California Regional Water Quality Control Board
North Coast Region

WASTE DISCHARGE REQUIREMENTS
ORDER NO. R1-2022-0010

for

OPERATION, CORRECTIVE ACTION, NEW CONSTRUCTION, AND CLOSURE AT THE SONOMA COUNTY CENTRAL DISPOSAL SITE (CDS)
WDID Nos. 1B801490SON and 1B99011RSON
COUNTY OF SONOMA

and

REPUBLIC SERVICES OF SONOMA COUNTY, INC.

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I. GENERAL

A. This Order rescinds and replaces Waste Discharge Requirements (WDRs) No's R1-2013-0003 as amended by R1-2015-0006, satisfies the regulatory renewal cycle for a Class III municipal landfill, and implements:

1. The Water Quality Control Plan for the North Coast Region (Basin Plan).
2. The minimum prescriptive standards (and, where deemed reasonable and appropriate, standards above and beyond those minimums) and performance goals of the California Code of Regulations (CCR), Title 27, Sections 20005-22278 (Non-Hazardous Solid Waste), and of Resource Conservation and Recovery Act (RCRA) Subtitle D, 40 Code of Federal Regulations (CFR) Part 258 (Criteria for Municipal Solid Waste Landfills).
3. State Water Resources Control Board (State Water Board) Resolution No. 93-62, Policy for Regulation of Discharges of Municipal Solid Waste, adopted June 17, 1993.

B. Basis and Rationale for Requirements:

The North Coast Regional Water Quality Control Board (Regional Water Board) developed the requirements in this Order based on information submitted as part of the 2015 Amended Joint Technical Document (JTD) for permit renewal and facility expansion, monitoring data, and other available information. Updates to the JTD were submitted in December 2021 and January 2022.

C. Site Owner and Operator:

The County of Sonoma (County) is the landfill owner. The County has contracted for day-to-day disposal operations with Keller Canyon Landfill Company, Inc., a subsidiary of Republic Services of Sonoma County, Inc. ("Republic"). Both owner and operator are considered dischargers under the California Water Code (Water Code).

D. A copy of this Order shall be kept at the CDS for reference by operating personnel at all times. Key operating personnel shall be familiar with its contents.

II. FINDINGS

A. Classification

The CDS as defined in Attachments “A” and “B” is a Class III landfill as defined in CCR, Title 27, Sections 20200- 20220.

B. Beneficial uses of local groundwater include:

1. Domestic water supply
2. Agricultural water supply
3. Industrial service supply

C. Human Right to Water

It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes (Wat. Code §106.3, subd. (a)). The Safe Drinking Water Act provides that all Californians have a right to pure and safe drinking water (Health & Saf. Code § 116270, subd. (a)). This Order promotes that policy by requiring the Discharger to handle and dispose of waste in a manner that will protect water quality objectives, including those that protect drinking water supplies.

D. Endangered Species Act

This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A sections 1531 to 1544). The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

E. Landfill Description and History

1. The existing disposal areas (Landfill 1, Landfill 2, and the Rock Extraction Area [REA]) and the planned expansion units at the CDS are located in a canyon at 500 Mecham Road, Petaluma, less than 4 miles southwest of the City of Cotati in an unincorporated area of Sonoma County. The property is located on two unnamed tributaries to Stemple Creek in Sections 4 and 9, T5N, R8W (Mount Diablo Baseline and Meridian) at 38 degrees, 18 minutes north latitude and 122 degrees, 45 minutes west longitude as shown in Attachment A of this Order.

2. The total waste footprint to be landfilled at the CDS is 164.5 acres and includes Landfill 1 (lower and upper), Landfill 2 (existing Phases I and II and future Phases III and IV), and the REA. Attachment “B” shows areas currently landfilled and proposed for development and future waste placement. Attachment “C” shows the final grading contours.

3. The facility has historically accepted, and will continue to accept, non-hazardous, non-designated, and inert solid waste from commercial and private haulers. The CDS is open to the public six days per week and closed on major holidays.

4. In accordance with the Solid Waste Facility Permit (SWFP) issued by Sonoma County Department of Health Services, Environmental Health Division (local enforcement agency, or LEA) and the California Department of Resources, Recycling and Recovery (Cal Recycle), the maximum waste tonnage at the facility is 2,500 tons per day, and the permitted maximum elevation of the site is 565 feet above mean sea level.

5. Waste deliveries to the CDS are received at a Tipping/ Transfer Facility where they are loaded into transfer trailers and, if to be landfilled, hauled to the active landfill area, spread in lifts, and compacted using heavy equipment. A portion of the waste currently received at the site has been periodically out-hauled to alternative disposal facilities. Out-hauling may continue during future periods when there is not sufficient permitted space for waste disposal onsite.

6. Existing onsite support facilities include offices, a scalehouse, recycling facilities, landfill gas collection, landfill gas flaring and landfill gas to energy power plant facilities, compressed natural gas pilot-scale plant, wood and green waste diversion processing areas, the Tipping/Transfer Facility, material recovery and storage areas, two Class II surface impoundments for leachate storage, headworks for a leachate pipeline connecting the facility to the City of Santa Rosa’s Laguna Wastewater Treatment Plant, various sedimentation ponds, and a material borrow area referred to as the West Canyon.

7. The entire Landfill 1 unit comprises the “pre-1993 Subtitle D footprint,” and is classified as an unlined “Existing Unit” by 40 CFR 258.1(d)(4) and 258.2, State Water Board Resolution 93-62, and CCR Title 27, Section 20164. Landfill 1 consists of an upper and a lower unit. The upper unit is within the original 1971 Landfill footprint. The lower canyon unit was constructed as a vertical expansion area in 1988 and designed with a clay-lined dendritic leachate collection and removal system (LCRS). Landfill 1 is currently undergoing corrective action to control releases of leachate and landfill gas to receiving waters. Corrective action involves a leachate and landfill gas extraction program intended to reduce liquid

levels and to create and maintain an inward hydraulic gradient. An 8.6-acre plan area of the 14.4 acre south face of Landfill 1 has been closed.

8. A compost facility was previously located on the upper unit of Landfill 1. Following removal of the compost operations in 2015, a portion of the upper unit with underlying waste was graded and lined with a composite liner system that included a LCRS. The area was constructed in three phases identified as (Former Compost Area) C-1, C-2, and C-3. These waste disposal areas have been substantially filled with C1 and C-2 predominantly used for disposal of fire disaster debris.

9. The REA is located on the west side of Landfill 1 and includes lateral expansion and the placement of waste over existing waste in Landfill 1. The lateral expansion containment system and the liner system that separates new waste from existing waste in Landfill 1 are engineered alternative systems designed in accordance with the requirements of this Order. REA Phase 1 has been completed and is currently active.

10. East Canyon expansion area Landfill 2 was approved under WDRs Order No. R1-2000-62, as amended by Order R1-2004-0040, and includes four phases east and adjacent to Landfill 1, and a fifth phase that will include placement of waste over both Landfills 1 and 2. Phases I and II of Landfill 2 have been constructed and are substantially filled. The containment systems for these phases are engineered alternative designs (EADs), as defined in CCR Title 27, Section 20080(b)1. In 2003, the Discharger reported detections of pollutants in the ground water flowing through the Landfill 2 landfill underdrain system attributable to landfill gas and landfill leachate. The Discharger undertook corrective actions and subsequent testing indicates that the corrective actions undertaken have mitigated and reduced water quality impacts.

F. Landfill Setting

1. The area surrounding the property is primarily a rural grazing area on low rolling hills and valleys. Both the existing and the proposed landfill units occupy south-trending valleys that are drained by unnamed tributaries to Stemple Creek.

2. Surrounding land uses include rural residential and agricultural operations, including dairy and cattle ranches. The closest subdivision, “Happy Acres,” is located about 0.5 miles northeast of the property and has about 90 residences.

3. Groundwater resources provide domestic and agricultural water supply for the surrounding area. There are three adjacent residences associated with dairy and cattle operations served by domestic water supply wells, as well as contiguous residences to the north, east, and

west of the property that rely on groundwater for both domestic and agricultural uses. In addition, domestic and irrigation wells are located to the south of the property, along Mecham Road. The Happy Acres Mutual Benefit Water System (HAMBWS) well, located northeast of the site near Stony Point Road, serves as the water supply for the residents of the Happy Acres subdivision.

G. Wastes and their Classification

1. The Discharger proposes to continue to accept municipal solid wastes, commercial and industrial wastes, and special wastes that are classified as “nonhazardous” or “inert” under CCR Title 27, Sections 20220 and 20230 respectively. As a Class III landfill, the facility is prohibited from accepting hazardous or designated wastes as defined under the CCR, Title 27, Section 20164, and the California Water Code Section 13173, respectively.
2. A household hazardous waste exclusion program is in effect at the facility and includes periodic waste load-checking.
3. The facility accepts nonhazardous grit and screening wastes (special wastes) from local wastewater treatment plants. The facility accepts other wastes requiring special handling, including but not limited to autoclaved medical waste, low level contaminated soils, small dead animals, soils from residential areas, and dewatered sludge.
4. Liquid waste generated onsite, such as landfill leachate, is transported via leachate pipeline to the Santa Rosa Laguna Treatment Plant where it is comingled with municipal wastewater and treated prior to final disposal or beneficial reuse in accordance with the National Pollutant Discharge Elimination System (NPDES) permit for the Santa Rosa Regional Water Reuse System (Order No R1-2020-0012). Liquid waste may also be impounded in the onsite Class II surface impoundments and/or pumped and trucked to permitted offsite disposal location(s). Under this Order, liquid waste streams generated by non-landfilling activities occurring on the property must be captured, contained, and disposed of in a manner that prevents their discharge to either surface or ground waters.
5. The Discharger has developed a Waste Acceptance Plan, dated December 2021, describing procedures and acceptance criteria designed to exclude hazardous and designated wastes from the site while accepting treated wood wastes and contaminated soils into composite lined areas of the CDS and to incorporate the requirements of this Order.

H. Landfill Siting

1. Pursuant to 40 CFR Subtitle D and CCR Title 27, municipal solid waste landfills that accept solid waste after October 9, 1993, are subject to siting criteria and restrictions related to airport safety and areas of rapid geologic change.

2. The property is located approximately 8.4 miles (more than 10,000 feet) from the nearest airport, the Petaluma Airport, therefore, the facility is not subject to specific demonstration and notification requirements related to aircraft safety.

3. The JTD indicates that rapid geologic change should not affect the existing or planned waste disposal areas because: (i) new cells will not be sited over loose, saturated sands which might experience liquefaction; (ii) subsidence due to rapid groundwater extraction is unlikely as there are no known significant groundwater extractions in the vicinity of the landfill; and (iii) onsite mapping and observations have not indicated the presence of pre-existing landslides, significant shear zones, zones of weakness, or other structural factors that could significantly affect stability; and (iv) there are no known Holocene-active faults within 200 feet of the site.

I. Geology, Faulting and Seismicity, Hydrogeology

1. The geologic units within the property boundaries include Quaternary alluvium and colluvium, the Late Miocene to Pliocene-Wilson Grove Formation, the Late Miocene to Pliocene-Sonoma Volcanics Group, and the Late Jurassic-to Late Cretaceous Franciscan Formation. The Wilson Grove Formation and Sonoma Volcanics Group overlie the Franciscan Formation and occur discontinuously throughout the region.

   (a) The Quaternary alluvium/colluvium occurs within the base of the canyons and thin layers on side slopes and ridgetops. These deposits are interbedded clays, silts, sands, and gravels, and are removed from the landfill areas as part of the grading and cover operations.

   (b) The Late Miocene to Pliocene-Wilson Grove Formation unconformably overlies the Franciscan Formation northeast and south of the landfill property. A remnant outcrop of Wilson Grove formation was mapped within the East Canyon Phase I and II area but has largely been removed during grading for those Phases. The formation consists of poorly consolidated, massive to interbedded, silty sandstone to fine grained sandy gravels. This

formation is the primary water bearing formation for many of the domestic water supply wells within the area.

(c) The Late Miocene to Pliocene-Sonoma Volcanics Group occurs locally to the southwestern border of the property. The formation has not been mapped in contact with the waste units and crops out southwest of the Dunham fault along the southwest boundary of the property.

(d) The Late Jurassic-to Late Cretaceous Franciscan Formation underlies both canyon landfill areas, is a regional bedrock unit, and is the primary geologic unit underlying the facility. The formation consists primarily of massive (thick) and interbedded greywacke sandstones, with shales and metavolcanic rocks. The formation exhibits deformation ranging from fracturing and consolidation of layered units to complete mélange or mixed rock types.

2. Faulting and Seismicity

   (a) The Facility is located near numerous regional active fault zones, including the Hayward - Rodgers Creek and San Andreas fault zones. There are no known Holocene-active faults within 200 feet of the property boundary.

   (b) The design maximum probable earthquake (MPE) for the site occurs on the Hayward - Rodgers Creek fault system approximately 12.2 km from the site and is characterized by a moment magnitude of 6.83 and a bedrock peak horizontal ground acceleration of 0.22g at the landfill.

   (c) Local faults shown on some geologic maps include the Tolay, Dunham, Bloomfield, Americano, and an “unnamed fault.” As described in the JTD, site investigations and published geologic evaluations have concluded that these faults are not Holocene active.

3. Groundwater Hydrology and Depth to Groundwater

   (a) Shallow groundwater conditions are present in the alluvial wells, with groundwater ranging from the surface to about 12 feet below the ground surface. One alluvial well is artesian during wetter periods of the year. Several alluvial wells are also reported dry during the summer months.

   (b) The Wilson Grove Formation marine sandstone is a principal water producing formation and a primary groundwater recharge formation in Sonoma County. Many domestic wells located

deep within this formation and wells within 1 mile of the property are reported to have moderate to high yields. The Wilson Grove Formation occurs locally to the south of Hammel Road and to the northeast of the property, underlying the Happy Acres subdivision. Domestic water supply wells within the subdivision draw water from both the upper Wilson Grove sandstone and the underlying Franciscan Formation.

(c) The Franciscan Formation is the primary water-bearing unit at the site. Site monitoring wells indicate groundwater occurs in this formation at depths ranging from about 20 to 130 feet below the ground surface. Many Franciscan Formation monitoring wells are low yield. The natural groundwater gradient direction in the Franciscan Formation is towards the southwest to southeast, trending with the canyon topography in both the Landfill 1 and Landfill 2 areas. It is likely controlled by fractures to some degree.

(d) New cell construction will involve excavation below existing groundwater levels. Section 20240(c) of Title 27 requires that new landfills be "sited, designed, constructed, and operated," to ensure or maintain at least five feet of separation between the contained wastes and the highest anticipated level of the groundwater table. Existing landfills are to be operated to maintain the required separation. Development of the REA lateral expansion area and Landfill 2 Phases III and IV require construction of a liner system with sufficient soil thickness beneath and within the liner system to provide at least 5 feet of separation.

J. Surface Waters, Wetlands, Floodplains

1. The property is located within the Stemple Creek watershed of the Estero de San Antonio Hydrologic Area within the Bodega Bay Hydrologic Unit. Stemple Creek is a coastal tributary to Bodega Bay.

2. The Basin Plan generally prohibits new point source discharges of waste to coastal streams and natural drainageways that flow directly to the ocean and requires that existing discharges to these waters be eliminated at the earliest practicable date. Specific types of surface water discharges, such as discharges of stormwater, may be permitted under general NPDES permits. These WDRs do not cover such discharges; the Discharger is responsible for securing and/or enrolling for coverage under the

requirements of applicable general NPDES permits for any proposed discharges of water from the facility into surface waters.

3. Subtitle D (40 CFR §258.12) requires that any new construction or lateral expansion of municipal solid waste landfills not be located in wetlands unless certain demonstrations can be made. The unconstructed new Landfill 2 Phases III and IV, and REA Waste Management Units (WMUs) will not be located in wetlands.

4. Order No. R1-2000-62 included Clean Water Act section 401 Water Quality Certification for wetland impacts and directed the County to monitor and report on 2.6 acres of mitigation wetlands constructed as part of the project. The County complied with these requirements and is not obligated to provide further demonstration to fulfill the requirements of 40 CFR section 258.12, except that the project must be designed in a manner that ensures that any remaining wetland soils or wetland hydrology in this area do not impair the integrity of the new landfill units nor their ability to protect natural ecological resources.

5. The JTD provides a map showing the 100-year floodplain and the disposal facility location that demonstrates the CDS is not located within a 100-year floodplain zone.

K. Precipitation and Stormwater

1. The facility receives about 30 inches of average annual precipitation as shown by the isohyetal map of normal annual precipitation prepared by the Sonoma County Water Agency (1983). About 95 percent of the storm events occur between the months of November and April. The mean annual evaporation is 43.67 inches, as published by the California Department of Water Resources for Sonoma County (December 1996-November 1997).

2. The 100-year, 24-hour precipitation event for the property is 8.42 inches, according to the National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 6, Version 2.

3. This Order does not replace or supersede the Statewide General NPDES Permit for Stormwater Discharges Associated with Industrial Activities (Industrial General Permit) or the Statewide General NPDES Permit for Discharges of Stormwater Associated with Construction Activities (Construction General Permit). The Discharger must ensure and certify that existing operations and proposed new construction and activities are comply with relevant stormwater general permits. Both permits require the Discharger

to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to address a facility's or project's pollutants of concern and identify Best Management Practices (BMPs) to reduce those pollutants in stormwater.

4. Stormwater run-on and runoff from the facility is controlled in a series of perimeter ditches, storm drains, down chutes, and sedimentation ponds located throughout the facility. The conveyances route stormwater to sedimentation basins. The sedimentation basins retain runoff, provide for evaporation, and allow suspended solids to settle before discharge to the two unnamed tributaries that flow to Stemple Creek.

5. The JTD demonstrates that the onsite surface water drainage system and sedimentation basins are adequately sized to accommodate peak flows and volumes associated with the 100-year, 24-hour storm. This Order requires that the Discharger report annually on the adequacy of onsite drainage collection, conveyance, treatment, and storage features.

L. Landfill 1 Corrective Actions

1. Dating from a detected and confirmed release of waste constituents from Landfill 1 in 1995, the County has conducted monitoring, investigative, and remediation activities as part of evaluation monitoring and corrective action programs for Landfill 1. WDRs Order No. R1- 2004-0040 summarized those efforts from 1995 through 2004 and included a time schedule directing the County to increase its efforts to abate the build-up of leachate in Landfill 1 and to mitigate releases of leachate and landfill gas migration towards the East Canyon. In compliance with the time schedule, the County and its consultants studied and assessed the presence and mechanisms for leachate generation and migration potential from Landfill 1.

2. In 2005, the County's consultant prepared a site conceptual model demonstrating that through a system including leachate extraction wells, gravity drains, collectors, sumps, and pumps, an inward hydraulic gradient can be maintained within Landfill 1, resulting in a net removal of approximately 10 million gallons of leachate per year from Landfill 1.

3. The Monitoring and Reporting Program, attached to this Order, requires that the Discharger provide an Annual Report which summarizes and confirms the performance and effectiveness of

the corrective action effort as it undergoes modification through the new phases of construction and site operations.

M. Landfill 2 Corrective Actions

1. In 2003, groundwater samples from the groundwater interception and diversion underdrain system began showing concentrations of waste constituents indicating a release or releases from Landfill 2, Phases I and II. Subsequent investigation attributed possible sources of these releases to a design failure in the liner anchor trench construction and leachate migration to groundwater during repair work to a landfill gas condensate line. The County also reported breaches in the Landfill 2 liner occurring both during liner construction as well as during active landfill operations.
2. These findings have been addressed; recent groundwater monitoring reports show low or decreasing levels of constituents of concern and the corrective actions undertaken by the County have been effective in mitigating and reducing water quality impacts.
3. Monitoring required under this Order will include continued sampling from corrective action monitoring points used to date to measure and document contaminant concentrations associated with releases from Landfill 2.

N. Waste Management Unit Design

1. The minimum standards prescribed under CCR Title 27 and Federal Subtitle D are intended to help prevent degradation of waters of the State. The California regulations allow Regional Water Boards to impose more stringent standards to address regional and site-specific conditions.
2. The Regional Water Board has judged it reasonable and appropriate for the protection of water quality to require a minimum 5 feet of separation between the bottom of waste (recognized by the North Coast Regional Water Board as being the bottom of the leachate collection and removal system/leakage detection system below the upper liner). Further, the Regional Water Board also believes it reasonable and appropriate to require a liner design that provides built-in redundancy and that will withstand anomalies in the normal range of field stresses that designers assume a Class III landfill liner is likely to encounter.

3. The Federal liner design criteria for new municipal solid waste (MSW) landfills, and lateral expansions of existing landfills, are:

   (a) A LCRS with the capacity to convey all leachate that reaches the liner to a sump, without relying on unlined or clay-lined conveyances.

   (b) A single synthetic liner at least 30 mil thick (at least 60 mil if HDPE)

   (c) A minimum of 2 feet of compacted soil with a hydraulic conductivity of 1x10-7 cm/sec (0.1 feet/year) or less.

4. CCR Title 27 requires MSW landfills be sited where soil characteristics, distance from waste to ground water, and other factors will ensure no impairment of beneficial uses of surface water or groundwater beneath or adjacent to the landfill.

   (a) If site characteristics alone do not ensure protection of the quality of ground water or surface water, Class III landfills are required to have a single clay liner with hydraulic conductivity of 1x10-6 cm/sec or less.

   (b) State Water Board Resolution No. 93-62 finds that single clay liners will only delay rather than prevent leachate leakage and requires the use of composite liners that at a minimum meet the Federal Subtitle D requirements.

   (c) Resolution No. 93-62 also finds that where sideslopes are demonstrated to be too steep to allow construction of a composite liner meeting the minimum prescriptive standard design, an alternative composite liner or 60-mil synthetic liner may be substituted, if it is demonstrated that the liner design will meet the Subtitle D performance requirement.

5. The Landfill 1 footprint is unlined, and it is exempt from current State and Federal containment criteria. However, because there has been a release from the WMU, the WMU must comply with the CCR Title 27 requirements for monitoring and corrective action. Furthermore, given the releases from the WMU, this Order requires that new waste placed on top of Landfill 1 be isolated and managed separately from the existing wastes.

O. Construction

1. The construction sequence is expected to include completion of the REA following by Landfill 2 Phases III, IV, and V. New construction will be subject to Regional Water Board review and approval.

2. Within each phase, construction will begin with surface preparation, construction of drainage layers, base liner, access roads and infrastructure, MSW placement, and incremental extensions first of an operations layer on the placed liner and then incremental installation of the preferential pathway liner over the adjacent Landfill 1, placement of daily, then eventually intermediate cover, and concurrent construction of interim and permanent surface water-management system features (including drainage ditches, piping, and sedimentation ponds).
3. Construction will involve significant soil excavation from the areas to be lined and stockpiling and will also require additional earthen material sourced from offsite locations as well as the West Canyon. The Discharger and/or its contractors will be responsible for developing and implementing a SWPPP to ensure that earthen materials disturbed, stored, placed, or otherwise managed in a manner that results or could result in the discharge of waste during the course of each construction project are properly located, contained, and controlled to prevent discharges to receiving waters located within and adjacent to the property.
4. CCR Title 27 section 20200 specifies WMU construction standards, including a requirement to construct liner and cap components in accordance with an approved Construction Quality Assurance (CQA) Plan that includes specific testing and reporting requirements. The CQA Plans for new cell construction and landfill closure will be subject to Regional Water Board review and approval.

P. Operations

1. CCR Title 27, Subchapter 4, Article 1 (§§20510- 20660) specifies landfill operations requirements, for the most part applicable to operational aspects subject to oversight by CalRecycle or by the Sonoma County Division of Environmental Health. The JTD includes an Operations Plan that notes onsite personnel will be trained to ensure that they are well-versed in environmental controls.
2. Operational areas on the property are subject to coverage under the Industrial General Permit, which requires preparation and implementation of a SWPPP and a Spill Response Plan intended to protect surface waters from releases associated with project operations.

3. The CEQA Addendum (discussed below), indicates that operations will be conducted under an Operational Quality Assurance (OQA) plan that includes provisions intended to protect the liner at vulnerable times (initial waste placement over the operations layer) and locations (e.g., anchor trench).

4. This Order directs the Discharger to develop and/or provide information about proposed operator training and oversight to increase operator awareness about the need for liner protection, to confirm that operations on the liner are being conducted in a protective manner, and to identify any damage and/or potentially damaging activity that should be corrected.

Q. Monitoring

1. Groundwater, surface water, and unsaturated zone monitoring must comply with the requirements of CCR Title 27, sections 20380-20435. The Discharger is presently monitoring existing units at the facility under MRP No. R1-2015-0006. This Order provides an updated MRP to address REA construction and the results of recent groundwater and leachate monitoring.

2. Attachment “J” shows surface, groundwater, and landfill gas monitoring locations for both the existing and the proposed WMUs. The facility monitoring program does not currently include a vadose zone monitoring component. If a monitorable vadose zone is identified during facility development or future investigations, it may be appropriate and necessary to modify the facility MRP to include a vadose zone monitoring element.

R. Closure

1. An approximately 8.6-acre area of the south face of Landfill 1 has been construction closed. The remainder of Landfill 1, the REA, and Landfill 2 will be closed when the units reach their final design grades. Preliminary Closure and Post-Closure Maintenance Plans are included in the JTD.

2. CCR Title 27, section 21090 requires that landfill caps include an impermeable layer comprised of a minimum of 1 foot of compacted soil with a permeability equal to or less than 1x10- 6 cm/sec, but no more permeable than the liner beneath that portion of the cap. Alternative designs meeting this standard may be proposed.

3. The Discharger proposes using 60-mil HDPE as the low permeability barrier over Landfill 1 and the REA and using a

composite liner comprised of 60-mil HDPE and a GCL over Landfill 2. Both designs would include a 2-feet-thick soil foundation layer.

4. At closure, perimeter slopes will be 3:1 or less with 15-feet-wide benches every 50 vertical feet or less. The drainage channels and the top deck will have minimum 3 percent slopes.
5. The JTD includes slope stability analyses for the final closed landfill configuration demonstrating acceptable factors of safety and displacement under seismic loadings and saturated conditions.
6. Final closure design is subject to further review and Regional Water Board consideration at a future date prior to and closer to execution (Attachment H).

S. Financial Assurances

1. The financial assurance mechanisms consist of an insured Bond for closure, post-closure maintenance and corrective actions. Monies are funded and reviewed annually in accordance with an approved estimate, as waste is discharged to the landfill.
2. The Discharger is required to update approved cost estimates annually to account for inflation and to recalculate the closure costs every five years using current costs (typically concurrent with the LEA/CalRecycle 5-year Solid Waste Facilities Permit review). In accordance with CCR Title 27, section 21820, subdivision (a), cost estimates shall be based on the cost of hiring a third party to close the landfill in accordance with the submitted closure plan.
3. The construction cost estimates for future areas proposed for preliminary or final closure shall, where applicable, reflect actual unit costs as incurred in the construction of that closure project.
4. The Discharger has provided cost estimates, adjusted for 2020 inflation, of $30,978,000 for Closure, $36,523,977 for Post Closure Maintenance and $937,585 for Corrective Action () to cover the costs of for a known or reasonably foreseeable release (KRFR) at the facility. The JTD includes an updated potential release scenario and costs, accounting for substantial capital improvements that have been previously constructed, primarily the leachate pipeline connection to the sanitary sewer, thus substantially reducing leachate trucking costs. The cost estimate includes future additions to the leachate extraction well system

and potential future corrective action monitoring wells. Regional Water Board staff have approved the plan and amount funded. The financial assurance mechanism is a Bond. The Discharger must review the KRFR scenario and cost estimate annually, update as appropriate, and so document in the annual monitoring report.

T. Antidegradation Policy

1. State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintenance of High-Quality Waters in California", (Antidegradation Policy) 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 WDRs that 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.

2. The Board interprets "high quality waters" as the best water quality that has existed since the Antidegradation Policy was adopted in 1968 after considering any subsequently authorized degradation that has been allowed in compliance with the Policy. The County has been investigating and implementing corrective action measures for releases associated with both Landfills 1 and 2 as releases have been identified and has demonstrably reduced and mitigated the impacts associated with those releases. The County has been diligent in implementing and refining its corrective action efforts associated with past releases and degradation to receiving waters.

3. The landfill design implements current State and Federal standards intended to protect human health and the environment and to protect against water quality impairment. The Regional Water Board has required containment measures above the minimum prescriptive standards contained in those regulations and has required that the discharger maintain a 5-foot separation to groundwater in the bottom of the new WMUs, and the

discharger has provided modeling information indicating that this design will result in no release and, therefore, no degradation to underlying State waters.

4. The discharger is implementing additional operational controls to protect new liner at locations and during periods when it may be vulnerable to damage.

5. Collectively, implementation of these requirements constitutes the best practicable treatment and control of the discharge in accordance with the Antidegradation Policy. The permitted discharge is consistent with the Antidegradation Policy.

U. CEQA and Other Considerations

1. In 1998, Sonoma County Board of Supervisors (County), the lead agency under the California Environmental Quality Act (CEQA), certified two separate Environmental Impact Reports (EIRs) (August 18, 1998 and December 15, 1998). The EIRs identified significant environmental impacts associated with the landfill expansion project and the reasonably foreseeable REA project and included a site mitigation plan for each significant impact. As responsible agency, the Regional Water Board considered the EIRs when it adopted Order No. R1-2000-62.

2. Pursuant to CCR Title 14, section 15164, the County developed an Addendum to the 1998 EIRs dated May 25, 2012, The Addendum included an analysis of the factors that would trigger the need to prepare a subsequent EIR under CCR Title 14, section 15162, subdivision (a). The County concluded that although there are some minor changes in the project and project circumstances, these changes will not result in any new significant effects, or substantially more severe significant effects than previously examined. The Addendum concluded there would be no anticipated new or worsened water quality impacts. The Regional Water Board concurred with this determination, on June 13, 2012. the County posted its Notice of Determination for that Addendum.

3. The Regional Water Board considered the collective CEQA documentation and mitigation measures for the facility and has determined that compliance with this Order will mitigate any potential adverse water quality impacts.

V. Procedural Requirements

1. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution and to protect public health have approved the use of this facility for the discharges of waste to land stated herein.

2. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations.

3. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to this facility and discharge.

4. Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and CCR, title 23, sections 2050 and following. 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 will be provided upon request or may be found on the California Waterboards Water Quality Petitions webpage: (https://www.waterboards.ca.gov/public_notices/petitions/water_quality)

THEREFORE, IT IS HEREBY ORDERED that WDRs Order Nos. R1-2013-0003 as amended by R1-2015-0006 be rescinded, and that the Discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

III. PROHIBITIONS

A. Disposal of waste to areas outside of the constructed waste footprint boundary as certified and approved by the Executive Officer, is prohibited.

B. The discharge of "hazardous waste" and "designated waste" at this facility is prohibited. The discharge of leachate from the landfill units and LCRSs to receiving waters is prohibited. For the purposes of this Order, the terms "hazardous waste" and "designated waste" are as defined in Title 27 of the CCR.

C. The discharge of waste including solids, liquids, leachate, or landfill gas to surface water, surface water drainage systems or groundwater is prohibited.

D. The Discharger shall not cause the concentration of any Constituent of Concern to exceed its respective concentration limit in any monitoring medium. The concentration limit for each monitoring parameter will be set at the background concentration. Data analysis will be performed in accordance with the MRP.

E. Discharges of waste to either a landfill unit that has not received wastes or to a lateral expansion of a landfill unit are prohibited, unless the discharge is to an area equipped with a containment system which meets requirements in the Specifications of this Order.

F. The discharge of liquid or semi-solid waste (i.e., waste containing less than 50 percent solids) to Landfill 1, Landfill 2, or the REA is prohibited, with the following exceptions:

    1. De-watered sewage or water treatment sludge as provided in CCR, Title 27, section 20220, subdivision (c) may be disposed of on lined areas.

    2. Leachate may be used for dust control over lined areas with the written approval of Board staff.

G. The discharge of solid waste containing free liquid or moisture in excess of the waste's moisture holding capacity to any portion of the Class III WMUs permitted under this Order is prohibited.

H. Ponding of liquids, including rainfall runoff and leachate, over solid waste disposal cells is prohibited.

I. The disposal of containerized liquids at this facility is prohibited.

J. The discharge of waste to ponded water from any source is prohibited.

K. The discharge of waste to surface waters or within 50 feet of surface waters is prohibited.

L. The discharge of wastes which have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products which require a higher level of containment than provided by the unit, are "restricted hazardous wastes", or could impair the integrity of containment structures, is prohibited.

M. The disposal of wastes containing more than one percent by weight friable asbestos is prohibited.

N. The discharge of landfill wastes, including VOC-impacted groundwater, to a stormwater sedimentation basin, is prohibited.

O. The discharge of wastes from activities occurring upon or within the landfill footprint to stormwater sedimentation basins, surface, and/or ground water is prohibited.

P. The discharge of any waste in any manner not specifically described in the Findings or addressed in the Specifications and regulated by this Order is prohibited.

Q. Creation of a pollution, contamination, or nuisance, as defined by Water Code section 13050, is prohibited.

R. The retention of more than 30 centimeters of leachate over the liner in any Subtitle D lined WMU is prohibited pursuant to 40 CFR section 258.40.

IV. SPECIFICATIONS

A. General Specifications

1. The discharge of wastes shall not cause water quality degradation by allowing a statistically or non-statistically significant increase over background or baseline concentrations as determined in accordance with the MRP.

2. Wastes shall only be discharged into, and shall be confined to, the landfill units specifically designed for their containment.

3. New landfill units and lateral expansions shall not be located in wetlands unless the Discharger has successfully completed, and the Regional Water Board has approved, all demonstrations required for such discharge under 40 CFR section 258.12, subdivision (a).

4. Leachate generation by a landfill unit shall not exceed 85 percent of the design capacity of the leachate sump pump. If leachate generation exceeds this value or if the depth of fluid in an LCRS exceeds the volume allowing for efficient pump operations, then the Discharger shall immediately cease the discharge of sludges and other high- moisture wastes to the landfill unit and shall notify the Regional Water Board in writing within seven days. Notification shall include a timetable for corrective action necessary to reduce leachate production and/or for increasing leachate removal capacity.

5. Waste discharged at this facility shall be provided with approved daily and intermediate cover material. The active face shall receive an appropriate daily cover to minimize contact water runoff and leachate production. All inactive areas (as defined in CCR Title 27, section 20164) shall be capped with at least one foot of clean, earthen material or approved intermediate cover material, compacted, and graded to drain from the active area.

6. All rainfall that contacts waste in the open face and then leaves the open face as runoff is contact water and shall be collected and controlled as leachate. Contact water shall not be allowed to pond on the waste surface.

7. Treated Wood Waste (TWW) may be disposed of at the Landfill under the following conditions:

   (a) Discharge of TWW shall only be to composite-line portions of the CDS.

   (b) The TWW is managed so as to prevent scavenging.

   (c) Any management of TWW at the CDS at the landfill prior to disposal, or in lieu of disposal, complies with applicable Health and Safety Code requirements.

   (d) TWW disposal shall be discontinued if monitoring of the composite lined portion of the CDS units where TWW disposal has occurred indicated a verified discharge until corrective action results cessation of the discharge.

B. WMU Construction Specifications

1. All ongoing and future phases of construction shall be in accordance with the applicable provisions of Title 27 and this Order and approved by the Executive Officer prior to operation.

2. WMU containment structures shall be designed and constructed under the direct supervision of a California registered civil engineer, or a certified engineering geologist, and shall be certified by that individual as having been constructed in accordance with Regional Water Board approved plans and specifications. Designs shall include a CQA Plan, the purpose of which is to:

   (a) Demonstrate that the WMU has been constructed according to the specifications and plans approved by the Regional Water Board.

   (b) Provide quality control on the material and construction practices used to construct the WMU and prevent the use of inferior products and/or materials which do not meet the approved design plans and specifications.

   (c) A final construction CQA report shall be submitted for approval by the Executive Officer after each phase of construction and prior to the discharge of waste into the constructed phase.

   (d) The final construction CQA report shall include, but not be limited to, as-built plans for the WMU, a CQA report with a written summary of the CQA program and all test results, analyses, and copies of the

inspector's original field notes, and a certification as described in the Landfill Specifications, below.

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged waste over the operating life, closure, and post closure maintenance period of the WMU.

4. Clay liners shall have a maximum hydraulic conductivity of 1 x 10-7 cm/sec and, a minimum relative compaction of 90 percent or as practical and specified in the JTD and construction documents to avoid damage to the underlying geosynthetic liner. Compacted clay layers in landfill caps shall have a maximum hydraulic conductivity of 1 x 10-6 cm/sec or be equal to the hydraulic conductivity of the bottom liner system or underlying geologic material, whichever is less permeable, and a minimum relative compaction of 90 percent. Hydraulic conductivities of liner materials shall be measured by laboratory tests using solutions with similar properties as the fluids that will be contained. Hydraulic conductivities of cap materials shall be measured by laboratory tests using water. Hydraulic conductivities measured through laboratory methods shall be confirmed by field-testing in accordance with this Order and MRP. Construction methods and quality assurance procedures shall be sufficient to ensure that all parts of the liner and cap meet the hydraulic conductivity and compaction requirements.

5. LCRSs shall be designed, constructed, and maintained to collect and transmit twice the anticipated daily volume of leachate generated by the WMU and to prevent the buildup of hydraulic head exceeding a depth of one foot on the underlying liner at any time. The depth of fluid in any LCRS sump shall be kept at or below the level needed to ensure efficient pump operation (Attachments G and H).

6. This Order requires the following liner designs for the new lateral expansion and vertical expansion WMUs (Attachments D-I).

   (a) Base Liner Design, Landfill 2, Phases III, IV, and REA (from top to bottom):

      i. Minimum 2 feet of soil operations layer
      ii. 8-oz per square yard geotextile
      iii. 1-foot-thick LCRS composed of granular material
      iv. 16-oz per square yard geotextile cushion
      v. 60-mil HDPE
      vi. 2 feet of 1x10-7 cm/sec compacted clay
      vii. 16-oz per square yard geotextile cushion
      viii. 1 foot of sand (leak detection layer)
      ix. 60-mil HDPE
      x. 1 foot of 1x10-7 cm/sec compacted clay
      xi. 4 feet of compacted foundation soil

xii. 8-oz geotextile separator
xiii. 1-foot-thick layer of granular material (ground water underdrain)
xiv. 8-oz geotextile separator
xv. Prepared subgrade

(b) Sideslope Liner Design, Phases III, IV, and REA where there is no existing waste beneath the liner (from top to bottom):

i. Minimum 2 feet of soil operations layer
ii. Geocomposite (LCRS)
iii. 60-mil HDPE
iv. Geosynthetic clay liner (GCL)
v. 60-mil HDPE
vi. GCL
vii. 60-mil HDPE
viii. 2-feet-thick soil cushion layer (REA only)
ix. Geocomposite (underdrain)
x. Prepared subgrade

(c) Preferential Leachate Pathway where new waste in the former compost area, REA, and Landfill 2 Phases III and IV will be placed over existing waste (from top to bottom):

i. Minimum 2 feet of soil operations layer
ii. Geocomposite drain net
iii. 60-mil HDPE
iv. GCL
v. Intermediate soil cover, depth variable

C. Surface Impoundment Specifications

1. Both Class II Surface Impoundments, leachate ponds LP1 and LP2, shall be operated in accordance with an approved leachate management plan.

2. All offsite discharge of leachate shall be to a legal point of disposal as presented within the approved leachate management plan. The legal point of disposal is currently the City of Santa Rosa Laguna Treatment Plant under City of Santa Rosa Non-Residential General Discharge Permit No. SR-IW5202. The permit does not specify a daily discharge volume limit.

3. The leachate conveyance system is regulated under general WDR Order No. 2006-0003-DWQ, with WDID number 1SSO11652. The Discharger must provide written notification to the Regional Water Board prior to making any proposed change in the legal point of disposal.

4. The Discharger shall maintain at least 2 feet of freeboard in the leachate ponds LP1 and LP2 at all times.

5. The leachate ponds shall be operated with dedicated freeboard measurement devices at all times.
6. Leachate ponds LP1 and LP2 shall be fully inspected annually, and integrity tested as needed in accordance with the applicable provisions of Title 27. Inspection reports or testing results shall be submitted by February 15, annually and include a complete report of findings, including a statement as to the presence or absence of leachate in the leak detection layer, steps taken to remove any leachate from this layer, and provisions for completion of all necessary maintenance, repairs, and submittal of CQA reports for repairs.
7. Leachate surface impoundment maintenance and repair plans shall be submitted to the Regional Water Board in advance of any work. Surface Impoundment repair plans and liner CQA Plans shall be developed and stamped by a licensed professional experienced in this type of work.
8. In the event any inspection or integrity tests indicate a release beyond the containment system, the Discharger shall notify the Regional Water Board by telephone within 2 hours of discovery and initiate corrective action.

D. Landfill Closure Specifications

1. At closure, each landfill shall receive a final cover in accordance with the State and Federal prescriptive standards, or an approved Engineered Alternative Design.
2. Materials used for final cover construction or repair shall have appropriate physical and chemical properties to ensure containment of wastes over the closure and post- closure maintenance period. CQA information and as- built drawings shall be submitted to the Regional Water Board within 60 days of the completion of any phase of final cover construction or repair.
3. Construction methods and quality assurance procedures shall be sufficient to ensure that all parts of the final cover meet the permeability and stability requirements specified in 40 CFR section 258.60 and CCR Title 27.
4. Vegetation shall be planted and maintained over intermediate cover and closed landfill areas. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth not in excess of the vegetative layer thickness. Vegetation shall be maintained to allow for inspection of the cap and its integrity.
5. Closed landfill units shall be graded to at least a three percent (3%) grade and maintained to prevent ponding and infiltration.
6. The final WMU slopes shall not exceed a horizontal-to-vertical ratio of 3:1, without benching, to ensure slope stability. Other areas with slopes

greater than ten percent surface drainage courses, and areas subject to erosion by wind or water shall be designed and constructed to prevent such erosion.

7. Closure of each WMU shall be performed under the direct supervision of a registered civil engineer or California certified engineering geologist. Appropriate documents shall be maintained by the Discharger, and provided at the request of the Executive Officer, to document that supervision.

E. Protection from Storm Events

1. Both active and closed WMUs shall be designed, constructed, and operated to prevent inundation or washout due to floods with a 100-year return period. Class III landfill units and related containment structures shall be constructed and maintained to prevent, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping under 100-year, 24- hour precipitation conditions.

2. Precipitation and drainage control systems shall be constructed on both active and closed WMUs. They shall be designed and constructed to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100- year, 24-hour precipitation conditions.

3. By August 15, annually, the Discharger shall submit to the Executive Officer a Winterization Plan describing measures planned to prepare the site and conduct operations during the wet season.

4. Prior to the anticipated rainy season, but no later than October 1, annually, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the facility and to prevent surface drainage from contacting or percolating through wastes. By December 15, annually, the Discharger shall submit a report to the Executive Officer describing measures taken to comply with this specification.

5. Surface drainage shall be designed to minimize infiltration and shall not be allowed to contact wastes. Internal drainage conveyances shall be located to the maximum extent practicable, such that they do not cross over landfill areas. Drainage over landfill areas shall be contained in engineered conveyance structures or in drainage ditches which are lined with at least one foot of compacted soil having an in-place permeability of 1 x 10-6 cm/sec or less or an engineered alternative that provides equivalent or better protection from storm-water infiltration.

V. PROVISIONS

A. The Discharger shall comply with these WDRs and the attached MRP. A violation of the MRP is a violation of these WDRs. The Discharger shall further comply with all applicable provisions of CCR Title 27 and 40 CFR Part 258, Subtitle D not specifically referred to in this Order.

B. For those impacts within the Regional Water Board's purview, the Discharger shall perform and/or comply with all CEQA mitigation measures as specified in the EIRs and subsequent CEQA documentation for the project.

C. Prior to landfill liner construction, the Discharger shall obtain any and all permits required under Federal, State, or local laws.

D. The Discharger shall continue to monitor each WMU and all underlying media per the MRP throughout the post-closure maintenance period and shall continue until the Regional Water Board determines that the wastes remaining at the site no longer threaten water quality.

E. In the event waste constituents are detected within the discharge from any landfill underdrain area, the Discharger shall propose and implement appropriate corrective action and collect all underdrain flow as leachate for discharge to the Class II surface impoundments and/or into the leachate disposal pipeline or other legal point(s) of disposal as authorized by the Executive Officer.

F. The Discharger shall continue corrective action measures described in the MRP, shall maintain overall leachate and landfill gas control capabilities during project construction and implementation, and shall assess current level of leachate control in Landfill 1 on an ongoing basis.

G. The Discharger shall have the continuing responsibility to assure protection of waters of the State from discharged wastes, including leachate, that may be generated and discharged during the closure and post-closure maintenance periods of the facility and during subsequent use of the property for other purposes.

H. The Discharger shall maintain legible records of the volume and type of each waste discharged for each landfill unit and the manner and location of discharge. Such records shall be maintained at the facility or the facility's administration office until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Regional Water Board and of the State Water Board at any time during normal business hours. At the beginning of the post-closure maintenance period for

each of the landfill areas, copies of these records shall be sent to the Regional Water Board.

I. The Discharger shall provide proof to the Regional Water Board within sixty days after completing final closure that the deed to the landfill facility property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that the parcel has been used as a municipal solid waste landfill, and that land use options for the parcel are restricted in accordance with the post- closure land uses set forth in the post-closure plan and in WDRs for the landfill.

J. In the event that the Discharger defaults on carrying out either the post-closure maintenance plan or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.

K. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with the MRP, as required by Water Code sections 13750 through 13755.

L. The Discharger shall provide a copy of this Order to all contractors and all subcontractors conducting the work and require that a copy of the Order remain in their possession at the work site. The Discharger shall be responsible for work conducted by its contractors or subcontractors.

M. The Discharger shall obtain and maintain adequate assurances of financial responsibility for initiating and completing corrective action for all known and reasonably foreseeable releases from a WMU at the facility in accordance with CCR Title 27, sections 20380, subdivision (b) and 22222. The Discharger shall provide an updated corrective action cost estimate to the Regional Water Board for review by February 15, 2023, and every five years thereafter, for the term of this permit.

N. In the event the Regional Water Board determines that the Discharger has failed or is failing to perform corrective action as required by law, the Regional Water Board may request that CalRecycle direct the Discharger to pay from the financial assurance revenues such amounts as necessary to insure sufficient corrective action. The Discharger shall be obligated to use such funds for corrective action in accordance with the directive of the Regional Water Board.

O. In accordance with CCR Title 27, the Discharger shall further provide and maintain adequate financial assurances to cover the costs of closure and post-closure maintenance for each WMU and shall report to the Regional Water Board staff by February 15, annually, that it has demonstrated financial responsibility to CalRecycle.

P. The closure and postclosure cost estimates shall be updated every 5 years or during each 5-year Solid Waste Facility Permit review and copied to the Regional Board staff.

Q. During times of active closure construction or any periods of repair to the waste containment, drainage, or monitoring facilities, legible copies of the daily CQA field notes and summary reports shall be submitted to the Regional Water Board at: NorthCoast@waterboards.ca.gov or via email to the staff person assigned to the facility at that time, by noon the following weekday. The facsimile or email shall be addressed to the Regional Water Board, Land Disposal Unit, and include the name of the staff person assigned to the facility.

R. A closure report for each construction season of closure activities and a full closure CQA report once final closure is achieved shall be prepared and certified by the CQA Officer and submitted, under penalty of perjury, to the Regional Water Board and other appropriate agencies in accordance with CCR Title 27, sections 20324, subdivision (c); 20324, subdivision (d); and 21880. The reports, at a minimum, shall include the certificate of closure; daily summary reports; material acceptance reports; final CQA documentation; laboratory testing results; field testing results; and an as-built topographic map of the capped area (for each construction season then for the completed project), prepared at a scale of one- inch to 100 feet, with a contour interval of two feet.

S. By January 2023, and at least every five years thereafter, the Discharger shall produce and submit to the Regional Water Board an iso-settlement map accurately depicting the estimated total change in elevation of the final cover's low-hydraulic-conductivity layer. If full closure has not been achieved by January 2023, the iso-settlement map may include just the portion of the landfill that has had the final cap placed. For each portion of the landfill, this map shall show the total lowering of the surface elevation of the final cover, relative to the baseline topographic map to be submitted in the Closure Report and shall indicate all areas where visually noticeable differential settlement may have been obscured by grading operations. The map shall be drawn to the same scale and contour interval as the topographic map in the Closure Report, but showing the current topography of the final cover, and featuring overprinted isopleths indicating the total settlement to date. Land surveying to

a one-foot contour interval rather than aerial surveying may be substituted to produce the iso-settlement map.

T. Each winter or spring when ponding is most likely to be present, the Discharger shall inspect the closed portions of the cap for ponding and then identify/outline and/or survey the perimeter of the ponded areas so that they can be repaired during drier conditions. The Discharger shall also note any areas of differential settlement that warrant future observation. After repairs are made during drier weather, the Discharger shall survey the revised surface of the repair. The Discharger shall outline the repaired areas on the initial as-built drawings or last iso settlement survey map and show the updated contours. Approximate locations of areas that have been identified for future observation shall also be noted. If no areas of settling are found, state so in the report. This information shall be included in the Annual Monitoring Report as well as each five-year iteration of the iso-settlement map. The map shall show all areas where differential settlement has been noted since the previous map submittal and shall highlight areas of repeated or severe differential settlement and repairs. Such notation and delineation shall be made by, or under the supervision of, a California registered professional civil engineer or California registered professional civil engineer or registered geologist.

U. All activities covered by this Order must comply with local, State, and Federal law. Prior to any construction, the Discharger shall obtain any and all permits required under federal, state, or local laws.

V. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under applicable State law.

W. Deliverable Reports, Plans, and Technical Information:

1. Industrial General Permit SWPPP Annual and Five-Year Reviews.

(a) The SWPPP should be reviewed annually and updated if needed. The review should include a review of all onsite operations to identify any changes in locations, activities, and waste discharges. If no changes are needed, the Discharger may so advise Regional Water Board staff rather than submitting a new copy of the unchanged SWPPP. However whether or not changes are made, the Discharger must annually provide a statement stamped by a registered professional that the current drainage features (collection, conveyance, containment, treatment, disposal, etc.), at the time of SWPPP preparation/review, meet the requirements of CCR Title 27, and either reference past calculations for the drainages in place, provide new

calculations, or provide amended calculations for those drainage structures (if any) that have been changed in the past year.

(b) Once every five years beginning in 2023, the Discharger must provide a statement stamped by a registered professional verifying sizing of any drainages and drainage structures that have been installed over the previous five years.

(c) The annual report is due by February 15 of each year. The five-year review is due by February 15 of each five-year reporting period. The first report under this order will be due on or before February 15, 2023.

2. Project Specific Construction General Permit SWPPP.

   (a) The SWPPP may be submitted by the contractor or by the Discharger.

   (b) The SWPPP should be submitted at least 60 days prior to start of any new landfill or closure construction activities

3. Leachate Management Plan Update. Annually, by February 15, or in advance of new cell construction.

4. Financial Assurance Assessment and Update:

   (a) Due annually by February 15.

   (b) Five-year update due by June 15, 2023, June 15, 2028, and every 5 years thereafter.

5. Spill Contingency Plan Updates.

   (a) Due annually, by February 15, as needed. If no changes are needed the Discharger may advise Regional Water Board staff rather than providing a new copy of the unchanged plan.

6. Design Reports for New Construction.

   (a) Due six months prior to the start of construction.

7. Blasting Plan.

   (a) This Plan is a required CEQA mitigation associated with potential water quality impacts.

   (b) Due at least 60 days before construction requiring blasting.

8. Field assessment and verification of geologic and hydrologic site features, and kinematic stability analysis for cut slopes.

   (a) Field assessment and verification for assumptions made regarding geologic composition and integrity, springs, seeps, and other water features (plan, schedule, contingency plan). Rock slope stability evaluations and kinematic analysis of steeper cut slopes (e.g., 2:1 or 2.5:1), prior to placement of bottom liner, as previous site evaluations

have indicated near surface instability in other areas of the site associated with steeper slopes. Provisions for the field portion of this effort may be incorporated into the CQA plan as appropriate; the Discharger should submit a copy of the revised, amended, or appended plans.

(b) Perform concurrently with excavation in the REA, Phase III, and Phase IV areas

(c) Due six months prior to the start of construction.

9. Liner projection, inspection, and awareness training plan (Operational Quality Assurance Plan).

(a) Develop (or provide if already available) a training module for facility operators that emphasizes the importance of operating heavy equipment, placing waste, and performing any other activities on the lined portions of the facility in a manner that minimizes the risk of damage to the liner.

(b) In addition, develop (or provide if already available) a plan to inspect the lined areas regularly to identify any evidence of damage or threatened damage, and to regularly or periodically observe facility operator performance in conducting activities on the lined portions of the facility.

(c) Due annually by May 15.

10. Preferential Pathway Plan.

(a) To ensure that cut and prepared slopes will provide for unimpeded leachate drainage, a preferential leachate pathway plan with step-by-step instructions for construction field staff must be prepared prior to the start of construction.

(b) Due six months prior to any construction of any phase involving preferential pathway. The plan may be included with the Design Report for construction.

11. Winterization Plan.

(a) The winterization plan should describe measures planned to prepare the facility and/or other active areas on the property, and to conduct operations during the wet season.

(b) Due annually by August 15.

12. Soil Availability Plan for following year soil needs.

(a) This plan may be submitted with the site winterization plan and must demonstrate that sufficient soil is secured onsite or available from an

offsite provider for next year's proposed activities, uses, and needs (intermediate cover, erosion control, vegetative cover, roads, operations layers, foundation, etc.).

(b) Due annually by August 15.

13. Confirmation of Implementation of Winterization Plan.

(a) This information must confirm that measures described in the winterization plan have been installed/implemented as proposed.

(b) Due annually by December 15.

14. Leachate Pond Inspection Report.

(a) Leachate ponds LP1 and LP2 shall be fully inspected annually, and integrity tested, as needed, in accordance with the applicable provisions of CCR Title 27. Inspection reports or testing results shall be submitted annually and include a complete report of findings and provisions for completion of all necessary maintenance, repairs, and submittal of CQA reports for repairs.

(b) Due annually by February 15.

15. Closure Construction Quality Assurance Report.

(a) As directed under this Order, the report shall be prepared and certified by the CQA Officer and must be submitted under penalty of perjury to the Regional Water Board and other appropriate agencies. The report, at a minimum, will include the certificate of closure; daily summary reports; material acceptance reports; final CQA documentation; laboratory testing results; field testing results; and an as-built topographic map of the capped area, prepared at a scale of one-inch to 100 feet, with a contour interval of two feet.

(b) Due within 90 days of completion of closure construction.

X. Operation and Maintenance

The Discharger must maintain in good working order and operate as efficiently as possible any facility or control system installed by the discharger to achieve compliance with the WDRs.

Y. Change in Discharge

The Discharger must promptly report to the Regional Water Board any material change in the character, location, or volume of the discharge.

Z. Accidental Spills, Incident Reporting and Monitoring

1. The Discharger shall provide and comply with its Emergency Response Plan for any accidental spill or incident pursuant to CCR, Title 27, section

21132. The Discharger shall immediately report the incident of unintentional or accidental spills and diligently act to abate the effects of the discharge. Written confirmation of the incident is required within two weeks of the discharge. Emergency Response Plans shall be reviewed, updated, and submitted to the Regional Water Board by February 15, 2023, and every five years thereafter.

AA. Inspections.

1. The Discharger shall permit authorized staff of the State Water Resources Control Board and Regional Water Board entry upon premises in which an effluent or waste source is located or in which any required records are kept.
2. The Discharger shall permit authorized staff of the Regional Water Board entry upon premises in which an effluent or waste source is located or in which any required records are kept.
3. The Discharger shall permit authorized staff of the Regional Water Board access to copy any records required to be kept under terms and conditions of this Order.
4. The Discharger shall permit authorized staff of the Regional Water Board inspection of monitoring equipment or records.
5. The Discharger shall permit authorized staff of the Regional Water Board to sample any discharge.

BB. Noncompliance

In the event the discharger is unable to comply with any of the conditions of this Order due to (a) breakdown of waste management equipment; (b) accidents caused by human error or negligence; and/or (c) other causes such as acts of nature, during work day business hours the Discharger must notify the Executive Officer by telephone within 2 hours of discovery of the incident (and by the following work day morning if after work day business hours) and confirm this notification in writing within two weeks of the telephone notification. The written notification shall include pertinent information explaining reasons for the noncompliance and shall indicate the steps taken to correct the problem and the dates thereof, and the steps being taken to prevent the problem from recurring.

CC. Change in Ownership

In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the Discharger must notify the succeeding owner or operator of the existence of this Order and the

status of the Discharger's annual fee account by letter, a copy of which must be forwarded to the Regional Water Board:

DD. Vested Rights

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Dischargers from liability under Federal, State, or local laws, nor create a vested right for the Discharger to continue the waste discharge.

EE. Revision of Requirements

The Regional Water Board will review this Order periodically and may revise its requirements when necessary.

FF. Annual Fees

Authorization under this Order is conditioned upon payment of annual fees as required and when due, pursuant to Water Code section 13260.

CERTIFICATION

I, Matthias St. John, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on June 9, 2022

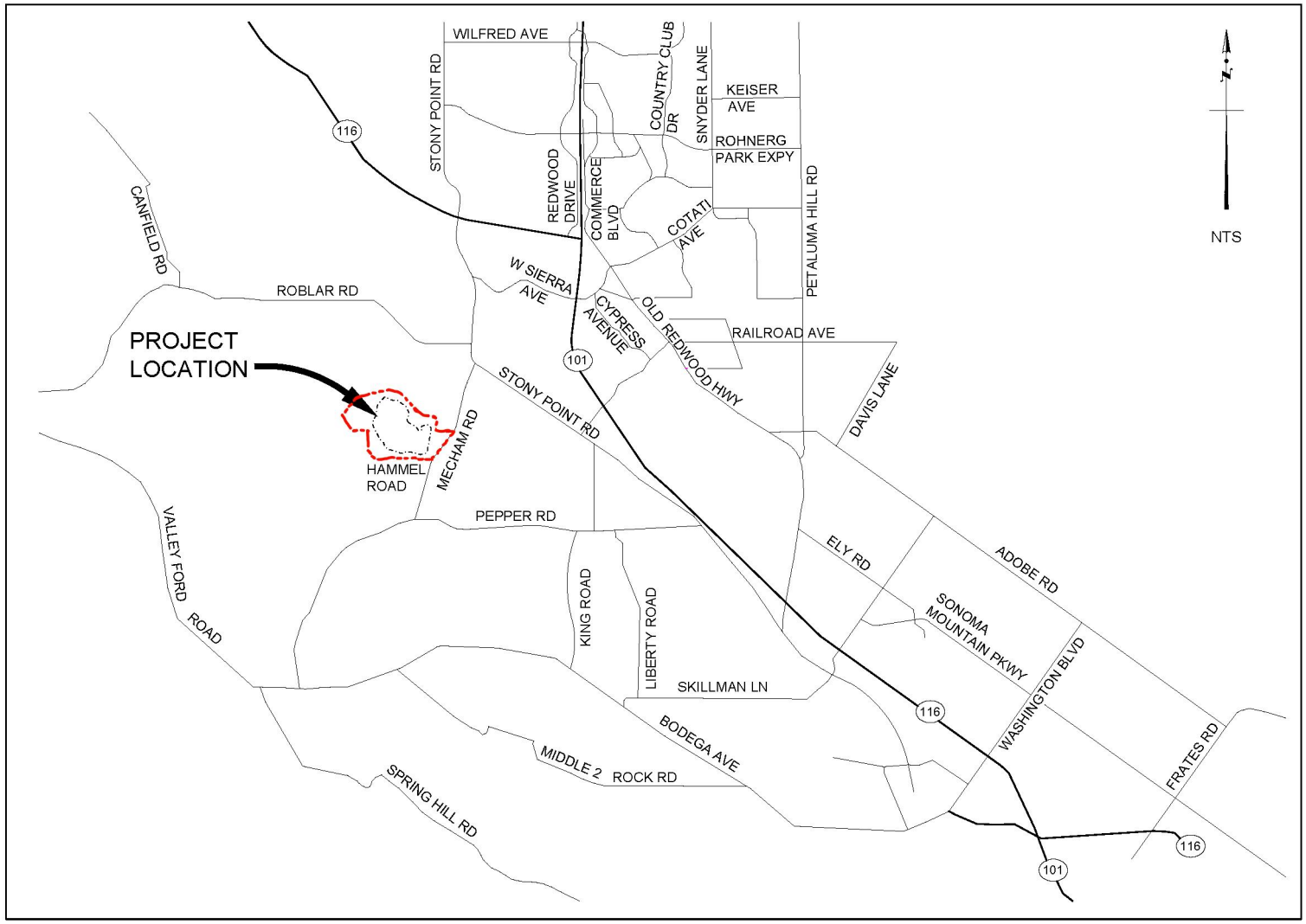
Digitally signed by Matthias St John
Date: 2022.06.22 09:07:07 -07'00'

Matthias St. John

Executive Officer

(22_0010_Central SWDS_WDR w Attachment A-J)

ATTACHMENT A DISPOSAL SITE VICINITY MAP



TETRA TECH
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Diamond Bar, CA 91765
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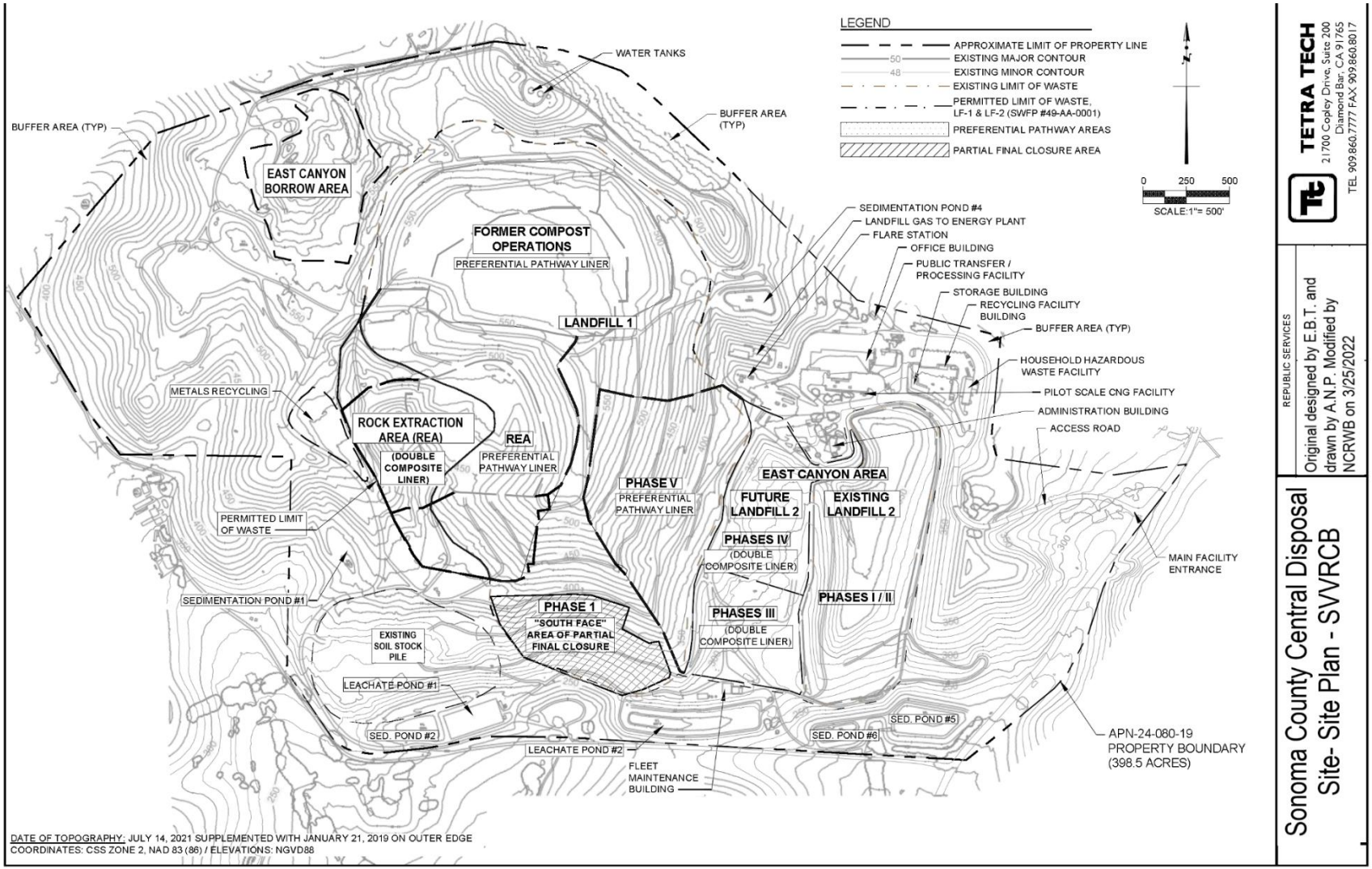
REPUBLIC SERVICES

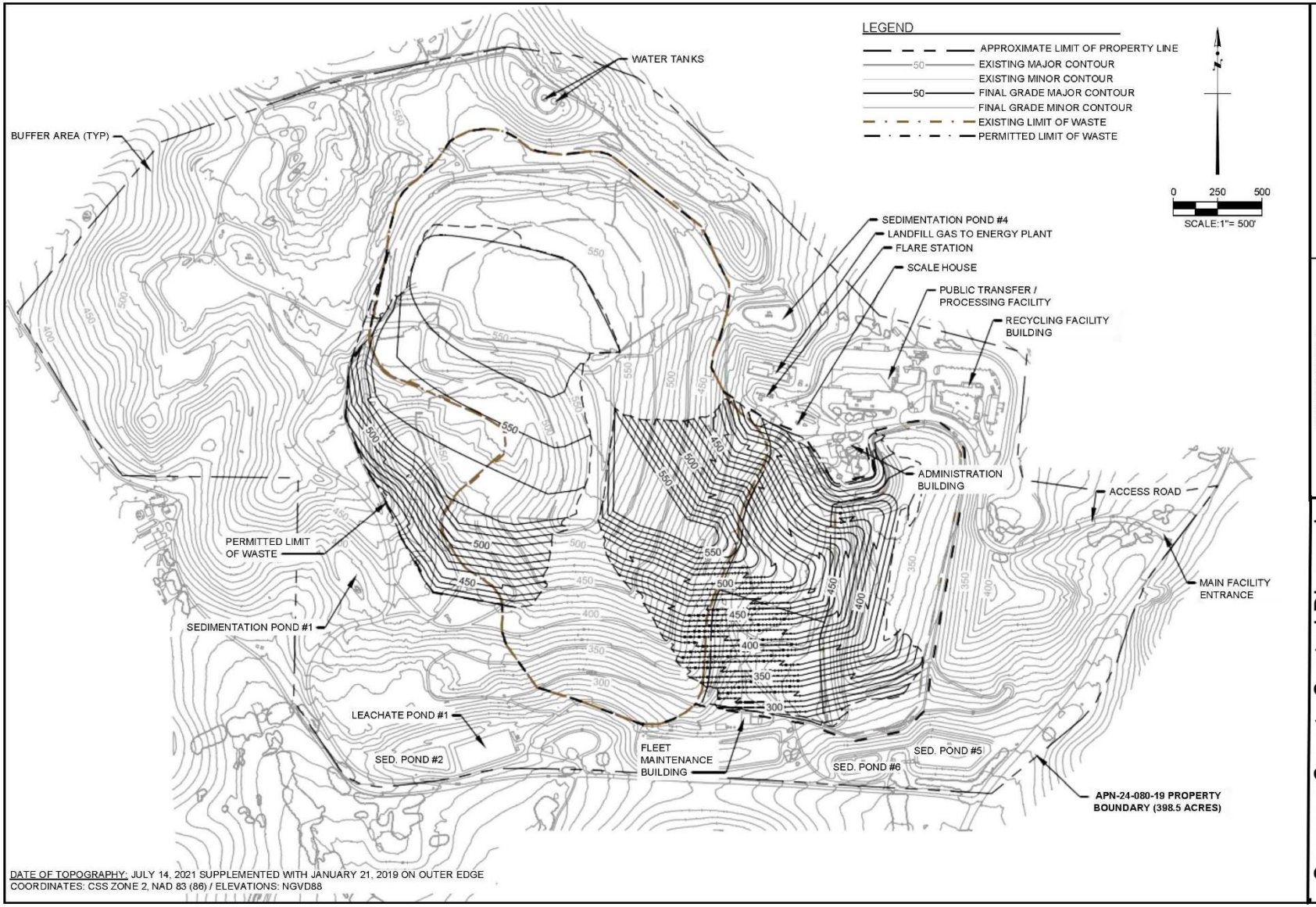
Original design by E.B.T and drawn by A.N.P. Modified by NCRWB on 3/25/2022

Sonoma County Central Disposal Site Vicinity Map

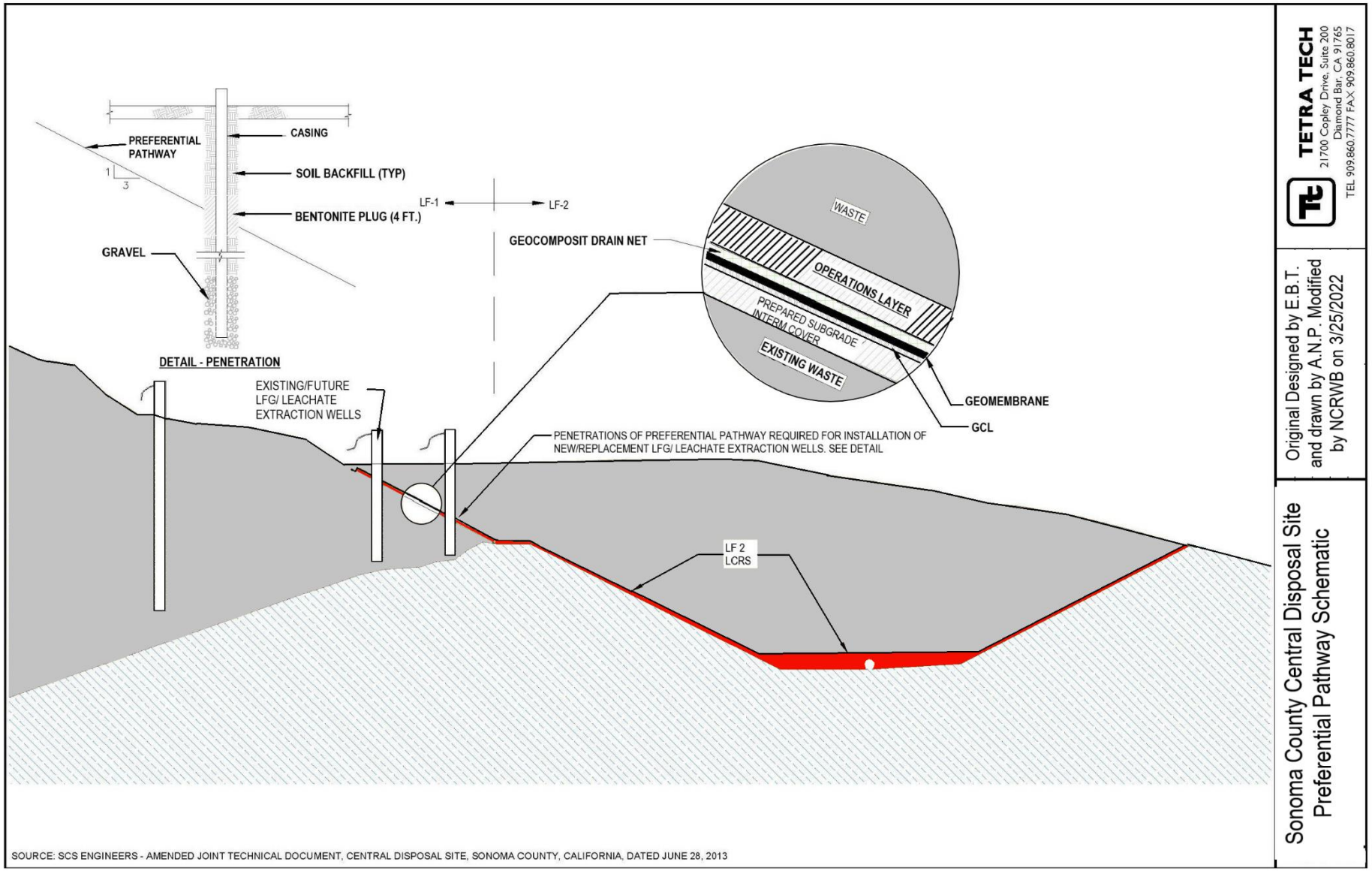
ATTACHMENT B SITE PLAN



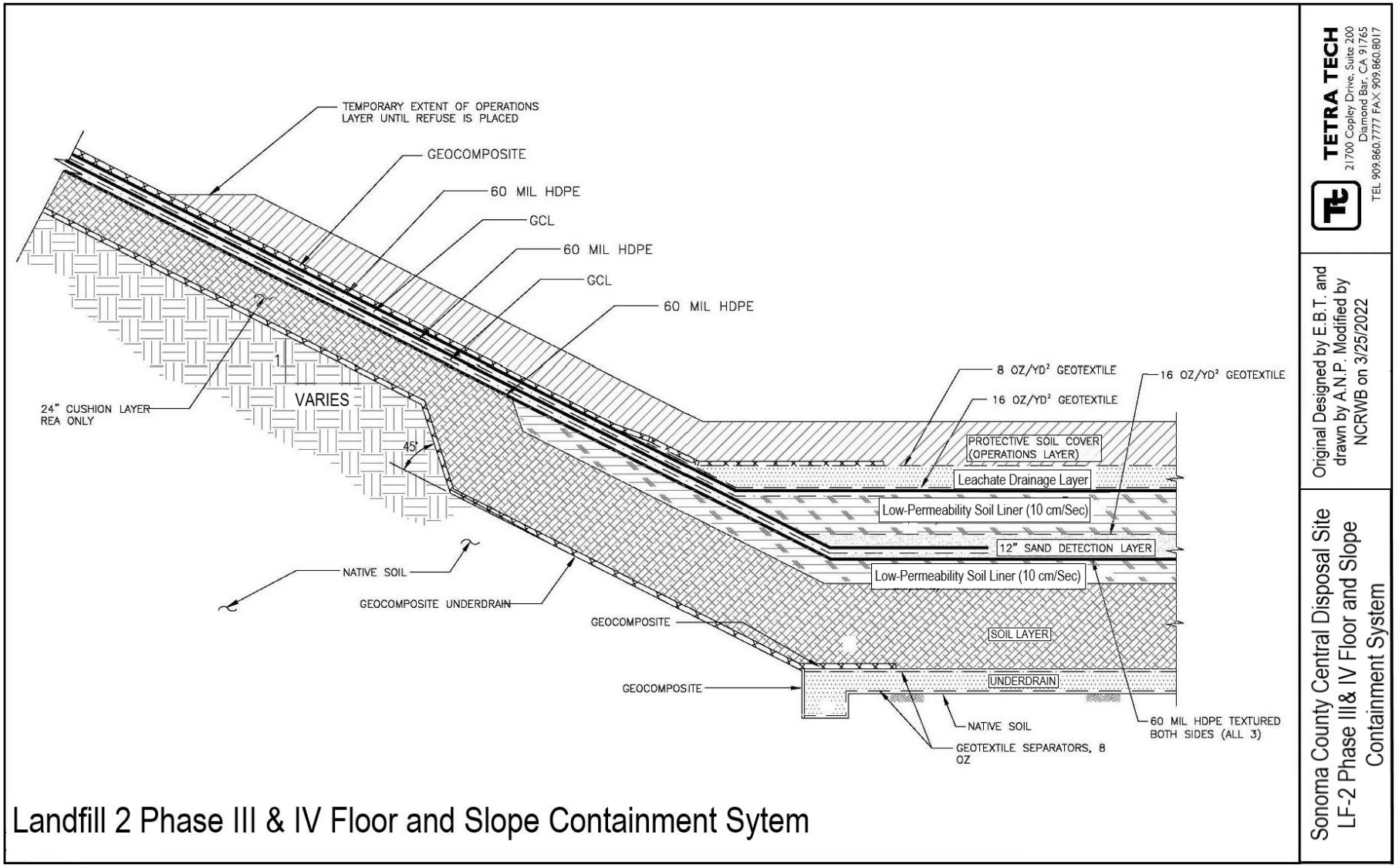
ATTACHMENT C FINAL GRADING PLAN



ATTACHMENT D PREFERENTIAL PATHWAY SCHEMATIC

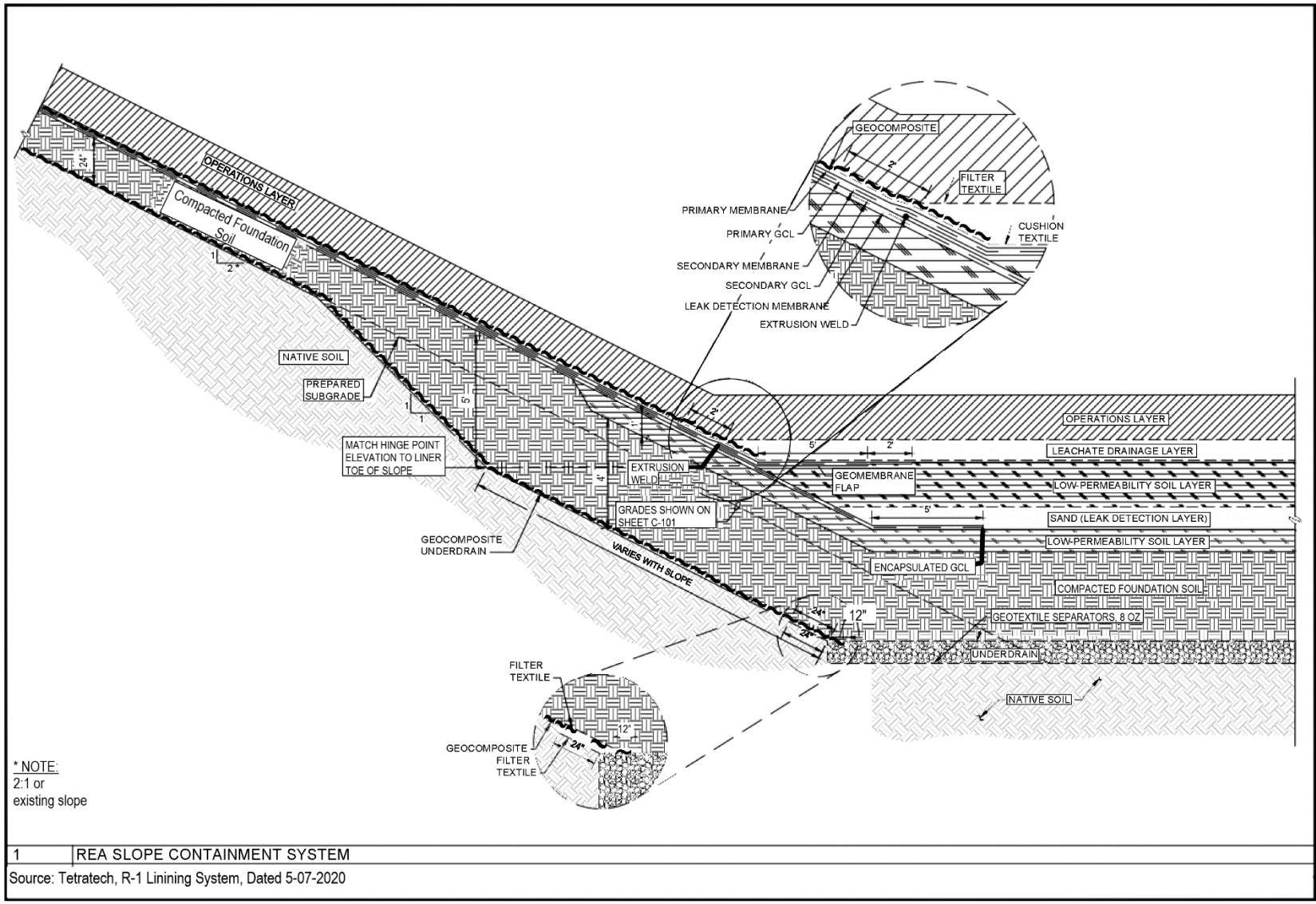


ATTACHMENT E LF-2 PHASE III & IV FLOOR AND SLOPE CONTAINMENT SYSTEM



Source: SCS Engineers - Amended joint technical document, Central Disposal Site, Sonoma County, CA. Dated June 28, 2013

ATTACHMENT F REA SLOPE AND FLOOR LINER SYSTEM DETAILS



1 REA SLOPE CONTAINMENT SYSTEM

Source: Tetratech, R-1 Linining System, Dated 5-07-2020

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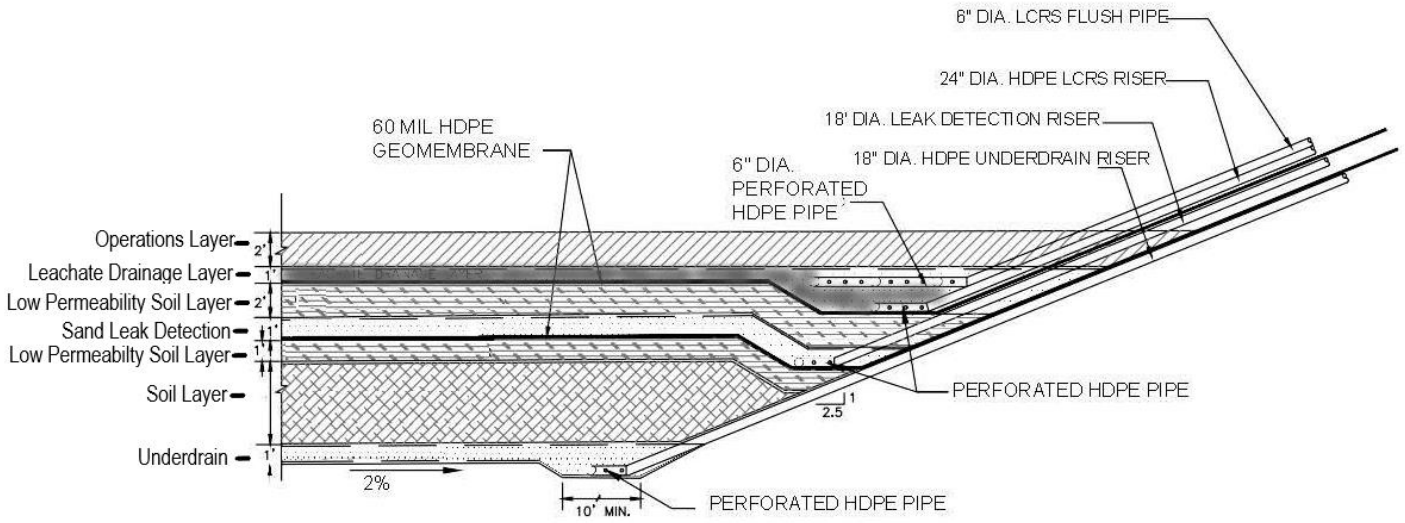
Original Designed by E.B.T. and Drawn by A.N.P. Modified by NCRWB on 3/25/2022

Sonoma County Central Disposal Site
REA Slope and Floor Liner System Details

ATTACHMENT G DETAILED PHASE IV LCRS AND UNDERDRAIN SUMPS



Phase IV LCRS and Underground Sumps
Source SCS Engineers - Ameded Joint Technical Document, Central Disposal Site, Sonoma County, CA. Dated June 28, 2013

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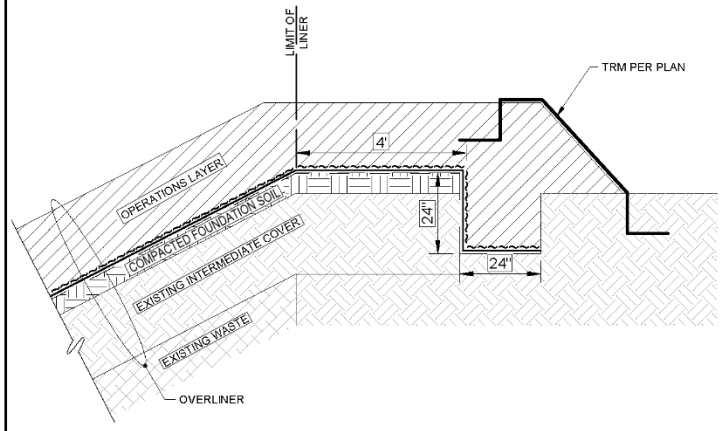
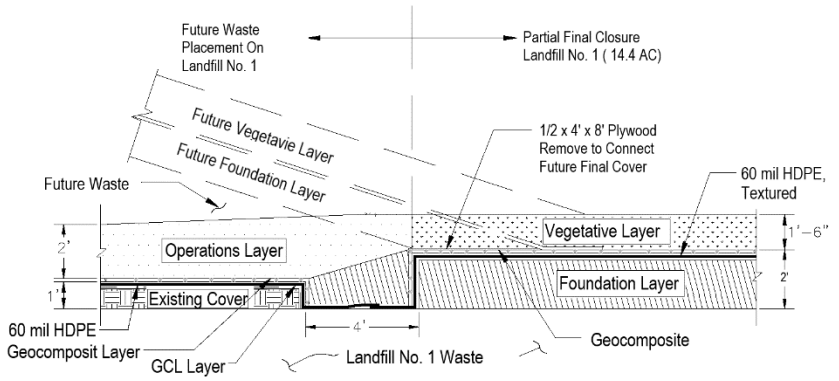
Original Designed by E.B.T. and Drawn by A.N.P. Modified by NCRWB on 3/25/2022

Sonoma County Central Disposal Site
Detailed Phase IV LCRS and Underdrain Sumps

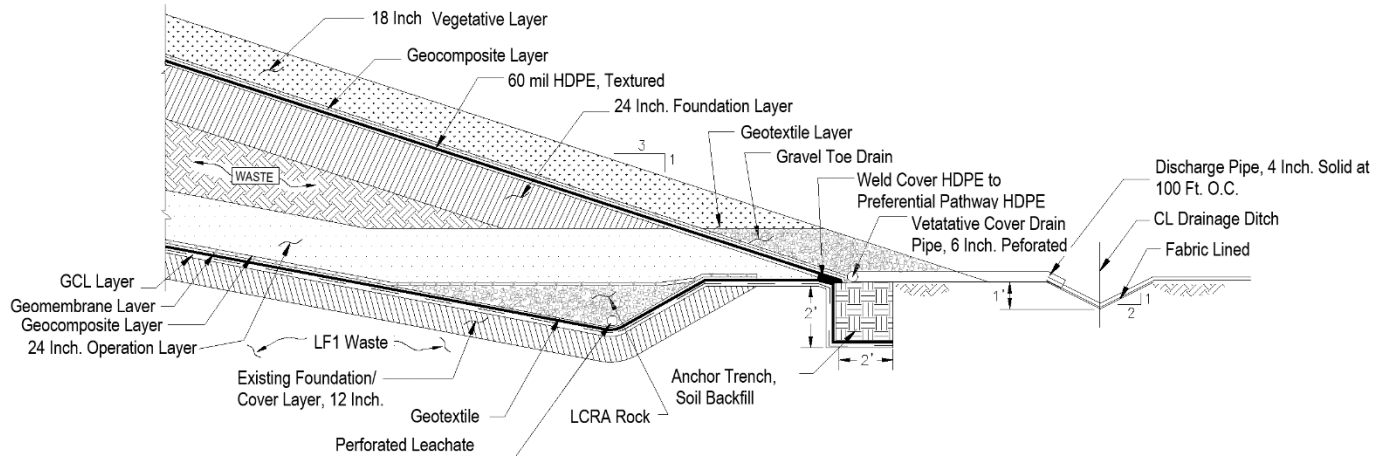
ATTACHMENT H FINAL COVERY SYSTEM PROFILES AND DETAILS



1 OVERLINER TERMINATION AT TOP OF SLOPE
NTS REFERENCE SHEET:



2 PARTIAL CLOSURE TO FUTURE FILL CONNECTION
NTS REFERENCE SHEET:



LF1 COVER AT TOE

SOURCE: SCS ENGINEERS - AMENDED JOINT TECHNICAL DOCUMENT, CENTRAL DISPOSAL SITE, SONOMA COUNTY, CALIFORNIA, DATED JUNE 28, 2013.
TETRATECH - PHASE 1 PARTIAL FINAL CLOSURE, DATED AUGUST 2017

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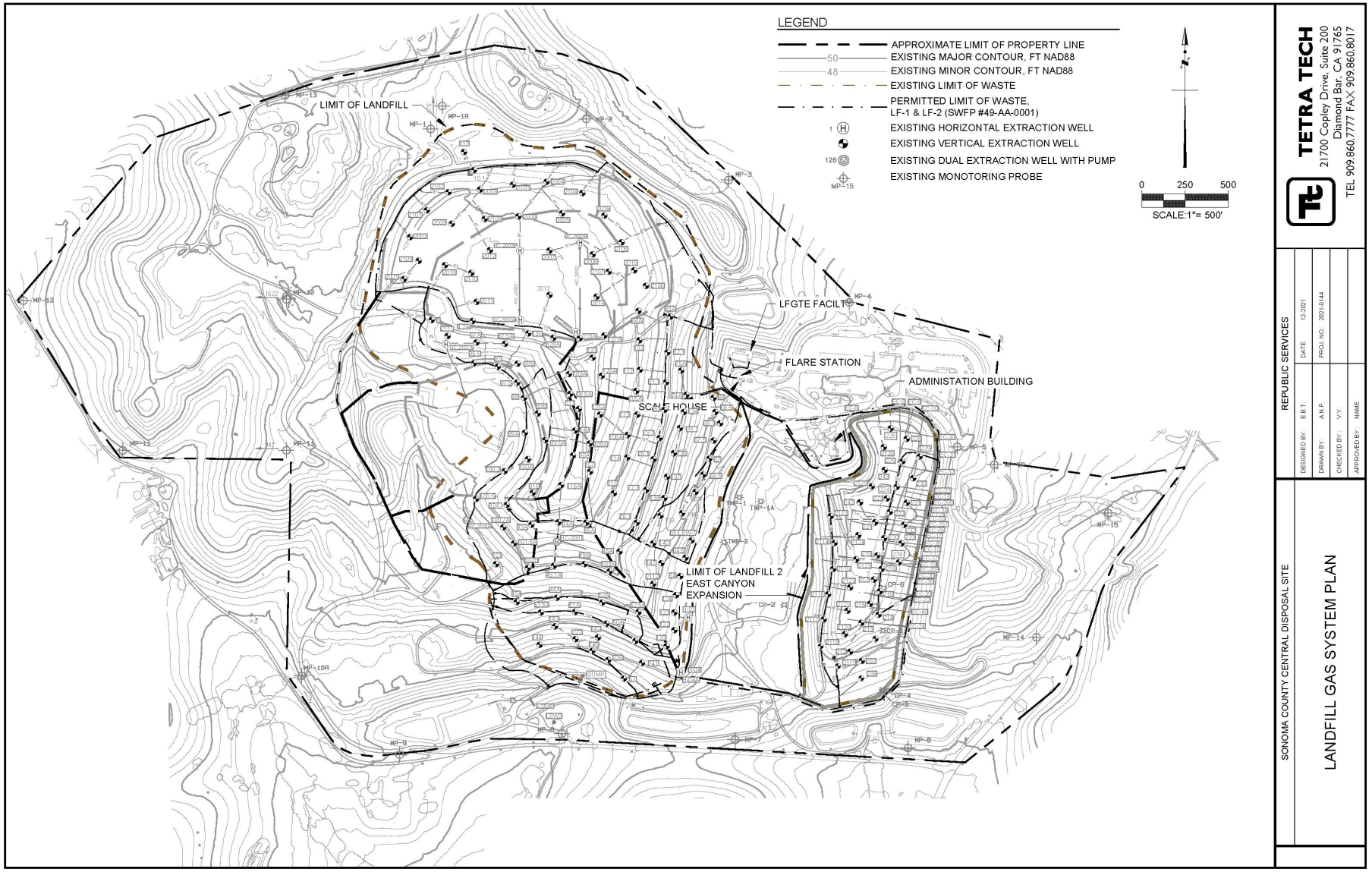
Original Designed by E.B.T. and Drawn by A.N.P. Modified by NCRWB on 3/25/2022

Sonoma County Central Disposal Site Final Cover System Profiles and Details

ATTACHMENT I LANDFILL GAS SYSTEM PLAN



ATTACHMENT J MONITORING WELL LOCATION MAP