
Central Valley Regional Water Quality Control Board

08 November 2021

Keegan George, P.E.
Sacramento Municipal Utility District
P.O. Box 15830
Sacramento, CA 95852-1830

NOTICE OF APPLICABILITY, GENERAL ORDER NO. R5-2015-0012, IN-SITU GROUNDWATER REMEDIATION PROGRAM, FORMER COMMUNITY LINEN SITE, 1800, 1824, & 1826 61ST STREET, SACRAMENTO, SACRAMENTO COUNTY

Sacramento Municipal Utility District (SMUD) (Discharger) submitted a Notice of Intent, dated 19 July 2021, requesting coverage under General Order R5-2015-0012, General Waste Discharge Requirements for In-situ Groundwater Remediation and Discharge of Treated Groundwater to Land (General Order). Based on information in the submittal, it is our determination that this project meets the required conditions to be approved under Order R5-2015-0012. All of the requirements contained in the general order are applicable to your project. You are assigned Order No. R5-2015-0012-072.

No comments were received on the draft Notice of Applicability and MRP during the 30-day public comment period ending on 18 October 2021.

Project Location:

The project is in Sacramento County, Township 8N, Range 5E, Section 16, Mount Diablo Baseline & Meridian. Assessor's Parcel No. 011-0090-010; Latitude 38°33'11.21"N; Longitude 121°26'2.61"W.

Project Description:

The primary objective of this project is to conduct a full-scale in-situ groundwater remediation program for treatment of chlorinated volatile organic compounds (CVOCs) in groundwater, including tetrachloroethene (PCE) and trichloroethene (TCE), by means of enhanced in-situ bioremediation. The project will consist of injection of amendments including EHC-L amendment mixed with clean anaerobic water, sodium bicarbonate (pH buffer), and bioaugmentation DHC culture (KB-1) including dehalococcoides bacteria into the groundwater to create conditions for anaerobic degradation of PCE and TCE to ethene and ethane. Pilot testing was conducted for the proposed amendments and additional bench-scale laboratory testing was conducted to test treatability compared to other amendment types. Details for the in-situ groundwater remediation program design are provided in the 19 July 2021 *Remedial Design and Implementation Plan (RDIP)*.

KARL E. LONGLEY ScD, P.E., CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

The groundwater treatment will consist of four permeable reactive zones (PRZ-1 through PRZ-4) each with two rows of borings for injection of the amendments at multiple depths below the groundwater table in each boring at the locations shown on attached Figure 5-5. An injection performance monitoring well network will be installed as shown on Figure 5-5 and monitored in accordance with the attached Monitoring and Reporting Program (MRP).

Before, during, and after the above-proposed injections, the groundwater will be monitored to determine the effectiveness of the injections in remediating PCE and breakdown byproducts, and to monitor for significant changes to groundwater quality in downgradient compliance wells caused by the amendments. A contingency plan, as outlined below, will be implemented if monitoring indicates exceedance of water quality limitations in downgradient compliance wells.

Monitoring and Reporting Program:

As part of the Order, the Discharger is required to perform groundwater monitoring and reporting in accordance with the attached MRP R5-2015-0012-072 to test efficacy of the treatment, and to verify that no adverse groundwater impacts occur due to injection of the amendments. The MRP includes the locations of the injection wells and monitoring requirements for treatment zone monitoring wells, transition zone monitoring wells, compliance zone monitoring wells, and background monitoring wells.

Contingency Plan:

The General Order requires a contingency plan for corrective actions should water quality exceed the requirements of the Order at the compliance wells. A Contingency Plan is included in Section 5.10 of the RDIP. The General Order prohibits concentrations of total dissolved solids (TDS) or dissolved metals more than 20% greater than their respective background levels, or exceedances of water quality limits at the compliance wells.


Baseline concentrations of TDS and certain dissolved metals will be determined following the procedures specified in the attached MRP. If there is an exceedance at a compliance well, a confirmation sample will be collected within 10 days of learning of the exceedance. If the exceedance is confirmed, the Central Valley Water Board shall be notified in writing within 10 days.

If an exceedance is confirmed in a compliance well, the Discharger shall implement the Contingency Plan in Section 5.10 of the RDIP, increasing frequency of monitoring; potentially ceasing future injection of bio-stimulating amendments; potentially mobilizing additional equipment to potentially contain impacted groundwater and/or increase redox potential of the groundwater; and meeting with the Central Valley Water Board staff to review monitoring data and confirm that corrective actions are sufficient. All contingency measures shall be fully implemented within six months of the confirmation of an exceedance in a compliance well.

Specific Requirements:

1. The project will be operated in accordance with the requirements contained in the General Order and in accordance with the information submitted in the completed Notice of Intent.
2. Injection of materials other than EHC-L amendment mixed with clean anaerobic water, sodium bicarbonate (pH buffer), bioaugmentation consisting of KB-1, and materials to increase the redox potential in the groundwater pursuant to the Contingency Plan (as described above) into the groundwater or subsurface is prohibited.
3. Failure to abide by the conditions of the General Order could result in an enforcement action as authorized by provisions of the California Water Code.
4. The Discharger shall comply with the attached Monitoring and Reporting Program, Order R5-2015-0012-072, and any revisions thereto as ordered by the Executive Officer.

If you have any questions regarding this matter, please call Bill Brattain at (916) 464-4622.


for PATRICK PULUPA
Executive Officer

Attachments

cc: Kristene Wilder, P.G., C.H.G., Brown and Caldwell, Davis