

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

**MEETING OF MARCH 1, 2023
SOUTH LAKE TAHOE**

ITEM 6

CLOSURE AND POST-CLOSURE WASTE DISCHARGE REQUIREMENTS FOR RESURGENCE SOLAR I, LLC AND RESURGENCE SOLAR II, LLC, SOLAR ELECTRIC GENERATING SYSTEMS III THROUGH VII, THREE SURFACE IMPOUNDMENTS, TWO LAND TREATMENT UNITS, AND POND NO. 5 LANDFILL

CHRONOLOGY

September 12, 1986	Board Order No. 6-86-108, established new Waste Discharge Requirements (WDRs) for three wastewater impoundments at Solar Electric Generating Systems (SEGS) III, IV, and V.
September 8, 1988	Board Order No. 6-88-144, rescinded Board Order 6-86-108 and issued revised WDRs that include new SEGS units, VI and VII, and a fourth impoundment.
April 11, 1990	Board Order No. 6-90-24, established WDRs for Heat Transfer Fluid (HTF)-contaminated soil in three units: 1) a Class II temporary storage unit, 2) treatment in a Class I Unit, and 3) discharge to a Class III Unit.
September 14, 1995	Board Order No. 6-95-102, rescinded Board Order 6-90-24 and revised the WDRs to 1) name new Dischargers, 2) reclassify the HTF-contaminated soil disposal units as a Class II Bioremediation Unit and Class II Landfarm Unit, 3) the revised Article 5 requirements of chapter 15, and 4) reflect a revision in California Environmental Quality Act (CEQA) compliance.
April 3, 1997	Board Order No. 6-97-58, adopted on April 3, 1997, rescinded Board Order 6-88-144 and revised the WDRs to 1) name new Dischargers and 2) incorporate requirements of Article 5, Chapter 15, Title 23, California Code of Regulations.

BACKGROUND

The Facility discharged authorized wastes under Board Order Nos. 6-86-108, 6-88-144, 6-90-24, 6-95-102, and 6-97-58 while operating as a concentrating solar thermal generating facility from 1986 to February 2020. It ceased operation of all the Waste Management Units (WMUs) in February 2020. The dischargers intend to convert the Facility to a photovoltaic-based solar arrangement that does not generate operational wastewater or use HTF and will reduce facility water usage.

Most of the wastewater formerly discharged to the site surface impoundments consisted of blowdown from the cooling towers, which contained concentrated salts. Other wastewaters were from the demineralizers, condensate systems, plant drains, and containment structures. The wastewater was routed through neutralization tanks where the pH was balanced prior to discharge to the impoundments. The wastewater

discharged to the surface impoundments was classified as a liquid designated waste (i.e., Class II waste). Three surface impoundments (i.e., Impoundments 3, 4, and 5) totaling 30 acres, received wastewater from SEGS III-VII operations.

The residual solids or “evaporite material” remaining after evaporation of wastewater in the ponds are classified as a solid designated waste, i.e., Class II waste. The evaporite material includes wind-blown sediments that settled in the surface impoundments over the life of the units.

The HTF-contaminated soil from spills and leaks during operations at the site is classified as a solid designated waste (i.e., Class II waste). Two land treatment units (LTUs) (i.e., Bioremediation Unit and Landfarm) were used to treat soil contaminated by release of HTF) from facility operations.

Board Order No. 6-97-58 requires the Discharger to clean close (i.e., remove all facility materials and waste) two surface impoundments and LTUs and convert the third surface impoundment to a landfill (to contain wastes from the two surface impoundments to be clean closed) through a Closure and Post Closure Maintenance Plan.

Since the Facility no longer generates process waste streams regulated by the Water Board, the Discharger submitted a Final Closure and Post Closure Maintenance Plan (FCPCMP) in 2022. The FCPCMP proposes clean closure (i.e., removal of all facility materials and associated waste) of the two LTUs and two of the three surface impoundments. The third surface impoundment would be converted into a landfill where the accumulated dry salty waste (from the two surface impoundments to be clean closed) would be placed and the landfill subsequently closed. The proposed Landfill is a Class II landfill since it will contain dry Class II wastes from the surface impoundments.

Water Board staff has prepared Closure and Post-Closure WDRs, which if adopted, would do the following:

- Authorize on-site disposal of waste from the surface impoundments and reuse of HTF-contaminated soils (with concentrations less than 100 milligrams per kilogram [mg/kg] of HTF constituents) at the facility in lieu of transporting and disposing of all waste offsite.
- Establish a post-closure maintenance and monitoring period.
- Incorporate Facility-specific storm water management measures and monitoring and reporting requirements.
- Provide general updates to the WDR and Monitoring and Reporting Program (MRP) based on current site conditions, pursuant to CCR title 27.

ISSUES

Should the Water Board adopt a Closure and Post-Closure WDR for Resurgence Solar I, LLC And Resurgence Solar II, LLC, Solar Electric Generating Systems III Through VII, Three Surface Impoundments, Two Land Treatment Units, and Pond No. 5 Landfill

DISCUSSION

Board Order No. 6-97-58 requires the Discharger to clean close (i.e., remove all facility materials and waste) two surface impoundments and both LTUs. The Discharger submitted a Final Closure and Post Closure Maintenance Plan (FCPCMP) in 2022. The Discharger's FCPCMP proposes clean closing both LTUs and two of the three surface impoundments (i.e., Ponds 3 and 4). The FCPCMP proposes transferring wastes from Ponds 3 and 4 to Pond 5 and closing Pond 5 as a landfill pursuant to California Code of Regulations (CCR) title 27. This proposed action would be in lieu of transporting the waste to an authorized disposal site (clean closure). The FCPCMP also proposes reusing the remaining HTF-contaminated soil (with less than 100 mg/kg HTF components on-site). This proposed action would be in lieu of transporting the HTF-contaminated soils to an authorized offsite treatment and reuse facility. The FCPCMP also proposes to use an engineered alternative cover for the Pond 5 Landfill cover.

Staff Evaluation

To authorize the Discharger's FCPCMP, the Discharger must demonstrate and the Water Board must find:

1. It is infeasible to attempt clean closure of all three surface impoundments;
2. Reusing the HTF-contaminated soils on-site complies with CCR title 27; and
3. The proposed engineered alternative for the proposed Pond 5/RSI-RSII Landfill cover's erosion-resistant layer complies with CCR title 27.

1. Evaluating the Feasibility to Clean Close All Three Surface Impoundments

The subject wastes in the surface impoundments and LTUs are Class II designated wastes. There are no open Class II designated waste landfills in the Lahontan Region. Disposal of Class II wastes in a Class III landfill is not allowed by CCR Title 27 or the facility-specific WDRs for the open Class III landfills in the Lahontan Region. To clean close all three surface impoundments, the dried salty solids (i.e., evaporite material) and wind-blown sediment remaining in the ponds would be required to be hauled by trucks a great distance to facilities authorized to accept Class II wastes. There is approximately 81,000 tons of waste materials remaining in the ponds. Off-site disposal would involve approximately 3,240 truck loads of waste traveling a minimum of 280 miles (round trip) to an authorized Class II facility in Kern County (McKittrick Landfill) or the US Ecology Landfill in Beatty, Nevada. The transportation and disposal costs for off-site disposal is estimated to be 10.8 million dollars, compared with the cost of approximately 3.2 million dollars to consolidate the on-site wastes into the proposed Pond 5 Landfill and immediately close the Pond 5 Landfill.

The environmental soundness of hauling large quantities of waste over long distances is also a consideration. The off-site disposal scenario would produce potential air emissions of hydrocarbons and particulates that would be far greater than the on-site disposal scenario in this case.

Given the high financial cost and the environmental impact of hauling wastes over long distances to properly authorized facilities, the off-site disposal required for completely clean closing all three surface impoundments is not practicable.

Staff recommend the Water Board find it is infeasible to clean close all three surface impoundments because of the potential environmental impacts of air pollution and the high cost of off-site disposal compared with the alternative to consolidate wastes in the proposed Pond 5 Landfill.

2. Evaluating the On-site Reuse of HTF-Contaminated Soils

The FCPCMP proposes to clean close the two LTUs and reuse the remaining HTF-contaminated soil (with less than 100 mg/kg HTF components) on-site.

HTF is a synthetic petroleum product composed of biphenyl and diphenyl ether. Like other petroleum hydrocarbons, HTF breakdown products include volatile components such as benzene and toluene. HTF in soil will lose its volatile components and breakdown naturally over time. HTF concentrations in soil stockpiles at SEGS III-VII are not hazardous waste requiring disposal in a Class I hazardous waste facility. The concentrations in soil do not require treatment or disposal in a Class II designated waste facility.

Staff have determined it is acceptable to reuse the HTF-contaminated soils on-site.

3. Evaluating the engineered alternative for the West Pond Landfill cover.

The prescriptive final cover requirements in CCR title 27 for a landfill cover includes a minimum two-foot-thick foundation layer which may be composed of appropriate waste materials overlain by a one-foot thick "Low-Hydraulic Conductivity Layer" with a hydraulic conductivity of less than 1×10^{-6} cm/s. The low-hydraulic conductivity layer must be overlain by a one-foot thick "Erosion Resistant Layer" which may be an erosion-resistant vegetative layer or evapotranspirative soil cover.

The Discharger has proposed an engineered alternative 2.5-foot thick evapotranspirative (ET) cover. See Pond 5 Closure System layers in Attachment C of the proposed WDR. The proposed cover system meets CCR title 27 regulations.

Staff have determined the engineered alternative proposed is protective of water quality.

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 Harper 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	Harper Valley Groundwater Basin (6-047)

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

PRESENTERS

No presentation is required.

PUBLIC OUTREACH/INPUT

The Tentative Order was posted on the Water Board's web site and distributed for public review and comment on November 9, 2022. Staff received 12 comments from the Discharger's consultant (Tetra Tech). Water Board staff's responses are included as Enclosure 2.

RECOMMENDATION

Adoption of the Order as proposed.

ENCLOSURE	ITEM	BATES NUMBER
1	Board Order No. R6V-2023-PROPOSED	6 - 7
2	Response to Comments	6 - 83

ENCLOSURE 1

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

**BOARD ORDER NO. R6V-2023-(PROPOSED)
WDID NO. 6B364550002**

**CLOSURE AND POST-CLOSURE
WASTE DISCHARGE REQUIREMENTS
FOR
RESURGENCE SOLAR I, LLC AND RESURGENCE SOLAR II, LLC
SOLAR ELECTRIC GENERATING SYSTEMS (SEGS) III THROUGH VII
THREE SURFACE IMPOUNDMENTS
TWO LAND TREATMENT UNITS,
AND POND NO. 5 LANDFILL (RESURGENCE SOLAR I AND RESURGENCE SOLAR II
LANDFILL [RSI-RSII LF])**

San Bernardino County

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

1. Discharger

The owner/operator, Resurgence Solar I, LLC and Resurgence Solar II, LLC (both are wholly owned subsidiaries of Nextera Energy Resources, LLC) submitted the Final Closure and Post-Closure Maintenance Plan (FCPCMP) for the Solar Electric Generating Systems (SEGS) III, IV, V, VI VII (SEGS III-IV) on January 11, 2022 (Revised August 15, 2022). For the purposes of this Order, Resurgence Solar I, LLC and Resurgence Solar II, LLC are referred to as the "Dischargers."

2. Facility

The Facility currently includes the following Waste Management Units (referred to as WMUs or Units hereafter):

- a. Three surface impoundments (i.e., Impoundments 3, 4, and 5) totaling 30 acres, which received wastewater from SEGS III-VII operations, and
- b. Two land treatment units (LTUs) (i.e., Bioremediation Unit and Landfarm), which were used to treat soil contaminated by release of heat transfer fluid (HTF) from facility operations.

A map of the Facility location with the layout of the existing and partially demolished solar thermal generating facility is included as Attachment A, which is made part of this Order.

The Facility operated as a concentrating solar thermal generating facility from 1986 to February 2020, when it ceased operation and all discharges to the WMUs. The dischargers intend to convert the Facility to a photovoltaic-based solar arrangement that does not generate operational wastewater or use HTF.

The FCPCMP proposes to clean-close two of the three surface impoundments (i.e., Ponds 3 and 4) and the two land treatment units by removing all waste materials from these WMUs. The third surface impoundment, Pond 5, is proposed to be closed as a landfill and to be identified as the Resurgence Solar I and Resurgence Solar II Landfill (RSI-RSII LF). The Landfill will contain all remaining solid wastes (81,000 tons) from all three surface impoundments and liner materials from Impoundments 3 and 4.

3. Facility Location

The Facility is located at 41100 US Highway 395, Boron, near the intersection of State Highway 58 and one-half mile north of unincorporated community of Kramer Junction (Assessor's Parcel Number 0491-151-38-0000). The Facility is within Section 31, Township 11 North, Range 6 West, San Bernardino Base & Meridian.

4. Site History

SEGS III, IV, and V began operating on the Site as concentrating solar thermal generating facilities in 1986. SEGS VI and VII were added in 1988. NextEra Energy Operating Services (NextEra) has owned and operated the SEGS III-VII facilities since 2005 through subsidiary companies including Luz Solar Partners Ltd. and Resurgence Solar I, LLC and Resurgence Solar II, LLC.

The concentrating solar thermal generating facility ceased operations in February 2020. The concentrating solar thermal system has been removed and the area has been cleared and graded. The Dischargers plan to convert the facility to photovoltaic system which will produce electricity directly from sunlight, will not use HTF and will reduce facility water usage.

5. Reason for Action

The WMUs are eligible for closure since wastewater and HTF-contaminated soils are no longer generated or discharged at the Site because the Facility will be converted to a photovoltaic solar facility. The Dischargers submitted the Closure and Post-Closure Maintenance Plan (FCPCMP) in January 2022 with a revised version submitted in August 2022.

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 Orders Nos. 6-95-102 and 6-97-58, issuing these new Waste Discharge Requirements (WDRs), and updating the Monitoring and Reporting Program (MRP) to: (1) establish the closure and post-closure maintenance and monitoring period and requirements for the Facility; (2) incorporate Facility-specific storm water management, monitoring, and reporting requirements; (3) provide general updates to the WDRs and MRP based on current Site conditions; and (4) develop WDRs and a MRP in compliance with the requirements of California Code of Regulations (CCR), title 27.

6. Order History

Class II Wastewater Impoundments (WDID 6B364550002)

- a. Board Order No. 6-86-108, adopted on September 12, 1986, established WDRs for three wastewater impoundments at SEGS III, IV, and V.
- b. Board Order No. 6-88-144, adopted on September 8, 1988, rescinded Board Order 6-86-108 and issued revised WDRs that include new SEGS units, VI and VII, and a fourth impoundment.
- c. Board Order No. 6-97-58, adopted on April 3, 1997, rescinded Board Order 6-88-144 and revised the WDRs to 1) named new Dischargers and 2) incorporated requirements of Article 5, Chapter 15, Title 23, California Code of Regulations.

HTF-Contaminated Soil Units (WDID 6B368909005)

- d. Board Order No. 6-90-24, adopted on April 11, 1990, established WDRs for HTF-contaminated soil in three units: 1) a Class II temporary storage unit, 2) treatment in a Class I Unit, and 3) discharge to a Class III Unit.
- e. Board Order No. 6-95-102, adopted on September 14, 1995, rescinded Board Order 6-90-24 and revised the WDRs to 1) name new Dischargers, 2) reclassify the HTF-contaminated soil disposal units as a Class II Bioremediation Unit and Class II Landfarm Unit, 3) the revised Article 5 requirements of chapter 15, and 4) reflect a revision in California Environmental Quality Act (CEQA) compliance.

7. Final Closure and Post-Closure Maintenance Plan

This Order approves the revised FCPCMP dated August 2022, which describes the proposed manner of closure for the bioremediation, landfarm, and surface impoundments; and closure of Pond 5 as a Class II landfill (i.e., Pond 5 Landfill/RSI-RSII LF) and the proposed maintenance of the landfill during the post-closure period.

The Bioremediation and Landfarm WMUs will be clean closed. Soils removed from the LTUs as part of the clean closure may be reclaimed onsite when the heat transfer fluid does not exceed an average total concentration of 100 mg/kg.

The clean closure of Impoundments 3 and 4 will be in accordance with CCR, Title 27, section 21400(b)(1). Wastes and contaminated materials (including liners) from Impoundments 3 and 4 will be removed and transferred to Pond 5/RSI-RSII Landfill. No other waste will be discharged to Impoundment 5. Impoundment 5 will be closed as a landfill in accordance with CCR, title 27, section 21400(b)(2)(A), which specifies:

“...that all residual wastes, including sludges, precipitates, settled solids, and liner materials, must be compacted, and the Unit must be closed as a landfill pursuant to [section] 21090, provided that the closed Unit meets applicable standards waste classification and siting requirements for landfill Units in Articles 3 and 4 of Subchapter 2, Chapter 3, Subdivision 1 of this division ([section] 20240 et seq.), and further provided that the moisture content of residual wastes, including sludges, does not exceed the moisture-holding capacity of the waste either before or after closure”

The liner of surface impoundment 5 will remain intact and will serve as the liner of the landfill (hydraulic conductivity of 1×10^{-6} centimeters per second [cm/s]). The liner consists of:

- a. an upper primary liner consisting of 60 mil high density polyethylene (HDPE);
- b. a lower secondary liner consisting of 50 mil HDPE; and
- c. between the liners is a synthetic drainage net that is used as part of the leachate collection and removal system (LCRS). In the lowest drain-line portions of the LCRS there is a sand layer with perforated drainage pipes

A final cover will be constructed over the Pond 5/RSI-RSII Landfill to isolate the waste from precipitation and minimize the potential to generate leachate. The final cover for the Landfill will be the primary containment system for the closed WMU in accordance with CCR, title 27, sections 21090 and 20950. Attachment B of this Order is a plan view of the Landfill location and Attachment C is a schematic of the proposed closed WMU showing the base liner and final cover liner systems.

The FCPCMP also conforms with Class II siting requirements of CCR, title 27, section 20250 and section 21750.

8. Closure as a Landfill

Pursuant to CCR, title 27, section 21400(b)(1), a discharger must clean close a surface impoundment unless they demonstrate, and the Water Board finds that it is infeasible to attempt clean-closure. In cases where clean closure is infeasible, CCR, Title 27, section 21400(b)(2) allows closure as a landfill provided that (1) closure is carried out pursuant to the requirements of CCR, title 27, section 21090; (2) the closed unit meets the applicable construction standards for landfills pursuant to CCR, title 27, 20240 et seq.; and (3) the moisture content of the residual wastes does not exceed the moisture holding capacity of the waste either before or after closure. The Water Board finds that clean closure of all three surface impoundments is infeasible, and that waste consolidation onsite and closure of Pond 5 as a landfill is appropriate pursuant to CCR, title 27, section 21400(b)(2), as detailed below.

a. Demonstration of Infeasibility of Clean Closure of All Wastewater Impoundments

The evaporite wastes remaining in the three surface impoundments are designated Class II wastes. To clean close all the surface impoundments, the evaporite wastes would be removed and hauled to a Class II landfill. The evaporite waste from the three impoundments comprise approximately 81,000 tons (approximately 3,240 truckloads) as well as a total of six liner systems. The nearest facilities capable of accepting the evaporite material are the Waste Management McKittrick Landfill in Kern County, California (approximately 280 miles round trip) and the US Ecology Landfill in Beatty, Nevada (approximately 360 miles round trip). If the material is transported and disposed at the Class II Waste Management McKittrick Landfill or the US Ecology Landfill, potential air emissions, both criteria pollutants (e.g.,

nitrogen oxides, hydrocarbons, particulate matter) and greenhouse gasses (carbon dioxide), will be regionally significant due to on-road diesel emissions. Costs are approximately \$10,754,400 for clean closure of all units. Based on this information, the Water Board finds the potential air pollution impacts and the cited high financial costs associated with offsite disposal demonstrate that clean closure of all three surface impoundments is impractical and, therefore, infeasible.

Closed Unit Will Meet Applicable Standards of Title 27

The Pond 5 Landfill/RSI-RSII LF will be closed and maintained during the post-closure period in accordance with the requirements of CCR, title 27, as described in the revised Final CPCMP and as required by this Order. Additionally, the closed WMU will meet the applicable siting and construction standards for a new Class II non-municipal solid waste landfill pursuant to CCR, title 27, 20240 et seq., as outlined below.

1. There will be at least a 5-foot separation between the bottom of the closed WMU and highest anticipation elevation of underlying groundwater [CCR, title 27, section 20240(c)].
2. The base liner system of the closed WMU will have a hydraulic conductivity of not more than 1×10^{-6} centimeters/second (cm/s) (CCR, title 27, section 20250(b)[3]).
3. The closed WMU will not be located within a known 100-year floodplain, therefore design considerations to prevent inundation or washout due to floods with a 100-year return period are not applicable (CCR, title 27, section 20250[c]).
4. The closed WMU is not located within 200 feet of a known Holocene-active fault (CCR, title 27, section 20250[d]).
5. Slope stability and liquefaction analyses were performed, and the closed WMU has been designed and will be constructed and maintained to preclude containment failure due to due rapid geologic change (CCR, title 27, section 20250[e]).
6. CCR, title 27, section 20250(c) specifies that clay liners for a Class II WMU be a minimum of 2-feet thick, unless an engineered alternative is approved by the Regional Board in accordance with CCR, title 27, section 20080(b). Board Order No. 6-97-58 approved the following engineered alternative base liner system for the surface impoundments: an upper liner consisting of 50-millimeter high-density polyethylene (HDPE), a lower liner consisting of 60-milliliter HDPE, and between the two liners, a synthetic drainage net for the leachate collection and removal system (LCRS).
7. The engineered alternative liner system was sufficient to contain the liquid wastes during active life of the surface impoundments and is expected to perform

similarly to contain the Pond 5/RSI-RSII Landfill's solid waste and any potential leachate during the post-closure period.

8. For Class II landfills, an LCRS is required unless the Discharger demonstrates, based on climatic and hydrogeologic conditions, that leachate will not be formed in, or migrate from the unit (CCR, title 27, section 20340[a]). Waste discharged to the Pond 5 Landfill will be solid wastes, which are not expected to decompose and generate leachate post-closure. Also, the final cover system is designed to prevent precipitation from infiltrating the waste and generating leachate. Additionally, the engineered alternative base liner system was sufficient to contain the liquid wastes during active life of the surface impoundments and is expected to perform similarly to contain solid wastes in the landfill during the post-closure period. It has been demonstrated that leachate will likely not be formed in or migrate from the closed WMU.. An LCRS is already present at the proposed Pond 5/RSI-RSII Landfill location and must be maintained in working order.
9. The closed WMU precipitation and drainage control facilities will be designed to manage the 100-year, 24-hour precipitation event (CCR, title 27, section 20250[c]).
10. The closed WMU has been designed to withstand the maximum credible earthquake without damage to the foundation or to the structures which control leachate, surface drainage, or erosion, or gas (CCR, title 27, sections 20365 and 20370[a]).

Moisture Content Not to Exceed Moisture Holding Capacity

Prior to clean closure, liquids in the surface impoundments will be evaporated such that no free liquids are present. Wastes generated during clean closure and discharged to the Pond 5/RSI-RSII Landfill are not expected to exceed 50 percent moisture content. The moisture holding capacity of the wastes is relatively high given their fine-grained texture, and the consolidated waste in the closed Pond 5/RSI-RSII Landfill is not expected to exceed moisture holding capacity after closure. Also, the final cover system is designed to store precipitation and release the stored precipitation to the vegetated cover and is not expected to allow precipitation to infiltrate the cover system and contact the waste.

9. Engineered Alternative to Prescriptive Landfill Cover Design

The prescriptive final cover standards for landfills are contained in 27 CCR, section 21090. In accordance with section 21090(a), the FCPMP proposes an engineered alternative to the prescriptive landfill cover. The proposed engineered alternative evapotranspirative (ET) cover will consist of a 2.5-foot-thick engineered monolithic soil layer placed over a 1-foot-thick foundation layer placed over the evaporation waste materials.

The Water Board finds: the proposed engineered alternative provides equivalent or better protection than the prescriptive standard cover design for protection against infiltration of precipitation (and potential irrigation water) into the Landfill waste materials and potential related water quality impairment.

This Order approves the engineered alternative final cover system proposed in the FCPCMP.

10. Waste Classification

Most of the wastewater formerly discharged to the impoundments consisted of blowdown from the cooling towers, which contained concentrated salts. Other wastewaters were from the demineralizers, condensate systems, plant drains, and containment structures. The wastewater was routed through neutralization tanks where the pH was balanced prior to discharge to the impoundments.

The wastewater discharged to the surface impoundments was classified as a liquid designated waste, i.e., Class II waste. The residual solids or “evaporite material” remaining after evaporation of wastewater in the ponds are classified as a solid designated waste, i.e., Class II waste. The evaporite material includes wind-blown sediments that settled in the surface impoundments over the life of the units. The HTF-contaminated soil is classified as a solid designated waste (i.e., Class II waste). The proposed Landfill is a Class II landfill since it will contain dry Class II wastes from the surface impoundments.

11. Waste Management Unit Classification and Authorized Disposal Sites

Pursuant to CCR, title 27, section 20250, the proposed Landfill is classified as a Class II WMU and is the only authorized waste disposal site within the Facility boundary for Class II residual solid wastes from the three surface impoundments.

12. Post-Closure Maintenance Period

The FCPCMP proposes to close the Pond 5/RSI-RSII LF surface impoundment as a landfill pursuant to CCR title 27, section 21400(b)(2)(a). The Waste Discharge Requirements for the Landfill require a post-closure period for monitoring and maintenance of the Pond 5 Landfill pursuant to State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB) requirements in CCR title 27. CCR title 27, section 20950 (a)(1) states: “Relative to the applicable SWRCB-promulgated requirements of this title, the post closure maintenance period must extend as long as the wastes pose a threat to water quality...the RWQCB’s finding that the waste in the Unit no longer poses a threat to water quality must release the discharger only from the need to comply with the SWRCB-promulgated portions of this title, for that Unit.” The Pond 5/RSI-RSII Landfill is scheduled to be certified closed by August 2023; therefore, the post-closure period is expected to end in 2053 for planning purposes but may be extended if measurably significant evidence of release is detected from the Facility or shortened if the Discharger demonstrates and the Water Board finds that the

waste in Pond 5/RSI-RSII Landfill no longer poses a threat to water quality.

The FCPCMP proposes to clean close the Pond 3 and 4 surface impoundments by removing all remaining wastes and contaminated material from these waste management units (WMUs) and placing the remaining wastes in the Pond 5/RSI-RSII Landfill. CCR title 27, section 21400(b)(1) states: "For surface impoundments that are successfully clean-closed, as herein described, the RWQCB must declare the Unit no longer subject to the SWRCB-promulgated requirements of this title." Therefore, a RWQCB declaration that the surface impoundments have been successfully clean closed eliminates the requirement for a post-closure period for the surface impoundments.

The FCPCMP proposes to clean close the Bioremediation Unit and Landfarm for the HTF-contaminated soil such that the waste in the Unit no longer poses a threat to water quality pursuant to CCR title 27, section 20950(a)(2)(B). Successful completion of clean-closure eliminates the need for any post-closure maintenance period and removes the Unit from being subject to the SWRCB-promulgated requirements of this subdivision..." Therefore, a RWQCB finding that the land treatment units have been successfully clean closed eliminates the requirement for a post-closure period for the land treatment units.

13. Land Uses

The site occupies approximately 1,000 acres. SEGS III-VII were operated as a concentrating solar thermal generating facility, which ceased operations in February 2020. The adjacent land is vacant except for desert plant and animal life indigenous to the western Mojave Desert. All SEGS units are shut down at this time and awaiting transition to photovoltaic solar arrays. The existing Facility is on a cleared, graded, and leveled site. The photovoltaic modules will produce electricity directly from sunlight. No HTF will be used, and no wastewater will be generated. No construction is planned or reasonably foreseen that could affect the final cover of the Pond 5/RSI-RSII Landfill.

14. Site Topography

The Site is situated within the western Mojave Desert of the Basin and Range Province. The Site is approximately 2,450 feet above sea level, topography is generally flat, sloping slightly to the east

15. Climatology

The western Mojave Desert, where the Facility is located, has an arid, high desert climate characterized by infrequent rainfall and relatively low humidity. Summers are hot and dry with occasional intense desert thunderstorms. Winters are by cool and dry. High winds and blowing dust are frequent occurrences in the area.

The mean annual temperature is 64 degrees (°) Fahrenheit (F); typical temperature ranges from a high of 100° F in the summer to a low of 31° F in the winter. Precipitation

in the vicinity of the Facility averages 4.8 inches annually. The expected precipitation for the 100-year, 24-hour storm event is 4 inches.

16. Site Geology

The Facility is in the western portion of Mojave Desert in the Basin and Range Province. The Facility is underlain by thick sequences of Pleistocene to Holocene alluvial sediments including undifferentiated material and fan deposits.

The roughly northwest-southeast trending South Lockhart Fault Zone is located approximately 8 miles east of the facility. The South Lockhart Fault is on strike with the larger Helendale Fault both of which have had displacement in Holocene time. Another smaller unnamed fault is located approximately 3 miles to the west of the facility. An evaluation of potential fault activity and effects on the proposed landfill was completed; no concerns were noted and the FCPCMP contains procedures to repair any parts of the proposed landfill that may be damaged by fault activity.

The water-bearing units consist of semi-consolidated to unconsolidated deposits that overlie the basement rocks. Underlying the Facility are basement rocks that consist of shales, basalts, and breccias, and igneous quartz lithologies. The water-bearing deposits range in size from coarse gravel to fine clays, generally showing a decrease in permeability with depth. The principal aquifer in the basin consists of unconsolidated Quaternary alluvium.

17. Site Hydrogeology and Groundwater Quality

The Site is situated within the Harper Valley groundwater basin, and protection of groundwater quality in the area is under the authority of the Lahontan RWQCB. The depth to groundwater in on-site monitoring wells ranges from 170 to 230 feet.

Based on 2021 groundwater monitoring data, the quality of groundwater beneath the Facility contains relatively high concentrations of total dissolved solids (TDS), chloride and sulfate. TDS concentrations in the four monitoring wells range from 600 to 1,300 milligrams/liter (mg/L), above to the secondary maximum contaminant level (MCL) of 500 mg/L. Chloride concentrations range from 190 to 390 mg/L, relative to the secondary MCL of 250 mg/L. Sulfate concentrations range from 60 to 430 mg/L, relative to a secondary MCL of 250 mg/L. Groundwater levels and concentrations of these constituents have been relatively consistent over time, indicating the wastewater impoundments have not impacted groundwater quality. Additionally, the concentrations are consistent with nearby water supply wells.

18. Site Hydrology

The Facility is located at the western boundary of the Mojave Hydrologic Unit and the Harper Valley Subunit. The site is relatively flat, with a stormwater flow direction is to the east/southeast. The ground surface across the approximately 1.5-mile-long property (north to south) loses approximately 50 feet of elevation (0.006 feet/foot). An ephemeral

drainage is located just outside of the southern boundary of the property. The drainage flows east to the Harper Lake.

Site Storm Water Management

The proposed drainage and erosion control for the Pond 5/RSI-RSII Landfill is designed to direct flow away from the Landfill and to the ephemeral drainage along the southern boundary of the Facility. The proposed final cover will be graded to promote effective storm water drainage. Total discharges after the installation of the cover are not anticipated to be greater than current flows. The hydrologic natural runoff conditions are not expected to change. The erosion potential for the design storm is small but selected erosion best management practices (BMPs) are included in the Construction Stormwater Pollution Protection Plan (SWPPP) and post closure maintenance plan. After the vegetative is established, the vegetation cover should offer additional protection during the design storm event.

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.

19. 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, including the Water Quality Objectives (WQOs) identified in the Basin Plan.

20. Receiving Waters

The receiving waters are the groundwaters of the Harper Valley Groundwater Basin (Department of Water Resources [DWR], Groundwater Basin No. 6-40; Basin Plan, Plate 2B) and minor surface waters of the Harper Valley Hydrologic Subunit (DWR Hydrologic Subunit 28.42). The ephemeral drainage along the Site's southern boundary represents a minor surface water of the Harper Valley Hydrologic Subunit.

21. Beneficial Uses

The present and probable future beneficial uses of the groundwaters of the Harper Valley Groundwater Basin (DWR No. 6-47), as set forth and defined in the Basin Plan are:

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

The present and probable future beneficial uses of the Harper Valley Hydrologic Subunit as set forth and defined in the Basin Plan are:

- a. Municipal and Domestic Supply (MUN);
- b. Agricultural Supply (AGR);
- c. Groundwater Recharge (GWR);
- d. Water Contact Recreation (REC-1);
- e. Non-Water Contact Recreation (REC-2);
- f. Warm Freshwater Habitat (WRM);
- g. Cold Freshwater Habitat (COLD);
- h. Wildlife Habitat (WILD)

22. Water Quality Protection Standard (WQPS)

The 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 monitoring are described in MRP No. R6V-2023-(PROPOSED), which is made part of this Order.

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 Pond 5 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-2023-(PROPOSED) are believed to be the best indicators of a release from the Facility.

24. Monitoring Points and Points of Compliance

The monitoring network for the Pond 5/RSI-RSII Landfill will be designed to monitor the uppermost aquifer as required by CCR, title 27, section 20405. The Point of Compliance is a vertical surface located at the hydraulically downgradient limit of the Pond 5/RSI-RSII Landfill that extends through the uppermost aquifer underlying the Landfill. The MRP must include Monitoring Points (as defined in section 20164) along the Point of Compliance, and additional Monitoring Points at locations determined pursuant to section 20415(b-d) at which the Water Standard under section 20390 applies and at which monitoring must be conducted.

25. Detection Monitoring Program

Pursuant to CCR, title 27, sections 20385 and 20420, the Dischargers are implementing a Detection Monitoring Program (DMP) for the Facility.

26. Evaluation Monitoring Program

An Evaluation Monitoring Program (EMP) may be required, pursuant to CCR, title 27, section 20385 and section 20420, subdivision (k)(5-6), whenever there is “measurably significant” evidence of a release from the Unit during a detection monitoring program or whenever there is significant physical evidence of a release from the Unit. The Dischargers must delineate the nature and extent of the release and develop a suite of proposed corrective action measures within 90 days of establishing an EMP. If the EMP confirms measurably significant evidence and/or significant physical evidence of a release, then the Dischargers must submit an Engineering Feasibility Study for corrective action pursuant to CCR, title 27, section 20425, and MRP No. R6V-2023-(PROPOSED).

27. Corrective Action Program

A Corrective Action Program (CAP) to remediate detected releases from the Pond 5 Landfill may be required pursuant to CCR, title 27, section 20385 and section 20430.

28. Financial Assurance

The Dischargers have provided documentation that a financial assurance fund has been developed for closure and post-closure maintenance and potential future corrective action requirements. This Order requires the Dischargers to report the amount of money available in the fund as part of the annual self-monitoring report. This Order also requires the Dischargers to demonstrate, in an annual report, that the amount of financial assurance is adequate or to increase the amount of financial assurance, as appropriate (e.g., for identified needed corrective actions, or for inflation, etc.).

29. Other Considerations and Requirements for Discharge

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

- a. *Past, present, and probable future beneficial uses of water.* This Order identifies existing groundwater quality and past, present, and probable future beneficial uses of water, as described in Finding No. 21. The proposed discharge will not adversely affect present or probable future beneficial uses of water because the discharge is authorized only to the Pond 5/RSI-RSII Landfill, which has been designed and will be constructed to prevent waste discharges to the groundwater and surface water. This Order also 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. 17 describes the environmental characteristics and quality of water available.
- c. *Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area.* The requirements of this Order will not affect groundwater quality. The Water Board will use its existing

authority and these Closure and Post-Closure WDRs to ensure protection of water quality from these discharges.

- d. *Economic considerations.* Water Quality Objectives established in the Basin Plan for the Harper Valley Groundwater Basin do not subject the *Dischargers to economic disadvantage as compared to other similar discharges in the Region*. This Order will require the Dischargers to submit proposals compliant with the requirements of CCR, title 27, and is reasonable.
- e. *The need for developing housing within the region.* The Dischargers are not responsible for developing housing within the region.
- f. *The need to develop and use recycled water.* The Dischargers do not propose the use of recycled water at this Facility.

30. Human Right to 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. The Dischargers has supported this policy by converting the SEGS III-VII Facility to photovoltaic-based solar facility, which will reduce water usage from approximately 1,000 acre-feet per year to less than 15 acre-feet per year. This Order further promotes the policy by requiring storm water and drainage controls, monitoring to assess water quality, and corrective action when needed to address any adverse impacts to water quality.

31. California Environmental Quality Act (CEQA)

The Water Board has determined that the proposed project is categorically exempt based on CEQA section 15302(c) in that it is a replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity.

32. Antidegradation Analysis

California State Water Resources Control Board (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 these WDRs, and an EMP and possible CAP will ensure water quality protection.

33. Technical and Monitoring Reports

The Dischargers must submit technical and monitoring reports in compliance with this Order and as described in MRP No. R6V-2023-(PROPOSED).

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 propose 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 propose to discharge waste outside of its region that could affect the quality of the waters of the state within its region must furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, must bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports."

The technical reports required by this Order and MRP No. R6V-2023-(PROPOSED) are necessary to assure compliance with these WDRs. 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.

34. Notification of Interested Parties

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

35. 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 or will be provided in hard copy or electronic format upon request.

36. Consideration of Public Comments

The Water Board, in a public meeting held on March 1, 2023, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to California Water Code sections 13263 and 13267, that the Dischargers must comply with the following:

I. RECEIVING WATER LIMITATIONS

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

A. Under no circumstances may the Dischargers cause the presence of the following substances or conditions in groundwaters of the Harper Valley Groundwater Basin.

1. Bacteria – Groundwaters designated as MUN, the median concentration of coliform organisms, over any seven-day period, must be less than 1.1 Most Probable Number per 100 milliliters (MPN/100 mL).
2. Chemical Constituents – Groundwaters designated as MUN must not contain concentrations of chemical constituents in excess of the Primary Maximum Contaminant Level or Secondary MCL based upon drinking water standards specified in the following provisions of CCR, title 22: Table 64431-A of section 64431 (Inorganic Chemicals), Table 64444-A of section 64444 (Organic Chemicals), Table 64449-A of section 64449 (Secondary MCLs – Consumer Acceptance Contaminant Levels), and Table 64449-B of section 64449 (Secondary MCLs – Consumer Acceptance Contaminant Level Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

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

3. Radioactivity – Groundwater designated MUN must not contain concentrations of radionuclides in excess of limits specified in CCR, title 22, section 64443, including future changes as the changes take effect.
4. Taste and Odors – Groundwaters must not contain taste or odor-producing substances in concentrations that cause a nuisance or that adversely affect beneficial uses. For groundwaters designated as MUN, at a minimum, concentrations must not exceed adopted Secondary MCLs as specified in CCR, title 22, section 64449, Table 64449-A (Secondary MCLs – Consumer Acceptance Contaminant Level) and Table 64449-B (Secondary MCLs – Consumer Acceptance Contaminant Levels Ranges) including future changes as the changes take effect.

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 a violation 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 violated, 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. The discharge of waste that contains liquid in excess of the moisture-holding capacity of the Pond 5/RSI-RSII Landfill is prohibited.
7. The discharge of solid or liquid waste, leachate, or any other deleterious material to surface waters or groundwater is prohibited.
8. The Pond 5/RSI-RSII Landfill must be protected from inundation, washout, or erosion of wastes and erosion of covering materials resulting from a 100-year, 24-hour storm or a flood having a 100-year return period.
9. The Dischargers must notify the Water Board within one business day of any flooding, slope failure or other change in Facility conditions that could impair the integrity of the Pond 5 Landfill or of precipitation and drainage control structures. The Dischargers must correct any failure that threatens the integrity of the Pond 5 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).
10. Surface drainage from off-site areas and internal Facility drainage from surface or subsurface sources, must not contact or percolate through solid wastes discharged at the Pond 5/RSI-RSII Landfill.
11. The exterior surfaces of the Pond 5/RSI-RSII Landfill must be graded to promote lateral run-off of precipitation and to prevent ponding.
12. The Dischargers must maintain in good working order any control system or monitoring device installed to achieve compliance with these WDRs.
13. The Dischargers must at all times maintain adequate and viable financial assurances acceptable to the Water Board Executive Officer for costs associated with closure and post-closure maintenance and monitoring and for corrective action for all known or reasonably foreseeable releases.

14. The Dischargers must comply with CCR, title 27, section 20950, closure and post-closure maintenance, general standards for all WMUs.
15. The Dischargers must comply with CCR, title 27, section 21090, requirements for closure and post-closure maintenance and design requirements for solid waste landfills except where engineered alternatives to the requirements in CCR, title 27, section 21090 have been approved by the RWQCB pursuant to CCR, title 27, section 20080.
16. The Pond 5/RSI-RSII Landfill is the only authorized disposal location at the Facility. The only waste authorized to be disposed in the Landfill is the solid wastes remaining in the three surface impoundments (Ponds 3, 4, and 5).

B. Specific Requirements for Clean Closure of the Land Treatment Units

17. Land Treatment units will be clean closed in accordance with the FCPCMP, the requirements in this Order, and with CCR, title 27, section 21400(b)(1).
18. Soils that were treated at the two land treatment units (i.e., Bioremediation Unit and Landfarm) may be reclaimed on-site if the following concentration limit is not exceeded:

Parameter	Average Total Concentration milligrams/kilograms (mg/kg)
Heat Transfer Fluid (diphenyl oxide and biphenyl)	100

C. Specific Requirements for Clean Closure of the Surface Impoundments

1. Two surface impoundments (Ponds 3 and 4) will be clean closed in accordance with the FCPCMP, the requirements in this Order, and with CCR, title 27, section 21400(b)(1).
2. Free liquids must be allowed to evaporate prior to residual solids, sludge, and evaporite material, and waste-impacted liner material being removed and discharged to the Pond 5/RSI-RSII Landfill.
3. Confirmation sampling and analyses are necessary to verify clean closure of the surface impoundments (i.e., Ponds 3 and 4). A minimum of four individual samples of the underlying soil exposed within each surface impoundment (following removal of residual solids, sludge, evaporite material, and waste-impacted liner material) must be collected and analyzed individually for 1,1-Biphenyl and 1,1-Oxybisbenzene via United States Environmental Protection Agency (USEPA) Method 8015B. Exceedance of the laboratory detection limits will require further soil sampling at 1-foot depth increments until results verify concentrations are acceptable. The surface impoundments will be considered clean closed when concentrations of the analytes reported for each individual sample have concentrations that are below laboratory detection limits. The

results of the confirmation sampling must be included in the final Construction Quality Assurance Report, as required by section V.C. of this Order.

5. All closure activities must be under the direct supervision of a California professional civil engineer or California certified engineering geologist pursuant to CCR, title 27, section 20950(b).
6. Successful clean closure must be demonstrated to and accepted by the Executive Officer for the units to be no longer subject to the SWRCB-promulgated requirements of title 27.

D. Pond 5/RSI-RSII Landfill Construction and Closure Requirements

1. The Pond 5/RSI-RSII Landfill will be constructed and closed in accordance with the FCPCMP and with the specifications contained in CCR, title 27, 20240 et seq.
2. All closure activities must be under the direct supervision of a California professional civil engineer or California certified engineering geologist pursuant to CCR, title 27, section 20950(b).

E. Specific Requirements for Use of Engineered Alternative Evapotranspirative Cover at Pond 5/RSI-RSII Landfill

The Dischargers have proposed the option of using an ET cover in lieu of the prescriptive cover required by CCR, title 27, section 21090(a)(3)(A)(1). The RWQCB approves this engineered alternative ET cover pursuant to CCR, title 27, section 20080. A cross-section of the proposed bottom liner, waste, and ET cover for the Landfill is presented in Attachment C, which is made a part of this Order. The cover must be established during closure and maintained during post-closure in accordance with the FCPCMP and with CCR, title 27, section 21090.

F. 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 Dischargers must comply with all storm water monitoring, response, and reporting requirements described in MRP No. R6V-2023-(PROPOSED).

G. Electronic Submittal of Information

Pursuant to CCR, title 23, section 3890, the Dischargers 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 SWRCB'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 Dischargers must maintain a DMP as required in CCR, title 27, section 20420. The Dischargers must continue to conduct a DMP, as necessary, to provide the best assurance of the detection of a release from the Pond 5/RSI-RSII Landfill.

B. Evaluation Monitoring Program

The Dischargers must establish an EMP whenever there is measurably significant evidence and/or significant physical evidence of a release from the Pond 5/RSI-RSII Landfill pursuant to CCR, title 27, section 20425. Within 90 days of initiating an EMP, the Dischargers must delineate the nature and extent of the release, as well as develop, propose, and support corrective action measures to be implemented in a corrective action program.

C. Corrective Action Program (CAP)

The Dischargers 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 Dischargers must implement a CAP until it can be demonstrated to the satisfaction of the RWQCB 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-2023-(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 Dischargers or RWQCB's Executive Officer determine that concentration limits were or are exceeded, the Dischargers 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. In the event of a release, unless the technical report proposing an EMP recommends and substantiates a longer

period, the Dischargers 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 must be conducted to provide the best assurance of the detection of a release from the Landfill.

E. Data Analysis

Within 45 days of receipt of laboratory results, the Dischargers must determine at each Monitoring Point whether there is measurably significant evidence and/or significant physical evidence of a release from the Pond 5/RSI-RSII LF 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 Dischargers 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 Dischargers must 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 Pond 5 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 is discovered, the Dischargers must immediately notify the RWQCB verbally 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-2023-(PROPOSED)). The Dischargers must initiate the verification procedures, as specified in section III.F below.

F. Verification Procedures

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

1. The Dischargers must either conduct a composite retest using data from the initial sampling event with all data obtained from the resampling event or must conduct a discrete retest in which only data obtained from the resampling event must be analyzed to verify evidence of a release. Alternatively, the Dischargers 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 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 Dischargers must report to the RWQCB, by certified mail, the results of the verification procedure, as well as all data collected for use in the retest.
4. If the Dischargers or Executive Officer verify that there is or was evidence of a release, the Dischargers are 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.C above) or make a demonstration to the Water Board that there is a source other than the Pond 5 Landfill that caused evidence of a release (see "Unscheduled Reports to be Filed with the Water Board," MRP No. R6V-2023-(PROPOSED)).
5. If the Dischargers decline to conduct verification procedures, the Dischargers must submit a technical report, as specified in Section III.G below.

G. Technical Report Without Verification Procedures

If the Dischargers choose 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 Dischargers must comply with the monitoring and reporting requirements as established in MRP No. R6V-2023-(PROPOSED) (Attachment D), and as specified by the Executive Officer. The MRP may be modified by the RWQCB Executive Officer.
2. The Dischargers must comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of MRP No. R6V-2023-(PROPOSED).

IV. PROVISIONS

A. Rescission of Waste Discharge Requirements

Board Order No. 6-97-58 and MRP 6-97-58; and No. 6-95-102 and MRP 6-95-102 are hereby rescinded.

B. Standard Provisions

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

C. Closure and Post-Closure

This Order provides RWQCB approval of the FCPCMP and the proposed engineered alternative final cover.

The Dischargers must submit a report to the Water Board on or before **February 15, 2024**, and by **February 15** every year thereafter, indicating that existing site monitoring and maintenance conditions are in are in conformance with the FCPCMP or provide an updated FCPCMP, if conditions warrant. The FCPCMP and cost estimates for corrective action 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.

D. Financial Assurance

The Discharger must submit to the RWQCB a financial assurance report on or before **120 days of Regional Board adoption of these WDRs**, and by **February 15** every year thereafter, providing evidence that adequate financial assurance has been provided for closure and 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 Dischargers. In addition, the Dischargers 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.

V. Time Schedule

A. Monitoring Systems Installation Work Plan

No later than 60 days following the adoption of this Order, the Discharger must submit for Water Board review and acceptance a work plan for the installation of new groundwater and

unsaturated zone monitoring point(s), establishing a groundwater monitoring network to adequately monitor the point of compliance upgradient and downgradient of the closed WMU, and for the installation of unsaturated zone monitoring points for the closed WMU. The work plan must be certified by a California professional civil engineer or a California professional geologist. In order for a discharger to utilize an existing well instead of installing a new groundwater monitoring well, the Discharger must submit documentation demonstrating that the existing well(s) can function as a monitoring well.

B. Monitoring Systems Installation Report

No later than 30 days following the construction completion of a monitoring system or monitoring system component, the Discharger must submit a technical report discussing the installation of the monitoring systems or monitoring system component for the closed WMU. The report must summarize all work activities associated with the installation of the groundwater and unsaturated zone monitoring systems. The report must be certified by a California professional civil engineer or a California professional geologist. It must contain sufficient information to verify that the construction was in accordance with State and/or County standards.

C. Final Construction Quality Assurance Report

No later than 90 days following clean-closure and the construction completion of the closed WMU, a Final Construction Quality Assurance (CQA) Report, required by CCR, title 27, section 20324, subdivision (d)(1)(C), must be submitted to the Water Board for review and acceptance by the Executive Officer. The report must be certified by a California professional civil engineer or a California certified engineering geologist. The report must contain sufficient information and test results to verify clean closure and to verify construction specifications with respect to the accepted engineered alternative to the prescriptive standards and with performance goals of CCR, title 27.

D. Sampling and Analysis Plan

No later than 90 days following the construction completion of the closed WMU, the Discharger must submit for Water Board review and acceptance a Sampling and Analysis Plan (SAP) for the closed WMU, including procedures for monitoring, sampling, and analysis of the groundwater and unsaturated zone monitoring systems. The SAP must include soil moisture background values for the unsaturated zone monitoring program and propose soil moisture action limits for which unsaturated zone monitoring data will be compared to determine physical evidence of a release.

E. Financial Assurances

No later than 30 days following the Water Board acceptance of the Final CQA Report required in section V.C above, the Discharger must submit Instruments of Financial Assurance acceptable to the Water Board.

1. A Financial Assurance Instrument providing adequate funding for the post-closure

monitoring and maintenance activities, as described in the accepted FCPCMP, must be submitted to the Water Board, pursuant to CCR, title 27, section 22212.

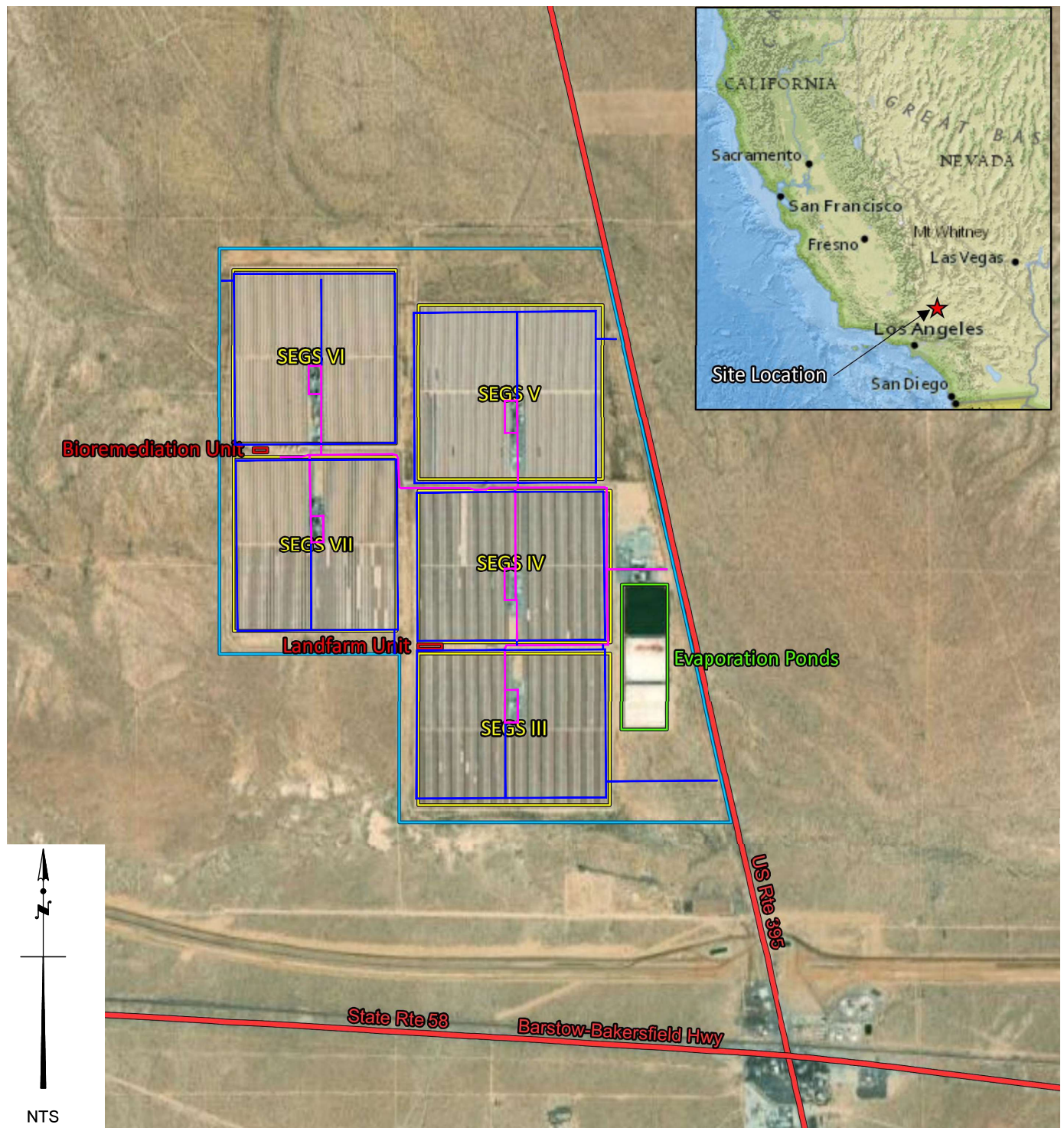
2. A Financial Assurance Instrument providing adequate funding for corrective action of a known and reasonably foreseeable release must be submitted to the Water Board, pursuant to CCR, title 27, section 22222.

I, Michael R. Plaziak, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Board, Lahontan Region, on March 1, 2023.

MICHAEL R. PLAZIAK, PG
EXECUTIVE OFFICER

- Attachments:
- A. Facility Location and Current Layout Map
 - B. Plan View of Pond 5/RSI/RSII Landfill
 - C. Detail - Pond 5/RSI-RSII Landfill Closure System
 - D. Monitoring and Reporting Program No. R6V-2023-(PROPOSED)
 - E. Standard Provisions for Waste Discharge Requirements

ATTACHMENT A



Legend

- Facility Boundary
- Solar Fields
- Land Treatment Units
- Evaporation Ponds
- Existing Paved Roads
- Existing Dirt Roads

SOURCE: NORTHSTAR, MAY 28, 2021



TETRA TECH

21700 Copley Drive, Suite 200
Diamond Bar, CA 91765

TEL 909.860.7777 FAX 909.860.8017

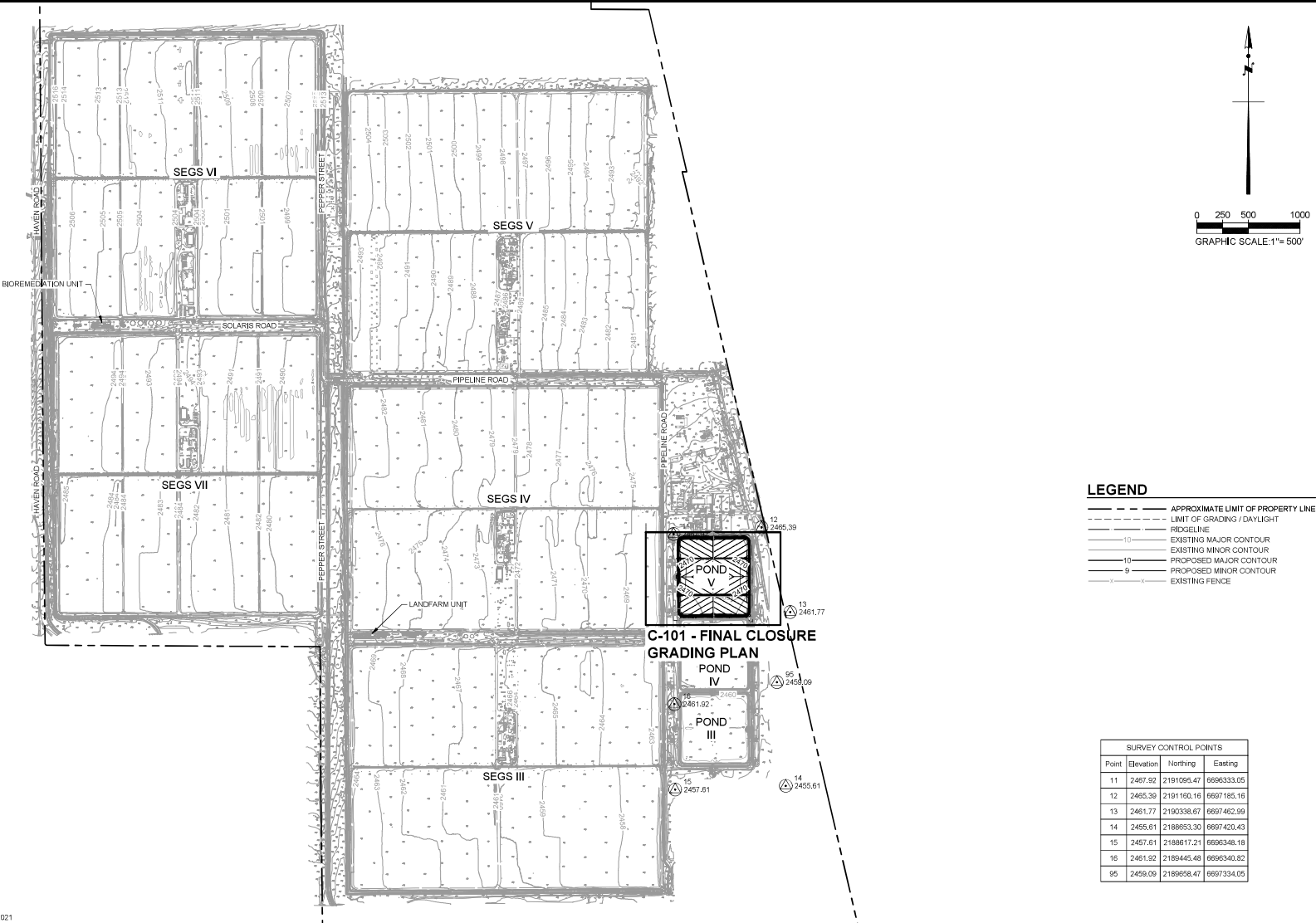
NEXTERA SEGGS III - VII CLOSURE AND POST-CLOSURE MAINTENANCE PLAN

SITE LOCATION AND VICINITY MAP

FIGURE 1

ATTACHMENT B

Attachment B - Plan View of Pond 5/RSI-RSII Landfill



DATE OF TOPOGRAPHY: FEBRUARY 14, 2021 SUPPLEMENTED WITH FEBRUARY 2, 2021

NO.	REVISION DESCRIPTION	BY



TETRA TECH
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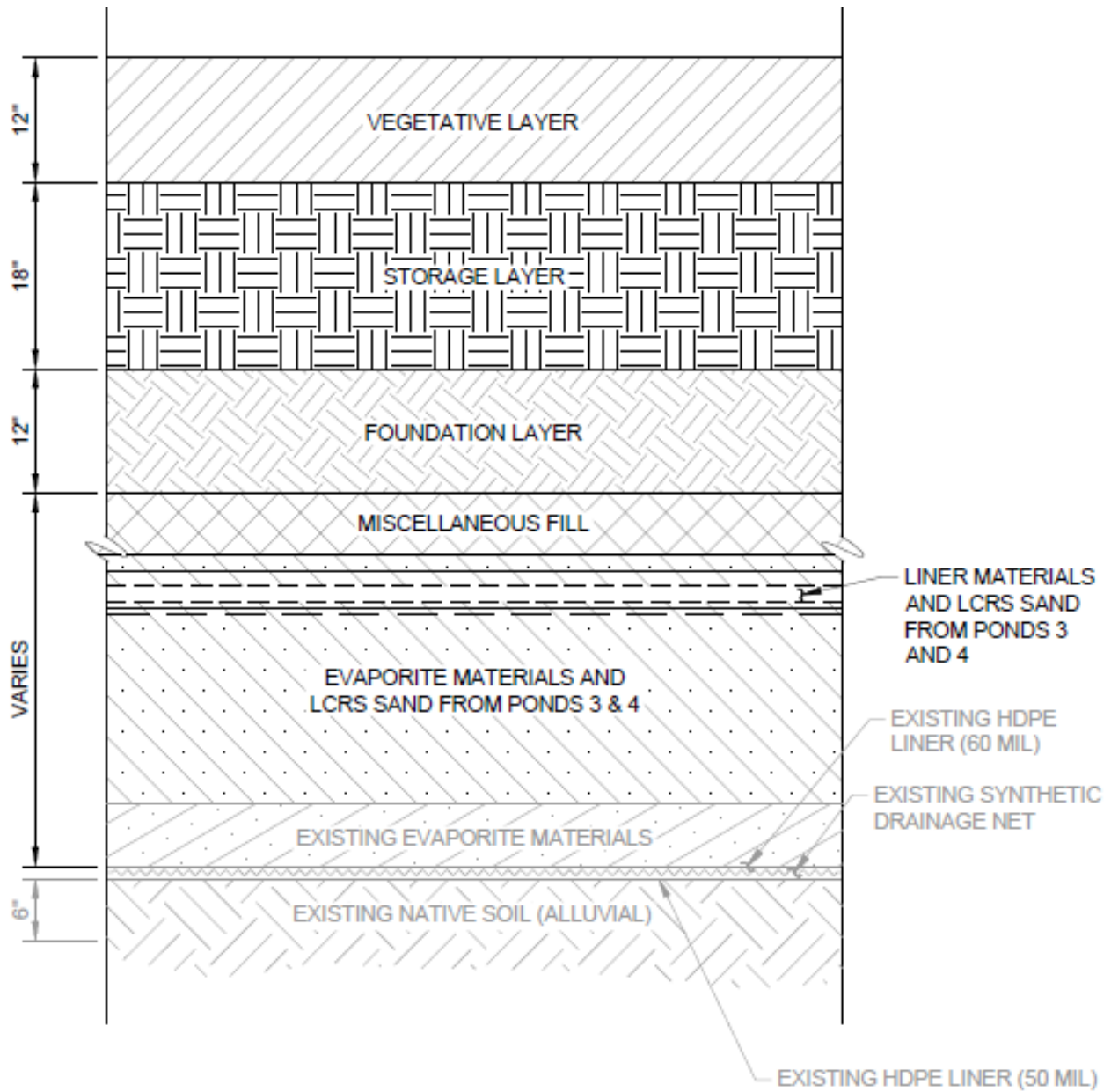


NEXTERA POND V - FINAL CLOSURE PLAN			
SITE PLAN AND SHEET INDEX MAP			
DESIGNED BY :	V.H.V.	FILE :	C-100 Site Plan And Sheet Index Map.dwg
DRAWN BY :	R.C.W.	DATE :	11-2021
CHECKED BY :	P.W./M.H.	SCALE :	AS SHOWN
APPROVED BY :	G.E.S.	DATE :	11-2021
		C-100	

PERMIT ONLY - NOT FOR CONSTRUCTION

ATTACHMENT C

Attachment C. Detail- Pond 5RSI-RSII Landfill Closure System



ATTACHMENT D

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

**MONITORING AND REPORTING PROGRAM
NO. R6V-2023-(PROPOSED)
WDID NO. 6B364550002**

**RESURGENCE SOLAR I, LLC AND RESURGENCE SOLAR II, LLC
SOLAR ELECTRIC GENERATING SYSTEMS (SEGS) III THROUGH VII
THREE SURFACE IMPOUNDMENTS
TWO LAND TREATMENT UNITS,
AND POND NO. 5 LANDFILL (RESURGENCE SOLAR I AND RESURGENCE SOLAR II
LANDFILL [RSI-RSII LF])**

San Bernardino County

This monitoring and reporting program (MRP) is issued to Resurgence Solar I, LLC and Resurgence Solar II, LLC (Discharger- Resurgence Solar I, LLC and Resurgence Solar II, LLC are wholly owned subsidiaries of Nextera Energy Resources, LLC) 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, title 27, section 20005, et seq. (hereafter Title 27). The technical reports required by Order R6V-2023-(PROPOSED) and MRP No. R6V-2023-(PROPOSED) are necessary to assure compliance with these waste discharge requirements. Therefore, the burden, including costs, of these reports bears a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

In requiring those reports, the regional board must provide the person with a written explanation with regard to the need for the reports and must identify the evidence that supports requiring that person to provide the reports. Water Code section 13268, building from section 13267, states, in part: (a) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of section 13399.2, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b). (b)(1) Civil liability may be administratively imposed by a regional board in accordance with article 2.5 (commencing with section 13323) of chapter 5 for a violation of subdivision (a) in an amount which must not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.

I. WATER QUALITY PROTECTION STANDARD

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

The owner/operator, Resurgence Solar I, LLC and Resurgence Solar II, LLC (both are wholly owned subsidiaries of Nextera Energy Resources, LLC) submitted a Final Closure and Post-Closure Maintenance and Monitoring Plan (FCPCMP) on January 21, 2022 (Revised August 15, 2022). A WQPS is necessary to evaluate the effectiveness of the detection monitoring program (DMP) to determine if a release occurs from the- Pond 5/RSI-RSII Landfill (Landfill).

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 for 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 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 has been established. CCR, title 27 allows for various options to determine concentration limits including statistical interwell and intrawell methods and non-statistical methods.

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.

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 and monitoring points for the groundwater and unsaturated zone monitoring systems for the closed WMU are shown in Attachment B of this MRP. The point of compliance is a vertical surface located at the hydraulically downgradient limit of the Pond 5/RSI-RSII Landfill that extends through the uppermost aquifer underlying the Pond 5 Landfill. However, MW-1, MW-2, MW-3, and MW-4 are not functioning as monitoring wells in accordance with title 27 requirements (e.g., locations of the wells, screen intervals, and screen lengths, do not meet title 27 requirements.). New monitoring points must be installed to include upgradient (background) groundwater and downgradient groundwater monitoring. Board Order No. R6T-2023-(PROPOSED), Section V (Time Schedule), requires the Discharger to submit a work plan(s) for the installation of replacement groundwater monitoring wells to monitor the point of compliance and for the installation of additional unsaturated zone monitoring points around the perimeter of the closed WMU. In order for the discharger to utilize an existing well instead of installing a new groundwater monitoring well, the Discharger must submit documentation demonstrating that the existing wells can function as a monitoring well.

The Discharger may add monitoring points, as needed, to comply with the DMP, evaluation monitoring program (EMP), and corrective action program requirements contained in Board Order No. R6V-2023-PROPOSED and this MRP, and as approved by the Water Board.

The Landfill monitoring points must include the leachate collection and removal system sumps originally designed and constructed for the Pond 5/RSI-RSII surface impoundment. The purpose is to provide an early indication of a release which may have breached the HDPE bottom liner and entered the sand drain.

E. Post-Closure Period

The FCPCMP proposes to close Pond 5 as a landfill. The post-closure period for the Pond 5/Resurgence I and Resurgence II (RSI-RSII) Landfill (closed WMU) will extend as long as the wastes pose a threat to water quality pursuant to CCR, title 27, section

20950 (a)(1). The Landfill is expected to be certified closed by August 2023; therefore, the post-closure period is expected to end in 2053 for planning purposes. However, the post-closure maintenance period may be extended if measurably significant evidence of release is detected from the Facility or shortened if the Discharger demonstrates and the Water Board finds that the waste in West Pond Landfill no longer represents a threat to water quality and 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 20410(c).

II. MONITORING

The Discharger must comply with the monitoring requirements outlined below. All monitoring and inspecting 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).

All groundwater samples, with the exception of field parameters, must 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.

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, sections 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 civil engineer or professional geologist 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

Groundwater monitoring points are shown on MRP, Attachment B.

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 relative to the surveyed (by California-licensed Land Surveyor and appropriately experienced California-licensed Civil Engineer) top-of-casing measuring point for each well. 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 United States Environmental Protection Agency (USEPA) 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.

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 elevation (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 seepage velocity of groundwater flow (feet/year); and the current groundwater elevation 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 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.

a. Monitoring Points

The unsaturated zone will be monitored for soil-pore gas using a series of unsaturated zone monitoring points.

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-pore gas samples are collected.

c. Soil-Pore Gas Purging and Sampling

Prior to sampling, each unsaturated zone monitoring point 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-pore gas samples, with the exception of field parameters, are to be collected in passivated stainless steel canisters (e.g., Summa® canisters) 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 shall monitor the unsaturated zone monitoring points for all COCs and monitoring parameters in accordance with the frequencies listed in Attachment A.

e. Field Parameters

The Discharger shall 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. Final Cover Integrity Monitoring and Maintenance Program

The Discharger will install an engineered alternative final cover over the Landfill, specifically an evapotranspirative (ET) cover. The final cover will consist of 1-foot-thick vegetative root zone layer underlain by a 1.5-foot-thick storage layer which is underlain by a 1-foot-thick foundation layer. The cover will be graded to prevent leachate formation due to storm water infiltration, to promote lateral runoff, and to prevent ponding. The Discharger must annually monitor and maintain the final cover materials to ensure the integrity of the cover and to evaluate the cover's capability to promote runoff and prevent ponding.

C. Storm Water Monitoring and Response 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). 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 laboratory 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 California Regional Water Quality Control Board-Lahontan Region (Water Board).

1. Storm Water Pollution Control Plan

A copy of the SWPCP (and amendments thereto) must be maintained at the Facility 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.1. The Discharger must develop and implement a site-specific SWPCP (or equivalent document) that contains, at minimum, the following elements below.

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 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 site activity that may have potential pollutant sources.

c. Potential Pollutant Sources

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

d. 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 potential pollutant-associated 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 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.

e. 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

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.

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, except for 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 must 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. LCRS sumps must be visually monitored for the presence of liquid when stormwater monitoring events occur.

At the time a storm water sample is collected, the Discharger must 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. If 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 must not be lower than 6.0 nor greater than 9.0.
Turbidity	Storm water discharges must not exceed 500 nephelometric turbidity units (NTUs).
Oil and Grease, Total	Storm water discharges must not contain oils and greases at concentrations in excess of 15 milligrams per liter (mg/L).
Iron, Total	Storm water discharges must 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. 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 thresholds 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

To determine whether there is "measurably significant" evidence of a new release from the WMU, 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.

B. Non-Statistical Analysis Methods

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 must 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 semi-annual and 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. Time-series plots are not required for parameters that have never been detected above their MDL (as specified by the applicable USEPA method). Each semi-annual and annual report must include these time-series plots.

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 quality 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		
Sampling and Reporting Frequency	Sampling and Reporting Period	Report Due Date
Annual DMP Monitoring Report	January 1 – December 31	February 15
Annual Storm Water Report	January 1 – December 31	February 15
Five-Year Constituent of Concern Monitoring Report ¹	January 1 – June 30	August 15
	July 1 – December 31	February 15
¹ 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 5-year report is due February 15, 2024.		

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 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 (preceding 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 (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 seepage velocity of groundwater flow (feet/year), and the current groundwater elevation isocontours for that monitoring period.

- f. Copies of all field monitoring and well sampling data sheets.
- g. Time-series plots of the laboratory 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. All data collected in accordance with MRP section II. B. Specifically, a description of the condition of the final cover materials and a discussion regarding any subsidence or soil cover washouts, which have occurred, and the capability of the cover to promote runoff and prevent ponding. In the case where subsidence, washouts or other damage to the cover is noted, the report must indicate the actions taken to repair cover material to prevent reoccurrence. The report must also include a determination on whether significant changes in the operation of the Landfill warrant an update to the FCPCMP.
- j. 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.
- k. 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.
- l. The Discharger must review the FCPCMP annually to determine if significant changes in the operation or 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 must 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 trainings performed during the reporting period, including dates and content.

3. 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 II of Title 40, Code of Federal Regulations (40 CFR), Part 258. 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 next five-year sampling event should be scheduled to occur in first half of 2025 and reported to the Water Board no later than **August 15, 2025**.

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

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 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.

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 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; or
- viii. For physical evidence of a release – the physical factors that indicate evidence of a release.

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 Evaluation Monitoring Program (EMP) meeting the provisions of CCR, title 27, section 20420, subdivision (k)(5). If the Discharger decides to not conduct verification procedures or to not 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 Evaluation Monitoring Program, 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 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. These logs must be submitted to the Water Board within 90 days following completion of fieldwork.

5. Significant Earthquake Event

After a significant¹ 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.

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 WDRs, 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.

¹ 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.

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 and include your WDID No. or Facility name in the subject line. For documents that are 50 MB or larger please contact Lahontan Water Board staff to discuss how to transmit the documents for our review.

F. Technical Reports

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

1. By **May 1, 2023**, the Discharger must submit a Work Plan to install monitoring wells to replace MW-1, MW-2, MW-3, MW-4, or provide documentation demonstrating that wells MW-1, MW-2, MW-3, and MW-4 function in accordance with title 27 requirements for monitoring wells. The existing monitoring wells do not meet title 27 requirements for location, screen interval, and screen length, etc.
2. By **May 1, 2023**, the Discharger must submit a Work Plan to install unsaturated zone monitoring points as required by CCR, title 27, section 20415(d)(5).
3. By **August 30, 2024**, the Discharger must submit a Closure Certification Report.
4. **Upon completion of all closure activities for a Unit**, the Discharger must conduct an aerial photographic survey of the closed portions of the Unit and of its immediate surroundings, including at least the surveying monuments pursuant to CCR, title 27, section 21090(e)(1). The data so obtained must be used to produce a topographic map of the site at a scale and contour interval sufficient to depict the as-closed topography of each portion of the Unit, and to allow early identification of any differential settlement pursuant to CCR, title 27, section 21090(e)(2).
5. **At least every five years after completing closure of the Landfill**, the Discharger must produce and submit to the Water Board an iso-settlement map accurately depicting the estimated total change in elevation of each portion of the final cover's low-hydraulic conductivity layer pursuant to CCR, title 27, section 21090(e)(2). For each portion of the Landfill, the map must show the total lowering of the surface elevation of the final cover, relative to the baseline topographic map produced in compliance with CCR, title 27, section 21090(e)(1).

6. **Prior to conducting periodic grading operations on the closed Landfill**, the Discharger must note on a map of the landfill the approximate location and outline of any areas where differential settlement is visually obvious. Each five-yearly iteration of the iso-settlement map must show all areas where differential settlement has been noted since the previous map submittal and must highlight areas of repeated or severe differential settlement. Map notations and delineations made pursuant to this requirement 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 Civil Engineer or Professional Geologist.

Ordered by: _____
MICHAEL PLAZIAK, PG
EXECUTIVE OFFICER

Dated: _____

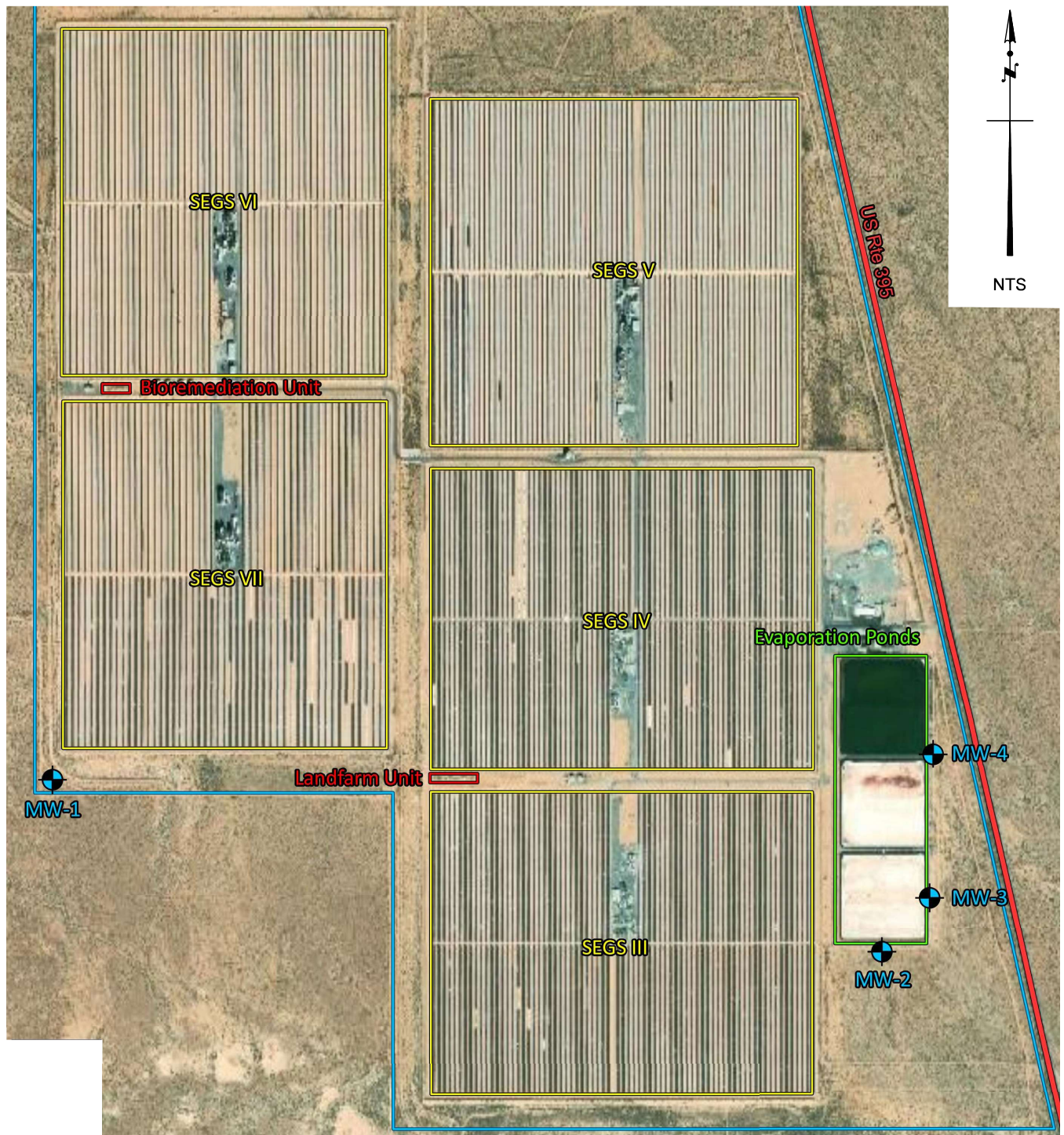
- Attachments: A. Water Quality Monitoring Program
B. Location Plan (Monitoring Points)
C. General Provisions for Monitoring and Reporting

ATTACHMENT A – WATER QUALITY MONITORING PROGRAM

GROUNDWATER MONITORING					
Parameter		Units	USEPA Method ¹	Sampling Frequency	Reporting Frequency
Field Parameters					
Groundwater Depth		feet below ground surface	--	annually	annually
" Gradient		foot/foot	--	annually	annually
" Direction		compass heading	--	annually	annually
Temperature		degrees Fahrenheit	--	annually	annually
Electrical Conductivity		micromhos/cm	--	annually	annually
pH		pH Units	--	annually	annually
Turbidity		NTUs	--	annually	annually
Constituents of Concern					
Monitoring Parameters	Total Dissolved Solids	milligrams/liter	E160.1	annually	annually
	Chloride	milligrams/liter	300	annually	annually
	Sodium	milligrams/liter	6010	annually	annually
	Sulfate	milligrams/liter	300	annually	annually
	Phosphate	milligrams/liter	300	annually	annually
	Potassium	milligrams/liter	6010	annually	annually
	Benzene	micrograms/liter	8260	annually	annually
	Biphenyl	micrograms/liter	8015	annually	annually
	Diphenyl Oxide	micrograms/liter	8015	annually	annually
	Volatile Organic Compounds ²	micrograms/liter	8260	annually	annually
	Semi-volatile Organic Compounds ³	micrograms/liter	8270	annually	annually
Arsenic		micrograms/liter	7062	5 year	5 year

UNSATURATED ZONE MONITORING				
Parameter	Units	USEPA Method ¹	Sampling Frequency	Reporting Frequency
Field Parameters				
Presence of liquid in lysimeters and/or LCRS sumps	visual observation data	--	during groundwater and stormwater sampling events	annually
UNSATURATED ZONE SOIL-PORE GAS MONITORING				
Parameter	Units	USEPA Method ¹	Sampling Frequency	Reporting Frequency
Field Parameters				
Atmospheric Pressure	inches of mercury	--	annually	annually
Nitrogen	parts per million or percent by volume	--	annually	annually
Methane ⁴	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 ⁴	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 ¹	Sampling Frequency	Reporting Frequency
pH	pH Units	--	four qualifying storm events per year ⁵	annually
Turbidity	NTUs	SM-2130-B		
Oil and Grease, Total	milligrams/liter	1664A		
Iron, Total	milligrams/liter	200.7		
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 Executive Officer.				
2 - As defined in Appendix I, 40 CFR, part 258.				
3 - As defined in Appendix II, 40 CFR, part 258.				
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.				

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.



Legend

-  Groundwater Monitoring Wells
-  Facility Boundary
-  Solar Fields
-  Land Treatment Units
-  Evaporation Ponds

SOURCE: NORTHSTAR, MAY 28, 2021



TETRA TECH

21700 Copley Drive, Suite 200
Diamond Bar, CA 91765

TEL 909.860.7777 FAX 909.860.8017

NEXTERA SEGs III - VII CLEAN CLOSURE PLAN

GROUNDWATER MONITORING WELL
LOCATIONS

FIGURE 2

Attachment C – General Provisions for Monitoring and Reporting

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LAHONTAN REGION GENERAL PROVISIONS FOR MONITORING AND REPORTING

I. SAMPLING AND ANALYSIS

- a. All analyses shall be performed in accordance with the current edition(s) of the following documents:
 - Standard Methods for the Examination of Water and Wastewater
 - 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 ensure 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 logbook 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.

Attachment C – General Provisions for Monitoring and Reporting

II. 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 logbook.

III. 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:
- e. 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;
 - In the case of a partnership, by a general partner
 - In the case of a sole proprietorship, by the proprietor

Attachment C – General Provisions for Monitoring and Reporting

- 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.
- f. Monitoring reports are to include the following:
- Name and telephone number of an individual who can answer questions about the report.
 - The Monitoring and Reporting Program Number.
 - WDID Number.
- g. Modifications

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

IV. 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.

ATTACHMENT E

Attachment E- Standard Provisions for Waste Discharge Requirements

September 1994

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LAHONTAN REGION STANDARD PROVISIONS FOR WASTE DISCHARGE REQUIREMENTS

I. Inspection and Entry

The Discharger shall permit Regional Board staff:

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

II. Reporting Requirements

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.

- 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.
- 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.
- 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.
- 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

Attachment E- Standard Provisions for Waste Discharge Requirements

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.

- 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.

III. 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.

IV. 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.

V. 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.

VI. 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.

VII. 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.

VIII. 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.

Attachment E- Standard Provisions for Waste Discharge Requirements

IX. 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.

X. Availability

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

XI. 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.

XII. Public Access

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

XIII. 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.

XIV. Definitions

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.

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.

XV. 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.

ENCLOSURE 2

Response to Comments on Tentative Closure and Post Closure Waste Discharge Requirements for Solar Electric Generating Systems III-VII, Kramer Junction, San Bernardino County

Comments received from Tetra Tech, dated December 15, 2022:

Comment 1 – WDR Finding 2 (page 2): Jeff Brooks confirmed via 11/22/22 e-mail that the liner materials (not the LCRS pipe) are acceptable for disposal in the Pond 5 LF if it is not feasible to recycle them. Recycling options were researched, and it was found to be infeasible; see Attachment 2 for the technical memo documenting the research. Due to sizing reduction and manageability issues with the liner material approximately 25% of it will be landfilled elsewhere. The remainder will be disposed in pond 5 LF. Revised attachment C cross section of LF (Attachment 3) was sent to Jeff Brooks at his request via e-mail on 11/15/22 modifying reference to LCRS materials.

Regional Board staff response: *The cross section has been updated from the previous draft based on the revised cross section received. This revised version will be part of the WDRs presented to the Regional Board for consideration for adoption.*

Comment 2 – WDR Finding 18 (page 10): Recommend deletion of an industrial Storm Water Pollution Prevention Plan (SWPPP) requirement as there will be no exposed industrial materials that represent potential pollutants after closure; during closure, the Construction SWPPP covers the site. During post-closure, the only potential pollutant is sediment that could be eroded from the final cover of the landfill. The post-closure maintenance plan includes rigorous erosion control measures, routine inspections and maintenance of those measures, and the establishment of vegetation on the final cover, which adequately addresses this issue after closure. In light of this, operating landfills typically submit a Notice of Termination under the Industrial General Permit for Storm Water Discharges shortly after closure and are no longer subject to its requirements. See related Comment 5 below.

Regional Board staff response: *Based on available information, enrollment under the Industrial Stormwater Permit is not needed or required. The WDRs text has been edited accordingly.*

Comment 3 – WDR Section II. Requirements and Prohibitions, Item C. Specific Requirements for Clean Closure of the Surface Impoundments (page 17): There are no background concentrations in soil for the two constituents that are listed, 1,1-Biphenyl and 1-1 Oxybisbenzene, as they are both man-made compounds. Appendix C – Clean Closure Plan of the 8/15/22 update of the Final Closure and Post-Closure Maintenance Plan (FCPMP), page 15 of 18 states regarding the analysis of these two compounds that "Exceedance of the laboratory detection limit will require further soil sampling at 1-foot depth increments until results verify concentrations are acceptable." It is recommended that this language be mirrored in this WDR section rather than referring to background soil levels.

Regional Board staff response: *Comment acknowledged, the text in the WDRs section has been adjusted to mirror the text in the FCPMP.*

Comment 4 – WDR Section V. Time Schedule, Item A. Monitoring Systems Installation Work Plan (page 23): Change from "landfill gas monitoring wells" to generic "unsaturated zone monitoring point(s)". Also recommend removing specific number and location ("along the perimeter") from this sentence. Recommend wording it with flexibility for the work plan to propose appropriate types, locations, and numbers of unsaturated zone monitoring point(s) which the RWQCB can then comment on as needed during the work plan approval process.
See related Comment 6 below.

Regional Board staff response: *WDRs section text modified as recommended.*

Comment 5 – Monitoring and Reporting Program, Section II. Monitoring, Item C. 1. c. List of Industrial Materials (page 9): There are no industrial materials exposed after closure so recommend deletion of requirements in C.1.; see related Comment 2 above.

Regional Board staff response: *WDRs text modified as recommended.*

Comment 6 - Monitoring and Reporting Program, Section IV. Reporting Requirements, Item F. Technical Reports (page 20): No LFG will be generated as there is no MSW/organic waste that can decompose and create methane or other gases. Recommend changing to "...submit a Work Plan to install unsaturated zone monitoring points to comply with 27 CCR 20415(d)." see related Comment 4 above.

Regional Board staff response: *The MRP text has been modified from "landfill gas monitoring wells" to "unsaturated zone monitoring points". However, monitoring for soil-pore gas is a required component of the MRP that remains unchanged. Unsaturated zone monitoring is required at all new Units, not just MSW landfills, unless the discharger demonstrates to the satisfaction of the Regional Board the following conditions in 27 CCR 20415(d). There is no evidence in the record to support that demonstration.*

Comment 7 – Monitoring and Reporting Program Attachment A. Water Quality Monitoring Program (Page 1 of 2): Request Morpholine and Hydroquinone be deleted as they have not historically been analyzed for and there are no new materials being deposited in the LF that would be potential sources of these two parameters.

Regional Board staff response: *The MRP has been modified to remove the analytes in response to this comment.*

Comment 8 - Monitoring and Reporting Program Attachment A. Water Quality Monitoring Program (Page 1 of 2): Request VOCs and SVOCs to be deleted as no LFG

will be generated resulting in no potential source of these parameters. See related Comments 4 and 6 above and Comment 11 below.

Regional Board staff response: *Monitoring and reporting for the analytes is needed to verify whether they are present and to determine compliance with title 27. Unsaturated zone monitoring is required at all new Units, not just MSW landfills, pursuant to title 27, even when LFG is not anticipated to occur. No changes to the MRP have been made in response to this comment.*

Comment 9: Monitoring and Reporting Program Attachment A. Water Quality Monitoring Program (Page 1 of 2): Request all metals but Arsenic be deleted based on the July 2022 sampling results of the evaporite materials from the three evaporation ponds. The results showed Arsenic above screening levels while all other parameters were below screening levels.

Regional Board staff response: *The metals analyte list has been adjusted as requested.*

Comment 10: Monitoring and Reporting Program Attachment A. Water Quality Monitoring Program (Page 1 of 2): Request Cyanide and Sulfide be deleted as there is no potential source for these two parameters from the historical processes that generated the wastewater deposited in the three ponds.

Regional Board staff response: *The MRP has been modified to remove cyanide and sulfide as requested.*

Comment 11: Monitoring and Reporting Program Attachment A. Water Quality Monitoring Program (Page 2 of 2): This section on unsaturated zone soil-pore gas monitoring is not necessary as no LFG will be generated in the LF due to the total absence of organic wastes. Request it be deleted. See related Comments 4, 6 and 8 above.

Regional Board staff response: *According to Title 27, section 20415(d)(5) unsaturated zone monitoring is required unless the discharger demonstrates to the satisfaction of the Regional Board that either there is no unsaturated zone monitoring device or method designed to operate under the subsurface conditions existent at that Unit or that installation of unsaturated zone monitoring devices would require unreasonable dismantling or relocating of permanent structures. There is no evidence in the record to support that demonstration. No changes to the MRP have been made in response to this comment.*

Comment 12: Monitoring and Reporting Program Attachment A. Water Quality Monitoring Program (Page 2 of 2): Request this section on Storm Water Monitoring be deleted as there are no industrial materials exposed at this facility resulting in no

potential pollutants that could possibly be discharged. See related Comments 2 and 5 above.

Regional Board staff response: *No changes to the MRP have been made in response to this comment. Storm water monitoring is needed to monitor for potential waste discharges associated with erosion at the facility and long-term facility maintenance activities.*

Enclosure:

Comments on the Tentative Closure and Post-Closure Waste Discharge Requirements for Solar Electric Generating Systems (SEGS) III-VII, WDID 6B364550002, Kramer Junction, San Bernardino County



December 15, 2022

JN: 197-2020-0148

Mr. Jeff Brooks, P.G.
Cleanup/Site Investigation and Enforcement Unit Chief
Lahontan Regional Water Quality Control Board
2501 Lake Tahoe Boulevard
South Lake Tahoe, California 96150

SUBJECT: Comments on the Tentative Closure and Post-Closure Waste Discharge Requirements for Solar Electric Generating Systems (SEGS) III-VII, WDID 6B364550002, Kramer Junction, San Bernardino County

Dear Mr. Brooks,

On behalf of NextEra, the discharger for the subject facility, Tetra Tech is providing review comments on the Tentative Closure and Post-Closure Waste Discharge Requirements (WDRs) for SEGS III-VII. Below is a summary of the comments and Attachment 1 is a pdf of the Tentative WDRs.

Comment 1 – WDR Finding 2 (page 2): Jeff Brooks confirmed via 11/22/22 e-mail that the liner materials (not the LCRS pipe) are acceptable for disposal in the Pond 5 LF if it is not feasible to recycle them. Recycling options were researched, and it was found to be infeasible; see Attachment 2 for the technical memo documenting the research. Due to sizing reduction and manageability issues with the liner material approximately 25% of it will be landfilled elsewhere. The remainder will be disposed in pond 5 LF. Revised attachment C cross section of LF (Attachment 3) was sent to Jeff Brooks at his request via e-mail on 11/15/22 modifying reference to LCRS materials.

Comment 2 – WDR Finding 18 (page 10): Recommend deletion of an industrial Storm Water Pollution Prevention Plan (SWPPP) requirement as there will be no exposed industrial materials that represent potential pollutants after closure; during closure, the Construction SWPPP covers the site. During post-closure, the only potential pollutant is sediment that could be eroded from the final cover of the landfill. The post-closure maintenance plan includes rigorous erosion control measures, routine inspections and maintenance of those measures, and the establishment of vegetation on the final cover, which adequately addresses this issue after closure. In light of this, operating landfills typically submit a Notice of Termination under the Industrial General Permit for Storm Water Discharges shortly after closure and are no longer subject to its requirements. See related Comment 5 below.

Mr. Jeff Brooks, P.G.
December 15, 2022
Page 2

Comment 3 – WDR Section II. Requirements and Prohibitions, Item C. Specific Requirements for Clean Closure of the Surface Impoundments (page 17): There are no background concentrations in soil for the two constituents that are listed, 1,1-Biphenyl and 1-1 Oxybisbenzene, as they are both man-made compounds. Appendix C – Clean Closure Plan of the 8/15/22 update of the Final Closure and Post-Closure Maintenance Plan (FCPMP), page 15 of 18 states regarding the analysis of these two compounds that "Exceedance of the laboratory detection limit will require further soil sampling at 1-foot depth increments until results verify concentrations are acceptable." It is recommended that this language be mirrored in this WDR section rather than referring to background soil levels.

Comment 4 – WDR Section V. Time Schedule, Item A. Monitoring Systems Installation Work Plan (page 23): Change from "landfill gas monitoring wells" to generic "unsaturated zone monitoring point(s)". Also recommend removing specific number and location ("along the perimeter") from this sentence. Recommend wording it with flexibility for the work plan to propose appropriate types, locations, and numbers of unsaturated zone monitoring point(s) which the RWQCB can then comment on as needed during the work plan approval process. See related Comment 6 below.

Comment 5 – Monitoring and Reporting Program, Section II. Monitoring, Item C. 1. c. List of Industrial Materials (page 9): There are no industrial materials exposed after closure so recommend deletion of requirements in C.1.; see related Comment 2 above.

Comment 6 - Monitoring and Reporting Program, Section IV. Reporting Requirements, Item F. Technical Reports (page 20): No LFG will be generated as there is no MSW/organic waste that can decompose and create methane or other gases. Recommend changing to "...submit a Work Plan to install unsaturated zone monitoring points to comply with 27 CCR 20415(d)." see related Comment 4 above.

Comment 7 – Monitoring and Reporting Program Attachment A. Water Quality Monitoring Program (Page 1 of 2): Request Morpholine and Hydroquinone be deleted as they have not historically been analyzed for and there are no new materials being deposited in the LF that would be potential sources of these two parameters.

Comment 8 - Monitoring and Reporting Program Attachment A. Water Quality Monitoring Program (Page 1 of 2): Request VOCs and SVOCs to be deleted as no LFG will be generated resulting in no potential source of these parameters. See related Comments 4 and 6 above and Comment 11 below.

Comment 9: Monitoring and Reporting Program Attachment A. Water Quality Monitoring Program (Page 1 of 2): Request all metals but Arsenic be deleted based on the July 2022 sampling results of the evaporite materials from the three evaporation ponds. The results showed Arsenic above screening levels while all other parameters were below screening levels.

Mr. Jeff Brooks, P.G.
December 15, 2022
Page 3

Comment 10: Monitoring and Reporting Program Attachment A. Water Quality Monitoring Program (Page 1 of 2): Request Cyanide and Sulfide be deleted as there is no potential source for these two parameters from the historical processes that generated the wastewater deposited in the three ponds.

Comment 11: Monitoring and Reporting Program Attachment A. Water Quality Monitoring Program (Page 2 of 2): This section on unsaturated zone soil-pore gas monitoring is not necessary as no LFG will be generated in the LF due to the total absence of organic wastes. Request it be deleted. See related Comments 4, 6 and 8 above.

Comment 12: Monitoring and Reporting Program Attachment A. Water Quality Monitoring Program (Page 2 of 2): Request this section on Storm Water Monitoring be deleted as there are no industrial materials exposed at this facility resulting in no potential pollutants that could possibly be discharged. See related Comments 2 and 5 above.

NextEra and Tetra Tech staff are available to participate in a virtual meeting to review these comments with you at your convenience. Please advise as to your availability for this meeting. Should you have any questions or require additional information, please contact Paul Willman at paul.willman@tetrattech.com or Julie Hauenstein at Julie.hauenstein@tetrattech.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Julie H", with a stylized flourish at the end.

Julie Hauenstein, P.E.

Attachment 1 – Tentative WDR

Attachment 2 – Technical Memo on Recyclability of Liner Materials

Attachment 3 – Revised Attachment C to Tentative WDRs

c: Patti Murphy, NextEra

Lahontan Regional Water Quality Control Board

November 9, 2022

WDID No. 6B364550002

TO: ATTACHED MAILING LIST

Closure and Post-Closure Waste Discharge Requirements for Solar Electric Generating Systems (SEGS) III-VII, Kramer Junction, San Bernardino County

Enclosed are tentative Waste Discharge Requirements for the subject line facility, located in San Bernardino County. The Lahontan Regional Water Quality Control Board (Water Board) requests that you review the enclosed documents and provide us with your written comments no later than **December 20, 2022**. Please send your comments to the Water Board's email address at


Lahontan@waterboards.ca.gov, and include **SEGS III-VII WDID No.**

6B364550002 Comments in the subject line text. If you do not have access to the internet, you may mail your comments to the Water Board's South Lake Tahoe office at the address shown on this letter to the attention of Jeff Brooks.

The Water Board will consider adopting the Closure and Post-Closure Waste Discharge Requirements at its regular meeting scheduled for March 1, 2023. As required by the California Code of Regulations, title 27, section 21730, notice of the meeting and the enclosed documents are being circulated not less than 45 days before the scheduled meeting. You can view the Water Board's meeting agenda 10 days before the meeting on our web site at:

www.waterboards.ca.gov/lahontan (click on Agenda). If you need further information regarding this meeting, please contact our office at (530) 542-5420.

If you need further information regarding this agenda item, please contact me at (530) 542-5420 or at jeff.brooks@waterboards.ca.gov.



JEFF BROOKS, PG
SENIOR ENGINEERING GEOLOGIST

Enc: Closure and Post-Closure Waste Discharge Requirements and
Monitoring and Reporting Program for SEGS III-VII

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

**BOARD ORDER NO. R6V-2023-(TENTATIVE)
WDID NO. 6B364550002**

**CLOSURE AND POST-CLOSURE
WASTE DISCHARGE REQUIREMENTS
FOR
RESURGENCE SOLAR I, LLC AND RESURGENCE SOLAR II, LLC
SOLAR ELECTRIC GENERATING SYSTEMS (SEGS) III THROUGH VII
THREE SURFACE IMPOUNDMENTS
TWO LAND TREATMENT UNITS,
AND POND NO. 5 LANDFILL (RESURGENCE SOLAR I AND RESURGENCE SOLAR II
LANDFILL [RSI-RSII LF])**

San Bernardino County

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

1. Discharger

The owner/operator, Resurgence Solar I, LLC and Resurgence Solar II, LLC (both are wholly owned subsidiaries of Nextera Energy Resources, LLC) submitted the Final Closure and Post-Closure Maintenance Plan (FCPCMP) for the Solar Electric Generating Systems (SEGS) III, IV, V, VI VII (SEGS III-IV) on January 11, 2022 (Revised August 15, 2022). For the purposes of this Order, Resurgence Solar I, LLC and Resurgence Solar II, LLC are referred to as the "Dischargers."

2. Facility

The Facility currently includes the following Waste Management Units (referred to as WMUs or Units hereafter):

- a. Three surface impoundments (i.e., Impoundments 3, 4, and 5) totaling 30 acres, which received wastewater from SEGS III-VII operations, and
- b. Two land treatment units (LTUs) (i.e., Bioremediation Unit and Landfarm), which were used to treat soil contaminated by release of heat transfer fluid (HTF) from facility operations.

A map of the Facility location with the layout of the existing and partially demolished solar thermal generating facility is included as Attachment A, which is made part of this Order.

The Facility operated as a concentrating solar thermal generating facility from 1986 to February 2020, when it ceased operation and all discharges to the WMUs. The dischargers intend to convert the Facility to a photovoltaic-based solar arrangement that does not generate operational wastewater or use HTF.

The Final CPCMP proposes to clean-close two of the three surface impoundments (i.e., Ponds 3 and 4) and the two land treatment units by removing all waste materials from these WMUs. The third surface impoundment, Pond 5, is proposed to be closed as a landfill and to be identified as the Resurgence Solar I and Resurgence Solar II Landfill (RSI-RSII LF). The Landfill will contain all remaining solid wastes (81,000 tons) from all three surface impoundments and liner and containment materials from Impoundments 3 and 4.

3. Facility Location

The Facility is located at 41100 US Highway 395, Boron, near the intersection of State Highway 58 and one-half mile north of unincorporated community of Kramer Junction (Assessor's Parcel Number 0491-151-38-0000). The Facility is within Section 31, Township 11 North, Range 6 West, San Bernardino Base & Meridian.

4. Site History

SEGS III, IV, and V began operating on the Site as concentrating solar thermal generating facilities in 1986. SEGS VI and VII were added in 1988. NextEra Energy Operating Services (NextEra) has owned and operated the SEGS III-VII facilities since 2005 through subsidiary companies including Luz Solar Partners Ltd. and Resurgence Solar I, LLC and Resurgence Solar II, LLC.

The concentrating solar thermal generating facility ceased operations in February 2020. The concentrating solar thermal system has been removed and the area has been cleared and graded. The Dischargers plan to convert the facility to photovoltaic system which will produce electricity directly from sunlight, will not use HTF and will reduce facility water usage.

5. Reason for Action

The WMUs are eligible for closure since wastewater and HTF-contaminated soils are no longer generated or discharged at the Site because the Facility will be converted to a photovoltaic solar facility. The Dischargers submitted the Closure and Post-Closure Maintenance Plan (FCPCMP) in January 2022 with a revised version submitted in August 2022.

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 Orders Nos. 6-95-102 and 6-97-58, issuing these new Waste Discharge Requirements (WDRs), and updating the Monitoring and Reporting Program (MRP) to: (1) establish the closure and post-closure maintenance and monitoring period and requirements for the Facility; (2) incorporate Facility-specific storm water management, monitoring, and reporting requirements; (3) provide general updates to the WDRs and MRP based on current Site conditions; and (4) develop WDRs and a MRP in compliance with the requirements of California Code of Regulations (CCR), title 27.

6. Order History

Class II Wastewater Impoundments (WDID 6B364550002)

- a. Board Order No. 6-86-108, adopted on September 12, 1986, established WDRs for three wastewater impoundments at SEGS III, IV, and V.
- b. Board Order No. 6-88-144, adopted on September 8, 1988, rescinded Board Order 6-86-108 and issued revised WDRs that include new SEGS units, VI and VII, and a fourth impoundment.
- c. Board Order No. 6-97-58, adopted on April 3, 1997, rescinded Board Order 6-88-144 and revised the WDRs to 1) name new Dischargers and 2) incorporate requirements of Article 5, Chapter 15, Title 23, California Code of Regulations

HTF-Contaminated Soil Units (WDID 6B368909005)

- d. Board Order No. 6-90-24, adopted on April 11, 1990, established WDRs for HTF-contaminated soil in three units: 1) a Class II temporary storage unit, 2) treatment in a Class I Unit, and 3) discharge to a Class III.
- e. Board Order No. 6-95-102, adopted on September 14, 1995, rescinded Board Order 6-90-25 and revised the WDRs to 1) name new Dischargers, 2) reclassify the HTF-contaminated soil disposal units as a Class II Bioremediation Unit and Class II Landfarm Unit, 3) the revised Article 5 requirements of chapter 15, and 4) reflect a revision in California Environmental Quality Act (CEQA) compliance.

7. Final Closure and Post-Closure Maintenance Plan

This Order approves the revised FCPCMP dated August 2022, which describes the proposed manner of closure for the bioremediation, landfarm, and surface impoundments; and closure of Pond 5 as a Class II landfill (i.e., Pond 5 Landfill/RSI-RSII LF) and the proposed maintenance of the landfill during the post-closure period.

The Bioremediation and Landfarm WMUs will be clean closed. Soils removed from the LTUs as part of the clean closure may be reclaimed onsite when the heat transfer fluid does not exceed an average total concentration of 100 mg/kg.

The clean closure of Impoundments 3 and 4 will be in accordance with CCR, Title 27, section 21400(b)(1). Wastes and contaminated materials (including liners) from Impoundments 3 and 4 will be removed and transferred to Pond 5/RSI-RSII Landfill. No other waste will be discharged to Impoundment 5. Impoundment 5 will be closed as a landfill in accordance with CCR, title 27, section 21400(b)(2)(A), which specifies:

“...that all residual wastes, including sludges, precipitates, settled solids, and liner materials, must be compacted, and the Unit must be closed as a landfill pursuant to [section] 21090, provided that the closed Unit meets applicable standards waste classification and siting requirements for landfill Units in Articles 3 and 4 of Subchapter 2, Chapter 3, Subdivision 1 of this division ([section] 20240 et seq.), and further provided that the moisture content of residual wastes, including sludges, does not

exceed the moisture-holding capacity of the waste either before or after closure”

The liner of the surface impoundment will remain intact and will serve as the liner of the landfill (hydraulic conductivity of 1×10^{-6} centimeters per second [cm/s]). The liner consists of:

- a. an upper primary liner consisting of 60 mil high density polyethylene (HDPE);
- b. a lower secondary liner consisting of 50 mil HDPE; and
- c. between the liners is a synthetic drainage net that is used as part of the leachate collection and removal system (LCRS). In the lowest drain-line portions of the LCRS there is a sand layer with perforated drainage pipes

A final cover will be constructed over the Pond 5/RSI-RSII Landfill to isolate the waste from precipitation and minimize the potential to generate leachate. The final cover for the Landfill will be the primary containment system for the closed WMU in accordance with CCR, title 27, sections 21090 and 20950. Attachment B of this Order is a plan view of the Landfill location and Attachment C is a schematic of the proposed closed WMU showing the base liner and final cover liner systems.

The FCPCMP also conforms with Class II siting requirements of CCR, title 27, section 20250 and section 21750.

8. Closure as a Landfill

Pursuant to CCR, title 27, section 21400(b)(1), a discharger must clean close a surface impoundment unless they demonstrate, and the Water Board finds that it is infeasible to attempt clean-closure. In cases where clean closure is infeasible, CCR, Title 27, section 21400(b)(2) allows closure as a landfill provided that (1) closure is carried out pursuant to the requirements of CCR, title 27, section 21090; (2) the closed unit meets the applicable construction standards for landfills pursuant to CCR, title 27, 20240 et seq.; and (3) the moisture content of the residual wastes does not exceed the moisture holding capacity of the waste either before or after closure. The Water Board finds that clean closure of all three surface impoundments is infeasible, and that waste consolidation onsite and closure of Pond 5 as a landfill is appropriate pursuant to CCR, title 27, section 21400(b)(2), as detailed below.

a. Demonstration of Infeasibility of Clean Closure of All Wastewater Impoundments

The evaporite wastes remaining in the three surface impoundments are designated Class II wastes. To clean close all the surface impoundments, the evaporite wastes would be removed and hauled to a Class II landfill. The evaporite waste from the three impoundments comprise approximately 81,000 tons (approximately 3,240 truckloads) as well as a total of six liner systems. The nearest facilities capable of accepting the evaporite material are the Waste Management McKittrick Landfill in Kern County, California (approximately 280 miles round trip) and the US Ecology Landfill in Beatty, Nevada (approximately 360 miles round trip). If the material is transported and disposed at the Class II Waste Management McKittrick Landfill or

the US Ecology Landfill, potential air emissions, both criteria pollutants (e.g., nitrogen oxides, hydrocarbons, particulate matter) and greenhouse gases (carbon dioxide), will be regionally significant due to on-road diesel emissions. Costs are approximately \$10,754,400 for clean closure of all units. Based on this information, the Water Board finds the potential air pollution impacts and the cited high financial costs associated with offsite disposal demonstrate that clean closure of all three surface impoundments is impractical and, therefore, infeasible.

Closed Unit Will Meet Applicable Standards of Title 27

The Pond 5 Landfill/RSI-RSII LF will be closed and maintained during the post-closure period in accordance with the requirements of CCR, title 27, as described in the revised Final CPCMP and as required by this Order. Additionally, the closed WMU will meet the applicable siting and construction standards for a new Class II non-municipal solid waste landfill pursuant to CCR, title 27, 20240 et seq., as outlined below.

1. There will be at least a 5-foot separation between the bottom of the closed WMU and highest anticipation elevation of underlying groundwater [CCR, title 27, section 20240(c)].
2. The base liner system of the closed WMU will have a hydraulic conductivity of not more than 1×10^{-6} centimeters/second (cm/s) (CCR, title 27, section 20250(b)[3]).
3. The closed WMU will not be located within a known 100-year floodplain, therefore design considerations to prevent inundation or washout due to floods with a 100-year return period are not applicable (CCR, title 27, section 20250[c]).
4. The closed WMU is not located within 200 feet of a known Holocene-active fault (CCR, title 27, section 20250[d]).
5. Slope stability and liquefaction analyses were performed, and the closed WMU has been designed and will be constructed and maintained to preclude containment failure due to due rapid geologic change (CCR, title 27, section 20250[e]).
6. CCR, title 27, section 20250(c) specifies that clay liners for a Class II WMU be a minimum of 2-feet thick, unless an engineered alternative is approved by the Regional Board in accordance with CCR, title 27, section 20080(b). Board Order No. 6-97-58 approved the following engineered alternative base liner system for the surface impoundments: an upper liner consisting of 50-millimeter high-density polyethylene (HDPE), a lower liner consisting of 60-milliliter HDPE, and between the two liners, a synthetic drainage net for the leachate collection and removal system (LCRS).
7. The engineered alternative liner system was sufficient to contain the liquid wastes during active life of the surface impoundments and is expected to perform

similarly to contain the Pond 5/RSI-RSII Landfill's solid waste and any potential leachate during the post-closure period.

8. For Class II landfills, an LCRS is required unless the Discharger demonstrates, based on climatic and hydrogeologic conditions, that leachate will not be formed in, or migrate from the unit (CCR, title 27, section 20340[a]). Waste discharged to the Pond 5 Landfill will be solid wastes, which are not expected to decompose and generate leachate post-closure. Also, the final cover system is designed to prevent precipitation from infiltrating the waste and generating leachate. Additionally, the engineered alternative base liner system was sufficient to contain the liquid wastes during active life of the surface impoundments and is expected to perform similarly to contain solid wastes in the landfill during the post-closure period. It has been demonstrated that leachate will likely not be formed in or migrate from the closed WMU, and therefore a LCRS is not required for the Pond 5 Landfill.
9. The closed WMU precipitation and drainage control facilities will be designed to manage the 100-year, 24-hour precipitation event (CCR, title 27, section 20250[c]).
10. The closed WMU has been designed to withstand the maximum credible earthquake without damage to the foundation or to the structures which control leachate, surface drainage, or erosion, or gas (CCR, title 27, sections 20365 and 20370[a]).

Moisture Content Not to Exceed Moisture Holding Capacity

Prior to clean closure, liquids in the surface impoundments will be evaporated such that no free liquids are present. Wastes generated during clean closure and discharged to the Pond 5/RSI-RSII Landfill are not expected to exceed 50 percent moisture content. The moisture holding capacity of the wastes is relatively high given their fine-grained texture, and the consolidated waste in the closed Pond 5/RSI-RSII Landfill is not expected to exceed moisture holding capacity after closure. Also, the final cover system is designed to store precipitation and release the stored precipitation to the vegetated cover and is not expected to allow precipitation to infiltrate the cover system and contact the waste.

9. Engineered Alternative to Prescriptive Landfill Cover Design

The prescriptive final cover standards for landfills are contained in 27 CCR, section 21090. In accordance with section 21090(a), the FCPMP proposes an engineered alternative to the prescriptive landfill cover. The proposed engineered alternative evapotranspirative (ET) cover will consist of a 2.5-foot-thick engineered monolithic soil layer placed over a 1-foot-thick foundation layer placed over the evaporation waste materials.

The Water Board finds: the proposed engineered alternative provides equivalent or

better protection than the prescriptive standard cover design for protection against infiltration of precipitation (and potential irrigation water) into the Landfill waste materials and potential related water quality impairment.

This Order approves the engineered alternative final cover system proposed in the FCPCMP.

10. Waste Classification

Most of the wastewater formerly discharged to the impoundments consisted of blowdown from the cooling towers, which contained concentrated salts. Other wastewaters were from the demineralizers, condensate systems, plant drains, and containment structures. The wastewater was routed through neutralization tanks where the pH was balanced prior to discharge to the impoundments.

The wastewater discharged to the surface impoundments was classified as a liquid designated waste, i.e., Class II waste. The residual solids or “evaporite material” remaining after evaporation of wastewater in the ponds are classified as a solid designated waste, i.e., Class II waste. The evaporite material includes wind-blown sediments that settled in the surface impoundments over the life of the units. The HTF-contaminated soil is classified as a solid designated waste (i.e., Class II waste). The proposed Landfill is a Class II landfill since it will contain dry Class II wastes from the surface impoundments.

11. Waste Management Unit Classification and Authorized Disposal Sites

Pursuant to CCR, title 27, section 20250, the proposed Landfill is classified as a Class II WMU and is the only authorized waste disposal site within the Facility boundary for Class II residual solid wastes from the three surface impoundments.

12. Post-Closure Maintenance Period

The FCPCMP proposes to close the Pond 5/RSI-RSII LF surface impoundment as a landfill pursuant to CCR title 27, section 21400(b)(2)(a). The Waste Discharge Requirements for the Landfill require a post-closure period for monitoring and maintenance of the Pond 5 Landfill pursuant to State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB) requirements in CCR title 27. CCR title 27, section 20950 (a)(1) states: “Relative to the applicable SWRCB-promulgated requirements of this title, the post closure maintenance period must extend as long as the wastes pose a threat to water quality...the RWQCB’s finding that the waste in the Unit no longer poses a threat to water quality must release the discharger only from the need to comply with the SWRCB-promulgated portions of this title, for that Unit.” The Pond 5/RSI-RSII Landfill is scheduled to be certified closed by August 2023; therefore, the post-closure period is expected to end in 2053 for planning purposes but may be extended if measurably significant evidence of release is detected from the Facility or shortened if the Discharger demonstrates and the Water Board finds that the waste in Pond 5/RSI-RSII Landfill no longer poses a threat to water quality.

The FCPCMP proposes to clean close the Pond 3 and 4 surface impoundments by removing all remaining wastes and contaminated material from these waste management units (WMUs) and placing the remaining wastes in the Pond 5/RSI-RSII Landfill. CCR title 27, section 21400(b)(1) states: "For surface impoundments that are successfully clean-closed, as herein described, the RWQCB must declare the Unit no longer subject to the SWRCB-promulgated requirements of this title." Therefore, a RWQCB declaration that the surface impoundments have been successfully clean closed eliminates the requirement for a post-closure period for the surface impoundments.

The FCPCMP proposes to clean close the Bioremediation Unit and Landfarm for the HTF-contaminated soil such that the waste in the Unit no longer poses a threat to water quality pursuant to CCR title 27, section 20950(a)(2)(B). Successful completion of clean-closure eliminates the need for any post-closure maintenance period and removes the Unit from being subject to the SWRCB-promulgated requirements of this subdivision..." Therefore, a RWQCB finding that the land treatment units have been successfully clean closed eliminates the requirement for a post-closure period for the land treatment units.

13. Land Uses

The site occupies approximately 1,000 acres. SEGS III-VII were operated as a concentrating solar thermal generating facility, which ceased operations in February 2020. The adjacent land is vacant except for desert plant and animal life indigenous to the western Mojave Desert. All SEGS units are shut down at this time and awaiting transition to photovoltaic solar arrays. The existing Facility is on a cleared, graded, and leveled site. The photovoltaic modules will produce electricity directly from sunlight. No HTF will be used, and no wastewater will be generated. No construction is planned or reasonably foreseen that could affect the final cover of the Pond 5/RSI-RSII Landfill.

14. Site Topography

The Site is situated within the western Mojave Desert of the Basin and Range Province. The Site is approximately 2,450 feet above sea level, topography is generally flat, sloping slightly to the east

15. Climatology

The western Mojave Desert, where the Facility is located, has an arid, high desert climate characterized by infrequent rainfall and relatively low humidity. Summers are hot and dry with occasional intense desert thunderstorms. Winters are by cool and dry. High winds and blowing dust are frequent occurrences in the area.

The mean annual temperature is 64 degrees (°) Fahrenheit (F); typical temperature ranges from a high of 100° F in the summer to a low of 31° F in the winter. Precipitation

in the vicinity of the Facility averages 4.8 inches annually. The expected precipitation for the 100-year, 24-hour storm event is 4 inches.

16. Site Geology

The Facility is in the western portion of Mojave Desert in the Basin and Range Province. The Facility is underlain by thick sequences of Pleistocene to Holocene alluvial sediments including undifferentiated material and fan deposits.

The roughly northwest-southeast trending South Lockhart Fault Zone is located approximately 8 miles east of the facility. The South Lockhart Fault is on strike with the larger Helendale Fault both of which have had displacement in Holocene time. Another smaller unnamed fault is located approximately 3 miles to the west of the facility. An evaluation of potential fault activity and effects on the proposed landfill was completed; no concerns were noted and the FCPCMP contains procedures to repair any parts of the proposed landfill that may be damaged by fault activity.

The water-bearing units consist of semi-consolidated to unconsolidated deposits that overlie the basement rocks. Underlying the Facility are basement rocks that consist of shales, basalts, and breccias, and igneous quartz lithologies. The water-bearing deposits range in size from coarse gravel to fine clays, generally showing a decrease in permeability with depth. The principal aquifer in the basin consists of unconsolidated Quaternary alluvium.

17. Site Hydrogeology and Groundwater Quality

The Site is situated within the Harper Valley groundwater basin, and protection of groundwater quality in the area is under the authority of the Lahontan RWQCB. The depth to groundwater in on-site monitoring wells ranges from 170 to 230 feet.

Based on 2021 groundwater monitoring data, the quality of groundwater beneath the Facility contains relatively high concentrations of total dissolved solids (TDS), chloride and sulfate. TDS concentrations in the four monitoring wells range from 600 to 1,300 milligrams/liter (mg/L), above to the secondary maximum contaminant level (MCL) of 500 mg/L. Chloride concentrations range from 190 to 390 mg/L, relative to the secondary MCL of 250 mg/L. Sulfate concentrations range from 60 to 430 mg/L, relative to a secondary MCL of 250 mg/L. Groundwater levels and concentrations of these constituents have been relatively consistent over time, indicating the wastewater impoundments have not impacted groundwater quality. Additionally, the concentrations are consistent with nearby water supply wells.

18. Site Hydrology

The Facility is located at the western boundary of the Mojave Hydrologic Unit and the Harper Valley Subunit. The site is relatively flat, with a stormwater flow direction is to the east/southeast. The ground surface across the approximately 1.5-mile-long property (north to south) loses approximately 50 feet of elevation (0.006 feet/foot). An ephemeral

drainage is located just outside of the southern boundary of the property. The drainage flows east to the Harper Lake.

Site Storm Water Management

The proposed drainage and erosion control for the Pond 5/RSI-RSII Landfill is designed to direct flow away from the Landfill and to the ephemeral drainage along the southern boundary of the Facility. The proposed final cover will be graded to promote effective storm water drainage. Total discharges after the installation of the cover are not anticipated to be greater than current flows. The hydrologic natural runoff conditions are not expected to change. The erosion potential for the design storm is small but selected erosion best management practices (BMPs) will be included in the Construction and Industrial Stormwater Pollution Protection Plans (SWPPP). After the vegetation is established, the vegetation cover should offer additional protection during the design storm event.

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.

19. 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, including the Water Quality Objectives (WQOs) identified in the Basin Plan.

20. Receiving Waters

The receiving waters are the groundwaters of the Harper Valley Groundwater Basin (Department of Water Resources [DWR], Groundwater Basin No. 6-40; Basin Plan, Plate 2B) and minor surface waters of the Harper Valley Hydrologic Subunit (DWR Hydrologic Subunit 28.42). The ephemeral drainage along the Site's southern boundary represents a minor surface water of the Harper Valley Hydrologic Subunit.

21. Beneficial Uses

The present and probable future beneficial uses of the groundwaters of the Harper Valley Groundwater Basin (DWR No. 6-47), as set forth and defined in the Basin Plan are:

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

The present and probable future beneficial uses of the Harper Valley Hydrologic Subunit as set forth and defined in the Basin Plan are:

- a. Municipal and Domestic Supply (MUN);
- b. Agricultural Supply (AGR);
- c. Groundwater Recharge (GWR);
- d. Water Contact Recreation (REC-1);
- e. Non-Water Contact Recreation (REC-2);
- f. Warm Freshwater Habitat (WRM);
- g. Cold Freshwater Habitat (COLD);
- h. Wildlife Habitat (WILD)

22. Water Quality Protection Standard (WQPS)

The 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 monitoring are described in MRP No. R6V-2023-(TENTATIVE), which is made part of this Order.

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 Pond 5 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-2023-(TENTATIVE) are believed to be the best indicators of a release from the Facility.

24. Monitoring Points and Points of Compliance

The monitoring network for the Pond 5/RSI-RSII Landfill will be designed to monitor the uppermost aquifer as required by CCR, title 27, section 20405. The Point of Compliance is a vertical surface located at the hydraulically downgradient limit of the Pond 5/RSI-RSII Landfill that extends through the uppermost aquifer underlying the Landfill. The MRP must include Monitoring Points (as defined in section 20164) along the Point of Compliance, and additional Monitoring Points at locations determined pursuant to section 20415(b-d) at which the Water Standard under section 20390 applies and at which monitoring must be conducted.

25. Detection Monitoring Program

Pursuant to CCR, title 27, sections 20385 and 20420, the Dischargers are implementing a Detection Monitoring Program (DMP) for the Facility.

26. Evaluation Monitoring Program

An Evaluation Monitoring Program (EMP) may be required, pursuant to CCR, title 27, section 20385 and section 20420, subdivision (k)(5-6), whenever there is “measurably significant” evidence of a release from the Unit during a detection monitoring program or whenever there is significant physical evidence of a release from the Unit. The Dischargers must delineate the nature and extent of the release and develop a suite of proposed corrective action measures within 90 days of establishing an EMP. If the EMP confirms measurably significant evidence and/or significant physical evidence of a release, then the Dischargers must submit an Engineering Feasibility Study for corrective action pursuant to CCR, title 27, section 20425, and MRP No. R6V-2023-(TENTATIVE).

27. Corrective Action Program

A Corrective Action Program (CAP) to remediate detected releases from the Pond 5 Landfill may be required pursuant to CCR, title 27, section 20385 and section 20430.

28. Financial Assurance

The Dischargers have provided documentation that a financial assurance fund has been developed for closure and post-closure maintenance and potential future corrective action requirements. This Order requires the Dischargers to report the amount of money available in the fund as part of the annual self-monitoring report. This Order also requires the Dischargers to demonstrate, in an annual report, that the amount of financial assurance is adequate or to increase the amount of financial assurance, as appropriate (e.g., for identified needed corrective actions, or for inflation, etc.).

29. Other Considerations and Requirements for Discharge

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

- a. *Past, present, and probable future beneficial uses of water.* This Order identifies existing groundwater quality and past, present, and probable future beneficial uses of water, as described in Finding No. 21. The proposed discharge will not adversely affect present or probable future beneficial uses of water because the discharge is authorized only to the Pond 5/RSI-RSII Landfill, which has been designed and will be constructed to prevent waste discharges to the groundwater and surface water. This Order also 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. 17 describes the environmental characteristics and quality of water available.
- c. *Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area.* The requirements of this Order will not affect groundwater quality. The Water Board will use its existing

authority and these Closure and Post-Closure WDRs to ensure protection of water quality from these discharges.

- d. *Economic considerations.* Water Quality Objectives established in the Basin Plan for the Harper Valley Groundwater Basin do not subject the *Dischargers to economic disadvantage as compared to other similar discharges in the Region*. This Order will require the Dischargers to submit proposals compliant with the requirements of CCR, title 27, and is reasonable.
- e. *The need for developing housing within the region.* The Dischargers are not responsible for developing housing within the region.
- f. *The need to develop and use recycled water.* The Dischargers do not propose the use of recycled water at this Facility.

30. Human Right to 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. The Dischargers has supported this policy by converting the SEGS III-VII Facility to photovoltaic-based solar facility, which will reduce water usage from approximately 1,000 acre-feet per year to less than 15 acre-feet per year. This Order further promotes the policy by requiring storm water and drainage controls, monitoring to assess water quality, and corrective action when needed to address any adverse impacts to water quality.

31. California Environmental Quality Act (CEQA)

The Water Board has determined that the proposed project is categorically exempt based on CEQA section 15302(c) in that it is a replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity.

32. Antidegradation Analysis

California State Water Resources Control Board (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 these WDRs, and an EMP and possible CAP will ensure water quality protection.

33. Technical and Monitoring Reports

The Dischargers must submit technical and monitoring reports in compliance with this Order and as described in MRP No. R6V-2023-TENTATIVE.

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 propose 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 propose to discharge waste outside of its region that could affect the quality of the waters of the state within its region must furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, must bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports."

The technical reports required by this Order and MRP No. R6V-2023-(TENTATIVE) are necessary to assure compliance with these WDRs. 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.

34. Notification of Interested Parties

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

35. 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 or will be provided in hard copy or electronic format upon request.

36. Consideration of Public Comments

The Water Board, in a public meeting held on March 1, 2023, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to California Water Code sections 13263 and 13267, that the Dischargers must comply with the following:

I. RECEIVING WATER LIMITATIONS

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

A. Under no circumstances must the Dischargers cause the presence of the following substances or conditions in groundwaters of the Harper Valley Groundwater Basin.

1. Bacteria – Groundwaters designated as MUN, the median concentration of coliform organisms, over any seven-day period, must be less than 1.1 Most Probable Number per 100 milliliters (MPN/100 mL).
2. Chemical Constituents – Groundwaters designated as MUN must not contain concentrations of chemical constituents in excess of the Primary Maximum Contaminant Level or Secondary MCL based upon drinking water standards specified in the following provisions of CCR, title 22: Table 64431-A of section 64431 (Inorganic Chemicals), Table 64444-A of section 64444 (Organic Chemicals), Table 64449-A of section 64449 (Secondary MCLs – Consumer Acceptance Contaminant Levels), and Table 64449-B of section 64449 (Secondary MCLs – Consumer Acceptance Contaminant Level Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

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

3. Radioactivity – Groundwater designated MUN must not contain concentrations of radionuclides in excess of limits specified in CCR, title 22, section 64443, including future changes as the changes take effect.
4. Taste and Odors – Groundwaters must not contain taste or odor-producing substances in concentrations that cause a nuisance or that adversely affect beneficial uses. For groundwaters designated as MUN, at a minimum, concentrations must not exceed adopted Secondary MCLs as specified in CCR, title 22, section 64449, Table 64449-A (Secondary MCLs – Consumer Acceptance Contaminant Level) and Table 64449-B (Secondary MCLs – Consumer Acceptance Contaminant Levels Ranges) including future changes as the changes take effect.

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 a violation 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 violated, 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. The discharge of waste that contains liquid in excess of the moisture-holding capacity of the Pond 5/RSI-RSII Landfill is prohibited.
7. The discharge of solid or liquid waste, leachate, or any other deleterious material to surface waters or groundwater is prohibited.
8. The Pond 5/RSI-RSII Landfill must be protected from inundation, washout, or erosion of wastes and erosion of covering materials resulting from a 100-year, 24-hour storm or a flood having a 100-year return period.
9. The Dischargers must notify the Water Board within one business day of any flooding, slope failure or other change in Facility conditions that could impair the integrity of the Pond 5 Landfill or of precipitation and drainage control structures. The Dischargers must correct any failure that threatens the integrity of the Pond 5 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).
10. Surface drainage from off-site areas and internal Facility drainage from surface or subsurface sources, must not contact or percolate through solid wastes discharged at the Pond 5/RSI-RSII Landfill.
11. The exterior surfaces of the Pond 5/RSI-RSII Landfill must be graded to promote lateral run-off of precipitation and to prevent ponding.
12. The Dischargers must maintain in good working order any control system or monitoring device installed to achieve compliance with these WDRs.
13. The Dischargers must at all times maintain adequate and viable financial assurances acceptable to the Water Board Executive Officer for costs associated with closure and post-closure maintenance and monitoring and for corrective action for all known or reasonably foreseeable releases.

14. The Dischargers must comply with CCR, title 27, section 20950, closure and post-closure maintenance, general standards for all WMUs.
15. The Dischargers must comply with CCR, title 27, section 21090, requirements for closure and post-closure maintenance and design requirements for solid waste landfills except where engineered alternatives to the requirements in CCR, title 27, section 21090 have been approved by the RWQCB pursuant to CCR, title 27, section 20080.
16. The Pond 5/RSI-RSII Landfill is the only authorized disposal location at the Facility. The only waste authorized to be disposed in the Landfill is the solid wastes remaining in the three surface impoundments (Ponds 3, 4, and 5).

B. Specific Requirements for Clean Closure of the Land Treatment Units

17. Land Treatment units will be clean closed in accordance with the FCPCMP, the requirements in this Order, and with CCR, title 27, section 21400(b)(1).
18. Soils that were treated at the two land treatment units (i.e., Bioremediation Unit and Landfarm) may be reclaimed on-site if the following concentration limit is not exceeded:

Parameter	Average Total Concentration milligrams/kilograms (mg/kg)
Heat Transfer Fluid (diphenyl oxide and biphenyl)	100

C. Specific Requirements for Clean Closure of the Surface Impoundments

1. Two surface impoundments (Ponds 3 and 4) will be clean closed in accordance with the FCPCMP, the requirements in this Order, and with CCR, title 27, section 21400(b)(1).
2. Free liquids must be allowed to evaporate prior to residual solids, sludge, and evaporite material, and waste-impacted liner material being removed and discharged to the Pond 5/RSI-RSII Landfill.
3. Confirmation sampling and analyses are necessary to verify clean closure of the surface impoundments (i.e., Ponds 3 and 4). A minimum of four individual samples of the underlying soil exposed within each surface impoundment (following removal of residual solids, sludge, evaporite material, and waste-impacted liner material) must be collected and analyzed individually 1,1-Biphenyl and 1,1-Oxybisbenzene via United States Environmental Protection Agency (USEPA) Method 8015B. The surface impoundments will be considered clean closed if the concentrations of analytes reported for each individual sample are consistent with the concentrations of constituents in background soil concentrations previously determined for the site and included in the FCPCMP.

The results of the confirmation sampling must be included in the final Construction Quality Assurance Report, as required by section V.C. of this Order.

5. All closure activities must be under the direct supervision of a California professional civil engineer or California certified engineering geologist pursuant to CCR, title 27, section 20950(b).
6. Successful clean closure must be demonstrated to and accepted by the Executive Officer for the units to be no longer subject to the SWRCB-promulgated requirements of title 27.

D. Pond 5/RSI-RSII Landfill Construction and Closure Requirements

1. The Pond 5/RSI-RSII Landfill will be constructed and closed in accordance with the FCPCMP and with the specifications contained in CCR, title 27, 20240 et seq.
2. All closure activities must be under the direct supervision of a California professional civil engineer or California certified engineering geologist pursuant to CCR, title 27, section 20950(b).

E. Specific Requirements for Use of Engineered Alternative Evapotranspirative Cover at Pond 5/RSI-RSII Landfill

The Dischargers have proposed the option of using an ET cover in lieu of the prescriptive cover required by CCR, title 27, section 21090(a)(3)(A)(1). The RWQCB approves this engineered alternative ET cover pursuant to CCR, title 27, section 20080. A cross-section of the proposed bottom liner, waste, and ET cover for the Landfill is presented in Attachment C, which is made a part of this Order. The cover must be established during closure and maintained during post-closure in accordance with the FCPCMP and with CCR, title 27, section 21090.

F. 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 Dischargers must comply with all storm water monitoring, response, and reporting requirements described in MRP No. R6V-2023-(TENTATIVE).

G. Electronic Submittal of Information

Pursuant to CCR, title 23, section 3890, the Dischargers 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 SWRCB'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 Dischargers must maintain a DMP as required in CCR, title 27, section 20420. The Dischargers must continue to conduct a DMP, as necessary, to provide the best assurance of the detection of a release from the Pond 5/RSI-RSII Landfill.

B. Evaluation Monitoring Program

The Dischargers must establish an EMP whenever there is measurably significant evidence and/or significant physical evidence of a release from the Pond 5/RSI-RSII Landfill pursuant to CCR, title 27, section 20425. Within 90 days of initiating an EMP, the Dischargers must delineate the nature and extent of the release, as well as develop, propose, and support corrective action measures to be implemented in a corrective action program.

C. Corrective Action Program (CAP)

The Dischargers 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 Dischargers must implement a CAP until it can be demonstrated to the satisfaction of the RWQCB 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-2023-(TENTATIVE).
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 Dischargers or RWQCB's Executive Officer determine that concentration limits were or are exceeded, the Dischargers 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. In the event of a release, unless the technical report proposing an EMP recommends and substantiates a longer

period, the Dischargers 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 must be conducted to provide the best assurance of the detection of a release from the Landfill.

E. Data Analysis

Within 45 days of receipt of laboratory results, the Dischargers must determine at each Monitoring Point whether there is measurably significant evidence and/or significant physical evidence of a release from the Pond 5/RSI-RSII LF 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 Dischargers 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 Dischargers must 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 Pond 5 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 is discovered, the Dischargers must immediately notify the RWQCB verbally 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-2023-(TENTATIVE)). The Dischargers must initiate the verification procedures, as specified in section III.F below.

F. Verification Procedures

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

1. The Dischargers must either conduct a composite retest using data from the initial sampling event with all data obtained from the resampling event or must conduct a discrete retest in which only data obtained from the resampling event must be analyzed to verify evidence of a release. Alternatively, the Dischargers 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 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 Dischargers must report to the RWQCB, by certified mail, the results of the verification procedure, as well as all data collected for use in the retest.
4. If the Dischargers or Executive Officer verify that there is or was evidence of a release, the Dischargers are 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.C above) or make a demonstration to the Water Board that there is a source other than the Pond 5 Landfill that caused evidence of a release (see "Unscheduled Reports to be Filed with the Water Board," MRP No. R6V-2023-(TENTATIVE)).
5. If the Dischargers decline to conduct verification procedures, the Dischargers must submit a technical report, as specified in Section III.G below.

G. Technical Report Without Verification Procedures

If the Dischargers choose 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 Dischargers must comply with the monitoring and reporting requirements as established in MRP No. R6V-2023-(TENTATIVE) (Attachment D), and as specified by the Executive Officer. The MRP may be modified by the RWQCB Executive Officer.
2. The Dischargers must comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of MRP No. R6V-2023-(TENTATIVE).

IV. PROVISIONS

A. Rescission of Waste Discharge Requirements

Board Order No. 6-97-58 and MRP 6-97-58; and No. 6-95-102 and MRP 6-95-102 are hereby rescinded.

B. Standard Provisions

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

C. Closure and Post-Closure

This Order provides RWQCB approval of the FCPCMP and the proposed engineered alternative final cover.

The Dischargers must submit a report to the Water Board on or before **February 15, 2024**, and by **February 15** every year thereafter, indicating that existing site monitoring and maintenance conditions are in are in conformance with the FCPCMP or provide an updated FCPCMP, if conditions warrant. The FCPCMP and cost estimates for corrective action 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.

D. Financial Assurance

The Discharger must submit to the RWQCB a financial assurance report on or before **120 days of Regional Board adoption of these WDRs**, and by **February 15** every year thereafter, providing evidence that adequate financial assurance has been provided for closure and 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 Dischargers. In addition, the Dischargers 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.

V. Time Schedule

A. Monitoring Systems Installation Work Plan

No later than 60 days following the adoption of this Order, the Discharger must submit for Water Board review and acceptance a work plan for the installation of new groundwater and

soil/landfill gas monitoring wells, establishing a groundwater monitoring network to adequately monitor the point of compliance upgradient and downgradient of the closed WMU, and for the installation of at least two unsaturated zone monitoring points along the perimeter of the closed WMU. The work plan must be certified by a California professional civil engineer or a California professional geologist. In order for a discharger to utilize an existing well instead of installing a new groundwater monitoring well, the Discharger must submit documentation demonstrating that the existing well(s) can function as a monitoring well.

B. Monitoring Systems Installation Report

No later than 30 days following the construction completion of a monitoring system or monitoring system component, the Discharger must submit a technical report discussing the installation of the monitoring systems or monitoring system component for the closed WMU. The report must summarize all work activities associated with the installation of the groundwater and unsaturated zone monitoring systems. The report must be certified by a California professional civil engineer or a California professional geologist. It must contain sufficient information to verify that the construction was in accordance with State and/or County standards.

C. Final Construction Quality Assurance Report

No later than 90 days following clean-closure and the construction completion of the closed WMU, a Final Construction Quality Assurance (CQA) Report, required by CCR, title 27, section 20324, subdivision (d)(1)(C), must be submitted to the Water Board for review and acceptance by the Executive Officer. The report must be certified by a California professional civil engineer or a California certified engineering geologist. The report must contain sufficient information and test results to verify clean closure and to verify construction specifications with respect to the accepted engineered alternative to the prescriptive standards and with performance goals of CCR, title 27.

D. Sampling and Analysis Plan

No later than 90 days following the construction completion of the closed WMU, the Discharger must submit for Water Board review and acceptance a Sampling and Analysis Plan (SAP) for the closed WMU, including procedures for monitoring, sampling, and analysis of the groundwater and unsaturated zone monitoring systems. The SAP must include soil moisture background values for the unsaturated zone monitoring program and propose soil moisture action limits for which unsaturated zone monitoring data will be compared to determine physical evidence of a release.

E. Financial Assurances

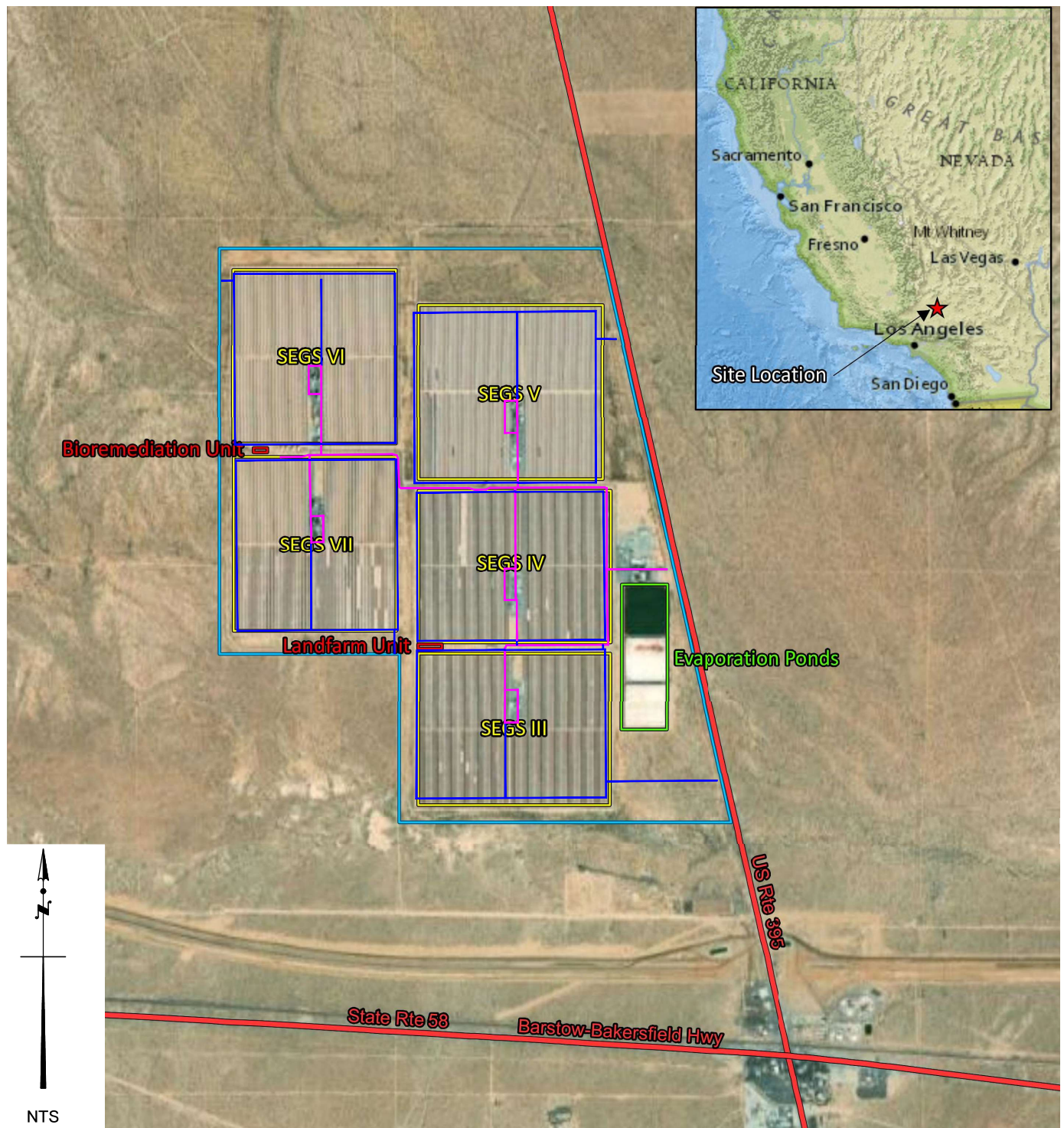
No later than 30 days following the Water Board acceptance of the Final CQA Report required in section V.C above, the Discharger must submit Instruments of Financial Assurance acceptable to the Water Board.

1. A Financial Assurance Instrument providing adequate funding for the post-closure monitoring and maintenance activities, as described in the accepted FCPCMP, must be submitted to the Water Board, pursuant to CCR, title 27, section 22212.
2. A Financial Assurance Instrument providing adequate funding for corrective action of a known and reasonably foreseeable release must be submitted to the Water Board, pursuant to CCR, title 27, section 22222.

I, Michael R. Plaziak, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Board, Lahontan Region, on March 1, 2023.

MICHAEL R. PLAZIAK, PG
EXECUTIVE OFFICER

- Attachments:
- A. Facility Location and Current Layout Map
 - B. Plan View of Pond 5/RSI/RSII Landfill
 - C. Detail - Pond 5/RSI-RSII Landfill Closure System
 - D. R6V-2023-(TENTATIVE) MRP
 - E. Standard Provisions for Waste Discharge Requirements



Legend

- Facility Boundary
- Solar Fields
- Land Treatment Units
- Evaporation Ponds
- Existing Paved Roads
- Existing Dirt Roads

SOURCE: NORTHSTAR, MAY 28, 2021



TETRA TECH

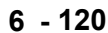
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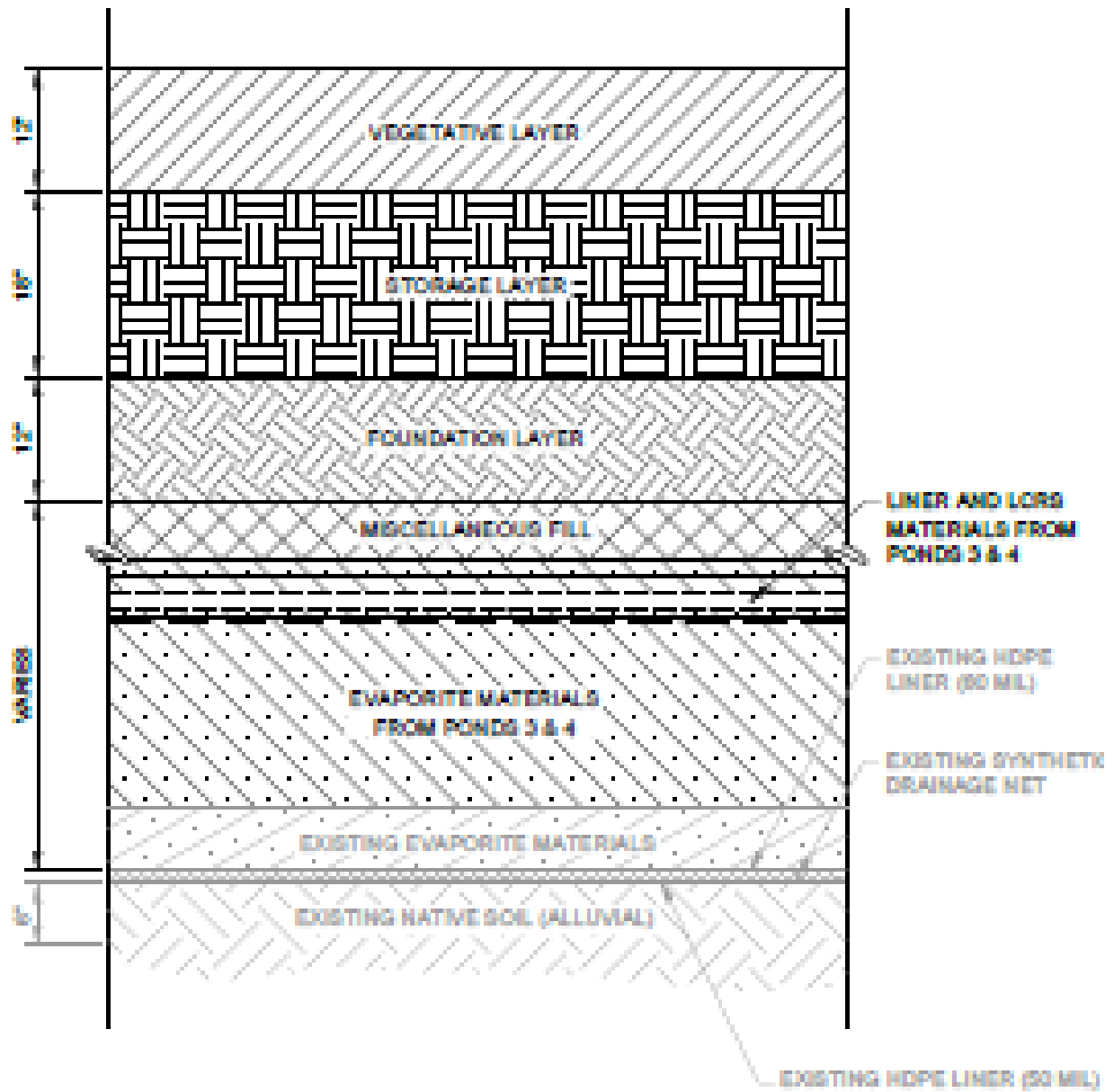
NEXTERA SEGs III - VII CLOSURE AND POST-CLOSURE MAINTENANCE PLAN

SITE LOCATION AND VICINITY MAP

FIGURE 1



Attachment C. Detail- Pond 5RSI-RSII Landfill Closure System



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

**MONITORING AND REPORTING PROGRAM
NO. R6V-2023-(TENTATIVE)
WDID NO. 6B364550002**

**RESURGENCE SOLAR I, LLC AND RESURGENCE SOLAR II, LLC
SOLAR ELECTRIC GENERATING SYSTEMS (SEGS) III THROUGH VII
THREE SURFACE IMPOUNDMENTS
TWO LAND TREATMENT UNITS,
AND POND NO. 5 LANDFILL (RESURGENCE SOLAR I AND RESURGENCE SOLAR II
LANDFILL [RSI-RSII LF])**

San Bernardino County

This monitoring and reporting program (MRP) is issued to Resurgence Solar I, LLC and Resurgence Solar II, LLC (Discharger- Resurgence Solar I, LLC and Resurgence Solar II, LLC are wholly owned subsidiaries of Nextera Energy Resources, LLC) 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, title 27, section 20005, et seq. (hereafter Title 27). The technical reports required by Order R6V-2023-(TENTATIVE) and MRP No. R6V-2023-(TENTATIVE) are necessary to assure compliance with these waste discharge requirements. Therefore, the burden, including costs, of these reports bears a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

In requiring those reports, the regional board must provide the person with a written explanation with regard to the need for the reports and must identify the evidence that supports requiring that person to provide the reports. Water Code section 13268, building from section 13267, states, in part: (a) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of section 13399.2, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b). (b)(1) Civil liability may be administratively imposed by a regional board in accordance with article 2.5 (commencing with section 13323) of chapter 5 for a violation of subdivision (a) in an amount which must not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.

I. WATER QUALITY PROTECTION STANDARD

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

The owner/operator, Resurgence Solar I, LLC and Resurgence Solar II, LLC (both are wholly owned subsidiaries of Nextera Energy Resources, LLC) submitted a Final Closure and Post-Closure Maintenance and Monitoring Plan (FCPCMP) on January 21, 2022 (Revised August 15, 2022). A WQPS is necessary to evaluate the effectiveness of the detection monitoring program (DMP) to determine if a release occurs from the- Pond 5/RSI-RSII Landfill (Landfill).

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 for 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 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 has been established. CCR, title 27 allows for various options to determine concentration limits including statistical interwell and intrawell methods and non-statistical methods.

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.

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 and monitoring points for the groundwater and unsaturated zone monitoring systems for the closed WMU are shown in Attachment B of this MRP. The point of compliance is a vertical surface located at the hydraulically downgradient limit of the Pond 5/RSI-RSII Landfill that extends through the uppermost aquifer underlying the Pond 5 Landfill. However, MW-1, MW-2, MW-3, and MW-4 are not functioning as monitoring wells in accordance with title 27 requirements (e.g., locations of the wells, screen intervals, and screen lengths, do not meet title 27 requirements.). New monitoring points must be installed to include upgradient (background) groundwater and downgradient groundwater monitoring. Board Order No. R6T-2023-(TENTATIVE), Section V (Time Schedule), requires the Discharger to submit a work plan(s) for the installation of replacement groundwater monitoring wells to monitor the point of compliance and for the installation of additional unsaturated zone monitoring points around the perimeter of the closed WMU. In order for the discharger to utilize an existing well instead of installing a new groundwater monitoring well, the Discharger must submit documentation demonstrating that the existing wells can function as a monitoring well.

The Discharger may add monitoring points, as needed, to comply with the DMP, evaluation monitoring program (EMP), and corrective action program requirements contained in Board Order No. R6V-2022-0014 and this MRP, and as approved by the Water Board.

The Landfill monitoring points must include the leachate collection and removal system sumps originally designed and constructed for the Pond 5/RSI-RSII surface impoundment. The purpose is to provide an early indication of a release which may have breached the HDPE bottom liner and entered the sand drain.

E. Post-Closure Period

The FCPCMP proposes to close Pond 5 as a landfill. The post-closure period for the Pond 5/Resurgence I and Resurgence II (RSI-RSII) Landfill (closed WMU) will extend as long as the wastes pose a threat to water quality pursuant to CCR, title 27, section

20950 (a)(1). The Landfill is expected to be certified closed by August 2023; therefore, the post-closure period is expected to end in 2053 for planning purposes. However, the post-closure maintenance period may be extended if measurably significant evidence of release is detected from the Facility or shortened if the Discharger demonstrates and the Water Board finds that the waste in West Pond Landfill no longer represents a threat to water quality and 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 20410(c).

II. MONITORING

The Discharger must comply with the monitoring requirements outlined below. All monitoring and inspecting 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).

All groundwater samples, with the exception of field parameters, must 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.

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, sections 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 civil engineer or professional geologist 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

Groundwater monitoring points are shown on MRP, Attachment B.

SEGS III-VII
Pond 5/RSI-RSII Landfill
San Bernardino County

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MONITORING AND REPORTING
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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 relative to the surveyed (by California-licensed Land Surveyor and appropriately experienced California-licensed Civil Engineer) top-of-casing measuring point for each well. 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 United States Environmental Protection Agency (USEPA) 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.

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 elevation (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 seepage velocity of groundwater flow (feet/year); and the current groundwater elevation 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 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.

a. Monitoring Points

The unsaturated zone will be monitored for soil-pore gas using a series of LFG monitoring wells, each having isolated multi-level (nested) probes, located around the perimeter of the landfill. All LFG monitoring wells will be completed with isolated shallow and deeper probes.

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-pore 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-pore gas samples, with the exception of field parameters, are to be collected in passivated stainless steel canisters (e.g., Summa® canisters) 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 shall 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 shall 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. Final Cover Integrity Monitoring and Maintenance Program

The Discharger will install an engineered alternative final cover over the Landfill, specifically an evapotranspirative (ET) cover. The final cover will consist of 1-foot-thick vegetative root zone layer underlain by a 1.5-foot-thick storage layer which is underlain by a 1-foot-thick foundation layer. The cover will be graded to prevent leachate formation due to storm water infiltration, to promote lateral runoff, and to prevent ponding. The Discharger must annually monitor and maintain the final cover materials to ensure the integrity of the cover and to evaluate the cover's capability to promote runoff and prevent ponding.

C. Storm Water Monitoring and Response 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). 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 laboratory 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 California Regional Water Quality Control Board-Lahontan Region (Water Board).

1. Storm Water Pollution Control Plan

A copy of the SWPCP (and amendments thereto) must be maintained at the Facility 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.1. The Discharger must develop and implement a site-specific SWPCP (or equivalent document) that contains, at minimum, the following elements below.

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 handled at the Facility, 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.

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

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.

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, except for 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 must 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. LCRS sumps must be visually monitored for the presence of liquid when stormwater monitoring events occur.

At the time a storm water sample is collected, the Discharger must 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. If 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 must not be lower than 6.0 nor greater than 9.0.
Turbidity	Storm water discharges must not exceed 500 nephelometric turbidity units (NTUs).
Oil and Grease, Total	Storm water discharges must not contain oils and greases at concentrations in excess of 15 milligrams per liter (mg/L).
Iron, Total	Storm water discharges must 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. 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 thresholds 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

To determine whether there is "measurably significant" evidence of a new release from the WMU, 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.

B. Non-Statistical Analysis Methods

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 must 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 semi-annual and 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. Time-series plots are not required for parameters that have never been detected above their MDL (as specified by the applicable USEPA method). Each semi-annual and annual report must include these time-series plots.

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 quality 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		
Sampling and Reporting Frequency	Sampling and Reporting Period	Report Due Date
Annual DMP Monitoring Report	January 1 – December 31	February 15
Annual Storm Water Report	January 1 – December 31	February 15
Five-Year Constituent of Concern Monitoring Report ¹	January 1 – June 30	August 15
	July 1 – December 31	February 15
¹ 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 5-year report is due February 15, 2024.		

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 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 (preceding 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 (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 seepage velocity of groundwater flow (feet/year), and the current groundwater elevation isocontours for that monitoring period.

- f. Copies of all field monitoring and well sampling data sheets.
- g. Time-series plots of the laboratory 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. All data collected in accordance with MRP section II. B. Specifically, a description of the condition of the final cover materials and a discussion regarding any subsidence or soil cover washouts, which have occurred, and the capability of the cover to promote runoff and prevent ponding. In the case where subsidence, washouts or other damage to the cover is noted, the report must indicate the actions taken to repair cover material to prevent reoccurrence. The report must also include a determination on whether significant changes in the operation of the Landfill warrant an update to the FCPCMP.
- j. 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.
- k. 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.
- l. The Discharger must review the FCPCMP annually to determine if significant changes in the operation or 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 must 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 trainings performed during the reporting period, including dates and content.

3. 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 II of Title 40, Code of Federal Regulations (40 CFR), Part 258. 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 next five-year sampling event should be scheduled to occur in first half of 2025 and reported to the Water Board no later than **August 15, 2025**.

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

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 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.

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 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; or
- viii. For physical evidence of a release – the physical factors that indicate evidence of a release.

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 Evaluation Monitoring Program (EMP) meeting the provisions of CCR, title 27, section 20420, subdivision (k)(5). If the Discharger decides to not conduct verification procedures or to not 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 Evaluation Monitoring Program, 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 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. These logs must be submitted to the Water Board within 90 days following completion of fieldwork.

5. Significant Earthquake Event

After a significant¹ 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.

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 WDRs, 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.

¹ 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.

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 and include your WDID No. or Facility name in the subject line. For documents that are 50 MB or larger please contact Lahontan Water Board staff to discuss how to transmit the documents for our review.

F. Technical Reports

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

1. By **May 1, 2023**, the Discharger must submit a Work Plan to install monitoring wells to replace MW-1, MW-2, MW-3, MW-4, or provide documentation demonstrating that wells MW-1, MW-2, MW-3, and MW-4 function in accordance with title 27 requirements for monitoring wells. The existing monitoring wells do not meet title 27 requirements for location, screen interval, and screen length, etc.
2. By **May 1, 2023**, the Discharger must submit a Work Plan to install Landfill Gas Monitoring wells as required by CCR, title 27, section 20415(d)(5).
3. By **August 30, 2024**, the Discharger must submit a Closure Certification Report.
4. **Upon completion of all closure activities for a Unit**, the Discharger must conduct an aerial photographic survey of the closed portions of the Unit and of its immediate surroundings, including at least the surveying monuments pursuant to CCR, title 27, section 21090(e)(1). The data so obtained must be used to produce a topographic map of the site at a scale and contour interval sufficient to depict the as-closed topography of each portion of the Unit, and to allow early identification of any differential settlement pursuant to CCR, title 27, section 21090(e)(2).
5. **At least every five years after completing closure of the Landfill**, the Discharger must produce and submit to the Water Board an iso-settlement map accurately depicting the estimated total change in elevation of each portion of the final cover's low-hydraulic conductivity layer pursuant to CCR, title 27, section 21090(e)(2). For each portion of the Landfill, the map must show the total lowering of the surface

elevation of the final cover, relative to the baseline topographic map produced in compliance with CCR, title 27, section 21090(e)(1).

6. **Prior to conducting periodic grading operations on the closed Landfill**, the Discharger must note on a map of the landfill the approximate location and outline of any areas where differential settlement is visually obvious. Each five-yearly iteration of the iso-settlement map must show all areas where differential settlement has been noted since the previous map submittal and must highlight areas of repeated or severe differential settlement. Map notations and delineations made pursuant to this requirement 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 Civil Engineer or Professional Geologist.

Ordered by: _____
MICHAEL PLAZIAK, PG
EXECUTIVE OFFICER

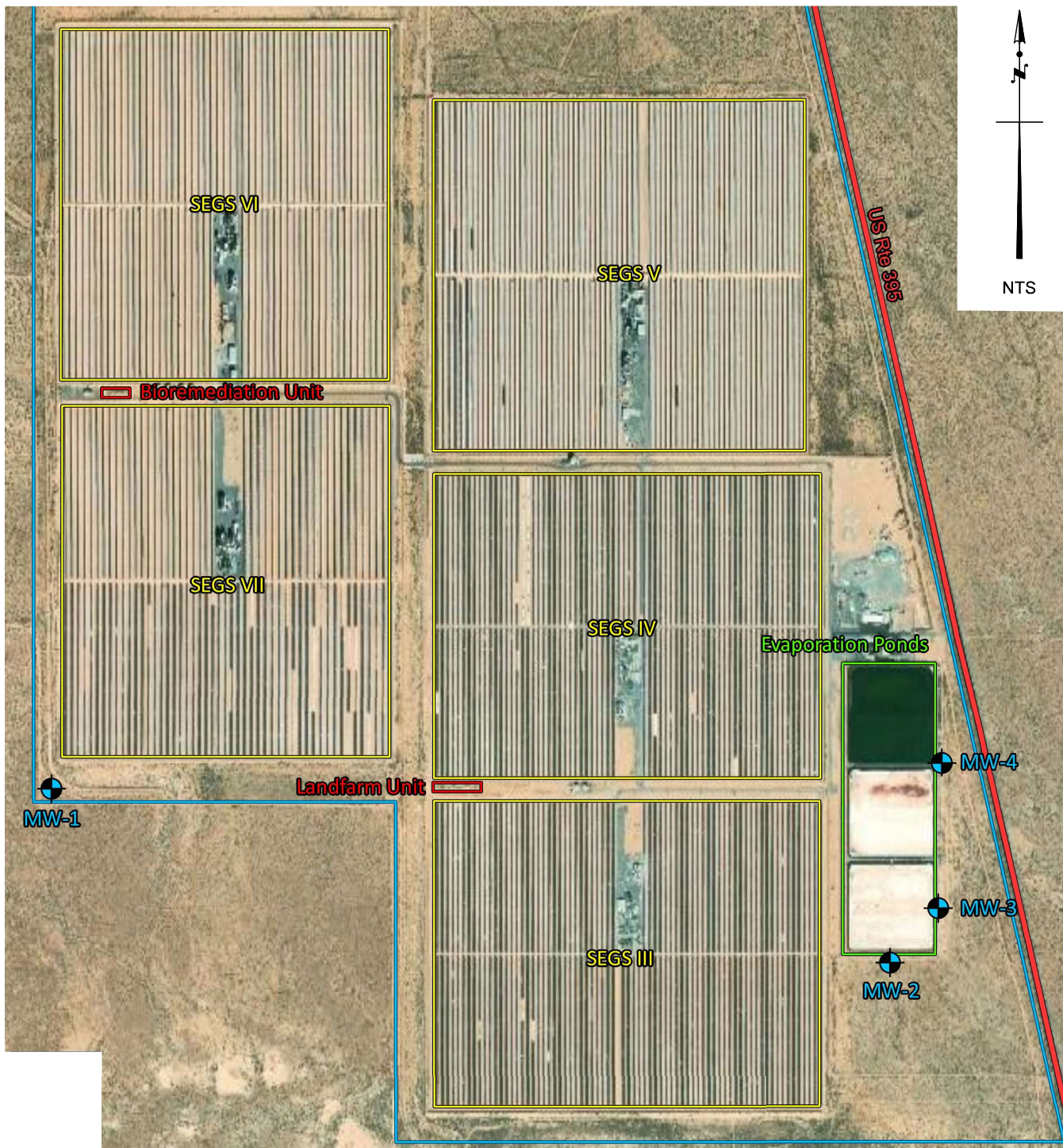
Dated: _____

Attachments: A. Water Quality Monitoring Program
B. Location Plan (Monitoring Points)
C. General Provisions for Monitoring and Reporting

ATTACHMENT A – WATER QUALITY MONITORING PROGRAM

GROUNDWATER MONITORING					
Parameter		Units	USEPA Method ¹	Sampling Frequency	Reporting Frequency
Field Parameters					
Groundwater Depth		feet below ground surface	--	annually	annually
" Gradient		foot/foot	--	annually	annually
" Direction		compass heading	--	annually	annually
Temperature		degrees Fahrenheit	--	annually	annually
Electrical Conductivity		micromhos/cm	--	annually	annually
pH		pH Units	--	annually	annually
Turbidity		NTUs	--	annually	annually
Constituents of Concern					
Monitoring Parameters	Total Dissolved Solids	milligrams/liter	E160.1	annually	annually
	Chloride	milligrams/liter	300	annually	annually
	Sodium	milligrams/liter	6010	annually	annually
	Sulfate	milligrams/liter	300	annually	annually
	Phosphate	milligrams/liter	300	annually	annually
	Potassium	milligrams/liter	6010	annually	annually
	Benzene	micrograms/liter	8260	annually	annually
	Biphenyl	micrograms/liter	8015	annually	annually
	Diphenyl Oxide	micrograms/liter	8015	annually	annually
	Morpholine	micrograms/liter	8270	annually	annually
	Hydroquinone	micrograms/liter	8270	annually	annually
	Volatile Organic Compounds ²	micrograms/liter	8260	annually	annually
	Semi-volatile Organic Compounds ³	micrograms/liter	8270	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

UNSATURATED ZONE MONITORING				
Parameter	Units	USEPA Method ¹	Sampling Frequency	Reporting Frequency
Field Parameters				
Presence of liquid in lysimeters and/or LCRS sumps	visual observation data	--	during groundwater and stormwater sampling events	annually
UNSATURATED ZONE SOIL-PORE GAS MONITORING				
Parameter	Units	USEPA Method ¹	Sampling Frequency	Reporting Frequency
Field Parameters				
Atmospheric Pressure	inches of mercury	--	annually	annually
Nitrogen	parts per million or percent by volume	--	annually	annually
Methane ⁴	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 ⁴	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 ¹	Sampling Frequency	Reporting Frequency
pH	pH Units	--	four qualifying storm events per year ⁵	annually
Turbidity	NTUs	SM-2130-B		
Oil and Grease, Total	milligrams/liter	1664A		
Iron, Total	milligrams/liter	200.7		
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 Executive Officer.				
2 - As defined in Appendix I, 40 CFR, part 258.				
3 - As defined in Appendix II, 40 CFR, part 258.				
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.				
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.				



Legend

-  Groundwater Monitoring Wells
-  Facility Boundary
-  Solar Fields
-  Land Treatment Units
-  Evaporation Ponds

SOURCE: NORTHSTAR, MAY 28, 2021



TETRA TECH

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NEXTERA SEGs III - VII CLEAN CLOSURE PLAN

GROUNDWATER MONITORING WELL
LOCATIONS

FIGURE 2

Attachment C – General Provisions for Monitoring and Reporting

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LAHONTAN REGION GENERAL PROVISIONS FOR MONITORING AND REPORTING

I. SAMPLING AND ANALYSIS

- a. All analyses shall be performed in accordance with the current edition(s) of the following documents:
 - Standard Methods for the Examination of Water and Wastewater
 - 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 ensure 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 logbook 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.

Attachment C – General Provisions for Monitoring and Reporting

II. 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 logbook.

III. 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:
- e. 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;
 - In the case of a partnership, by a general partner
 - In the case of a sole proprietorship, by the proprietor

Attachment C – General Provisions for Monitoring and Reporting

- 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.
- f. Monitoring reports are to include the following:
- Name and telephone number of an individual who can answer questions about the report.
 - The Monitoring and Reporting Program Number.
 - WDID Number.
- g. Modifications

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

IV. 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.

September 1994

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LAHONTAN REGION

STANDARD PROVISIONS

FOR WASTE DISCHARGE REQUIREMENTS

I. Inspection and Entry

The Discharger shall permit Regional Board staff:

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

II. Reporting Requirements

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.

- 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.

Attachment E- Standard Provisions for Waste Discharge Requirements

- 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.
- 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.
- 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.
- 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.

III. 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.

IV. 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.

V. 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.

Attachment E - Standard Provisions for Waste Discharge Requirements

VI. 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.

VII. 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.

VIII. 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.

IX. 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.

X. Availability

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

XI. 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.

Attachment E- Standard Provisions for Waste Discharge Requirements

XII. Public Access

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

XIII. 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.

XIV. Definitions

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.

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.

XV. 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.

TECHNICAL MEMORANDUM

To: Patty Murphy

Cc: Paul Willman and Julie Hauenstein

From: Jennifer Merrick

Date: December 8, 2022

Subject: Research on Recyclability of Liner Materials from Ponds 3 and 4 Demolition

Reference Project: SEGS III – VII Solar Project Site

Per NextEra's request, research into the recyclability of HDPE liners used in the impoundments at Solar Energy Generating Systems III-VII Kramer Junction, CA began on 11/21/22. Information relayed for inquiry to all 13 contacts (see below for list of contacts) included: amount of material, usage/purpose of material, condition of material, and material location. Several contacts were found using the industry specific search engine Thomas Net, while the majority of contacts were referred by sales representatives and plastic specialists from plastic processing companies. Contacts were attempted by inquiring through phone or email, some contacts were unresponsive while a majority responded with similar results stating the material ultimately cannot be recycled due to the condition it may be in from use/application. Among all 13 contacts, responses received frequently stated the material is unlikely to be recyclable; however, contacts from 2 separate companies provided additional specific information.

Allan Company – Chip Lavigne, Sales Manager

Mr. Lavigne stated at this time, plastic recyclers are highly likely to decline working with this material. One, due to its large volume, and two, it's likeliness of contamination from previous use. The large volume and condition of the material will require a high level of labor that will likely not be worth the return value. Labor may consist of exportation, preparation (shredding, grinding, etc.), cleaning/sanitizing, bailing, all of which could agitate machinery/cause breakdowns due to the residual dirt and sand and the inherent strength of the material itself. Due to all these factors, plastic processors within and outside the US are likely to decline accepting preparatory work for this low value material.

Phoenix Plastics – Len Donovan, CEO

Mr. Donovan is a manufacturer of this type of material, although not the direct producer of what's used on the project site. He mentioned that HDPE liners are hard to recycle materials due to the potential contamination from application and referred contacts from agriculture application liner producers. Contacts from these references once again confirmed the material does not have a standardized recycler or reclaimer.

List of Entities Contacted

[Arrotin Plastic Materials, Inc.](#) San Bernardino, CA 92408
amanda@arrotin.com Email sent

Tetra Tech

21700 Copley Drive, Suite 200 | Diamond Bar, CA 91765

Tel 909.860.7777 Fax 909.860.8017 www.tetrattech.com

https://tetrattechinc-my.sharepoint.com/personal/wendy_solano_tetrattech_com/Documents/Desktop/Shortcut/Assignments/Paul/Draft Liner Material

Recyclability Memo.docx

Memorandum

RE Research on Recyclability of Liner Material

December 8, 2022

Page 2 of 2

[America Chung Nam, LLC](#) City of Industry, CA 91789

909-839-8383 = Email sent, no answer by phone

[Phoenix Plastics](#) San Pedro, CA 90732

310-344-5167 - Spoke with **Len Donovan** (CEO)

[Allan Company](#)

626-893-4726 - Spoke with **Chip Lavigne** (Sales Manager)

[B&B Plastics](#)

909-829-3606 info@bbplasticsinc.com - Spoke with **Eddie** (Sales Manager)

[Talco Plastics](#)

951-531-2000, 562-630-1224 - Spoke with **Ajit Perera** (Post Consumer Division)

[Envision Plastics](#) 909-308-0260 jennifer.peralta@envisionplastics.com

Spoke with **Jenifer Peralta** (Operations Assistant)

GSE (liner manufacturer)

218-230-6700, 832-577-6584 jegarcia@solmax.com - Spoke with **Jessica Garcia**

ISCO (HDPE pipe supplier) 714-559-2008, 909-888-0306

John Chammas (Regional Sales Manager) john.chammas@isco-pipe.com - Email sent

GRI - Drexel University

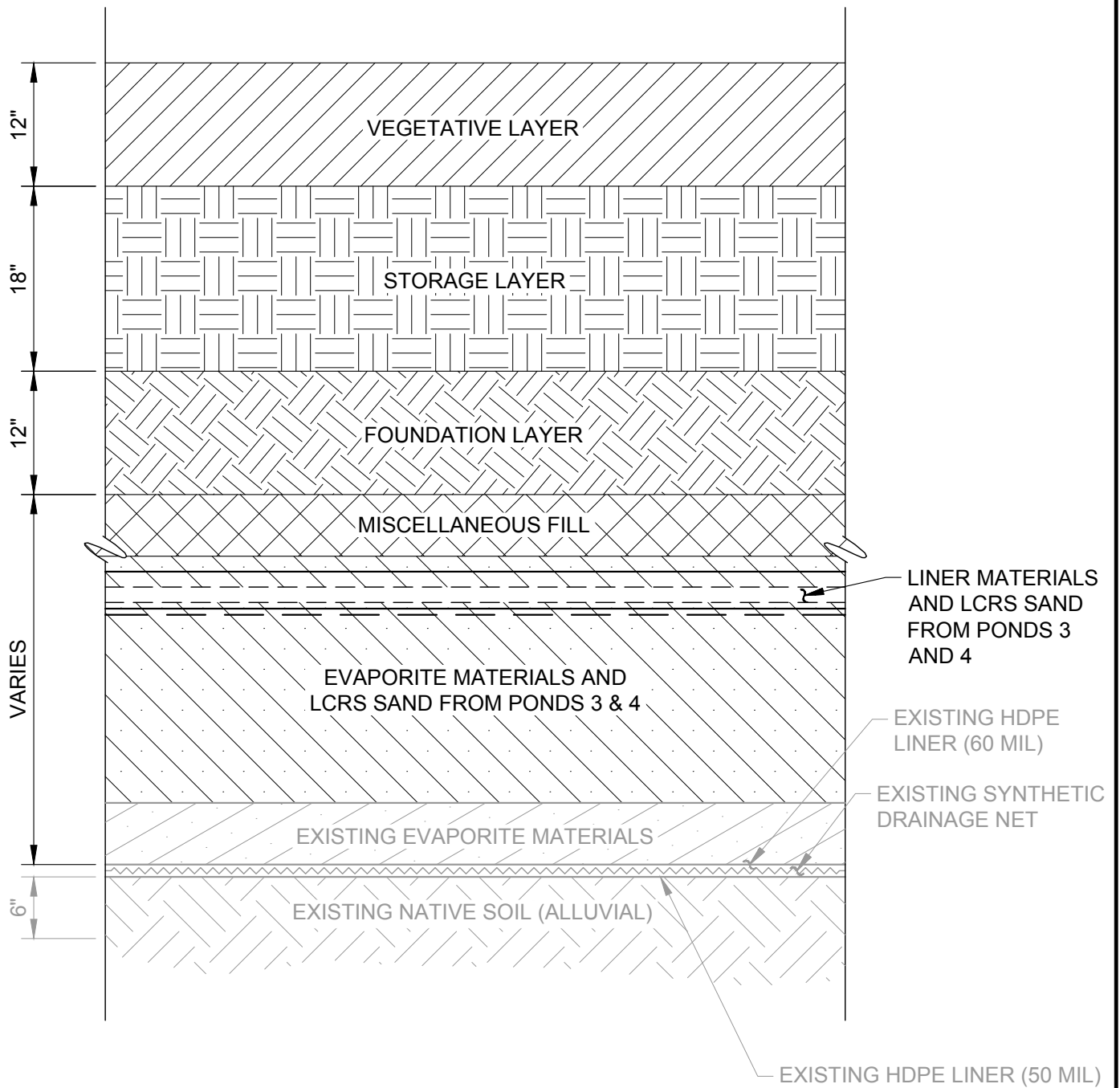
George Koerner 610-522-8440 gsigeokoerner@gmail.com - Email sent

[WEIMA Shredding + Compressing](#)

803-372-4797 - Spoke with **Neil Poissant** by phone

[Recycling - Ag Plastics \(deltaplastics.com\)](#) - Email sent

[Get Value Back On Your Plastic Scrap - PlastiCycle](#) - Email sent



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RS I - RS II LANDFILL

**SEGS III-VII POND 5
CLOSURE DETAILS**

FIGURE 1