CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MEETING OF MAY 13, 2021
VIDEO AND TELECONFERENCE ONLY

ITEM 6
Revised Waste Discharge Requirements for U.S. Marine Corps Logistics Base, Yermo Annex Industrial Wastewater Treatment and Recycling Facility, San Bernardino County

CHRONOLOGY	
February 8, 1996	Water Board adopted Waste Discharge Requirements (WDRs) and Monitoring and Reporting Program (MRP), Board Order No. 6-96-8, setting the requirements for construction and operation of the Marine Corps Logistics Base (MCLB), Yermo Annex, Industrial Wastewater Treatment and Recycling Facility (Facility).
September 9, 1999	Board Order No. 6-96-8A1 revised WDRs to revise limits for the reverse osmosis reject wastewater, allow for small increases in acidity and concentrations of oil and grease in the surface impoundments, and revise the treatment process to include an Ultrafiltration System.

BACKGROUND
The United States Marine Corps (USMC) is the owner of the land and operator of the Facility and is referred to as the Discharger. The Facility currently operates under Board Order No. 6-96-8, as amended under Board Order No. 6-96-8A1. The Facility consists of an industrial wastewater treatment plant (Treatment Plant) and five lined surface impoundments. The Treatment Plant processes industrial wastewater generated at MCLB, Yermo Annex to produce a high-quality reclaimed wastewater (recycled water) that can be reused for industrial service. Remaining wastewater that cannot be recycled is disposed of in one of the five lined surface impoundments. Facility operations have been modified over time to optimize treatment process while maintaining effluent limits to the surface impoundments and recycled water. The Water Board is rescinding Board Order No. 6-96-8 (and its amendment 6-96-8A1) and issuing these revised WDRs consistent with California Code of Regulations (CCR), title 27 and general order updates.

ISSUES
Should the Water Board adopt revised WDRs and associated MRP requirements consistent with California Code of Regulations, title 27 and general order updates for the Facility?

DISCUSSION

The Discharger has contacted the Water Board requesting that we revise the Board Order to outline the true wastewater treatment flow process. The Ultrafiltration system provides a better than expected treatment of the wastewater and makes many of the treatments systems included in the Board Order unnecessary. Furthermore, many of the treatments are too old to allow for procurement of parts once they break. Removal of the unnecessary treatment units from the treatment process allows for the Facility to operate more efficiently and conserve electrical power.

The Board Order is being revised to ensure complete compliance with CCR, title 27, particularly treatment processes and groundwater monitoring requirements and warrants general order updates, since the existing order has been active for over 20 years.

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 Lower Mojave River Valley Groundwater Basin is seen in the table below. Based on this designation, neither a GSA nor GSP are required at this time.

Priority	Groundwater Basin in Inyo County
Very Low	Lower Mojave River Valley Groundwater Basin (6-040)

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

PUBLIC OUTREACH/INPUT

The Tentative Order was distributed for public comment on March 3, 2021. Comments on the Tentative Order were received on March 4, 2021 from the Discharger; no other comments were received. Water Board staff's responses to the comments are included as Enclosure 2.

RECOMMENDATION

Adoption of Order as proposed.

ENCLOSURE	ITEM	BATES NUMBER
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ENCLOSURE 1

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

BOARD ORDER NO. R6V-2021-PROPOSED
WDID NO. 6B369509001

REVISED WASTE DISCHARGE REQUIREMENTS

FOR

U.S. MARINE CORPS LOGISTICS BASE, YERMO ANNEX
INDUSTRIAL WASTEWATER TREATMENT AND RECYCLING FACILITY

San Bernardino County

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

1. Discharger

   A revised Report of Waste Discharge (ROWD) was submitted to the Water Board by the United States Marine Corps (USMC) on October 28, 2019. The revised ROWD was submitted to support updates made to the treatment processes used at the Marine Corps Logistics Base (MCLB), Yermo Annex, Industrial Wastewater Treatment and Recycling Facility (Facility). The USMC owns the land underlying the Facility. For the purpose of this Order, the USMC is referred to as the "Discharger."

2. Facility Location

   The Facility is located approximately 1.5 miles southwest of the community of Yermo in Section 10, Township 9N, Range 1E, San Bernardino Baseline and Meridian and is shown on Attachment A.

3. Facility

   The Facility consists of an industrial wastewater treatment plant (Treatment Plant) and five lined industrial wastewater evaporation ponds (surface impoundments) used for disposal of reverse osmosis (RO) reject wastewater. The purpose of the Treatment Plant at the Facility is to treat industrial wastewater generated at MCLB (primarily from the Marine Depot Maintenance Command [MDMC] building at the Yermo Annex) to produce a high-quality reclaimed wastewater (recycled water) that can be reused for industrial service.

4. Description of the Facility

   Water influent is fed to the Treatment Plant via a collection system. The portion of the collection system under the main portion of the MDMC is constructed of cast iron sewer pipe. Water from the MDMC is collected through the cast iron sewer pipe and emptied in a wet well then transferred to the Treatment Plant via an above ground, 2,400-foot long, 3-inch diameter steel pipe. Additionally, a polyvinyl chloride transfer pipe for condensation water from two stationary compressors and cooling tower water at Building 574 to the Treatment Plant is present. This double-walled polyvinyl

chloride pipeline is equipped with an electronic monitoring system to detect fluid leaks from the inner pipe. Discharger records show that the double-walled transfer pipe leak detection system stopped working in 2005 and transfer of wastewater via this pipe was ceased. Since then, condensation water from two stationary air compressors and cooling tower water is transferred via vacuum truck from Building 574 to the wet well weekly and/or as needed.

The Treatment Plant is located under a single canopy. Waste Discharge Requirements (WDR) Table 1 lists the major treatment and storage systems, the number of units within each system, and the capacities that were permitted under Board Order 6-96-8A1. A process flow diagram is shown in Attachment B.

WDR Table 1. Former Treatment Plant Components

Treatment Plant Systems	Number of Units in Parallel	Capacity of Each Unit
Influent Equalization Tanks with Oil – Water Separators	2	21,000 gallons
Oil – Water Separators	2	86,400 gpd
Ultra-Filtration System	1	10,000 gallons
Low Purity Water Storage	1	25,000 gallons
Granular Activated Carbon (GAC)	2	86,400 gpd
Heavy Metals Precipitation	1	86,400 gpd
Pressure Sand Filtration	2	86,400 gpd
Air Stripper	1	86,400 gpd
Ultraviolet Oxidation	1	86,400 gpd
RO Filtration	1	86,400 gpd
High Purity Water Storage Tank	1	10,000 gallons

gpd: gallons per day.

Since the Water Board adopted Board Order 6-96, the Discharger has modified the Treatment Plant over time to optimize treatment processes. These changes allow for the elimination of unnecessary treatment units from the treatment process and allow the Facility to operate more efficiently and conserve electrical power.

WDR Table 2 lists the current major treatment and storage systems, the number of units within each system, the capacity of each unit, and the average flow capabilities currently being used at the Treatment Plant. Each system is listed by the order in which it occurs in the overall treatment process. A process flow diagram for the current Treatment Plant configuration is shown in Attachment C.

WDR Table 2. Proposed Treatment Plant Components

Treatment Plant Systems	Number of Units in Parallel	Capacity of Each Unit
Influent Equalization Tanks (T-1 & T-2 ASTs)	2	21,000 gallons
Clarifiers	2[1]	3,200 gallons
Ultra-Filtration System	1	10,000 gallons
Low Purity Water Storage (T-15, AST)	1	25,000 gallons
RO Filtration	1	86,400 gpd
High Purity Water Storage Tank (T-16, AST)	1	10,000 gallons

[1]Can operate in parallel or series.
AST: aboveground storage tank.

The Treatment Plant is also equipped with a secondary containment system surrounding the treatment components. Liquid spills flow to one of seven concrete-lined sumps that are part of the secondary containment system. The spilled liquids are automatically returned to the influent waste stream for treatment.

The Treatment Plant generates an annual average of 20,000 gallons per day (gpd) of recycled water. Total dissolved solids (TDS) concentrations in the recycled water range from 50 to 500 milligrams per liter (mg/L). The Facility generates an annual average of 5,000 gpd of RO reject wastewater, which is discharged to the lined surface impoundments for evaporation. TDS concentrations in the RO reject wastewater range from 2,500 to 15,000 mg/L.

5. Plant Monitoring and Bypass Prevention Program

The Treatment Plant includes system redundancy in the event of either equipment failure or the need for maintenance on individual systems/units. The internal piping system for the Treatment Plant allows for manual bypass of wastewater around individual treatment systems/units, but not the entire plant.

The Bypass Prevention Program ensures that plant effluents are not discharged in violation of applicable effluent limits. The Discharger will take appropriate actions to stop effluent flows from the plant under an adverse plant condition that may cause a violation of applicable effluent limits. An adverse condition includes a condition where any of the systems or combinations of systems are inoperable or not properly treating wastewater as designed.

6. Reasons for Action

Revised WDRs are being issued to reflect current operation and treatment processes, establish allowable uses of recycled water, and for general updates to

the WDR and Monitoring and Reporting Program (MRP) to reflect current site conditions.

7. Order History

On December 6, 1995, the Discharger originally submitted an ROWD for the Facility. The Water Board adopted WDRs for the Facility on February 8, 1996, (Board Order No. 6-96-8) to regulate the discharge of RO reject wastewater to lined surface impoundments at the Facility. The WDRs were amended (Board Order No. 6-96-8A1) on September 9, 1999 to:

a. Revise the limits for the RO reject wastewater;

b. Allow for small increases in acidity (1.5 pH units) and concentrations of oil and grease (40 mg/L); and,

c. Revise the treatment process to include the UF system.

8. Detected Release to Groundwater

Groundwater sampling conducted in the late 1980s revealed that the groundwater at the Yermo Annex is contaminated with solvents from separate activities within the Yermo Annex. Hazardous constituents in the groundwater from nearby source areas are currently being investigated for remediation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

The Discharger is currently implementing a selected remedy for addressing contaminants in soil and groundwater under the CERCLA program at MCLB Barstow. Contaminants consist primarily of the chlorinated solvents trichloroethylene (TCE) and perchloroethylene (PCE, [see Finding 14]). Currently, the measured concentrations of PCE and TCE underneath the Facility are below their respective maximum contaminant levels (MCLs, both set at 5.0 micrograms per Liter [µg/L]). The origin of these contaminants is historic releases of solvent wastewater at the Yermo Annex prior to construction of the Facility. Major historic releases occurred from a broken industrial sewer and a subsurface percolation system associated with CERCLA Areas of Concerns (CAOCs) 15/17 (former industrial wastewater evaporation ponds and dry well) and 16 (Building 573), with additional releases from CAOCs 26 (Building 533 waste disposal area) and 35 (former Class III landfill). Solvent wastewater subsequently migrated and impacted the groundwater underlying the surface impoundments.

The selected remedies are described in a Record of Decision (ROD) titled *Marine Corps Logistics Base, Barstow, California, Operable Units 1 and 2 ROD, April 1998*. Monitoring requirements are contained in a document titled *Marine Corps Logistics Base. Barstow, California, Operable Units 1 through 6 Long-Term Ground Water Monitoring Plan, July 1998*, as modified by the current approved *Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan), Long-Term*

Monitoring Program for Operable Units 1 through 7, February 2016. The ROD and Monitoring Plan may be periodically revised or amended, as needed.

9. Land Uses

Land in the vicinity of the Facility is owned by the Federal government (Department of Defense) and is part of the MCLB Barstow, Yermo Annex. Land use at and surrounding the Facility is industrial (military). The land uses outside of Yermo Annex, MCLB Barstow are designated as rural, agricultural, recreational, and rural-urban.

10. Site Topography

The natural land surface slope at the Facility is less than 1 percent towards the south, and the elevation above mean sea level (msl) is approximately 1,950 feet.

11. Climate

The area typically has hot summers and mild winters. Temperature averages range from 40 degrees Fahrenheit (F) in the winter to over 110 degrees F in the summer. The average annual precipitation in the vicinity of the Facility is approximately five inches per year. The evaporation rate is approximately 79 inches annually. Winds are primarily from the west.

12. Site Geology

The Facility is in the Mojave Desert geomorphic province of California. Elephant Mountain, located immediately west of Yermo Annex, consists of Mesozoic-age metavolcanic rocks with “indurated siltstone, sandstone, and conglomerate locally present in minor amounts” as defined by the United States Geological Survey. Per the *Record of Decision, Operable Unit 7, MCLB Barstow, California*, October 2014, bedrock underlying the Facility is encountered at approximately 600 feet below ground surface (bgs). The local basin is filled by a sequence of Quaternary-age alluvial deposits derived from the Mojave River. The ground surface is mantled by windblown sand deposits and younger alluvial deposits.

The geologic structure in the vicinity of the Facility is characterized by a series of subparallel faults and fault zones trending northwest. The Facility vicinity is bounded by the Harper Lake and Waterman faults to the southwest and the Calico and Manix faults to the north and northwest, respectively. These faults are located more than one mile from the surface impoundments.

13. Site Hydrology and Hydrogeology

The Facility is located within the Lower Mojave Hydrologic Area (No. 628.50) of the Mojave Hydrologic Unit (No. 628.00) and is approximately 1 mile north of the Mojave

River. The Facility is not within a 100-year floodplain.

The Facility overlies the Lower Mojave River Valley Groundwater Basin (No. 6-40). Two hydraulically connected aquifers are within the groundwater basin, the Floodplain Aquifer and the Regional Aquifer. The Floodplain Aquifer is composed of past and current Mojave River deposits. The surrounding and underlying Regional Aquifer is generally composed of unconsolidated alluvial fan deposits from the surrounding mountains. The Facility is located above the Floodplain Aquifer. Depth to groundwater beneath the Facility is approximately 185 to 190 feet below ground surface. The groundwater gradient is approximately 0.001 feet per foot towards the southeast.

14. Groundwater Quality

The remedial actions currently being conducted at MCLB Barstow, Yermo Annex under the CERCLA program, as described in Finding 8, has been successful in cleaning up solvent concentrations (primarily PCE and TCE) underneath the Facility as shown below in WDR Table 3. Selected constituents are also presented on the table for the Facility's monitoring wells.

WDR Table 3. Selected Groundwater Quality Results

Constituent	Units	YIMW-2	YIMW-4	YIMW-6	YIMW-8	MCLs
PCE	µg/L	<0.5	<0.5	<0.5	<0.5	5
TCE	µg/L	<0.5	<0.5	<0.5	<0.5	5
Chloride	mg/L	76	71	82	71	250[1]
Sulfate	mg/L	130	110	130	120	250[1]
TDS	mg/L	520	485	590	485	500[1]
pH	-	7.77	7.89	8.49	8.44	6.5-8.5[1]
Specific Conductance	µS/cm	803	716	802	749	900[1]

Results are from the Facility's November 2019 sampling event.
Well locations are shown on WDR Attachment D.
Well YIMW-8 is upgradient of the Facility; Wells YIMW-2, YIMW-4, and YIMW-6 are downgradient of the facility.
[1]Secondary MCL.
µg/L: micrograms per liter
µS/cm: microSiemens per centimeter

15. Water Sources

On-site production wells owned by the Discharger provide the water used at the Facility. Production wells used include supply wells YDW-5, YDW-6, and YDW-7. Groundwater from supply wells YDW-5 and YDW-6 receive wellhead treatment using granular activated carbon (GAC) to treat low levels of volatile organic compounds (VOCs). Supply well YDW-7 is located outside the impacted

groundwater noted in Finding 8 and does not require a similar wellhead treatment. Water samples are collected on a monthly basis from all three wells. Select water quality data from supply well YDW-7 are shown in WDR Table 4.

WDR Table 4. Groundwater Quality Results

Constituent	Units	YDW-7	MCLs
Arsenic	µg/L	<2	10
Chloride	mg/L	77	250[1]
Fluoride	mg/L	0.58	2
Hexavalent Chromium	µg/L	3.3	NE
Nitrate (as Nitrogen)	mg/L	1	10
Nitrite (as Nitrogen)	mg/L	<0.4	1
Sulfate	mg/L	92	250[1]
Total Dissolved Solids	mg/L	470	500[1]
pH	-	7.8	6.5-8.5[1]
Specific Conductance	µS/cm	740	900[1]

All results are from May 2018.
NE: an MCL has not been established for this constituent.
[1]Secondary MCL

16. Waste Management Unit Classification and Authorized Disposal Sites

The evaporation ponds (surface impoundments) are classified as Class II waste management units (WMUs) as defined in CCR, title 27, section 20250. The five surface impoundments are the only authorized disposal sites for the RO reject wastewater (Attachment E).

17. Waste Classification

The RO reject wastewater is classified as a designated waste as defined in California Water Code (CWC), section 13173 (b). Residual solids remaining after evaporation will contain inorganic salts and is also classified as a designated waste.

18. Description of Surface Impoundments

The Facility Class II surface impoundments (Evaporation Ponds 1 to 5) are designed to evaporate an annual average of 6,250 gpd of RO reject water. The cumulative area of 1.25 acres (0.25 acres per pond) has a capacity of 600,000 gallons. The locations of the surface impoundments are shown on Attachment E.

The upper liner of each surface impoundment is constructed of 10 inches of double-reinforced concrete coated with a 10-mil thick epoxy sealer to prevent deterioration caused by salt. The lower liner of each surface impoundment consists of a 36-mil thick synthetic liner. Between the concrete and the synthetic liner is a layer of gravel that is part of the leachate collection and removal system (LCRS).

A high Portland cement to water ratio was used to produce a cured concrete with a permeability of less than 1 x 10^{-7} centimeters per second (cps) during the construction of the surface impoundments. Synthetic rubber "leakage stops" were installed to control leakage through concrete joints. The sealed reinforced concrete liner was used instead of clay to allow a tractor with a front-end loader attachment to remove accumulated salts and prevent chemical/physical breakdown that may occur if clay was exposed to high TDS in wastewater.

19. Engineered Alternative to the Prescriptive Standard for Surface Impoundments

CCR, title 27, section 20080 (b), includes prescriptive standards for WMU construction and allows for engineered alternatives to such standards. Board Order No. 6-96-8 approved the engineered alternative described in Finding 18 in lieu of the prescriptive standard specified in CCR, title 27. The Facility design provides a higher level of protection against water quality impairment than the prescribed standard.

20. Action Leakage Rate

Water Board staff have calculated the respective action leakage rates (ALRs) for the surface impoundments at this Facility based on the design dimensions and design specifications of the surface impoundments and on a 1992 United States Environmental Protection Agency (USEPA) guidance document, *Action Leakage Rates for Leak Detection Systems, Supplemental Background Document for the Final Double Liners and Leak Detections Systems Rule for Hazardous Waste Landfills, Waste Piles, and Surface Impoundments*. The numerical ALRs are specified in MRP No. R6V-2021-Proposed to include requirements for monitoring and reporting leakage rates from the LCRS and the type of response actions the Discharger must take if applicable ALRs are exceeded.

21. Water Quality Protection Standard

The Water Quality Protection Standard (WQPS) consists of monitoring parameters, constituents of concern (COCs), concentration limits, monitoring points, and the point of compliance. The WQPS applies over the active life of the Facility, closure and post-closure maintenance period, and the compliance period. The constituents of concern (COCs), monitoring points, and point of compliance for groundwater and unsaturated zone monitoring are described in MRP No. R6V-2021-Proposed.

22. Recycled Water Exceptions

As stated in the CCR, title 22, section 60303, title 22 recycled water requirements do not apply to recycled water used onsite at a water recycling plant or wastewater treatment plant, provided access by the public to the area of onsite recycled water use is restricted. This exception applies because the Facility is located on military land (industrial in nature) and public access is restricted.

23. Disinfection Byproducts Controls

Disinfection is not required by this Board Order and no disinfection byproduct controls are required.

24. Compliance Period

The compliance period is the number of years equal to the active life of the Facility plus the closure period until the Water Board finds that the Facility no longer poses a threat to water quality. The compliance period is the minimum period during which the Discharger must conduct a water quality monitoring program subsequent to a release. The compliance period must begin anew each time the Discharger initiates an Evaluation Monitoring Program (EMP). If the discharger is engaged in a corrective action program at the scheduled end of the compliance period, the compliance period shall be extended until the Discharger can demonstrate that the Facility has been in continuous compliance with its WQPS for a period of three consecutive years as specified in CCR, title 27, section 20410 (c).

25. Detection Monitoring Program

Pursuant to CCR, title 27, sections 20385 and 20420, the Discharger has implemented a detection monitoring program (DMP) for the Facility. The DMP for the Facility consists of monitoring groundwater and the unsaturated zone for the presence of COCs. The DMP is specified in MRP No. R6V-2021-Proposed.

26. Evaluation Monitoring Program

An EMP may be required, pursuant to CCR, title 27, sections 20385 and 20420 (k)(6), whenever there is “measurably significant” evidence of a release from the Facility during a DMP or whenever there is significant physical evidence of a release from the Facility. The Discharger needs to delineate the nature and extent of the release and develop a suite of proposed corrective action measures within 90 days of establishing an EMP, unless the Discharger proposes and substantiates a longer time period for implementing the EMP. If the EMP confirms measurably significant evidence of a release, then the Discharger needs to submit an Engineering Feasibility Study for corrective action pursuant to CCR, title 27, section 20425 (b), and MRP No. R6V-2021-Proposed.

27. Corrective Action Program

A Corrective Action Program (CAP) has been in place since 1998 for contaminants in soil and groundwater associated with several CAOCs under the CERCLA program at MCLB Barstow, Yermo Annex, as noted in Finding 8. The existing and ongoing CAP is not in place as a result of any releases from the Facility. A separate CAP to remediate released wastes from the Facility is required pursuant to CCR, title 27,

sections 20385 and 20430, if results of an EMP confirm measurably significant evidence of a release from the Facility.

28. Known or Reasonably Foreseeable Release from the Surface Impoundments

The Discharger has submitted a corrective action estimate to address a known or reasonably foreseeable release, including a cost estimate of the total likely maximum cost of remediation for a known or reasonably foreseeable release for the five existing surface impoundments, pursuant to CCR, title 27, section 20380, subdivision (b). The analysis includes a proposed financial assurance mechanism to cover the estimated corrective action costs meeting the requirements of CCR, title 27, sections 22220 through 22222 and 22225 et seq. The Discharger needs to maintain a financial assurance instrument for corrective action of a known or reasonably foreseeable release from the surface impoundments.

29. Surface Impoundments Closure and Post-Closure Maintenance Plan

The Discharger has submitted a Closure and Post-Closure Maintenance Plan (CPCMP), which proposes that the surface impoundments will be clean-closed, in accordance with CCR, title 27, sections 20950 and 21090 (f). All residual waste materials in the surface impoundments will be removed and disposed of in an approved offsite waste disposal facility. Liner system material and underlying soil will be tested for contamination. Any material not classified as inert will be removed and disposed of at an approved disposal location.

30. Financial Assurance

The Discharger shall obtain and maintain Financial Assurance Instruments that comply with CCR, title 27, sections 22207, 22212, and 22220 et seq. The Facility is on land owned by the Federal Government (Department of Defense) and the federal government is a self-insured entity. As a federal entity, in lieu of using other Financial Assurance Instruments, the Discharger may submit a report on financial assurance for closure, post-closure and corrective action to the Water Board consistent with CCR, title 27, section 22250. The report shall include (1) a commitment by discharger to make a timely request for the funds needed to complete the closure and post-closure maintenance activities described in the most recently approved final closure and post-closure maintenance plans; (2) copies of initial closure and post-closure maintenance cost estimates and any amendments thereto; and (3) a commitment by the federal entity not to restructure the closure and post-closure funding in a manner that would interfere with timely completion of closure or post-closure maintenance activities. Every five years after submittal of the initial financial assurance report, or earlier, if requested by the Executive Officer, the Discharger shall submit a report that either validates the financial assurance instrument’s ongoing viability or proposes and substantiates any needed changes. The Discharger may combine the three components (Closure, Post-Closure, Corrective Action) of the instruments into one report to comply with the requirement.

31. Storm Water Management

The Facility's industrial operations require coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Dischargers Associated with Industrial Activities, NPDES No. CAS000001, Statewide Industrial General Permit, Order No. 2014-0057-DWQ, and as amended. The Facility is currently enrolled under the Statewide Industrial General Permit, and the Discharger has developed and is implementing a site-specific Storm Water Pollution Prevention Plan (SWPPP), dated September 2020. Storm water protection at the Facility is primarily accomplished through drainage control based on the following objectives: protection from run-on; minimize infiltration of precipitation into the waste; minimize exposure of pollutants to precipitation; manage run-off to minimize erosion and sedimentation; and minimize offsite migration of storm water. To achieve these objectives, the Discharger implements structural and non-structural Best Management Practices (BMPs), as described in the SWPPP, to mitigate potential pollution of storm water discharges and performs site compliance inspections to evaluate the effectiveness of the BMPs. The Discharger will continue to implement BMPs and perform inspections throughout the compliance period of the Facility.

32. Lahontan 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.

33. Receiving Waters

The receiving waters are the groundwaters of the Lower Mojave River Valley Groundwater Basin (Department of Water Resources, Groundwater Basin Number 6-40, Basin Plan, Plate 2B) and surface waters (minor surface waters and the Mojave River) of the Lower Mojave Hydrologic Area of the Mojave Hydrologic Unit (Hydrologic Unit No. 628.50; Basin Plan, Plate 1B).

34. Beneficial Groundwater Uses

The present and potential beneficial uses of the groundwaters of the Lower Mojave River Valley Groundwater Basin Number 6-40 as set forth and defined in the Basin Plan are:

1. Municipal and domestic supply (MUN);
2. Agricultural supply (AGR);
3. Industrial service supply (IND);
4. Freshwater replenishment (FRSH); and
5. Aquaculture (AQUA)

The present and potential beneficial uses of the Mojave River and of minor surface waters of the Lower Mojave Hydrologic Area No. 628.50, as set forth and defined in the Basin Plan are:

6. MUN;
7. AGR;
8. Groundwater recharge (GWR);
9. FRSH;
10. Water contact recreation (REC-1);
11. Noncontact water recreation (REC-2);
12. Commercial and sportfishing (COMM);
13. Warm freshwater habitat (WARM);
14. Cold freshwater habitat (COLD);
15. Wildlife habitat (WILD);
16. Rare, threatened, or endangered species (RARE);
17. Water quality enhancement (WQE); and
18. Flood peak attenuation / flood water storage (FLD)

35. Statistical and Non-Statistical Methods

Statistical and non-statistical analyses of monitoring data are necessary for the earliest possible detection of a release of waste from the Facility. CCR, title 27, section 20415 (e)(7), requires statistical data analyses to determine when there is "measurably significant" evidence of a release from the Facility. CCR, title 27, section 20415 (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 are listed in MRP No. R6V-2021-Proposed.

36. California Water Code, Section 13241 Considerations

Pursuant to CWC, section 13241, the requirements of this Board Order take into consideration the following factors.

1. *Past, present, and probable future beneficial uses of water* – This Board Order identifies existing groundwater quality and past, present, and future beneficial uses of water, as described in Findings 14 and 34, respectively. The proposed discharge will not adversely affect present or probable future beneficial uses of water because the RO reject wastewater is authorized only to lined surface impoundments, as specified in Finding 16, and this Board Order requires monitoring to detect any impacts to water quality.

2. *Environmental characteristics of the hydrographic unit under consideration, including the quality of the water available thereto* – The Lower Mojave River Valley is a closed groundwater basin and will experience increases in salt loading from natural and anthropogenic sources over time. Additionally, as noted in Finding 8, the groundwater has already been impacted by past activities associated with MCLB Barstow base activities. A remedy has been put in place under the CERCLA program to clean-up the groundwater to MCLs (drinking water standards) under and around the Facility footprint. This Board Order further requires controls to protect and maintain groundwater quality of the aquifer. It is in the best interest of the people of the state for the Discharger to meet effluent limitations contained in this Board Order.

3. *Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area* – Compliance with the requirements of this Board Order will not affect surface water and groundwater quality. The Water Board will use its existing authority and these WDRs to ensure protection of water quality from these discharges.

4. *Economic considerations* – Water quality objectives established in the Basin Plan for the surface waters of the Lower Mojave Hydrologic Area and groundwaters of the Lower Mojave River Valley Groundwater Basin do not subject the Discharger to economic disadvantage as compared to other similar discharges in the Region.

5. *The need for developing housing within the region* - The Discharger is not responsible for developing housing within the region. This Board Order provides for capacity to collect, store, and evaporate RO reject wastewater in lined surface impoundments within the property of Marine Corps Logistics Base, Barstow.

6. *The need to develop and use recycled water* – The Board Order authorizes the Discharger to treat industrial wastewater and establishes allowable uses of recycle reusable water as specified in this Board Order, Section III.D.

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

CWC, 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. To promote this policy, this Board Order prohibits discharge outside of authorized areas to minimize the threat to groundwater quality, requires monitoring to assess water quality and corrective actions to address impacts to water quality.

38. California Climate Change Mitigation Strategy

The Water Board adopted Resolution No. R6T-2019-0277 that addresses impacts of climate change. The four protection strategies stated in the resolution are addressed by this Board Order as stated below:

1. Protection of Wetlands, Floodplains and Headwaters - *Support external efforts and initiate necessary regulatory actions to facilitate improved meadow, wetland, and floodplain conditions and stream flows in headwater areas to achieve greater levels of watershed resiliency*.

   This Board Order has no effect on wetlands, floodplains, and headwaters protection.

2. Infrastructure Protection - *Support external efforts and initiate necessary regulatory actions to help build and maintain sustainably functioning infrastructure so built systems remain safe and reliable during extreme weather events including heat waves, extreme precipitation, severe droughts, and wildfires.*

   Infrastructure associated with this Facility is protected under a canopy that limits the effects of extreme weather events on the treatment components. This Board Order also eliminates excess, duplicative, and outdated treatment systems, thereby saving energy.

3. Protection of Groundwater Quality and Supply - *Support external efforts and initiate necessary regulatory actions to protect groundwater quality and improve groundwater recharge for purposes of protecting source water and building sustainability and drought resiliency.*

   The Facility recycles and reuses industrial water, limiting the amount of pumped groundwater needed to support MCLB Barstow base activities.

4. Protection of Headwater Forests and Promoting Fire Resiliency - *Support external efforts and initiate necessary regulatory actions to facilitate the pace and scale of projects implemented to build long-term resilience of headwater forests including those that (1) reduce vulnerability to catastrophic fires and pest infestations, and (2) support resilience in recovery efforts*.

   This Board Order has no effect on protecting headwater forests or promoting fire resiliency.

39. California Environmental Quality Act

The Water Board adopted a negative declaration (Resolution No. 6-96-6) for the project on February 8, 1996 by circulating NEPA documents in lieu of preparing its own Environmental Document. This WDR governs an existing facility and is therefore

exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resources Code, section 21000 et seq., in accordance with CCR, title 27, section 15301, Existing Facility (CEQA Exemptions).

40. Antidegradation Analysis

State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintenance of High Quality Waters in California") requires that whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality must be maintained. Any change in the existing high quality is allowed by that policy only if it has been demonstrated to the Regional Water Board that any change will be consistent with maximum benefit to the people of the state, 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.

Adequate liner systems, which comply with CCR, title 27 requirements, are required to prevent an unauthorized release to groundwater; these WDRs are expected to prevent further degradation of water quality as a result of waste discharges from the Facility. MRP No. R6V-2021-Proposed must be followed to ensure that waste discharges are contained within the surface impoundments at the Facility. There are no detected releases to groundwater from the Facility. As a result, degradation from the Facility is not expected.

41. Technical and Monitoring Reports

CWC, 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 discharged or discharging, or who proposed to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who had discharged, discharges, or is suspected of having discharged or discharging, or who proposed to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports."

Technical reports are necessary to assure compliance with this WDR. 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.

42. 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 CWC, section 13320, and CCR, title 23, sections 2050 et. seq. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the internet at http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided in hard copy or electronic format upon request.

43. Notification of Interested Parties

The Water Board notified the Discharger and interested agencies and persons of its intent to adopt a revised WDR for the authorized discharge of wastes to the surface impoundments and has provided them with an opportunity to submit their written views and recommendations.

44. Consideration of Public Comments

The Water Board, in a public meeting held on May 13, 2021, heard, and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to CWC, sections 13263 and 13267, that the Discharger must comply with the following requirements:

I. RECEIVING WATER LIMITATIONS

The discharge must not cause the existing water quality to be degraded nor shall the discharge cause a violation of any applicable water quality standard for receiving water.

A. Under no circumstances shall the discharge cause the presence of the following substances or conditions in groundwaters of the Lower Mojave River 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 MCL 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 – Radionuclides must not be present in concentrations that are deleterious to human, plant, animal, or aquatic life, or that result in the accumulation of radionuclides in the food chain to an extent that it presents a hazard to human, plant, animal, or aquatic life. Groundwater designated MUN must not contain concentrations of radionuclides in excess of limits specified in CCR, title 22, section 64442, Table 64442, and section 64443, Table 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.

B. Under no circumstances shall the discharge cause the presence of the following substances or conditions in surface waters of the Lower Mojave Hydrologic Area.

1. Ammonia – The neutral, un-ionized ammonia species (NH_3) is highly toxic to freshwater fish. The fraction of toxic NH_3 to total ammonia species (NH_4^+ + NH_3) is a function of temperature and pH. Tables 3-1 to 3-4 from the Basin Plan were derived from Unites States Environmental Protection Agency (USEPA) ammonia criteria for freshwater. Ammonia concentrations must not exceed the values listed for the corresponding conditions in these tables. For temperature and pH values not explicitly in these tables, the most conservative value neighboring the actual value may be used or criteria can be calculated from numerical formulas available on page 3-4 of the Basin Plan.

2. Bacteria – Waters must not contain concentrations of coliform organisms attributable to anthropogenic sources, including human and livestock wastes. The fecal coliform concentration during any 30-day period must not exceed a log mean of 20/100 mL, nor shall more than 10 percent of all samples collected during any 30-day period exceed 40/100 mL. The USEPA recommends that the log mean should ideally be based on a minimum of not less than five samples collected as evenly spaced as practicable during any

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

3. Biostimulatory Substances – Waters must not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses.

4. Chemical Constituents – Waters designated as MUN must not contain concentrations of chemical constituents in excess of the MCL or secondary MCL based upon drinking water standards specified in CCR, title 22, chapter 15, article 1, section 64400 et. seq. Waters designated as AGR must not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses (i.e., agricultural purposes). Waters must not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses.

5. Chlorine, Total Residual – For the protection of aquatic life, total chlorine residual must not exceed either a median value of 0.002 mg/L or a maximum value of 0.003 mg/L. Median values must be based on daily measurements taken within any six-month period.

6. Color – Waters must be free of coloration that causes nuisance or adversely affects the water for beneficial uses.

7. Dissolved Oxygen – The dissolved oxygen concentration, as percent saturation, must not be depressed by more than 10 percent, nor shall the minimum dissolved oxygen concentration be less than 80 percent of saturation. The minimum dissolved oxygen concentration must not be less than 4.0 mg/L as a daily minimum, 5.0 mg/L as a 7-day mean, and 6.5 mg/L as a 30-day mean.

8. Floating Materials – Waters must not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect the water for beneficial uses. For natural high-quality waters, the concentrations of floating material must not be altered to the extent that such alterations are discernible at the 10 percent significance level.

9. Oil and Grease – Waters must not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect the water for beneficial uses. For natural high-quality waters, the concentration of oils, greases, or other film or coat generating substances must not be altered.

10. Nondegradation of Aquatic Communities and Populations – All waters must be free from substances attributable to wastewater or other discharges that produce adverse physiological responses in humans, animals, or plants; or which lead to the presence of undesirable or nuisance aquatic life. All waters must be free from activities that would substantially impair the biological community as it naturally occurs due to physical, chemical and hydrologic processes.

11. pH – Changes in normal ambient pH levels must not exceed 0.5 pH units. The pH must not be depressed below 6.5 nor raised above 8.5. Compliance with the pH objective for these waters will be determined on a case-by-case basis.

12. Radioactivity – Radionuclides must not be present in concentrations which are deleterious to human, plant, animal, or aquatic life nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life. Waters designated as MUN must not contain concentrations of radionuclides in excess of the limits specified in CCR, title 22.

13. Sediment – The suspended sediment load and suspended sediment discharge rate of surface waters must not be altered in such a manner as to cause nuisance or adversely affect the water for beneficial uses.

14. Settleable Materials – Waters must not contain substances in concentrations that result in deposition of material that causes nuisance or that adversely affects the water for beneficial uses. For natural high-quality waters, the concentration of settleable materials must not be raised by more than 0.1 milliliter per liter.

15. Suspended Materials – Waters must not contain suspended materials in concentrations that cause nuisance or that adversely affect the water for beneficial uses. For natural high-quality waters, the concentration of total suspended materials must not be altered to the extent that such alterations are discernible at the 10 percent significance level.

16. Taste and Odor – Waters must not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish or other edible products of aquatic origin, that cause nuisance, or that adversely affect the water for beneficial uses. For naturally high-quality waters, the taste and odor must not be altered.

17. Temperature – The natural receiving water temperature of all waters must not be altered unless it can be demonstrated to the satisfaction of the Water Board that such an alteration in temperature does not adversely affect the water for beneficial uses. For waters designated WARM, water temperature

must not be altered by more than five degrees Fahrenheit (5° F) above or below the natural temperature. For waters designated COLD, the temperature must not be altered.

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

19. Turbidity – Waters must be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity must not exceed natural levels by more than 10 percent.

II. DISCHARGE SPECIFICATIONS

A. Flow Limitations

1. The influent flow of wastewater to the Treatment Plant must not exceed 0.05 million gallons per 24-hour period (mgd) (50,000 gpd).

2. The flowrate of RO reject wastewater to the surface impoundments (collectively) must not exceed a daily average of 0.00625 mgd (6,250 gpd) for any consecutive 12-month period.

3. The maximum volume of RO reject wastewater discharged to the surface impoundments (collectively) must not exceed 0.015 million gallons (15,000 gallons) on any given 24-hour period.

B. Limits for Surface Impoundment Wastewater

1. All RO reject wastewater discharged to the surface impoundments and the wastewater within each surface impoundment must not contain concentrations of parameters in excess of the limits specified in WDR Table 5.

2. In the event of a bypass from the collection, conveyance, or disposal facilities (per WDR, Section III.A.18), the Discharger must sample and analyze stored

effluents (effluent batch) for all constituents listed in WDR Table 5. The Discharger is prohibited from discharging the effluent batch to the authorized disposal locations except when laboratory results show that the limits in WDR Table 5 are not exceeded.

WDR Table 5. Limits on Surface Impoundment Wastewater

Parameters	Maximum[1]
Metals and Inorganics	
Antimony	6.0
Arsenic	3.75
Barium	75
Beryllium	0.563
Cadmium	0.75
Total Chromium	2.83
Cobalt	10
Copper	18.75
Lead	3.75
Mercury	0.15
Molybdenum	5
Nickel	10
Selenium	0.75
Silver	3.75
Thallium	1
Vanadium	10
Zinc	50
Fluoride	78

Parameters	Maximum[1]
VOCs	
Benzene	0.05
Toluene	0.05
Xylene	0.05
Ethylbenzene	0.05
Methylene Chloride (dichloromethane)	0.05
Tetrachloroethene (PCE)	0.05
1,1,1-Trichloroethane (1,1,1-TCA)	0.05
Trichloroethene (TCE)	0.05
SVOCs	
2-Methylphenol (o-Cresol)	0.3
3-Methylphenol (m-Cresol)	0.3
Naphthalene	0.5
Phenol	0.3

[1]Units are in milligrams per liter.

3. All wastewater discharged to the surface impoundments must not contain a pH of less than 4.5 or more than 9.0.

   All wastewater within each surface impoundment must not contain a pH less than 6.0. The maximum pH must not exceed a pH of 9.0 unless it is a result of biological processes within the surface impoundment. In such case, the pH within each surface impoundment must not exceed a pH of 11.5.

4. All wastewater discharged to the surface impoundments and the wastewaters within each surface impoundment must not exhibit characteristics of: (a) ignitability, (b) corrosivity, (c) reactivity or (d) toxicity as defined in 22 CCR, sections 66261.21, 66261.22, 66261.23, and 66261.24, respectively.

5. All wastewater discharged to the surface impoundments must not contain oil and grease concentrations greater than 40 mg/L. Analysis of oil and grease should be done by a California state-certified laboratory using USEPA

Method 1664 or equivalent method. An alternate method may be proposed and used if acceptable to the Executive Officer.

C. Limits for Sludge in Surface Impoundments

1. Any sludge (defined as waste with total settleable solids greater than 10,000 mg/L) within the surface impoundments must not contain concentrations (on a wet weight basis) of parameters in excess of the limits specified in WDR Table 6.

WDR Table 6. Limits for Sludge in Surface Impoundments

Parameters	Maximum[1]
Metals and Inorganics	
Antimony	112.5
Arsenic	37.5
Barium	750
Beryllium	5.63
Cadmium	7.5
Total Chromium	37.5
Cobalt	600
Copper	187.5
Lead	37.5
Mercury	1.5
Molybdenum	500
Nickel	150
Selenium	7.5
Silver	37.5
Thallium	52.4
Vanadium	180
Zinc	1,875
Fluoride	770

Parameters	Maximum[1]
VOCs	
Benzene	0.5
Toluene	0.5
Xylene	0.5
Ethylbenzene	0.5
Methylene Chloride (dichloromethane)	0.5
PCE	0.5
1,1,1-TCA	0.5
TCE	0.5
SVOCs	
2-Methylphenol (o-Cresol)	15
3-Methylphenol (m-Cresol)	15
Naphthalene	25
Phenol	15

[1]Units are in milligrams per kilogram.

2. Any sludge within the surface impoundments must not exhibit characteristics of: (a) ignitability, (b) corrosivity, (c) reactivity or (d) toxicity as defined in 22 CCR, sections 66261.21, 66261.22, 66261.23, and 66261.24, respectively.

III. REQUIREMENTS AND PROHIBITIONS

A. General

1. The discharge must not cause or threaten to cause a condition of pollution or nuisance as defined in CWC, section 13050.

2. There must be no discharge, bypass, or diversion of wastewater from the collection, conveyance, or disposal facilities to adjacent land areas or surface waters.

3. The Discharger may continue to transfer wastewater from Building 574 to the wet well noted in Finding 4 or influent waste stream of the Treatment Plant via vacuum truck while the dual-walled transfer pipe from Building 574 remains offline. BMPs must be employed during this transfer of wastewater to avoid spills. The Discharger may recommence use of the dual-walled transfer pipe provided a report is first submitted to the Water Board showing that the leak detection system for this pipeline is operable and working as designed and Water Board staff accepts the report.

4. The discharge of waste that causes exceedance of any narrative or numeric water quality objective contained in the Basin Plan is prohibited.

5. Where any applicable numeric or narrative water quality objective contained in the Basin Plan is already being violated, the discharge of waste that causes further degradation or pollution is prohibited.

6. The discharge of waste that could affect the quality of waters of the state that is not authorized by the State or Regional Water Board through waste discharge requirements, waiver of waste discharge requirements, National Pollutant Discharge Elimination System permit, cease and desist order, certification of water quality compliance pursuant to federal Clean Water Act section 401, or other appropriate regulatory mechanism is prohibited.

7. The discharge of pesticides to surface or groundwater is prohibited.

8. Surface drainage within the surface impoundments must be contained within the surface impoundments. No water contained within the surface impoundments is to be discharged outside the surface impoundments, unless it is to a location approved by the Water Board Executive Officer.

9. All facilities used for the collection, conveyance, or disposal of waste must 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.

10. The discharge of hazardous waste to the surface impoundments or generation of hazardous waste due to evaporation in the surface impoundments is prohibited.

11. The discharge of solid wastes, leachate, wastewater, or any other deleterious materials to groundwater is prohibited.

12. The discharge of waste, except to the authorized surface impoundments, is prohibited.

13. The discharge must not cause any increases in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil, or other geologic materials outside of the surface impoundments if such waste constituents could migrate to waters of the State – in either liquid or gaseous phase – and cause a condition of nuisance, degradation, contamination, or pollution.

14. The discharge of waste in a manner that does not maintain a five-foot separation between the waste and the seasonal high groundwater table is prohibited as specified in CCR, title 27, section 20240 (c).

15. The integrity of the active surface impoundments must be maintained throughout the life of the WMUs and must not be diminished as a result of maintenance operation or lack thereof.

16. 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.

17. The Discharger must maintain in good working order any control system or monitoring device installed to achieve compliance with this WDR.

18. The Discharger must at all times maintain adequate and viable financial assurances acceptable to the Water Board Executive Officer for costs associated with closure and for corrective action for all known or reasonably foreseeable releases.

19. The Discharger must comply with the bypass prevention program described herein. There must be no bypass or diversion of wastewater from the collection, conveyance, or disposal facility except when an adverse plant condition occurs (i.e., treatment system or combinations of systems are inoperable or not properly treating wastewater as designed). If a bypass or diversion of wastewater from the collection, conveyance, or disposal facility occurs, then:

    a. Wastewater must be temporarily stored in storage tanks at the plant.

    b. The stored effluents (effluent batch) must be sampled for all constituents listed in WDR Table 5.

    c. Sample results must be compared to applicable effluent limits.

    d. The Discharger is prohibited from discharging the effluent batch to the authorized disposal locations except when laboratory results show that the limits in WDR Table 5 are not exceeded. The effluent discharges to

authorized disposal locations must stop if operational monitoring indicates the discharges are not meeting effluent limits in WDR Table 5.

e. Flow of effluent streams from the Treatment Plant to the surface impoundments is only to be restarted once the problem with the system(s)/unit(s) has been corrected and the Treatment Plant effluent streams again meet applicable effluent limits

20. The Discharger must remove any waste from the surface impoundments if it contains concentrations of constituents in excess of discharge specifications noted in this order. Removal must be completed within 14 days of the receipt of laboratory results indicating that the limits have been exceeded. Removed waste must be stored, treated, and disposed in a legal manner.

21. The presence of increased moisture content in the unsaturated zone due to surface impoundment leakage is prohibited.

22. The discharge of waste must not cause WQPS constituents of concern, chloride, sulfate, and TDS, to be present in groundwater at concentrations in excess of their respective Upper Prediction Limits (UPLs). Due to historical variances in background concentrations of monitoring parameters, the concentration limits may be reconstructed and adjusted on an annual basis. In addition, the concentration limits may be adjusted when there is no evidence of a release.

B. Surface Impoundments

1. The discharge of RO reject wastewater except to the authorized disposal sites listed in Finding 16 is prohibited.

2. All lined surface impoundments must be effectively sealed to prevent the exfiltration of liquids. For this WDR, "effectively sealed" facilities are Class II WMUs that are designed and constructed as noted in Finding 18.

3. The surface impoundment freeboard, the vertical distance between the liquid surface elevation and the lowest part of the pond dike or the invert of an overflow structure, must be a minimum of two feet at all times, as specified in CCR, title 27, section 20375.

C. Leachate Collection and Recovery Systems

1. If a quantity of leachate is detected in a LCRS above the ALRs, as specified in MRP No. R6V-2021-Proposed, the Discharger must immediately take steps to locate and repair leak(s) in the liner system and comply with the Exceeding the Leakage Rates requirements presented in MRP No. R6V-2021-Proposed, Section IV.B, “Unscheduled Reports to be Filed With the Water Board.” If

subsequent repairs do not result in a reduction in the leakage rate to less than the ALR for any given surface impoundment, the Discharger must immediately cease the discharge of waste to that surface impoundment, including leachate, and notify the Water Board. The notification must include a timetable for remedial action to repair the liner of the surface impoundment(s).

2. The depth of leachate in the leachate collection sump must be kept at the minimum needed to ensure efficient sump dewatering pump operation.

3. The LCRSs must be operated to function without clogging throughout the life of the surface impoundment.

4. Any leachate collected in any LCRS must either be returned to one of the surface impoundments or disposed at a Class II WMU.

5. The LCRSs must be evaluated at least once annually to verify proper operation.

6. The LCRSs must be capable of removing twice the maximum anticipated daily volume of leachate from the WMU.

D. Recycled Water

The only authorized uses for recycled water are as follows:

1. Industrial service uses where the recycled water will not be discharged directly to the vadose zone (soils) or waters of the State,

2. Discharge to the concrete Amphibious Vehicle Test Track Impoundment where the recycled water will not be discharged to the vadose zone (soils) or waters of the State, and

3. Discharge to the domestic sewer system that is connected to the Yermo Annex Domestic Wastewater Treatment Facility (DWTF; located immediately south of the Facility) when there is low demand for industrial service use or at the Amphibious Vehicle Test Track and no storage capacity is left in the Facility surface impoundments. A separate WDR (Board Order No. 6-01-42) regulates effluent discharges from the Yermo Annex DWTF. Board Order No. 6-01-42 requires that all DWTF effluent meet discharge requirements, including times when recycled water from the Facility is sent to the Yermo Annex DWTF influent stream.

In the areas of industrial use, the recycled water may either be released to the atmosphere as water vapor during use or returned to the industrial sewer following use (the industrial sewer conveys used recycled water back to the

Facility for recycling). The conveyance and use of recycled water must comply with applicable county and state health department requirements for ensuring protection of human health.

E. Electronic Submittal of Information

Pursuant to CCR, title 23, section 3890, the Discharger must submit all reports, including soil and water data, electronically over the internet to the State Water Board's GeoTracker system. This requirement is in addition to, and not superseded by, any other applicable reporting requirement.

IV. WATER QUALITY MONITORING AND RESPONSE PROGRAMS

A. Water Quality Protection Standard

1. The WQPS consists of COCs (chloride, sulfate, and TDS), 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-2021-Proposed.

2. The Discharger must submit a ROWD to the Water Board at least 120 days before initiating discharge of any new constituents of concern to the surface impoundments. Before a new discharge commences, the Discharger must estimate the concentration for such constituents within the wastewater stream and submit written statistical method(s) in order to detect a release of such constituents.

3. At any given time, the concentration limit for each monitoring parameter and COC must be equal to the background data set of that constituent unless a concentration limit greater than background has been established. The background data set for each monitoring point/constituent pair should be comprised of at least eight data points, collected quarterly.

4. If the Discharger or Water Board Executive Officer determines that concentration limits were or are exceeded, the Discharger may immediately institute verification procedures upon such determination as specified in WDR, Section IV.F or, within 90 days of such determination, submit a technical report pursuant to CWC, section 13267 (b), proposing an EMP meeting the provisions of CCR, title 27. In the event of a new release, the Discharger will only have 90 days, once the Water Board authorizes the establishment of the EMP to complete the delineation, develop a suite of proposed corrective action measures, and submit a revised ROWD with a proposed CAP for adoption by the Water Board.

5. Monitoring of the groundwater and the unsaturated zone must be conducted

to provide the best assurance of the early detection of any new releases from the Facility.

B. Detection Monitoring Program

The Discharger must maintain a DMP as required in CCR, title 27, section 20420.

C. Evaluation Monitoring Program

The Discharger must perform an EMP whenever there is measurably significant evidence and/or significant physical evidence of release pursuant to CCR, title 27, section 20385 (a)(2) or (3). Within 90 days of initiating the EMP, the Discharger must delineate the nature and extent of the release, as well as develop, propose, and support corrective action measures to be implemented in a CAP.

D. Corrective Action Program

The Discharger must implement a CAP as required pursuant to CCR, title 27, sections 20385 and 20430 (c), following completion of an EMP.

E. Data Analysis

Within 45 days after completion of groundwater sampling, the Discharger must determine at each monitoring point whether there is measurably significant evidence and/or significant physical evidence of a new release from the Facility. 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 new release.

1. The Discharger must use the UPLs specified in WDR, Section III.A.21 to evaluate point of compliance data in order to determine statistically significant evidence of a release from the Facility.

2. On an annual basis, the Prediction Interval method must be used to evaluate point of compliance data for the first three quarters of the year in order to determine evidence of a release. For the last quarter of the year, the Discharger must construct a Tolerance Interval and compare three previous quarters of data to the concentration limits and determine whether there is evidence of a release from the Facility.

3. To determine whether there is significant physical evidence of a new release from the Facility, the Discharger must also use non-statistical methods. Significant physical evidence may include, but is not limited to, unexplained volumetric changes in the surface impoundments, unexplained stress in

biological communities, unexplained changes in soil characteristics, visible signs of spill/release, unexplained water table mounding beneath or adjacent to the surface impoundments, and/or any other change in the environment that could reasonably be expected to be the result of a new release from the surface impoundments. Other non-statistical evidence of a release may include trends of increasing concentrations of one or more constituents over time.

4. If there is measurably significant evidence and/or significant physical evidence of a new release, the Discharger must immediately notify the Water Board by telephone as to the monitoring points and constituent(s) or parameters involved followed by written notification sent certified mail within seven days (see MRP No. R6V-2021-Proposed, Section IV.B, “Unscheduled Reports to be Filed With the Water Board”). The Discharger must initiate the verification procedures, as specified in this WDR, Section IV.F.

F. Verification Procedures

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

1. The Discharger must either conduct a composite retest using data from the initial sampling event with all data obtained from the resampling event or must conduct a discrete retest in which only data obtained from the resampling event must be analyzed to verify evidence of a release. Alternatively, the Discharger may perform a pass 1-of-3 retesting approach using quarterly samples, as an engineered alternative.

2. The verification procedure must only be performed for the constituent(s) that has shown a statistically significant evidence of a release and must be performed for those monitoring points at which a release is indicated.

3. If a determination is made that there is evidence of a release using the Prediction or Tolerance Interval Method, the Discharger may, within 30 days of such determination, update the Upper Tolerance Limit and reevaluate point of compliance data in order to verify evidence of a release from the Facility. The Discharger must also collect one set of three additional samples from the affected monitoring point and compare the results to the updated Upper Tolerance Limit.

4. Within seven days of receiving the results of the last laboratory analyses for the retest, the Discharger must report to the Water Board, by certified mail, the results of the verification procedure, as well as all data collected for use in the retest.

5. If the Discharger or Executive Officer verifies that there is or was evidence of a release, the Discharger is required to submit a technical report to the Water Board within 90 days of such a determination, pursuant to CWC, section 13267 (b). The report must propose an EMP (see Section IV.C above) or make a demonstration to the Water Board that there is a source other than the surface impoundments that caused evidence of a release (see MRP No. R6V-2021-Proposed, Section IV.B, "Unscheduled Reports to be Filed With the Water Board").

6. If the Discharger declines to conduct verification procedures, the Discharger must submit a technical report, as specified in this WDR, Section IV.G.

G. Technical Report Without Verification Procedures

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

H. Monitoring and Reporting

1. Pursuant to CWC, section 13267 (b), the Discharger must comply with the monitoring and reporting requirements as established in the attached MRP No. R6V-2021-Proposed and as specified by the Executive Officer. The MRP may be modified by the Water Board Executive Officer.

2. The Discharger must comply with the *General Provisions for Monitoring and Reporting*, dated September 1, 1994, which is attached to and is made part of MRP No. R6V-2021-Proposed.

V. PROVISIONS

A. Rescission of Waste Discharge Requirements

Board Order Number 6-96-8 (and its amendment 6-96-8A1) and MRP Number 96-8 (and its amendment 96-8A1) are hereby rescinded.

B. Standard Provisions

The Discharger must comply with the *Standard Provisions for Waste Discharge Requirements*, dated September 1, 1994, which is attached and is made part of this Order (Attachment F).

C. Closure Plan

The preliminary closure plan must be updated if there is a substantial change in operations or costs for closure. The Discharger must submit a report to the Water Board by April 30 every year, indicating that the preliminary closure plan is in conformance with existing Facility operations. This report may be included in the annual monitoring report as required in MRP No. R6V-2021-Proposed.

A final closure plan must be submitted to the Water Board for review and approval at least 180 days prior to beginning any partial or final closure activities, or prior to discontinuing the use of the Facility for waste treatment, storage, or disposal pursuant to CCR, title 27, section 21710 (c)(5)(B). The final closure plan must be prepared by or under the supervision of either a California-licensed civil engineer or a certified engineering geologist and be in compliance with CCR, title 27, section 21400.

D. Financial Assurance

The Discharger must obtain and maintain Financial Assurance Instruments that comply with CCR, title 27, sections 22207, 22212, and 22220 et seq. As a federal entity, in lieu of using other Financial Assurance Instruments, the Discharger may submit a report on financial assurance for closure, post-closure and corrective action to the Water Board consistent with CCR, title 27, section 22250. The report shall include (1) a commitment by discharger to make a timely request for the funds needed to complete the closure and post-closure maintenance activities described in the most recently approved final closure and post-closure maintenance plans; (2) copies of initial closure and post-closure maintenance cost estimates and any amendments thereto; and (3) a commitment by the federal entity not to restructure the closure and post-closure funding in a manner that would interfere with timely completion of closure or post-closure maintenance activities. Every five years after submittal of the initial financial assurance report, or earlier, if requested by the Executive Officer, the Discharger shall submit a report that either validates the financial assurance instrument’s ongoing viability or proposes and substantiates any needed changes. The Discharger may combine the three components (Closure, Post-Closure, Corrective Action) of the instruments into one report to comply with the requirement.

E. Modifications to the Facility

If the Discharger intends to expand the Facility or the capacity of the surface impoundments, a report of waste discharge must be filed with the Water Board no later than 120 days prior to the anticipated change, containing a detailed plan for Facility expansion. This plan must include, but is not limited to, a time schedule for studies, design, and other information needed to document the proposed expansion of the Facility pursuant to CCR, title 27, section 21710.

F. Sampling and Analysis Plan

Pursuant to CWC, section 13267, the Discharger must submit a revised Sampling and Analysis Plan (SAP) when conditions change (including, but not limited to, any changes to sampling methods, locations, or analytical methods and procedures). The reporting requirements for the SAP are specified in MRP No. R6V-2021-Proposed.

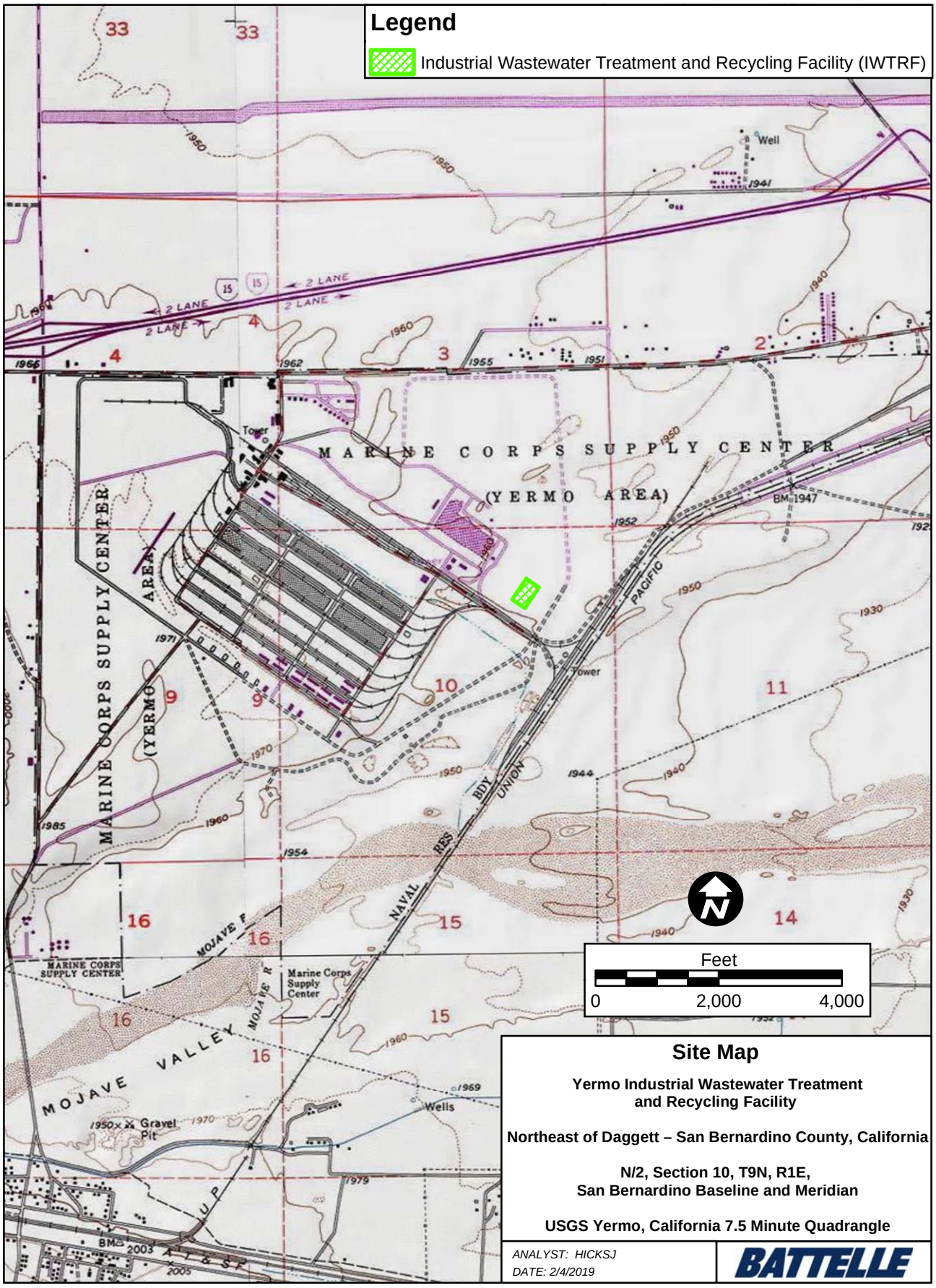
G. Monitoring and Reporting

1. The Discharger shall prepare a draft WQPS report as specified in Section I of MRP No. R6V-2021-Proposed no later than November 30, 2021.
2. The Discharger shall respond to Water Board comments and submit a final WQPS report no later than February 28, 2022.

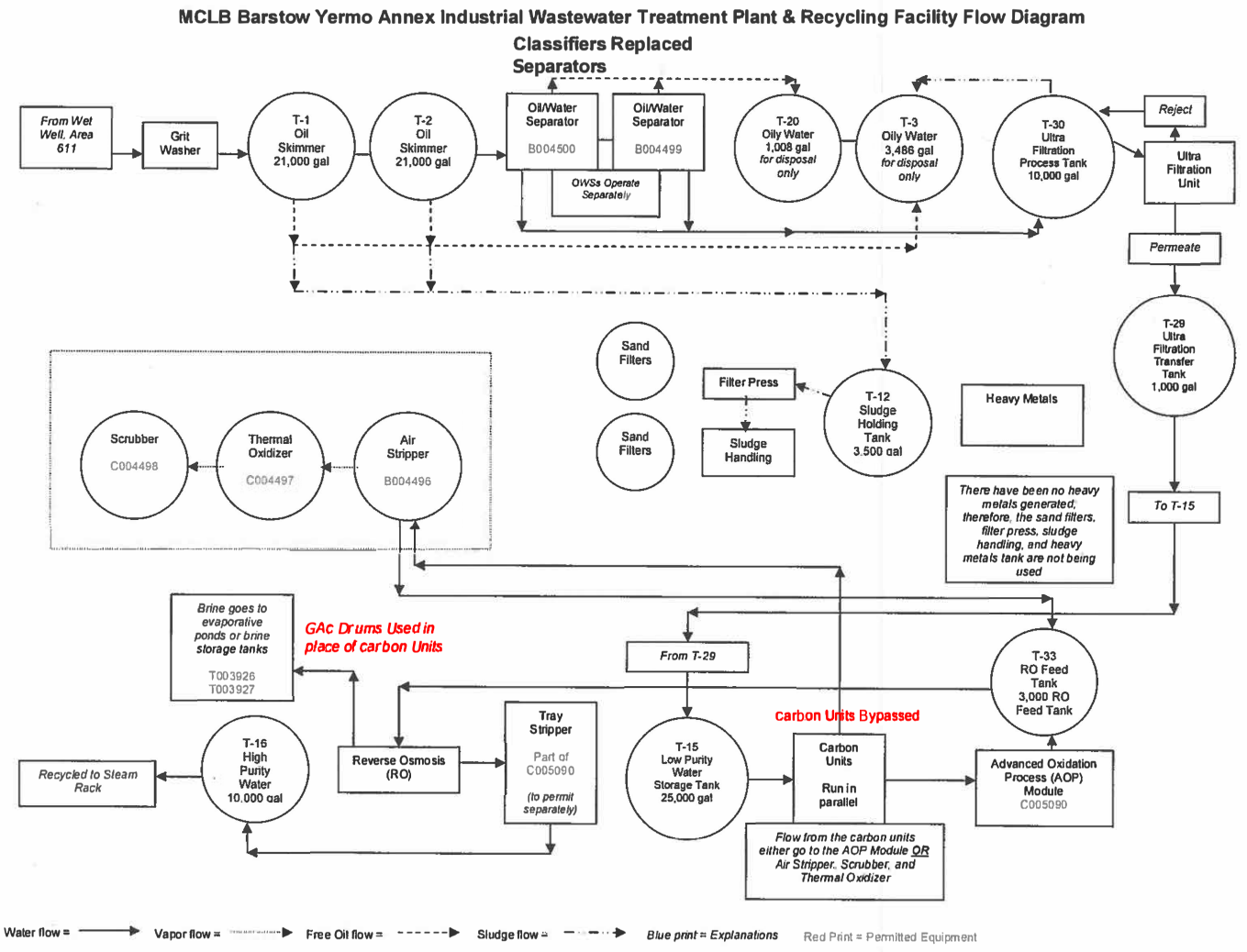
I, Michael R. Plaziak, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on May 13, 2021.

_____
MICHAEL R. PLAZIAK
EXECUTIVE OFFICER

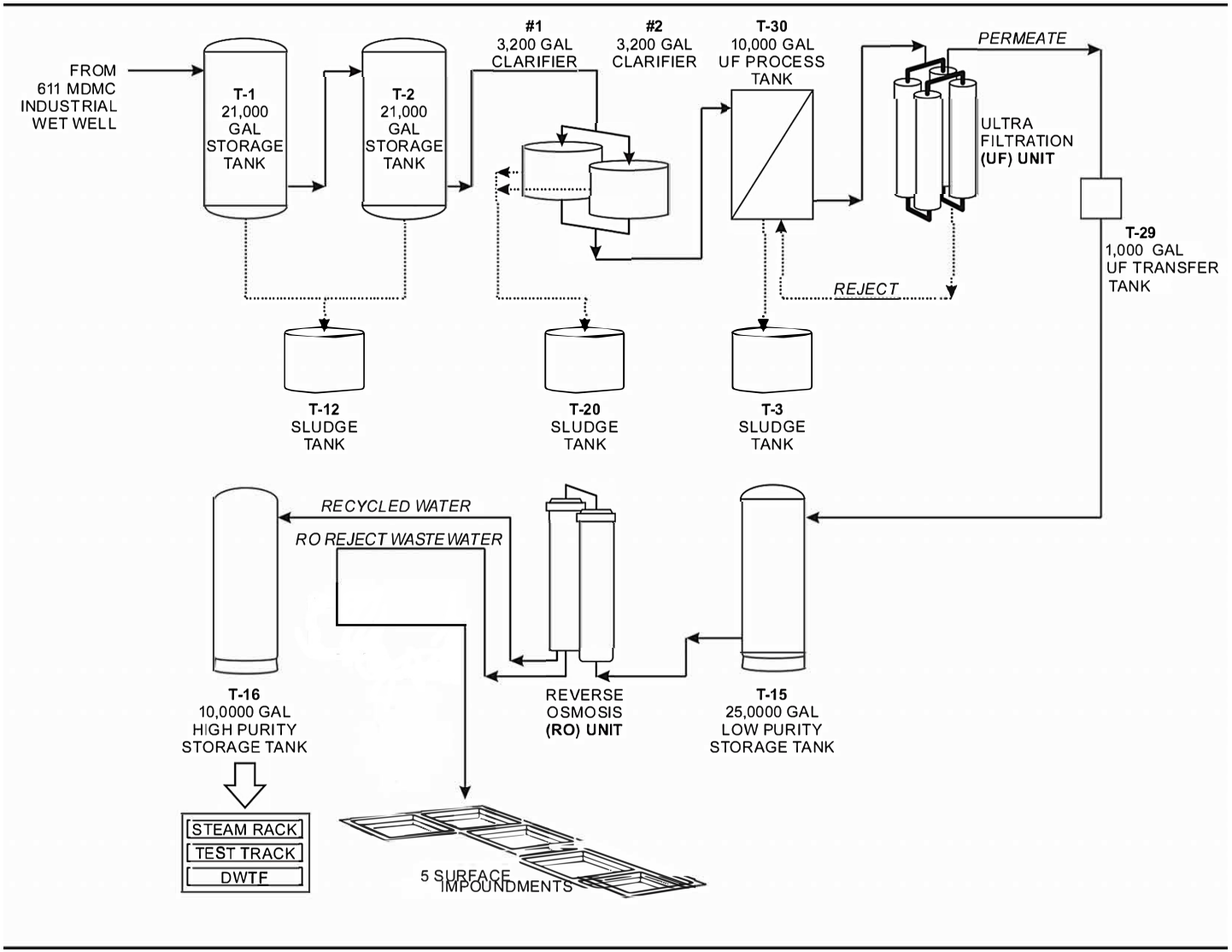
Attachments:
A. Yermo Annex Site Location Map
B. Yermo Annex IWTRF Former Process Flow Diagram
C. Yermo Annex IWTRF Proposed Process Flow Diagram
D. Yermo Annex IWTRF Groundwater Monitoring Well Location Map
E. Yermo Annex IWTRF Surface Impoundments and LCRS Layout
F. *Standard Provisions for Waste Discharge Requirements*, dated September 1, 1994



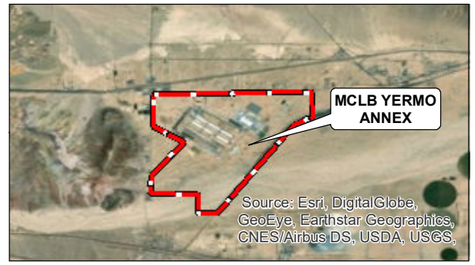
ATTACHMENT A - YERMO ANNEX SITE LOCATION MAP



ATTACHMENT B - YERMO ANNEX IWTRF FORMER PROCESS FLOW DIAGRAM



ATTACHMENT C - YERMO ANNEX IWTRF PROPOSED PROCESS FLOW DIAGRAM



Legend

- Yermo Annex Boundary
- Yermo Domestic Groundwater Monitoring Well
- Yermo Industrial Groundwater Monitoring Well

NOTES:
MCLB Marine Corps Logistics Base

SOURCE:
Google Earth Aerial Image, Date Unknown
Environmental Systems Research Institute (ESRI)
USA Spatial Feature Classes

N

0 350 700 1,400
Feet

1 inch = 700 feet

DEPARTMENT OF THE NAVY — SAN DIEGO, CALIFORNIA
NAVAL FACILITIES ENGINEERING COMMAND

GROUNDWATER MONITORING PROGRAM
FOR WASTE WATER TREATMENT SYSTEMS
MARINE CORPS LOGISTICS BASE BARSTOW, CALIFORNIA

FIGURE 2

GROUNDWATER MONITORING WELL LOCATIONS
YERMO ANNEX

BATTELLE

Contract No.: N39430-16-D-1802
TO: 0035

Date: 1/28/2019 Path: X:\GIS_CAD_GIN\TiFigures\Barstow\Battelle 010 - GWM\04 Yermo Domestic Well Locations.mxd


SITE AREA MAP: WELL INTEGRITY TESTING
Evaporation
Pond #1
LCRS #1
Evaporation
Pond #2
LCRS #2
Vadose Zone Point
VMW-1
LCRS #3
Yermo Annex IWTRF
Treatment Plant
Evaporation
Pond #3
Vadose Zone Point
VMW-2
LCRS #4
Evaporation
Pond #4
LCRS #5
Vadose Zone Point
VMW-3
Evaporation
Pond #5
Yermo Annex Domestic Waste Water Treatment
Facility Effluent Evaporation Pond
LOCATING AREAS ARE APPROXIMATE
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC
LEACHATE COLLECTION AND REMOVAL SYSTEM
FOR WASTEWATER TREATMENT SYSTEMS
MARINE CORPS LOGISTICS BASE BARSTOW, CALIFORNIA
FIGURE 2
SITE WELL LOCATION MAP
BATTELLE
SITE AREA MAP
3D

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

STANDARD PROVISIONS
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Board staff:

a. to enter upon premises in which an effluent source is located or in which any required records are kept;

b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements (WDRs);

c. to inspect monitoring equipment or records; and

d. to sample any discharge.

2. Reporting Requirements

a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.

b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.

c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.

d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.

e. Reports required by the WDRs, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation.

f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.

3. Right to Revise WDRs

The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.

7. Waste Discharge Requirement Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.

8. Property Rights

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

9. Enforcement

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

10. Availability

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

11. Severability

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

12. Public Access

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

13. Transfers

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

14. Definitions

a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.

b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

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

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

REVISED MONITORING AND REPORTING PROGRAM
NO. R6V-2021-PROPOSED
WDID NO. 6B369509001

FOR

U.S. MARINE CORPS LOGISTICS BASE, YERMO ANNEX
INDUSTRIAL WASTEWATER TREATMENT AND RECYCLING FACILITY

San Bernardino County

This Monitoring and Reporting Program (MRP) No. R6V-2021-Proposed is issued to the United States Marine Corps (Discharger) for the Marine Corps Logistics Base (MCLB), Yermo Annex, Barstow, California, Industrial Wastewater Treatment and Recycling Facility (Facility) pursuant to California Water Code (CWC), section 13267 and incorporates requirements for groundwater and unsaturated zone monitoring and reporting; facility monitoring, maintenance, and reporting; and financial assurances reporting contained in California Code of Regulations (CCR), title 27, section 20005, et seq.

I. WATER QUALITY PROTECTION STANDARD

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

The Discharger is currently implementing a Detection Monitoring Program (DMP) to monitor groundwater and the unsaturated zone for the Facility. A WQPS is necessary to provide the best assurance of the earliest detection of any releases from the Facility.

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 the WMUs (surface impoundments). The COCs for each monitored medium are listed in Attachment A, which is made part of this MRP. The Discharger must monitor all COCs at the sampling frequency and reporting frequency listed in Attachment A.

B. Monitoring Parameters

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

C. Concentration Limits

Upper prediction limits (UPLs) are established (and revised annually per WDR, Section A.III.21) for COCs chloride, sulfate, and TDS and are intended to reflect background ambient conditions of surface and subsurface media that are unaffected by a release from the existing surface impoundments. At any given time, the concentration limit for the above mentioned COCs must be less than or equal to the established UPLs.

1. The Discharger is using the following methodologies to determine concentration limits for the groundwater monitoring program.

   a. Upper Prediction Limit Comparison - The Discharger is using historical water quality data from individual groundwater monitoring wells to develop site-specific concentration limits for chloride, sulfate, and TDS. UPL comparisons for these COCs are appropriate because these COCs show spatial variation in water quality across the Facility, and a historical release has been detected in groundwater. Calculations for developing these UPLs should be included in a WQPS report.

   b. Non-Statistical Comparisons - For inorganic COCs either not detected in the background well or only detected at trace concentrations and for man-made organic COCs, the concentration limit is set at the respective practical quantitation limit (PQL) for the analytical method used.

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 concentration limits to provide seasonal or reason-specific concentration limits (background data sets) for each COC at each monitoring point.

Concentration limits greater than background (CLGBs) for corrective action may be proposed by the Discharger in accordance with CCR, title 27, section 20430, after proposed corrective action measures reveal that it is technically and economically infeasible to achieve background water quality levels. The Discharger has not proposed CLGBs for this Facility.

D. Point of Compliance and Monitoring Points

The point of compliance and monitoring points for the groundwater and unsaturated zone systems are shown in the waste discharge requirements (WDRs), Board Order No. R6V-2021-Proposed, Attachments D and E. The Discharger may add monitoring points, as needed, to comply with the DMP requirements contained in this MRP, and as approved by the Water Board Executive Officer.

The point of compliance is a vertical surface located at the hydraulically downgradient limit of the surface impoundments that extends through the uppermost aquifer underlying the Facility. A groundwater monitoring network is established for the Facility. There are eight well casings representing four groundwater monitoring locations, including clustered groundwater monitoring well pairs YIMW-1 and YIMW-2 (YIMW-1/2), YIMW-3/4, YIMW-5/6, and YIMW-7/8. For each well pair, the odd-numbered designation represents the shallow-screened casing, and the even-numbered designation represents the deep-screened casing. Monitoring wells YIMW-7/8 serve as background wells. The point of compliance boundary is bound by monitoring wells YIMW-1/2, YIMW-3/4, and YIMW-5/6. The unsaturated zone is monitored by three neutron probes (VMW-1, VMW-2, and VMW-3).

E. Compliance Period

The compliance period is the number of years equal to the active life of the WMU plus any post-closure monitoring and maintenance period until the Water Board finds that the Facility no longer poses a threat to water quality. The compliance period is the minimum period during which the Discharger must conduct a water quality monitoring program subsequent to a release. The compliance period must begin anew each time the Discharger initiates an Evaluation Monitoring Program (EMP). The compliance period may be extended if the Facility is not in compliance with its WQPS.

The Discharger plans to clean-close the five surface impoundments, (Evaporation Ponds 1 through 5). At closure, any residual liquids remaining in the Ponds will be allowed to evaporate and all residual wastes, including sludges, precipitates, settled solids, and liner materials will be completely removed and disposed off-site at an appropriate disposal facility in accordance with applicable regulations.

II. MONITORING

The Discharger must comply with the monitoring requirements outlined below. The Discharger must monitor the groundwater and the unsaturated zone beneath the surface impoundments, monitor wastewater effluent discharges to the surface impoundments, and monitor wastewater in the surface impoundments. All monitoring and inspection activities must be documented, and all sampling must be conducted

in accordance with an approved Sampling and Analysis Plan (SAP) that includes quality assurance and quality control standards and procedures, as described in the *General Provisions for Monitoring and Reporting* (Attachment B of this MRP).

The Discharger must operate and maintain a detection monitoring system that complies with the DMP monitoring provisions contained in CCR, title 27, sections 20380 through 20420. Monitoring of the groundwater and unsaturated zone must be conducted to provide the best assurance of the early detection of a release from the Facility. Changes to the existing monitoring systems must be designed and certified by a California-licensed professional geologist or civil engineer as meeting the requirements of CCR, title 27, section 20415 (e)(1). The Discharger must collect, preserve, and transport samples in accordance with the SAP.

All samples collected in accordance with this MRP, except for field parameters, are to be analyzed by a California state-certified laboratory using United States Environmental Protection Agency (USEPA) analytical methods 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. Flow Monitoring

The Discharger must monitor and record the following flow volumes and rates.

1. The total volumes, in gallons, of wastewater flow to the Facility for each day and each month.
2. The average flow rates, in gallons per day (gpd), of wastewater to the Facility calculated for each month.
3. The total volume in gallons of RO reject wastewater discharged from the Facility to the surface impoundments for each day and each month.
4. The average flowrate of RO reject wastewater discharged from the Facility to the surface impoundments calculated for each month and each calendar year.

B. Facility Effluent Monitoring

The Discharger must monitor the composition of wastewater discharged to the surface impoundments through the collection of liquid samples for laboratory analyses. All observations and measurements must be recorded in a permanent logbook kept onsite.

1. Effluent Monitoring Point

A liquid grab sample will be collected from the wastewater conveyance system at a location upstream from the point of discharge to a surface impoundment. The sample location must be documented for each sampling event.

2. RO Reject Wastewater Monitoring Parameters and COCs

   The Discharger must monitor Reverse Osmosis (RO) reject wastewater and monitoring parameters in accordance with the frequencies listed in Attachment A.

3. Recycled Water Monitoring Parameters and COCs

   The Discharger must monitor recycled water generated by the Facility and monitoring parameters in accordance with the frequencies listed in Attachment A.

4. Calibration Documentation

   Annually, the Discharger must submit documentation of instrument calibration and performance checks to verify proper operation of all field monitoring equipment including wastewater flow meters. Wastewater flow meters are to be replaced, as needed.

C. Surface Impoundment Monitoring

The surface impoundment monitoring program monitors the composition of wastes contained within the surface impoundments through the collection of liquid and solid samples for laboratory analyses. All observations and measurements must be recorded in a permanent logbook kept onsite.

1. Dikes and Liners

   a. At least monthly, the surface impoundments freeboard (i.e., the vertical distance between the liquid surface elevation and the lowest part of the pond dike or the invert of the overflow structure) must be measured in each surface impoundment. The freeboard must be a minimum of two feet at all times, as specified in CCR, title 27, section 20375. If the pond is dry, indicate that it is dry. Additionally, during a significant rainfall event, the Discharger should confirm that the freeboard is a minimum of two feet.

   b. Monthly, visually inspect each of the surface impoundment dikes and exposed liners to determine if there are any indication of loss of integrity. Should the inspection indicate that any unauthorized discharge has occurred, or may occur, the Discharger must notify the Water Board within 24 hours of the inspection, followed by confirmation in writing within 7 days.

2. Surface Impoundment Monitoring

   a. Sludge

      Monthly, the Discharger must visually inspect each pond to determine if sludge is present; if present, a grab sample of the sludge must be sampled for the parameters and at the frequencies listed in Attachment A of this MRP for sludge. Sampling locations must be established at each pond where sludge is most likely to accumulate. Each sampling location

must be documented for each pond during a sampling event. If no sludge is present in the surface impoundment, a statement to that effect must be made in the monitoring reports.

b. Wastewater

A liquid grab sample from each surface impoundment must be collected and analyzed for the parameters, and at the frequencies, listed in Attachment A of this MRP for surface impoundment liquids. Each sampling location must be documented for each pond during a sampling event. If no liquid is present in the surface impoundment, a statement to that effect must be made in the monitoring reports.

3. Leachate Collection and Recovery Sumps

The LCRS monitoring program monitors the composition of liquids within the LCRS through the collection of liquid samples for laboratory analyses. All observations and measurements must be recorded in a permanent logbook kept onsite

a. Monitoring Points

Each surface impoundment is equipped with an LCRS. The LCRS monitoring point locations are shown on Attachment E of the WDR, Board Order No. R6V-2021-Proposed.

b. Monitoring Parameters

The LCRSs must be monitored for the presence of liquids.

c. Calibration Documentation

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

d. Inspections

Inspect the LCRS weekly to determine the presence of liquids. If an LCRS is dry at the time of monitoring, this information must be recorded and reported to the Water Board in accordance with the reporting requirements of the MRP Section IV.A.

Upon detection of liquid in a LCRS (1) at a volume greater than one-half of the Action Leakage Rate (ALR) or (2) for three consecutive liquid detections, the Discharger must immediately collect a grab sample of the liquid and analyze the sample for all COCs and monitoring parameters listed in the surface impoundments monitoring section of Attachment A.

The Discharger must record, in conjunction with the regular LCRS inspection, the volume of liquid pumped from the LCRS, the pumping rate (in gallons per day), date, and discharge location(s) of liquids pumped from the LCRS.

e. Action Leakage Rates and Rapid and Large Leak Rates

The ALR and Rapid and Large Leakage Rates (RLLRs) for Ponds 1 through 5 are shown in MRP Table 1, LCRS Action Leakage Rates and Rapid and Large Leakage Rates. The ALRs for the surface impoundments are based on the surface areas of the surface impoundments; the RLLRs are calculated based on the maximum design flow rate of the leak detection system that can be removed without liquid head on the bottom liner exceeding 1 foot, and on a 1992, USEPA guidance document, *Action Leakage Rates for Leak Detection Systems, Supplemental Background Document for the Final Double Liners and Leak Detection Systems Rule for Hazardous Waste Landfills, Waste Piles, and Surface Impoundments*. Per the USEPA guidance document, the ALRs account for the area of the surface impoundment, multiplied by a factor of 20 for the LCRS. The RLLRs are calculated based on LCRS design (e.g., slope, hydraulic conductivity, thickness of drainage material). The leakage rates for the surface impoundments are based on the original design criteria for those surface impoundments.

MRP Table 1. LCRS Action Leakage Rates and Rapid and Large Leakage Rates

Surface Impoundment	Surface Area (acres)	Action Leakage Rate (gpd per pond)	Rapid and Large Leakage Rate (gpd per pond)
Pond 1	0.275	4.4	16.5
Pond 2	0.275	4.4	16.5
Pond 3	0.275	4.4	16.5
Pond 4	0.275	4.4	16.5
Pond 5	0.275	4.4	16.5

If liquids are detected in the LCRS, the Discharger must take the response actions described in MRP Table 2, Action and Response Levels for LCRS.

MRP Table 2. Action and Response Levels for LCRS

Unit Flow Rate	Action/Response
Less than Action Leakage Rate	Record weekly flow rate and submit recorded flow rates with the next regularly schedule monitoring report. If detection of liquid in a LCRS (1) at a volume greater than one-half of the ALR or (2) for three consecutive liquid detections, the Discharger must immediately collect a grab sample of the liquid and analyze the sample for all COCs and monitoring parameters listed for Surface Impoundment Monitoring in Attachment A.
Greater than or equal to the Action Leakage Rate	Notify the Water Board immediately (within 24 hours). Cease discharge to the affected surface impoundment and repair the liner.
Greater than or equal to the Rapid and Large Leakage Rate	Notify the Water Board immediately (within 24 hours). Cease discharge to the affected surface impoundment, remove the contents of the surface impoundment and LCRS until the leakage rate is no longer exceeded and repair the liner. A sample must be collected and analyzed for the COCs and the monitoring parameters identified for Surface Impoundment Monitoring in Attachment A.

4. Unsaturated Zone

The unsaturated (vadose) zone monitoring program monitors the composition of soil-pore liquids beneath the surface impoundments through the collection of samples for laboratory analyses and field measurements.

a. Monitoring Points

The unsaturated zone is monitored for soil-pore liquids using neutron probes at three locations (VMW-1, VMW-2, and VMW-3). Unsaturated zone monitoring point locations are shown on Attachment E of the WDR, Board Order No. R6V-2021-Proposed.

b. Monitoring Parameters and Constituents of Concern

Quarterly, the Discharger must measure soil moisture concentrations in soils at three discrete depths (10, 20, and 30 feet below ground surface [bgs]) utilizing the three neutron probes installed for monitoring the vadose zone. The Discharger must compare the measurements to historical soil moisture content using a statistical method that has been reviewed and approved. If the comparison indicates moisture significantly higher than background, a soil sample must be collected. If required, the discharger must provide a work plan outlining this soil sampling.

If any elevated level of soil moisture is detected in the vadose zone, the Discharger must notify the Water Board and report physical evidence of a

release in accordance with the reporting requirements of this MRP, Section IV.B.

c. Calibration Documentation

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

d. Inspections

Annually, the unsaturated zone monitoring system must be inspected to evaluate if leakage from the surface impoundments has been captured by the LCRS. The results must be presented in the annual monitoring report and compared with earlier inspections. Any problems noted must be reported to the Water Board.

D. 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 surface impoundments through the collection of groundwater samples for laboratory analysis and field measurement of water quality parameters.

1. Monitoring Points

Groundwater monitoring points are shown on Attachment D, WDR, Board Order No. R6V-2021-Proposed.

2. Depth to Groundwater

Prior to purging and sampling, the Discharger must measure and record the depth below the ground surface of the static groundwater elevation (feet bgs) in all groundwater monitoring wells. The measurements must be accurate to the nearest 0.01 foot. If any monitoring well is dry for more than four quarters, a new or modified well must be provided.

3. Groundwater Purging and Sampling

Quarterly, prior to sampling, all groundwater monitoring wells must be purged consistent with the approved SAP.

4. Monitoring Parameters and Constituents of Concern

Quarterly, the Discharger must monitor, at each groundwater monitoring well, all COCs and monitoring parameters listed in this MRP, Attachment A, for groundwater.

5. Field Parameters

Quarterly, the Discharger must monitor the groundwater for all field parameters listed in this MRP, Attachment A.

6. Calibration Documentation

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

III. DATA ANALYSIS

All data analyses methods (statistical and non-statistical) must meet the requirements of CCR, title 27, section 20415 (e)(8) and (9).

A. Site-Specific Statistical Analysis Method

To determine whether there is "measurably significant" evidence of any new releases from the Facility, evaluation of data will be conducted using statistical methods. For detection monitoring, the Discharger must use statistical methods to analyze COCs (chloride, sulfate, and TDS) 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 (e)(7). *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (USEPA, 2009) or subsequent versions may also be used to select the statistical test to use for comparing detection monitoring data to background monitoring data.

The Discharger has implemented prediction limits as described in the approved Sampling and Analysis Plan. The prediction limit method meets the requirements of CCR, title 27, section 20415 (e)(8)(C).

B. Non-Statistical Analysis Methods

To determine if any releases occur from the Facility, data evaluation must also be conducted using non-statistical methods. Non-statistical analysis shall be as follows.

1. Physical Evidence

Physical evidence can include, but is not limited to, unexplained stress in biological communities such as vegetation loss, soil discoloration, or groundwater mounding. Each quarterly 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. Each quarterly and annual report must include time-series plots. Time-series plots are not required for parameters that have never been detected above their method detection limit (as specified by the applicable USEPA method).

IV. RECORD KEEPING AND 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 monitoring points (one time) and all media 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 (Global Identification: L10009543893), per the following schedule. The Discharger must comply with *General Provisions for Monitoring and Reporting*, dated September 1, 1994 (Attachment B).

MRP Table 3. Monitoring Reporting Schedule

Report Name	Sampling and Reporting Period	Report Due Date
First Quarter Monitoring Report	January 1 – March 31	April 30
Second Quarter Monitoring Report	April 1 – June 30	July 31
Third Quarter Monitoring Report	July 1 – September 30	October 31
Fourth Quarter Monitoring Report	October 1 – December 31	January 31
Annual Report	January 1 – December 31	March 30
Five-Year Constituent of Concern Report[1]	January 1 – June 30 July 1 – December 31	July 31 January 31

[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 July 31 report due date corresponds to the January 1 through June 30 sampling and reporting period; the January 31 report due date corresponds to the July 1 through December 31 sampling and reporting period. The five-year report may be combined with a quarterly report for the corresponding due date.

1. Quarterly Monitoring Reports

Each quarterly self-monitoring report must include, but not be limited to, the following information.

a. All data collected during the reporting period in accordance with the approved SAP for the wastewater effluent, surface impoundments, LCRS, unsaturated zone, and groundwater monitoring systems, as outlined in this MRP, Section II.

b. Tabulated results of sampling and laboratory analyses for each groundwater monitoring point, including historical (last ten years at minimum) 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 of the following monitoring points including historical (last ten years at minimum) and current reporting period data.

   i. All unsaturated zone monitoring points
   ii. All LCRS monitoring points
   iii. All surface impoundment monitoring points and media
   iv. All wastewater effluent monitoring points

d. A map and/or aerial photograph showing the surface impoundment perimeter and ancillary facilities as well as locations of monitoring points and background monitoring points, observation stations, and the surface trace of the point of compliance.

e. Describe, 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 surface impoundments, the velocity of groundwater flow (feet/year), and the current groundwater isocontours for that monitoring period.

f. All data and visual observations associated with monitoring of the surface impoundments, wastewater flow monitoring, wastewater effluent conveyance and monitoring, and an evaluation of the effectiveness of the LCRS facilities.

g. A narrative description of any modifications to, additions to, maintenance of, or operational problems associated with the wastewater conveyance system or surface impoundment disposal facilities.

h. Copies of all field monitoring and well sampling data sheets.

i. Time-series plots of the analytical results from the groundwater, unsaturated zone, surface impoundment, and wastewater effluent 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 (if applicable), as well as the PQL and method detection limit (MDL) for the analytical method used.

j. 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.

2. Annual Monitoring Reports

Each annual report must include, but not be limited to, the following information.

a. All data collected in accordance with MRP, Section II.

b. A narrative of the items described in the General Provisions for Monitoring and Reporting (MRP, Attachment B).

c. A list of all monitoring point/monitoring parameter pairs (pairs), by medium, which have exhibited a verified measurably significant increase, together with the respective date (for each) when that increase occurred. Any pairs that have shown an increase within that (prior) year shall be bold-underlined or otherwise highlighted to indicate the increased concentrations.

d. A list of all non-routine monitoring parameter COCs, by medium, that during testing that year or tested every five years, have indicated measurably significant amount and, as a result, have become monitoring parameters, together with the date when the transition occurred.

e. Four maps, one for each quarterly monitoring period of the last reporting year, showing (1) the groundwater elevation isocontours determined for that monitoring period, (2) all monitoring points, (3) the surface trace for each waste management unit, (4) all observation stations, and (5) the surface trace of the Facility's point of compliance. The maps must be to scale, be labeled, and include a legend.

f. Graphical and tabular data for the monitoring data obtained for the previous calendar year (January – December). Each table must summarize the historical and most recently detected constituent concentrations for all locations sampled and compare these data to both the given monitoring point/COC pair's respective statistical concentration limit and (if applicable) MCL and be labeled appropriately. Each such graph must be plotted using raw data, and at a scale appropriate to show trends or variations in water quality. For graphs showing trends of similar constituents (e.g., volatile organic compounds), the scale must be the same.

g. Calibration methods and any discrepancies of any meters used for field parameter evaluations after calibration is performed.

h. An evaluation of the effectiveness of both the groundwater and unsaturated zone monitoring programs and any proposed modifications necessary to improve the detection monitoring.

i. A brief chronological summary of dates of any operational problems and maintenance activities that may impact water quality at the site.

j. The compliance record and the corrective actions taken or planned, which may be needed to bring the Facility into full compliance with the discharge requirements.

k. The Discharger must review the preliminary closure plan and corrective action plan for all known or reasonably foreseeable releases annually to determine if significant changes in the operation of the Facility warrant an update to these plans. Any proposed changes to these plans must be outlined in the annual report.

l. The Discharger has established background concentration limits in the WQPS for detection monitoring. These limits may be revised annually. The revised limits must be included in the annual report.

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

Pursuant to CCR, title 27, section 20420 (g), every five years the Discharger must sample a suite of non-monitoring parameter COCs. Groundwater samples must be collected at all monitoring points and submitted for laboratory analyses once every five years for all monitoring parameters and COCs listed in Appendix I and Appendix II of 40 CFR, Part 258 (Attachment A). Successive monitoring efforts must be carried out alternately during January 1 through June 30 of one five- year sampling event and July 1 through December 31 of the next five- year sampling event, and every fifth year, thereafter. The five-year COC sampling event must be reported in the quarterly report for the referenced time period (MRP Table 3). The five-year requirement has not previously been required; therefore, the first five- year sampling event is scheduled to occur in first quarter calendar year 2022.

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 Facility

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

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

The Discharger must immediately (within 24 hours) notify the Water Board verbally whenever a determination is made that there is significant physical or “measurably significant” evidence of a release from the Facility. 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 the verification procedures (as outlined in Order No. R6V-2021-Proposed, Section IV.F) or demonstrate that another source other than the surface impoundments 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 a physical evidence of a release – the physical factors that indicate evidence of a release; or
viii. For a measurably significant evidence of a release – the monitoring parameters and/or COCs that are involved in the measurably significant evidence of a release from the Facility.

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

The Discharger may make a demonstration that a source other than the Facility 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. Exceeding the Leakage Rates

Exceeding the ALR is an Adverse Condition. The Discharger must immediately notify the Water Board verbally within 24 hours whenever a determination is made that leakage into the LCRS exceeds the ALR for the respective surface impoundment. This oral notification must be followed by written notification via certified mail within 7 days of such determination. This written notification must then be followed by a technical report via certified mail within 30 days of such determination. The technical report must describe the actions taken to abate the Adverse Condition and describe any proposed actions to abate future potential Adverse Conditions.

Exceeding the RLLR is also an Adverse Condition. In addition to the requirements above for exceeding the ALR, the technical report must include sampling results and a comparison of the wastewater in the surface impoundment and the leachate in the LCRS, as described in MRP, Table 2.

3. Evaluation Monitoring

The Discharger must, within 90 days of verifying a release, submit a technical report and amended report of waste discharge to establish an Evaluation

Monitoring Program (EMP) pursuant to CWC, section 13267 (b), proposing an EMP meeting the provisions of CCR, title 27, section 20420 (k)(5). If the Discharger decides not to conduct verification procedures or decides not to make a demonstration that a source other than the Facility 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 (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 Facility.

4. Engineering Feasibility Study Report

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

5. Significant Earthquake Event

After a significant or greater earthquake event (described in greater detail below) at or near the Facility, the Discharger shall 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 or to report no damage to the Facility was sustained. The Discharger shall closely examine the surface impoundments and appurtenant wastewater piping, inspect the 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 are identified, the Discharger shall make repairs to those areas within 30 days from the date of

the earthquake event. Repairs must be made in accordance with Board Order No. R6V-2021-Proposed.

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

6. Failure to Furnish Reports

   Pursuant to Water Code section 13308, if the Regional Board determines there is a threatened or continuing violation of any order issued under Section 13267, the regional board may issue an order establishing a time schedule and prescribing a civil penalty which shall become due if compliance is not achieved in accordance with that time schedule.

7. Violations

   If monitoring data indicate violation of a specific requirement of Board Order No. R6V-2021-Proposed, 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.

8. Electronic Reporting Requirements

   Pursuant to CCR, title 23, section 3890, the Discharger must submit reports, including soil, vapor, and water data, 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 the WDID No. and Facility name in the subject line.

Ordered by: _____Dated:_____
MICHAEL R. PLAZIAK
EXECUTIVE OFFICER

Attachment A: Monitoring Constituents for all Media
Attachment B: General Provisions for Monitoring and Reporting Program

ATTACHMENT A – MONITORING CONSTITUENTS FOR ALL MEDIA

EFFLUENT – 1) REVERSE OSMOSIS REJECT WASTEWATER AND 2) RECYCLED WATER MONITORING CONSTITUENTS			
Parameters[1]	**Units**	**Sampling Frequency**	**Reporting Frequency**
Field Parameters – Liquid			
pH	pH units	Daily	Quarterly
Specific Conductance	µS/cm	Daily	Quarterly
Temperature	degrees Fahrenheit or Celsius	Daily	Quarterly
Turbidity	NTU	Daily	Quarterly
General Parameters and Metals – Liquid[2]			
Oil and Grease[3]	mg/L	Quarterly	Quarterly
Cadmium	mg/L	Quarterly	Quarterly
Chromium, Total	mg/L	Quarterly	Quarterly
Copper	mg/L	Quarterly	Quarterly
Nickel	mg/L	Quarterly	Quarterly
Lead	mg/L	Quarterly	Quarterly
Zinc	mg/L	Quarterly	Quarterly

SURFACE IMPOUNDMENTS MONITORING CONSTITUENTS			
Parameters[1]	**Units**	**Sampling Frequency**	**Reporting Frequency**
Field Parameters – Liquid			
pH	pH units	Weekly	Quarterly
Specific Conductance	µS/cm	Weekly	Quarterly
Temperature	degrees Fahrenheit or Celsius	Weekly	Quarterly
General Parameters and Metals – Liquid			
Chloride	mg/L	Quarterly	Quarterly
Fluoride	mg/L	Quarterly	Quarterly
Sulfate	mg/L	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Quarterly	Quarterly
Cadmium	mg/L	Quarterly	Quarterly
Chromium, Total	mg/L	Quarterly	Quarterly
Copper	mg/L	Quarterly	Quarterly
Lead	mg/L	Quarterly	Quarterly
Nickel	mg/L	Quarterly	Quarterly
Zinc	mg/L	Quarterly	Quarterly
Antimony	mg/L	Annually	Annually
Arsenic	mg/L	Annually	Annually
Barium	mg/L	Annually	Annually
Beryllium	mg/L	Annually	Annually
Cobalt	mg/L	Annually	Annually
Mercury	mg/L	Annually	Annually

SURFACE IMPOUNDMENTS MONITORING CONSTITUENTS (Continued)			
Parameters[1]	**Units**	**Sampling Frequency**	**Reporting Frequency**
General Parameters and Metals – Liquid (Continued)			
Molybdenum	mg/L	Annually	Annually
Selenium	mg/L	Annually	Annually
Silver	mg/L	Annually	Annually
Thallium	mg/L	Annually	Annually
Vanadium	mg/L	Annually	Annually
Volatile Organic Compounds – Liquid			
1,1,1-Trichloroethane	µg/L	Quarterly	Quarterly
Benzene	µg/L	Quarterly	Quarterly
Ethylbenzene	µg/L	Quarterly	Quarterly
Methylene Chloride	µg/L	Quarterly	Quarterly
Tetrachloroethene	µg/L	Quarterly	Quarterly
Toluene	µg/L	Quarterly	Quarterly
Trichloroethene	µg/L	Quarterly	Quarterly
Xylene	µg/L	Quarterly	Quarterly
Semi-Volatile Organic Compounds - Liquid			
2-Methylphenol	µg/L	Quarterly	Quarterly
3-Methylphenol	µg/L	Quarterly	Quarterly
Naphthalene	µg/L	Quarterly	Quarterly
Phenol	µg/L	Quarterly	Quarterly
Field Parameters – Sludge			
pH	pH Units	Monthly	Quarterly
Specific Conductance	µS/cm	Monthly	Quarterly
General Parameters and Metals – Sludge			
Chloride	mg/kg	Quarterly	Quarterly
Fluoride	mg/kg	Quarterly	Quarterly
Sulfate	mg/kg	Quarterly	Quarterly
Total Dissolved Solids	mg/kg	Quarterly	Quarterly
Cadmium	mg/kg	Quarterly	Quarterly
Chromium, Total	mg/kg	Quarterly	Quarterly
Copper	mg/kg	Quarterly	Quarterly
Lead	mg/kg	Quarterly	Quarterly
Nickel	mg/kg	Quarterly	Quarterly
Zinc	mg/kg	Quarterly	Quarterly
Antimony	mg/kg	Annually	Annually
Arsenic	mg/kg	Annually	Annually
Barium	mg/kg	Annually	Annually
Beryllium	mg/kg	Annually	Annually
Cobalt	mg/kg	Annually	Annually
Mercury	mg/kg	Annually	Annually
Molybdenum	mg/kg	Annually	Annually
Selenium	mg/kg	Annually	Annually

SURFACE IMPOUNDMENTS MONITORING CONSTITUENTS (Continued)			
Parameters[1]	**Units**	**Sampling Frequency**	**Sampling Frequency**
General Parameters and Metals – Sludge (Continued)			
Silver	mg/kg	Annually	Annually
Thallium	mg/kg	Annually	Annually
Vanadium	mg/kg	Annually	Annually
Volatile Organic Compounds – Sludge			
1,1,1-Trichloroethane	µg/kg	Quarterly	Quarterly
Benzene	µg/kg	Quarterly	Quarterly
Ethylbenzene	µg/kg	Quarterly	Quarterly
Methylene Chloride	µg/kg	Quarterly	Quarterly
Tetrachloroethene	µg/kg	Quarterly	Quarterly
Toluene	µg/kg	Quarterly	Quarterly
Trichloroethene	µg/kg	Quarterly	Quarterly
Xylene	µg/kg	Quarterly	Quarterly
Semi-Volatile Organic Compounds - Sludge			
2-Methylphenol	µg/kg	Quarterly	Quarterly
3-Methylphenol	µg/kg	Quarterly	Quarterly
Naphthalene	µg/kg	Quarterly	Quarterly
Phenol	µg/kg	Quarterly	Quarterly

GROUNDWATER MONITORING CONSTITUENTS			
Parameters[1]	**Units**	**Sampling Frequency**	**Reporting Frequency**
Field Parameters - Liquid			
Depth to Groundwater	feet below ground surface	Quarterly	Quarterly
pH	pH units	Quarterly	Quarterly
Specific Conductance	µS/cm	Quarterly	Quarterly
Temperature	degrees Fahrenheit or Celsius	Quarterly	Quarterly
Turbidity	NTU	Quarterly	Quarterly
General Parameters			
Chloride	mg/L	Quarterly	Quarterly
Sulfate	mg/L	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Quarterly	Quarterly
Volatile Organic Compounds Constituents of Concern - Liquid			
1,1,1-Trichloroethane	µg/L	Quarterly	Quarterly
Benzene	µg/L	Quarterly	Quarterly
Ethylbenzene	µg/L	Quarterly	Quarterly
Methylene Chloride	µg/L	Quarterly	Quarterly
Tetrachloroethene	µg/L	Quarterly	Quarterly
Toluene	µg/L	Quarterly	Quarterly

GROUNDWATER MONITORING CONSTITUENTS (Continued)			
Parameter	**Units**	**Sampling Frequency**	**Reporting Frequency**
Volatile Organic Compounds Constituents of Concern – Liquid (Continued)			
Trichloroethene	µg/L	Quarterly	Quarterly
Xylene	µg/L	Quarterly	Quarterly
Five-Year Constituents of Concern - Liquid[4]			
Cyanide, Total	µg/L	5 year	5 year
Dioxins	µg/L	5 year	5 year
Furans	µg/L	5 year	5 year
Herbicides	µg/L	5 year	5 year
Organochlorine Pesticides	µg/L	5 year	5 year
Organophosphorus Pesticides	µg/L	5 year	5 year
Polychlorinated Biphenyls and Pesticides	µg/L	5 year	5 year
Semi-volatile Organic Compounds	µg/L	5 year	5 year
Sulfide	mg/L	5 year	5 year
Volatile Organic Compounds[5]	µg/L	5 year	5 year
CAM 17 Metals[6]			
Antimony	mg/L	5 year	5 year
Arsenic	mg/L	5 year	5 year
Barium	mg/L	5 year	5 year
Beryllium	mg/L	5 year	5 year
Cadmium	mg/L	5 year	5 year
Chromium, Total	mg/L	5 year	5 year
Cobalt	mg/L	5 year	5 year
Copper	mg/L	5 year	5 year
Lead	mg/L	5 year	5 year
Mercury	mg/L	5 year	5 year
Nickel	mg/L	5 year	5 year
Selenium	mg/L	5 year	5 year
Silver	mg/L	5 year	5 year
Thallium	mg/L	5 year	5 year
Vanadium	mg/L	5 year	5 year
Zinc	mg/L	5 year	5 year

[1]With the exception of field parameters, analyses must be conducted in a laboratory certified to perform such analyses (i.e., a California Environmental Laboratory Accreditation Program accredited laboratory) or a laboratory approved by the Water Board.
[2]If a batch discharge of effluent is planned, the Discharger must sample and analyze each batch for all constituents listed under surface impoundment monitoring for liquid. The conditions under which the Discharger may discharge in batches is discussed in the summary of the Bypass Prevention Program contained in Board Order No. R6V-2021-Proposed, Waste Discharge Requirements, Section III.A.18.
[3]Use USEPA Method 1664 or equivalent method that has been reviewed and approved.

[4]As defined in Appendix II, 40 CFR, part 258, except where noted.
[5]As defined in Appendix I, 40 CFR, part 258.
[6]CAM 17 Metals as defined in California Code of Regulations, title 22, section 66261.24.

µg/kg – Micrograms per kilogram.
µg/L – Micrograms per liter.
µS/cm – Microsiemens per centimeter.
CAM – California Assessment Manual
CFR – Code of Federal Regulations.
mg/kg – Milligrams per kilogram.
mg/L – Milligrams per liter.
NTU – Nephelometric Turbidity Unit.
USEPA – United States Environmental Protection Agency

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

GENERAL PROVISIONS
FOR MONITORING AND REPORTING

1. SAMPLING AND ANALYSIS

   a. All analyses shall be performed in accordance with the current edition(s) of the following documents:

      i. Standard Methods for the Examination of Water and Wastewater

      ii. Methods for Chemical Analysis of Water and Wastes, EPA

   b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.

   c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.

   d. The Discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.

   e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.

   f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.

   g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

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

b. Operational Log

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

3. REPORTING

a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.

b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.

d. Monitoring reports shall be signed by:

i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;

ii. In the case of a partnership, by a general partner;

iii. In the case of a sole proprietorship, by the proprietor; or

iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

e. Monitoring reports are to include the following:

i. Name and telephone number of individual who can answer questions about the report.

ii. The Monitoring and Reporting Program Number.

iii. WDID Number.

f. Modifications

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

4. NONCOMPLIANCE

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

ENCLOSURE 2

Lahontan Regional Water Quality Control Board

April 23, 2021

WDID No. 6B369509001

James Fejeran
Marine Corps Logistics Base
Environmental Division
PSC Box 110570
Barstow, CA 92311-0570
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Response to MCLB Barstow Staff Comments on the Tentative Revised Waste Discharge Requirements for United States Marine Corps Logistics Base, Yermo Annex Industrial Wastewater Treatment and Recycling Facility, San Bernardino County

Lahontan Regional Water Quality Control Board (Water Board) staff reviewed your transmitted e-mails dated February 24, March 4, and March 29, 2021, providing additional information regarding the Tentative Revised Waste Discharge Requirements for United States Marine Corps Logistics Base, Yermo Annex Industrial Wastewater Treatment and Recycling Facility. This letter provides Water Board staff's formal responses to your comments in the enclosed table.

If you have any questions, please contact me at (760) 241-7241 or at christopher.avalos@waterboards.ca.gov or William Muir, Senior Engineering Geologist, at (760) 241-3523 or at william.muir@waterboards.ca.gov.

for Christopher Avalos
Engineering Geologist

Enc: Table 1 – Water Board Responses to MCLB Barstow Comments – Tentative Revised Waste Discharge Requirements for United States Marine Corps Logistics Base, Yermo Annex Industrial Wastewater Treatment and Recycling Facility

cc: Mark Ulibarri, MCLB Barstow, mark.ulibarri@usmc.mil

Table 1 – Water Board Responses to MCLB Barstow Comments – Tentative Revised Waste Discharge Requirements for United States Marine Corps Logistics Base, Yermo Annex Industrial Wastewater Treatment and Recycling Facility

MCLB Barstow Comments	Water Board Staff Responses
On February 24, 2021, MCLB Barstow staff shared with Water Board staff (via e-mail) the following informational statement that included forwarded internal MCLB Barstow staff discussion: "Hopefully you can provide guidance in regards to the condensate line that runs from behind building 574 (old boiler plant) to the IWTRF. This line has been shut down since 2004 or 2006 is what Mark Ulibarri can recall and this line used to have boiler plant water, cooling tower water and condensate water going through. Per emails below the line was pressure tested and there were no leaks. From what Mark and I discussed, the line was shut because the leak detection system failed and not working. We wanted to know that with the Boiler Plant not operational and only cooling tower water and condensate water will be going to the IWTRF, will we still need the leak detection system on this condensate line operational before sending water to the IWTRF? Your assistance on this matter will be greatly appreciated. Please advise."	On February 24, 2021, Water Board staff replied to the MCLB Barstow staff's e-mail asking that MCLB Barstow staff confirm that they were formally requesting to reuse the pipeline. Additionally, Water Board staff stated that the leak detection system should be tested and proven to be operational before it could be used again.
In response to Water Board staff's February 24, 2021 e-mail, on March 4, 2021, MCLB Barstow staff transmitted the following e-mail (that also included forwarded internal MCLB Barstow staff discussion): "Per email below will there be any additional recommendation the Water Board will require to get this condensate line operational again? Please advise."	Based on MCLB Barstow staff's March 4, 2021 e-mail and internal MCLB Barstow staff discussions transmitted within this email, Water Board staff interpreted MCLB Barstow staff's intent to pursue the reuse of the pipeline. Water Board staff once again reiterated our request that the leak detection system be tested and proven to be operational before the pipeline is put back to use. Water Board staff stated that if the leak detection system is tested and repaired, the system's description and possibly additional periodic monitoring requirements for the leak detection system would be necessary and would need to be included in the Board Order. Water Board staff recommended that

	MCLB Barstow staff set up a conference call with us if they wished to discuss this matter further.
On March 29, 2021, MCLB Barstow staff requested (via e-mail) a conference call with Water Board staff to further discuss the use of the pipeline.	On April 14, 2021, Water Board and MCLB Barstow staff discussed the pipeline use during a conference call. The pipeline had been equipped with a leak detection system to ensure that leaked wastewater did not commingle with previously contaminated soils underneath the hardstand in the area that is currently being remediated under MCLB Barstow's Installation Restoration Program. Based on the information provided by MCLB Barstow staff, Water Board staff revised the first paragraph of Finding 4 of the Tentative Board Order to reflect the true nature of the collection system upgradient of the Treatment System as follows. Lined-out text denotes omitted text; lined text denotes added text: Water influent is fed to the Treatment Plant via a collection system. The portion of the collection system under the main portion of the MDMC is constructed of cast iron sewer pipe. ~~The rest of the system consists of interceptor sewer constructed of approximately 500 linear feet of underground dual-walled fiberglass pipe, 500 linear feet of above ground polypropylene-lined steel pipe, and approximately 1,200 linear feet of underground dual-walled polyvinyl chloride pipe. The underground dual-walled pipelines are equipped with electronic monitoring systems to detect fluid leaks from the inner pipe.~~ Water from the MDMC is collected through the cast iron sewer pipe and emptied in a wet well then transferred to the Treatment Plant via an above ground, 2,400-foot long, 3-inch diameter steel pipe. Additionally, a polyvinyl chloride transfer pipe for condensation water from two stationary compressors and cooling tower water at Building 574 to the Treatment Plant is present. This double-walled polyvinyl chloride pipeline is equipped with an electronic monitoring system to detect fluid leaks from the inner pipe. Discharger records show that the double-walled transfer pipe leak detection system stopped working in 2005 and transfer of wastewater via this pipe was ceased. Since then, condensation water from two stationary air compressors and cooling tower

	water is transferred via vacuum truck from Building 574 to the wet well weekly and/or as needed. Additionally, the following General Requirements and Prohibitions were added to Section III.A.3 of the Board Order to allow for transfer of wastewater via vacuum truck with applicable best management practices in place to limit spills and to note the requirement that a working electronic monitoring system be in place at the pipeline before MCLB Barstow can reuse it. 3. The Discharger may continue to transfer wastewater from Building 574 to the wet well noted in Finding 4 or influent waste stream of the Treatment Plant via vacuum truck while the dual-walled transfer pipe from Building 574 remains offline. BMPs must be employed during this transfer of wastewater to avoid spills. The Discharger may recommence use of the dual-walled transfer pipe provided a report is first submitted to the Water Board showing that the leak detection system for this pipeline is operable and working as designed and Water Board staff accepts the report.