



Central Valley Regional Water Quality Control Board

14 December 2021

Talle Lopez, Director Env Affairs
California Water Service Company
1720 N. First Street
San Jose, CA 95112

CERTIFIED MAIL
7018 1830 0001 2774 8197

NOTICE OF APPLICABILITY

CENTRAL VALLEY WATER BOARD RESOLUTION R5-2018-0085; WAIVER OF REPORTS OF WASTE DISCHARGE AND WASTE DISCHARGE REQUIREMENTS FOR SPECIFIC TYPES OF DISCHARGE WITHIN THE CENTRAL VALLEY REGION; CALIFORNIA WATER SERVICE COMPANY; BAKERSFIELD DISTRICT STATION 225-01 WATER TREATMENT SYSTEM BACKWASH; KERN COUNTY

On 16 September 2021, California Water Service Company (or Discharger) submitted a Report of Waste Discharge (RWD) for coverage under Resolution R5-2018-0085, *Approving Waiver of Reports of Waste Discharge and Waste Discharge Requirements for Specific Types of Discharge Within the Central Valley Region* (or Low Threat Waiver) for the discharge of backwash water from a water treatment system for Bakersfield District Station 225-01. According to the RWD, the water treatment system is intended to reduce arsenic concentrations in the well water in order to meet drinking water requirements.

Based on the information provided in the RWD, the discharge meets the required conditions for approval under the Low Threat Waiver. You are hereby assigned enrollee number **R5-2018-0085-0063**. Please include this number on all correspondence related to this discharge. A [copy of the Low Threat Waiver](#) is enclosed and available on the Central Valley Water Board's website at (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf).

Please familiarize yourself with the contents of the Low Threat Waiver, including the Conditions of Discharge (Attachment A of the Low Threat Waiver). The discharge must be managed in accordance with the requirements contained in the Conditions of Discharge and with the information submitted in the RWD and this Notice of Applicability (NOA). The Low Threat Waiver will expire on **7 December 2023**. Prior to this date, the Discharger shall contact the Central Valley Water Board and either cease the discharge or submit a new

DENISE KADARA, ACTING CHAIR | PATRICK PULUPA, EXECUTIVE OFFICER

RWD and application fee to continue the discharge under a renewed waiver, general order, or individual waste discharge requirements.

In accordance with the requirements in Attachment A of the Low Threat Waiver for filter backwash discharges (Table 1, Category 13), this NOA is accompanied by Monitoring and Reporting Program (MRP) R5-2018-0085-0063 to ensure compliance with the conditions in the Low Threat Waiver.

LOCATION

The Discharger is installing an arsenic water treatment system for the Bakersfield District Station 225-01 at 8403 Wible Road in Bakersfield, Kern County, as shown in **Attachment A** (35° 16' 47.05" N, 119° 02' 27.15" W). This portion of Kern County is within the Tulare Lake Basin.

The operative Water Quality Control Plan for the Tulare Lake Basin (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve water quality objectives for all waters of the basin.

DISCHARGE DESCRIPTION

California Service Water Company is installing a wellhead water treatment system at the Bakersfield District Station 225-01 to remove arsenic from groundwater to meet drinking water standards. The water treatment system consists of two De Nora Sorb 33 Model EAS-4710 vessels operated in parallel, which contain Bayoxide E33, a granular ferric oxide media used to capture arsenic and remove it from the well water.

According to the RWD, the vessels are expected to be backwashed on a quarterly basis, or whenever the pressure differential across the vessels exceeds 10 pounds per square inch (psi), to remove sediment buildup and accumulation of calcium and biofilm within the system. The backwash cycle will last about 12 minutes and discharge approximately 10,320 gallons per event. Backwash water will be discharged to an onsite unlined sump with a storage capacity of about 300,000 gallons. A conceptual flow diagram of the backwash cycle is included as **Attachment B**.

According to the informational brochure provided with the RWD, the Bayoxide media has a high capacity for arsenic reducing levels to < 4 µg/L and has a very low arsenic residual in the backwash. The quality of the backwash water is expected to be similar to the quality of the raw well water entering the system with the addition of suspended solids flushed from the vessels. In addition, the discharge may have elevated iron concentrations in the backwash water from the ferric oxide media. According to the RWD, if elevated iron becomes an issue, a filter will be added to the backwash system to remove excess iron from the discharge. The MRP requires the Discharger to sample the backwash discharge for iron, and this NOA requires the Discharger to install the necessary filter to remove iron from the backwash if the backwash iron concentration exceeds the secondary MCL of 300 µg/L.

A sample of the raw well water quality at Station 255-01, collected on 25 June 2020, is provided in Table 1 below.

Table 1: Well Water Quality Bakersfield District Station 225-01 (Raw)

Parameter	Unit	Station 255-01	MCL
pH	pH unit	8.0	--
Electrical Conductivity (EC)	µmhos/cm	380	500 – 1,000
Nitrate as N	mg/L	1.8	10
Chloride	mg/L	--	250 – 500
Aluminum	µg/L	<50	10
Antimony	µg/L	<6	0.005
Arsenic	µg/L	8.5	10
Cadmium	µg/L	<1	5
Total Chromium	µg/L	<10	100
Copper	µg/L	<50	1,000
Iron	µg/L	<100	300
Mercury	µg/L	<1	2
Manganese	µg/L	<20	50
Nickel	µg/L	<10	--
Lead	µg/L	<5	15
Selenium	µg/L	<5	50
Zinc	µg/L	<50	5,000

Additional information on water quality for the well at Bakersfield Station 255-01 can be found on the [Division of Drinking Water's Public Water Systems Database](https://sdwis.waterboards.ca.gov/PDWW/JSP/WaterSystemDetail.jsp?tinwsys_is_number=1735&tinwsys_st_code=CA&wsnumber=CA1510003) at:

(https://sdwis.waterboards.ca.gov/PDWW/JSP/WaterSystemDetail.jsp?tinwsys_is_number=1735&tinwsys_st_code=CA&wsnumber=CA1510003)

FACILITY-SPECIFIC REQUIREMENTS

The Low Threat Waiver and this NOA covers the discharge of filter backwash water from the arsenic water treatment system for the Bakersfield District Station 225-01. The Discharger shall comply with the requirements specified in the Low Threat Waiver and the facility-specific requirements listed below.

1. Discharge of filter backwash water shall be conducted as described in the RWD and in accordance with the requirements contained in the Low Threat Waiver.
2. Discharge of filtered backwash water at a location or in a manner different from that described in this NOA is prohibited.
3. If iron concentrations detected in the backwash sample exceeds the Secondary MCL of 300 µg/L, the Discharger shall install a filter on the backwash system.

4. The Discharger shall comply with the attached Monitoring and Reporting Program (MRP) R5-2018-0085-0063.
5. Runoff or discharge of filter backwash water to a wetland, surface water (other than the onsite storage basin specified above), surface water drainage course, or biologically or culturally sensitive area is prohibited.
6. Failure to comply with the requirements of this NOA, attached MRP, and the Low Threat Waiver, could result in enforcement actions as authorized by provisions of the California Water Code.
7. The Discharger shall notify the Central Valley Water Board of any change in agreement or proposed use of the discharge of backwash water as described in the RWD and this NOA.

All monitoring reports and other correspondence should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50 MB should be emailed to: centralvalleyfresno@waterboards.ca.gov.

To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email or any documentation submitted to the mailing address for this office:

Facility Name: Bakersfield District Station 225-01 Water System Backwash
Program: NON-15.
Resolution: R5-2018-0085-0063
CIWQS Place ID: 877966

Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to:

Central Valley Regional Water Quality Control Board Fresno Office
1685 E Street
Fresno, CA 93706

All documents, including responses to inspections and written notifications, submitted to comply with this Waiver shall be directed, via the paperless office system, to the Compliance and Enforcement Unit, attention to Russell Walls. Mr. Walls can be reached at (559) 488-4392 or Russell.Walls@waterboards.ca.gov. Questions regarding the permitting aspects of the Waiver, and notification for termination of coverage under the Waiver, shall be directed, via the paperless office system, to the Waste Discharge Requirements Permitting Unit, attention Katie Carpenter. Ms. Carpenter can be reached at (559) 445-5551 or by email at Katie.Carpenter@waterboards.ca.gov.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the NOA and the conditions specified in the Low Threat Waiver, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Resources Control Board must receive the petition by 5:00 p.m., 30 days after the date of this NOA, 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 Resources Control 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 or will be provided upon request.
(http://www.waterboards.ca.gov/public_notices/petitions/water_quality).

Original Signed by Clay L. Rodgers for:
Patrick Pulupa,
Executive Officer

Attachments: Attachment A – Site Plan
Attachment B – Conceptual Flow Diagram

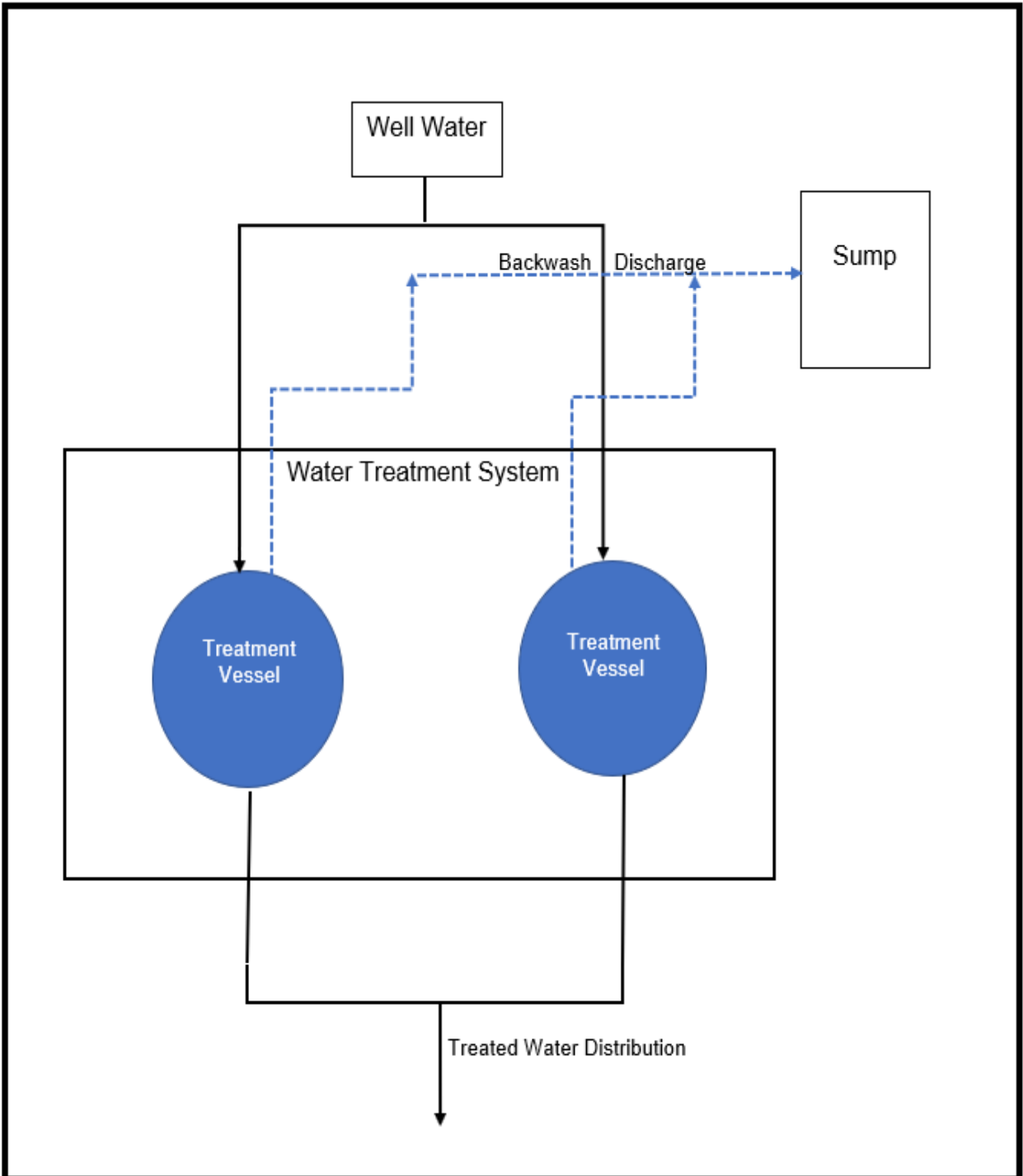
Enclosures: Low Threat Waiver Resolution R5-2018-0085
Monitoring and Reporting Program R5-2018-0085-0063

cc w/o encs.: David Lancaster, State Water Resources Control Board, OCC (via email)
Laurel Warddrip, State Water Resources Control Board, DWQ (via email)
Russell Walls, Central Valley Water Board, (via email)
Chad Fisher, State Water Board Division of Drinking Water, (via email)
Kern County Environmental Health Department, Bakersfield
Neil McQueen, McQueen Environmental Consulting, (via email)

ATTACHMENT A – Site Plan



ATTACHMENT B – Conceptual Flow Diagram



Design Reference: Conceptual representation of backwash cycle

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

**MONITORING AND REPORTING PROGRAM R5-2018-0085-0063
FOR
CALIFORNIA WATER SERVICE COMPANY
BAKERSFIELD DISTRICT STATION 225-01
WATER TREATMENT SYSTEM BACKWASH
KERN COUNTY**

On **14 December 2021** the Central Valley Regional Water Quality Control Board (Central Valley Water Board) Executive Officer issued the California Water Service Company (Discharger) a Notice of Applicability (NOA) R5-2018-0085-0063, for coverage under Resolution R5-2018-0085, *Approving Waiver of Reports of Waste Discharge and Waste Discharge Requirements for Specific Types of Discharge Within the Central Valley Region* (Low Threat Waiver or Waiver). The NOA is for the discharge of filter backwash water to land from the arsenic removal water treatment system at Bakersfield District Station 225-01 at 8403 Wible Road in Kern County. This Monitoring and Reporting Program (MRP) is issued pursuant to California Water Code section 13267. The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP.

Section 13267, subsection (b)(1) of the California Water Code states:

“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 proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”

The Discharger owns the water treatment system subject to NOA R5-2018-0085-0063, and the monitoring reports are necessary to ensure the Discharger complies with the NOA and the conditions specified in the Low Threat Waiver. Pursuant to Water Code section 13268, the Discharger shall implement this MRP and shall submit the monitoring reports described herein.

Section 13268 of the California Water Code states, in part:

“(a)(1) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, failing or refusing to furnish

a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying and information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b)

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.”

A glossary of terms used in this MRP is included on the last page.

I. GENERAL MONITORING REQUIREMENTS

A. FLOW MONITORING

Hydraulic flow rates shall be measured at the monitoring points specified in this MRP. All flow monitoring systems shall be appropriate for the conveyance system (i.e., open channel flow or pressure pipeline) and liquid type. The measurements may be based on flow meter readings or pump run time estimate. The method of measurement must be specified. Unless otherwise specified, each flow meter shall be equipped with a flow totalizer to allow reporting of cumulative volume as well as instantaneous flow rate. Flow meters shall be calibrated at the frequency recommended by the manufacturer; typically, at least once per year and records of calibration shall be maintained for review upon request.

B. MONITORING AND SAMPLING LOCATIONS

Samples shall be obtained at the monitoring points specified in this MRP. The Central Valley Water Board Executive Officer shall approve any proposed changes to sampling locations prior to implementation of the change.

The Discharger shall monitor the following locations to demonstrate compliance with the requirements of this MRP:

Table 1. Bakersfield District Station 225-01 Monitoring Locations

Monitoring Location	Monitoring Location Description
EFF-001	Location where a sample of the backwash water can be collected prior to discharge to the onsite sump.
Basin-01	Onsite sump used for disposal of backwash water.

C. SAMPLING AND SAMPLE ANALYSIS

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. Except as specified otherwise in this MRP, grab samples will be considered representative of water, wastewater, soil, solids/sludges and groundwater. The time, date, and location of each sample shall be recorded on the sample chain of custody form.

Field test instruments (such as those used to measure pH, temperature, electrical conductivity, dissolved oxygen, wind speed, and precipitation) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated at the frequency recommended by the manufacturer;
3. The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

Laboratory analytical procedures shall comply with the methods and holding times specified in the following (as applicable to the medium to be analyzed):

- *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA);
- *Test Methods for Evaluating Solid Waste* (EPA);
- *Methods for Chemical Analysis of Water and Wastes* (EPA);
- *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA);
- *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and
- *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125).

Approved editions shall be those that are approved for use by the United States Environmental Protection Agency (US EPA) or the State Water Resources Control Board (State Water Board), Division of Drinking Water's Environmental Laboratory Accreditation Program (ELAP). The Discharger may propose alternative methods for approval by the Executive Officer. Where technically feasible, laboratory reporting limits shall be lower than the applicable water quality objectives for the constituents to be analyzed.

II. SPECIFIC MONITORING REQUIREMENTS

A. WATER SYSTEM BACKWASH

Monitoring of the backwash water from the Water System shall consist of the following:

Effluent Monitoring

The Discharger shall monitor the backwash water. Samples shall be taken of the backwash water at **EFF-001** after it leaves the vessels but before it enters the onsite sump. At a minimum, effluent monitoring shall consist of the following:

Table 2. Effluent Monitoring

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sample Frequency</u>	<u>Reporting Frequency</u>
Flow	gallons	Meter	Continuous	Quarterly
pH	pH units	Grab	Once/event (see 1 below)	Quarterly
EC	µmhos/cm	Grab	Once/event (see 1 below)	Quarterly
Arsenic	µg/L	Grab	Quarterly/Annually (see 2 below)	Quarterly
Iron	µg/L	Grab	Quarterly/Annually (see 2 below)	Quarterly
General Minerals	various	Grab	Once (see 3 below)	Quarterly

1. Samples shall be collected once during each backwash event.
2. Samples shall be collected quarterly for four quarters (or four consecutive backwash events) and then annually thereafter.
3. Samples shall be collected once during the first backwash event.

B. BASIN MONITORING

The Discharger shall inspect the onsite sump at **Basin-01** prior to and during each backwash event. The results of the inspection shall be included as part of the quarterly monitoring reports. Basin monitoring shall include the following:

Table 3. Basin Monitoring

<u>Constituent</u>	<u>Units</u>	<u>Sample Type</u>	<u>Reporting Frequency</u>
Freeboard	Feet	Measurement	Quarterly
Nuisance Odors or Vectors	--	Observation	Quarterly
Berm Condition	--	Observation	Quarterly

C. SOLIDS DISPOSAL MONITORING

The Discharger shall report the handling and disposal of all solids associated with the water treatment system and discharge of backwash water (e.g., filter material, sludge from the unlined basin, etc.). Records shall include the name/contact information for the hauling company, the type and amount of waste transported, the date removed, the disposal facility name and address, and copies of any analytical data required by the entity accepting the waste. These records shall be submitted as part of the annual monitoring report.

III. REPORTING REQUIREMENTS

All monitoring reports should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: centralvalleyfresno@waterboards.ca.gov. Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to the following address:

Central Valley Regional Water Quality Control Board
Region 5 – Fresno Office
1685 “E” St.
Fresno, California 93706

To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email or transmittal sheet:

Program: Non-15,
Facility: Bakersfield District Station 225-01 - Water System Backwash
Order: R5-2018-0085-0063
County: Kern
Place ID: 877966

A transmittal letter shall accompany each monitoring report. The letter shall include a discussion of all violations of this MRP during the reporting period and actions taken or planned for correcting each violation. If the Discharger has previously submitted a report describing corrective actions taken and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by the Discharger or the Discharger’s authorized agent certifying under penalty of perjury that the report is true, accurate and complete to the best of the signer’s knowledge.

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, groundwater, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and

spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

Laboratory analysis reports shall be included in the monitoring reports. All laboratory reports must also be retained for a minimum of three years. For a discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

Monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

All monitoring reports that involve planning, investigation, evaluation or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

A. QUARTERLY MONITORING REPORTS

Quarterly Monitoring Reports shall be submitted to the Central Valley Water Board by **1st day of the second month after the quarter** (i.e., the 1st Quarter [January – March] quarterly report is due 1st May). Each Quarterly Monitoring report shall include the following:

1. Results of all required monitoring data shall be presented in tabular format. If no discharge occurred during the quarter the report shall so state.
2. Copies of all laboratory analytical report(s) and chain of custody form(s) for in-house and contracted laboratory analyses.
3. The names and contact information for the operator(s) responsible for operation, maintenance, and monitoring of the water treatment system and discharge of filter backwash water.
4. A discussion and summary of the compliance record for the reporting period identifying all corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into compliance with the NOA and/or Low Threat Waiver.
5. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Resources Control Board must receive the petition by 5:00 p.m., 30 days after the date of this MRP, 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 Resources Control 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 (http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided on request.

The Discharger shall begin implementing the above monitoring program the date of this MRP.

Ordered by: *Original Signed by Clay L. Rodgers for:*

PATRICK PULUPA, Executive Officer

12/14/2021

(Date)

IV. GLOSSARY

BOD ₅	Five-day biochemical oxygen demand
CaCO ₃	Calcium carbonate
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
TDS	Total dissolved solids
TKN	Total Kjeldahl nitrogen
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-hr Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots over a 24-hour period.
Daily	Every day except weekends or holidays.
Once/event	Once per backwash event.
Twice Weekly	Twice per week on non-consecutive days.
Weekly	Once per week.
Twice Monthly	Twice per month during non-consecutive weeks.
Monthly	Once per calendar month.
Quarterly	Once per calendar quarter.
Semiannually	Once every six calendar months (i.e., two times per year) during non-consecutive quarters.
Annually	Once per year. Annual samples shall be collected in the third quarter between July and September.
mg/L	Milligrams per liter
mg/kg	Milligrams per kilogram
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
gpd	Gallons per day
mgd	Million gallons per day
General Minerals	Analysis shall include; alkalinity (as CaCO ₃), bicarbonate (as CaCO ₃), boron, calcium, carbonate (as CaCO ₃), chloride, iron, magnesium, manganese, nitrate as N, phosphate, potassium, sodium, sulfate, total dissolved solids, and verification that the analysis is complete (i.e., cation/anion balance).