



San Mateo County Health System

January 16, 2014

Andrew Cooper (USTClosuresComments@waterboards.ca.gov)
State Water Resources Control Board
1001 I Street, 16th Floor
Sacramento, CA 95814

SUBJECT: Comment Letter – L.C. Smith Properties Case Closure Summary

Dear Mr. Cooper:

Thank you for the opportunity to respond to the Underground Storage Tank Cleanup Fund's (Fund) case closure recommendation for the case at 1620 South Delaware Street in San Mateo. San Mateo County Environmental Health Groundwater Protection Program (GPP) has technical concerns with the Fund's Review Summary Report (RSR) based on its reliance upon recent (but not the most recent) soil samples for the direct contact exposure assessment, the lack of use of the first soil vapor samples' data recently submitted for this case, and issues with the historical risk assessments prepared by the environmental consultant that the Fund's RSR relies upon to justify closure. The Fund's use of recently (but not the most recent) submitted soil data specifically eliminates the maximum concentrations of contaminants in soil which actually fail the direct contact and outdoor air exposure pathway of the State Water Resources Control Board's (SWRCB) Low Threat Underground Storage Tank Case Closure Policy (LTCP) under all land use scenarios. The concentrations of the most recently submitted soil vapor samples also fail the SWRCB's LTCP for the vapor intrusion pathway under all land use scenarios. Finally, the historical risk assessments the Fund's RSR relies upon to justify its conclusion of proposed closure under the LTCP is incomplete (fails to evaluate direct contact exposure pathway and the utility worker receptor as indicated by the Fund) and incorrect (uses incorrect toxicity values for benzene).

In addition to the technical issues above GPP also has administrative objections to the proposed closure. Because this case clearly does not meet the LTCP based on the historical and residual soil data failing the direct contact pathways for all land uses, the current soil vapor concentrations not complying with the LTCP for vapor intrusion under all land uses, the incorrect and incomplete risk assessments, and the potential for redevelopment of the site versus an assumed unchanged land use (and even specific type of commercial use by the Fund), the Executive Director cannot order this case closed under Resolution 2012-0061. Additionally, the proposed closure of this case relies entirely on the likely inaccurate assumption that the facility will remain a self-serve car wash. The unstated assumption by the Fund is that any change in land use, even from currently unoccupied commercial to occupied commercial, will result in this site being reopened. In essence, the State Water Resources Control Board (SWRCB) is limiting the future use of this property to this specific type of commercial land use. Therefore, this has the potential to be a government takings issue for the current property owner. Finally, the

Environmental Health

2000 Alameda de las Pulgas, Suite 100, San Mateo, CA 94403

Phone (650) 372-6200 • Fax (650) 627-8244 • CA Relay 711 • Website www.smchealth.org

Health System Chief • Jean S. Fraser

Board of Supervisors • Dave Pine • Carole Groom • Don Horsley • Warren Slocum • Adrienne Tissier

mechanism to trigger a review of this case should a change in land use occur in the future is not 100% reliable. Therefore, there is no confidence this will occur at the appropriate time. Now is the appropriate time to address the residual contamination under all future potentially likely land use scenarios.

Technical Issues

The RSR is dated August 2013 but is signed by the Fund Manager, Lisa Babcock, on December 5, 2013. Brunsing Associates, Inc. submitted their August 27, 2013 *Soil Vapor Probe Installation* report to the SWRCB's Geotracker database on August 29, 2013. Based on email correspondence with Bob Trommer of the Fund, the new report was not incorporated into the RSR. The 2013 Brunsing report conveys results of four soil samples and three soil vapor samples from the site. One of the soil samples, at a depth of only 4 feet below ground surface, had the highest most recent (as defined by the Fund) concentration of benzene (4.51 milligrams per kilogram [mg/kg]) and ethylbenzene (36.5 mg/kg) at the site. The previous highest most recent concentrations of benzene (2.36 mg/kg) and ethylbenzene (14.6 mg/kg), as stated in the Fund's RSR, were detected from samples collected in December 2005.

However, the actual historical and residual maximum concentrations of benzene (22 mg/kg) and ethylbenzene (69 mg/kg) at a depth of only 4.5 feet collected in 1996 were specifically excluded from the Fund's RSR. There was no explanation as to why the Fund excluded the highest maximum residual concentrations from its RSR and there are no more recent samples confirming any assumed decline in concentration from this point over time. To be clear, the LTCP criteria for benzene in soil under the direct contact exposure pathway in shallow soil (less than 5 feet deep) are 1.9 mg/kg (residential), 8.2 mg/kg commercial, and 14 mg/kg utility worker. Therefore, the actual maximum residual concentrations of benzene in shallow soil fails the LTCP direct contact criteria for all land uses (residential, commercial, and utility worker).

The soil vapor samples submitted in the 2013 report were the first soil vapor samples collected from the site. The concentrations of benzene (79,000 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]) and ethylbenzene ($<20,000 \mu\text{g}/\text{m}^3$) are 282 and up to 5.5 times, respectively, higher than the LTCP soil gas criteria for commercial land use. These actual soil vapor concentrations undermine Brunsing's 2006 risk assessment modeled site specific target cleanup levels for soil vapor that the Fund's RSR solely relies upon to justify closure under this exposure pathway. In fact during the Fund's review of this case prior to the development of the RSR, GPP's April 26, 2013 email actually stated that "only soil vapor needs further characterization." Unfortunately, Fund staff could not accurately summarize GPP's two-sentence email in the RSR. This email and subsequent lack of response to this objection in the RSR was immediately brought to the attention of the Fund staff whom decided to continue on with the 60-day comment period to the public rather than correct the obvious error in the RSR.

The Fund's RSR statement that the site meets the Vapor Intrusion to Indoor Air criteria under Policy Criterion 2b is not valid because the risk assessments referenced as justification were prepared prior to the collection of soil vapor samples which subsequently fail the LTCP. Bob

Trommer's December 20, 2013 email acknowledging the fact the new data was not incorporated into the RSR states "(the Fund) do(es) not agree that the additional data collected in August invalidated the previous risk assessments which were prepared and signed by a licensed professional." GPP believes this statement is incorrect from a professional standpoint. In order to settle this disagreement regarding the validity of risk assessments using modeled soil vapor concentrations prepared prior to the collection of soil vapor samples at a site, GPP proposes an independent third party entity such as the Office of Environmental Health Hazard Assessment to briefly weigh in on this statement. This should be a relatively simple and easy task to accomplish.

Further explanation in Mr. Trommer's email seems to state very little to no reliance upon any data collected from the site.

The Tier 2 Risk-Based Corrective Action prepared by Brunsing Associates noted that the only potentially significantly exposed population at the Site are car wash workers. These workers work outdoors and there are no full time employees at the Site. The only enclosed structure at the Site is the storage room, therefore indoor air inhalation is not a complete pathway. This site is a paved, open air, coin operated car wash facility. Consequently, the risk of accidental contact with site soil is negligible.

Therefore, it appears the Fund would have proposed closure of this case regardless of contaminant concentrations even in relation to published criteria of the peer-reviewed LTCP. This begs the question of the need to have a scientifically-based peer-reviewed LTCP if the Fund is simply going to ignore the criteria in it and chose the criterion of the vapor intrusion and direct contact pathways that essential means "we just don't think it will be a problem". The Fund needs to justify their proposed closures based on the scientifically-based peer-reviewed LTCP criteria rather than, the more commonly selecting the option that they, as a regulator, do not believe it is a problem for human health, safety, and the environment.

Of note, Brunsing Associates did not recommend closure of this case in their most recent report which was issued after the LTCP was published. Obviously, if the responsible party's own consultant was not willing to conclude in their own professional opinion that the site meets the LTCP with this newer information then the Fund's conclusion that it does has to be questioned. This is particularly concerning since the Fund is solely relying upon this same consultant's past conclusions in their risk assessments which was based on modeled contaminant soil vapor concentrations which have since been superseded by actual data.

Mr. Trommer's December 20, 2013 email does point out "the benzene concentration of 4.51 mg/kg identified in the soil during the August (2013) investigation is well below the LTCP guidance concentration of 8.2 mg/kg for 0 to 5 feet soil at commercial/ industrial facilities." While this is true, and continuing to ignore the actual maximum residual concentration of benzene, it begs the question as to why the Fund would not require a commercial deed restriction

for this prime corner property. The City of San Mateo and a majority of the bay-side county is under intense pressure to redevelop and provide more housing of all kinds.

In fact, this site is included within a ½ mile radius of the Hayward Park Cal Train Station which encompasses the City of San Mateo's Rail Corridor Transit-Oriented Development Plan (<http://www.cityofsanmateo.org/index.aspx?NID=1112>). On June 6, 2005, the City Council certified the Final Environmental Impact Report, approved the Rail Corridor Transit Oriented Development Plan as modified, and adopted the associated revisions to the General Plan. The Plan is intended to allow, encourage, and provide guidance for the creation of transit-oriented development (TOD) within a half-mile radius of the Hillsdale and Hayward Park Caltrain station areas. In fact, Section 6(C)(i) of the Plan specifically directs City staff to actively explore measures available to the City to reduce water use and to report back to the City Council with recommendations for City actions. Available measures may include but are not limited to the use of recycled water, consistent with existing General Plan policy L.U. 4.4 Water Supply, which states, "Investigate the feasibility of developing reclaimed water facilities or ground water that will enable reuse of water for irrigation purposes, freeing comparable potable water supplies for other uses."

In the vicinity of this site alone, approved development plans are on file with the City of San Mateo for Station Park Green at 1700 South Delaware Street and 92 & Delaware at 1830 South Delaware Street (<http://www.cityofsanmateo.org/index.aspx?NID=1176>). It seems with these very large redevelopment sites in the vicinity of the subject site already approved that the prospects for redevelopment of the subject site at 1620 South Delaware should be categorized as imminent rather than not likely to change as implied in the Fund's RSR and the Brunsing risk assessments the Fund's RSR relies upon to justify closure. The Fund's RSR fails to mention the development plan this site is incorporated within or the two large already-approved redevelopment sites in the very near vicinity of the site and how that might affect the potential likely future groundwater, vapor intrusion, and direct contact exposure pathways at (and adjacent to based on possible dewatering activities around) the site.

Finally, in letters dated June 7, 2007 and September 10, 2009, GPP had historically questioned the assumptions, particularly the input parameters in Appendix C of the 2006 report and Appendix A of the 2008 report, respectively, used in the Brunsing risk assessments. These concerns were also passed along to the Fund during their development of the RSR. The Brunsing 2006 and 2008 risk assessments that the Fund's RSR relies so heavily on actually fails to use the correct California-specific toxicity values for benzene. The risk assessments use an inhalation unit risk factor of 8.29×10^{-6} micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and a reference concentration of 5.95×10^{-3} milligram per cubic meter (mg/m^3). The actual California-specific toxicity values as stated in the DTSC's HERD model are 2.9×10^{-5} $\mu\text{g}/\text{m}^3$ and 6.0×10^{-2} mg/m^3 , respectively. Therefore, Brunsing's 2006 and 2008 risk assessments used toxicity values for benzene that are off by a factor of 10. Brunsing also used an average concentration of contaminants across the site rather than the maximum detected or a calculated 95% upper confidence limit value to be conservative as stated in the text of the reports the risk assessment

was intended to be. Even the most recent soil samples would appear to raise the average concentration for benzene, at least, used in the risk assessment.

In addition, the Input Parameter Summary indicates that Brunsing assumed the direct ingestion and dermal contact pathway was non-existent. Therefore, it actually was not incorporated into the risk assessments as the Fund's RSR states it was. GPP fails to understand how the Fund can rely upon a risk assessment to eliminate the direct contact exposure pathway when the risk assessment did not evaluate that pathway.

One final outstanding issue regarding the Brunsing risk assessments is the absence of input parameters for the Construction Worker receptor (NA on Input Parameter Summary for both 2006 [p. 102] and 2008 reports and boxes not checked on page 1 of Appendix A of Exposure Pathway Identification for Surface Soil Exposure and Air Exposure in the 2008 report) even though the text of the risk assessments say it was evaluated. Subsequently, the site-specific target levels for construction workers are not calculated for Soil Volatilization to Outdoor Air and Surface Soil Inhalation, Ingestion, and Dermal Contact (page 1 of Appendix E of 2006 report).

In summary regarding the Brunsing risk assessments, it does not appear they used the correct California-specific toxicity values, they do not actually evaluate the direct contact (direct ingestion and dermal contact) pathway, and they do not actually evaluate the construction worker receptor. Therefore, it appears the Fund should not rely upon it to properly evaluate the Vapor Intrusion to Indoor Air and Direct Contact and Outdoor Air Exposure pathways. In the absence of an appropriately conducted risk assessment, the current maximum residual concentrations in soil and soil vapor clearly fail the LTCP. Of particular concern is the utility (construction) worker receptor because the maximum residual concentration of benzene was located in South Delaware Street where utilities are most often located at these depths. This is even still a concern in light of the very weakly, if at all, supported argument that the site is paved and there is no likelihood that it will be changed in the future. GPP has provided more than enough evidence to support the belief that this site could actually be developed in the very near future.

Administrative Issues

As outlined above in the Technical Issues section, this site does not pass the SWRCB's LTCP. In particular, the Brunsing 2006 and 2008 risk assessments contained numerous errors that invalidate its conclusions and makes it not appropriate for the Fund to solely relying upon it regarding two of the three media specific criteria in justifying closure. Of particular concern was the lack of evaluation of the utility (construction) worker receptor, the failure to use California-specific toxicity factors, and the lack of evaluation of direct contact (direct ingestion and dermal contact) exposure pathway in the risk assessments.

Resolution 2012-0061 clearly states when the Executive Director can and cannot close a tank case or require closure of a tank case pursuant to Health and Safety Code section 25299.39.2 or section 25296.40. Under number 7, the Executive Director may close or require the closure of

any underground storage tank case if the case meets the criteria found in the State Water Board's Low-Threat Underground Storage Tank Closure Policy adopted by State Water Board Resolution No. 2012-0016. As stated above, this case clearly does not meet the LTCP in any justifiable way. Therefore, the Executive Director cannot legally require closure of this tank case.

The second administrative issue GPP wishes to raise is the fact that throughout the RSR the Fund implies this site will remain a self-serve car wash for the foreseeable future and uses this as justification for proposing closure particularly under the Vapor Intrusion to Indoor Air and Direct Contact and Outdoor Air Exposure pathways. As stated above this site is actually located with a specific development plan that emphasizes high-density housing and other land uses. Two other large sites in close proximity to this case have already received approval for specific redevelopment. The pressure to redevelop the subject site will only increase when these other two large sites are completed and when the subject site is granted closure. It is a more reasonable assumption that the subject site will be redeveloped in the near future rather than not as assumed by the Fund in the RSR.

Nevertheless, should the property owner wish to redevelop the property they will quickly discover that they are limited financially to only the current type of commercial use if the proposed closure under the Fund's assumptions is granted. It is highly unlikely that banks would be willing to lend money for redevelopment with such large questions looming regarding the residual contamination at this site and the conditions under which it was granted closure. In essence it appears the government (SWRCB) will have restricted the use of this property without adequate compensation and potentially performed a taking of the property.

One possible response to this government takings issue is to say that if the site were to be proposed for redevelopment that the site would be reevaluated under the proposed land use and if necessary reopened for further investigation and possible remediation with funding potentially available from the Fund. However, the mechanism to trigger a review of this case should a change in land use occur in the future is not 100% reliable. Therefore, there is no confidence this will occur at the appropriate time. In addition, future funding is not guaranteed as the Fund is currently set to expire on January 1, 2016 and funding over the next two years may have already been budgeted for other sites leaving nothing available for this site should it be reopened. Now is the appropriate time to deal with this residual contamination under all future potentially likely land use scenarios.

SUMMARY

Based on all of the information available for this case, the following are specific comments the Fund should respond to if it wishes to continue proposing closure:

- How can the Fund justify excluding the actual maximum residual concentrations of contaminants in soil, particularly benzene, from its RSR and subsequent comparison to the

LTCP when no more recent soil samples have been collected from this area justifying any assumed decrease in concentration over time?

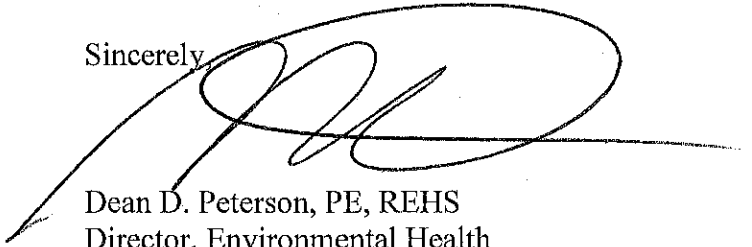
- How can the Fund justify ignoring the recent, and only, soil vapor samples collected at the site which fail the residential and commercial land use criteria of the LTCP in favor of a risk assessment that only modeled soil vapor concentrations from data collected prior and up to 2006 and has not been superseded by actually data?
- How can the Fund continue to rely upon risk assessments that did not use California specific toxicity factors for benzene?
- How can the Fund rely upon risk assessments that failed to evaluate the direct contact (direct ingestion and dermal contact) pathway as justification for closure under the Direct Contact and Outdoor Air Exposure media specific criteria of the LTCP?
- How can the Fund rely upon risk assessments that failed to evaluate the utility (construction) worker receptor as justification for closure under the Direct Contact and Outdoor Air Exposure media specific criteria of the LTCP when the maximum residual concentration, located in South Delaware Street where several utilities are likely to be located, exceeds the utility worker direct contact and outdoor air exposure media specific criteria of the LTCP?
- How can the Fund justify closure under an assumed continued land use, and even the specific type of commercial land use currently in existence, when the subject site is included within a transportation hub-specific development plan and two large redevelopments have already been approved in the very near vicinity of the site?
- If the Fund wants to continue assuming the site will remain under its current, and specific type of, land use, then why will it not require a commercial deed restriction in light of the known development plan?
- How can the Fund justify proposing closure when the environmental consultant that performed the risk assessments the Fund's RSR so heavily relies upon and collected and submitted the recent soil vapor sample results did not propose closure under the LTCP?
- Based on the fact the site does not satisfy the LTCP particularly since the risk assessments the Fund was solely relying upon have been found to have been incorrect or incomplete in terms of exposure pathways, receptors, and toxicity values and superseded by more recent soil vapor data, how can the SWRCB's Executive Director legally close this tank case under Resolution 2012-0061?
- Should the SWRCB continue with ordering closure of this case under the specific type of commercial land use currently present, how is it not a government taking from the property

owner?

- How can the Fund continue to propose closure for this case knowing that the mechanism to trigger a review of the case should development be proposed, even from this type of commercial use to another, is not 100% reliable?

Should you have any questions, please contact Charles Ice at (650) 372-6295 or Gregory J. Smith at (650) 372-6279.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Peterson', with a long horizontal flourish extending to the right.

Dean D. Peterson, PE, REHS
Director, Environmental Health