

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2010-0038
Waste Discharger Identification No. 3 400301002

For

**CALIFORNIA ARMY NATIONAL GUARD
CAMP ROBERTS CLASS III LANDFILL
SAN LUIS OBISPO COUNTY**

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

SITE OWNER AND LOCATION

1. The California Army National Guard (Discharger) owns and operates the Camp Roberts Class III Landfill (Landfill).
2. Camp Roberts is located approximately 36 miles north of San Luis Obispo along U.S. Highway 101, covers approximately 60 square miles (the majority of which is west of the 101), and is nearly split evenly between Monterey and San Luis Obispo County as shown in **Figure 1**.
3. The Landfill is located within the San Luis Obispo County portion of Camp Roberts, near the eastern boundary, and about 1.8 miles south-southeast of the camp's main entrance as shown on **Figure 2**. The Landfill is in the southeast quarter of Section 1 and the northeast quarter of Section 12, Township 25 south, Range 11 east, Mount Diablo Base Meridian. The Landfill occupies portions of Assessor's Parcels Nos. 27-39-13 and 27-39-20.

PURPOSE OF ORDER

4. The Discharger submitted a Joint Technical Document (JTD) on February 18, 2010, to facilitate the review and revision of Order No. 94-78. The JTD documents the Discharger's proposal to upgrade and expand the Landfill.
5. Order No. R3-2010-0038 reflects the Landfill's active status, and establishes requirements pursuant to California Code of Regulations Title 27, Solid Waste (CCR Title 27), effective July 18, 1997, and pursuant to Code of Federal Regulations Title 40, Parts 257 and 258 (40 CFR Parts 257 and 258), Solid Waste Facility Disposal Criteria.
6. The Landfill is currently regulated by Waste Discharge Requirements Order No. 94-78, as adopted by the Board on September 9, 1994. Order R3-2010-0038 replaces Order No. 94-78.

7. Order No. R3-2010-0038 includes the following key elements:
 - a. A detailed review of the Landfill site.
 - b. Expanded waste footprint.
 - c. Updated waste stream information.
 - d. Conditional allowance for disposal of lead impacted construction debris.
 - e. Allowance for disposal of treated wood waste.
 - f. Language that requires compliance with CCR Title 27 and 40 CFR Parts 257 and 258.
 - g. A revised Monitoring and Reporting Program.

LANDFILL SITE DESCRIPTION AND HISTORY

8. The Landfill's property boundary (waste management facility, as defined in CCR Title 27) encompasses approximately 85 acres and includes the North Unit and the South Unit.
9. The 85-acre Landfill includes lined and unlined (pre-Subtitle D) waste management units. 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 refuse footprint, stormwater conveyance ditches and culverts, and sediment retention basins. The wider permitted Landfill operational area includes the WMU, the main access road and the borrow area.
10. The permitted disposal area is approximately 17.6 acres and prior to proposed upgrades consists of two separate unlined units referred to as the North Unit (4.9 acres) and the South Unit (12.7 acres) as shown on **Figure 3**. The Discharger is closing the North Unit and will begin upgrading the South Unit with a Water Board approved liner in 2010. The Discharger has modified the permitted waste footprint for the Landfill to include an updated historical waste disposal footprint, which was found to have occurred slightly out of the current permitted area.
11. There are six inactive closed waste disposal areas located adjacent to the Landfill. The inactive closed waste disposal areas consist of the South Landfill (not the permitted South Unit), and five trenches (T-1/2, T-3, T-4, T-5, and T-6) collectively known as the Closed Landfills. The South and Closed Landfills were active and abandoned before federal, state, or county landfill permitting programs came into effect. To reduce impacts to groundwater and address long-term maintenance issues Camp Roberts formally closed the South and Closed Landfills with a final cover in 2006. The South and Closed Landfills are enrolled in Order No. R3-2004-0006, General Waste Discharge Requirements for Post-Closure Maintenance of Closed, Abandoned or Inactive Nonhazardous Waste Landfills within the Central Coast Region.
12. The majority of land within a one-mile radius of the permitted landfill falls with the

Camp Roberts boundary. However, to the southeast the one-mile radius encompasses 230 acres of private rangeland that borders Camp Roberts approximately ¼ mile from the Landfill.

13. Land use within the Camp Roberts boundary and within one-mile of the Landfill includes warehouse facilities, vehicle and equipment maintenance facilities, troop barracks and training areas, and administrative offices. The land use of the private rangeland, within one mile of the Landfill, is undeveloped apart from a single residence and several agricultural buildings.
14. The Discharger disposed of waste in the South Unit from 1978 until 1984 and although significant capacity remained in the South Unit, it is estimated that less than 70,000 cubic yards of capacity were used. The Discharger transferred disposal operations to the North Unit in 1984 and continued until the North Unit's capacity was reached in 2003 at approximately 100,618 cubic yards.
15. The Discharger has been directed by the Department of Defense to remove buildings constructed during World War II as part of its Facilities Reduction Plan. Over 659 structures at Camp Roberts and 13 structures at Camp San Luis Obispo are expected to generate up to 44,000 tons of waste after demolition. Construction materials include lumber, plywood siding and decking, and asphalt shingle roof tiles. Lead and barium were components in the paint used on the buildings in 1944. Asbestos is found in the siding and flooring, which is also typical of the materials and construction methods of that era.
16. The Discharger plans to upgrade the South Unit (permitted Landfill), dividing it into two separate cells; one to handle lead impacted construction debris and the other to handle the solid waste generated at Camp Roberts. Both cells will incorporate liners and leachate collection and removal systems consistent with CCR Title 27.
17. The South Unit has approximately 557,117 cubic yards of airspace remaining and is expected to have an operation life of approximately 11 years without further upgrades or expansion.

WASTE TYPE & CLASSIFICATION

18. The Landfill may accept non-hazardous residential, commercial, and industrial solid waste as classified by CCR Title 27, Section 20220(a), as Class III wastes.
19. The waste type allowed to be discharged at a Class III landfill, per CCR Title 27 Section 20220, is generally limited to "Nonhazardous Solid Waste", 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).”

20. Wastes containing greater than one percent (>1%) friable asbestos are classified as hazardous under CCR, Title 22. Since such wastes do not pose a threat to water quality, Section 25143.7 of the Health and Safety Code permits their disposal in any landfill, providing waste discharge requirements specifically permit the discharge and the wastes are handled and disposed of in accordance with other applicable State and Federal statutes and regulations.
21. The Camp Roberts waste stream has historically consisted of municipal type solid waste and dewatered sludge from the wastewater treatment plants. It has also periodically included nonhazardous construction demolition debris and properly managed non-friable asbestos-containing materials. The composition of a typical compactor truckload is summarized in the following table:

| Waste Components | Percent of Total |
|-------------------------|-------------------------|
| Paper | 25 |
| Cardboard | 38 |
| Metal | 2 |
| Plastic | 10 |
| Green Waste | 5 |
| Wood | 15 |
| Other Waste | 5 |

22. Construction debris resulting from building removal activities as described in Finding 15, is expected to be hazardous due to lead, which is a persistent or bioaccumulative substance and exceeds its respective total threshold limit concentration or soluble threshold limit concentration, as set forth in CCR Title 22 §66261.24. The construction debris is not expected to exceed the Resource Conservation and Recovery Act (“RCRA”) hazardous waste threshold as measured by the toxicity characteristic leaching procedure. Since lead concentration is the only characteristic that would classify this material as a non-RCRA hazardous waste, it meets the requirements for consideration as a Special Waste in accordance with CCR Title 22 §66261.124. In March 2008, the California Department of Toxic Substance Control (DTSC) approved 287 of the buildings as a Special Waste so that it can be disposed of as set forth in this Order. If the construction waste from the remaining buildings is also approved as a Special Waste by DTSC, or if it is reclassified as nonhazardous, it will also be disposed as set forth in this Order. If the construction waste from the remaining buildings is not classified as a Special Waste and continues to be classified as a hazardous waste, it will not be disposed onsite and will be transported to an appropriate hazardous waste disposal facility.

GEOLOGY

23. **Setting** – Camp Roberts is located in the Salinas River valley in the central-southern portion of the Coast Ranges geomorphic province. The province is characterized by a series of parallel, northwest-southeast trending mountain ridges that more or less parallel the coast. The Salinas River valley extends about 120 miles from Monterey Bay, through the Camp Roberts area, to the Santa Margarita area.
24. **Topography** – The Landfill is situated in the low hills that flank the Salinas River valley to the southwest and is located within a small canyon. The highest point on the surrounding ridgeline is at an elevation of 845 feet above mean sea level (ft-msl), while the entrance to the canyon is at 700 ft-msl. The hillside slopes are relatively gentle, typically not exceeding grades of 3:1 (h:v). The slope of the canyon floor is approximately five percent.
25. **Geologic Structure and Stratigraphy** – The primary geologic unit below the Landfill is the Paso Robles Formation, a predominantly non-marine unit consisting of mainly sandstone and conglomerate, with some mudstone and limestone. The formation is mainly cross-stratified with friable sand and sandy gravel with varying degrees of cementation. The Paso Robles Formation below the Landfill is several hundred feet thick and comprised of relatively thin, often discontinuous sand and gravel layers interbedded with thicker layers of silt and clay. Underlying the Paso Robles Formation is older marine shale, sandstone, and conglomerate strata associated with the Pliocene-age Poncho Rico Formation.

In a cut slope at the Landfill, the exposed strata of the Paso Robles Formation are nearly flat-lying and consist of massive beds of cross-stratified friable sandstone and conglomerate. Upper structural beds dip slightly toward the axis of the valley. The Discharger documents sand (SW), silty sand (SM), silt (ML), and clay (CL) from boring logs for piezometer and lysimeter installations. Laboratory tests on undisturbed samples of the clayey materials have indicated vertical hydraulic conductivities ranging from 3.1×10^{-7} to 8.9×10^{-7} centimeters per second (cm/s).

The natural geologic materials between the base of waste disposal areas and groundwater do not adequately protect against degradation of beneficial uses or water quality. Therefore, this Order requires an engineered liner system to contain the waste and protect groundwater.

26. **Faulting/Seismicity** – In January 2010, the Discharger prepared a seismic hazard evaluation as part of the slope stability analyses for the Landfill based on future construction of the South Unit upgrade. The report provides 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 WMUs meet or exceed factors of safety typical of industry performance standards.

The slope stability analysis for the South Unit does not identify any major fault traces

within the Landfill, nor within the immediate area of the Landfill. The Rinconda Fault lies approximately five miles west of the Landfill and the San Andreas Fault lies approximately 25 miles to the east of the Landfill. Both faults are associated with historic large magnitude earthquakes and are a potential source of strong shaking at the Landfill. The Maximum Probable Earthquake for a major earthquake is a Magnitude 8.0 on the San Andreas Fault. The Maximum Probable Earthquake for a near Landfill fault is a Magnitude 7.5 on the Rinconda Fault.

27. **Hydrogeology** – Depth to groundwater measurements range from approximately 93.5 feet below ground surface (bgs) (MW-15) to 277.8 feet bgs (MW-03). Groundwater flow direction is generally towards the north-northwest in the vicinity of the South Unit and northwest in the vicinity of the North Unit. The groundwater potentiometric surface occurs at elevations ranging from approximately 615 ft-msl in the southern edge of the closed trenches to approximately 551 feet msl near the northwest edge of the North Unit, as shown in **Figure 3**.

GROUNDWATER, STORMWATER, AND SURFACE WATER

28. **Groundwater** – Groundwater is located at depths greater than 150 feet bgs beneath the Landfill and flows in a relatively consistent north-northwest direction. Although there are several small localized perched zones in the vicinity of the old unpermitted Closed Landfills, there are no known perched zones below the permitted active North or South Units.
29. **Groundwater Quality** – Groundwater quality from monitoring wells show limited impacts from waste disposed at the active permitted North and South Units. In 2004, Water Board staff added perchlorate monitoring to the monitoring program. Perchlorate was not initially detected in any monitoring wells; however, as analytical methods improved, and detection limits dropped, perchlorate was detected in all monitoring wells. The maximum contaminant level for perchlorate in drinking water is 6 parts per billion (ppb), and in general, the perchlorate concentrations are less than 4 ppb. Since perchlorate was initially detected, only one monitoring well (MW-12A) has consistently shown levels greater than 4 ppb, with one sample greater than 6 ppb. Monitoring well MW-12A is located upgradient from the North and South Units. Upgradient wells from the Closed Landfills also contain perchlorate. Therefore, the North and South Units do not appear to be the source of the perchlorate detected in the monitoring wells. Water Board staff from the Department of Defense program will look into any potential sources other than the landfill in this area.
30. **Supply Wells** – There are two hydraulically upgradient water supply wells located $\frac{3}{4}$ of a mile to the southeast of the landfill. There are no water supply wells within one mile that are hydraulically downgradient from the landfill.
31. **Surface Water** – The Salinas River is approximately one mile to the northeast of the Landfill and flows to the northwest. The Nacimiento River is approximately three miles to the northwest of the Landfill and flows to the northeast into the Salinas River. An unnamed drainage channel along East Perimeter Road is just west of the Landfill and flows north towards the Salinas River.

32. **Stormwater** – The Discharger routes most of the surface drainage from the Landfill through a detention pond with overflow to the natural drainage channel along East Perimeter Road. Although yet to be constructed, perimeter ditches and the detention pond have been designed to handle the runoff from a 100-year, 24-hour storm consistent with CCR Title 27, Section 21750(e). The Discharger also designed the detention pond to function as a sedimentation basin to reduce suspended solids and prevent them from entering offsite surface waters.
33. **Stormwater Permitting** - In addition to this Order, the Discharger is covered under a Statewide General Storm Water Permit. On October 3, 1995, the Discharger submitted a “Notice of Intent” to comply with the General Permit to Discharge Storm Water Associated with Industrial Activity (WQ Order No. 97-03-DWQ). The Discharger performs stormwater monitoring in accordance with the General Permit’s Monitoring and Reporting Program and required stormwater pollution prevention plan. Stormwater samples are collected during scheduled operating hours, twice per year, during the first storm event of the year and a second event, preceded by at least three days without a stormwater discharge. The Discharger collects samples at all stormwater discharge locations during the first hour of runoff.
34. **Precipitation** – The area receives an average of 13.95 inches of rain per year primarily between the months of November and April. The highest average monthly rainfall is 3.01 inches in January.
35. **Floodplain** – The Federal Emergency Management Agency Flood Insurance Rate Map for San Luis Obispo County (Community Panel Numbers 060304 0075 B and 060304 0100 B) and Monterey County (Community Panel Number 060195 0975 D), shows that the Landfill is entirely outside the 100-year flood plain.
36. **Groundwater Separation** – Proposed and existing excavation grades and liner designs provide separation between groundwater and waste, thus meeting the CCR Title 27 requirement for maintaining a minimum five-foot separation.

CONTROL SYSTEMS/MONITORING PROGRAMS

37. **Leachate Management System** – The leachate collection and removal system (LCRS) design for each cell of the upgraded South Unit includes a high permeability layer (current specification is 12-inch thick granular drainage layer), geotextile cushioning between the composite liner and the high permeability layer, a collection sump, and riser pipes to allow access for removing leachate. The Discharger will initially configure the sumps for evacuation by a vacuum truck or temporary submersible pump. Once electricity is available at the site, the Discharger will install a permanent submersible pump system and a leachate holding tank. The Discharger will use leachate removed from the sumps for dust control in the active lined municipal solid waste cell areas of the landfill.
38. **Landfill Gas Control** – Currently, the North and South Units do not have landfill gas

collection. Landfill gas collection is not proposed for the upgraded South Unit due to the lack of historical gas issues onsite. Landfill gas controls may be required at a future date, if landfill gas migration is detected or landfill gas impacts to water quality are detected.

39. **Monitoring and Reporting Program (MRP)** – Monitoring systems are outlined in the attached MRP No. R3-2010-0038 and include visual inspections, groundwater monitoring, soil-vapor gas monitoring, and leachate monitoring. Finding 40 below documents the groundwater monitoring well network changes in comparison to the previous Order.
40. The groundwater monitoring well network for the Landfill consists of nine monitoring wells (MW-1, MW-2, MW-3, MW-4A, MW-5, MW-16, P-1, P-2, and P-3) at the locations shown in **Figure 3**. Historically, there were additional wells (MW-8, MW-9, MW-10S, MW-10D, MW-11, MW-12A, MW-13, MW-14, and MW-15) upgradient of the Landfill in the vicinity of the Closed Landfills and three additional wells (SLF-MW1, SLF-MW2, SLF-MW3) located around the South Landfill. Wells MW-9, MW-10D, MW-11, MW-13, and MW-15 are incorporated into a Monitoring and Reporting Program for the South and Closed Landfills in accordance with the General Order No. R3-2004-0006.
41. **Leachate Monitoring** – The Discharger will install an LCRS beneath both the municipal solid waste cell and the lead impacted construction debris waste cell. The Discharger will double-line the sumps beneath both waste cells and each will have sump access riser pipes through which the Discharger will remove leachate periodically using submersible pumps. The Discharger will periodically remove leachate from the sumps and store it in a holding tank, where the Discharger will routinely monitor and test the leachate. The Discharger will either dispose of collected leachate onsite, or via another Water Board-approved method. Onsite leachate disposal is limited to dust control or spraying onto the working face within the lined portion of the municipal solid waste cell only. To minimize low pH leachate contact with the lead impacted construction debris, the Discharger is not allowed to dispose of the leachate over the lead impacted construction debris waste cell at any time.
42. **Surface Water Monitoring** – The Discharger will collect surface water samples from the retention/sedimentation basin's point of discharge into the unnamed tributary located along the New Sanitary Fill Road.
43. **Unsaturated Zone Monitoring** – The Discharger will monitor the unsaturated zone regularly in accordance with the MRP.
44. **Landfill Gas Monitoring** – The Discharger monitors soil vapor gas probes for landfill gas quarterly. If gas generation and migration become an issue then the Discharger will be required to implement gas collection and additional gas monitoring.

BASIN PLAN

45. 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 Resources Control Board (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.
46. The Basin Plan identifies the following present and anticipated beneficial uses of the Salinas River (between the Nacimiento River the Santa Margarita Reservoir):
- a. Municipal Supply;
 - b. Agricultural Supply;
 - c. Industrial Process Supply;
 - d. Groundwater Recharge;
 - e. Water contact recreation;
 - f. Non-contact water recreation;
 - g. Wildlife habitat;
 - h. Cold fresh water habitat;
 - i. Warm fresh-water aquatic habitat;
 - j. Migration of Aquatic Organisms;
 - k. Spawning, Reproduction, and/or Early Development;
 - l. Rare, threatened, or endangered species;
 - m. Commercial and sport fishing.
47. The Basin Plan identifies the following present and anticipated beneficial uses of the Nacimiento River (downstream of the Nacimiento Reservoir):
- a. 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 fresh water habitat;
 - i. Warm fresh-water aquatic habitat;
 - j. Migration of Aquatic Organisms;
 - k. Spawning, Reproduction, and/or Early Development;
 - l. Rare, threatened, or endangered species;
 - m. Commercial and sport fishing.
48. Present and anticipated beneficial uses of groundwater in the Landfill vicinity include:
- a. Agricultural supply;

- b. Municipal and domestic supply; and
- c. Industrial use.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

49. Proposed changes including expanded waste footprint, increased landfill capacity, landfill upgrades, demolition of army barracks and corresponding disposal of lead impacted construction debris have undergone the Federal National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) process. The Discharger prepared a Final Environmental Assessment (EA) in March 2010 in accordance with NEPA and CEQA that resulted in a Finding of No Significant Impact and a Negative Declaration. The Water Board is a responsible agency for purposes of CEQA and has reviewed the CEQA document. The project, operated in compliance with these WDRs, will be protective of water quality. The Final EA and Negative Declaration satisfy the CEQA requirements.
50. Except with respect to the proposed changes (listed in Finding 49) this Order is for an existing facility and therefore is exempt from provisions of CEQA (Public Resources Code, Section 21000, et seq.) in accordance with Title 14, Chapter 3, and Section 15301.

GENERAL FINDINGS

51. In accordance with CCR Title 27 Section 20260(b)(1) and 40 CFR 258.40, the Water Board finds that all new WMUs constructed at the landfill must have prescriptive composite liners, except for engineered alternatives as provided in CCR Title 27 Section 20080(b) and 40 CFR 258.40(a)(1) and (c).
52. 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. 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. Compliance with Order No. R3-2010-0038 should assure conditions are met and mitigate any potential changes in water quality attributed to the Landfill.
53. The Landfill meets the criteria of CCR Title 27 and 40 CFR 258 for a Class III landfill suitable to receive non-hazardous solid waste. Order No. R3-2010-0038 implements, but is not limited to, the prescriptive standards and performance goals of CCR Title 27 and 40 CFR 258.
54. The Landfill is also regulated by the California Department of Resources Recycling and Recovery (CalRecycle) and a Solid Waste Facilities Permit No. 40-AA-0002 issued on June 7, 2010, which is periodically amended.

55. **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 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.

56. The discharges regulated by this Order are required to comply with the land disposal regulations contained in 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.

57. On April 7, 2010, CalRecycle staff issued a letter stating that the Discharger has 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 are annually adjusted for inflation.

58. On **June 25, 2010**, the Water Board notified the Discharger and interested agencies and persons of its intention to update the Landfill Waste Discharge Requirements and has provided them with a copy of the proposed Order and an opportunity to submit views and comments.

59. After considering all comments pertaining to this discharge during a public hearing on **September 2, 2010**, this Order was found consistent with the above findings.

IT IS HEREBY ORDERED pursuant to authority in Section 13263 of the California Water Code, the California Army National Guard, its agents, successors, and assigns may discharge wastes at the Camp Roberts Class III Landfill, providing compliance is maintained with the following:

A. COMPLIANCE WITH OTHER REGULATIONS, ORDERS AND STANDARD PROVISIONS

1. Discharge of waste, operations, and monitoring shall comply with all applicable requirements contained in CCR Title 27 and 40 CFR 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 Landfill Permitted Refuse Footprint, **Figure 3** is prohibited.
2. Onsite disposal of leachate to the lead impacted construction debris waste cell is prohibited.
3. Discharge of waste within the approved and permitted waste disposal footprint for the WMU is prohibited as provided in Specification C.3.
4. Discharge of hazardous waste or hazardous constituents, except for lead impacted construction debris 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. 14**.
 - 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. 6**, and sludge, except as allowed by **Specification C.19**.
5. Discharge of waste or leachate to ponded water, drainage way(s), or waters of the State, including groundwater, is prohibited.
6. 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.

7. Disposal 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.
8. 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. R3-2010-0038.
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 areas inside the approved and permitted waste disposal footprint WMUs, which 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 40 CFR 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. Each new 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 40 CFR 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 must design, construct, and maintain to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, overtopping, and damage to WMUs, 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).
 5. The Discharger must prevent formation of a habitat for carriers of pathogenic microorganisms.
 6. Discharge of condensate or leachate must comply with the following:
 - a. The Discharger may only return liquids to a 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. R3-2010-0038;
 - c. A secondary 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.
 7. Daily cover must prevent nuisance and excess leachate generation, and minimize infiltration, promote lateral runoff of precipitation/surface water away from the active disposal area. Shredded tires, tarps, and wood chips are approved 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.
 8. The Discharger must stockpile daily cover material during favorable weather to ensure that adequate daily cover material is accessible during inclement weather.
 9. 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 February 2010 "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 change being implemented.

10. 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.
11. 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.
12. 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.
13. The Discharger must provide all Landfill 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 thickness and permeability of the long-term intermediate cover must be based 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.
14. Wastes containing greater than one percent (>1 percent) friable asbestos are classified as hazardous under CCR Title 22. Since such wastes do not pose a threat to water quality, §25143.7 of the Health and Safety Code 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 §25143.7 of the Health and Safety Code, CCR, Title 14, §17897 "Standards for Handling and Disposal of Asbestos-Containing Waste," and all other applicable Federal, State, and local statutes and regulations.
15. Lead impacted construction debris was designated a Special Waste per California Code of Regulations (CCR) Title 22 §66261.122 and § 66261.124 by the DTSC. The South Unit liner containment system must be equipped with a composite liner and LCRS in accordance with Specification C.3.

16. New landfill units and lateral expansions must not be located in wetlands, as defined in 40 CFR §232.2(r), unless the owner or operator can make demonstrations pursuant to 40 CFR §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 a WMU 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 WMUs 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 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 a 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.4.**
 - d. The materials meet the criteria for no free liquids in accordance with **Prohibition B.6.**

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. R3-2010-0038) 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.

2. Pursuant to CCR Title 27 §20400, the Water Board must 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 No. R3-2010-0038.
3. 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.
4. Discharge of waste must not cause concentrations of chemicals 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 5.5.
5. 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.
6. Discharge of waste must neither cause nor contribute to any surface water impacts.
7. Constituents of concern and monitoring parameters for groundwater, leachate, and landfill gas are listed in MRP No. R3-2010-0038. Monitoring points and background monitoring points must be those specified in MRP No. R3-2010-0038.
8. The compliance period, pursuant to CCR Title 27 §20380(d)(1) and §20410, is estimated to be the year 2051 [based on the Landfill estimated closure date of 2021 plus 30 years, pursuant to 40 CFR 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 40 CFR 258.61(b)1].

E. PROVISIONS

1. Order No. 94-78, "Waste Discharge Requirements for the California Army National Guard, Camp Roberts Class III Landfill, San Luis Obispo County," adopted by the Water Board on September 9, 1994, 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. R3-2010-0038, 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 Landfill's active WMU 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. R3-2010-0038.
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. R3-2010-0038.
 - b. Access to a copy of any records that must be kept under the conditions of this Order and MRP No. R3-2010-0038.
 - c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order and MRP No. R3-2010-0038.
 - 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 WMU (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 WMU, 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 40 CFR parts 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 JTD. The next regularly scheduled JTD is due **March 6, 2015**.

REPORTING

17. All reports must be signed 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 §13267 (b)(2) of the CWC, 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 40 CFR 258 criteria. The report must include photographs of all wet weather preparedness measures implemented.

22. At least **180-days** prior to construction of a WMU 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 WMU'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 that are 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. Request for change in ownership or responsibility may be approved or disapproved in writing by the Executive Officer. 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. A copy of that notification must be sent to the Executive Officer.
25. The Discharger must furnish, within a reasonable time, 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 Luis Obispo 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. R3-2010-0038, as required by §13750.5 through §13755 and §13267 of the CWC.
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. Reports of compliance or noncompliance with, or any progress reports on, final requirements contained in any compliance schedule must be submitted within 14-

days following each scheduled date. 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 **March 6, 2015**, the Discharger must submit a Report of Waste Discharge (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 **March 6, 2015**, or earlier as needed, 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 subdivision (b) of §13267 of the CWC, 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 §13350, §13385, and §13387 of the CWC.
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 §13267 of the CWC. 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 §13268 of the CWC.
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. R3-2010-0038 or MRP No. R3-2010-0038 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.

REPORT AND IMPLEMENTATION DATE SUMMARY

| TASK | IMPLEMENTATION DATE |
|--|--|
| Runoff diversion and erosion prevention [Provision E.4] | October 1, of each year |
| Vegetation placement over entire Landfill area [Provision E.5] | October 1, of each year |
| Construct and maintain a compacted soil cover over the Active Landfill Area, except working face [Provision E.6] | October 1, of each year |
| Notify Water Board staff [Provision E.13] | Two-weeks prior to constructing each phase |
| Wet Weather Preparedness Report [Provision E.21] | October 1, of each year |
| Design Plans and CQA Plan [Provision E.22] | 180-days prior to construction |
| ROWD/JTD Amendment [Provision E.31] | March 6, 2015 |
| Update Report on Reasonably Foreseeable Release [Provision E.32] | March 6, 2015, or sooner, as necessary |

I, Roger W. Briggs, 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 **September 2, 2010**.



Executive Officer

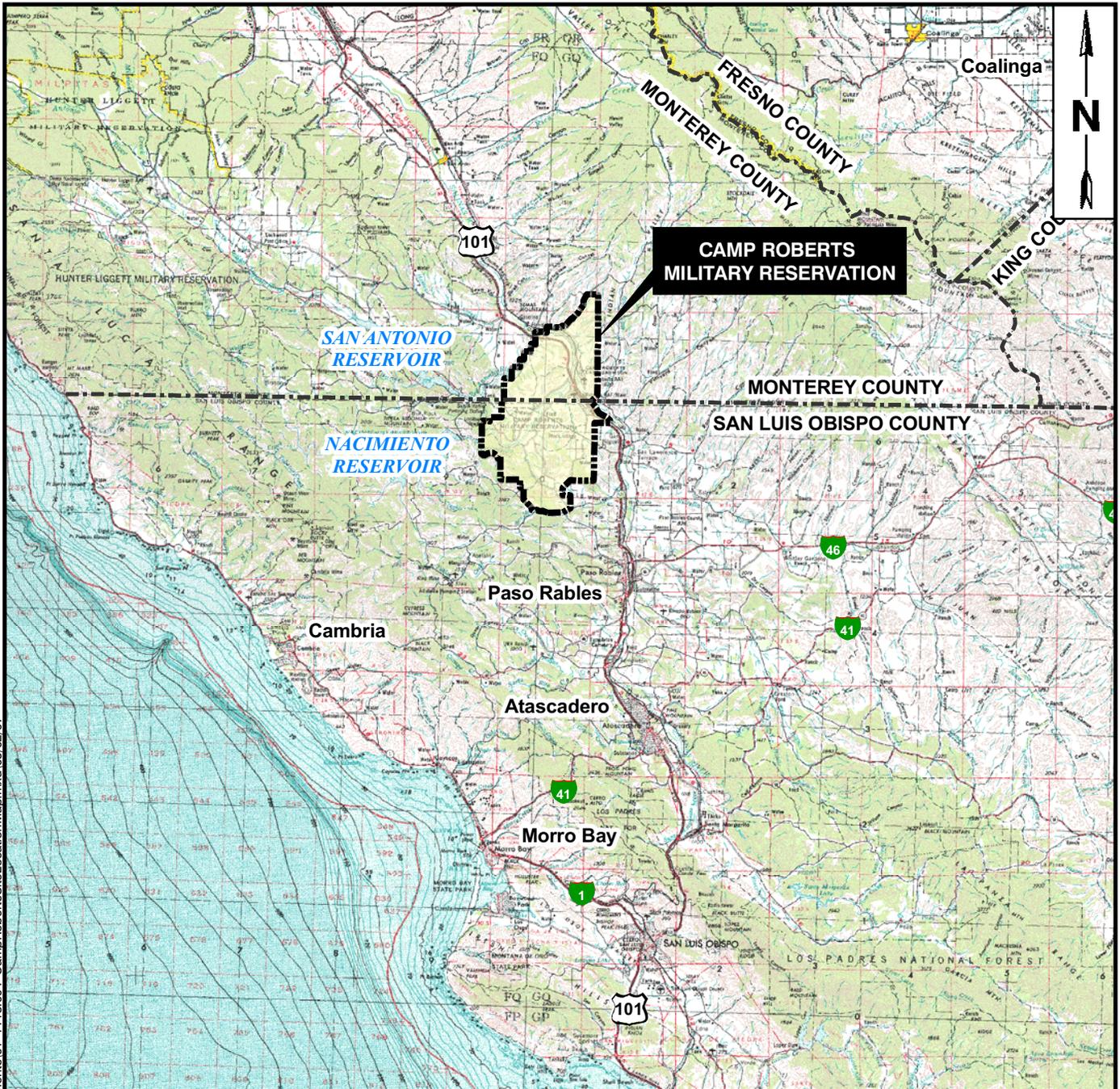
Attachments:

Figure 1 - Location Map

Figure 2 - Vicinity Map

Figure 3 - Site Map

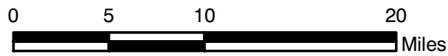
Monitoring and Reporting Program No. R3-2010-0038



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MAP LOCATION



APPROXIMATE SCALE

FIGURE 1

CAMP ROBERTS LOCATION MAP

JOINT TECHNICAL DOCUMENT
CAMP ROBERTS LANDFILL

PREPARED FOR

CALIFORNIA ARMY NATIONAL GUARD
SACRAMENTO, CALIFORNIA



REFERENCE:

1:250,000 U.S.G.S. TOPOGRAPHIC MAPS OF
MONTEREY AND SAN LUIS OBISPO, CALIFORNIA

S:\GIS\1235 CAARNG CampRoberts\001 - North Unit Closure\ArchMapDocuments\006 - 1235.001 - CampRobertsFacilityPlan.mxd\09/29/09

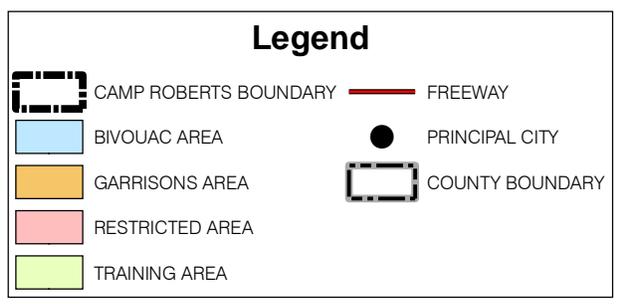
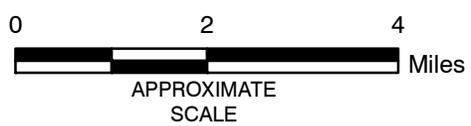
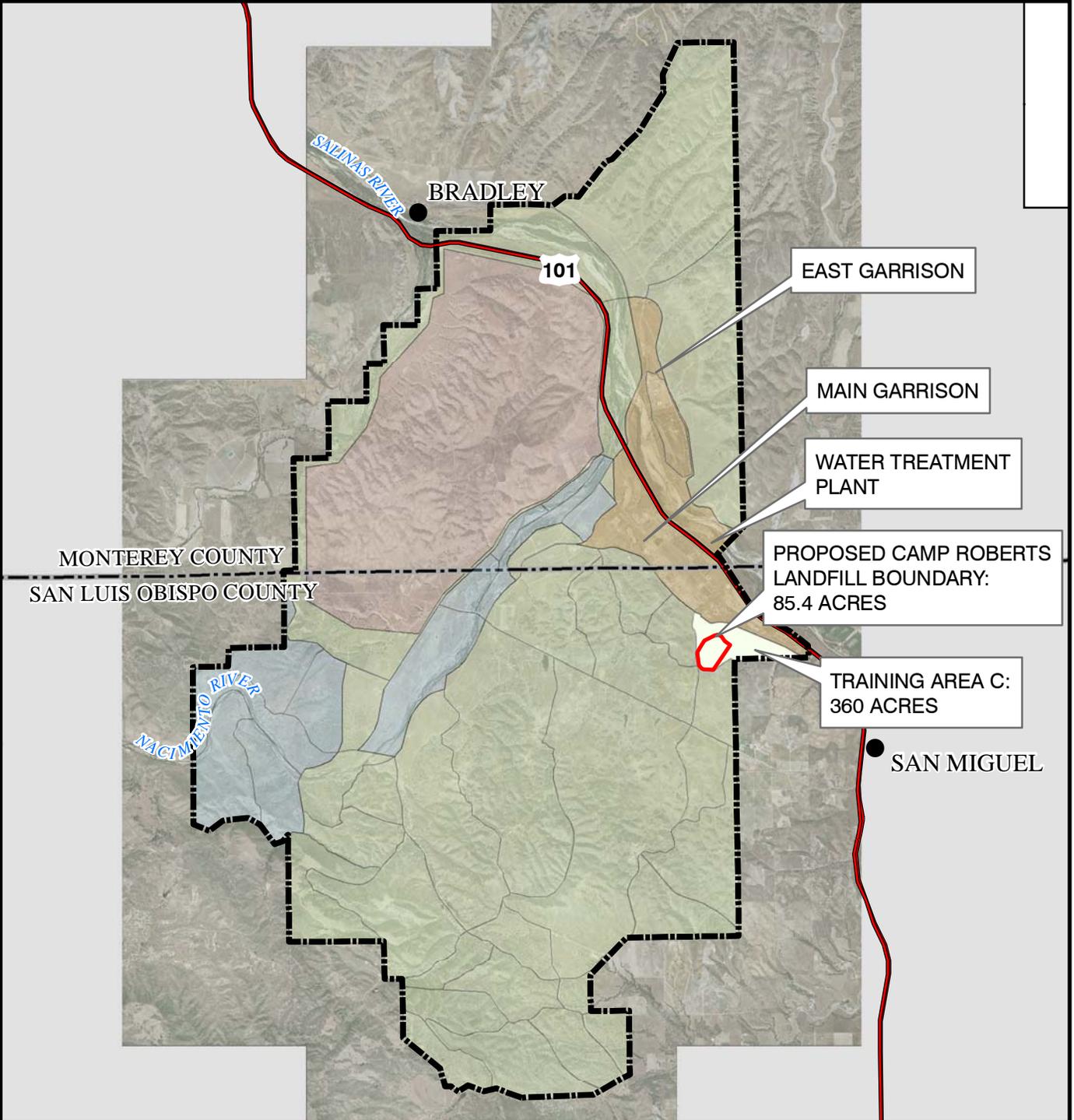


FIGURE 2

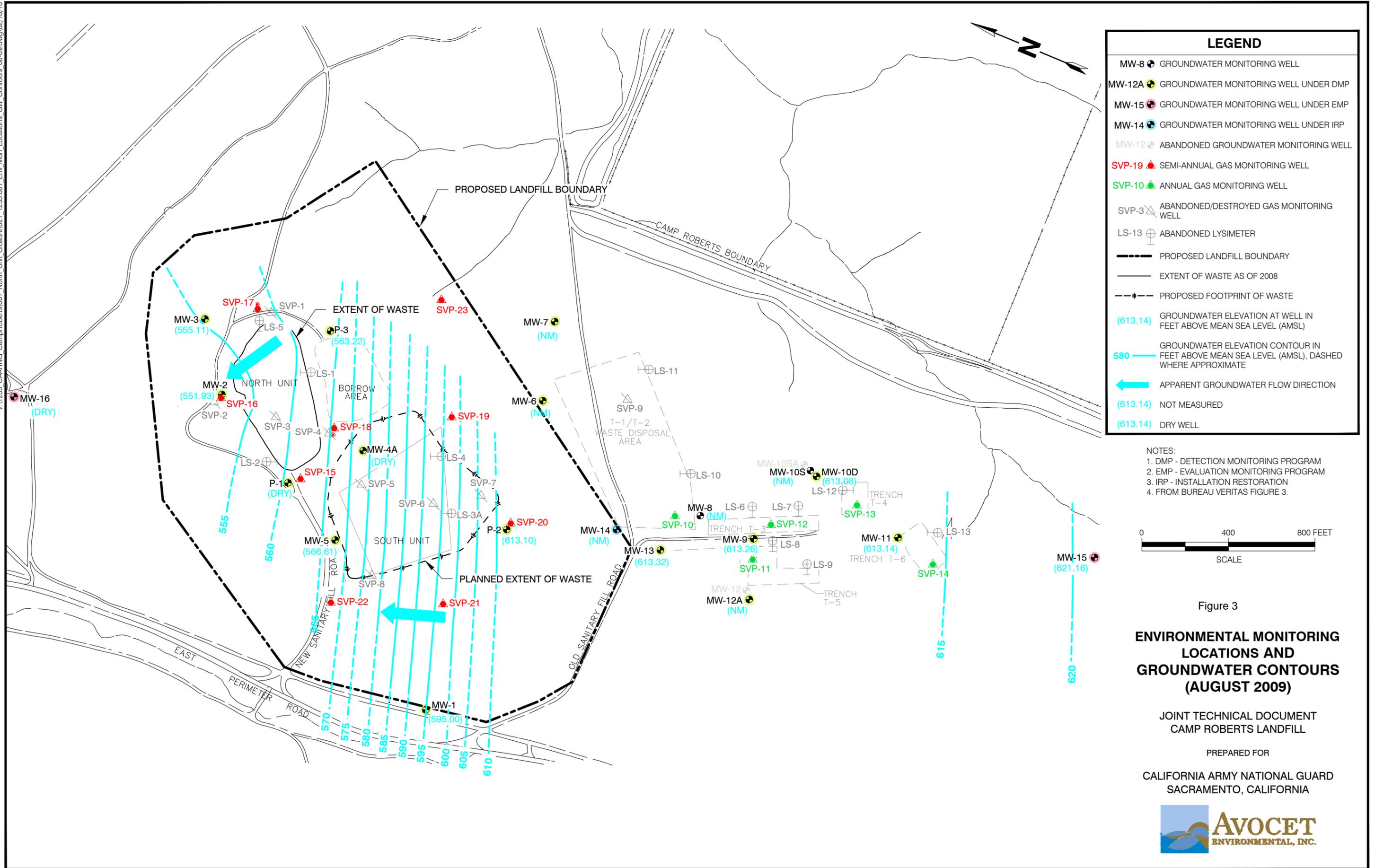
CAMP ROBERTS FACILITY PLAN

CAMP ROBERTS LANDFILL
CAMP ROBERTS, CALIFORNIA

PREPARED FOR

CALIFORNIA ARMY NATIONAL GUARD
SACRAMENTO, CALIFORNIA





**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. R3-2010-0038
Waste Discharger Identification No. 3 400301002**

FOR

**CALIFORNIA ARMY NATIONAL GUARD
CAMP ROBERTS CLASS III LANDFILL
SAN LUIS OBISPO COUNTY**

Monitoring and Reporting Program Order No. R3-2010-0038 (MRP) is issued by the Regional Water Quality Control Board, Central Coast Region (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 California Army National Guard (Discharger) owns and operates the Camp Roberts Class III Landfill (Landfill). The Discharger is subject to this MRP because it owns and operates the Landfill. The MRP is required to assess compliance with the CWC, applicable state and federal regulations, and Waste Discharge Requirements Order No. R3-2010-0038.

PART I: MONITORING AND OBSERVATION SCHEDULE

Unless otherwise indicated, the Discharger must report all monitoring and observations as outlined in **Part IV**.

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. During the wet season (**October 1 through April 30**), following each storm event that produces onsite storm water runoff, with inspections performed at least **monthly**. For purposes of this MRP, onsite runoff is defined as: 1) surface water flow that produces 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.

- 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 Waste Management Units (WMUs), along the perimeter of the WMUs, and any waste diversion or recycling areas.
 - i. Whether storm water 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 WMUs (show affected area on map).
 - v. Evidence of erosion or exposed waste.
 - vi. Evidence of waste in the drainage system (e.g., ditches and storm water sediment/retention basins).
 - vii. Inspection of storm water discharge locations for evidence of non-storm water 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 storm water facilities;
2. Whether storm water 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 Storm Water 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. Landfill LCRS:
 - i. **Bi-Weekly** (between October 1 and April 30 of each year) – Inspect all systems for containment and collection system integrity, record volume of leachate collected (gallons), and report disposal method utilized. When more than one disposal method is used, record the volume specific for each method.
 - ii. **Monthly (between October 1 and April 30 of each year)** – Pumping system operational check.
 - iii. **Monthly (between May 1 and September 30 of each year)** – after emptying the leachate tanks by May 1 of each year, leachate containment and collection system integrity, record volume of leachate collected (in gallons) and disposal method used.
 - iv. Perform routine preventative maintenance focused on keeping the system at design operation. The Discharger must summarize and report all scheduled and unscheduled maintenance.
 - v. **Annually** – Leachate collection and removal system testing and demonstration as required by California Code of Regulations (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.
- vi. All lined WMUs will have the location of their respective liners surveyed and markers placed at locations readily observable by Landfill operations staff discharging leachate back to lined modules, and by state inspectors.
 - vii. **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.
 - viii. Compute pollutant mass removed using leachate 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 schedule(s). Monitoring locations are shown on Landfill Monitoring Network, **Figure 1**. The Discharger must comply with the sampling, analyses, and reporting requirements discussed in **Parts II, III, and IV** of this monitoring and reporting program.

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. The Discharger must sample the following Monitoring Points and Background Monitoring Point as described below:

**TABLE 1
MONITORING POINTS**

| Monitoring Points (See Figure 1) | | Monitoring Program ¹ | | Monitoring Parameters/Frequency | | |
|---|-----------------------|---------------------------------|------------------------------|---------------------------------|---------------------|---|
| Well ID | Monitoring Zone | Detection Monitoring | Corrective Action Monitoring | Parameters | COCs ⁽²⁾ | Frequency for Parameters ⁽³⁾ |
| MW-1 | Background | X | | Table 2 | Table 3 | Semiannually |
| MW-2 | Downgradient | X | | Table 2 | Table 3 | Semiannually |
| MW-3 | Downgradient | X | | Table 2 | Table 3 | Semiannually |
| MW-4A | Downgradient | X | | Table 2 | Table 3 | Semiannually |
| MW-5 | Downgradient | X | | Table 2 | Table 3 | Semiannually |
| MW-16 | Downgradient | X | | Table 2 | Table 3 | Semiannually |
| P-1 | Downgradient | X | | Table 2 | Table 3 | Semiannually |
| P-2 | Upgradient/Background | X | | Table 2 | Table 3 | Semiannually |
| P-3 | Downgradient | X | | Table 2 | Table 3 | Semiannually |
| S1 and S2 | Surface Water | X | | Table 2 | NA ⁽⁴⁾ | Conditional ⁽⁵⁾ |
| Vadose Zone Monitoring ⁽⁶⁾ | Vadose Zone | X | | Table 2 | Table 3 | Annually |
| Leachate | Collection System | | X | Table 2 | Table 3 | Annually |
| Stormwater ⁽⁷⁾ | Stormwater | | | Table 4 | NA ⁽⁴⁾ | Annually |
| Gas Probes & Adjacent Structures ⁽⁸⁾ | Gas Migration | X | | Part I F.6 | NA ⁽⁴⁾ | Quarterly |

⁽¹⁾ For all new Monitoring Points, the Discharger shall 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.

⁽²⁾ Starting in 2013, sample once every five years for full suite of analytes listed in Table 3 as discussed in Part I F.4. except as provided under Part III C.

⁽³⁾ Quarterly monitoring shall be performed each February, May, August, and November. Semiannual monitoring shall be performed in February and August.

⁽⁴⁾ Not applicable.

⁽⁵⁾ S1 and S2 are located in the unnamed drainage channel that runs parallel to, and alongside East Perimeter Road 100 feet upstream and downstream of the Landfill's discharge point and shall only be monitored if the Discharger observes an impact from the Landfill to runoff (ie. Leachate seep, exposed waste).

⁽⁶⁾ Discharger shall monitor the leachate collection system secondary sump (leak detection) for liquids and must analyze samples as noted above.

⁽⁷⁾ The Discharger shall collect and analyze samples as specified in Part I F.5. of this Monitoring and Reporting Program.

⁽⁸⁾ The Discharger shall collect and analyze samples as specified in Part I F.6 of this Monitoring and Reporting Program.

3. Monitoring Parameters:

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

Table 2
Detection Monitoring

| Parameters | Method^{1,2} | Units³ |
|---|-----------------------------|--------------------------|
| Volatile Organic Compounds ⁴ | 8260B | µg/L |
| pH | Field | pH Units |
| Electrical Conductivity (EC) | Field | µmhos/ cm |
| Chloride | 300.0 | mg/L |
| Nitrate (as Nitrogen) | 300.0 | mg/L |
| Total Dissolved Solids | 160.1 | mg/L |
| Sulfate | 300.0 | mg/L |
| Manganese | 6010B | mg/L |
| Sodium | 6010B | mg/L |
| Barium | 6010B | mg/L |
| Lead | 6010B | mg/L |
| Perchlorate | 314.0 | µg/L |
| Total Petroleum Hydrocarbons – crude oil standard | 8015M | mg/L |
| Total Organic Carbon | 9060/5310B | mg/L |
| Dissolved Oxygen | Field | mg/L |
| Temperature | Field | °F/C |
| Turbidity | Field | NTU |
| Groundwater Elevations | Sounder | Feet |

1. Or most recently approved United States Environmental Protection Agency (US EPA) method that provides the lowest practicable detection limits. All metals must be field filtered before laboratory analysis.
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; µmhos/cm – micromillihos per centimeter; °F/C – degrees Fahrenheit/Centigrade; NTU – nephelometric turbidity units; µg/L – micrograms per liter
4. Volatile Organic Compounds (VOCs) include all VOCs detectable using USEPA Method 8260B, including at least all 47 organic constituents listed in Appendix I to 40 CFR, 258 (Subtitle D), oxygenates (MTBE, TAME, DIPE, EDB, and 1,2 DCA), 1,4 Dioxane, and all unidentified peaks. The detection limit for individual VOCs in undiluted samples shall not exceed 0.5 micrograms per liter (µg/L).

4. Constituents of Concern Monitoring:

Constituents of Concern (COC) listed in **Table 3** either directly include or include by reference all constituents listed in Appendix II 40 CFR, Part 258. Monitoring for COC must include only those analytes in **Table 3** that are not analyzed as part of the routine monitoring program. The Discharger must collect and analyze samples for COC **once every five years**. 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 sump. If there is an indication of release (**Part IV.C.3**), then the Discharger is also required to monitor for COC. Wells that have not previously been sampled for COC shall be sampled and analyzed for all COC within three months of this program becoming effective. Additionally, within three months of installing a new groundwater monitoring point, the Discharger must collect and analyze samples for COC.

- a. **COC Monitoring** – The Discharger must analyze all groundwater and leachate samples for the following:

Table 3
Constituents of Concern

| Constituents | Method¹ | Units² |
|--|---------------------------|--------------------------|
| Antimony | 6010B | mg/L |
| Arsenic | 6010B | mg/L |
| Beryllium | 6010B | mg/L |
| Cadmium | 6010B | mg/L |
| Chromium | 6010B | mg/L |
| Cobalt | 6010B | mg/L |
| Copper | 6010B | mg/L |
| Cyanide | 335.4 | mg/L |
| Mercury | 7470 | mg/L |
| Nickel | 6010B | mg/L |
| Selenium | 6010B | mg/L |
| Silver | 6010B | mg/L |
| Sulfide | 376.2 | mg/L |
| Thallium | 6010B | mg/L |
| Tin | 6010B | mg/L |
| Vanadium | 6010B | mg/L |
| Zinc | 6010B | mg/L |
| Chlorophenoxy Herbicides | 8151A | µg/L |
| Organochlorine Pesticides | 8081A | µg/L |
| PCBs | 8082 | µg/L |
| Organophosphorus Pesticides | 8141 | µg/L |
| Semi-Volatile Organic Compounds ³ | 8270C | µg/L |
| Volatile Organic Compounds, Appendix II ⁴ | 8260B | µg/L |

1. Or most recently approved US EPA method that provides the lowest practicable detection limits. All metals must be field filtered before laboratory analysis.
2. mg/L – milligrams per liter; µg/L – micrograms per liter
3. Semi-Volatile Organic Compounds must include pentachloroethane, 2-picoline, and pyridine.
4. Includes Fuel Oxygenates. The detection limit for individual VOCs in undiluted samples shall not exceed 0.5 micrograms per liter (µg/L).

5. Stormwater Monitoring:

The Discharger must collect two (twice per year) 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 4**.

Table 4
Stormwater Monitoring Parameters

| Parameter | Method ¹ | Units ² |
|--|---------------------|--------------------|
| Specific Conductance | 120.1 | µS/cm |
| Nitrate & Nitrite as Nitrogen (30-day holding time) | 300.0 | mg/L |
| pH | Field | pH Units |
| Total Dissolved Solids | 160.1 | mg/L |
| Total Organic Carbon | 5310C | mg/L |
| Total Suspended Solids | 160.2 | mg/L |
| Iron (unfiltered) | 6010B | mg/L |
| 1. US EPA. Upon receiving prior approval from the Central Coast Water Board Executive Officer, the Discharger may use equivalent analytical methods. | | |
| 2. mg/L – milligrams per liter; µS/cm – microSiemens per centimeter | | |

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

6. Landfill Gas Monitoring:

Monitor gas monitoring probes (SVP-15, SVP-16, SVP-17, SVP-18, SVP-19, SVP-20, SVP-21, SVP-22, SVP-23) **quarterly** for methane, carbon dioxide, and oxygen using field meters per California Department of Resources Recycling and Recovery (CalRecycle) requirements for perimeter monitoring (probes subject to on-going review and evaluation by CalRecycle). Whenever gas probes contain methane concentrations greater than five percent in any single sampling event,

the Discharger must collect and analyze a gas sample for volatile organic compounds using method TO-15 (or equivalent) in ppbv. 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 (40 CFR §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 [§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. 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 40 CFR 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). 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. Letter of Transmittal:

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. R3-2010-0038, 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, as appropriate;
- 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(s) 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 40 CFR §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 3**.

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. 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.



ORDERED BY: _____
Executive Officer

9-3-10
Date

Figure: Landfill Monitoring Network, Figure 1

