

Central Valley Regional Water Quality Control Board

26 March 2018

Gary Stallworth
602 North California Street
Stockton, CA 95202

NOTICE OF APPLICABILITY OF GENERAL ORDER NO. R5-2015-0012 Waste Discharge Requirements General Order for In-Situ Remediation and Discharge of Treated Groundwater to Land, Stallworth Auto Sales, 602 North California Street, Stockton, San Joaquin County

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) received a document titled *Notice of Intent Application* (Application) submitted on your behalf by Advanced GeoEnvironmental, Inc. (AGE), on 17 June 2014 for the unauthorized underground storage tank (UST) release located at 602 North California Street in Stockton, San Joaquin County (Site). The Application requested coverage under General Order No. R5-2008-0149 for In-Situ Remediation and Discharge of Treated Groundwater to Land (General Order). Subsequent to submission of the Application, General Order No. R5-2008-0149 was replaced by General Order R5-2015-0012. AGE and Central Valley Water Board staff worked together to address several rounds of comments and revisions to the scope of work. Central Valley Water Board staff concludes that this project meets the required conditions to operate under Order No. R5-2015-0012. All of the requirements contained in the General Order are applicable to the Site and you are assigned Order No. R5-2015-0012-XXX.

Project Location:

The project is in the City of Stockton in San Joaquin County
Assessor's Parcel No. 139-165-09

Project Description:

Previous use of a UST at the Site resulted in petroleum hydrocarbon impact to soil and groundwater. The primary constituents of concern include total petroleum hydrocarbons as gasoline, and benzene, toluene, ethylbenzene and total xylenes (BTEX). The site is currently occupied by a small, single story office facility with a garage utilized for auto sales, and is located in a mixed commercial and residential area.

Between May 2012 and June 2012, AGE performed a hydrogen peroxide injection pilot test at the Site. AGE proposes conducting in-situ chemical oxidation using hydrogen peroxide to remediate residual fuel hydrocarbon impacts to soil and groundwater. San Joaquin County Environmental Management Department approved the proposed *Corrective Action Plan* in March 2014. Oversight of the case was transferred to the Central Valley Water Board on 1 July 2015.

For this project, the Discharger submitted the following documents:

- *Corrective Action Plan* dated 30 January 2014
- *Notice of Intent (NOI)* dated 6 June 2014
- *Response to: Central Valley Water Board Staff Comments to NOI General Order R5-2008-0149 (January 2015 Letter)* dated 12 January 2015
- *Response to: Central Valley Water Board Comment Letter Dated 29 June 2015 (August 2015 Letter)* dated 25 August 2015
- AGE's 8 April 2016 emailed response to Central Valley Water Board staff Questions on Injections, NOI, and draft MRP (April 2016 email)
- AGE's 25 October 2016 emailed response to Central Valley Water Board staff Questions on Injections, NOI, and draft MRP (October 2016 email)
- AGE's 23 February 2018 emailed response to Central Valley Water Board staff Questions on Injections, NOI, and draft MRP (23 February 2018 email)
- AGE's 27 February 2018 emailed response to Central Valley Water Board staff Questions on Injections, NOI, and draft MRP (x February 2018 email)

AGE proposes using six (6) injection wells (IW-1, IW-2, IW-3, IW-5, IW-7, and MW-1A) for injection of hydrogen peroxide to the subsurface. A 200-gallon hydrogen peroxide solution composed of 175 gallons of water and 25 gallons of 35% hydrogen peroxide (H_2O_2), will be injected into each of the injection points over an approximately one week period; a total of 1,400 gallons per injection event will be injected. Hydrogen peroxide will be injected at rate between 1 to 5 gallons per minute (gmp). AGE will initially perform four (4) injection events with a frequency of one ejection event a month; a total of 5,600 gallons of peroxide solution will be injected during the initial four injection events. Additional injection events will be performed based on results. AGE must notify Central Valley Water Board staff at least one week prior to conducting additional injection events.

There are 27 wells associated with this Site. The Monitoring and Reporting Program, incorporated with this permit, requires sampling of 15 of the 27 Site wells. Monitoring and reporting of remaining Site wells is under the direction of Central Valley Water Board staff. Gary Stallworth will be responsible for conducting groundwater sampling, and for reporting of the results as described in the attached Monitoring and Reporting Program.

AGE submitted a Contingency Plan to address any unforeseen negative impacts is as follows:

1. The following wells are classified as compliance wells: MW-6, MW-7, and IW-9.
2. For the purposes of this contingency plan, an impact to water quality is defined as one of the constituents exceeding an action level. Background concentrations and action levels are shown in the table below.

Stallworth Auto Sales - Action Levels			
Shallow zone (56 to 68.5 ft. bgs)	Maximum Background Concentration (ug/L) ^a	WQO (ug/L)	Action Level (ug/L)
Arsenic	116	10	116
Barium	1,320	1,000	1,320
Bromide	1,100	2,300	1,100
Bromate	<13	10	13
Cadmium	<5	5	5
Copper	90	300	108
Hexavalent Chromium	<0.20	10	0.24
Iron	2,750	300	2,750
Manganese	4,760	50	4,760
TDS	565,000	500,000	565,000
EC	1198 µmhos/cm	900 µmhos/cm	1198 µmhos/cm
pH			<6.5 or >8.5
Deep Zone (116 to 121)	Maximum Background Concentration (ug/L)	WQO (ug/L)	Action Level (ug/L)
Arsenic	108	10	116
Barium	1,190	1,000	1,320
Bromide	640	2,300	1,100
Bromate	<13	10	13
Cadmium	<5	5	5
Copper	83	300	100
Hexavalent Chromium	<0.20	10	0.24
Iron	740	300	740
Manganese	2,080	50	2,080
TDS	560,000	500,000	560,000
EC	1121 µmhos/cm	900 µmhos/cm	1121 µmhos/cm
pH			<6.5 or >8.5

a –Maximum detected concentrations, sampled collected October 2016 from treatment, background, transition, and compliance zone wells

- If water quality concentrations exceed action levels in compliance wells, AGE will cease injections into the core area of the plume.
- AGE will collect additional groundwater data during two consecutive quarters from the compliance wells to confirm exceedance of action levels. If exceedances are confirmed in post-injection analytical results, AGE proposes to implement bulk groundwater extraction

events, utilizing the impacted compliance zone wells as the extraction points. Groundwater will be extracted from each of the effected wells at a rate between 1 and 3 gallons per minute and pumped into an onsite storage container (20,000-gallon capacity), where it will be stored until it is removed and hauled to a licensed waste facility for proper disposal. Each of the bulk-pumping event will remove approximately 20,000 gallons (the capacity of the temporary storage tank).

5. After each bulk-pumping event, groundwater samples will be collected from each of the impacted compliance wells and analyzed. Bulk-pumping events will continue until concentrations in compliance wells decrease to below action levels.
6. AGE will not resume hydrogen peroxide injection after implementing the contingency plan until after corresponding with Central Valley Water Board staff.

If you desire to modify the injectants and/or volume of injectants, a revised Notice of Intent must be submitted and a new Notice of Applicability issued prior to proceeding with the additional/modified injection.

The scope of work for this project is covered by the CEQA documentation for the General Order. Additional CEQA activities are not needed.

No comments were received on the draft Notice of Applicability and Monitoring and Reporting Program during the 30-day public comment period ending 26 April 2018.

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 Notice of Intent.
2. The required annual fee (as specified in the annual billing you will receive from the State Water Resources Control Board) shall be submitted until this Notice of Applicability is officially rescinded.
3. The Responsible Party shall comply with the attached General Order No. R5-2015-0012, General Waste Discharge Requirements for In-situ Groundwater Remediation and Discharge of Treated Groundwater to Land.
4. Injection of materials other than a hydrogen peroxide solution as specified above, into the subsurface is prohibited, unless analysis, as specified in Order No. R5-2015-0012, of the injectant is provided and approval is given by Central Valley Water Board staff.
5. 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.
6. The Responsible Party will implement the final contingency plan, included as part of the Notice of Intent, within 30-days of it being triggered.
7. The Responsible Party shall comply with the attached Monitoring and Reporting Program, Order No. R5-2015-0012-XXX and any revisions thereto as ordered by the Executive Officer.

If you have any questions or concerns please contact Vera Fischer at (916) 464-4792 or contact her at vera.fischer@waterboards.ca.gov.

Pamela C. Creedon
Executive Officer

Attachment: General Order No. R5-2015-0012
Monitoring and Reporting Program No. R5-2015-0012-XXX

cc: Ms. Jovel Vossler, Regional Water Quality Control Board, Sacramento
Ms. Kasey Foley, San Joaquin County Environmental Management, Stockton
Mr. Brian Millman, Advanced GeoEnvironmental, Inc., Stockton