
Los Angeles Regional Water Quality Control Board

July 14, 2015

Mr. John Allen
Allen Matkins Leck Gamble Mallory & Natsis LLP
515 South Figueroa Street, 9th Floor
Los Angeles, California 90071-3398

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
CLAIM NO. 7014 2120 0004 7561 9386

SUBJECT: REVIEW OF REPORTS PURSUANT TO CALIFORNIA WATER CODE SECTION 13267 ORDER

SITE\CASE: FAZIO CLEANERS, 23383 MULHOLLAND DRIVE, WOODLAND HILLS, CALIFORNIA (SCP NO. 0645, SITE ID NO. 1848600)

Dear Mr. Allen:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is the public agency with primary responsibility for the protection of groundwater and surface water quality for all beneficial uses within major portions of Los Angeles and Ventura counties, including the above referenced site (Site). To accomplish this, the Regional Board oversees the investigation and cleanup of unregulated discharges adversely affecting the State's waters, authorized by the Porter-Cologne Water Quality Control Act (CWC Division 7).

The Regional Board has received and reviewed the following documents prepared by Arcadis on behalf of BEX Portfolio, LLC.

- Quarterly Groundwater Monitoring Report, First Quarter of 2015 (Monitoring Report), dated April 15, 2015
- Site Assessment Summary Report (Report) dated April 21, 2015

SUMMARY OF TECHNICAL REPORTS

Site Assessment Summary Report

The scope of work in the Report includes an evaluation of soil and soil vapor concentrations at the Site, and a human health risk evaluation. The major findings are:

For Soil:

- Tetrachloroethene (PCE) was detected in all 11 soil samples with the highest concentration of 620 micrograms per kilogram ($\mu\text{g}/\text{kg}$) at sample ARC-SV-13-2. Trichloroethylene (TCE) was detected in one of 11 soil samples collected, at a concentration of 8.0 $\mu\text{g}/\text{kg}$ at sample ARC-SV-18-2.

- Volatile organic compounds (VOCs) in soil were compared to the January 2015 USEPA direct contact regional screening levels (RSLs) for industrial land use and the California Regional Water Quality Control Board, San Francisco Bay Region Environmental Screening Levels (ESLs) for construction/trench workers direct contact exposures and none of the detected soil VOC concentrations are above the industrial soil RSLs or construction/trench worker soil ESLs.

For Soil Vapor:

- PCE was detected in all five soil vapor samples collected with the highest concentration of 173 micrograms per liter ($\mu\text{g/L}$) at sample ARC-SV-13 DUP. TCE was detected in four of the five soil vapor samples collected with the highest concentration of 11 $\mu\text{g/L}$ at sample ARC-SV-13 DUP.
- PCE soil vapor concentrations exceeded the soil vapor screening level of 2.08 $\mu\text{g/L}$ for all the samples collected and TCE soil vapor concentrations exceeded the soil vapor screening level of 8 $\mu\text{g/L}$ for three sample locations.
- The estimated excess lifetime cancer risk (ELCR) based on the maximum PCE and TCE soil vapor concentrations were calculated to be approximately 8×10^{-5} and 1×10^{-6} , respectively.
- The Report concluded that soil vapor concentrations are not expected to pose adverse health effects to indoor occupants of the onsite building based on potential vapor migration from the subsurface.

For Sub-slab Soil Vapor:

- PCE was detected in all three sub-slab soil vapor samples collected with the highest concentration of 5.9 $\mu\text{g/L}$ at sample SS-03. TCE was only detected in one sub-slab soil vapor sample collected (SS-03) at a concentration of 0.15 $\mu\text{g/L}$.
- No VOC sub-slab soil vapor concentration exceeded its sub-slab vapor screening level, with the exception of PCE. PCE sub-slab soil vapor concentrations exceeded the sub-slab soil vapor screening level of 0.041 $\mu\text{g/L}$ in all the samples collected.
- The ELCR based on the maximum and arithmetic average detected PCE sub-slab soil vapor concentrations was calculated to be approximately 1×10^{-4} and 4×10^{-5} , respectively.
- The Report concluded based on the more representative average PCE sub-slab soil vapor concentration, residual concentrations of VOCs in sub-slab soil vapor are unlikely to pose adverse health effects to indoor occupants of the onsite building based on potential vapor migration from the subsurface.

The Report recommends to continue monitoring the existing groundwater monitoring well network on a semiannual basis to confirm post-remedial concentrations of VOCs in soil and groundwater. The well network will be evaluated periodically to determine the monitoring value of each well and a request for a revised monitoring program will be made if a well is deemed to be ineffective for the monitoring program.

Quarterly Groundwater Monitoring Report

The Monitoring Report documents the groundwater monitoring activities performed in March 2015. The major findings are:

- Groundwater monitoring has been conducted since 1996 and groundwater occurs at a depth of 10 to 14 feet below ground surface (bgs) at the Site.

- Six monitoring wells (MW-1 through MW-3 and DVW-1 through DVW-3) are monitored in the existing groundwater monitoring well network. During the first groundwater monitoring event conducted on September 2, 1996, the maximum PCE concentration was detected in well MW-3 located approximately 200 feet downgradient, and north-northwest of DVW-1, with a concentration of 430 µg/L. The PCE concentrations in this well have decreased over time, with a current PCE concentration of 2.2 µg/L detected in well MW-3.
- PCE concentrations in wells DVW-1 and DVW-2, located near the source area have increased over time. PCE was detected at concentrations of 2.6 µg/L (DVW-1) and 2.5 µg/L (DVW-2) during the September 29, 1997 sampling event and the current PCE concentrations in DVW-1 and DVW-2 are 254 µg/L and 206 µg/L, respectively.

REGIONAL BOARD COMMENTS AND REQUIREMENTS

Based on the information submitted in the Report and Monitoring Report, we have the following comments and requirements:

1. PCE and TCE in soil vapor are above their soil vapor screening levels and the calculated risk is greater than what the Regional Board uses as the most conservative (health-protective assumptions) risk base screening levels of 1×10^{-6} for the target chemicals; therefore, the Report was forwarded to the Office of Environmental Health Hazard Assessment (OEHHA) for review. On June 16, 2015, the Regional Board received a memorandum from OEHHA containing technical comments (copy attached) for the Report. The Regional Board concurs with OEHHA's comments and you are required to respond to OEHHA's comments accordingly. Submit a technical response to OEHHA's comments by **September 15, 2015**.
2. Semiannual groundwater monitoring utilizing the existing well network shall continue and the removal of any wells from the monitoring program is not authorized until approved by the Regional Board.
3. PCE concentrations in groundwater monitoring wells MW-1, MW-3, and DVW-3 are currently below the Maximum Contaminant Level (MCL) and PCE concentration in MW-2 is detected at a current concentration (7.39 µg/L) slightly above the MCL. However, wells DVW-1 and DVW-2, located at the core of the plume still present elevated PCE concentrations above the MCL, at concentrations of 254 µg/L and 206 µg/L, respectively. The PCE concentrations in these two wells do not show a decreasing or stable trend despite 18 years of groundwater monitoring. Therefore, residual soil contamination is still a continuous source to groundwater contamination.
4. According to the Los Angeles Region Water Quality Control Plan dated June 13, 1994, the beneficial uses of underlying groundwater beneath the Site include municipal use. As such, the California Code of Regulations Title 22 MCL applies to protect beneficial uses. The MCL for PCE is 5 µg/L. The maximum PCE concentration in groundwater during the most recent monitoring event was 254 µg/L (well DVW-1) and has consistently been in the range of 115 µg/L to 254 µg/L during the past five monitoring events. Therefore, active remediation is required to expedite the degradation of VOCs in groundwater at the core of the plume in order to achieve groundwater cleanup goals in a timely manner. Submit a Feasibility Study to evaluate options to clean up the subsurface groundwater at the Site by **September 15, 2015**.

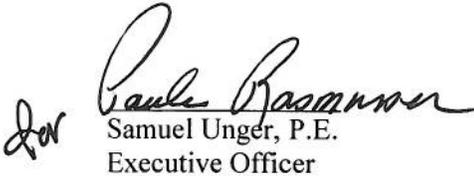
The above requirements and due dates for submittal of the technical reports are amendments to the requirements of the California Water Code California Water Code (CWC) section 13267 Order (Order) originally dated July 10, 2008. All other aspects of the Order and amendments thereto, remain in full force and effect. The required technical reports are necessary to investigate the characteristics of and extend of the discharges of waste at the Site and to evaluate cleanup alternatives. Therefore, the burden, including costs, of the reports bears a reasonable relationship to the need for the reports and benefits to be

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obtained. Pursuant to section 13268 of the CWC, failure to submit the required technical reports by the specified due date may result in civil liability administratively imposed by the Regional Board in an amount up to one thousand dollars (\$1,000) for each day each technical report is not received.

If you have any questions regarding this matter, please contact Ms. Jillian Ly, project manager, at (213) 576-6664 (jillian.ly@waterboards.ca.gov) or Ms. Thizar Tintut-Williams, Unit Chief, at (213) 576-6723 (thizar.williams@waterboards.ca.gov).

Sincerely,

 Samuel Unger, P.E.
Executive Officer

Attachment: OEHHA Memorandum dated June 16, 2015

cc: James Gonzalez, ARCADIS U.S. Inc.

Office of Environmental Health Hazard Assessment



Matthew Rodriguez
Secretary for
Environmental Protection

George V. Alexeeff, Ph.D., D.A.B.T., Director
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Edmund G. Brown Jr.
Governor

MEMORANDUM

TO: Jillian Ly
Water Resource Control Engineer
Site Cleanup Program, Unit III

FROM: Nathalie Pham, Ph.D.
Staff Toxicologist
Integrated Risk Assessment Branch
Office of Environmental Health Hazard Assessment

DATE: June 16, 2015

SUBJECT: SITE ASSESSMENT SUMMARY REPORT – Fazio Cleaners, 23383
Mulholland Drive, Woodland Hills, CA

2015 JUN 22 PM 1:06
CALIFORNIA REGIONAL WATER
QUALITY CONTROL BOARD
LOS ANGELES REGION

R4-14-78

OEHHA # 880381-00

Document reviewed

- Site Assessment Summary Report, Fazio Cleaners, 23383 Mulholland Drive, CA dated May 7, 2015 by Arcadis.

Scope of the Review & Site Characterization

- The document was reviewed to evaluate the soil vapor migration pathways at the Site. An accurate health assessment depends on adequate site characterization. Samples must be handled in a manner to prevent loss prior to analysis and they must be analyzed by appropriate methods.

Conceptual Site Model (CSM)

- The major pathway was by inhalation of vapors that may potentially migrate to ambient or indoor air through soil gas.
- The risk assessment was based on a target cancer risk of 1×10^{-5} and noncancer hazard quotient of one for construction and commercial worker scenarios.

California Environmental Protection Agency

Sacramento: (916) 324-7572 Oakland: (510) 622-3200

www.oehha.ca.gov

Chemicals of Potential Concern (COPCs)

- COPCs detected at the site were PCE, TCE, and Cis-1,2-DCE. The dominant COPC was PCE.

General Comments

- One method Arcadis used to derive the ELCR for soil vapor and sub-slab vapor exposure was from the arithmetic average of detected PCE concentrations.
 - This is not an acceptable method of deriving risk assessment-based estimates. The cancer risk is either derived from the maximum concentration detected or from 95% UCL of the arithmetic mean of detected concentrations.

Human Health Risk Assessment

- None of the detected soil VOC concentrations were above industrial soil RSLs.
- Arcadis calculated the estimated ELCRs (derived from maximum PCE concentrations) for soil vapor and sub-slab soil vapor and they were 8×10^{-5} and 1×10^{-4} , respectively.
 - Risks estimated from both soil vapor and sub-slab soil vapor were greater than the 1×10^{-5} for construction and commercial scenarios.
- Arcadis states "concentrations are unlikely to pose adverse health effects to indoor occupants" based on an ELCR derived from the *arithmetic average* PCE soil vapor concentration (page 24 of report). This is an unacceptable method for deriving risk assessment-based estimates. See above.

Vapor Intrusion Risk and Hazard

- It is unclear how the ELCRs (or ILCRs) were calculated. The DTSC-recommended Johnson & Ettinger soil gas model was not used for this risk assessment.
 - OEHHA advises using the J&E screening model to predict the risk from subsurface soil vapor migration.
- OEHHA used the maximum concentrations from the most recent sampling event to determine the soil vapor risk using the J&E model.
 - The cancer risk and noncancer hazard for PCE were 4.3×10^{-5} and 5.8×10^{-1} , respectively.
 - The cancer risk and noncancer hazard for TCE were 9.7×10^{-6} and 3.3, respectively.

Conclusions

- The arithmetic average of the sampling set is not an appropriate way to derive the target risk.
 - OEHHA suggests deriving risk from either the maximum concentration detected or the 95% UCL.

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- OEHHA recommends further transparency on risk and hazard calculations. OEHHA's risk calculations did not match those by Arcadis.
- If redevelopment/remediation of the Site is inconsistent with the land uses identified evaluated in this risk assessment, additional evaluation of potential health risks may be necessary.

Please do not hesitate to contact me at (916) 327-7338 or by e-mail at Nathalie.Pham@oehha.ca.gov, if you have any questions related to this review.

Memo reviewed by



Hristo Hristov, MD, Ph.D.
Staff Toxicologist

References

DTSC, 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance) Department of Toxic Substances Control, California Environmental Protection Agency, October, 2011.

US EPA, 1996. Soil Screening Guidance: User's Guide. Office of Solid Waste and Emergency Response, July 1996.

US EPA, 2004. User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings, Office of Emergency and Remedial Response, February 2004.