



Central Valley Regional Water Quality Control Board

29 March 2023

Toby James Reading
Reading Oil, Inc.
1535 Lurline Avenue
Colusa, CA 95932

CERTIFIED MAIL
7012-0470-0000-9904-2270

Toby James Reading
Reading Oil, Inc.
PO Box 88
Colusa, CA 95932

CERTIFIED MAIL
7012-0470-0000-9904-2263

TECHNICAL REPORTING ORDER R5-2023-0802 FOR SUBMITTAL OF TECHNICAL REPORTS, READING OIL, 1535 LURLINE AVENUE, COLUSA, COLUSA COUNTY

You are legally required to respond to this Order. Please read it carefully.

This Order is issued to Reading Oil, Inc. (Responsible Party) pursuant to Health and Safety Code section 25296.10 and Water Code section 13267, which authorize the Central Valley Water Board to require submission of technical reports associated with the investigation of the unauthorized release and/or discharge of petroleum hydrocarbons at 1535 Lurline Avenue in Colusa having Colusa County Assessor's Parcel Number 015-330-074-000.

This Order outlines the legal and factual bases for this Order and requires the Responsible Party to (1) submit a groundwater investigation work plan for Central Valley Water Board staff (Staff) review and concurrence within 60 days from the date of this Order, (2) submit a groundwater investigation report within 150 days from the date that Staff concurs with the work plan, and (3) resume semi-annual groundwater monitoring and sampling during the second and fourth quarters. Further details are provided in the Required Actions section of this Order.

MARK BRADFORD, CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

FINDINGS

Site Ownership and Operations

1. This Order pertains to petroleum hydrocarbons detected on the real property located at 1535 Lurline Avenue in Colusa, having Colusa County Assessor's (Assessor) Parcel Number (APN) 015-330-074-000 (Site). The Assessor identifies the owner of the Site as James L. Reading of Colusa. The Site has operated as a bulk petroleum storage and distribution facility, known as Reading Oil, since at least 1990. The Site's location and details are depicted on the map provided as Attachment 1 of this Order.
2. According to the California Secretary of State, James Reading incorporated Reading Oil in September 1991. Reading Oil, Inc.'s March 2022 Statement of Information lists Toby James Reading of Colusa as the current Chief Executive Officer and Chief Financial Officer. James Reading passed away in February 2014.
3. The Site currently contains one 20,000-gallon gasoline underground storage tank (UST), a bulk loading rack, two fueling islands, one 25,000-gallon gasoline above-ground storage tank (AST), one 42,000-gallon diesel AST, one 10,000-gallon kerosene AST, one 3,000-gallon solvent (type not identified) AST, three 3,000-gallon lubricating oil ASTs, and a warehouse.

Summary of Prior Environmental Investigations

4. In July 1990, James Reading removed one former 10,000-gallon gasoline UST and installed the current 20,000-gallon gasoline UST in the same area. Soil samples collected from the bottom of the excavation contained gasoline and diesel range petroleum hydrocarbons up to 323 milligrams per kilogram (mg/kg) and 698 mg/kg, respectively, indicating an unauthorized release of petroleum had occurred.
5. In January 1999, Colusa County Health and Human Services submitted a UST Unauthorized Release Form listing Reading Oil, Inc. as the "responsible party". In November 1999, Central Valley Water Board staff (Staff) requested the Responsible Party to submit an investigation work plan to characterize the extent of petroleum hydrocarbons in soil and groundwater.
6. The Responsible Party directed consultants to conduct Site assessments to character the release between June 2000 and April 2019. These assessments resulted in the installation of groundwater monitoring wells MW-1 through MW-18, MW-5D, MW-6D/E, MW-8D/E, and MW-12D, recovery well RW-1, vapor extraction well VEW-1, and ozone sparge well OS-1.

7. Various remedial actions were completed at the Site, beginning with the excavation of impacted sand from beneath the former UST in July 1990. Apex Envirotech, Inc. (Apex), on behalf of the Responsible Party, operated an ozone sparge system at OS-1 from January 2010 until May 2016. Along with the ozone system, Apex operated an oxygen emitter in MW-8D from February 2011 to August 2017, in MW-18 from February 2011 to July 2012, and in MW-17 from July 2012 to August 2017. Prior to January 2010, Apex oversaw various short-term and pilot-scale tests of remedial strategies including soil vapor extraction in April 2002, groundwater extraction in June 2002, and ozone sparging in April 2004 and December 2008. Apex also removed free product from MW-2 and MW-9 from February 2006 to April 2006, and again from MW-2 from July 2007 to October 2008.
8. Apex began monitoring groundwater at the Site in July 2000. Apex typically sampled the Site's wells on a quarterly basis, with some events occurring semi-annually and annually, until the most recent event in April 2019. As of the April 2019 sampling event, Apex recommended the continuation of semi-annual groundwater monitoring and implementation of a dual-phase extraction (DPE) pilot test.
9. Based on the analyses of groundwater samples collected in April 2019, Apex depicted the Site's total petroleum hydrocarbons as gasoline (TPHg) and benzene plumes as not delineated to water quality objectives from the northeast, counterclockwise, to the southwest and towards the southeast, in the Site's shallow groundwater zone. The Site's shallow-zone methyl tertiary butyl ether (MTBE) plume is also depicted as not delineated to the northeast, east, and west. In the Site's intermediate zone, Apex depicted the MTBE plume as not delineated except towards the northwest.
10. In August 2009, Apex submitted the results of a Sensitive Receptor Survey (SRS). In the SRS, Apex identified 21 wells within 2,000 feet of the Site. Of the 21 wells identified, three domestic wells existed east-southeast (i.e., downgradient) of the Site. Apex identified the nearest well in this direction as being located approximately 360 feet from the Site on an adjacent parcel having APN #15-33-131. The two other domestic wells were identified at 1308 Oak Street, approximately 1,400 feet southeast of the Site, and at, "12th Street approach to Levee", approximately 1,760 feet east of the Site. Additionally, in the SRS, Apex stated the nearest downgradient well is, "an irrigation well located approximately 220 feet east-southeast of the Site to a depth of 100 feet with an unknown screen interval." Apex did not comment if this well could be any of the other wells identified in the SRS. During field reconnaissance for the SRS, Apex also identified one domestic well and one possible domestic well at 32 Palm Avenue and 20 Palm Avenue, respectively. These locations are north of the Site. Apex did not state in the SRS if any of the identified wells were at risk due to the Site's petroleum release. Due to the length of time that has passed since August 2009 SRS was completed, an additional SRS should be completed to evaluate

whether the wells identified in the 2009 SRS still exist and in what capacity those wells are used to extract groundwater.

11. In addition to the domestic wells identified by Apex in the SRS, two active City of Colusa groundwater supply wells are located approximately 2,500 feet east-southeast and 3,300 feet southeast of the Site. To date, City of Colusa Wells 06 and 02 have not been impacted by MTBE.
12. Based on the April 2019 groundwater sampling event and the lack of offsite plume characterization, the Responsible Party cannot accurately determine if offsite receptors are at risk or have been impacted, and the Responsible Party has not developed a completed conceptual model of the Site. Additionally, based on April 2019 groundwater sample results, additional remediation was necessary at that time. A current and continual assessment of groundwater conditions is necessary to determine the most appropriate remedial approach and to evaluate the efficacy of any implemented strategies.
13. In August 2020, Staff requested that the Responsible Party resume semi-annual groundwater monitoring, conduct the DPE pilot test, and evaluate the lateral and vertical extent of the petroleum plume in groundwater. As of the date of this Order these requests have not been satisfied.
14. In May 2021, Staff issued a Draft Cleanup and Abatement Order (2021 Draft Order) for the Responsible Party to review and comment. The 2021 Draft Order directed the Responsible Party to resume semi-annual groundwater monitoring, implement a work plan to investigate the extent and mobility of Site petroleum constituents in groundwater, and recommend a path to closure based on an evaluation of Site conditions. The Responsible Party did not contact Staff regarding the 2021 Draft Order and did not implement any of its provisions.
15. Staff has revised the 2021 Draft Order to this Technical Reporting Order under Health and Safety Code section 25296.10 and Water Code section 13267 to best satisfy the needs of the case and the requirements to meet the criteria of the State Water Board's Low-Threat UST Case Closure Policy¹ (LTCP).
16. As of the date of this Order, the Site is ineligible for closure under the LTCP because it does not meet the following criteria:
 - a. LTCP General Criterion (e) requires development of a conceptual site model (CSM) that assesses the nature, extent, and mobility of the release. The Responsible Party has not developed a CSM that meets this requirement.

¹ State Water Resources Control Board, Low-Threat UST Case Closure Policy, https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf

- b. The LTCP Media-Specific Criteria for Groundwater (Groundwater Criteria) require that “the contaminant plume that exceeds water quality objectives must be stable or decreasing in the areal extent and meet all of the additional characteristics of one of the five classes of sites” described therein. The Site does not currently meet the Groundwater Criteria because:
- i. The extent of MTBE in groundwater is unknown. Apex has evaluated the groundwater flow direction to be typically toward the southeast. The Responsible Party has not monitored groundwater southeast of MW-9 completed within the Site’s shallow groundwater zone and well MW-8D completed within the Site’s intermediate groundwater zone.
 - ii. Dissolved MTBE has been detected in MW-9 and MW-8D up to 32,000 µg/L and 11,000 µg/L, respectively. Additionally, groundwater samples from shallow zone well MW-8, located just west (i.e., upgradient) of MW-9, have contained MTBE up to 160,000 µg/L.
17. **UST Cleanup Fund Eligibility.** The Responsible Party previously requested and obtained reimbursement from the State Water Board, Division of Financial Assistance (DFA) for corrective action related to the 1990 removal of a 10,000-gallon UST from the Site. (UST Cleanup Fund Claim #15512.) On 15 April 2010, DFA issued a Revised Final Division Decision (RFDD) on Claim #15512, stating that DFA would reimburse only 50 percent of remaining eligible corrective action costs at the Site because it had determined that the Site was contaminated by a mix of eligible and ineligible releases. The remainder of costs are ineligible for UST Cleanup Fund reimbursement because evidence indicates that the release(s), in part, giving rise to this Order are from an AST and/or the 20,000-gallon UST installed in 1990.

LEGAL AUTHORITY

18. Health and Safety Code section 25296.10 provides that responsible parties “shall take corrective action in response to an unauthorized release” from a UST and that such corrective action shall be consistent with any order, water quality policy, or water quality plan issued pursuant to Division 7 of the Water Code (§ 13000, et seq.).
19. California Code of Regulations title 23 (Title 23), section 2720 defines “responsible party” as:
1. Any person who owns or operates an underground storage tank used for the storage of any hazardous substance;

2. In the case of an underground storage tank no longer in use, any person who owned or operated the underground storage tank immediately before the discontinuation of its use;
 3. Any owner of the property where an unauthorized release of a hazardous substance from an underground storage tank has occurred; [or]
 4. Any person who had or has control over an underground storage tank at the time of or following an unauthorized release of a hazardous substance.
20. Reading Oil, Inc. is a “responsible party,” pursuant to Title 23 section 2720, by virtue of its ownership and/or control of petroleum USTs from which unauthorized release of hazardous substance(s) has occurred. To the extent that groundwater contamination beneath the Site was caused by an unauthorized release(s) from USTs, this Order requires the Responsible Party to conduct corrective actions pursuant to Health and Safety Code section 25296.10.
21. Water Code section 13267, subdivision (a) provides that “[a] regional board... in connection with any action relating to any plan or requirement authorized by [Water Code division 7] may investigate the quality of any waters of the state within its region.”
22. Water Code section 13267, subdivision (b)(1) further provides that “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...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 regarding the need for the reports and shall identify the evidence that supports requiring that person to provide the reports.”
23. The Central Valley Water Board’s Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) designates beneficial uses for groundwater within that region. The Basin Plan designates the groundwater beneath the Site for municipal and domestic supply (MUN) and provides that the groundwater shall not contain chemical constituents that adversely affect beneficial uses, shall not contain taste- or -odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses, and shall be maintained free of toxic substances. The State Water Board, Department of Drinking Water has determined that the maximum contaminant levels (MCL) for MTBE in water designated MUN as 5 µg/L.

24. The Responsible Party has discharged and is suspected of having discharged waste that has impacted the quality of groundwater beneath the Site. Discharges and unauthorized releases from the Responsible Party's facility have caused concentrations of benzene and MTBE in groundwater to exceed the applicable MCL. Therefore, pursuant to Health and Safety Code section 25296.10 and Water Code section 13267, this Order requires the Responsible Party to investigate and submit technical reports concerning the scope and extent of groundwater pollution at, beneath, and near the Site.
25. The investigation and reporting required under this Order are reasonably necessary to ascertain the scope and extent of groundwater contamination at the Site, to assess impacts and threatened impacts to water quality and specifically municipal water supply, and to determine the need for additional corrective action, cleanup, abatement, and/or remediation. The burden, including costs, of compliance with this Order is reasonable in relation to the need for the required reports and the benefits to be obtained thereby.
26. Estimated costs of compliance with this Order are described in the attached cost estimate table (Attachment 2). Staff derived the estimated costs from the State Water Board's 2018 Cost Guidelines Update² and November 2020 Remediation Cost Guidelines Appendix.³ The State Water Board developed the Cost Guidelines pursuant to Health and Safety Code section 25299.57(h), which states, in part, that the State Water Board "shall develop a summary of expected costs for common remedial actions. This summary of expected costs may be used by claimants as a guide in the selection and supervision of consultants and contractors." Costs provided in Attachment 1 are estimates only, the purpose of which are to provide guidance to the responsible parties listed in this Order.
27. In issuing this Order, the Executive Officer is acting pursuant to delegated authority under Water Code section 13223.

REQUIRED ACTIONS

IT IS HEREBY ORDERED that, pursuant to Health and Safety Code section 25296.10 and Water Code section 13267, the Responsible Party shall submit technical reports in accordance with the following provisions:

1. **Within 60 days of this Order**, the Responsible Party shall submit, for Staff review and concurrence, a work plan to investigate the extent and mobility of the Site's petroleum constituents in groundwater. The work plan shall evaluate

² State Water Resources Control Board, 2018 Cost Guidelines Update, https://www.waterboards.ca.gov/water_issues/programs/ustcf/docs/cost_guidelines/2018_cost_guidelines_update.pdf

³ State Water Resources Control Board, November 2020 Remediation Cost Guidelines Appendix, https://www.waterboards.ca.gov/water_issues/programs/ustcf/docs/cost_guidelines/202011_remediation_cost_guidelines_appendix.pdf

historic groundwater flow directions, gaps in groundwater analytical data in those directions, mobility of dissolved contaminants, and potential of contaminants to impact sensitive receptors. Based on this evaluation, the work plan shall propose groundwater sample locations, depths, and collection method that will delineate the horizontal and/or vertical extent of dissolved contamination. The work plan shall also include an updated SRS that locates and evaluates receptors around the Site for risks posed by the Sites release.

2. **Within 90 days of Staff's concurrence with the work plan**, implement the work plan.
3. **Within 60 days of implementation of the investigation**, submit an investigation report that including, but not limited to:
 - a. Maps(s) of sample locations.
 - b. Boring logs.
 - c. A conclusion stating if the investigation has delineated the extent of the petroleum release.
 - d. An evaluation of the case compared to the LTCP.
 - e. Based on the evaluation, recommendation for a path to closure (e.g., active remediation, monitoring natural attenuation, case closure).
4. **Within 180 days of this Order**, resume semi-annual groundwater monitoring of Site groundwater monitoring wells and remediation wells: MW 1, MW-2, MW-3, MW-4, MW-5, MW-5D, MW-6, MW-6D, MW-6E, MW-7, MW-8, MW-8D, MW-8E, MW-9, MW-10, MW-11, MW-12, MW-12D, MW-13, MW-14, MW-15, MW-16, MW-17, MW-18, RW-1, VEW-1, OS-1, and Young Well, during the second (**April 1 - June 30**) and fourth (**October 1 - December 31**) quarters. These activities shall include, but are not limited to, gauging and recording the depth to groundwater and sampling the dissolved-phase petroleum constituents in wells. The collected samples shall be submitted to a California-accredited environmental laboratory for analysis by United States Environmental Protection Agency Method 8260B for TPHg, benzene, toluene, ethylbenzene, xylenes, MTBE, and tertiary butyl alcohol (TBA).
5. Submit groundwater monitoring reports by **August 1st** for second quarter monitoring events and **February 1st** for fourth quarter monitoring events. Monitoring reports shall include, but are not limited to:
 - a. Description of the monitoring and sampling activities.
 - b. Recommendations for any additional assessment or testing needed to characterize or delineate Site contamination.
 - c. Evaluation of chemical concentration trends, supported with appropriate graphs.

- d. Maps showing Site groundwater sampling locations and TPHg, benzene, and MTBE isoconcentrations.
- e. Maps showing current groundwater elevation contours for groundwater zones.
- f. Tabulated monitoring well information including well identification, groundwater zone, well screen interval, top of casing elevation, and well depth.
- g. Tabulated current measured depth to groundwater.
- h. Tabulated current groundwater analytical results.
- i. Tabulated historical data for Site monitoring wells.
- j. Copy of the analytical laboratory reports.
- k. Copy of well sampling field logs that document, as appropriate, measured depth to water, well purging method, water quality parameters, date and time, volume of water removed, and sample condition.

REPORTING REQUIREMENTS

The following provisions apply to all reports submitted under this Order:

1. All reports shall be submitted electronically copies by the State Water Board's GeoTracker database at <https://geotracker.waterboards.ca.gov>, in accordance with California Code of Regulations, title 23, division 3, chapter 30 and also with GeoTracker standards and procedures, as specified on the State Water Board's website at https://www.waterboards.ca.gov/ust/electronic_submittal/.
2. Appropriate reports shall be prepared by, or under the supervision of, a registered professional engineer or geologist and signed and stamped by the registered professional. (See Bus. & Prof. Code, §§ 6735, 7832, and 7835.1.)
3. All technical reports shall include a cover letter signed by the submitting party (or their authorized agents), certifying under penalty of perjury under the laws of the State of California that the signer has examined and is familiar with the report and that the report is true, complete, and accurate. The submitting party shall also state if they agree with any recommendations or proposals and whether they approved implementation of said proposals.

ENFORCEMENT

Failure to comply with the provisions of this Order, and in conformity with the schedule set forth above, 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. The Central Valley Water Board further reserves its right to take any additional enforcement actions authorized by law.

ADMINISTRATIVE REVIEW

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, in which case the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions will be provided upon request or may be found on the Internet at: https://www.waterboards.ca.gov/public_notices/petitions/water_quality.

If you have any questions about this Order, please contact Michael DeSmet at (916) 464-4830, or at michael.desmet@waterboards.ca.gov.

This Order is effective upon the date of signature.

Original signed by John J. Baum
for PATRICK PULUPA, Executive Officer

29 March 2023
Date

Attachments: 1. Site Map
2. Cost Estimate Table

cc: Kuljeet Munti, Colusa County Environmental Health (email)
Casey Satkowski, State Water Board - ECAP unit (email)