormwater drainage, waste intake, rainfall data, and physical landfill observations. The MRP establishes groundwater monitoring points, monitoring frequency, monitoring parameters, constituents of concern, criteria for sample collection and analyses, methods for analyzing data both statistically and non-statistically, minimum monitoring report content, and definition of terms.

48. **Groundwater Monitoring –** The groundwater monitoring program is designed by the Discharger to monitor the upper portion of the aquifer for potential impacts from disposal operations (**Figure 3**). There are four groundwater monitoring programs in place as follows:

a. **Class I Post-Closure Detection Monitoring –** Four groundwater monitoring wells (E-2, E-3, E-9, and E-17) are in place to monitor the groundwater quality beneath the closed Class I area. The Discharger also monitors Well E-2 semiannually for VOCs as part of the Class III Detection Monitoring Program. Well E-9 is a background well and wells E-2, E-3, and E-17 are point-of-compliance wells. For other wells within the area (E-1, E-8, E-12, E-13, E-14, and G-24) the Discharger monitors these wells to determine groundwater potentiometric elevations. These wells are either hydraulically upgradient from

the former impoundments or screened at deeper intervals in the aquifer than the wells listed above. Consequently, the Discharger does not sample and analyze these wells for first-indications of a potential release. The Discharger has not detected constituents of concern for 35 years in the area surrounding the Class I Landfill; therefore, there is no evidence of a release from former waste disposal.

b. **Class III Detection Monitoring –** There are five Detection Monitoring Program wells (E-2, E-15, WA-11, WA-15, and CP-25). Wells E-15 and WA-11 are background wells. Well E-2 is hydraulically downgradient from background well E-15 in the Class I area. Well WA-15 is a deep compliance well for monitoring groundwater beneath the VOCs impacted zone. Well CP-25 is a shallow compliance well for monitoring groundwater downgradient of the VOCs impacted zone. The Discharger monitors other wells within the Class III area and the adjacent downgradient property (P-1, W-3, WA-13, WA-14, LIMA-3, and G-26) to determine groundwater potentiometric elevations.

c. **Class III Corrective Action Monitoring –** The Class III Corrective Action Monitoring Program is intended to evaluate: a) the effectiveness of the on-site groundwater extraction system for controlling VOCs migration from the Class III Landfill, and b) the effectiveness of the off-site groundwater extraction system at preventing downgradient VOCs migration. Wells include W-4, W-5, WA-8, WA-9, WA-10, WA-12, WA-19, WA-20, CP-31, G-32 and G-33. The Discharger uses wells W-4, W-5, WA-19, and CP-31 to monitor groundwater quality along the northern and western cross-gradient margin of the Class III Landfill, and wells WA-12, G-32, and G-33 to monitor water quality downgradient from the on-site groundwater extraction system. The Discharger uses well WA-9 to monitor groundwater quality along the southern margin of the off-site VOCs impacted zone, and wells WA-8, WA-10, WA-12, and WA-20 to monitor groundwater quality downgradient of the off-site groundwater extraction wells, EW-2 and EW-3. The Discharger installed well CP-30 in the "saddle" north of the Class III Landfill as a corrective action monitoring well to determine the effectiveness of the landfill gas extraction system in reducing VOCs detected in groundwater north of unlined Module 1. The Discharger installed an additional well, CP-31, near extraction well EW-4, to provide additional information on groundwater elevation and quality. Monitoring well W-3 is not associated with the groundwater extraction system, but is part of groundwater elevation monitoring to verify separation between groundwater and waste in the bottom of lined Module 2. This well lies within the excavation boundary for future lined modules and the Discharger will remove it during future construction activities. The Discharger may possibly adjust the wells to accommodate expansion plans; however, if this is not possible, the Discharger may replace these monitoring wells.

d. **Groundwater Extraction System Monitoring –** The Discharger discharges groundwater from the extraction wells to a sanitary sewer line along John Smith Road. Each extraction well has a sampling port for sample collection. The three on-site extraction wells are EW-1, EW-4, and EW-5 and two off-site extraction wells include EW-2 and EW-3. The Discharger also performs quarterly sampling and analyses of the discharge from the groundwater extraction system to determine compliance with the City of Hollister's Wastewater Discharge Permit

No. 92-002 and Amendments. The Discharger submits the laboratory analytical results from the monitoring to Water Board staff and a representative of the City of Hollister.

49. **Leachate Monitoring –** The Module 2 through 6 leachate sump, Sump LC 1 – 6, is located as the base of lined Module 3A and is equipped with a riser pipe to allow monitoring and removal of collected leachate. The Discharger pumps collected leachate from the riser pipe and out of Sump LC 1—6. The Discharger will either dispose of collected leachate on-site, or discharge it into the sanitary sewer system. On-site disposal is limited to dust control, spraying onto the working face within lined areas of the Landfill, and a potential recirculation system (recirculation proposed for future operations) into the lined areas of the Landfill.

50. **Surface Water Monitoring –** There is no surface water monitoring program. The Landfill is situated at the top of a watershed divide and thus, there are no surface water tributaries flowing toward or through the Landfill property.

51. **Unsaturated Zone Monitoring –** The current unsaturated zone monitoring system consists of a double-lined leachate collection sump, Sump LC 1 – 6, constructed as part of Module 3A. Sump LC 1 – 6 collects leachate from Modules 2, 3, and 4, and will collect leachate from Modules 5 and 6 after future construction of these new lined modules. Water Board staff required the Discharger to construct Sump LC 1 – 6 as a double lined leachate collection sump for unsaturated zone monitoring. This was an alternative to monitoring the natural subgrade beneath the LCRS and sump because the bedrock underlying Module 3A prevented effective monitoring of the unsaturated zone utilizing typically available methods. Water Board staff required the Discharger to incorporate unsaturated zone monitoring within the space between the primary liner and the underlying secondary liner in the Module 3A leachate sump to meet the requirements of CCR Title 27 §20415(d).

52. **Landfill Gas Monitoring –** The Discharger measures Landfill gas quantity and quality regularly according to the Monitoring and Reporting Program.

BASIN PLAN

53. The Water Quality Control Plan, Central Coast Basin (Basin Plan), was adopted by the Water Board on September 8, 1994, and approved by the State Water Board on November 17, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State Waters. This Order implements the water quality objectives stated in that Plan.

54. The Basin Plan identifies the following present and anticipated beneficial uses for surface water in the vicinity of the Landfill:

    a. Domestic and Municipal Supply
    b. Agricultural Supply

c. Industrial Service Supply
d. Groundwater Recharge
e. Water Contact Recreation
f. Non-Contact Water Recreation
g. Wildlife Habitat
h. Cold freshwater Habitat
i. Fish Migration
j. Fish Spawning

55. Observed groundwater use in the vicinity of the Landfill is agricultural and domestic water supply. The Basin Plan identifies the following beneficial uses of groundwater in the vicinity of the Landfill:

a. Domestic and Municipal Supply
b. Agricultural Supply
c. Industrial Supply

CALIFORNIA ENVIRONMENTAL QUALITY ACT

56. This Order contains prohibitions, discharge specifications, water quality protection standards, and provisions intended to protect the environment by mitigating or avoiding impacts of the project on water quality. This Order addresses both an existing facility and a lateral expansion.

57. The Discharger prepared a Mitigated Negative Declaration (MND) dated November 2, 2001 for continued operation and expansion of the Landfill in accordance with the California Environmental Quality Act (CEQA) (State Clearinghouse No. 1991083121). The San Benito County Division of Environmental Health (County) certified the MND in November 2001. Subsequently, the County filed a Notice of Determination (NOD) in December 2001. In November 2003, DTSC filed a Notice of Exemption (State Clearinghouse No. 2003118286) for the Class I Landfill in accordance with the State Clearinghouse, citing 14 CCR, §15301, for a Class 1 Categorical Exemption for a Post-Closure Permit renewal. The Discharger prepared another MND dated September 6, 2012 for continued operation and expansion of the Landfill in accordance with CEQA (State Clearinghouse No. 2012061081). The San Benito County Building and Planning Department Director certified the MND on September 6, 2012 and subsequently filed a NOD on September 7, 2012.

58. This Order is for an existing facility and therefore is exempt from provisions of the California Environmental Quality Act (Public Resources Code, §21000, et seq.) in accordance with CCR Title 14, Chapter 3, §15301.

GENERAL FINDINGS

59. In accordance with CCR Title 27 §20260(b)(1) and CFR Title 40 Part 258.40, the Water Board finds that all new modules constructed at the Landfill must have prescriptive composite liners, except for engineered alternatives as provided in CCR Title 27 §20080(b) and CFR Title 40 Part 258.40(a)(1) and (c).

60. In accordance with California Water Code (CWC) §13263(g), no discharge into waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, must create a vested right to discharge. All discharges of waste into waters of the state are privileges, not rights. Water Board authorization to discharge waste is conditioned upon the Discharger complying with provisions of Division 7 of the CWC and with any more stringent limitations necessary to implement the Basin Plan, to protect beneficial uses, and to prevent nuisance. The Discharger's compliance with Order No. R3-2013-0047 should assure they meet conditions and mitigate any potential changes in water quality attributed to the Landfill.

61. The Landfill meets the criteria of CCR Title 27 and CFR Title 40 Part 258 for a Class III landfill suitable to receive non-hazardous solid waste. Order No. R3-2013-0047 implements, but is not limited to, the prescriptive standards and performance goals of CCR Title 27 and CFR Title 40 Part 258.

62. **Antidegradation:** State Water Board Resolution No. 68-16 Statement of Policy with Respect to Maintaining High Quality of Waters in California (Resolution No. 68-16) requires Regional Water Boards, in regulating the discharge of waste, to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with the maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in a Regional Water Board's policies (e.g., quality that exceeds applicable water quality standards). Resolution No. 68-16 also states, in part:

    "Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in best practicable treatment and control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained".

63. The discharges regulated by this Order are required to comply with the land disposal regulations contained in CCR Title 27, which are intended to prevent discharges of waste to waters of the state, preventing degradation of waters of the state. The discharge is subject to waste discharge requirements, which will result in best practicable treatment or control.

64. CalRecycle regulates this Landfill under Solid Waste Facility Permit (SWFP) No. 35-AA-0001, which CalRecycle renewed on March 22, 2013. CalRecycle became the Enforcement Agency for administering the Discharger's SWFP in May 2012 after

assuming this function from the Local Enforcement Agency (i.e., the San Benito County Health Department, Environmental Division).

65. The Monterey Bay Unified Air Pollution Control District (MBUAPCD) issued a permit to operate (Permit No. 14563) for the landfill gas collection and flare system on March 30, 2010, and the MBUAPCD renews the permit annually. The MBUAPCD also issued Permit No. 14070 on January 28, 2009 for the five corrective action groundwater extraction wells that discharge to the City of Hollister Domestic Wastewater Treatment Plant. These permits contain the requirements and conditions for Landfill operations.

66. The City of Hollister Department of Public Works issued a permit to discharge in 1992, for monitoring the Discharger's disposal of water from the five corrective action groundwater extraction wells (Wastewater Discharge Permit No. 92-002 and Amendments). The Discharger continues to discharge their extracted groundwater in compliance with Permit No. 92-002.

67. "Treated wood" means wood that contains a chemical preservative for purposes of protecting the wood against attacks from insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood and the chemical preservative is registered pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (United States Code Title 7 Sec. 136 and following). This may include but is not limited to waste wood that has been treated with chromated copper arsenate, pentachlorophenol, creosote, acid copper chromate, ammoniacal copper arsenate, ammoniacal copper zinc arsenate, or chromated zinc chloride. Existing law regulates the control of hazardous waste, but exempts from the hazardous waste control laws, wood waste that is exempt from regulation under the federal Resource Conservation and Recovery Act (RCRA) of 1976, as amended if the wood waste is disposed of in a municipal landfill that meets certain requirements imposed pursuant to the Porter-Cologne Water Quality Control Act for the classification of disposal sites, and the Landfill meets other specified requirements outlined in Health and Safety Code §25143.1.5 and §25150.7. Health and Safety Code §25150.8 also provides that if treated wood waste is accepted by a solid waste landfill that manages and disposes of the treated wood waste in the manner specified, the treated wood waste must be deemed to be a solid waste, and not a hazardous or designated waste. The Discharger has indicated that all treated wood waste accepted at the facility will be handled and disposed of in accordance with the provisions outlined in Health and Safety Code §25143.1.5, §25150.7, and §25150.8.

68. On March 7, 2013, CalRecycle staff stated that the Discharger had demonstrated availability of financial resources to conduct closure and post-closure maintenance activities and an appropriate financial assurance instrument for corrective action for a reasonably foreseeable release at the Landfill. The financial instruments for closure, post-closure maintenance, and corrective action adjust annually for inflation.

69. Effective March 30, 2009, the Department of Toxic Substances Control (DTSC) repealed conditional authorization letters that allow automobile shredder waste that is subjected to certain treatment requirements to be classified as non-hazardous waste because DTSC's testing and analyses has shown increasing levels of hazardous constituents in the treated shredder waste. On September 17, 2009, the DTSC granted an extension to the proposed repeal date regarding conditional authorization to manage automobile shredder waste as non-hazardous waste. The current extension is contingent on continuing progress in the development of alternative management standards that are protective of human health and the environment and does not specify a new effective date for the repeal of the conditional authorization. As a result, automobile shredder waste from certain authorized facilities managed pursuant to CCR Title 22 §66260.200(f) and Policy and Procedure #88-6, may continue to be managed as non-hazardous waste.

70. On August 30, 2013, the Water Board notified the Discharger and interested agencies and persons of its intent to issue Waste Discharge Requirements for the Landfill, and has provided the opportunity to review a copy of the proposed Order and submit written views and comments.

71. After considering all comments pertaining to this discharge during a public hearing on December 5 - 6, 2013, Water Board staff found that this Order is consistent with the above findings.

IT IS HEREBY ORDERED pursuant to authority in CWC §13263 and §13267, the Discharger, its agents, successors, and assigns in maintaining the John Smith Road Class I and Class III Landfills must comply with the following:

A. COMPLIANCE WITH OTHER REGULATIONS AND ORDERS

1. Discharge of waste, operations, and monitoring must comply with all applicable requirements contained in CCR Title 27 and CFR Title 40 Parts 257 and 258. If any applicable regulation requirements overlap or conflict in any manner, the most water quality protective requirement must govern in all cases, unless specifically stated otherwise in this Order, or as directed by the Executive Officer.

2. The Discharger must control stormwater runoff releases from the Landfill by complying with all requirements contained in the General Storm Water Permit for Industrial Activities.

B. PROHIBITIONS

1. Discharge of waste to areas outside the approved and permitted waste disposal footprint for the WMU as illustrated in **Figure 2**, is prohibited.

2. Discharge of waste within the approved and permitted waste disposal footprint for the WMU is prohibited as provided in **Specification C.3**.

3. Discharge of hazardous waste or hazardous constituents, except for treated wood waste or waste that is hazardous due only to its asbestos content, is prohibited. Wastes that are prohibited include but are not limited to:

    a. Radioactive wastes.
    b. Designated waste.
    c. Hazardous waste, except waste that is hazardous due only to its asbestos content. Asbestos containing greater than one percent (>1 percent) friable asbestos material is considered hazardous, but may be discharged as allowed by **Specification C. 15**.
    d. Chemical and biological warfare agents.
    e. Waste solvents, dry cleaning fluids, paint sludge, pesticides, phenols, and acid and alkaline solutions.
    f. Oils or other liquid petroleum products.
    g. Wastes that have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products.
    h. Wastes that require a higher level of containment than provided by the Landfill.
    i. Liquid or semi-solid waste containing less than 50 percent solids by weight. This includes landfill leachate and gas condensate, except as allowed by **Specification C. 7**, and sludge, except as allowed by **Specification C.19**.

4. Discharge of waste or leachate to ponded water, drainage way(s), or waters of the State, including groundwater, is prohibited.

5. Discharge of liquid waste, meaning any waste materials that are determined to contain free liquids through visual inspection, or as defined by Method 9095 (Paint Filter Liquids Test), is prohibited.

6. Discharge of waste within 50 feet of the property line, 100 feet of surface waters, or 100 feet of domestic water supply wells is prohibited, unless approved by the Executive Officer.

7. Disposal of wastes within five (5) feet of the highest anticipated elevation of underlying groundwater, including the capillary fringe, is prohibited, except as allowed under CCR Title 27, §20080 (b) and (c).

C. SPECIFICATIONS

1. Discharge of waste must not cause a condition of pollution or contamination to occur through a statistically significant release of pollutants, contaminants, and/or waste constituents, as indicated by the most appropriate statistical [or non-statistical] data analysis method and retest method described in MRP No. R3-2013-0047.

2. Discharge, collection, and treatment of waste must not create nuisance, as defined by CWC §13050(m).

3. The Discharger must not discharge waste to WMU areas inside the approved and permitted waste disposal footprint that did not receive waste as of April 9, 1994, unless the discharge is to an area equipped with an Executive Officer-approved containment system consisting of a composite liner and LCRS. The liner must consist of the following three components, pursuant to CFR Title 40 Part 258 and CCR Title 27 §20340:

   a. **Lower Component**: A layer of compacted soil that is at least two feet thick that has a hydraulic conductivity of no more than 1×10^{-7} centimeters per second (0.1 feet/year);
   b. **Upper Component**: A synthetic flexible membrane liner at least 40-thousandths of an inch (mil) thick (or at least 60-mils thick if the liner is high-density polyethylene) that is installed in direct and uniform contact with the Lower Component;
   c. **Leachate Collection and Removal System**: The LCRS system must be capable of minimizing head buildup over the liner to less than 30 centimeters in depth. The LCRS must consist of a permeable subdrain layer, which covers the bottom of the module and extends as far up the sides as possible, (i.e., blanket type). The LCRS must be of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment and must be designed and operated to function without clogging through the scheduled closure and post-closure maintenance period.
   d. **Unsaturated zone Monitoring**: Each new lined area of the WMU must include unsaturated zone monitoring that is designed and constructed to meet the requirement for determining the earliest possible detection of a release(s), as specified in CCR Title 27 §20414(d); or,
   e. **Engineered alternative**: A design that satisfies the performance criteria in CFR Title 40 Part 258.40(a)(1) and (c), and satisfies the criteria for an engineered alternative to the Prescriptive Design, as provided by CCR Title 27 §20080(b), where the Discharger receives written concurrence from the Executive Officer that the performance of the alternative composite liner's components, in combination, is equal to, or exceeds, the waste containment capability of the regulatory Prescriptive Design.

4. The Discharger shall construct a preferential leachate pathway layer on slope(s) where newly disposed wastes will overlap previously disposed wastes in unlined areas of the WMU. The Discharger shall construct the layer so that leachate generated within the overlapping waste area will flow to the LCRS of lined portions of the WMU; specifically Modules 2 through 4.

5. The Discharger must design, construct, and maintain to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, overtopping, and damage to the WMU containment structures and drainage facilities

resulting from natural disasters (e.g., floods with a predicted frequency of once in 100 years, the maximum probable earthquake, and severe wind storms).

6. The Discharger must prevent formation of a habitat for carriers of pathogenic microorganisms.

7. The discharge of condensate or leachate must comply with the following:

   a. The Discharger may only return liquids to the portion of the WMU equipped with a containment system that meets or exceeds the performance standard of CCR Title 27, CFR 40 Part 258.40(a)(2), or the standard set in this Order, whichever is more protective of water quality;
   b. The Discharger must measure liquids by volume and record the volume on a monthly basis. The Discharger must include the monthly volume records in the monitoring submittals required in MRP No. R3-2013-0047;
   c. A second containment system sized to hold 100 percent of the primary containment system holding capacity;
   d. The Discharger may not discharge leachate within 48 hours of any forecasted rain event, during any rain event, or 48-hours after any rain event; and,
   e. An approved alternate method of leachate disposal (e.g., wastewater treatment plant), that is acceptable to the Executive Officer.

8. Daily cover must prevent nuisance and excess leachate generation, and minimize infiltration, promote lateral runoff of precipitation/surface water away form the active disposal area. CalRecycle approved shredded tires, tarps, and wood chips for use as daily cover during the dry season (May 1 through September 30 of each year). Upon Executive Officer approval, the Discharger may utilize alternative daily cover materials during the wet season that minimize infiltration and promote lateral runoff.

9. The Discharger must stockpile daily cover material during favorable weather to ensure that adequate daily cover material is accessible during inclement weather.

10. The Discharger must operate the Landfill and configure the final Landfill contours, in conformance with the most recent Executive Officer-approved Operations Plan, and/or Report of Waste Discharge/Joint Technical Document (collectively Plan) except where the Plan conflicts with this Order. The most recently updated Plan is the Discharger's June 11, 2013 "Joint Technical Document." In the event of conflict, this Order must govern in cases where it is more protective of water quality. Any change to the Plan that may affect compliance with this Order must be approved in writing by the Executive Officer prior to the Discharger implementing such changes.

11. The Discharger must grade and operate all Landfill surfaces and working faces to minimize precipitation/surface water from infiltrating into waste, to prevent ponding of water, and to resist erosion. The Discharger must repair erosion rills greater than six inches in depth, or when rills leave insufficient cover to prevent infiltration of

precipitation/surface water. The Discharger must provide positive drainage to divert precipitation/surface water runoff from areas containing waste.

12. Pursuant to the General Storm Water Permit for Industrial Activities, the Discharger must use best management practices to maintain the capacity of stormwater retention facilities and thereby reduce or prevent pollutants in stormwater from discharging into receiving waters to the best available technology standard. CCR Title 27 §20365 requires that the Discharger periodically a) remove accumulated sediment from the stormwater retention facilities and b) empty or otherwise manage the facilities to maintain their capacity.

13. The Discharger must maintain a minimum of two feet of freeboard in all stormwater sediment containment basins. Freeboard is defined as the distance between the water surface within the sedimentation basin and the top of the impoundment.

14. The Discharger must provide all Landfill disposal areas that have not reached final fill elevation, but will remain inactive over one-year, with an Executive Officer-approved long-term intermediate cover. The Discharger must base the thickness and permeability of the long-term intermediate cover primarily on Landfill-specific conditions including, but not limited to: length of exposure time, volume of underlying material, soil permeability, thickness and composition of existing cover, amount of yearly rainfall, depth to groundwater, beneficial uses of underlying groundwater, Landfill-specific geologic and hydrogeologic conditions, and effectiveness of existing monitoring systems.

15. CCR Title 22 classifies waste containing greater than one percent (>1 percent) friable asbestos as hazardous under CCR Title 22. Since such wastes do not pose a threat to water quality, Health and Safety Code §25143.7 permits their disposal in any landfill, providing waste discharge requirements specifically permit the discharge. Asbestos may be discharged in the Landfill only if it is handled and disposed of in accordance with Health and Safety Code §25143.7, CCR Title 14 §17897 “Standards for Handling and Disposal of Asbestos-Containing Waste,” and all other applicable Federal, State, and local statutes and regulations.

16. New landfill units and lateral expansions must not be located in wetlands, as defined in CFR Title 40 Part 232.2(r), unless the owner or operator can make demonstrations pursuant to CFR Title 40 Part 258.12(a) that the discharge of waste will not cause or contribute to significant degradation of wetlands and associated ecological resources.

17. Wastes discharged in violation of this Order, must be removed and relocated.

18. “Treated wood” wastes may be discharged only to WMU areas equipped with a composite liner and LCRS, and must be handled in accordance with California Health and Safety Code §25143.1.5 and §250150.7.

19. Sewage sludge or water treatment sludge with greater than 50 percent moisture content may be discharged at the Landfill if all of the following criteria are met:

    a. The Discharger must discharge sludge only to WMU areas that have a LCRS designed such that leachate gravity drains to a collection point/sump and is removed through gravity or pumping to a holding tank or sanitary sewer for volume measurement, testing, and disposal.
    b. A daily minimum solids-to-sludge ratio of 5 to 1, based on weight, must be maintained when co-disposing (burying) sludge with solid waste.
    c. Primary and mixtures of primary and secondary sewage sludge must contain at least 20 percent solids by weight.
    d. Secondary sewage sludge and water treatment sludge must contain at least 15 percent solids by weight.

20. The Discharger may dispose contaminated soil and brine if all the following criteria are met:

    a. Discharges are in accordance with a waste acceptance plan approved by the Executive Officer.
    b. Discharges are to an area of the WMU equipped with a composite liner and LCRS in accordance with **Specification C.3.**
    c. The materials are non-hazardous in accordance with **Prohibition B.3.**
    d. The materials meet the criteria for no free liquids in accordance with **Prohibition B.5.**

D. WATER QUALITY PROTECTION STANDARDS

1. The discharge of waste must not cause a statistically significant difference in water quality over background concentrations for proposed concentration limits for each constituent of concern or monitoring parameter (per MRP No. R3-2013-0047) at the point of compliance. The Discharger must maintain concentration limits for as long as the waste poses a threat to water quality. Discharge of waste must not adversely impact the quality of State waters. Pursuant to CCR Title 27 §20400, the Water Board shall specify concentration limits in waste discharge requirements. The Water Board complies with the intent of CCR Title 27 §20400 by requiring the Discharger to establish and review concentration limitations on an annual basis in accordance with MRP Order No. R3-2013-0047.

2. Pursuant to CCR Title 27 §20405, the point of compliance is a vertical surface located at the hydraulically downgradient limit of a WMU that extends through the uppermost aquifer underlying the WMU.

3. Discharged waste must not cause concentrations of organic chemicals, inorganic constituents, and radionuclides in groundwater to exceed the State Department of Public Health's latest recommended Drinking Water Action Levels or Maximum

Contaminant Levels of CCR Title 22, Division 4, Chapter 15, Article 4 §66431, and Article 5.5 §64444.

4. Discharge of waste must not cause a violation of any applicable water quality standard for receiving waters adopted by the Water Board or the State Water Board.

5. Discharge of waste must neither cause nor contribute to any surface water impacts including, but not limited to:

   a. Floating, suspended, or macroscopic particulate matter, or foam.
   b. Increases in bottom deposits or aquatic growth.
   c. An adverse change in temperature, turbidity, or apparent color beyond natural background levels.
   d. The creation or contribution of visible, floating, suspended, or oil, or other products of petroleum origin.
   e. The introduction or increase in concentration of toxic or other pollutants/contaminants resulting in unreasonable impairment of the beneficial uses of State waters.

6. Constituents of concern and monitoring parameters for groundwater, leachate, and landfill gas are listed in MRP No. R3-2013-0047. Monitoring points and background monitoring points must be those specified in MRP No. R3-2013-0047.

7. The compliance period pursuant to CCR Title 27 §20380(d)(1) and §20410, is estimated to be the year 2064 [based on the Landfill estimated closure date of 2034 plus 30 years, pursuant to CFR Title 40 Part 258.61(a)], or until waste discharged at the Landfill no longer poses a threat to water quality, whichever is longer [except as provided by CFR Title 40 Part 258.61(b)1].

E. PROVISIONS

1. Order No. R3-2010-0021 “Waste Discharge Requirements for the John Smith Road Class III Landfill,” adopted by the Water Board on May 13, 2010, is hereby rescinded.

2. The Discharger is responsible for waste containment, monitoring, and correcting any problems resulting from the discharge of waste for as long as the waste poses a threat to water quality.

3. The Discharger must comply with MRP No. R3-2013-0047, as specified by the Executive Officer.

4. **By October 1 of each year**, the Discharger must complete all necessary runoff diversion and erosion prevention measures (except for planting vegetation). The Discharger must complete all necessary construction, maintenance, or repairs of precipitation and drainage control facilities to prevent erosion or Landfill flooding and

to prevent surface drainage from contacting or percolating through waste. The Discharger must repair erosion rills greater than six-inches deep immediately after storm events that cause the erosion, if it is safe to do so.

5. **By October 1 of each year**, the Discharger must seed and maintain vegetation (as necessary) over all slopes within the entire Landfill area to prevent erosion. The Discharger must select vegetation that requires minimum irrigation and maintenance and a rooting depth not to exceed the vegetative layer thickness. After receiving approval from the Executive Officer, the Discharger may utilize non-hazardous sludge as a soil amendment to promote vegetation. Soil amendments and fertilizers (including wastewater sludge) used to establish vegetation must not exceed the vegetation's agronomic rates (i.e., annual nutrient needs).

6. **By October 1 of each year and throughout the rainy season of each year**, the Discharger must maintain a compacted soil cover designed and constructed to minimize percolation of precipitation through waste over the entire active Landfill area. The only exception to this specification is the working face. The working face must be confined to the smallest area practicable based on the anticipated quantity of waste discharged and required by waste management facility operations. Based on Landfill-specific conditions, the Executive Officer may require a specified thickness of soil cover for any portion of the active Landfill prior to the rainy season.

7. Should additional data become available through monitoring or investigation that indicates compliance with this Order is not adequately protective of water quality, the Water Board will review and revise this Order as appropriate.

8. If the Discharger or the Water Board determines, pursuant to CCR Title 27 §20420, that there is evidence of a release from any portion of the Landfill, the Discharger must immediately implement the procedures outlined in CCR Title 27 §20380, §20385, §20430, and MRP No. R3-2013-0047.

9. This Order does not authorize commission of any act causing injury to the property of another, does not convey any property rights of any sort, does not remove liability under federal, state, or local laws, and does not guarantee a capacity right.

10. The Water Board must be allowed, at any time and without prior notification:

    a. Entry upon the Landfill area or where records are kept under the conditions of this Order and MRP No. R3-2013-0047.
    b. Access to a copy of any records the Discharger must keep under the conditions of this Order and MRP No. R3-2013-0047.
    c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order and MRP No. R3-2013-0047.
    d. To photograph, sample, and monitor for the purpose of showing compliance with this Order.

11. The Discharger must take all reasonable steps to minimize or correct adverse impacts on the environment resulting from non-compliance with this Order.

12. 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 by failure to disclose fully all relevant facts.
    c. A change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge.
    d. A material change in character, location, or volume of the waste being discharged to land.

13. **Two-weeks** prior to constructing each phase of a new lined area (e.g., preparing foundation, installing liner, installing leachate collection and removal system, placing operations layer, etc.), the Discharger must notify Water Board staff.

14. Prior to liner or cover construction, a third party (e.g., unrelated to the Discharger, Landfill operator, project designer, contractor) must prepare a Construction Quality Assurance (CQA) Plan. The Executive Officer must approve the third party and CQA Plan. The third party must implement the CQA Plan and provide regular construction progress reports to the Executive Officer.

15. Prior to beginning discharge of waste into any newly constructed lined module or modules, the Discharger must receive a final inspection and written approval from the Executive Officer.

16. The Discharger must obtain and maintain Financial Assurance Instruments (Instruments), which comply with CCR Title 27 (§22207 [Closure Fund], §22212 [Post Closure Fund], and §22220 et seq. [Corrective Action Fund]), and CFR Title 40 Part 257 and 258. Pursuant to CCR Title 27 §20380(b), the Discharger must obtain and maintain assurances of financial responsibility, naming the Water Board as beneficiary, for initiating and completing corrective action for all known or reasonably foreseeable releases. As landfill conditions change, and upon the Water Board's request, the Discharger must submit a report proposing the amount of financial assurance necessary for corrective action for the Executive Officer's review and approval. The Discharger must demonstrate compliance with all financial instruments to the Water Board at a minimum of a) every five years, or b) when the Discharger submits a revised Joint Technical Document. The next regularly scheduled Joint Technical Document is due **December 31, 2018**.

REPORTING

17. The Discharger must sign all reports as follows:

    a. By either a principal executive officer or ranking elected official.
    b. Their “duly authorized representative.”
    c. A California Registered Civil Engineer or Certified Engineering Geologist must sign engineering reports.

18. Any person signing a report makes the following certification, whether its expressed or implied:

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

19. Except for data determined to be confidential under CWC §13267 (b)(2), all reports prepared in accordance with this Order must be available for public inspection at the Water Board office.

20. The Discharger must submit reports in advance of any planned changes in the permitted Landfill, or in an activity, which could potentially or actually result in noncompliance.

21. By **October 1** of each year, the Discharger must submit a Wet Weather Preparedness Report (WWPR). The WWPR must describe compliance with **Provisions E.4, E.5, and E.6** above. The report must also detail preparedness actions taken to ensure discharges to surface or groundwater do not occur during the impending rainy season, and ensure compliance with all other relevant CCR Title 27 and CFR Title 40 Part 258 criteria. The report must include photographs of all wet weather preparedness measures implemented.

22. At least **180 days** prior to construction of a lined area, the Discharger must submit design plans and a CQA Plan. The Executive Officer will provide comments on the design plans and CQA Plan to the Discharger no later than **90 days** after receiving the document. Prior to beginning construction, the Discharger must receive Executive Officer approval on the Discharger’s design and CQA Plan.

23. The Discharger must notify the Water Board with a written request of any proposed change in ownership or responsibility for construction or operation of the Landfill in accordance with CCR Title 27 §21710 (c)(1). The written request must be given at least **90 days** prior to the effective date of change in ownership or responsibility and must:

a. Be accompanied by an amended Report of Waste Discharge and any technical documents needed to demonstrate continued compliance with these Waste Discharge Requirements.
b. 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 Water Board.
c. Contain a statement indicating that the new owner or operator assumes full responsibility for compliance with this Order.

24. The Executive Officer may approve or disapprove in writing the Discharger's request for change in ownership or responsibility. In the event of any change in ownership of this Landfill, the Discharger must notify the succeeding owner or operator, in writing, of the existence of this Order. The Discharger must send a copy of that notification to the Executive Officer.

25. The Discharger must furnish, within a reasonable timeframe, any information the Executive Officer may request to determine compliance with this Order or to determine whether cause exists for modifying or terminating this Order.

26. The Discharger or persons employed by the Discharger must comply with all notice and reporting requirements of the State Department of Water Resources, San Benito County, and other applicable permitting agencies with concurrence of the Executive Officer regarding the permitting, construction, alteration, inactivation, destruction, or abandonment of all monitoring wells used for compliance with this Order or with MRP No. R3-2013-0047, as required by CWC §13750.5 through §13755, and §13267.

27. Should the Discharger discover that it failed to submit any relevant facts or that it submitted incorrect information, it must promptly submit the missing or corrected information.

28. The Discharger must notify the Executive Officer, within **24 hours by telephone and within 14 days** in writing, of:

a. Any noncompliance that potentially or actually endangers health or the environment. Reports of noncompliance must include a description of;
   i. The reason for non-compliance;
   ii. A description of the non-compliance, including photo documentation;
   iii. Schedule of tasks necessary to achieve compliance; and,
   iv. An estimated date for achieving full compliance.
b. Any flooding, equipment failure, slope failure, or other change in Landfill conditions which could impair the integrity of waste containment facilities or of precipitation and drainage control structures;
c. Leachate seep(s) occurring on or in proximity to the Landfill;
d. Violation of a discharge prohibition; and
e. Violation of any treatment system's discharge limitation.

29. The Discharger must submit within **14 days** of each scheduled date, reports of compliance or noncompliance with, or any progress reports on, final requirements contained in any compliance schedule. If reporting noncompliance, the report must include a description of:

    a. The reason for non-compliance.
    b. A description of the non-compliance.
    c. Schedule of tasks necessary to achieve compliance.
    d. An estimated date for achieving full compliance.

30. The Discharger must promptly correct any noncompliance issue that threatens the Landfill's containment integrity. Correction schedules are subject to the approval of the Executive Officer, except when delays will threaten the environment and/or the Landfill's integrity (i.e., emergency corrective measures). For emergency corrective measures, the Discharger must report details of the corrections in writing within **seven (7) days** of initiating correction.

31. By **December 31, 2018**, the Discharger must submit a Report of Waste Discharge (hereafter "ROWD") pursuant to CCR Title 27 §21710, to the Executive Officer. The ROWD is to be submitted in the form of an addendum to the JTD, in accordance with CCR Title 27 §21585 et al., and meet the following criteria:

    a. Updated information on waste characteristics, geologic, and climatologic characteristics of the waste management facility and the surrounding region, installed features, precipitation and drainage controls, and closure and post closure maintenance plans, in accordance with CCR Title 27 §21740, §21750, §21760, and §21769.
    b. Include a completed State Water Board JTD Index, in accordance with CCR Title 27 §21585(b),
    c. Discuss whether, in the Discharger's opinion, there is any portion of this Order that is incorrect, obsolete, or otherwise in need of revision.
    d. Include any other technical documents needed to demonstrate continued compliance with this Order and all pertinent State and Federal requirements.
    e. Include detailed updated information regarding regulatory considerations, operating provisions, environmental monitoring, and closure and post closure.

32. By **December 31, 2018,** and every five years thereafter, or earlier as needed, the Discharger must submit for the Executive Officer's review and approval an updated report on a reasonably foreseeable release, along with adjustments to financial assurances (as necessary).

33. The Discharger must file with the Water Board a ROWD (in accordance with **Provision E. 31** of this Order) or secure a waiver from the Executive Officer at least **120 days** before making any material change or proposed change in the character, location, or volume of the waste being discharged to land.

ENFORCEMENT

34. The Discharger must comply with all conditions of this Order. Non-compliance violates state law and is grounds for enforcement action or modification of the Order.

35. Any person failing or refusing to furnish technical or monitoring program reports as required by CWC subdivision (b) of §13267, or falsifying any information provided therein, is guilty of a misdemeanor.

36. The Discharger and any person who violates Waste Discharge Requirements and/or who intentionally or negligently discharges waste or causes or permits waste to be discharged into surface waters or groundwater of the state may be liable for civil and/or criminal remedies, as appropriate, pursuant to CWC §13350, §13385, and §13387.

37. Provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order must not be affected.

38. The Water Board requires all technical and monitoring reports pursuant to this Order in accordance with CWC §13267. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Discharger to enforcement action pursuant to CWC §13268.

39. The Discharger must comply with all conditions of these Waste Discharge Requirements. Violations may result in enforcement actions, including Water Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Water Board. (CWC §13261, §13267, §13263, §13265, §13268, §13300, §13301, §13304, §13340, §13350).

40. No provision or requirement of Order No. R3-2013-0047 or MRP No. R3-2013-0047 is a limit on the Discharger's responsibility to comply with other federal, state and local laws, regulations, or ordinances.

41. The Discharger must comply with the following submittal and implementation schedule for all tasks and/or reports required by this Order.

TASK AND REPORT SUMMARY

TASK	IMPLEMENTATION DATE
Provision E.4: Runoff diversion and erosion prevention	October 1, of each year
Provision E.5: Seed and maintain vegetation	October 1, of each year
Provision E.6: Minimize percolation of precipitation	October 1, of each year
Provision E.13: Notice of construction of new lined areas	At least two (2) weeks prior
Provision E.15: Prior to discharging waste to new lined areas	Executive Officer written approval
Provision E.30: Correction of noncompliance	Immediately; subject to Executive Officer approval, except during emergencies
REPORT	**DUE DATE**
Provision E.16: Revised financial assurance demonstration	December 31, 2018
Provision E. 20: Planned changes and noncompliance	Prior to implementing changes
Provision E.21: Wet Weather Preparedness Report	October 1, of each year
Provision E.22 Design and CQA plans for construction	At least 180 days prior to construction
Provision E.23: Notice of change in ownership or responsibility	At least 90 days prior to the effective date of change
Provision E.24: Notice of Order upon transfer	Within 14 days of notice to new owner or operator
Provision E.25: Requests regarding compliance determination	Reasonable timeframe
Provision E.27: Missing and/or corrected information	Immediately upon discovery
Provision E.28: Notice of non-compliance	Within 24 hours verbally and within 14 days in writing
Provision E.29: Compliance, non-compliance, and status	Within 14 days following each scheduled date
Provision E.30: Emergency corrective measures	Within seven (7) days of initiating corrections
Provision E.31: Report of Waste Discharge	December 31, 2018
Provision E.32: Demonstration of financial assurance	December 31, 2018, and every five (5) years thereafter
Provision E.33: Waiver from Report of Waste Discharge	At least 120 days prior to implementing changes

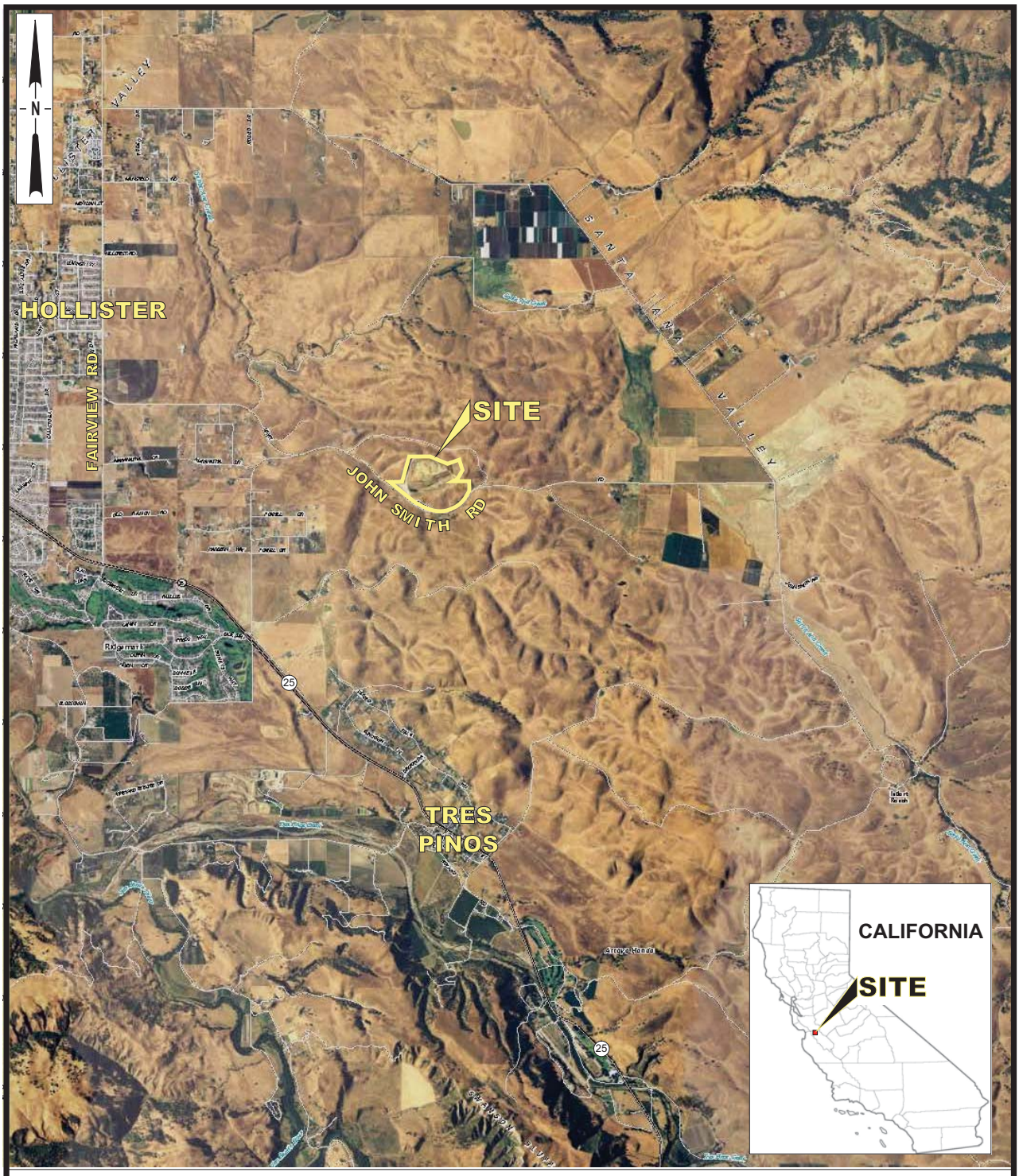
I, Kenneth A. Harris Jr., Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on December 5 - 6, 2013.

_____
Executive Officer

Figures: Figure 1 – Landfill Location
Figure 2 – Permitted Waste Disposal Footprint
Figure 3 – Monitoring Locations
Figure 4 – Final Closure Contours
Figure 5 – Groundwater Contours
Figure 6 – Well Survey Map
Figure 7 – Groundwater VOCs

Attachment 1 – Monitoring and Reporting Program Order No. R3-2013-0047

P:\LDU\Facilities\PERMITTED\John Smith Road\WDR - MRP Order No. R3-2013-0047\WDR Order No. R3-2013-0047 John Smith Road.doc



Source: USGS 7.5' Ortho Quad. Map: Tres Pinos,California; 8/11/2009.

Figure 1
Landfill Location
John Smith Road Landfill
San Benito County

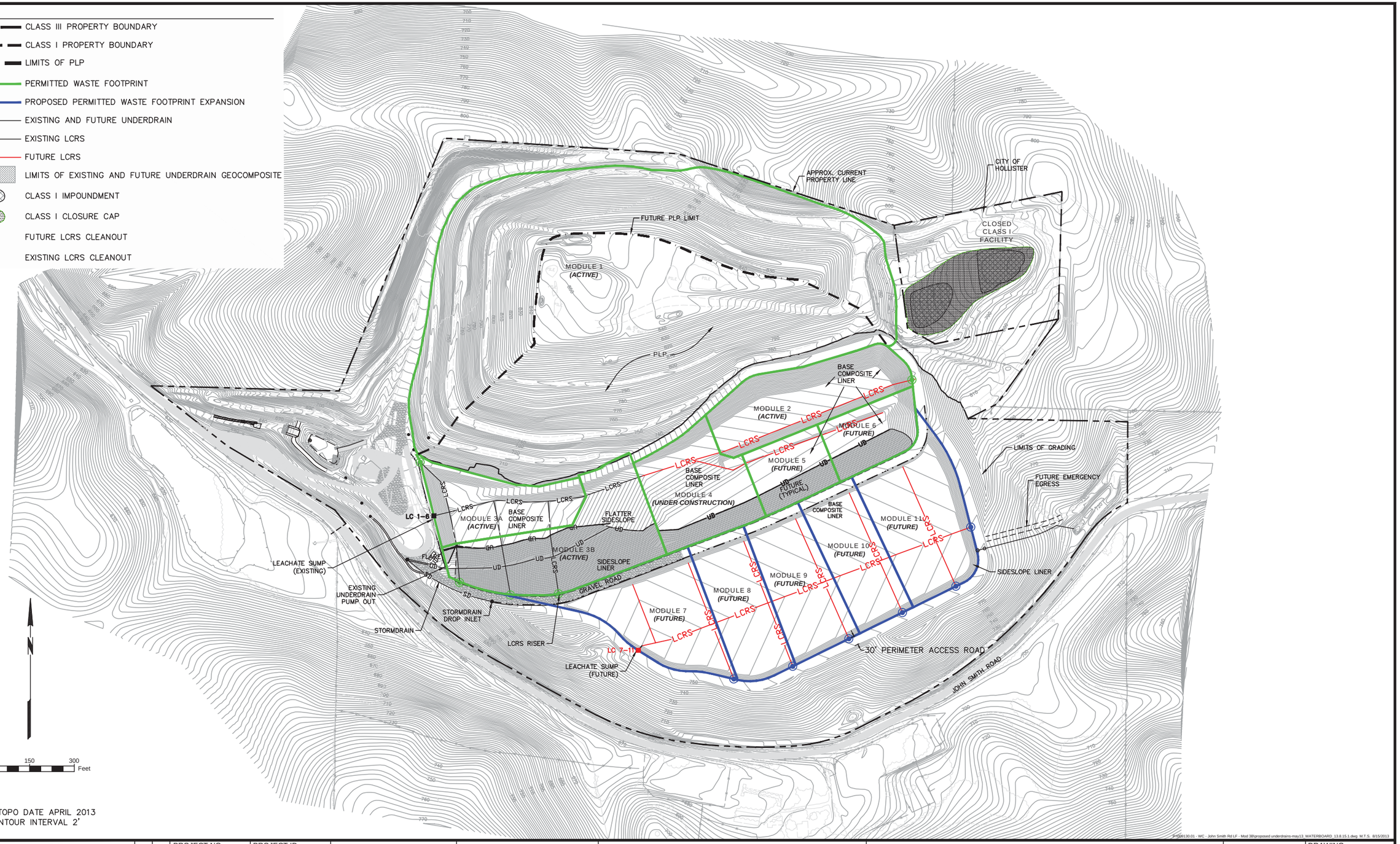
FIGURE
1
PROJECT NO.
073-97185-HG

G:\073-97185-HG\FIGURES\SITE LOCATION_USGS_ORTHO.DSF 8/1/13

Item No. 8 Attachment 1
December 5-6, 2013
Proposed WDRs Order No. R3-2013-0047

LEGEND

- CLASS III PROPERTY BOUNDARY
- CLASS I PROPERTY BOUNDARY
- LIMITS OF PLP
- PERMITTED WASTE FOOTPRINT
- PROPOSED PERMITTED WASTE FOOTPRINT EXPANSION
- UD — EXISTING AND FUTURE UNDERDRAIN
- LCRS — EXISTING LCRS
- LCRS — FUTURE LCRS
- LIMITS OF EXISTING AND FUTURE UNDERDRAIN GEOCOMPOSITE
- CLASS I IMPOUNDMENT
- CLASS I CLOSURE CAP
- FUTURE LCRS CLEANOUT
- EXISTING LCRS CLEANOUT



BASE TOPO DATE APRIL 2013
CONTOUR INTERVAL 2'

NO.	DATE	REVISIONS	BY	CHK
1	4/12/13	CHANGE SLOPE IN MODULE 4	CC	CC
2	5/29/13	REVISION 5/29/13	CC	JS

PROJECT NO: 010050.04	PROJECT ID:
DRAWN BY: D. ZAITZ	SCALE: 1"=150'
ENGINEER: J. SOLORIO	DATE:
CHECKED BY: C. COLES	DATE:

ORIGINAL SCALE IN INCHES
0 1 2

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

JSRL – JTD

SAN BENITO COUNTY
INTEGRATED WASTE
MANAGEMENT DEPARTMENT

Figure 2
Permitted Waste Disposal Footprint
John Smith Road Landfill
San Benito County

REGISTERED GEOLOGIST CLAYTON E. COLES No. EG1730 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

DRAWING: 2
SHEET: 2 OF 2
DATE: 8/14/2013

APPROXIMATE CLASS I AREA BOUNDARY

APPROXIMATE LIMIT OF CLASS III WASTE PLACEMENT

CLOSED CLASS I DISPOSAL AREA

SITE ENTRANCE

SCALE HOUSE

LANDFILL GAS FLARE

APPROXIMATE CLASS III AREA BOUNDARY

JOHN SMITH ROAD

CP-25 WA-20 LIMA-3 GP-7 W-4 GP-6 W-5 GP-2 GP-2A G-1 G-2 G-3 G-4 G-5 G-6R G-7 G-8 G-9 G-10 G-11 G-12 G-13R G-14 G-15 G-16 G-23 G-24 G-25 G-26 G-27 G-28 G-29 G-35 G-36 G-37 GP-13 CP-30 GP-9 E-1 E-2 E-3 E-8 E-9 E-12 E-13 E-14 E-15 E-16 E-17 E-18 GP-10 G-17 G-18 G-19 G-20 G-21 G-22 P-1 W-3 WA-19 EW-2 SP-1 WA-10 WA-8 CP-31 EW-5 EW-4 EW-1 G-33 GP-3A G-32 WA-14 WA-12 WA-15 EW-3 WA-13 WA-9 WA-11 GP-12 G-26 GP-11A SP-2 GP-11B SP-3

N

0 300 600

SCALE IN FEET

Date of topography: April 2010 (AeroGeodetic – CA State Plane Coordinates) with March 3 2013 interior update (Tetra Tech – CA State Plane Coordinates).

EXPLANATION

- CLASS III AREA DETECTION MONITORING WELL
- CLASS III AREA CORRECTIVE ACTION MONITORING WELL
- GROUNDWATER EXTRACTION SYSTEM WELL
- CLASS I AREA POST-CLOSURE DETECTION MONITORING WELL
- GROUNDWATER ELEVATION MONITORING WELL
- PIEZOMETER
- STORM WATER MONITORING LOCATION
- SOIL-GAS MONITORING WELL
- LANDFILL GAS EXTRACTION WELL
- FORMER CLASS I IMPOUNDMENT

Golder Associates

DATE 8/19/13
DWN KMM
APP TLV
REV 0
PROJECT NO. 053-7473-13

Figure 3
Monitoring Locations
John Smith Road Landfill
San Benito County

1" 1/2" 0" 1"
Dimscale: 200 Ltscale: 200 Psltscale: 309
G:\053-7473\FIGURES\MONITORING LOCATIONS_2013_2010-11x17.dwg 8/19/13

Item No. 8 Attachment 1
December 5-6, 2013
Proposed WDRs Order No. R3-2013-0047

LEGEND

- LOCATION OF FUTURE GAS WELLS
- GROUNDWATER–MONITORING WELL
- STORMWATER MONITORING POINTS
- PIEZOMETER LOCATION
- GAS WELL LOCATION
- LEACHATE SUMP RISER
- GAS PROBE LOCATION
- ADD 12' WIDE GRAVEL DRIVING SURFACE DURING CLOSURE
- RIP RAP
- BOUNDARY BETWEEN SUBTITLE "D" AND PRE–SUBTITLE "D"
- PROPERTY BOUNDARY
- GAS HEADER (G)
- DRAINAGE SWALE
- CULVERT
- FLARED INLET (C 4.2)
- PERIMETER WASTE BOUNDARY
- CLASS I IMPOUNDMENT
- CLASS I CLOSURE CAP
- CROSS SECTION
- DROP INLET (D 4.2)
- TEE OUTLET (1 4.2)

NOTES:
1. ELEVATIONS ON CLOSURE CAP REPRESENT TOP OF INTERMEDIATE COVER. FINAL ELEVATIONS WILL BE APPROXIMATELY 3.5 FEET HIGHER.
2. EXISTING AND FUTURE GASLINES ARE NOT SHOWN FOR CLARITY.
3. ASSUME THAT APPROXIMATELY ONE GAS EXTRACTION WELL WILL BE INSTALLED FOR EVERY TWO ACRES IN WHICH NO WELLS ARE SHOWN IN THE FUTURE.

PRE-SUBTITLE "D" AREA
NORTHERN EDGE OF SUBTITLE "D"
CITY OF HOLLISTER PROPERTY LINE
PROPOSED CLASS I FACILITY NORTHERN STOCKPILE
ADDITIONAL PLP
SUBTITLE AREA
APPLY OVERSIZED ROCK TO THIS SLOPE
WESTERN SEDIMENT BASIN
REMOVE SCALE HOUSE, SCALES, TRAILERS & HAZMAT SHED
FLARE STATION
GAS HEADER (EXISTING AT TIME OF CLOSURE)
SLEEVE FOR GAS–HEADER CROSSING (TYP. OF 4)
JOHN SMITH ROAD
EASTERN SEDIMENT BASIN
R=50'
5%

GRAPHICAL SCALE
0 100 200 300 400
(FEET)
BASE TOPO DATE MARCH 2011
2–FOOT CONTOUR INTERVAL

NO.	DATE	REVISIONS	BY	CHK

PROJECT NO: 010050.04	PROJECT ID:
DRAWN BY: J. HOLDEN	SCALE: 1"=100'
ENGINEER: J. SOLORIO	DATE:
CHECKED BY: C. COLES	DATE:

ORIGINAL SCALE IN INCHES
0 1 2

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

JSRL – JTD

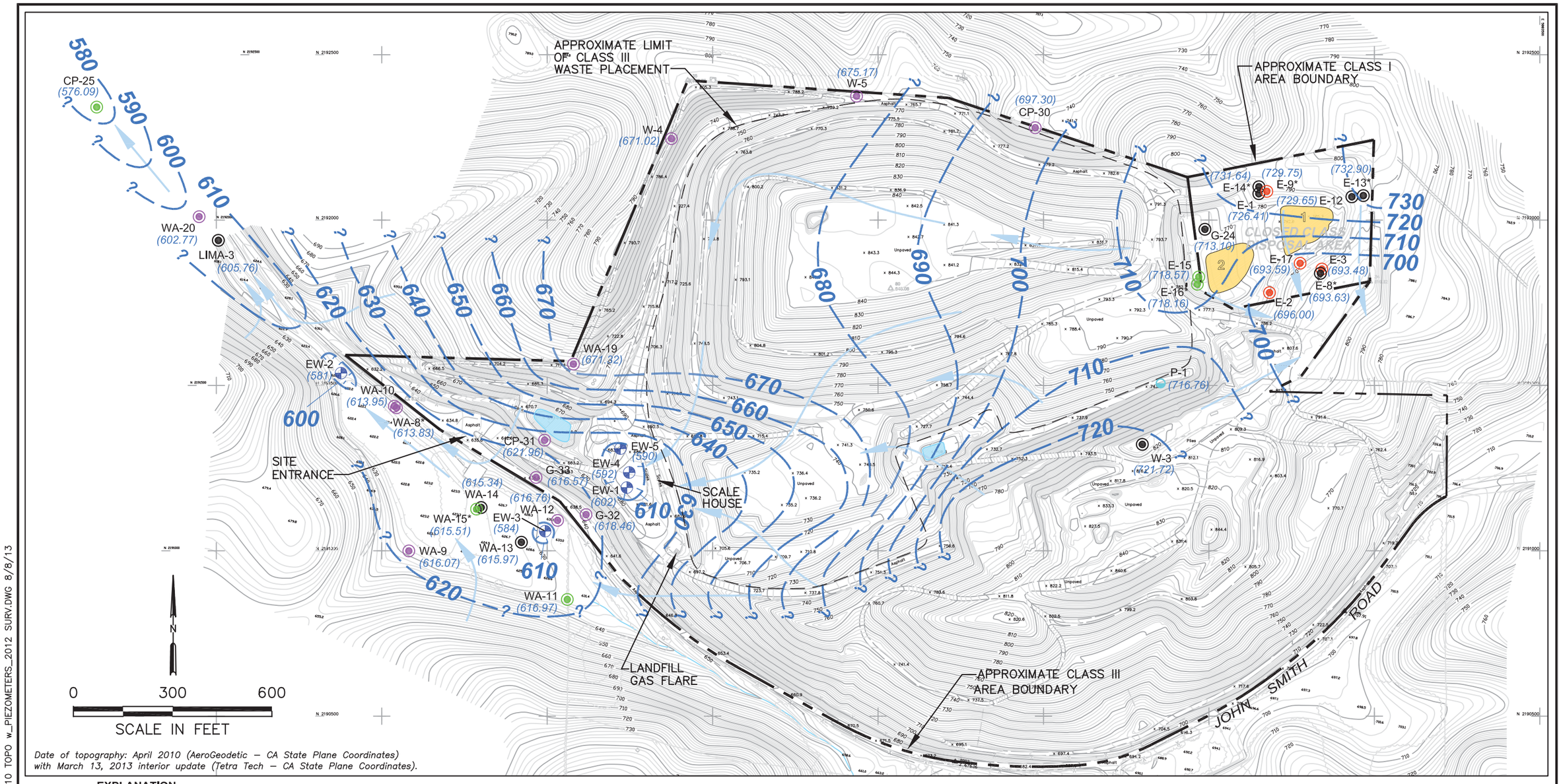
SAN BENITO COUNTY
INTERGRATED WASTE
MANAGEMENT DEPARTMENT

Figure 4
Final Closure Contours
John Smith Road Landfill
San Benito County

REGISTERED GEOLOGIST CLAYTON E. COLES No. EG1730 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

DRAWING: 4.0
SHEET: 8 OF 14
DATE: 2/29/2012

P:\009130.01 – WC – John Smith Rd LF – Mod 3B\PCPCMP.dwg J.L.H. 4/25/2012



Date of topography: April 2010 (AeroGeodetic – CA State Plane Coordinates) with March 13, 2013 interior update (Tetra Tech – CA State Plane Coordinates).

EXPLANATION

- CLASS III AREA DETECTION MONITORING WELL
- CLASS III AREA CORRECTIVE ACTION MONITORING WELL
- GROUNDWATER EXTRACTION SYSTEM WELL
- CLASS I AREA POST-CLOSURE DETECTION MONITORING WELL
- GROUNDWATER ELEVATION MONITORING WELL
- PIEZOMETER

(696.47) GROUNDWATER ELEVATION (FT.-MSL); MEASURED 4/17-18/2013

700 GROUNDWATER POTENTIOMETRIC CONTOUR (FT.-MSL); QUERIED WHERE UNCERTAIN

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

* WELL SCREENED IN LOWER PORTION OF AQUIFER; GROUNDWATER ELEVATION NOT USED IN CONTOURING

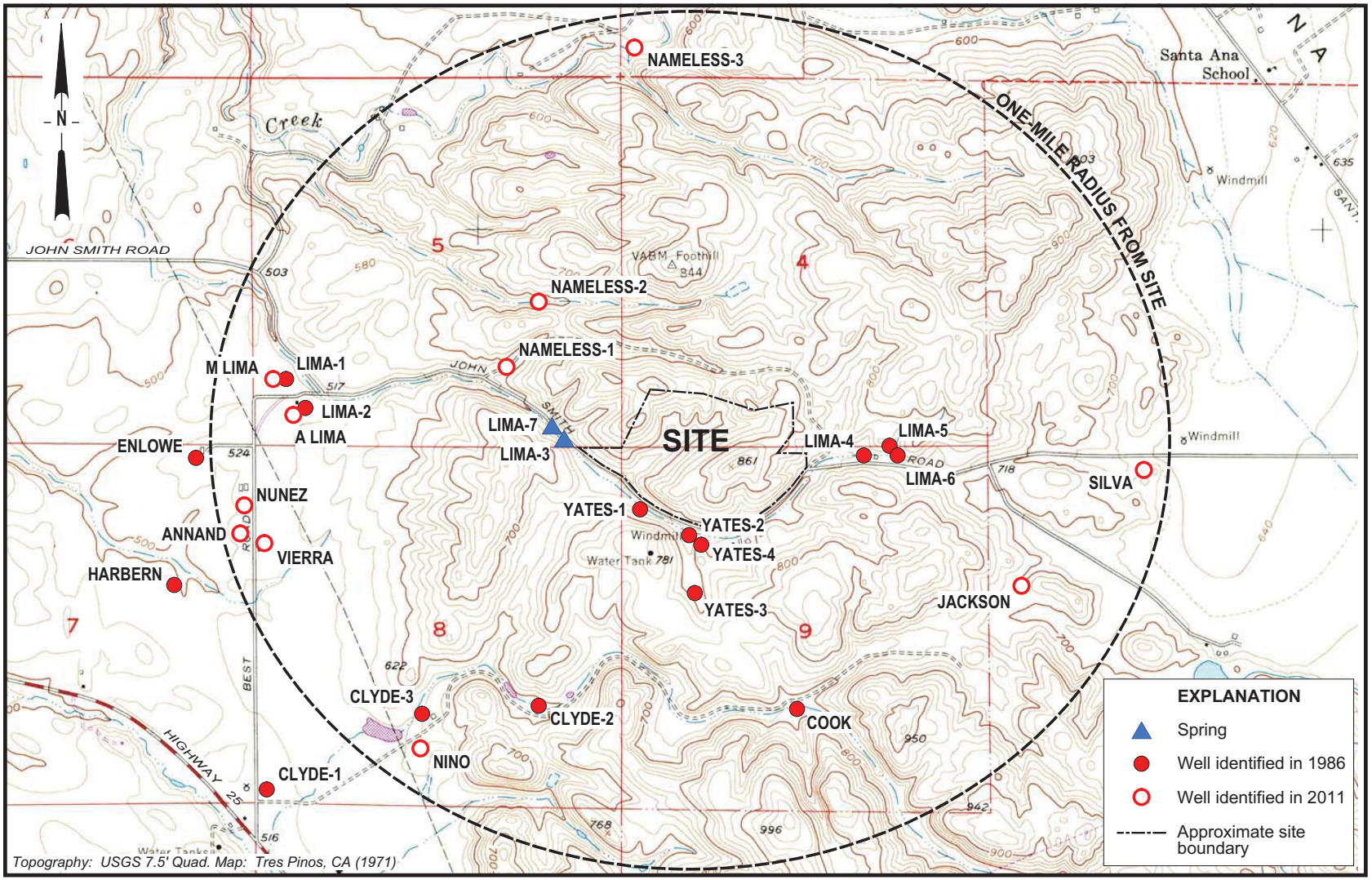
Golder Associates

DATE	8/8/13
DWN	KMM
APP	TLV
REV	0
PROJECT NO.	053-7473-13

Figure 5
Groundwater Contours
Second Quarter 2013
John Smith Road Landfill
San Benito County

Item No. 8 Attachment 1
December 5-6, 2013
Proposed WDRs Order No. R3-2013-0047

1" 1/2" 0" 1"
Dimscale: 200 Ltscale: 200 Pltscale: 0
G:\053-7473\FIGURES\GWELEVBASE 2013_2010 TOPO w_PIEZOMETERS_2012 SURV.DWG 8/8/13



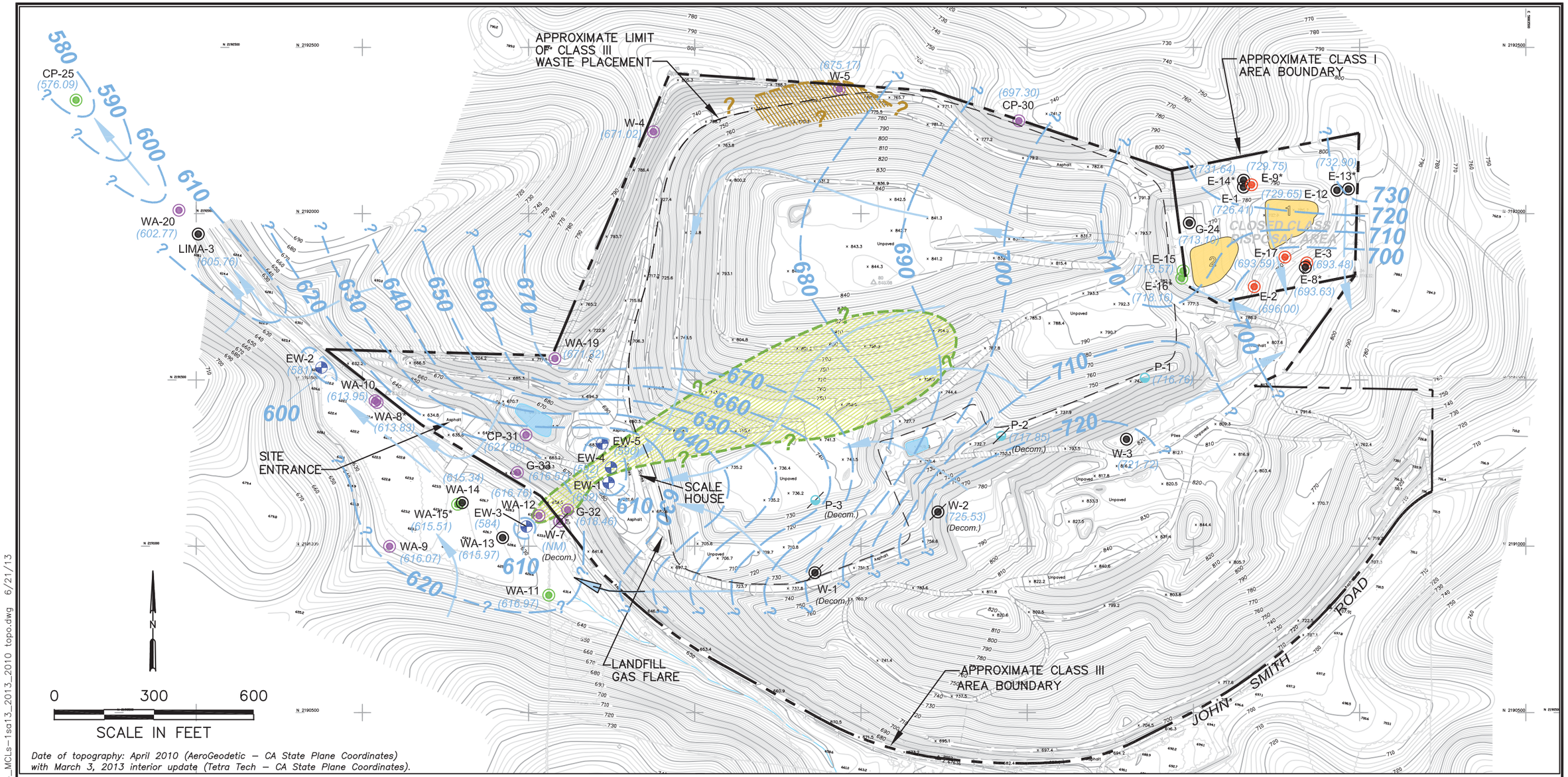
Golder Associates

SCALE: 0 2000 FEET

Figure 6
Well Survey Map
John Smith Road Landfill
San Benito County

G:\053-7474\2013 MRP_WDR\FIGURES\WELL SURVEY.DSF 8/8/13

Item No. 8 Attachment 1
December 5-6, 2013
Proposed WDRs Order No. R3-2013-0047



Date of topography: April 2010 (AeroGeodetic – CA State Plane Coordinates) with March 3, 2013 interior update (Tetra Tech – CA State Plane Coordinates).

EXPLANATION

- CLASS III AREA DETECTION MONITORING WELL
- CLASS III AREA CORRECTIVE ACTION MONITORING WELL
- GROUNDWATER EXTRACTION SYSTEM WELL
- CLASS I AREA POST-CLOSURE DETECTION MONITORING WELL
- GROUNDWATER ELEVATION MONITORING WELL
- PIEZOMETER

(616.97) GROUNDWATER ELEVATION (FT.-MSL); MEASURED 4/17-18/2013

GROUNDWATER POTENTIOMETRIC CONTOUR (FT.-MSL); QUERIED WHERE UNCERTAIN

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

* WELL SCREENED IN LOWER PORTION OF AQUIFER; GROUNDWATER ELEVATION NOT USED IN CONTOURING

AREAS WHERE VOCs EXCEED MCLs (LANDFILL GAS SOURCE)

APPROXIMATE AREA WHERE VOCs EXCEED MCLs (LEACHATE SOURCE)

LIMITS OF LEACHATE SOURCE AREA ARE BASED ON WAHLER ASSOC. "ADDITIONAL STUDIES REPORT", MARCH 1993.

Golder Associates

DATE 6/21/13
DWN KMM
APP TLV
REV 0
PROJECT NO. 053-7473

Figure 7
Groundwater VOCs
Second Quarter 2013
John Smith Road Landfill
San Benito County

1" 1/2" 0" 1"
Dimscale: 200 Ltscale: 200 Psltscale: 0
G:\053-7473\Figures\VOCs greater than 1 ppb_MCLs-1sq13_2013_2010 topo.dwg 6/21/13

Item No. 8 Attachment 1
December 5-6, 2013
Proposed WDRs Order No. R3-2013-0047

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

MONITORING AND REPORTING PROGRAM NO. R3-2013-0047
Proposed for Revision at the December 5 - 6, 2013 Board Meeting

FOR
JOHN SMITH ROAD LANDFILL
CLASS I AND CLASS III WASTE MANAGEMENT UNITS
SAN BENITO COUNTY

Monitoring and Reporting Program Order No. R3-2013-0047 (MRP) is issued by the Regional Water Quality Control Board, Central Coast Region (hereafter "Water Board") pursuant to California Water Code (CWC) §13267. Pursuant to CWC §13268, a violation of §13267 requirements may subject you to civil liability of up to $1,000 per day for each day in which the violation occurs.

The County of San Benito Integrated Waste Management Department (hereafter "Discharger") owns and operates the John Smith Road Class I Landfill and Class III Landfill (hereafter "Landfill"). The Discharger is subject to this MRP because it owns and operates the Landfill (collectively the Class I and Class III areas). The MRP is required to assess compliance with the CWC, applicable state and federal regulations, and Waste Discharge Requirements Order No. R3-2013-0047.

PART I: MONITORING AND OBSERVATION SCHEDULE

Unless otherwise indicated, the Discharger must report all monitoring and observations as outlined in **Part IV**. Unless otherwise noted, California Code of Regulations (CCR) Title 27, Division 2, Subdivision 1, Chapter 3, Subchapter 3, Article 1, and the essentially equivalent CCR Title 22, Division 4.5, Chapter 14, Article 6 monitoring requirements, are applicable to the Class III area and the Class I Corrective Action portions of the facility, respectively.

A. SITE INSPECTIONS

The Discharger must inspect the Landfill, in accordance with the following schedule, and record (including photographs, when appropriate) at a minimum, the Standard Observations listed below:

1. **Site Inspection Schedule**:

   a. At least **monthly** during the wet season (**October 1 through April 30**) following each storm event that produces onsite stormwater runoff. For

purposes of this MRP, onsite runoff is defined as: 1) surface water flow that produces significant ponding, erosion, or other water quality problem; and/or a discharge to a sediment/retention basin, or 2) surface water flow resulting from a minimum of one inch of rain within a 24-hour period[1].

b. During the dry season (**May 1 through September 30**), a minimum of one inspection each **three month period**.

2. **Standard Observations**:

a. For the Landfill - this includes inspections at the WMU, along the perimeter of the WMU, and waste diversion or recycling areas.
   i. Whether stormwater drainage ditches and sediment/retention basins contain liquids.
   ii. Evidence of liquid leaving or entering the Landfill, estimated size of affected area, and estimated flow rate (show affected area on map).
   iii. Presence of odors – characterization, source, and distance from source.
   iv. Evidence of ponding over the WMU (show affected area on map).
   v. Evidence of erosion or exposed waste.
   vi. Evidence of waste in the drainage system (e.g., ditches and stormwater sediment/retention basins).
   vii. Inspection of stormwater discharge locations for evidence of non-stormwater discharges.
   viii. Integrity of drainage systems during wet season.

b. For Receiving Waters
   i. Floating and suspended materials of waste origin; presence or absence, source, and size of affected area.
   ii. Discoloration and turbidity – description of color, source, and size of affected area.
   iii. Presence of odors – characterization, source, and distance from source.
   iv. Evidence of beneficial use – presence of water-associated wildlife.
   v. Estimated flow rate to the receiving water.
   vi. Weather conditions – wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

B. ADDITIONAL DRAINAGE SYSTEMS INSPECTIONS

The Discharger must inspect all drainage control systems following each onsite runoff-producing storm event and record the following:

1. General conditions of the stormwater facilities;

[1] The intent of this requirement is for Landfill staff to use professional judgment to determine how quickly (during or within 24 hours) a landfill inspection is warranted after a storm event to ensure that the storm event has not resulted in erosion or other stormwater related issues that can potentially impact water quality or the integrity of the landfill facility and related appurtenances, such as, areas with interim and/or final covers, storm water conveyance systems (i.e., drainage control systems), access roads, etc.

2. Whether stormwater sedimentation/retention basins and drainage ditches contain liquids and if basins are discharging;
3. To insure that the terms of the State Water Resources Control Board (State Water Board) Order No. 97-03-DWQ, General Permit No. CAS000001 are properly implemented, document compliance with the Landfill-specific Stormwater Pollution Prevention Plan; and
4. Steps taken to correct any problems found during the inspections, as required under **Part IA** of this Monitoring and Reporting Program, and date(s) when corrective action was taken. Include photographic documentation.

C. RAINFALL DATA

The Discharger must record the following information from the nearest monitoring station:

1. Total precipitation, in inches, during each **three month period** (October through December, January through March, April through June, and July through September).
2. Precipitation, in inches, during the most intense 24-hour rainfall event occurring within each contiguous **three month period**.
3. Number and date of storms (greater than or equal to one inch in 24 hours) received during the **three month period.**

D. POLLUTION CONTROL SYSTEMS

The Discharger must inspect all pollution and control systems (e.g., groundwater extraction system, leachate collection and removal system (LCRS), and gas collection and removal system) and record the following information:

1. Groundwater extraction system (corrective action):

    a. Routine Operational Checks:
        i. **Weekly** – Inspect operational status and record inspections on check-off sheets and include in semiannual monitoring reports.
        ii. Perform routine preventative maintenance focused on keeping the system at design operation. The Discharger must summarize and report all scheduled and unscheduled maintenance.

    b. Data Collection:
        i. **Monthly** – Record volume of liquid extracted. Report monthly volume and running sub-total. Report disposal method utilized. When more than one disposal method is used, record volume specific for each method.
        ii. Compute pollutant mass removed using concentration data and collection volume. Report monthly, semiannual, and annual running totals.

2. Landfill LCRS:

   a. Routine Operational Checks.
      i. **Weekly** – Inspect all systems for containment and collection system integrity. Include monthly inspection check-off sheets with semiannual monitoring reports.
      ii. Perform routine preventative maintenance focused on keeping the system at design operation. The Discharger must summarize and report all scheduled and unscheduled maintenance.
      iii. **Monthly (between October 1 and April 30 of each year) –** pumping system operational check.
      iv. **Annually** – Leachate collection and removal system testing and demonstration as required by CCR Title 27, §20340(d). Report results in the Annual Summary Report required by MRP, **Part IV.B**. The Discharger must develop results of annual testing in a manner that makes one year's test comparable to previous and subsequent tests. The Discharger must specifically address the absence or presence of bio-fouling in the inspection report.
      v. All lined areas of the WMU must have the location of their respective liners surveyed and markers placed at readily observable locations observable by Landfill operations staff discharging leachate back to lined modules, and by state inspectors.

   b. Data Collection:
      i. **Weekly** – Record volume of leachate collected. Report monthly volume and running sub-total. Report disposal method utilized. When more than one disposal method is used, record volume specific for each method.
      ii. **Annually** – Analyze leachate for monitoring parameters as specified in **Part I.F.2, Table 1**. The Discharger must take samples directly from any LCRS that provides sufficient liquid to sample and is representative of leachate from the waste mass.
      iii. Compute pollutant mass removed using leachate concentration data and collection volume. Report monthly, semiannual, and annual running totals.

3. Landfill Gas Collection and Removal System:

   a. Routine Operational Checks:
      i. **Monthly** – Inspect system for containment and collection system integrity. Include monthly inspection check-off sheets with semiannual monitoring reports.
      ii. Perform routine preventative maintenance focused on keeping the system at design operation. The Discharger must summarize and report all scheduled and unscheduled maintenance.
      iii. **Annually** – Submit an annual operational summary for the gas collection system. The summary must outline downtime causes and durations, and major system changes.

b. Data Collection:
   i. **Monthly** – Record volume of gas extracted. Report monthly volume and annual sub-total. Indicate how sampler measured volume measurement.
   ii. **Monthly** – Record volume of gas condensate collected. Report monthly, semiannual and annual sub-totals and report disposal method utilized. When more than one disposal method is utilized, record volume specific for each method.
   iii. **Semiannually** – Analyze gas collection header as specified in **Part I.F.2, Table 1**.
   iv. **Semiannually** – Analyze gas condensate as specified in **Part I F.2, Table 1**.
   v. Compute pollutant mass removed using semiannual concentration data and collection volume. Report monthly, semiannual, and annual running totals.

E. INTAKE MONITORING

The Discharger must record the following information associated with waste inflows:

1. Log of all loads that require special handling or special characterization prior to discharge to comply with waste discharge requirements (e.g., contaminated soils, semi-liquid loads, sewage sludge, brines, asbestos loads, and other). The log must document volume of waste and results of all characterization testing required; and
2. Log of random load checking program. The log must contain a record of all load checks. For refused loads, the following information is required: the type of waste refused; and the name, address, and telephone number of the party attempting to dispose of the waste.

F. MONITORING LOCATIONS AND ANALYTICAL MONITORING

The Discharger must monitor the Landfill in accordance with the following schedules. Monitoring locations are shown on "Monitoring Locations" **Figure 1**. The Discharger must comply with the sampling, analyses, and reporting requirements discussed in **Parts II, III, and IV** of this MRP.

1. Monitoring Periods:

   a. **Quarterly** – The 1st through 4th quarter monitoring periods are January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31, respectively.
   b. **Semiannually** - The 1st and 2nd semiannual monitoring periods are January 1 – June 30, and July 1 – December 31.
   c. **Annually** – The annual monitoring period is from January 1 – December 31.

2. Monitoring Programs:

   a. For the **Class III** area the Discharger must sample the following Monitoring Points and Background as described below:

Table 1
Class III Monitoring

Monitoring Points[1,2]	Monitoring Program		Monitoring Frequency	Monitoring Parameters
	Detection	Corrective Action		
WA-11 (background)	X		Semiannual	Table 3
E-2	X		Semiannual	Table 3
E-15 (background)[3]	X	X	Semiannual	Table 3
E-16 (when E-15 is dry)	X		Semiannual	Table 3
WA-15	X		Semiannual	Table 3
CP-25	X		Semiannual	Table 3
CP-30		X	Semiannual	Table 4
CP-31		X	Semiannual	Table 4
G-32		X	Semiannual	Table 4
G-33		X	Semiannual	Table 4
W-4		X	Semiannual	Table 4
W-5		X	Semiannual	Table 4
WA-8		X	Semiannual	Table 4
WA-9		X	Semiannual	Table 4
WA-10		X	Semiannual	Table 4
WA-12		X	Semiannual	Table 4
WA-19		X	Semiannual	Table 4
WA-20		X	Semiannual	Table 4
P-1, W-3, WA-13, WA-14, LIMA-3, G-26			Semiannual	Groundwater elevations only
EW-1		X	Annual	Table 6
EW-2		X	Annual	Table 6
EW-3		X	Annual	Table 6
EW-4		X	Annual	Table 6
EW-5		X	Annual	Table 6

Monitoring Points[1,2]	Monitoring Program		Monitoring Frequency	Monitoring Parameters
	Detection	Corrective Action		
GP-2 GP-3A GP-2AR, GP-2AY, GP-2AG GP-6R, GP-6Y, GP-6G GP-7R, GP-7Y, GP-7G GP-9R, GP-9Y, GP-9G GP-10R, GP-10Y, GP-10G GP-11AR, GP-11AG GP-11BR, GP-11BG GP-12R, GP-12Y, GP-12G GP-13R, GP-13Y, GP-13G		X	Quarterly[4]	Table 5
Gas Collection Header		X	Semiannual	Table 5
Gas Condensate		X	Semiannual	Table 4
Leachate Sump[5]	X		Annual	Table 3
Leachate Sump Leak Detection Layer (unsaturated zone monitoring)	X		Quarterly	Liquids detection
			Annual	Table 3[6]
SP-1, SP-2, SP-3	X		Annual	Table 9[7] and Table 10[8]
Stormwater Contacting Leachate		X	Occurrences	Table 10[8] and Table 11[9]
Stormwater Sediment Basin(s)	X		Annual	Table 12
Constituents of Concern (COC)[6]	X	X	Once every 5 years	Table 7

1 Groundwater elevations must be monitored semiannually corresponding with anticipated seasonal high and low groundwater conditions (Spring/Autumn).
2 For all **new** Monitoring Points, the Discharger must conduct quarterly monitoring for four consecutive quarters starting from the date first sampled. After completing the initial quarterly samples, monitor semiannually, except as provided under **Part III C**.
3 E-15 is in Corrective Action monitoring for volatile organic compounds (VOCs) related to the Class III Landfill and Detection Monitoring related to the Class I Landfill for other parameters.
4 Annual laboratory testing for VOCs must be conducted on all probes within gas monitoring wells that exhibit impacts from Landfill gas. For nested probe sets within gas monitoring wells, annual laboratory testing for VOCs must only be conducted on the probes that exhibit the greatest impact from Landfill gas.
5 Groundwater and leachate sampling and analyses according to **Part I.F.4** do not apply to groundwater extraction wells that are in use.
6 Applicable upon confirmation of release from the primary liner and/or upon confirmation of detection of groundwater intrusion into the sump.
7 Sampling and analyses required two times per wet season as defined in **Part I.F.5.a. and b**.
8 Sampling and analyses required when stormwater comes in contact with wastes as described in **Part I.F.5.c**.
9 Sampling and analyses required when stormwater comes in contact with wastes as described in **Part I.F5.d**.

b. For the **Class I** area the Discharger must sample the following detection Monitoring Points and background Monitoring Points as described below:

Table 2
Class I Post-Closure Monitoring

Monitoring Points	Monitoring Program		Parameters	
	Detection	**Monitoring Table**	**Monitoring Frequency**	**Field Indicators**[1]
E-1, E-2, E-3, E-8, E-9[2] (background) E-12, E-13, E-14, E-17, G-24			Semiannual groundwater elevations	
E-2, E-3, E-9, E-17	X	Table 8	Every 5 years[3]	Every 5 years

1 Field indicator parameters: pH, electrical conductivity, temperature, and turbidity, at a minimum.
2 If Well E-9 cannot be sampled, Well E-12 must be sampled.
3 The next COC sampling event is in 2015 during the highest groundwater elevation. COC sampling events must alternate between highest and lowest groundwater elevations starting with the highest during 2015.

3. Monitoring Parameters:

a. The Discharger must analyze all samples from all Detection Monitoring Points for the following monitoring parameters:

Table 3
Detection Monitoring

Parameters	Method[1,2]	Units[3]
Volatile Organic Compounds[4]	8260	µg/L
pH	150.1	Units
Electrical Conductivity	120.1	µS/cm
Bicarbonate Alkalinity	310.1	mg/L
Chloride	300.0	mg/L
Nitrate + Nitrite as Nitrogen	353.2	mg/L
Dissolved Oxygen	Field	mg/L
pH	Field	Units
Temperature	Field	ºF/C
Electrical Conductivity	Field	µS/ cm
Turbidity	Field	NTU
Total Well Depth[5]	Field	Feet
Groundwater Elevations	Sounder	Feet

1 Or most recently approved United States Environmental Protection Agency (US EPA) method that provides the lowest practicable detection limits; or upon receiving prior approval from the Water Board Executive Officer, the Discharger may use alternative analytical methods.
2 Statistical and non-statistical assessment methods, as required by **Part III**, must be used to evaluate the sampling results of laboratory-derived parameters.
3 mg/L – milligrams per liter; µS/cm – microSiemens per centimeter; ^{O}F/^{O}C – degrees Fahrenheit/Centigrade; NTU– nephelometric turbidity units; µg/L – micrograms per liter.
4 VOCs must include all VOCs detectable using USEPA Method 8260, including at least all 47 organic constituents listed in Appendix I to 40 CFR, 258 (Subtitle D), oxygenates (MTBE, TBA, TAME, DIPE, and ETBE), and 1,4-dioxane.
5 Must be measured every five years, or when dedicated pumps and/or equipment are removed from wells.

b. The Discharger must analyze all samples from Corrective Action Program assessment Monitoring Points for the following:

Table 4
Corrective Action Monitoring

Parameters	Method [1,2]	Units
Volatile Organic Compounds[3]	8260	µg/L
Dissolved Oxygen	Field	mg/L
pH	Field	Units
Temperature	Field	ºF/C
Electrical Conductivity	Field	µS/cm
Turbidity	Field	NTU
Groundwater Elevations	Sounder	Feet

1 Or most recently approved US EPA method that provides the lowest practicable detection limits; or upon receiving prior approval from the Water Board Executive Officer, the Discharger may use alternative analytical methods.
2 Statistical and non-statistical assessment methods, as required by **Part III**, must be used to evaluate the sampling results of laboratory-derived parameters.
3 VOCs must include all VOCs detectable using USEPA Method 8260, including at least all 47 organic constituents listed in Appendix I to 40 CFR, 258 (Subtitle D), oxygenates (MTBE, TBA, TAME, DIPE, and ETBE), and 1,4-dioxane.

c. The Discharger must analyze all gas and unsaturated zone gas monitoring locations for the following monitoring parameters:

Table 5
Gas Probes Monitoring

Parameters	Method[1]	Units
Methane	Field	ppm
Carbon Dioxide	Field	ppmv and percentage
Oxygen	Field	ppmv and percentage
Volatile Organic Compounds[2]	TO-15	ppbv

1 Or most recently approved US EPA method that provides the lowest practicable detection limits; or upon receiving prior approval from the Water Board Executive Officer, the Discharger may use alternative analytical methods.
2 Annual laboratory testing for VOCs must be conducted on all probes within gas monitoring wells that exhibit impacts from Landfill gas. For nested probe sets within gas monitoring wells, annual laboratory testing for VOCs must only be conducted on the probes that exhibit the greatest impact from Landfill gas.

d. The Discharger must analyze all samples from the groundwater extraction system for the following monitoring parameters:

Table 6
Groundwater Extraction System Monitoring

Parameters	Method[1]	Units
Volatile Organic Compounds[2]	8260	µg/L
1 Or most recently approved US EPA method that provides the lowest practicable detection limits; or upon receiving prior approval from the Water Board Executive Officer, the Discharger may use alternative analytical methods. 2 VOCs must include all VOCs detectable using USEPA Method 8260, including at least all 47 organic constituents listed in Appendix I to 40 CFR, 258 (Subtitle D), oxygenates (MTBE, TBA, TAME, DIPE, and ETBE), and 1,4-dioxane.		

4. Constituents of Concern Monitoring:

COC listed in Tables **7 and 8** either directly include or include by reference all constituents listed in Code of Federal Regulations (CFR) Title 40, Chapter I, Subchapter I, Part 258, **Appendix I and II** (Class III area); and CCR Title 22, Division 4.5, Chapter 14, Article 19, **Appendix IX** [reference: CFR Title 40, Chapter I, Subchapter I, Part 264] (Class I area). Monitoring for COC must include only those analytes in **Tables 7 and 8** that are not analyzed as part of the routine monitoring program. The Discharger must collect and analyze samples for COCs **once every five years**. The Discharger is required to conduct the next COC sampling event in **Spring 2015**. Analysis of COC must be carried out **once every five years** at each of the Landfill's groundwater Monitoring Points (Detection and Corrective Action), and leachate sumps. If there is an indication of release (**Part IV.C.4**), then the Discharger is also required to monitor for COC. The COC monitoring must be carried out in the Spring of year one and the Autumn of the fifth year. Additionally, within three months of installing a new groundwater monitoring point, the Discharger must collect and analyze samples for COCs.

a. **COC Monitoring (Class III and Class I Areas) –** The Discharger must analyze all groundwater and leachate samples for the following:

Table 7
Constituents of Concern for Class III Area

Parameter[1]	Method[2]	Units
Antimony	6020	mg/L
Arsenic	6020	mg/L
Barium	6020	mg/L
Beryllium	6020	mg/L
Cadmium	6020	mg/L
Chromium	6020	mg/L
Cobalt	6020	mg/L
Copper	6020	mg/L

Lead	6020	mg/L
Mercury	7470	mg/L
Nickel	6020	mg/L
Selenium	6020	mg/L
Silver	6020	mg/L
Thallium	6020	mg/L
Tin	6010	mg/L
Vanadium	6020	mg/L
Zinc	6020	mg/L
Cyanide	335.4	mg/L
Sulfide	376.2	mg/L
Chlorophenoxy Herbicides	8151	µg/L
Organochlorine Pesticides	8081	µg/L
PCBs	8082	µg/L
Organophosphorus Pesticides	8141	µg/L
Semi-Volatile Organic Compounds[3]	8270	µg/L
Volatile Organic Compounds[4]	8260	µg/L

1 Samples for metals must be field filtered through a 0.45 micron in-line filter prior to laboratory analysis for dissolved metals.
2 Or most recently approved US EPA method that provides the lowest practicable detection limits; or upon receiving prior approval from the Water Board Executive Officer, the Discharger may use alternative analytical methods.
3 SVOCs must include 1,4-dioxane, pentachloroethane, 2-picoline, and pyridine.
4 VOCs must include all VOCs detectable using USEPA Method 8260, including at least all 47 organic constituents listed in Appendix I to 40 CFR, 258 (Subtitle D), oxygenates (MTBE, TBA, TAME, DIPE, and ETBE).

Table 8
Constituents of Concern for Class I Area

Parameter[1]	**Method**[2]	**Units**
Antimony	6010	mg/L
Arsenic	6020	mg/L
Barium	6020	mg/L
Beryllium	6020	mg/L
Cadmium	6020	mg/L
Chromium	6020	mg/L
Cobalt	6020	mg/L
Copper	6020	mg/L
Iron	6010	mg/L
Lead	6020	mg/L
Manganese	6020	mg/L
Mercury	7470	mg/L
Nickel	6020	mg/L

Selenium	6020	mg/L
Silver	6020	mg/L
Thallium	6020	mg/L
Tin	6010	mg/L
Vanadium	6020	mg/L
Zinc	6020	mg/L
Carbamate and Urea Pesticides	632	µg/L
Total Kjeldahl Nitrogen	351.2	mg/L
Bicarbonate	310.1	mg/L
Organochlorine Pesticides	8081	µg/L
PCBs	8082	µg/L
Volatile Organic Compounds[3]	8260	µg/L

1 Samples for metals must be field filtered through a 0.45 micron in-line filter prior to laboratory analysis for dissolved metals.
2 Or most recently approved US EPA method that provides the lowest practicable detection limits; or upon receiving prior approval from the Water Board Executive Officer, the Discharger may use alternative analytical methods.
3 VOCs must include all VOCs detectable using USEPA Method 8260, including at least all 47 organic constituents listed in Appendix I to 40 CFR, 258 (Subtitle D), oxygenates (MTBE, TBA, TAME, DIPE, and ETBE), and 1,4-dioxane.

5. Surface Water Monitoring:

   Annually, collect two stormwater samples pursuant to State Water Board Order No. 97-03-DWQ, General Permit No. CAS000001, as follows:

   a. Within one hour of the first stormwater discharge of the wet season (October 1 through April 30), and within normal business hours.

   b. During at least one other storm event of the wet season, following a minimum of three working days without a stormwater discharge from the preceding storm event. A storm event is an event that produces surface water runoff from the Landfill to waters of the state. Collect unfiltered samples at discharge points and analyze for constituents listed in **Table 9**.

Table 9
Stormwater Monitoring Parameters

Parameter	Method[1]	Units
Electrical Conductivity	120.1	µS/cm
Nitrate + Nitrite as Nitrogen	353.2	mg/L
pH	Field or 150.1	pH Units
Total Organic Carbon	415.1/5310	mg/L
Total Suspended Solids	160.2	mg/L

Total Iron	6010	mg/L
1 Or most recently approved US EPA method that provides the lowest practicable detection limits; or upon receiving prior approval from the Water Board Executive Officer, the Discharger may use alternative analytical methods.		

c. Subchapter N Monitoring: The General Stormwater Permit requires that stormwater discharges meet all applicable provisions of Sections 301 and 402 of the Clean Water Act. CFR Title 40, Chapter I, Subchapter N, Subpart B-RCRA Subtitle D Non-Hazardous Waste Landfill, Parts 445.2(b) and (f), and 445.21 establish effluent limitations and standards for stormwater discharges from landfills. If stormwater comes in direct contact with Landfill wastes (e.g., stormwater in contact with open active face; stormwater in contact with any leachate spills, leachate seeps, and/or gas collection condensate spills; stormwater in direct contact with truck wash-water or water that was in direct contact with solid waste at the landfill facility), the Discharger shall collect and analyze unfiltered stormwater samples for the Subchapter N monitoring parameters listed in **Table 10.** However, if stormwater does not come in direct contact with landfill wastes (e.g., stormwater flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill) then the Discharger will not need to sample for the Subchapter N monitoring parameters.

Table 10
Subchapter N Monitoring Parameters

Parameter	Method[1]	Units
Biochemical Oxygen Demand (BOD)	5210	mg/L
Total Suspended Solids	160.2	mg/L
Ammonia (as Nitrogen)	350.1	mg/L
[alpha]-Terpineol	8270	µg/L
Benzoic Acid	8270	µg/L
p-Cresol	8270	µg/L
Phenol	8270	µg/L
Total Zinc	6010/6020	mg/L
pH	Field	pH Units
1 Or most recently approved US EPA method that provides the lowest practicable detection limits; or upon receiving prior approval from the Water Board Executive Officer, the Discharger may use alternative analytical methods.		

d. Additional Stormwater Monitoring: If stormwater comes in contact with leachate from spills or seeps and/or gas condensate from spills or seeps, the Discharger must collect unfiltered samples from all representative impacted onsite and offsite locations for the monitoring parameters included in **Table 3**. These sampling requirements are independent of the two stormwater samples that are collected for the General Stormwater Permit and must be collected whether the facility discharges stormwater offsite or not.

e. Annually, collect a sediment sample from within each of the stormwater sediment basins and analyze for the parameters in **Table 11** [reference list: CCR Title 22, Division 4, Chapter 15, Article 4, §64431] . Sediment sampling is not required if the Discharger removes each basins' accumulated sediments prior to October 1 of each year and discharges the sediments into the Landfill's lined Waste Management Units.

Table 11
Stormwater Sediment Basin Monitoring Parameters

Parameter	Method[1]	Units
Total Aluminum	6010	mg/kg
Total Antimony	6010/6020/7041	mg/kg
Total Arsenic	6010/6020/7060	mg/kg
Total Barium	6010/6020	mg/kg
Total Beryllium	6010/6020/7091	mg/kg
Total Cadmium	6010/6020/7131	mg/kg
Total Chromium	6010/6020/7191	mg/kg
Cyanide	9012	mg/kg
Total Mercury	7471	mg/kg
Total Nickel	6010/6020/7521	mg/kg
Nitrate (as Nitrogen)	300.0	mg/kg
Nitrite (as nitrogen)	353.2	mg/kg
Total Selenium	6010/6020/7740	mg/kg
Total Thallium	6010/60207841	mg/kg
Total Petroleum Hydrocarbons	8015	mg/kg
Semi-Volatile Organic Compounds[2]	8270	mg/kg

1 Or most recently approved US EPA method that provides the lowest practicable detection limits; or upon receiving prior approval from the Water Board Executive Officer, the Discharger may use alternative analytical methods.
2 Appendix II.

6. Unsaturated Zone Gas Monitoring:

Monitor probes within gas monitoring wells **Quarterly** for methane, carbon dioxide, and oxygen at monitoring points in **Table 1**. Submit monitoring results to the Water Board in semiannual reports and include information specified in CCR Title 27, §20934.

7. Groundwater Flow Rate and Direction:

a. For each monitored groundwater body, the Discharger must measure the water elevation in every well, at least semiannually, including the times of

expected highest and lowest elevations of the water level, and determine the presence of vertical gradients, and groundwater flow rate and direction for the respective groundwater body. Groundwater elevations for all wells in a given groundwater body must be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction (CFR Title 40, Chapter I, Subchapter I, Part 258.53(d)).

b. The Discharger must compare observed groundwater characteristics with those from previous determinations, noting the appearance of any trends and of any indications that a change in the hydrogeologic conditions beneath the site has occurred.

8. Sample Procurement Limitation:

   For any given monitored medium, the Discharger must collect samples from Monitoring Points with a span not exceeding 30 days within a given Monitoring Period and collect samples in a manner that ensures sample independence to the greatest extent feasible [CCR Title 27, §2550.7(e)(12)(B) of Article 5].

PART II: SAMPLE COLLECTION AND ANALYSIS

A. SAMPLING AND ANALYTICAL METHODS

The Discharger must collect, store, and analyze samples according to the most recent version of Standard US EPA methods (US EPA publication "SW-846"), and in accordance with a sampling and analysis plan approved by the Water Board's Executive Officer. A laboratory certified for these analyses by the State of California Environmental Laboratory Program must perform all water analyses and they must identify the specific methods of analysis. The director of the laboratory whose name appears in the certification must supervise all analytical work in his/her laboratory and must sign reports of such work submitted to the Water Board. In addition, the Discharger is responsible for seeing that the laboratory analysis of samples from Monitoring Points meets the following restrictions:

1. The methods of analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90 percent non-numerical determinations (i.e., trace) in historical data for that medium, the analytical method having the lowest Method Detection Limit (MDL) must be selected.
2. Trace results (results falling between the MDL and the Practical Quantitation Limit [PQL]) must be reported as such.
3. The laboratory must derive MDLs and PQLs for each analytical procedure, according to State of California laboratory accreditation procedures. Both limits are defined in **Part V** and must reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. If the

laboratory suspects that, due to a change in matrix or their effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived values, the results must be flagged accordingly, and an estimate of the limit actually achieved must be included.

4. Report Quality Assurance and Quality Control (QA/QC) data along with the sample results to which it applies. Also report sample results that are unadjusted for blank results or spike recovery. The QA/QC data submittal must include:

    a. Method, equipment, and analytical detection limits;
    b. Recovery rates, an explanation for any recovery rate that is outside the US EPA-specified recovery rate;
    c. Results of equipment and method blanks;
    d. Results of spiked and surrogate samples;
    e. Frequency of quality control analysis;
    f. Chain of custody logs; and
    g. Name and qualifications of the person(s) performing the analyses.

5. Report and flag (for easy reference) QA/QC analytical results involving detection of common laboratory contaminants in associated samples.
6. Identify, quantify, and report, to a reasonable extent, non-targeted chromatographic peaks [Tentatively Identified Compounds (**TICs**)]. Perform second column or second method confirmation procedures when significant unknown peaks are encountered to identify and more accurately quantify the unknown analyte(s).

B. CONCENTRATION LIMIT DETERMINATION

1. For the purpose of establishing Concentration Limits for COC and Monitoring Parameters detected in greater than 10 percent of a medium's samples, the Discharger must:

    a. Statistically analyze existing monitoring data (**Part III**), and propose, to the Executive Officer, statistically derived Concentration Limits for each COC and each Monitoring Parameter at each Monitoring Point for which sufficient data exist.
    b. In cases where sufficient data for statistically determining Concentration Limits do not exist, the Discharger must collect samples and analyze for COC and Monitoring Parameter(s), which require additional data. Once sufficient data are obtained, the Discharger must submit proposed Concentration Limit(s) to the Executive Officer for approval. This procedure must take no longer than two calendar years.
    c. Sample and analyze new Monitoring Points, including any added by this Order, until sufficient data are available to establish a proposed Concentration Limit for all COC and Monitoring Parameters. Once sufficient data are obtained, the Discharger must submit the proposed Concentration Limit(s) to the Executive Officer for approval. This procedure must take no longer than two calendar

years.

2. Once established, review concentration limits a minimum of annually. Propose new concentration limits, when appropriate.

C. RECORD MAINTENANCE

The Discharger must maintain records in accordance with CCR Title 27, §21720(f) and CFR Title 40, Chapter I, Subchapter I, Part 258.29, including maintenance and retention of analytical records for a minimum of five years by the Discharger or laboratory. The Discharger must extend the period of retention during the course of any unresolved litigation or when requested by the Executive Officer. Such records must show the following for each sample:

1. Identity of sample and of the Monitoring Point from which it was taken, along with the identity of the individual who obtained the sample.
2. Date and time of sampling.
3. Date and time that analyses were started and completed, and the name of the personnel performing each analysis.
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.
5. Results of analyses, MDL, and PQL for each analysis.
6. A complete chain of custody log.

PART III: STATISTICAL AND NON-STATISTICAL ANALYSIS OF DATA

A. STATISTICAL ANALYSIS

For Detection Monitoring, the Discharger must use statistical methods to analyze COC and Monitoring Parameters that exhibit concentrations that equal or exceed their respective MDL in at least 10 percent of applicable historical samples. The Discharger may propose and use any statistical method that meets the requirements of CCR Title 27, §20414(e)(7). All statistical methods and programs proposed by the Discharger are subject to Executive Officer approval.

B. NON-STATISTICAL METHOD

For Detection Monitoring, the Discharger must use the following non-statistical method for analyzing constituents, which are detected in less than 10 percent of applicable historical samples. This method involves a two-step process:

1. From constituents to whom the method applies, compile a specific list of those constituents, which exceed their respective MDL. The list must be compiled based on either data from the single sample or in cases of multiple independent samples, from the sample, which contains the largest number of constituents.

2. Evaluate whether the listed constituents meet either of two possible triggering conditions. Either the list from a single well contains two or more constituents, or contains one constituent, which equals or exceeds its Practical Quantitation Limit. If either condition is met, and the compound is not a known laboratory artifact, the Discharger must conclude that a release is tentatively indicated and must immediately implement the appropriate re-test procedure under **Part III.C**.

C. RE-TEST PROCEDURE

1. In the event that the Discharger concludes that a release has been tentatively indicated, the Discharger must carry out the reporting requirements of **Part IV.C.2** and, within 30 days of receipt of analytical results, collect two new suites of samples for the indicated COC or Monitoring Parameter(s) at each indicating Monitoring Point, collecting at least as many samples per Monitoring Point as were used for the initial test.
2. Analyze each of the two suites of re-test analytical results using the same statistical method (or non-statistical comparison) that provided the tentative indication of a release. If the test results of either (or both) of the re-tested data suites confirm the original indication, the Discharger must conclude that a release has been discovered and must carry out the requirements of **Part IV.C.4**.
3. The Discharger must carry out re-tests only for the Monitoring Point(s) for which a release is tentatively indicated, and only for the COC or Monitoring Parameter(s) which triggered the indication. When an analyte of the VOCs composite parameter is re-tested, report the results of the entire VOCs composite.

PART IV: REPORTING

A. MONITORING REPORT

The Discharger must submit a Monitoring Report semiannually by **January 31 and July 31** of each year. Submit the Monitoring Reports in an electronic format, with transmittal letter, text, tables, figures, laboratory analytical data, and appendices in PDF format (one PDF for the entire report, or up to GeoTracker upload limitation). The Discharger is required to upload the full Monitoring Report into GeoTracker, as stipulated by California State law. The Monitoring Report must address all facts of the Landfill's monitoring program. The Monitoring Report must include, but should not be limited to the following:

1. <u>Letter of Transmittal</u>:
   A letter transmitting the essential points must accompany each report. The letter must include a discussion of violations caused by the Landfill since submittal of the last such report. If the Discharger has not observed any new violations since the last submittal, the Discharger must state this in the transmittal letter. Both the Monitoring Report and the transmittal letter must be signed as follows: for private facilities, a principal executive officer at the level of vice president; for public

agencies, the director of the agency. Upon Water Board Executive Officer approval, the cited signature can be by a California Registered Civil Engineer, or Certified Engineering Geologist, or Professional Geologist who has been given signing authority by the cited signatories. The transmittal letter must contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

2. Compliance Summary:
   The summary must contain at least a discussion of compliance with concentration limits, release indications, and any corrective actions taken.

3. Graphical Presentation of Data:
   For each Monitoring Point in each medium, submit, in graphical format, the complete history of laboratory analytical data. Graphs must effectively illustrate trends and/or variations in the laboratory analytical data. Each graph must plot a single constituent concentration over time at one (for intra-well comparison) or more (for inter-well comparisons) Monitoring Points in a single medium. Where applicable, include Maximum Contaminant Levels (MCLs) and/or concentration limits along with graphs of constituent concentrations. When multiple samples are taken, graphs must plot each datum, rather than plotting mean values.

   The Discharger must also determine horizontal gradients, groundwater flow rate, and flow direction for each respective groundwater body. Present this data on a figure that depicts groundwater contours and flow directions as well as gradient. Include one figure for each water level measuring period in the semiannual monitoring report.

4. Corrective Action Summary:
   Discuss significant aspects of any corrective action measures conducted during the Monitoring Period and the status of any ongoing corrective action efforts, including constituent trend analysis. Calculate pollutant load removed from the impacted media (water, gas, leachate) by mass removal system(s). Base the mass removal calculations on actual analytical data as required by **Part I.F**. Present discussion and indications, relating mass removal data to the violation the corrective action is addressing.

5. Laboratory Results:
   Summarize and report laboratory results and statements demonstrating compliance with **Part II**. Include results of analyses performed at the Landfill that are outside of the requirements of this Monitoring and Reporting Program.

6. Sampling Summary:

   a. For each Monitoring Point addressed by the report, a description of: 1) the method and time of water level measurement, 2) the method of purging and purge rate and well recovery time, and 3) field parameter readings.

b. For each Monitoring Point addressed by the report, a description of the type of sampling device used, its placement for sampling, and a description of the sampling procedure (number of samples, field blanks, travel blanks, and duplicate samples taken; the date and time of sampling; the name and qualification of the person actually taking the samples; and description of any anomalies).

7. Leachate Collection and Detection Systems:
   A summary of the total volume of leachate collected each month since the previous Monitoring Report for both the leachate collection and leachate detection systems. Also, include fluid level measurements in the LCRS(s) along with transducer calibration records. Tabulate and graph the LCRS(s) fluid level measurements and fluid volumes in the semiannual reports.

8. Standard Observations:
   A summary of Standard Observations (**Part I**) made during the Monitoring Period.

9. Map(s):
   The base map for the Monitoring Report must consist of a current aerial photograph or include relative topographical features, along with Monitoring Points and features of the Landfill facility.

B. ANNUAL SUMMARY REPORT

The Discharger must submit an annual report to the Water Board covering the previous monitoring year. The annual Monitoring Period ends on December 31 each year. Submit this Annual Summary Report no later than January 31 of each year. The Discharger may combine the Annual Summary Report with the Second Semiannual Monitoring Report of the year. The annual report must include the information outlined in **Part IV. A**. above and the following:

1. Discussion:
   Include a comprehensive discussion of the compliance record as it relates to Waste Discharge Requirements Order No. R3-2010-0021, a review of the past year's significant monitoring system and operational changes, a summary of corrective action results and milestones, and a review of construction projects, with water quality significance, completed or commenced in the past year or planned for the upcoming year.

2. Statistical Limit Review:
   The Discharger must review the statistically derived concentration limits a minimum of annually, and revise them as necessary. The Discharger must discuss data collected during the past year and consider for inclusion in, and determination of, proposed limits for the coming year. For statistical limits that

are changed from the previous year, include a comprehensive discussion of the proposed limit for Executive Officer review and consideration.

3. Analytical Data:
   Complete historical analytical data for detected analytes presented in tabular form in Excel™ format or in another file format acceptable to the Executive Officer.

4. Leachate Collection and Detection System:
   The Discharger must submit the results of the annual leachate collection and leachate detection system testing, as required by **Part I.F**. Submit annually testing that shows the leachate is non-hazardous, if leachate is used for dust control.

5. Map(s):
   A map, or set of maps, that indicate(s) the type of cover material in place (final, long-term intermediate, or intermediate) over inactive and completed areas.

C. CONTINGENCY RESPONSE

1. Leachate Seep:
   The Discharger must, within 24 hours, report by telephone or email the discovery of previously unreported seepage from the disposal area. File a written report with the Water Board within seven days, containing at least the following information:

   a. A map showing the location(s) of seepage along with photographic documentation;
   b. An estimate of the flow rate;
   c. Location of sample(s) collected for laboratory analysis. Unless otherwise directed by Water Board staff, the Discharger shall sample all leachate seeps and spills for the monitoring parameters in **Table 11**. In the event multiple seeps occur in a similar localized area (slope or bench), the Discharger may use professional judgment to reduce the number of leachate seep or spill samples provided the Discharger collects a representative sample. The Discharger shall photo document sample location, all observed seeps, and document the sample location(s) on a map or diagram. The Discharger is also required to sample stormwater in accordance with **Part I.F.5**.
   d. A description of the nature of the discharge (e.g. pertinent observations and analysis); and
   e. A summary of corrective measures both taken and proposed.

2. Initial Release Indication Response:
   Should the initial statistical or non-statistical comparison (under **Part III. A or B**) indicate that a new release is tentatively identified, the Discharger must:

a. Within 24 hours, notify the Water Board verbally or by email of the Monitoring Point(s) and constituent(s) or parameter(s) involved;
b. Provide written notification by certified mail within seven days of such determination; and
c. Either of the following:
   i Carry out a discrete re-test in accordance with **Part III.C**. If the re-test confirms the existence of a release or the Discharger fails to perform the re-test, the Discharger must carry out the requirements of **Part IV.C.4**. In any case, the Discharger must inform the Water Board of the re-test outcome within 24 hours of results becoming available, following up with written results submitted by certified mail within seven days, or;
   ii Make a determination, in accordance with CCR Title 27, §20420(k)(7), that a source other than the WMU caused the release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation, or by natural variation in the groundwater, surface water, or the unsaturated zone.

3. Physical Evidence of a Release:
   If either the Discharger or the Executive Officer determines that there is significant physical evidence of a new release pursuant to CCR Title 27, §20385(a)(3), the Discharger must conclude that a release has been discovered and must:

   a. Within seven days notify the Executive Officer of this fact by certified mail (or acknowledge the Executive Officer's determination);
   b. Carry out the requirements of **Part IV.C.4**. for potentially-affected medium; and
   c. Carry out any additional investigations stipulated in writing by the Executive Officer for the purpose of identifying the cause of the indication.

4. Release Discovery Response:
   If the Discharger concludes that a new release has been discovered the following steps must be carried out:

   a. If this conclusion is not based upon monitoring for COC, the Discharger must sample for COC at Monitoring Points in the affected medium. Within seven days of receiving the laboratory analytical results, the Discharger must notify the Executive Officer, by certified mail, of the concentration of COC at each Monitoring Point. This notification must include a synopsis showing, for each Monitoring Point, those constituents that exhibit an unusually high concentration;
   b. The Discharger must, within 90 days of discovering the release, submit to the Executive Officer a Revised Report of Waste Discharge proposing an Evaluation Monitoring and Reporting Program that: (1) meets the requirements of CCR Title 27, §20420 and §20425; and (2) satisfies the requirements of CFR Title 40, Chapter I, Subchapter I, Part 258.55(g)(1)(ii) by

committing to install at least one monitoring well directly down gradient of the center of the release;

c. The Discharger must, within 180 days of discovering the release, submit to the Executive Officer a preliminary engineering feasibility study meeting the requirements of CCR Title 27, §20420; and
d. The Discharger must immediately begin delineating the nature and extent of the release by installing and monitoring assessment wells as necessary to assure that the Discharger can meet the requirements of CCR Title 27, §20425 to submit a delineation report within 90 days of when the Executive Officer directs the Discharger to begin the Evaluation Monitoring Program.

5. Release Beyond Facility Boundary:
   Any time the Discharger or the Executive Officer concludes that a new release from the Landfill has migrated beyond the facility boundary, the Discharger must notify persons who either own or reside upon the land that directly overlies any part of the plume and are immediately down gradient of the plume (Affected Persons).

   a. Initial notification to Affected Persons must be accomplished within 14 days of making this conclusion and must include a description of the Discharger's current knowledge of the nature and extent of the release.
   b. Subsequent to initial notification, the Discharger must provide updates to Affected Persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.
   c. Each time the Discharger sends a notification to Affected Persons (under a. or b. above), the Discharger must, within seven days of sending such notification, provide the Executive Officer with both a copy of the notification and a current mailing list of Affected Persons.

PART V: DEFINITION OF TERMS

A. AFFECTED PERSONS

Individuals who either own or reside upon the land, which directly overlies any part of that portion of a gas, or liquid phase release that may have migrated beyond the facility boundary.

B. CONCENTRATION LIMITS

The Concentration Limit for any given COC or Monitoring Parameter in a given monitored medium must be either:

1. The constituent's statistically determined background value or tolerance limit, established using an Executive Officer approved method (**Part III**); or
2. In cases where the constituent's MDL is exceeded in less than 10 percent of historical samples, the MDL is the concentration limit defined in **Part II. A.1**.

C. CONSTITUENTS OF CONCERN (COC)

An extensive list of constituents likely to be present in a typical municipal solid waste landfill. The COC for this Landfill are listed in **Table 7 and 8**.

D. MATRIX EFFECT

Any increase in the MDL or PQL for a given constituent as a result of the presence of other constituents, either of natural origin or introduced through a release, that are present in the sample being analyzed.

E. METHOD DETECTION LIMIT (MDL)

The lowest concentration at which a given laboratory, using a given analytical method to detect a given constituent, can differentiate with 99 percent reliability, between a sample which contains the constituent and one which does not. The MDL must reflect the detection capabilities of the specific analytical procedure and equipment used by the laboratory.

F. MONITORED MEDIUM

Those media that are monitored pursuant to this Monitoring and Reporting Program (groundwater, surface water, liquid, leachate, gas condensate, and other as specified).

G. MONITORING PARAMETERS

A short list of constituents and parameters used for the majority of monitoring activities. The Monitoring Parameters for this Landfill are listed in **Part I. F**.

H. MONITORING PERIOD (frequency)

The duration of time, during which a sampling event must occur. The Monitoring Period for the various media and programs is specified in **Part I.F**.

I. PRACTICAL QUANTITATION LIMIT (PQL)

The lowest acceptable calibration standard (acceptable as defined for a linear response, or by actual curve fitting) times the sample extract dilution factor times any additional factors to account for Matrix Effect. The PQL must reflect the quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. PQLs reported by the laboratory must not simply be re-stated from US EPA analytical method manuals. Laboratory derived PQLs are expected to agree closely with published US EPA estimated quantitation limits (EQL).

J. RECEIVING WATERS

Any surface water, which actually or potentially receives surface runoff, or groundwater, which pass over, through, or under waste materials or contaminated soils.

K. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

TICs are those compounds which can be detected by an analytical method but their concentration cannot be confirmed without additional analytical testing. For

instance, a gas chromatograph/mass spectrometer instrument can be calibrated to identify and quantify the concentrations of a number of target compounds. However, additional compound spectra may be detected for which the instrument was not calibrated. Their identity can be confirmed with a search of the spectral library of compounds to find a match, but the concentration cannot be confirmed without running a known standard of the tentative matched compound. For those instances where no good match for the compound can be found, the class of the compound can be identified (e.g., an alkane).

L. VOLATILE ORGANIC COMPOUNDS (VOCs) COMPOSITE MONITORING PARAMETER (VOCs composite)

VOCs composite is a composite parameter that encompasses a variety of VOCs. The constituents addressed by the VOCs composite Monitoring Parameter includes all VOCs detectable using US EPA Methods 8260B (water) and TO-15 (gas) or equivalent.

The Executive Officer may modify or rescind this MRP at any time.

ORDERED BY:

Kenneth A. Harris Jr., Executive Officer

December 5 - 6, 2013
Date

Figure 1: Monitoring Locations

P:\LDU\Facilities\PERMITTED\John Smith Road\WDR - MRP Order No. R3-2013-0047\MRP Order No. R3-2013-0047 John Smith Road.doc

APPROXIMATE LIMIT OF CLASS III WASTE PLACEMENT

APPROXIMATE CLASS I AREA BOUNDARY

APPROXIMATE CLASS III AREA BOUNDARY

CLOSED CLASS I DISPOSAL AREA

SITE ENTRANCE

SCALE HOUSE

LANDFILL GAS FLARE

JOHN SMITH ROAD

CP-25 CP-30 CP-31

GP-2A GP-2 GP-3A GP-6 GP-7 GP-9 GP-10 GP-11A GP-11B GP-12 GP-13

W-3 W-4 W-5

WA-8 WA-9 WA-10 WA-11 WA-12 WA-13 WA-14 WA-15 WA-19 WA-20

EW-1 EW-2 EW-3 EW-4 EW-5

SP-1 SP-2 SP-3

P-1

LIMA-3

G-1 G-2 G-3 G-4 G-5 G-6R G-7 G-8 G-9 G-10 G-11 G-12 G-13R G-14 G-15 G-16 G-17 G-18 G-19 G-20 G-21 G-22 G-23 G-24 G-25 G-26 G-27 G-28 G-29 G-32 G-33 G-35 G-36 G-37

E-1 E-2 E-3 E-8 E-9 E-12 E-13 E-14 E-15 E-16 E-17 E-18 E-19 E-20 E-21 E-22

0 300 600

SCALE IN FEET

Date of topography: April 2010 (AeroGeodetic – CA State Plane Coordinates) with March 3 2013 interior update (Tetra Tech – CA State Plane Coordinates).

EXPLANATION

- CLASS III AREA DETECTION MONITORING WELL
- CLASS III AREA CORRECTIVE ACTION MONITORING WELL
- GROUNDWATER EXTRACTION SYSTEM WELL
- CLASS I AREA POST-CLOSURE DETECTION MONITORING WELL
- GROUNDWATER ELEVATION MONITORING WELL
- PIEZOMETER
- STORM WATER MONITORING LOCATION
- SOIL-GAS MONITORING WELL
- LANDFILL GAS EXTRACTION WELL
- FORMER CLASS I IMPOUNDMENT

Golder Associates

DATE 8/19/13
DWN KMM
APP TLV
REV 0
PROJECT NO. 053-7473-13

Figure 1
Monitoring Locations
John Smith Road Landfill
San Benito County

Dimscale: 200 Ltscale: 200 Psltscale: 309
G:\053-7473\FIGURES\MONITORING LOCATIONS_2013_2010-11x17.dwg 8/19/13

Item No. 8 Attachment 1
December 5-6, 2013
Proposed WDRs Order No. R3-2013-0047