

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

**MEETING OF JUNE 12, 2019  
BARSTOW**

**ITEM 6**

**CLOSURE AND POST-CLOSURE WASTE DISCHARGE REQUIREMENTS FOR  
SAN BERNARDINO SOLID WASTE MANAGEMENT DIVISION, TRONA-ARGUS  
SANITARY LANDFILL, SAN BERNARDINO COUNTY**

**CHRONOLOGY**

November 14, 1985	Water Board adopted new Waste Discharge Requirements (WDR) and Monitoring and Reporting Program (MRP), Board Order No. 6-85-136, which set requirements for the operation of the Trona-Argus Sanitary Landfill (Facility).
September 9, 1993	Board Order No. 6-93-100-45 was adopted and amended the WDR to incorporate the requirements of Code of Federal Regulations (CFR), title 40, (40 CFR), parts 257 and 258 (Subtitle D), as implemented in the State of California under State Water Resources Control Board (State Water Board) Resolution No. 93-62.
November 9, 1995	Board Order No. 6-95-121 was adopted and revised the WDR to incorporate requirements of the previously adopted Board Order No. 6-93-100-45, and to document a new time schedule for compliance with State and Federal regulations.
July 17, 1997	Board Order No. 6-95-121A1 was adopted and amended the WDR to describe the roles and responsibilities of the contract operator of multiple San Bernardino County landfill facilities.

**BACKGROUND**

The Facility operated and received waste under Board Order No. 6-85-136 and Board Order No. 6-95-121. The Facility stopped receiving waste on October 16, 1996. The waste management unit (Landfill) was subsequently closed in accordance with a Final Closure and Post-Closure Maintenance Plan (FCPCMP) on October 16, 1998. The Facility currently operates as a transfer station. The Water Board is rescinding Board Order No. 6-95-121 and issuing these new Closure and Post-Closure WDR and updating the MRP to: (1) establish the post-closure maintenance and monitoring period and requirements for the Facility; (2) incorporate Facility-specific storm water management, monitoring, and reporting requirements; and (3) provide general updates to the WDR and MRP based on current site conditions, in compliance with the California Code of Regulations (CCR), title 27.

**ISSUES**

Should the Water Board adopt the new Closure and Post-Closure WDR and associated MRP to establish post-closure maintenance and monitoring requirements for the Facility?

## DISCUSSION

The Facility is a closed Class III municipal solid waste landfill owned by the County of San Bernardino and operated by the San Bernardino Solid Waste Management Division (Discharger) since 1985. The Landfill is unlined with no leachate collection system and was the only authorized waste disposal site within the Facility. This Order defines the date of closure of the Landfill and establishes the post-closure maintenance and monitoring requirements for the Facility.

The Discharger submitted a complete FCPCMP to the Water Board in June 1997. The Landfill was closed in October 1998 in accordance with the FCPCMP. An engineered alternative final cover was constructed over the Landfill, specifically an evapotranspirative (ET) soil cover. The constructed ET cover is a 2.5-foot thick monolithic cover underlain by a 2-foot thick foundation layer and has been vegetated with native species from the surrounding area. The Discharger will perform maintenance on an as-needed basis to maintain, as designed, the final monolithic cover of the Landfill throughout the post-closure period of the Facility. This Order approves the FCPCMP, engineered alternative final cover system, and revised FCPCMP that was subsequently submitted to the Water Board in August 2000.

This Order requires a minimum post-closure period of 30 years for monitoring and maintenance of the Facility in accordance with Subtitle D (part 258.61). The Landfill was closed in October 1998; therefore, the post-closure monitoring period is expected to end in 2028 but may be extended if significant evidence of a release is detected from the Facility. A Detection Monitoring Program has been designed to monitor the groundwater beneath the Facility for evidence of a release from the Landfill. The Detection Monitoring Program will be implemented throughout the post-closure period of the Facility. To date, there has been no significant evidence of a release at the Facility.

Storm water protection at the Facility is primarily accomplished through drainage control based on the following objectives: protection from run-on; minimize infiltration of precipitation into the waste; minimize exposure of pollutants to precipitation; manage run-off to minimize erosion and sedimentation; and minimize offsite migration of storm water. To achieve these objectives, the Discharger implements structural and non-structural Best Management Practices (BMPs) to mitigate potential pollution of storm water discharges and performs site compliance inspections to evaluate the effectiveness of the BMPs. The Discharger will continue to implement BMPs and perform inspections throughout the post-closure period of the Facility.

## SUSTAINABLE GROUNDWATER MANAGEMENT ACT

The Sustainable Groundwater Management Act (SGMA) requires the formation of a Groundwater Sustainability Agency (GSA) to develop a Groundwater Sustainability Plan (GSP) for basins designated as medium to high priority at this time. The priority set by the California Department of Water Resources for the Searles Valley Groundwater Basin is seen in the table below. Based on this designation neither a GSA nor GSP would be required at this time.

Priority	Groundwater Basin in San Bernardino County
Very Low	Searles Valley Groundwater Basin (6-052)

Source: <https://gis.water.ca.gov/app/bp2018-dashboard/p1/>

**PUBLIC OUTREACH/INPUT**

The Tentative Order was distributed for public comment on February 25, 2019. No comments on the proposed Order were received.

**RECOMMENDATION**

Adoption of Order as proposed.

<b>ENCLOSURE</b>	<b>ITEM</b>	<b>BATES NUMBER</b>
<b>1</b>	Board Order R6V-2019-PROPOSED	<b>6 - 5</b>



# **ENCLOSURE 1**



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

**BOARD ORDER NO. R6V-2019-[PROPOSED]  
WDID NO. 6B360304021**

**CLOSURE AND POST-CLOSURE WASTE DISCHARGE REQUIREMENTS  
FOR**

**SAN BERNARDINO COUNTY SOLID WASTE MANAGEMENT DIVISION  
TRONA-ARGUS SANITARY LANDFILL**

\_\_\_\_\_  
San Bernardino County

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

1. Discharger

The County of San Bernardino Solid Waste Management Division submitted a complete Final Closure and Post-Closure Maintenance Plan (FCPCMP) for the Trona-Argus Sanitary Landfill in June 1997. A revised FCPCMP was subsequently submitted in August 2000. For the purposes of this Order, the San Bernardino County Solid Waste Management Division is referred to as the "Discharger."

2. Facility

The Trona-Argus Sanitary Landfill is a closed Class III municipal solid waste (MSW) landfill ("Facility") owned by the County of San Bernardino and operated by the Discharger since 1985. The Facility stopped receiving waste on October 16, 1996, and currently operates as a waste transfer station. For purposes of this Order, the Waste Management Unit (WMU) is referred to as the "Landfill," and consists of a 19-acre existing WMU that is unlined with no leachate collection and recovery system (LCRS) and an adjacent 3-acre former burn dump area. A map of the Facility is included as Attachment A, which is made part of this Order.

3. Facility Location

The Facility is located at 83000 First Street approximately 1.5 miles west of the community of Trona in San Bernardino County. The Facility is within Section 18 of Township 25 South, Range 43 East, Mount Diablo Baseline and Meridian, as shown on Attachment A.

4. Reason for Action

The Facility began receiving waste in 1966. The Facility stopped receiving waste on October 16, 1996, and the Landfill was closed on October 16, 1998, in accordance with the FCPCMP dated June 1997. The FCPCMP describes the manner of closure and the proposed maintenance of the Facility during the post-closure period. The Water Board is rescinding Board Order No. 6-95-121 and issuing these new Closure and Post-

Closure Waste Discharge Requirements (WDR) and updating the Monitoring and Reporting Program (MRP) to: (1) establish the post-closure maintenance and monitoring period and requirements for the Facility; (2) incorporate Facility-specific storm water management, monitoring, and reporting requirements; and (3) provide general updates to the WDR and MRP based on current site conditions, in compliance with the California Code of Regulations (CCR), title 27.

5. Order History

- a. WDR was established for the Facility under Board Order No. 6-85-136, which was adopted on November 14, 1985.
- b. Board Order No. 6-93-100-45 was adopted on September 9, 1993 and amended the WDR to incorporate the requirements of the Code of Federal Regulations, title 40 (40 CFR), parts 257 and 258 (Subtitle D), as implemented in the State of California under State Water Resources Control Board (State Water Board) Resolution No. 93-62.
- c. Board Order No. 6-95-121 was adopted on November 9, 1995, and revised the WDR to incorporate requirements of previously adopted Board Order No. 6-93-100-45, and document a new time schedule for compliance with State and Federal regulations.
- d. Board Order No. 6-95-121A1 was adopted on July 17, 1997, and amended the WDR to describe the roles and responsibilities of the contract operator of multiple San Bernardino County landfill facilities.

6. Waste Management Unit Classification and Authorized Disposal Sites

Pursuant to CCR, title 27, section 20260, the Landfill is classified as a Class III WMU and is the only authorized waste disposal site within the Facility boundary. The Landfill is defined as an MSW landfill in Subtitle D.

7. Waste Classification

The waste that was discharged to the Landfill is defined in CCR, title 27, sections 20220 and 20230, as non-hazardous and inert solid waste, respectively. The waste that was discharged to the Landfill is defined as MSW in Subtitle D.

8. Subtitle D Compliance Status

Subtitle D requirements became effective for this Landfill on April 9, 1994. Board Order No. 6-93-100-45 and No. 6-95-121 required the submittal of several items to comply with Subtitle D for the Landfill. The Discharger submitted complete information regarding the acceptance of liquids, the existing waste footprint, the distance from the Landfill to the nearest drinking water source, and whether the Landfill is located in a



100-year floodplain or a wetland. These items fulfilled the submittal requirements of Subtitle D, as implemented by State Water Board Resolution No. 93-62.

9. Final Closure and Post-Closure Maintenance Plan

The FCPCMP, dated June 1997 and revised August 2000, describes the manner of closure and the proposed maintenance of the Facility during the post-closure period. An engineered alternative final cover was constructed over the Landfill, specifically an evapotranspirative (ET) soil cover. The constructed ET cover is a 2.5-foot thick monolithic cover underlain by a 2-foot thick foundation layer, and has been vegetated with native species from the surrounding area. An onsite borrow area was the source of the cover materials. The main concept of this type of landfill cover is to store moisture between the soil particles during the rainy season and release that moisture during the dry season through plant uptake and evaporation. The Discharger will perform maintenance on an as-needed basis to maintain, as designed, the final ET cover of the Landfill throughout the post-closure period of the Facility.

Regulations contained in CCR, title 27, section 20080, subsection (b), allows for an engineered alternative provided that the Discharger demonstrates that the construction of the prescriptive standard is not feasible and that an engineered alternative is consistent with the performance goal of the prescriptive standard and affords equivalent protection against water quality impairment. Based on the results of the alternative final cover performance evaluation as provided in the FCPCMP, the final ET cover is protective of water quality and meets the requirements of CCR, title 27, section 20080, subsection (b). This Order approves the FCPCMP, dated June 1997 and revised August 2000, and the installed engineered alternative final cover system.

10. Post-Closure Period

This Order requires a minimum post-closure maintenance and monitoring period of 30 years after completion of closure of the entire Landfill in accordance with 40 CFR, Part 258.61. The Landfill final closure activities were completed in October 1998; therefore, the post-closure period is expected to end in 2028 but the Discharger will not be released from post-closure until it is demonstrated to and approved by the Water Board that the Landfill no longer poses a threat to water quality in accordance with CCR, title 27, section 20950(a)(1).

11. Land Uses

The FCPCMP states there are no structures within 1,000 feet of the Facility boundary. The adjacent land within one mile of the Facility is designated Rural Living to the north and south, and Resource Conservation to the west. To the east are the following designated land uses: Service Commercial; Regional Industrial; Single-Family Residential; Planned Development; and General Commercial.

12. Site Topography

The Facility is located within the Searles Valley, a closed basin bounded on the east and northeast by the Slate Range, on the west by the Argus Range and Spangler Hills, and on the south by the Lava Mountains. Searles Lake occupies the north-central part of the valley. The Facility is situated on the west side of the valley on an alluvial fan surface that originates from the Argus Mountains and gently slopes towards the east and northeast.

The existing topography of the Facility is shown on Attachment B. Surface elevation of the Landfill ranges from approximately 1,783 feet above mean sea level (msl) in the western portion of the site to approximately 1,900 feet above msl in the eastern portion of the site.

13. Climatology

The Searles Valley, in which the Facility is located, has an arid climate characterized by infrequent rainfall, cold winters and hot summers, and low relative humidity. The mean annual temperature is 71 degrees (°) Fahrenheit (F) and ranges from a high of 105° F in the summer to a low of 31° F in the winter. Precipitation in the vicinity of the Facility averages 3.5 inches annually. The maximum expected precipitation for the 24-hour, 100-year frequency design storm event is approximately 0.742 inches per hour. The annual average evaporation rate is approximately 110 inches per year.

14. Site Geology

The Facility is located within the central portion of the Searles Valley in the southwestern end of the Basin and Range Geomorphic Province. The Basin and Range province is characterized by extensional tectonics, which have resulted in the formation of numerous horsts (structural ranges) and grabens (structural depressions). The area is tectonically active, but there are no known active (Holocene-age) faults beneath the Facility. The closest fault is Wilson Canyon fault located approximately 2.5 miles to the northeast of the Facility. Holocene active faults within the vicinity of the Facility include the Tank Canyon fault located approximately 9 miles to the southeast, the Panamint Fault Zone approximately 14 miles to the east, the Garlock Fault located approximately 16 miles to the south, and the Little Lake Fault Zone approximately 20 miles to the west.

The geologic units beneath the Facility consist of the following, from oldest to youngest.

- a. Mesozoic granitic rocks are the oldest rocks in the vicinity of the Facility and form the crystalline basement rock beneath the site.
- b. Two sequences of Quaternary lake deposits overlie the basement rock and consist of unconsolidated, poorly sorted sands and gravelly sands. The lower sequence includes sands, clays and clayey sands to sandy clays. The clayey lake deposits are generally soft and calcareous and are interbedded within contorted thin lenses of sand.

- c. Overlying the Quaternary lake deposits are Quaternary alluvial fan deposits composed of a thick sequence of moderately- to well-consolidated gravels and sands derived from erosion of the surrounding mountains.

15. Site Hydrogeology and Groundwater Quality

The Facility overlies the Searles Valley Groundwater Basin. Groundwater beneath the Facility occurs in the older alluvium at an average depth of approximately 270 feet below the ground surface (bgs). Groundwater flows in an east-northeasterly direction towards Searles Lake with an average hydraulic gradient of 0.12 feet per foot. The estimated groundwater velocity ranges from 0.05 feet per day to 4.8 feet per day. The depth to groundwater beneath the site has generally increased since monitoring began in 1988.

The Discharger has been monitoring groundwater quality beneath the Facility since 1988. The inorganic and dissolved metal water chemistry in groundwater beneath the Facility is consistent with the available water quality data for monitoring wells within the vicinity of the Facility. In general, groundwater quality in the area is poor due to naturally occurring conditions and from regional sources. Elevated concentrations of total dissolved solids (TDS), chloride, and sulfate have been detected in several groundwater monitoring wells including the background well located hydraulically upgradient of the Landfill (T-1). Over the last ten years, TDS concentrations in the groundwater have ranged from 1,200 milligrams per liter (mg/L) to 23,000 mg/L. Similarly, chloride concentrations in the groundwater have ranged from 290 mg/L to 11,000 mg/L, and sulfate concentrations in the groundwater have ranged from 170 mg/L to 3,900 mg/L. The secondary maximum contaminant level (MCL) for these constituents is 500 mg/L for TDS, 250 mg/L for chloride, and 250 mg/L for sulfate.

In 1994 a quantifiable concentration of toluene (6.65 mg/L) was detected in the background groundwater monitoring well T-1 above the primary MCL of 0.15 mg/L. Since then, other volatile organic compounds (VOCs) have been detected sporadically in groundwater from other compliance wells, but only at trace levels. No measurably significant evidence of a release has been detected at the Facility.

16. Site Hydrology

The Facility is within the Searles Valley Hydrologic Area of the Trona Hydrologic Unit. The Searles Valley is a closed topographic basin. All water that enters the basin infiltrates into the groundwater, evaporates, or flows overland eventually toward Searles Lake. Searles Lake is located approximately 1.5 miles east of the Facility and occupies the floor of Searles Valley.

17. Site Storm Water Management

Storm water protection at the Facility is primarily accomplished through drainage control based on the following objectives: protection from run-on; minimize infiltration of precipitation into the waste; minimize exposure of pollutants to precipitation; manage

run-off to minimize erosion and sedimentation; and minimize offsite migration of storm water. To achieve these objectives, the Discharger implements structural and non-structural Best Management Practices (BMPs) to mitigate potential pollution of storm water discharges and performs site compliance inspections to evaluate the effectiveness of the BMPs. The Discharger will continue to implement BMPs and perform inspections throughout the post-closure compliance period of the Facility.

This Order requires prohibitions, limitations, and provisions for storm water and non-storm water discharges at the Facility to protect both groundwater and surface water quality.

18. Basin Plan

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

19. Receiving Waters

The receiving waters are the groundwaters of the Searles Valley Basin (Department of Water Resources, Groundwater Basin No. 6-52; Basin Plan, Plate 2B) and minor surface waters of the Searles Valley Hydrologic Area of the Trona Hydrologic Unit (Hydrologic Unit No. 621.10; Basin Plan, Plate 1B).

20. Beneficial Uses

The present and probable beneficial uses of the groundwaters of the Searles Valley Basin No. 6-52, as set forth and defined in the Basin Plan are:

- a. Industrial Service Supply (IND).

The present and probable beneficial uses of minor surface waters of the Searles Valley Hydrologic Area No. 621.10, as set forth and defined in the Basin Plan are:

- a. Municipal and Domestic Supply (MUN);
- b. Ground Water Recharge (GWR);
- c. Water Contact Recreation (REC-1);
- d. Non-contact Water Recreation (REC-2);
- e. Warm Freshwater Habitat (WARM); and
- f. Wildlife Habitat (WILD).

21. Water Quality Protection Standard

The Water Quality Protection Standard (WQPS) consists of constituents of concern (COCs), concentrations limits, monitoring points, and the point of compliance. The COCs, monitoring points, and point of compliance for groundwater and unsaturated zone monitoring are described in MRP No. R6V-2019-PROPOSED, which is made part

of this Order. The WQPS applies over the active life of the landfill, closure and post-closure maintenance period, and the compliance period of the Facility in accordance with CCR, title 27, section 20410(a).

22. Compliance Period

The compliance period is the number of years equal to the active life of the WMU plus a minimum of 30 years during the post-closure period in accordance with 40 CFR, Part 258.61. The compliance period is the minimum period during which the Discharger must conduct a water quality monitoring program. The compliance period must begin anew each time the Discharger initiates an Evaluation Monitoring Program (EMP). The Landfill closed October 16, 1998; therefore, the compliance period is expected to end in 2028, but may be extended if the Facility is not in compliance with its WQPS. If the Discharger is engaged in a Corrective Action Program (CAP) at the scheduled end of the compliance period, the compliance period shall be extended until the Discharger can demonstrate that the WMU has been in continuous compliance with its WQPS for a period of three consecutive years as specified in CCR, title 27, section 201410(c).

23. Statistical and Non-Statistical Methods

Statistical and non-statistical analyses of monitoring data are necessary for the earliest possible detection of measurably significant evidence of a release of waste from the Landfill. CCR, title 27, section 20415, subdivision (e)(7), requires statistical data analyses to determine when there is "measurably significant" evidence of a release from the WMU. CCR, title 27, section 20415, subdivision (e)(8) allows non-statistical data analysis methods that can achieve the goal of the monitoring program at least as well as the most appropriate statistical method. The monitoring parameters listed in MRP No. R6V-2019-PROPOSED are believed to be the best indicators of a release from the Facility.

24. Detection Monitoring Program

Pursuant to CCR, title 27, sections 20385 and 20420, the Discharger is implementing a Detection Monitoring Program (DMP) for the Facility. The current DMP has been designed to monitor the unsaturated zone and groundwater for evidence of a release. To date, there has been no measurably significant evidence and/or significant physical evidence of a release at the Facility.

25. Evaluation Monitoring Program

An EMP may be required, pursuant to CCR, title 27, section 20385 and section 20420, subdivision (k)(5-6), in order to evaluate evidence of a release if detection monitoring and verification procedures indicate evidence of a release. The Discharger must delineate the nature and extent of the release and develop a suite of proposed corrective action measures within 90 days of initiating an EMP, unless the Discharger proposes and substantiates a longer time period for implementing the EMP. If the EMP confirms measurably significant evidence and/or significant physical evidence of a

release, then the Discharger must submit an Engineering Feasibility Study report proposing corrective action measures pursuant to CCR, title 27, section 20425, and MRP No. R6V-2019-PROPOSED.

26. Corrective Action Program

A CAP to remediate detected releases from the Landfill may be required pursuant to CCR, title 27, section 20430, should results of an EMP warrant a CAP.

27. Financial Assurance

The Discharger is required to obtain and maintain Financial Assurance Instruments to conduct post-closure maintenance activities and for corrective action of all known and reasonably foreseeable releases as required under CCR, title 27, sections 22207, 22212, and 22222 et seq.

The Discharger has provided documentation that a financial assurance fund has been developed for post-closure maintenance and for corrective action of all known and reasonably foreseeable releases. This Order requires the Discharger to report the amount of money available in the fund as part of the annual self-monitoring report. This Order also requires the Discharger to demonstrate, in the annual report, that the amount of financial assurance is adequate or to increase the amount of financial assurance, as appropriate, for inflation.

28. California Water Code, Section 13241 Considerations

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

- a. Past, present, and probable future beneficial uses of water. This Order identifies existing groundwater quality and past, present, and probable future beneficial uses of water, as described in Finding No. 20. The proposed discharge will not adversely affect present or probable future beneficial uses of water including municipal and domestic supply, agricultural supply, industrial service supply, and freshwater replenishment, because the discharge is authorized only to the Landfill and this Order requires monitoring to detect any impacts to water quality.
- b. Environmental characteristics of the hydrographic unit under consideration including the quality of water available thereto. Finding No. 15 describes the environmental characteristics and quality of water available.
- c. Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area. Compliance with the requirements of this Order will not affect groundwater quality. The Water Board will use its existing authority and this WDR to ensure protection of water quality from these discharges.

- d. Economic considerations. Water Quality Objectives established in the Basin Plan for the Searles Valley Groundwater Basin and Searles Valley Hydrologic Area do not subject the Discharger to economic disadvantage as compared to other similar discharges in the Region. This Order will require the Discharger to submit proposals compliant with the requirements of CCR, title 27, and is reasonable.
- e. The need for developing housing within the region. The Discharger is not responsible for developing housing within the region. This Order provides for continued monitoring a closed municipal solid waste Landfill.
- f. The need to develop and use recycled water. The Discharger does not propose the use of recycled water at this Facility.

29. Human Right to Safe, Clean, Affordable, and Accessible Water

California Water Code, section 106.3, establishes a state policy that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes and directs state agencies to consider this policy when adopting regulations pertinent to those uses of water. This Order promotes that policy by requiring storm water and drainage controls, monitoring to assess water quality, and corrective action when needed to address impacts to water quality.

30. California Environmental Quality Act

This Closure and Post-Closure WDR governs an existing Facility that the Discharger formerly operated. The Project consists only of continued maintenance and monitoring of the post-closure status of the Landfill and is, therefore, exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resources Code, Section 21000 et seq., in accordance with CCR, title 14, section 15301, Existing Facility (CEQA Exemptions).

31. Antidegradation Analysis

State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintenance of High Quality Waters in California") requires that whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality must be maintained. Any change in the existing high quality is allowed by that policy only if it has been demonstrated to the Regional Water Board that any change will be consistent with maximum benefit to the people of the state, and will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies. The policy further requires that dischargers meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur and that the highest water quality consistent with maximum benefit to the people of the state will be maintained.

There has been no detected release at the Facility and thus no change in the existing

water quality is expected as result of this WDR. The DMP is designed to detect the earliest possible release; implementation of an EMP and possible CAP will ensure water quality protection.

32. Technical and Monitoring Reports

The Discharger must submit technical and monitoring reports in compliance with this Order and as described in MRP No. R6V-2019-PROPOSED.

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

33. Right to Petition

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

34. Notification of Interested Parties

The Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for post-closure maintenance and monitoring of the Facility and has provided them with an opportunity to submit their written views and recommendations.

35. Consideration of Public Comments

The Water Board, in a public meeting held on June 12, 2019, heard and considered all comments pertaining to the discharge.

**IT IS HEREBY ORDERED** that the Discharger must comply with the following:



I. RECEIVING WATER LIMITATIONS

The discharge shall not cause the existing water quality to be degraded nor shall the discharge cause a violation of any applicable water quality standard for receiving water adopted by the Water Board or the State Water Board as required by the California Water Code and regulations adopted hereunder.

- A. Under no circumstances shall the discharge cause the presence of the following substances or conditions in groundwaters of the Searles Valley Groundwater Basin.
1. Chemical Constituents – Groundwaters must not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.
  2. Taste and Odors – Groundwaters must not contain taste or odor-producing substances in concentrations that cause a nuisance or that adversely affect beneficial uses.
  3. Toxic Substances – Any presence of toxic substances in concentrations that individually, collectively, or cumulatively cause a detrimental physiological response in humans, plants, animals, or aquatic life is prohibited.
- B. Under no circumstances shall the discharge cause the presence of the following substances or conditions in surface waters of the Searles Valley Hydrologic Area.
1. Ammonia – The neutral, un-ionized ammonia species ( $\text{NH}_3$ ) is highly toxic to freshwater fish. The fraction of toxic  $\text{NH}_3$  to total ammonia species ( $\text{NH}_4^+ + \text{NH}_3$ ) is a function of temperature and pH. Tables 3-1 to 3-4 from the Basin Plan were derived from United States Environmental Protection Agency (USEPA) ammonia criteria for freshwater. Ammonia concentrations must not exceed the values listed for the corresponding conditions in these tables. For temperature and pH values not explicitly in these tables, the most conservative value neighboring the actual value may be used or criteria can be calculated from numerical formulas available on page 3-4 of the Basin Plan.
  2. Bacteria – Waters must not contain concentrations of coliform organisms attributable to anthropogenic sources, including human and livestock wastes. The fecal coliform concentration during any 30-day period must not exceed a log mean of 20/100 mL, nor shall more than 10 percent of all samples collected during any 30-day period exceed 40/100 mL. The USEPA recommends that the log mean should ideally be based on a minimum of not less than five samples collected as evenly spaced as practicable during any 30-day period. However, a log mean concentration

exceeding 20/100 mL for any 30-day period shall indicate violation of this objective even if fewer than five samples were collected.

3. Biostimulatory Substances – Waters must not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses.
4. Chemical Constituents – Waters designated as MUN must not contain concentrations of chemical constituents in excess of the MCL or secondary MCL based upon drinking water standards specified in CCR, title 22, chapter 15, article 1, section 64400 et. seq. Waters designated as AGR must not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses (i.e., agricultural purposes). Waters must not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses.
5. Chlorine, Total Residual – For the protection of aquatic life, total chlorine residual must not exceed either a median value of 0.002 mg/L or a maximum value of 0.003 mg/L. Median values must be based on daily measurements taken within any six month period.
6. Color – Waters must be free of coloration that causes nuisance or adversely affects the water for beneficial uses.
7. Dissolved Oxygen – The dissolved oxygen concentration, as percent saturation, must not be depressed by more than 10 percent, nor shall the minimum dissolved oxygen concentration be less than 80 percent of saturation. The minimum dissolved oxygen concentration must not be less than 4.0 mg/L as a daily minimum, 5.0 mg/L as a 7-day mean, and 6.5 mg/L as a 30-day mean.
8. Floating Materials – Waters must not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect the water for beneficial uses. For natural high quality waters, the concentrations of floating material must not be altered to the extent that such alterations are discernible at the 10 percent significance level.
9. Oil and Grease – Waters must not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect the water for beneficial uses. For natural high quality waters, the concentration of oils, greases, or other film or coat generating substances must not be altered.

10. Nondegradation of Aquatic Communities and Populations – All waters must be free from substances attributable to wastewater or other discharges that produce adverse physiological responses in humans, animals, or plants; or which lead to the presence of undesirable or nuisance aquatic life. All waters must be free from activities that would substantially impair the biological community as it naturally occurs due to physical, chemical and hydrologic processes.
11. pH – Changes in normal ambient pH levels must not exceed 0.5 pH units. The pH must not be depressed below 6.5 nor raised above 8.5. Compliance with the pH objective for these waters will be determined on a case-by-case basis.
12. Radioactivity – Radionuclides must not be present in concentrations which are deleterious to human, plant, animal, or aquatic life nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life. Waters designated as MUN must not contain concentrations of radionuclides in excess of the limits specified in CCR, title 22.
13. Sediment – The suspended sediment load and suspended sediment discharge rate of surface waters must not be altered in such a manner as to cause nuisance or adversely affect the water for beneficial uses.
14. Settleable Materials – Waters must not contain substances in concentrations that result in deposition of material that causes nuisance or that adversely affects the water for beneficial uses. For natural high-quality waters, the concentration of settleable materials must not be raised by more than 0.1 milliliter per liter.
15. Suspended Materials – Waters must not contain suspended materials in concentrations that cause nuisance or that adversely affect the water for beneficial uses. For natural high quality waters, the concentration of total suspended materials must not be altered to the extent that such alterations are discernible at the 10 percent significance level.
16. Taste and Odor – Waters must not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish or other edible products of aquatic origin, that cause nuisance, or that adversely affect the water for beneficial uses. For naturally high quality waters, the taste and odor must not be altered.
17. Temperature – The natural receiving water temperature of all waters must not be altered unless it can be demonstrated to the satisfaction of the Water Board that such an alteration in temperature does not adversely affect the water for beneficial uses. For waters designated WARM, water temperature must not be altered by more than five degrees Fahrenheit

(5° F) above or below the natural temperature. For waters designated COLD, the temperature must not be altered.

18. Toxicity – All waters must be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration and/or other appropriate methods as specified by the Water Board [or the Executive Officer or his/her designee]. The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary, for other control water that is consistent with the requirements for “experimental water” as defined in Standard Methods for the Examination of Water and Wastewater (American Public Health Association, et al. 1998).
19. Turbidity – Waters must be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity must not exceed natural levels by more than 10 percent.

## II. REQUIREMENTS AND PROHIBITIONS

### A. General

1. The discharge must not cause or threaten to cause a condition of pollution or nuisance as defined in California Water Code, section 13050.
2. The discharge of waste, as defined in California Water Code, section 13050, subdivision (d), must not cause an exceedance of any narrative Water Quality Objective (WQO) contained in the Basin Plan.
3. Where any numeric or narrative WQO contained in the Basin Plan is already being exceeded, any discharge which causes further degradation or pollution is prohibited.
4. The discharge of pesticides to surface waters or groundwater is prohibited.
5. Water used for dust control must be limited to a minimal amount. A "minimal amount" is defined as that amount which will not result in run-off.

6. All purge water discharged to the ground at the Landfill and water used for dust control must not contain concentrations of volatile organic compounds (VOCs) in excess of the WQPS.
7. The discharge of waste that contains liquid in excess of the moisture-holding capacity of the Landfill, or which contains liquid in excess of the moisture-holding capacity as a result of waste management operations, compaction, or settlement, is prohibited.
8. The discharge of solid or liquid waste, leachate, or any other deleterious material to surface waters or groundwater is prohibited.
9. Surface drainage from offsite areas and internal site drainage from surface or subsurface sources, must not contact or percolate through solid wastes discharged at the Landfill.
10. The Discharger must maintain in good working order any control system or monitoring device installed to achieve compliance with these WDRs.
11. The Landfill, closed in accordance with the FCPCMP accepted by the Water Board, must be maintained in a closed condition, per the FCPCMP and these Closure and Post-Closure WDRs.
12. The Discharger must remove and relocate any waste, which is or has been discharged at the closed Landfill in violation of these requirements.
13. The closed Landfill must be protected from inundation, washout, or erosion of wastes and erosion of covering materials resulting from a 24-hour, 100-year storm or a flood having a 100-year return period.
14. The exterior surfaces of the closed Landfill must be graded to promote lateral run-off of precipitation and to prevent ponding.
15. The Discharger must notify the Water Board within one business day of any flooding, slope failure or other change in site conditions that could impair the integrity of the Landfill or of precipitation and drainage control structures. The Discharger must correct any failure that threatens the integrity of the Landfill, after approval of the method, in accordance with a schedule established by the Water Board as specified in CCR, title 27, section 21710, subdivision (c)(2).
16. The Discharger must at all times maintain adequate and viable financial assurances acceptable to the Water Board Executive Officer for costs associated with post-closure maintenance and monitoring and for corrective action for all known or reasonably foreseeable releases.

17. Pursuant to CCR, title 27, section 21090, subdivision (a)(4)(C), the Discharger must repair, in a timely manner, any breach or other cover problem discovered during the periodic inspection of the Landfill cover. Repairs to the upper soil cover material must follow a Construction Quality Assurance (CQA) plan, as required in CCR, title 27, section 20323 and section 20324, and the FCPCMP.

B. Storm Water Discharges

Waste in discharges of storm water must be reduced or prevented to achieve the best practicable treatment level using controls, structures, and management practices. The Discharger must comply with all storm water monitoring, response, and reporting requirements described in MRP No. R6V-2019-PROPOSED.

C. Electronic Submittal of Information

Pursuant to CCR, title 23, section 3890, the Discharger must submit all reports, including soil, soil vapor, and water data, prepared for the purpose of subsurface investigation or remediation of a discharge of waste to land subject to Division 2 of title 27 electronically over the internet to the State Water Board's Geotracker system. This requirement is in addition to, and not superseded by, any other applicable reporting requirement.

III. WATER QUALITY MONITORING AND RESPONSE PROGRAMS

A. Detection Monitoring Program

The Discharger must maintain a DMP as required in CCR, title 27, section 20420. The Discharger must continue to conduct a DMP, as necessary, to provide the best assurance of the detection of a release from the Landfill.

B. Evaluation Monitoring Program

The Discharger must establish an EMP whenever there is measurably significant evidence and/or significant physical evidence of a release from the Landfill pursuant to CCR, title 27, section 20425. Within 90 days of initiating an EMP, the Discharger must delineate the nature and extent of the release, as well as develop, propose, and support corrective action measures to be implemented in a CAP.

C. Corrective Action Program

The Discharger will implement a CAP as required pursuant to CCR, title 27, section 20430, should the results of the EMP warrant a CAP. If warranted, the Discharger must implement a CAP until it can be demonstrated to the satisfaction of the Water Board that the concentrations of all COCs are reduced to levels

below their respective concentration limits throughout the entire zone affected by the release.

D. Water Quality Protection Standard

1. The WQPS consists of COCs, concentration limits, monitoring points, and the point of compliance. The COCs, concentration limits, monitoring points, and point of compliance for groundwater and unsaturated zone monitoring are described in MRP No. R6V-2019-PROPOSED.
2. At any given time, the concentration limit for each COC must be equal to the background data set of that constituent unless a concentration level greater than background has been established.
3. If the Discharger or Water Board Executive Officer determines that concentration limits were or are exceeded, the Discharger may immediately institute verification procedures upon such determination as specified below or, within 90 days of such determination, submit a technical report pursuant California Water Code, section 13267, subdivision (b), proposing an EMP meeting the provisions of CCR, title 27, section 20420, subdivision (k)(5). In the event of a release, unless the technical report proposing an EMP recommends and substantiates a longer period, the Discharger will only have 90 days, once the Water Board authorizes the initiation of the EMP, to complete the delineation, develop a suite of proposed corrective action measures, and submit a proposed CAP for adoption by the Water Board.
4. Monitoring of the groundwater and unsaturated zone must be conducted to provide the best assurance of the detection of a release from the Landfill.

E. Data Analysis

Within 45 days after completion of sampling, the Discharger must determine at each Monitoring Point whether there is measurably significant evidence and/or significant physical evidence of a release from the Landfill. The analysis must consider all monitoring parameters and COCs. The Executive Officer may also make an independent finding that there is measurably significant evidence and/or significant physical evidence of a release.

1. To determine whether there is "measurably significant" (as defined in CCR, title 27, section 20164) evidence of a release from the Landfill, the Discharger must use approved statistical data analysis methods to evaluate point of compliance groundwater data, as required by CCR, title 27, section 20415, subdivision (e).

2. To determine whether there is significant physical evidence of a release from the Landfill, the Discharger must also use non-statistical methods. Significant physical evidence may include, but is not limited to, unexplained volumetric changes in the Landfill, unexplained stress in biological communities, unexplained changes in soil characteristics, visible signs of leachate migration, unexplained water table mounding beneath or adjacent to the Facility, and/or any other change in the environment that could be reasonably be expected to be the result of a new release from the Landfill. Other non-statistical evidence of a release may include trends of increasing concentrations of one or more constituents over time.
3. If there is measurably significant evidence and/or significant physical evidence of a release, the Discharger must immediately notify the Water Board by telephone or email as to the monitoring points and constituent(s) or parameters involved followed by written notification sent certified mail within seven days (see "Unscheduled Reports to be Filed With the Water Board," MRP No. R6V-2019-PROPOSED). The Discharger must initiate the verification procedures, as specified in this order, Section III.F below.

F. Verification Procedures

Whenever there is a determination by the Discharger or Executive Officer that there is measurably significant evidence or significant physical evidence of a release, the Discharger must initiate verification procedures as specified below.

1. The Discharger must either conduct a composite retest using data from the initial sampling event with all data obtained from the resampling event or must conduct a discrete retest in which only data obtained from the resampling event must be analyzed to verify evidence of a release. Alternatively, the Discharger may perform a pass 1-of-3 retesting approach using quarterly samples, as an engineered alternative.
2. The verification procedure need only be performed for the constituent(s) that has shown a measurably significant evidence of a release and must be performed at each Monitoring Point for which a release is indicated.
3. Within seven days of receiving the results of the last laboratory analyses for the retest, the Discharger must report to the Water Board, by certified mail, the results of the verification procedure, as well as all data collected for use in the retest.
4. If the Discharger or Executive Officer verifies that there is or was evidence of a release, the Discharger is required to submit a technical report to the Water Board within 90 days of such a determination, pursuant to California Water Code, section 13267, subdivision (b). The report must propose an evaluation monitoring program (see section III.B above) or make a demonstration to the Water Board that there is a source other than the



Landfill that caused evidence of a release (see “Unscheduled Reports to be Filed With the Water Board,” MRP No. R6V-2019-PROPOSED).

5. If the Discharger declines to conduct verification procedures, the Discharger must submit a technical report, as specified in this order, Section III.G below.

G. Technical Report Without Verification Procedures

If the Discharger chooses not to initiate verification procedures after there has been a determination made for evidence of a release, a technical report must be submitted pursuant to California Water Code, section 13267, subdivision (b). The report must propose an EMP or attempt to demonstrate that the release did not originate from the Facility.

H. Monitoring and Reporting

1. Pursuant to California Water Code, section 13267, subdivision (b), the Discharger must comply with the monitoring and reporting requirements as established in the attached MRP No. R6V-2019-PROPOSED and as specified by the Executive Officer. The MRP may be modified by the Water Board Executive Officer.
2. The Discharger must comply with the “General Provisions for Monitoring and Reporting,” dated September 1, 1994, which is attached to and made part of MRP No. R6V-2019-PROPOSED.

IV. PROVISIONS

A. Rescission of Waste Discharge Requirements

Board Order No. 6-95-121, as amended by Board Order No. 6-95-121A1, and MRP No. 95-121 are hereby rescinded.

B. Standard Provisions

The Discharger must comply with the “Standard Provisions for Waste Discharge Requirements,” dated September 1, 1994, in Attachment C, which is attached to and made part of this Order.

C. Final Closure and Post-Closure Maintenance Plan Approval

This Order provides Water Board approval of the FCPCMP and the proposed engineered alternative final cover. The Discharger must submit a report to the Water Board on or before **February 15, 2020**, and by **February 15** every year thereafter, indicating that the FCPCMP is in conformance with existing Facility operations. The FCPCMP and cost estimates for post-closure maintenance and

corrective action of all reasonably foreseeable releases must be updated if/when there is a significant change in the activities or costs for maintenance and/or monitoring of the Facility, and to reflect changes in inflation rates (see Section IV.D below).

D. Financial Assurance

The Discharger must submit to the Water Board a financial assurance report on or before **February 15, 2020**, and by **February 15** every year thereafter, providing evidence that adequate financial assurances has been provided for post-closure maintenance and for corrective action of all known and reasonably foreseeable releases. Evidence must include the total amount of money available in the fund developed by the Discharger. In addition, the Discharger must either provide evidence that the amount of financial assurance is still adequate or increase the amount of financial assurance by an appropriate amount. An increase may be necessary due to inflation, change(s) in regulatory requirements, change(s) in the approved closure plan, or other unforeseen events.

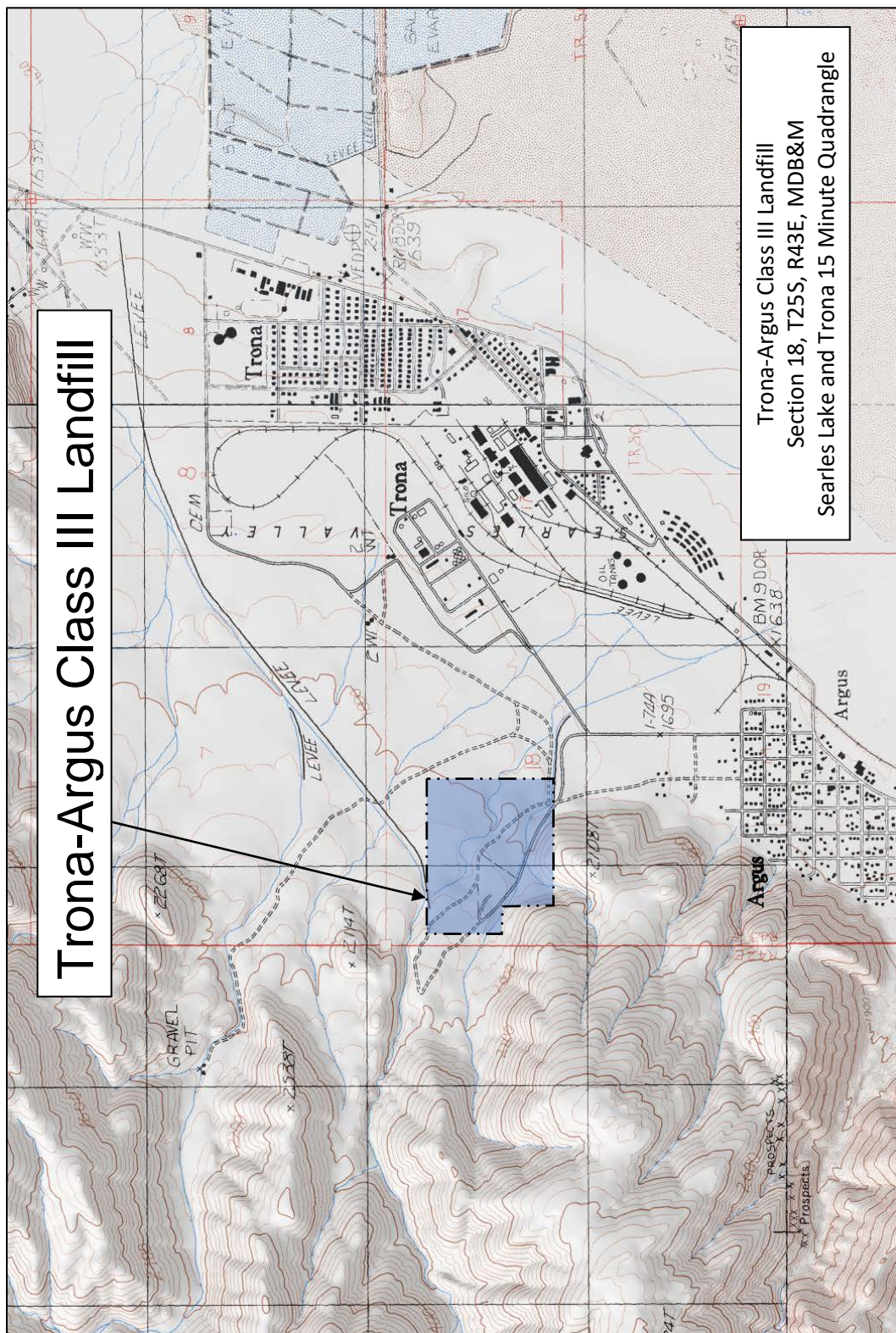
I, Patty Z. Kouyoumdjian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by California Regional Water Quality Control Board, Lahontan Region, on June 12, 2019.

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PATTY Z. KOUYOUMDJIAN  
EXECUTIVE OFFICER

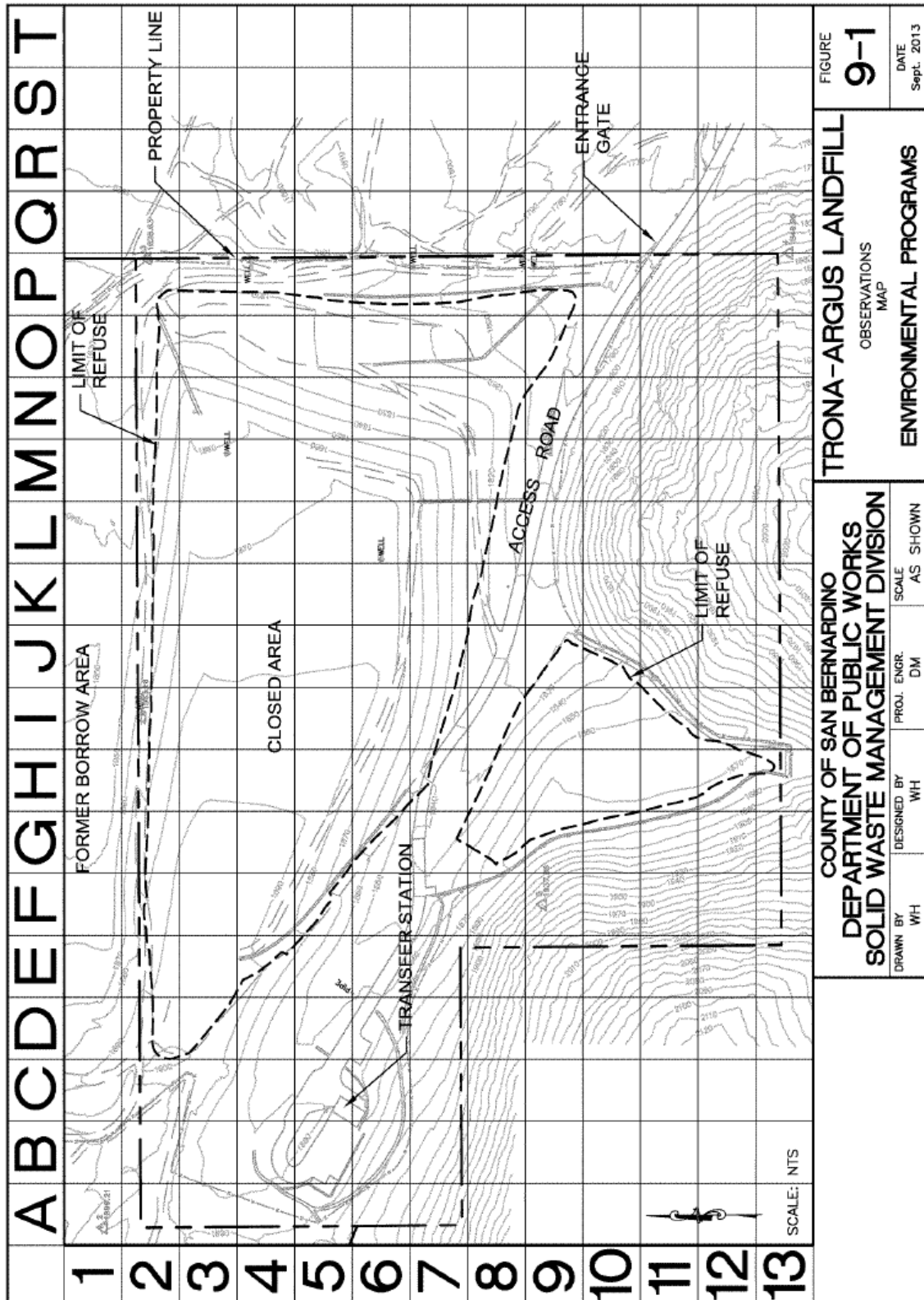
Attachments: A. Trona-Argus Sanitary Landfill Facility and Site Vicinity Map  
B. Trona-Argus Sanitary Landfill Footprint of Waste and Site Topography Map  
C. Standard Provisions for Waste Discharge Requirements

Attachment A  
Trona-Argus Sanitary Landfill Facility and Site Vicinity Map





Attachment B  
Trona-Argus Sanitary Landfill Footprint of Waste and Site Topography Map





CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

**STANDARD PROVISIONS**  
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Board staff:

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

2. Reporting Requirements

- a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.
- b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.
- c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.
- d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.

- e. Reports required by the WDRs, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation.
  - f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.
3. Right to Revise WDRs
- The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.
4. Duty to Comply
- Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.
5. Duty to Mitigate
- The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.
6. Proper Operation and Maintenance
- The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.
7. Waste Discharge Requirement Actions
- The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.



8. Property Rights

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

9. Enforcement

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

10. Availability

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

11. Severability

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

12. Public Access

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

13. Transfers

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

14. Definitions

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

15. Storm Protection

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



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

**MONITORING AND REPORTING PROGRAM  
NO. R6V-2019-[PROPOSED]  
WDID NO. 6B360304021**

**SAN BERNARDINO COUNTY SOLID WASTE MANAGEMENT DIVISION  
TRONA-ARGUS SANITARY LANDFILL**

San Bernardino County

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This Monitoring and Reporting Program (MRP) No. R6V-2019-PROPOSED is issued to San Bernardino County Public Works Department, Solid Waste Management Division (Discharger) pursuant to California Water Code, section 13267 and incorporates requirements for groundwater and unsaturated zone monitoring and reporting; facility monitoring, maintenance, and reporting; and financial assurances reporting contained in California Code of Regulations (CCR), title 27, section 20005, et seq. The technical reports required by Order R6V-2019-PROPOSED and MRP No. R6V-2019-PROPOSED are necessary to assure compliance with the Waste Discharge Requirements. Therefore, the burden, including costs, of these reports bears a reasonable relationship to the need for the report and the benefits to be obtained from the reports.

**I. WATER QUALITY PROTECTION STANDARD**

A Water Quality Protection Standard (WQPS) is required by CCR, title 27, section 20390 through 20410, to assure the earliest possible detection of a release from a waste management unit to the underlying soil and/or groundwater. The WQPS consists of all constituents of concern (COCs), the concentration limits for each COC, the point of compliance, and all water quality monitoring points. The Executive Officer shall review and approve the WQPS, or any modification thereto, for each monitored medium.

The San Bernardino County Solid Waste Management Division (Discharger) submitted a complete Final Closure and Post-Closure Maintenance and Monitoring Plan (FCPCMP) for the Trona-Argus Sanitary Landfill (Facility) in June 1997. The waste management unit (Landfill) was closed on October 16, 1998, in accordance with the FCPCMP. Subsequently, a revised FCPCMP was submitted in August 2000. The Facility is currently operating as a transfer station and operating under a Detection Monitoring Program (DMP). A WQPS is necessary to evaluate the effectiveness of the DMP to determine if a release occurs.

**A. Constituents of Concern**

The COCs include all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in a waste management unit. The COCs for each monitored medium at the Landfill are listed in Attachment A, which is made part of this

Monitoring and Reporting Program (MRP). The Discharger must monitor all COCs at the sampling frequency and reporting frequency listed in Attachment A.

B. Monitoring Parameters

Monitoring parameters are those COCs that provide a reliable indication of a release from the Facility. The monitoring parameters for each monitored medium at the Landfill are listed in this MRP, Attachment A. The Discharger must monitor all monitoring parameters at the sampling frequency and reporting frequency listed in Attachment A.

C. Concentration Limits

Concentration limits are established for each COC and are intended to reflect background ambient conditions of surface and subsurface media that are unaffected by a release from the waste management unit. At any given time, the concentration limit for each COC must be equal to the background data set of that constituent unless a concentration limit greater than background (CLGB) has been established. CCR, title 27, section 20415 allows for various options to determine concentration limits including statistical interwell and intrawell methods and non-statistical methods. CLGBs have not been established for this site.

1. The Discharger is using the following methodologies to determine concentration limits for the groundwater monitoring program.
  - a. Interwell Comparisons – The Discharger is using historical water quality data from the upgradient groundwater monitoring well to develop concentration limits for inorganic COCs. Because there is no indication of a release from the Landfill, interwell comparisons are appropriate.
  - b. Intrawell Comparisons – When the upgradient groundwater dataset is determined to have a non-normal distribution, non-parametric intrawell prediction limits are calculated for those inorganic COCs.
  - c. Non-Statistical Comparisons – For inorganic COCs either not detected in background wells or only detected at trace concentrations and for man-made organic COCs, the concentration limit has been set at the method detection limit (MDL) for the analytical method used. For the DMP, the MDL is selected as the concentration limit, as this will allow for early detection of a release from the Landfill.
2. The Discharger is not required to have concentration limits for soil-pore gas methane, carbon dioxide, nitrogen, and oxygen COCs. These COCs exist naturally in soil with a high degree of variability such that development of background concentrations would be technically infeasible. While VOCs are not naturally occurring in the soil, establishing

concentration limits for VOCs in the unsaturated zone is technically infeasible at this time because few studies have evaluated the relationship between soil-pore gas VOC concentrations and the potential threat to water quality. The Discharger will collect soil-pore gas data in the unsaturated zone and use that data to characterize the relationship, if any, between landfill gas (LFG) migration, soil-pore gas VOC concentrations, and the potential threat to water quality at the soil-groundwater interface.

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

D. Point of Compliance and Monitoring Points

The point of compliance is a vertical surface located at the hydraulically downgradient limit of the Landfill that extends through the uppermost aquifer underlying the waste management unit (Landfill). The point of compliance is monitored by existing groundwater monitoring wells T-4 and T-5. Additional monitoring points include upgradient (background) groundwater monitoring well T-1. The soil-pore gas in the unsaturated zone is monitored for LFG concentrations with a series of three LFG probes located around the perimeter of the Landfill (TG-1, TG-2, and TG-3). The monitoring point locations are shown on Attachment B of this MRP.

E. Compliance Period

The compliance period is the number of years equal to the active life of the Landfill plus a minimum of 30 years during the post-closure period. The compliance period is the minimum period during which the Discharger must conduct a water quality monitoring program. The compliance period must begin anew each time the Discharger initiates an Evaluation Monitoring Program (EMP). The compliance period may be extended if the facility is not in compliance with its WQPS.

II. MONITORING

The Discharger must comply with the monitoring requirements outlined below. All monitoring and inspection activities must be documented, and all sampling must be conducted in accordance with an approved Sampling and Analysis Plan (SAP) that includes quality assurance and quality control standards and procedures, as described in the General Provisions for Monitoring and Reporting (Attachment C of this MRP).

A. Detection Monitoring Program

The Discharger must operate and maintain a detection monitoring system that complies with the DMP monitoring provisions contained in CCR, title 27, section 20385 through 20420. Monitoring of the groundwater and unsaturated zone must be conducted to evaluate the effectiveness of the DMP and to provide the best assurance of the early detection of any releases from the Landfill. Changes to the existing monitoring system must be designed and certified by a California-licensed professional geologist or civil engineer as meeting the requirements of CCR, title 27, section 20415(e)(1). The Discharger must collect, preserve, and transport samples in accordance with an approved SAP.

1. Groundwater Monitoring

The groundwater monitoring program monitors the quality of groundwater that passes through the point of compliance as well as monitors the quality of groundwater upgradient, cross-gradient, and downgradient of the Landfill through the collection of groundwater samples for laboratory analysis and field measurement of water quality parameters.

a. Monitoring Points

The point of compliance is monitored by the existing groundwater monitoring wells T-4 and T-5. Additional monitoring points include upgradient (background) groundwater monitoring well T-1.

b. Depth to Groundwater

Prior to purging and sampling, the Discharger must measure and record the depth below the ground surface (bgs) of the static groundwater surface in all groundwater monitoring wells. The measurements must be accurate to the nearest 0.01 foot.

c. Groundwater Purging and Sampling

Prior to sampling, all groundwater monitoring wells must be purged using either standard or low-flow techniques until temperature, electrical conductivity, and pH of extracted well water have stabilized. These parameters will be considered stable when three consecutive readings have pH values within +/- 0.3 pH units and temperature and electrical conductivity values within +/- three (3) percent.

All groundwater samples, with the exception of field parameters, are to be analyzed by a California state-certified laboratory using the United States Environmental Protection Agency (USEPA) analytical methods listed in Attachment A or the most recently approved SW-846 USEPA method or other equivalent USEPA

method. An alternate method may be proposed and used if acceptable to the Executive Officer.

d. Constituents of Concern and Monitoring Parameters

The Discharger must monitor, at each groundwater monitoring well, all COCs and monitoring parameters in accordance with the frequencies listed in Attachment A. Should any non-monitoring parameter COC exceed their respective concentration limit by a measurably significant amount at any given monitoring point, that non-monitoring parameter COC will become a monitoring parameter at that monitoring point.

e. Field Parameters

The Discharger must monitor, at each groundwater monitoring well, all field parameters in accordance with the frequencies listed in Attachment A.

f. Aquifer Characteristics

The Discharger must calculate, and illustrate on a site plan and/or aerial photograph, the following aquifer characteristics: the static water level (feet above mean sea level) in each groundwater monitoring well; the groundwater gradient (feet/feet); the direction of the groundwater gradient beneath and around the Facility (degrees); the velocity of groundwater flow (feet/year); and the current groundwater isocontours for that monitoring period.

g. Calibration Documentation

Annually, the Discharger must submit documentation of instrument calibration and performance checks to verify proper operation of the field monitoring equipment.

2. Unsaturated Zone Monitoring

The unsaturated (vadose) zone monitoring program monitors the composition of soil-pore gases near the Landfill through the collection soil-pore gas samples for laboratory analyses and field measurements. Monitoring of the unsaturated zone must coincide with the groundwater monitoring period.

a. Monitoring Points

The unsaturated zone is monitored for soil-pore gas using a series of three LFG monitoring wells, each having isolated multi-level (nested) probes, located around the perimeter of the landfill (TG-1,

TG-2, and TG-3). All three LFG monitoring wells are completed with isolated probes to depths of 50 feet bgs (shallow probe) and 90 feet bgs (deep probe).

b. Field Calibration

Prior to beginning gas collection at the Facility, the instrument(s) will be calibrated using laboratory-grade calibration gases and procedures according to manufacturer recommendations and the approved SAP. This will be done each day the instrument is used and whenever an instrument has been transported from one facility to another to ensure that the field calibration is performed at the same atmospheric pressure at which the soil-gas samples are collected.

c. Soil-Pore Gas Purging and Sampling

Prior to sampling, each LFG probe must be purged of the gas that has been standing inside the casing until methane, oxygen, and carbon dioxide concentrations have stabilized. These parameters will be considered stable when continuous readings have stopped fluctuating. Atmospheric pressure will also be recorded during the purging process.

All soil-gas samples, with the exception of field parameters, are to be collected in accordance with the approved SAP and analyzed by a California state-certified laboratory using the USEPA analytical methods listed in Attachment A or the most recently approved SW-846 USEPA method or other equivalent USEPA method. An alternate method may be proposed and used if acceptable to the Executive Officer.

d. Constituents of Concern and Monitoring Parameters

The Discharger must monitor the shallow and deep probes of the LFG monitoring wells for all COCs and monitoring parameters in accordance with the frequencies listed in Attachment A.

e. Field Parameters

The Discharger must monitor all probes in each LFG monitoring well for all field parameters in accordance with the frequencies listed in Attachment A. If methane gas is detected during field monitoring at or above a threshold concentration of 5 percent of methane gas volume in air, then soil-pore gas samples must be taken from that LFG monitoring probe (during that monitoring event) and analyzed for the soil-pore gas COCs listed in Attachment A.



f. Calibration Documentation

Annually, the Discharger must submit documentation of instrument calibration and performance checks to verify proper operation of all field monitoring equipment.

B. Facility Inspections

The following elements must be monitored annually and reported to the Water Board in accordance with the schedule specified in this MRP, Section IV.A.2. Maintenance and repairs must be performed in a timely manner following discovery of the problem in accordance with the procedures outlined in the approved FCPCMP.

1. Annual Inspection

Annually, prior to the anticipated rainy season, but no later than **September 30**, the Discharger must conduct an inspection of the Facility. The inspection must assess damage to the drainage control system, groundwater monitoring equipment (including wells, etc.), and must include adequate observations to assess the Landfill condition. Any necessary construction, maintenance, or repairs must be completed by **October 31** of the same year. The Discharger must document the inspection and the repair measures implemented, including photographs of the problem and of the repairs.

2. Storm Events

The Discharger must inspect all precipitation, diversion, and drainage facilities for damage **within 10 days** following major storm events. Necessary repairs must be completed **within 30 days** of the inspection. The Discharger must document the inspection(s) and the repair measures implemented, including photographs of the problem and of the repairs.

C. Final Cover Integrity Monitoring and Maintenance Program

The Discharger has installed an engineered alternative final cover over the Landfill, specifically an evapotranspirative (ET) cover. The final cover consists of 2.5-foot thick engineered soil material underlain by a 2-foot thick foundation layer. The cover has been graded to prevent leachate formation due to storm water infiltration, to promote lateral runoff, and to prevent ponding. Pursuant to CCR, title 27, section 21090, the Discharger must monitor the condition of the cover system as outlined in the FCPCMP. The purpose of this monitoring is to ensure the integrity of the cover and to evaluate the cover's capability to promote runoff and prevent ponding.

The following elements are to be monitored annually and reported to the Water Board in accordance with the schedule specified in this MRP, section IV.A.3.

Maintenance and repairs to the cover must be performed in a timely manner following discovery of the problem in accordance with the procedures outlined in the approved FCPCMP.

1. An evaluation of the condition of the ET cover surface, including areas requiring replanting/reseeding, if needed.
2. Eroded portions of the cover surface requiring regrading, repair, or (for areas where the problem persistently reoccurs) installation of additional erosion control measures.
3. An evaluation of the ability of the cover to promote runoff and prevent ponding.
4. Areas where there is evidence of ponding or lacking free drainage.
5. An evaluation of the cover thickness, including areas requiring regrading and additional soil cover, to maintain the as-built final cover over the entire surface of the Landfill.
6. Areas of the cover surface damaged by equipment operation.
7. Localized areas identified in the five-year iso-settlement survey as having sustained repeated or severe differential settlement.
8. Prior to conducting periodic grading repairs and maintenance of the cover surface, the discharger must note on a map of the Landfill the approximate location and outline of any areas where differential settlement is visually obvious. Map notations and delineations made pursuant to this paragraph need not be surveyed, so long as all areas where differential settlement was visually identifiable prior to regrading can be relocated. Such notation and delineation must be made by, or under the supervision of, a California-licensed professional geologist or civil engineer.

D. Storm Water Monitoring and Reporting Program

Waste in discharges of storm water must be reduced or prevented to achieve the best practicable treatment level using controls, structures, and best management practices (BMPs) for areas associated with the transfer stations operations at the Facility. At minimum, the Discharger must: develop and implement a site-specific storm water pollution control plan (SWPCP); conduct monitoring, including visual observations and periodic collection of samples for analytical analysis; evaluate storm water monitoring data; implement appropriate response actions when monitoring data indicate non-compliance with the storm water monitoring program; and provide annual reports to the Water Board.

1. Storm Water Pollution Control Plan

The Discharger must develop and implement a site-specific SWPCP (or equivalent document) that contains, at minimum, the following elements. A copy of the SWPCP (and amendments thereto) must be maintained at the Facility so as to be available to site personnel at all times. The Discharger is required to submit a copy of the SWPCP to the Water Board in accordance with the schedule specified in MRP section IV.F.

a. Facility Information

A list of site contacts including those persons responsible for assisting with the implementation of the SWPCP.

b. Site Map

A site map that illustrates: the Facility boundary; all storm water drainage areas within the Facility and the flow direction of each drainage area; locations of storm water collection and conveyance systems, including associated discharge locations and directions of flow; locations of storm water monitoring points; locations of structural control measures that affect run-on; and locations of all industrial storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, cleaning and material reuse areas, and other areas of industrial activity that may have potential pollutant sources.

c. List of Industrial Materials

A list of industrial materials<sup>1</sup> handled at the Facility's transfer station, the locations where each material is stored and handled, as well as the typical quantities and handling frequency.

d. Potential Pollutant Sources

A description of all potential pollutant sources including industrial processes, material handling and storage areas, dust and particulate generating activities, non-storm water discharges, and erodible surfaces.

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<sup>1</sup> Includes, but is not limited to: raw materials, recyclable materials, intermediate products, final products, by product, waste products, fuels, materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances; pesticides; and waste products such as ashes, slag, and sludge and that are used, handled, stored, or disposed in relation to a facility's industrial activity.

e. Best Management Practices

A narrative description of each minimum and/or advanced BMP being implemented at the Facility, as well as a summary table that identifies each area of industrial activity, the associated pollutant sources and pollutants, and the specific BMPs being implemented.

The following minimum BMPs must be implemented and maintained to reduce or prevent pollutants in industrial storm water discharges: good housekeeping; preventative maintenance; spill and leak prevention response; material handling and waste management; erosion and sediment controls; an employee training program; and quality assurance and record keeping.

Advanced BMPs may be necessary to reduce or prevent discharges of pollutants in storm water discharges in a manner that reflects best industry practice considering technological availability and economic practicability and achievability. Advanced BMPs may include: exposure minimization BMPs; storm water containment and discharge reduction BMPs; treatment control BMPs; or other advanced BMPs based on site-specific criteria.

f. Storm Water Monitoring Plan

The SWPCP must include a storm water monitoring plan that meets the requirements outlined in MRP section II.C.2 below.

2. Storm Water Monitoring

a. Monitoring Points

The storm water discharge monitoring locations must be selected such that samples collected are representative of storm water discharge leaving each drainage area identified for the Facility. The storm water discharge monitoring locations must be identified on the site plan in the SWPCP.

b. Storm Water Sampling

The Discharger must collect storm water samples from each storm water discharge monitoring location and analyze for all monitoring parameters in accordance with the frequencies listed in Attachment A.

All storm water samples, with the exception of pH, are to be analyzed by a California state-certified laboratory using the USEPA analytical methods listed in Attachment A or the most recently approved SW-846 USEPA method or other equivalent USEPA

method. An alternate method may be proposed and used if acceptable to the Executive Officer.

c. Visual Observations

Monthly, the Discharger shall visually observe and document, during normal operating hours, each drainage area for the following: the presence or indications of prior, current, or potential non-storm water discharges and their sources; authorized non-storm water discharges, their sources, and associated BMPs; and all potential pollutant sources.

Visual observations must also be conducted at the same time that storm water sampling occurs. At the time a storm water sample is collected, the Discharger shall observe and document the discharge for the following.

- i. Visually observe and record the presence or absence of floating and suspended materials, oil and grease, discolorations, turbidity, odors, trash/debris, and source(s) of any discharged pollutants.
- ii. In the event that a discharge location is not visually observed during the sampling event, the Discharger must record which discharge locations were not observed during sampling or that there was no discharge from the discharge location.

d. Monitoring Parameters

The Discharger must monitor, at each storm water discharge monitoring location, all parameters in accordance with the frequencies listed in Attachment A.

e. Water Quality Thresholds

The specific water quality thresholds that apply to the storm water monitoring parameters are listed in the table below.

STORM WATER MONITORING	
Parameter	Water Quality Thresholds
pH	Measured pH shall not be lower than 6.0 nor greater than 9.0.
Turbidity	Storm water discharges shall not exceed 500 nephelometric turbidity units (NTUs).
Oil and Grease, Total	Storm water discharges shall not contain oils and greases at concentrations in excess of 15 milligrams per liter (mg/L).
Iron, Total	Storm water discharges shall not contain dissolved iron at concentrations in excess of 1.0 mg/L.

f. Calibration Documentation

Annually, the Discharger must submit documentation of instrument calibration and performance checks to verify proper operation of any field monitoring equipment.

3. Storm Water Data Evaluation and Response Actions

The storm water monitoring data (storm water sampling and analytical data and visual observations) must be evaluated to determine the following: the effectiveness of BMPs in reducing or preventing pollutants in the storm water discharges; compliance with the monitoring parameter water quality thresholds; and the need to implement additional BMPs and/or SWPCP revisions.

The results of all storm water sampling and analytical results from each distinct sample must be directly compared to the water quality threshold for the corresponding monitoring parameter. An exceedance of one or more water quality threshold requires the Discharger to implement the following response actions:

- a. The Discharger must notify the Water Board verbally or via email within 30 days of obtaining laboratory results whenever a determination is made that a water quality threshold is exceeded for one or more storm water monitoring parameters;
- b. Identify the pollutant sources that may be related to the exceedance and whether the BMPs in the SWPCP have been properly implemented and perform BMP maintenance, if necessary;
- c. Assess the SWPCP and its implementation to determine whether additional BMPs or SWPCP measures are necessary to reduce or prevent pollutants in storm water discharges; and
- d. Revise or amend the SWPCP, as appropriate, to incorporate the additional BMPs or SWPCP measures necessary to reduce or prevent pollutants in storm water discharges and implement the revised SWPCP no later than 60 days following the reported exceedance; or
- e. Demonstrate, to the satisfaction of the Executive Officer, that the exceedance(s) is attributed solely to non-industrial pollutant sources and/or to natural background sources.

### III. DATA ANALYSES

All groundwater data must be analyzed using statistical and non-statistical methods that meet the requirements of CCR, title 27, sections 20415, subdivisions (e)(8) and (9).

#### A. Site-Specific Statistical Analysis Method

In order to determine whether there is "measurably significant" evidence of any new releases from the Facility, evaluation of data will be conducted using statistical methods. For detection monitoring, the Discharger must use statistical methods to analyze COCs and monitoring parameters that exhibit concentrations that equal or exceed their respective concentration limit. The Discharger may propose and use any data analyses that meets the requirements of CCR, title 27, section 20415, subdivision (e)(7). *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (USEPA, 2009) or subsequent versions may also be used to select the statistical test to use for comparing detection monitoring data to background monitoring data.

The Discharger has established concentration limits for detection and evaluation of compliance with the CAP. The limits may be revised every two years.

#### B. Non-Statistical Analysis Methods

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

##### 1. Physical Evidence

Physical evidence can include, but is not limited to, unexplained stress in biological communities such as vegetation loss, soil discoloration, or groundwater mounding. Each annual report must comment on such physical elements.

##### 2. Time-Series Plots

Non-statistical evidence of a release may include trends of increasing concentrations of one or more constituents over time, as depicted in time-series plots. Each annual report must include these time-series plots. Time-series plots are not required for parameters that have never been detected above their MDL (as specified by the applicable USEPA method).

#### IV. REPORTING REQUIREMENTS

The Discharger must comply with the following reporting requirements.

##### A. Scheduled Reports to be Filed with the Water Board

The following periodic reports, including all water and soil vapor monitoring data collected during the corresponding reporting period, must be submitted electronically to the Water Board by uploading to the State Water Board's GeoTracker system, per the following schedule.

REPORTING SCHEDULE		
Report Name	Sampling and Reporting Period	Report Due Date
Annual DMP Monitoring Report <sup>1</sup>	January 1 – December 31	February 15
Annual Storm Water Report <sup>1</sup>	January 1 – December 31	February 15
Annual Cover Performance Report <sup>1</sup>	January 1 – December 31	February 15
Five-Year Iso-Settlement Map <sup>2</sup>	(once every five years)	February 15
Five-Year Constituent of Concern Monitoring Report <sup>3</sup>	January 1 – June 30	August 15
	July 1 – December 31	February 15
<sup>1</sup> Reports may be combined. <sup>2</sup> The next five-year iso-settlement map is scheduled to be submitted to the Water Board no later than February 15, 2020. <sup>3</sup> Sampling and reporting period will alternate between January 1 through June 30 for one five-year sampling event and July 1 through December 31 for the next five-year sampling event. The August 15 report due date corresponds to the January 1 through June 30 sampling and reporting period; the February 15 report due date corresponds to the July 1 through December 31 sampling and reporting period. The next five-year constituent of concern report is due August 15, 2020.		

##### 1. Annual Detection Monitoring Reports

Annual DMP reports must be submitted to the Water Board no later than **February 15** of each year and must include, but not be limited to, the following information.

- a. All data collected during the reporting period in accordance with the approved SAP for the Landfill's groundwater and unsaturated zone monitoring systems, as outlined in MRP section II.A.
- b. Tabulated results of sampling and laboratory analyses for each groundwater monitoring point where a parameter has been reported at a concentration exceeding the MDL, including historical (at minimum, the last ten years) and current reporting period data, as well as the concentration limit for each monitoring parameter and an identification of each sample that exceeds its respective



concentration limit by a measurably significant amount at any given monitoring point.

- c. Tabulated results of sampling and laboratory analyses for each unsaturated zone monitoring point, including historical (at minimum, the last ten years) and current reporting period data.
- d. A map and/or aerial photograph showing the Landfill perimeter and ancillary facilities as well as locations of all monitoring points, observation stations, and the surface trace of the point of compliance.
- e. Calculate and illustrate on a map and/or aerial photograph the static groundwater surface elevation (feet above mean sea level) in each groundwater monitoring well, the groundwater gradient (feet/feet) and the direction of the groundwater gradient beneath and around the Facility (degrees), the velocity of groundwater flow (feet/year), and the current groundwater isocontours for that monitoring period.
- f. Copies of all field monitoring and well sampling data sheets.
- g. Time-series plots of the analytical results from the groundwater and unsaturated zone monitoring at each monitoring point for each COC detected during the monitoring period as well as available historical data (minimum of last ten years of data). Time-series plots must include, as horizontal lines, the COCs concentration limit as derived in accordance with the WQPS for the respective COC/monitoring point pair, as well as the MDL for the analytical method used.
- h. A letter transmitting the essential points of each report, including a discussion of any violations found since the last report was submitted and describing actions taken or planned for correcting those violations.
  - i. If the Discharger has previously submitted a detailed time schedule for correcting violations, a reference to the correspondence transmitting this schedule will suffice.
  - ii. If no violations have occurred since the last submittal, this must be stated in the letter of transmittal.
- i. Evidence that adequate financial assurance for post-closure maintenance and corrective action is still in effect. Evidence may include a copy of the renewed financial instrument or a copy of the receipt for payment of the financial instrument.

- j. Evidence that the financial assurance amount is adequate or increase the amount of financial assurance by an appropriate amount if necessary, due to inflation, a change in the approved closure plan, or other unforeseen events.
- k. The Discharger must review the FCPCMP annually to determine if significant changes in the maintenance of the Facility warrant an update to the plan. Proposed changes to the plan must be outlined in the annual report

2. Annual Storm Water Reports

Annual storm water reports must be submitted to the Water Board no later than **February 15** of each year in accordance with the frequencies listed in Attachment A, and may be combined with the annual DMP monitoring report. Annual storm water reports must include, but not be limited to, the following information:

- a. All data collected during the reporting period in accordance with the storm water monitoring plan, as outlined in MRP section II.C.2.
- b. Tabulated results of sampling and laboratory analyses for each storm water discharge monitoring location, including historical and current reporting period data, as well as the water quality objective for each monitoring parameter and an identification of each sample that exceeds its respective water quality objective at any given discharge monitoring location.
- c. A copy of the current site map from the SWPCP.
- d. Copies of all field monitoring, storm water sampling, and visual observation data sheets. An explanation shall be provided in the Annual Report for uncompleted sampling event visual observations.
- e. Calibration methods and any discrepancies of any meters used for field parameter evaluations after calibration is performed.
- f. A summary of the actions taken in response to a water quality objective exceedance, including monitoring parameter and pollutant source(s) involved, additional BMP and/or SWPCP measures taken, and associated dates and timelines for implementing the response action; or a demonstration that the exceedance(s) is attributed to a non-industrial pollutant source and/or to a natural background source.
- g. A copy of any SWPCP amendments and/or revisions for the reporting period.

- h. A summary of significant spills and/or leaks that occurred at the Facility during the reporting period and the response taken by the Discharger, including dates.
- i. A summary of employee storm water trainings performed during the reporting period, including dates and content.

3. Final Cover Reports

a. Annual Final Cover Reports

Annual final cover reports must be submitted to the Water Board no later than **February 15** of each year, and may be combined with the annual DMP monitoring report. Annual final cover reports must include, but not be limited to, the following information.

- i. All data collected in accordance with this MRP, section II. B.1.
- ii. A description of the condition of the final cover materials and a discussion regarding any settlement or soil cover erosion, which have occurred, and the capability of the cover to promote runoff and prevent ponding.
- iii. Where settlement, erosion, or other damage to the cover is noted, the report must indicate the actions taken to repair the cover material, the date(s) those actions were taken, and what actions are being taken to prevent reoccurrence.

b. Five-Year Iso-Settlement Map

Pursuant to CCR, title 27, 21090(2)(2), at least once every five years, the Discharger must prepare and submit to the Water Board an iso-settlement map accurately depicting the estimated total change in elevation of the final cover surface. The five-year iso-settlement map must be submitted to the Water Board no later than **February 15** of the year in which it is due and may be combined with the annual DMP monitoring report. The next five-year iso-settlement map is scheduled to be submitted to the Water Board no later than **February 15, 2020**. The map must include, at minimum, the following information:

- i. The total lowering of the surface elevation of the final cover, relative to the baseline topographic map prepared at the time of closure (as-built condition).
- ii. Indicate all areas where repeated and severe differential settlement has occurred since closure.

- iii. The map must be drawn to the same scale and contour interval as the baseline as-built topographic map but show the current topography of the final cover and include overprinted isopleths indicating the total settlement to-date.

4. Five-Year Constituent of Concern Monitoring and Reporting Program

Pursuant to CCR, title 27, section 20420, subdivision (g), every five years the Discharger must sample for COCs. Groundwater samples must be collected and submitted for laboratory analyses at all monitoring points once every five years for all monitoring parameters and COCs listed in Appendix I and Appendix II of Title 40, Code of Federal Regulations (40 CFR), Part 258 (Attachment A). Successive monitoring efforts must be carried out alternately during January 1 through June 30 of one five-year sampling event and July 1 through December 31 of the next five-year sampling event, and every fifth year, thereafter. The five-year COC sampling event must be reported no later than 45 days following the monitoring period. The last five-year sampling event occurred in second half of 2015; therefore, the next five-year sampling event is scheduled to occur in first half of 2020 and reported to the Water Board no later than **August 15, 2020**.

B. Unscheduled Reports to be Filed with the Water Board

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

1. Notice of Tentative Release from the Landfill

Should the statistical or non-statistical data analyses indicate, for a given COC, that a new release is tentatively identified, the Discharger must follow these requirements.

a. Physical or Measurably Significant Evidence of a Release from the Landfill

The Discharger must immediately notify the Water Board verbally whenever a determination is made that there is significant physical or "measurably significant" evidence of a release from the Landfill. This verbal notification must be followed by written notification via certified mail within seven days of such determination. Upon such notification, the Discharger may initiate verification procedures or demonstrate that another source other than the Landfill caused evidence of a release in accordance with MRP section IV.B.1.b below.

The notification must include the following information:

- i. The potential source of the release;
- ii. General information including the date, time, location, and cause of the release;
- iii. An estimate of the flow rate and volume of waste involved;
- iv. A procedure for collecting samples and description of laboratory tests to be conducted;
- v. Identification of any water body or water-bearing media affected or threatened;
- vi. A summary of proposed actions; and
- vii. For a physical evidence of a release – the physical factors that indicate evidence of a release; or
- viii. For a measurably significant evidence of a release – the monitoring parameters and/or COCs that are involved in the measurably significant evidence of a release from the Landfill.

b. Other Source That May Cause Evidence of a Release from the Landfill

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

2. Evaluation Monitoring

The Discharger must, within 90 days of verifying a release, submit a technical report pursuant to California Water Code section 13267, subdivision (b), proposing an EMP meeting the provisions of CCR, title 27, section 20420, subdivision (k)(5). If the Discharger decides not to conduct verification procedures, or decides not to make a demonstration that a source other than the Landfill is responsible for the release, the release will be considered verified. The EMP must include the following information:

- a. COC Concentrations – the maximum concentration of each COC at each monitoring point as determined during the most recent COC sampling event (i.e., under CCR, title 27, section 20420,

subdivision (g) or (k)[1]). Any COC that exceeds its concentration limit is to be retested at that monitoring point. Should the results of the retest verify that the COC is above the concentration limit, then that COC will become a monitoring parameter at that monitoring point;

- b. Proposed Monitoring System Changes – any proposed changes to the groundwater and unsaturated zone monitoring systems necessary to meet the provisions of CCR, title 27, section 20425;
- c. Proposed Monitoring Changes – any proposed additions or changes to the monitoring frequency, sampling and analytical procedures or methods, or statistical methods used at the Facility necessary to meet the provisions of CCR, title 27, section 20425; and
- d. Proposed Delineation Approach – a detailed description of the measures to be taken by the Discharger to assess the nature and extent of the release from the Landfill.

3. Engineering Feasibility Study Report

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

4. Monitoring Well Logs

Pursuant to CCR, title 27, section 20415, subdivision (e)(2) all monitoring wells (including groundwater and unsaturated zone monitoring wells) and all other borings installed to satisfy the requirements of this Monitoring and Reporting Program must be drilled by a licensed drilling contractor and must be logged during drilling under the direct supervision of either a California-licensed professional geologist or civil engineer with expertise in stratigraphic well logging. Such logs must be submitted to the Water Board within 90 days following completion of fieldwork.

5. Significant Earthquake Event

After a significant<sup>2</sup> or greater earthquake event at the Facility, the Discharger must notify the Water Board within 48 hours, and within 45 days submit to the Water Board a detailed written post-earthquake report describing any physical damages to the containment features or groundwater and/or unsaturated zone monitoring systems. The Discharger must closely examine the Landfill cover, vegetative cover, slope conditions, drainage control system, and surface grading for signs of cracking or depressed/settled areas, following the earthquake event. If cracking or depressed areas of the cover is identified, the Discharger must make repairs to those areas within 30 days from the date of the earthquake event. Repairs must be made in accordance with approved procedures in the FCPCMP.

C. General Provisions

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

D. Violations

If monitoring data indicate violation of the Closure and Post-Closure WDR, the Discharger must report the violation in the scheduled report for the corresponding reporting period and provide information indicating the cause of violation(s) and the action taken or planned to bring the discharge into compliance.

E. Electronic Reporting Requirements

Pursuant to CCR, title 23, section 3890, the Discharger must submit reports, including soil, vapor, and water data, prepared for the purpose of subsurface investigation or remediation of a discharge of waste to land subject to Division 2 of CCR, title 27, electronically over the internet to the State Water Resources Control Board's GeoTracker system. This requirement is in addition to, and not superseded by, any other applicable reporting requirement. The Discharger must provide the monitoring report to the Water Board, as specified in this MRP, and upload the full monitoring report into GeoTracker, as stipulated by CCR, title 23.

For all other types of documents and correspondence, please send to the Water Board's email address at [Lahontan@waterboards.ca.gov](mailto:Lahontan@waterboards.ca.gov) and include your WDID No. or Facility name in the subject line.

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<sup>2</sup> A significant earthquake is a seismic event classified according to the United States Geological Survey Earthquake Hazard Program as a moderate earthquake measuring between 5 and 5.9 on the Richter scale, or higher. The Discharger may use the Modified Mercalli Intensity Scale VI or higher for equivalent ground shaking generated by a significant earthquake of Richter magnitude 5.0 or higher as contained with the USGS Earthquake Hazard Program Magnitude/Intensity Comparison chart found at <https://earthquakes.usgs.gov>.

F. Technical Reports

Pursuant to California Water Code, section 13267, subdivision (b), by **August 30, 2019**, the Discharger must submit a SWPCP that meets the requirements outlined in MRP section II.C.1. The report must be certified by a California-licensed professional geologist or civil engineer.

Ordered by: \_\_\_\_\_

PATTY Z. KOUYOUMDJIAN  
EXECUTIVE OFFICER

Dated: \_\_\_\_\_

- Attachments:
- A. Water Quality Monitoring Program
  - B. Location of Monitoring Points
  - C. General Provisions for Monitoring and Reporting

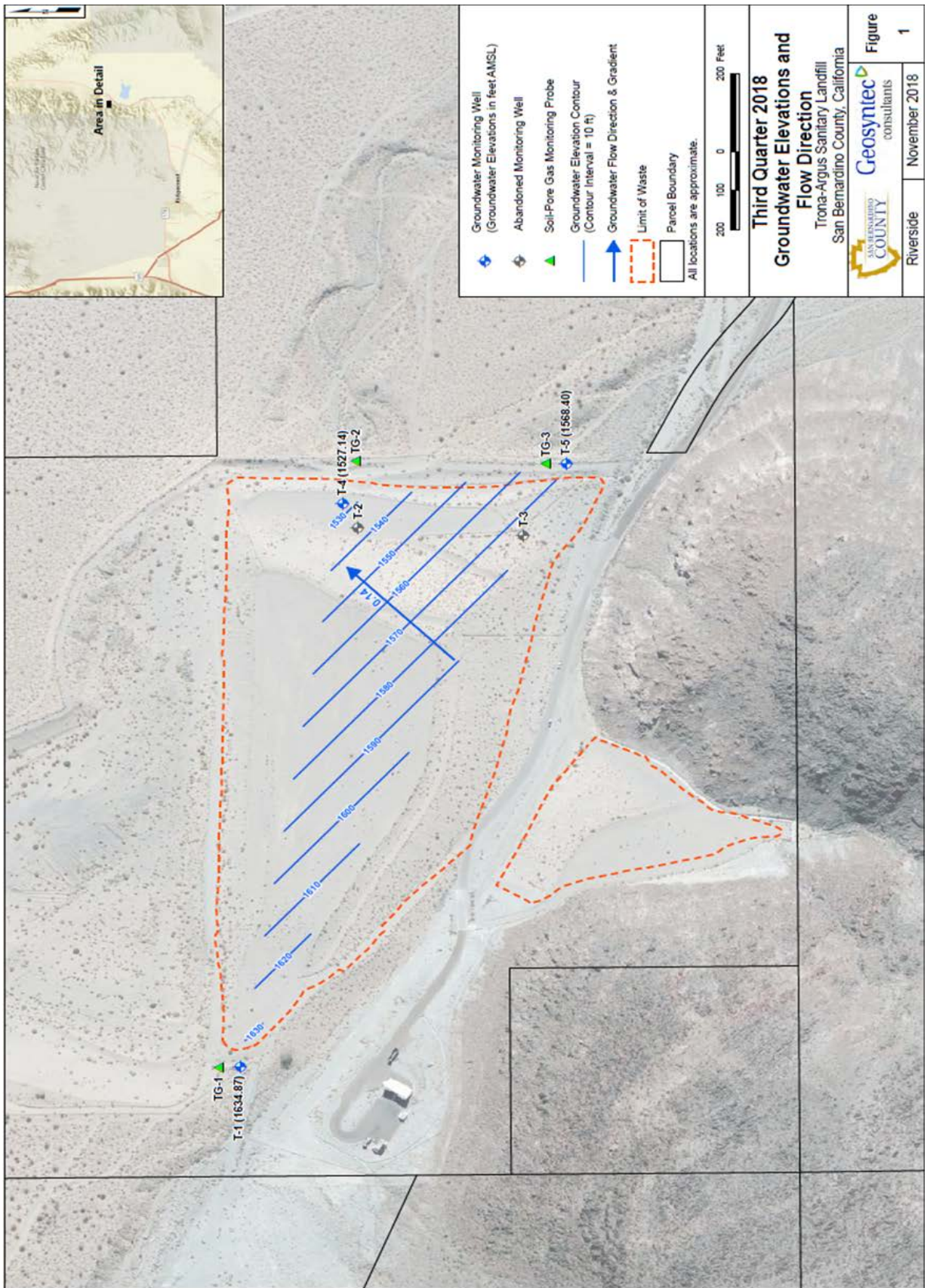


**ATTACHMENT A – WATER QUALITY MONITORING PROGRAM**

<b>GROUNDWATER MONITORING</b>					
<b>Parameter</b>		<b>Units</b>	<b>USEPA Method<sup>1</sup></b>	<b>Sampling Frequency</b>	<b>Reporting Frequency</b>
<b>Field Parameters</b>					
Depth to Groundwater		feet below ground surface	--	annually	annually
Temperature		degrees Fahrenheit or Celsius	--	annually	annually
Electrical Conductivity		micromhos/cm	--	annually	annually
pH		pH Units	--	annually	annually
Turbidity		NTUs	--	annually	annually
<b>Constituents of Concern</b>					
<b>Monitoring Parameters</b>	Total Dissolved Solids	milligrams/liter	E160.1	annually	annually
	Chloride	milligrams/liter	300	annually	annually
	Sulfate	milligrams/liter	300	annually	annually
	Nitrate as Nitrogen	milligrams/liter	300	annually	annually
	Volatile Organic Compounds <sup>2</sup>	micrograms/liter	8260	annually	annually
Antimony		micrograms/liter	7062	5 year	5 year
Arsenic		micrograms/liter	7062	5 year	5 year
Barium		micrograms/liter	6010	5 year	5 year
Beryllium		micrograms/liter	6010	5 year	5 year
Cadmium		micrograms/liter	7131	5 year	5 year
Chromium		micrograms/liter	6010	5 year	5 year
Hexavalent Chromium		micrograms/liter	7196	5 year	5 year
Cobalt		micrograms/liter	6010	5 year	5 year
Copper		micrograms/liter	6010	5 year	5 year
Lead		micrograms/liter	7421	5 year	5 year
Mercury		micrograms/liter	7471	5 year	5 year
Nickel		micrograms/liter	7521	5 year	5 year
Selenium		micrograms/liter	7742	5 year	5 year
Silver		micrograms/liter	6010	5 year	5 year
Thallium		micrograms/liter	7841	5 year	5 year
Tin		micrograms/liter	6010	5 year	5 year
Vanadium		micrograms/liter	6010	5 year	5 year
Zinc		micrograms/liter	6010	5 year	5 year
Total Cyanide		micrograms/liter	335.4	5 year	5 year
Total Sulfide		micrograms/liter	376.2	5 year	5 year
Volatile Organic Compounds <sup>3</sup>		micrograms/liter	8260	5 year	5 year
Semi-volatile Organic Compounds <sup>3</sup>		micrograms/liter	8270	5 year	5 year
Polychlorinated Biphenyls and Pesticides <sup>3</sup>		micrograms/liter	8141	5 year	5 year
Chlorinated Herbicides <sup>3</sup>		micrograms/liter	8151	5 year	5 year

UNSATURATED ZONE SOIL-PORE GAS MONITORING				
Parameter	Units	USEPA Method <sup>1</sup>	Sampling Frequency	Reporting Frequency
Field Parameters				
Atmospheric Pressure	inches of mercury	--	annually	annually
Nitrogen	parts per million or percent by volume	--	annually	annually
Methane <sup>4</sup>	parts per million or percent by volume	--	annually	annually
Carbon Dioxide	parts per million or percent by volume		annually	annually
Oxygen	parts per million or percent by volume		annually	annually
Constituents of Concern				
Methane	parts per million or percent by volume	ASTM-D1946	Based on results of soil-pore gas field parameter monitoring <sup>4</sup>	annually
Carbon Dioxide	parts per million or percent by volume			annually
Nitrogen	parts per million or percent by volume			annually
Oxygen	parts per million or percent by volume			annually
Volatile Organic Compounds	parts per billion or percent by volume	TO-15		annually
STORM WATER MONITORING				
Parameter	Units	USEPA Method <sup>1</sup>	Sampling Frequency	Reporting Frequency
pH	pH Units	--	four qualifying storm events per year <sup>5</sup>	annually
Turbidity	NTUs	SM-2130-B		
Oil and Grease, Total	milligrams/liter	1664A		
Iron, Total	milligrams/liter	200.7		
<div>1 - The Discharger shall analyze for all constituents, with the exception of field parameters, using the United States Environmental Protection Agency (USEPA) analytical methods indicated or the most recently approved SW-846 USEPA method or other equivalent USEPA method. An alternate method may be proposed and used if acceptable to the Water Board Executive Officer.</div> <div>2 - As defined in Appendix I, 40 CFR, part 258.</div> <div>3 - As defined in Appendix II, 40 CFR, part 258.</div> <div>4 - If methane gas is detected during field monitoring at or above a threshold concentration of 5 percent of methane gas volume in air, then soil-pore gas samples must be taken from that LFG monitoring probe (during that monitoring event) and analyzed for the soil-pore gas COCs listed.</div> <div>5 - A qualifying storm event is a precipitation event that produces a storm water discharge for at least one drainage area and is preceded by 48 hours with no discharge from any drainage area. The Discharger shall collect and analyze storm water samples from two qualifying storm events within the first half of each reporting year (July 1 to December 31) and from two qualifying storm events within the second half of each reporting year (January 1 through June 30). If a sufficient number of qualifying storm events do not occur within a given reporting year, the Discharger must document and report that information in the regularly scheduled Annual Storm Water Report.</div>				

Attachment B-Location of Monitoring Points





CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

**GENERAL PROVISIONS**  
FOR MONITORING AND REPORTING

1. **SAMPLING AND ANALYSIS**

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

## 2. OPERATIONAL REQUIREMENTS

### a. Sample Results

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

### b. Operational Log

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

## 3. REPORTING

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

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

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

#### 4. NONCOMPLIANCE

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

x:PROVISIONS WDRS

file: general pro mrp

