

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2015-0012-001-01

FOR
GROUNDWATER REMEDIATION PROJECT
AND DISCHARGE OF TREATED GROUNDWATER TO LAND
NESTLÉ USA, INC.
FORMER RIPON FACILITY AT 230 INDUSTRIAL AVENUE
SAN JOAQUIN COUNTY

This Monitoring and Reporting Program (MRP) is issued to Nestlé USA, Inc. (Discharger) by the Executive Officer of the Central Valley Regional Water Quality Control Board (Central Valley Water Board) pursuant to Water Code section 13267. This Order describes requirements for monitoring the use of treated groundwater for surface irrigation or injection into the Upper Aquifer (“A-Zone”) and Intermediate Aquifer (“C1-Zone”) in areas affected by contamination associated with the former Nestle Facility in Ripon, California (Figure 1). Currently, the Discharger’s comprehensive, site-wide well monitoring program is administered under Revised MRP No. R5-2014-0815, as issued in April 2014 and most recently revised on 6 April 2022. This MRP augments MRP No. R5-2014-0815 and includes requirements specific to injection or reuse for irrigation of treated groundwater. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form.

GROUNDWATER TREATMENT MONITORING

The Discharger operates two groundwater treatment systems, one at 223 North Walnut Avenue (the “Walnut System”) and one at the Ripon Unified School District (RUSD) property located at 301 North Acacia Avenue (the “North Area System”). The Walnut System extracts groundwater from two wells (EU-5 and EU-6), treats the water with granular activated carbon (GAC), and injects the treated water into three injection wells (M-2A, IU-1, and IU-2) located at the site. Another on-site well (EU-3) is available as a backup injection well. The North Area System extracts groundwater from two wells (RPS-1 and RPS-3), treats the water with GAC, and injects the treated water into two injection wells (IW-1 and IW-2) located at the RUSD property. The treated water from the North Area System will also be used for irrigation at the RUSD property on an as-needed basis. Well locations are shown on Figure 2.

The effluent of each groundwater treatment system shall be monitored in accordance with the frequency found in Table 1 using the analytical methods provided in Table 3, below.

Table 1: Groundwater Treatment System Monitoring

Sample Location	Target Parameters	Frequency
Influent	Volatile Organic Compounds	Quarterly
Mid-Point	Volatile Organic Compounds	Monthly
Effluent	Volatile Organic Compounds	Monthly
Effluent	pH, temperature, specific electrical conductance, dissolved oxygen, and total dissolved solids	Twice per Month

Discharger shall report all Volatile Organic Compound (VOC) detections in effluent to Regional Board staff within 24 hours of receipt of lab results. Discharger shall immediately shutdown the treatment plant if VOCs are detected in effluent samples at concentrations equal to or above Federal or State Maximum Contaminant Levels (MCLs). Detections of VOCs at or above MCLs in the mid-point sample shall trigger a carbon change-out within thirty (30) days.

GROUNDWATER MONITORING

The designated groundwater monitoring wells to be used for background, performance monitoring, and compliance monitoring purposes for each treatment system are shown in Table 2. Sampling of the designated monitoring wells shall be conducted in accordance with the frequency listed in Table 2, using the analytical methods listed in Table 3, and performing the field sampling found in Table 4, below.

Table 2: Well Sampling

Well ID ¹	Monitoring Objective	VOCs	TDS, Fe, Mn, As	Sampling Frequency
WALNUT SYSTEM				
M-15A	Background		X	Quarterly for one year, then semi-annually.
M-10A	Performance	X		
Walnut System EFF	Compliance	X	X	
M-56A	Compliance	X		
M-57A	Compliance	X		
NORTH AREA SYSTEM				
RPS-1	Background		X	Quarterly for One year, then semi-annually.
M-27C	Performance	X		
RC-2	Compliance	X		
North Area System EFF	Compliance	X	X	

¹ "A" represents a well in the A Zone of the Shallow Aquifer (approximate depth range of 50 to 110 feet bgs), and "C" represents a well in the C1 or C2 Zones of the Intermediate Aquifer (approximate depth range of 110 to 188 feet bgs).

Table 3: Analytical Methods

Constituent	Method ^{2,3}	Maximum Practical Quantitation Limit (µg/L)
VOCs	EPA 8260B	0.5
Dissolved Iron, Manganese, and Arsenic	EPA 6020	100
TDS	Field Measurement ⁴	10,000

FIELD SAMPLING

In addition to the above sampling and laboratory analyses, field sampling and analysis shall be conducted each time a monitoring or extraction well is sampled. The sampling and analysis of field parameters shall be as specified in Table 4.

Table 4: Field Sampling Requirements

Parameters	Units	Practical Quantitation Limit	Type of Sample
Volume Purged	Gallons	0.1 gallons	Measurement
Groundwater Elevation	Feet	0.01 feet	Measurement
Electrical Conductivity	µS/cm	50 µS/cm	Grab
Dissolved oxygen	mg/L	0.1 mg/L	Grab
Oxidation-reduction potential	millivolts	10 mV	Grab
pH	pH units	0.1 units	Grab
Temperature	°F/°C	0.1 °F/°C	Grab

All wells that are purged shall be purged until pH, temperature, and conductivity are within 10% of the previous value.

Field test instruments (such as those used to test pH) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are calibrated prior to each monitoring event;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are appended to the required quarterly and annual monitoring reports.

² Discharger must analyze and report the full suite of VOCs.

³ Or an equivalent EPA Method that achieves the maximum practical quantitation limit. All concentrations between the method detection limit and the practical quantitation limit shall be reported as an estimated value.

⁴ In a December 2017 memorandum, ECM Consultants compared field measurements for TDS (which is based on electrical conductivity) to laboratory analytical results for TDS and demonstrated that there is less than 5% variance between the two methods. Field measurement of TDS have been conducted at the Walnut System since 2017.

DISCHARGE MONITORING

The Discharger shall monitor twice per month the discharge of treated groundwater that is injected into the A-Zone and C1-Zone according to the requirements specified in Table 5. The Discharger shall also monitor twice per month the discharge of treated groundwater that is applied above land surface for irrigation.

Table 5: Discharge Monitoring Requirements

Parameters	Units	Type of Sample
Injected volume	Gallons	Totalizer
Volume applied for irrigation	Gallons	Totalizer

ESTABLISHMENT OF BACKGROUND CONCENTRATION VALUES

The Discharger shall develop background values for concentrations of the following constituents in groundwater: TDS, dissolved iron, dissolved manganese, and dissolved arsenic. The background values shall be developed following the procedures found in California Code of Regulations, title 27, section 20415, subdivision (e)(10). The Discharger shall submit a proposal to develop the background concentrations by June 30, 2023.

REPORTING

When reporting the data, the Discharger shall arrange the information in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner as to clearly illustrate compliance with this Order. In addition, the Discharger shall notify the Central Valley Water Board within 48 hours of any unscheduled shutdown of any groundwater extraction system. The results of any monitoring done more frequently than required at the locations specified in the MRP shall also be reported to the Central Valley Water Board.

As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, all reports shall be prepared by a registered professional Civil Engineer or Geologist or their subordinate and signed by the registered professional.

The site-wide groundwater monitoring program (Revised MRP No. R5-2014-0815) requires the Discharger to submit quarterly electronic reports, which conform to the requirements of the California Code of Regulations, title 23, division 3, chapter 30. The quarterly reports are submitted electronically over the internet to the Geotracker database system by **15 May, 15 August, and 15 November** until such time as the Executive Officer determines that the reports are no longer necessary, or until a revised reporting schedule is approved for MRP No. R5-2014-0815. The 4th Quarter data is included in the Annual Report, which is submitted by **31 March** of each year. The information required to be reported under this MRP (MRP No. R5-2015-0012-001) shall be included in the quarterly and annual reports for Revised MRP No. R5-2014-0815.

A letter transmitting the monitoring reports shall accompany each report. The letter shall include a discussion of requirement violations found during the reporting period and actions taken or planned for correcting noted violations, such as operational or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by:

PATRICK PULUPA
Executive Officer

12 May 2023

(Date)

08/15/22, 12/19/22, and 2/27/23: ALG

FIGURE 2 - WELL LOCATION MAP

