CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2015-0012-086
FOR
IN-SITU GROUNDWATER REMEDIATION
AND DISCHARGE OF TREATED GROUNDWATER TO LAND

This Monitoring and Reporting Program (MRP) describes requirements for monitoring a groundwater remediation project for the Former J.R. Simplot (Simplot) agricultural chemical distribution facility at 6245 Winton Way in Winton, Merced County (Site). This MRP is issued to Miller Springs Remediation Management, Inc. (MSMRI), Glenn Springs Holdings (GSH), and Simplot, collectively referred to as Discharger, pursuant to California Water Code Section 13267 in conjunction with Notice of Applicability (NOA) R5-2015-0012-086.

The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer. As appropriate, California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) staff shall approve specific sampling locations prior to the implementation of monitoring activities.

Effluent and groundwater samples collected for Site remediation purposes per MRP R5-2024-0802 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAG995002, Order R5-2022-0006-007 and revisions thereto, may be used for compliance with the sampling requirements found in this MRP as long as the sampling and analytical requirements contained in this MRP are met. Duplication of sampling is not intended. Results of all samples used to meet the monitoring requirements of this MRP must be included in the required monitoring reports for this MRP.

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 MONITORING

There are fourteen (14) potential re-injection wells (six primary and eight secondary), four (4) groundwater extraction wells, eight (8) nested groundwater monitoring wells, and twelve (12) shallow groundwater monitoring wells associated with this project as shown on Figure 2 in NOA Attachment A. The nested wells are screened across different depths, referred to as Zones, from the shallowest (A-Zone) to the deepest (G-Zone). Not all nested wells are screened across all zones. In the event of issues with a primary injection well, one or more secondary injection wells may be used to replace the problematic primary injection well. The groundwater monitoring program for these wells and any treatment system wells installed subsequent to the issuance of this MRP shall follow the schedule below. Sample collection and analysis shall follow standard EPA protocol.

Monitoring and extraction wells shall be sampled at a minimum according to the schedule in Table 1 and the samples analyzed by the methods in Table 2 as follows. The results of any monitoring done more frequently than required at the locations specified in the MRP shall be reported to the Central Valley Water Board in the next regular monitoring report following the monitoring event(s).

**Table 1. Monitoring Locations, Constituents, Frequency, and Objectives**

| Well Number | Constituents | Frequency | Monitoring Objective |
|---|---|---|---|
| MLW-2B, MLW-2C, MLW-4B, MLW-4C | 1,2,3-trichloropropane (1,2,3-TCP), nitrate as nitrogen (nitrate), bromide (note 1) | Semi-annually during injection activities and for one year thereafter | Injection Zone – evaluate effectiveness of injections to mobilize local COCs (note 2) |
| EW-1, MLW-5B, MLW-5C, MLW-6B, MLW-6C, RW-5, RW-6, W-2, W-2A, W-3, W-4, W-4A, W-14A, W-15A, W-16A | 1,2,3-TCP, nitrate, bromide (note 1) | Monthly during the first nine months of injection activities; Quarterly for one year thereafter | Treatment Zone - evaluate flushing performance around the Injection Zone (note 2) |
| EW-S1, EW-S2, EW-D1, EW-D2 | 1,2,3-TCP, nitrate, bromide (note 1) | Monthly during injection activities and quarterly for one year thereafter | Extraction Zone - evaluate mass removal (note 2) |
| MLW-1C, MLW-7C, W-3A | 1,2,3-TCP, nitrate, bromide (note 1) | Quarterly during injection activities and for one year thereafter | Background - reference monitoring of upgradient concentrations |
| MLW-3B, MLW-3C, MLW-10B, MLW-10C | 1,2,3-TCP, nitrate, bromide (note 1) | Monthly during injection activities; Quarterly for one year thereafter | Compliance - determine compliance with groundwater limitations |

Table 1 notes:

1. Sodium bromide tracer is intended to aid in interpretation of 1,2,3-TCP and nitrate data in the study area, particularly in the extraction wells. Once the injection parameters and aquifer response behavior are understood, with Central Valley Water Board staff concurrence, sodium bromide use may be halted and may be eliminated from the list of monitored constituents.
2. Increases in COC concentrations are expected in these extraction wells initially as residual source mass is flushed from the vadose zone in the Injection Zone and into the Treatment Zone. Over time the COC concentrations are expected to decrease as the COCs are removed from the Injection and Treatment Zones and are recovered by the extraction wells.

**Table 2. Analytical Methods**

| **Constituent** | **Method** (note 1) | **Maximum Practical Quantitation Limit** (note 2) |
|---|---|---|
| Nitrate as nitrogen | EPA 300.0 or EPA 6500 | 300 µg/L |
| 1,2,3-TCP (note 3) | SRL 524M-TCP,<br>EPA 8260B, or EPA 504.1 | 0.005 µg/L |
| Bromide (tracer compound) | EPA 300.0 | best available |

Table 2 notes:

1. Use the analytical methods listed in Table 2 or an equivalent EPA Method that achieves the maximum Practical Quantitation Limit (PQL).
2. All concentrations between the Method Detection Limit (MDL) and the PQL shall be reported as an estimated value.
3. SRL 524M-TCP is the preferred method, however, if 1,2,3-TCP concentration in a monitoring well is expected to exceed 0.02 µg/L but be less than 0.5 µg/L, then EPA Method 504.1 may be used. If 1,2,3-TCP concentration is expected to exceed 0.5 µg/L, then EPA Method 8260B may be used.

## FIELD SAMPLING

In addition to the above sampling and laboratory analyses, field sampling and analysis shall be conducted each time a monitoring well or extraction well is sampled. For all wells listed in Table 1 the sampling and analysis of field parameters shall be as specified in Table 3. In the event that a well is evaluated to be dry following measurement of groundwater elevation, or if insufficient water exists in the well to collect data for field sampling parameters, the priority of available sample volumes shall be given to laboratory analytical sample aliquots for the constituent(s) listed in Table 1.

**Table 3. Field Sampling Requirements**

| **Parameters** | **Units** | **Practical Quantitation Limit** | **Analytical Method** |
|---|---|---|---|
| Groundwater Elevation | feet (ft) | 0.01 ft | Measurement |
| Electrical Conductivity (EC) | microsiemens per centimeter (µS/cm) | 50 µS/cm | Field Meter |
| pH | standard units (s.u.) | 0.1 s.u. | Field Meter |
| Temperature | degrees Fahrenheit ($^{o}$F) | 0.1 $^{o}$F | Field Meter |

All wells that are purged using low-flow purging techniques shall be purged until pH, temperature, and conductivity are within 10% of the previous value. Where low-flow purging is not practical, zero-purge sampling may be used according to standard EPA sampling protocols to remove groundwater that has accumulated in the well's sump.

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 submitted as described in item (b) of the Reporting section of this MRP.

## TREATMENT PLANT EFFLUENT MONITORING

The effluent from the groundwater treatment system shall be sampled as follows in Table 4. Groundwater samples collected for compliance with other Central Valley Water Board requirements for this Site, including National Pollutant Discharge Elimination System (NPDES) Permit No. CAG995002, may be used for compliance with the sampling requirements in Tables 4 and 5 as long as the sampling and analytical requirements contained in this MRP are met. Duplication of sampling is not intended. Results of all samples used to meet the monitoring requirements of this MRP must be included in the required monitoring reports for this MRP.

**Table 4. Treatment Plant Effluent Monitoring During Injection Activities**

| Constituents | Units | Type of Sample | Frequency |
|---|---|---|---|
| Nitrate as nitrogen | mg/L | Meter and calculated | Continuous |
| 1,2,3-TCP | µg/L | Grab | Weekly (note 1) |
| Total Dissolved Solids (TDS) | mg/L | Grab | Monthly |

Table 4, note 1: With Central Valley Water Board staff concurrence, effluent sampling frequency for 1,2,3-TCP may be reduced to monthly after two quarters of compliant operation with weekly sampling.

## IN-SITU DISCHARGE MONITORING

The Discharger shall monitor the discharge of treated water and tracer injected into the groundwater according to the requirements specified in Table 5, below. Because the re-injected water is the effluent from the treatment system, sampling done to maintain compliance with National Pollutant Discharge Elimination System (NPDES) Permit No. CAG995002 may be reported for compliance with Table 4 and with appropriate parameters in Table 5.

**Table 5. Discharge Monitoring Requirements During Injection Activities**

| Parameter | Units | Type of Monitoring | Frequency |
|---|---|---|---|
| Injected Volume | gallons per day (gpd) | Meter | Continuous |
| Sodium bromide tracer | pounds (lb) or kilograms (kg) per gpd of injected volume | Scale and calculation | Monthly (note1) |
| Nitrate as N | mg/L | Meter | Monthly |
| 1,2,3-TCP | µg/L | Grab | Weekly during the first two months of active injections; monthly thereafter |

Table 5, note 1. Once the injection parameters and aquifer response behavior are understood, with Central Valley Water Board staff concurrence, sodium bromide use may be halted and may be eliminated from the list of monitored parameters.

## REPORTING

Duplication of reporting is not required. Reports satisfying the requirements of this MRP may be combined and submitted concurrently with required annual reports under MRP Order R5-2024-0802. 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 Central Valley Water Board staff 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 Monitoring and Reporting Program shall also be reported to Central Valley Water Board staff, preferably as part of the regular semiannual reports.

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 Discharger shall submit semiannual electronic data reports which conform to the requirements of the California Code of Regulations, Title 23, Division 3, Chapter 30. The semiannual reports shall be submitted electronically over the internet to the GeoTracker database system by the 1st day of the second month following the end of the first and third calendar quarters, so by **1 May** and **1 November** until such time as the Executive Officer determines that the reports are no longer necessary.

**Semiannual Reporting:**

Each semiannual report shall include the following minimum information:

(a) a description and discussion of the groundwater sampling event and results, including trends in the concentrations of pollutants and ground-water elevations in the wells, when applicable, and how and when samples were collected;

(b) field logs that contain, at a minimum, water quality parameters measured before, during, and after purging (if applicable), method of purging (if applicable), depth to water, volume of water purged (if applicable), etc.;

(c) pollutant concentration maps for groundwater zones A through C;

(d) cumulative data tables containing the water quality analytical results and depth to groundwater;

(e) a copy of the laboratory analytical data report;

(f) the status of any ongoing remediation, including an estimate of the cumulative mass of pollutant removed from the subsurface, system operating time, the effectiveness of the remediation system, and any field notes pertaining to the operation and maintenance of the system;

(g) an analysis of whether the residual pollutants in the vadose zone are being effectively treated; and

(h) if applicable, the reasons for and duration of all interruptions in the operation of any remediation system, and actions planned or taken to correct and prevent interruptions.

**Annual Reporting:**

An Annual Report shall be submitted to the Central Valley Water Board by **1 November** of each year. This report shall contain an evaluation of the effectiveness and progress of the investigation and remediation. The Annual Report may be substituted for the second semi-annual monitoring report as long as it contains all of the information required for that report plus that required for the Annual Report. The Annual Report shall contain the following minimum information:

(a) both tabular and graphical summaries of all data obtained during the year;

(b) groundwater contour maps and pollutant concentration maps containing all data obtained during the previous year;

(c) a discussion of the long-term trends in the concentrations of the pollutants in the groundwater monitoring wells;

(d) an analysis of whether the pollutant plume is being effectively treated;

(e) a description of all remedial activities conducted during the year, an analysis of their effectiveness in removing the pollutants, and plans to improve remediation system effectiveness;

(f) identification of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;

(g) a description of all remedial activities conducted during the year, an analysis of their effectiveness in removing the pollutants in the treatment area, and plans to improve remediation effectiveness; and

(h) if desired, a proposal and rationale for any revisions to the groundwater sampling plan frequency and/or list of analytes.

A letter transmitting the monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation 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 as of the date of signature on this Order.

***Original digitally signed by John J. Baum***
Ordered by: ***on Date: 2026.01.23 13:21:40 -08'00'***

for PATRICK PULUPA, Executive Officer