Claim # 12013

COMMENT LETTER*

TO: State Water Resources Control Board – Division of Water Quality
Attn.: USTClosuresComments@waterboards.ca.gov

FROM: Kevin D. Brown, CEG #2180; geobrown@earthlink.net

DATE: January 2, 2014

SUBJECT: **Comment Letter – Busi Chevron Case Closure Summary**

SITE ADDRESS: 8 East California Street, Valley Springs, California 95252

***Disclaimer:** **The views and opinions expressed in this comment letter are solely those of the author in his private capacity and do not in any way reflect the views of his employer or any related entity.**

Dear State Water Resources Control Board,

I have reviewed the October 30, 2013, "NOTICE OF OPPORTUNITY FOR PUBLIC COMMENT" and the September 30, 2013, "UST CASE CLOSURE REVIEW SUMMARY REPORT" for the referenced site. I have also evaluated information about the case in GeoTracker, reviewed a December 6, 2013, letter from the Central Valley Regional Water Quality Control Board-Sacramento Section (Regional Water Board), and compared the case attributes to the August 17, 2012, State Water Board's *Low-Threat Underground Storage Tank Case Closure Policy* (LTCP).

Main Comments

The site, a former gas station, is currently improved with a commercial building. The case closure summary states, "This case meets all of the required criteria of the Policy." However, it is clear from the record that a secondary source (e.g., contaminated soil) has not been removed to the extent practicable, which is required by the LTCP. Residual soil pollution remains at the site, as indicated by high concentrations of volatile organic compounds (VOCs) detected in shallow soil vapor probes (less than two feet deep). In January 2013, during the last round of vapor sampling, several fuel-related VOCs were detected at concentrations above accepted risk-based levels and well above the allowable LTCP criteria.

I reviewed a January 31, 2013, *Soil Vapor Monitoring Report* from Versar. On January 2, 2013, shallow soil vapor samples were collected at the site. TPH-gasoline was detected at a very high concentration of 5,500,000 $\mu g/m^3$, and benzene and ethylbenzene were detected at concentrations of 2,300 $\mu g/m^3$ and 55,000 $\mu g/m^3$, respectively. Naphthalene analysis, as required by the LTCP, was not conducted (I also didn't see any oxygen and other bioattenuation data). It's baffling as to why the environmental consultant failed to compare the empirical soil vapor data to the vapor criteria presented in the LTCP, which had been adopted about five months prior. Instead, laboratory results were compared to the San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels (ESLs) under a commercial land use setting – the concentrations exceed the ESLs. As correctly pointed out by the Regional Water Board, the site "does not meet any of the soil vapor scenario criteria" presented in the LTCP.

Speaking of naphthalene, I will use this time to briefly comment on the misleading "Potter and Simmons (1998)" argument made by the State Water Board for this case (and for that matter dozens of other UST cases that have been closed, or are awaiting closure, under the LTCP). The argument, that benzene data for soil can be used as a substitute for missing naphthalene data, is a good example of pseudoscience! The LTCP requires, under the *Direct Contact and Outdoor Air Exposure* media-specific section, that real naphthalene data, not estimated concentrations, be determined for every UST site. Nowhere in the LTCP or subsequent resolutions does it state that benzene can be used as a surrogate for naphthalene. I'm quite confident that the authors of the LTCP would not have included naphthalene as a chemical-of-concern for UST sites if benzene data could be used instead.

No technical rationale was provided in the case closure summary to support the tenuous position by the State Water Board that, "Any remaining petroleum constituents do not pose significant risk to human health, safety or the environment." As noted by the Regional Water Board and the environmental consultant, subsurface vapor concentrations exceed the LTCP and other risk-based standards. An HVAC system in operation at the site was modified, according to the State Water Board, to "produce a positive pressure environment which meets the soil vapor intrusion criteria as engineered controls." Did a qualified engineer complete this evaluation?

The State Water Board further surmises, "The only effective technology to protect this commercial building has been provided (the HVAC)." This conclusion is a fallacy. A subsurface/subslab depressurization system (SSD) is a proven technology to prevent vapor intrusion, and a properly designed and installed SSD system at the subject property would be far superior to relying on the existing HVAC system as a mitigation method. A typical SSD uses minor electricity, is relatively quiet, and requires little maintenance. To ensure human health is protected from harmful vapors, it would be prudent that a competent and properly licensed engineer be retained to evaluate whether a SSD can be safely and effectively installed at the site.

Additional Comments

- Was the former 300-gallon UST at the site a waste oil UST?
- Is the site a "fractured bedrock" site? It is noted that the main reference used during the creation of the LTCP was the controversial 1995 Lawrence Livermore National Laboratory (LLNL) report on low risk fuel/UST sites; fractured bedrock sites were specifically excluded from the LLNL study.
- Is the perched groundwater table reflective of the site's shallow bedrock setting?
- Is TPH-gasoline in soil vapor a risk driver at this site?
- Is this a site with "unique attributes" as defined by the LTCP?
- Why can't soil excavation be completed to remove the identified "hot spot?"
- On Page 1, the case closure summary states three USTs were removed in December 1989. On Page 7, it states the USTs were removed in December 1998. Which date is correct?
- In accordance with the Water Code and other applicable regulations and laws, have all responsible parties to the pollution been properly identified? In other words, who owned the site when the gasoline station was operating and the fuel leaks occurred?

Conclusion

The proposed closure of this UST case is undoubtedly premature. The site poses an unknown threat to human health and, by definition, should not be considered a low-threat case under the LTCP. Furthermore, relying solely on a potentially unreliable HVAC system to prevent vapor intrusion does not meet the standard-of-practice in the State of California. Additional soil vapor sampling and laboratory analysis, including a full suite of VOCs and semi-VOCs, is necessary to better characterize the nature of

the subsurface vapor contamination and to aid in the proper completion of a human health risk assessment.

Overruling the Regional Water Board, with competent and knowledgeable professionals who oppose closing this case, is not in the best interests of the landowner, the citizens of Valley Springs, or the people of California. Again, this is not a low-threat case.

Thank you for accepting my comments. I look forward to receiving a written response (one that is signed by a properly licensed professional in the State of California).

Sincerely,

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