

From: [Soo, Kit, Env. Health](#)
To: rulim@comcast.net; nidt@pacbell.net; craiglim@me.com; drealeibert@gmail.com
Cc: ["Robert Kitay"; Roe, Dilan, Env. Health](#)
Subject: R00479 - Lim's Property - 250 8th Street, Oakland - August 17 Meeting Summary and Action Items
Date: Wednesday, September 14, 2016 1:24:00 PM

Dear Responsible Parties,

Thank you for attending the meeting on August 17, 2016. Attendees of the meeting included Craig Lim, Denise Tom, Andrea Leibert, Russell Lim (Lim Family); Robert Kitay (Aqua Sciences); Dilan Roe and Kit Soo (Alameda County Environmental Health, ACDEH)

The meeting focused on how to efficiently utilize the remaining USTCF funds to remediate offsite impacts associated with the historic releases of the underground storage tanks at the site; and to assess the current onsite conditions to provide information relative to future property transactions. A summary of our discussion items, comments and actions items are presented below:

Discussion

- Remediation Status and Groundwater Monitoring
 - o Previous remediation excavation appears to have reduced residual onsite contamination in soil and groundwater. However, residual contamination has migrated offsite.
 - o In order to reduce offsite contamination, an ozone sparging and a vapor extraction system were installed at the site in January 2011 and April 2011, respectively. The ozone sparging system is comprised of twelve (12) ozone sparge wells (OS-1 through -12). OS-1 through -7 are located on site, positioned in two rows bordering the southern property boundary. OS-8 through -12 are located offsite on 8th Street, bordering the northern boundary of the neighboring properties to the south. The vapor extraction system is comprised of ten (10) vapor extraction wells (VE-1 through -9, and MW-4R). VE-1 through -5 are located in the general proximity to OS-1 through -7. VE-6 through -9 and MW-4R are located along the general proximity to OS-8 through -12. The systems were shut down on June 23, 2015 as per a phone call to Jerry Wickham on April 13, 2015 to monitor the effectiveness of the remediation systems.
 - o A review of the quarterly groundwater monitoring data which was performed as part of the rebound monitoring program indicates that groundwater concentration have been increasing in downgradient wells MW-2, MW-3, MW-4R and MW-7 since shut down occurred. Specifically, benzene concentrations in MW-2, MW-3 and MW-4R during the latest groundwater monitoring event (June 9, 2016) were 8,100, 6,000 and 2,600 micrograms per liter (ug/L), respectively.
- Soil Vapor Sampling
 - o Proposed soil gas sampling onsite and offsite, as presented in the *Workplan for a Soil Vapor Assessment at Lim Property, 250 8th Street, Oakland, CA 94607*, dated February 24, 2016, prepared by Aqua Science Engineers, Inc. The purpose of this assessment is to assess the potential for vapor intrusion onsite and offsite, when the systems are shutdown.

- Tank Excavation Backfill and Waste Oil Tank Constituents of Concern
 - o Subsequent to our meeting ACDEH reviewed the case file and according to the *Environmental Remediation Excavation and Disposal Final Report*, dated June 8, 1993, prepared by All Environmental, Inc., three main excavations (Excavations I and II, and Disp A excavation [dispenser island located closest to the building]) were backfilled with pea gravel to a depth of 4 feet below ground surface (bgs) and the last 4 feet bgs were backfilled with imported base rock to grade. There was no mention as to what the waste oil tank excavation was backfilled with.
 - o Additionally, data in the case file indicates a soil sample was collected at 1 to 2 feet below the center of the tank, within a 9 feet deep excavation, and analyzed for Volatile Organics (EPA 624/8240) and Base, Neutrals and Acids (EPA 625/8270). The results were all non-detect below the respective reporting limits.

Technical Comments

- Soil Vapor Sampling
 - o Based on our review of the Work Plan, ACDEH request the following information be provided to support the proposed scope of work:
 - Onsite Locations
 - Overlay former tank, former fuel dispensers, former excavations and other pertinent information on to the current site and vicinity plan. Show the proposed locations of the soil gas samples on the revised site and vicinity plan.
 - Offsite Locations
 - Perform a survey of foundation types (i.e. basement, crawlspace, etc.) for the properties to the south of 8th Street, directly downgradient from the site. Show the locations of the foundations types on the revised site and vicinity plan, if this applies.
 - o If the results of the soil vapor sampling indicate concentrations above environmental screening levels indicating vapor intrusion risk to building occupants, then the SVE system shall be turned back on and plans for further mitigation must be submitted to ACDEH for further review.

Upon completion of the above tasks, please email the revised site and vicinity plan, results of the survey and any revisions to the scope of the work as a results of the foundation survey to ACDEH for approval prior to implementation

- Groundwater Monitoring
 - o In order to conserve funds, ACDEH requests that the next rebound monitoring be performed in December 2016, instead of the typically scheduled quarterly monitoring event. For the same reason, only monitoring wells MW-2, MW-3 and MW-4R and a reduced target list of Total Petroleum Hydrocarbons as Gasoline (TPH-g), Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX) will be sampled during this sampling event only. ACDEH request that the results of the December 2016 monitoring event be summarized in a table and submitted to ACDEH via email within 2 weeks of the receipt of the analytical data. Upload the EDF data to the

geotracker database. After the review of the December 2016 results, the frequency of sampling, number of wells and analyte list will be modified accordingly, if warranted.

- Remediation System Evaluation
 - o Conduct an evaluation of the remediation effectiveness based on the results of the soil vapor sampling and groundwater monitoring data. Please evaluate historical system run time and operational difficulties and make any recommendations for system optimization.
Upon completion of the above tasks, a meeting to discuss the results of the evaluation will be performed.

Technical Report Request

We request that you perform the proposed work and submit the following deliverables to ACDEH (Attention: Kit Soo), and according to the following schedule:

- September 29, 2016 – Figure showing Proposed Onsite and Offsite Soil Vapor Locations, and Indoor Air Locations (if warranted based on foundation type survey) – via email
- Within 60 days of approval and no later than November 29, 2016 – Soil Vapor Implementation and Potential Indoor Air Sampling
- December 29, 2016 – Upload Table containing Soil Gas and Potential Indoor Air Sampling results, and Lab Data to ACDEH's ftp site (Attention: Kit Soo) and to Geotracker:
File to be named: SWI_R_yyyy-mm-dd RO0469
- December 5, 2016 – Groundwater Monitoring and Sampling of 3 Monitoring Wells
- January 5, 2016 – Meeting to discuss results of the December 2016 Groundwater Monitoring and Sampling and Remediation System Evaluation

If you have any questions, please let us know.

Thanks, Kit

Kit Soo, PG

Senior Hazardous Materials Specialist

Alameda County Department of Environmental Health (ACDEH)

1131 Harbor Bay Pkwy

Alameda, CA 94502

Direct - 510-567-6791

kit.soo@acgov.org