From: Vaughan, Patrick
To: Fairbairn, Paul; KINGERY Sarah * DEQ
Cc: SCHERZINGER Bruce * DEQ; MAJOR Kaley * DEQ
Subject: RE: LUST 22-08-0575
Date: Thursday, June 6, 2024 1:46:10 PM
Attachments: image001.png
Importance: High

Hello all;

The Stantec PM asked me to add any relevant comments to this e-mail since I have worked on this project here in the Portland office for a considerable length of time. I completely concur with all points presented but would add the following comments:

- Work performed to date indicates that workers engaged in intrusive subsurface activities in the public rights-of-way are the primary receptor and may be exposed to residual petroleum contamination via direct (absorption and/or incidental ingestion) or indirect exposure (inhalation of Site related contaminants in outdoor air or from volatilized contaminants from water or impacted soil within an excavation). As noted in the e-mail, these receptors would be protected by implementation of the CMMP and properly develop health and safety plan (HASP). There is no beneficial use of impacted groundwater in the public rights-of-way.

- Vapor intrusion would be of concern only at hypothetical future structures built over the roadway (not likely) or as noted by EPA, CalEPA, Washington DOE, etc. only at structures within 30 feet of the contamination (the petroleum exclusion zone). Commercial and residential structures along E. Milton Street are greater than 30-feet from the road centerline. Due to the effects of petroleum biodegradation, the greatest risk from vapor intrusion occur when groundwater wets the foundation and there is insufficient distance for biodegradation to occur. Historic depth to groundwater data in the are indicate that this is not likely (DTW varies from 2 to 5-feet bgs). A preferential pathway vis sewer laterals is possible however, in Stantec's experience with petroleum release sites, the relatively low odor threshold for gasoline would quickly alert occupants of buildings with faulty plumbing connections.

- Finally, there are precedents at other DEQ sites that Stantec and I have participated in, for managing actual or potential impacts in roadways with dense utilities (chlorinated solvents in residential neighborhood-ECSI #4586 draft EES; Alba Village, ECSI #5251 NFA (dioxin contamination).

There are additional discussion points that can be presented in a conference call or face-to-face meeting.

Regards

Pat

Patrick H. Vaughan
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Stantec

From: Fairbairn, Paul <Paul.Fairbairn@stantec.com>
Sent: Tuesday, June 4, 2024 3:42 PM
To: KINGERY Sarah * DEQ <Sarah.KINGERY@deq.oregon.gov>
Cc: SCHERZINGER Bruce * DEQ <Bruce.SCHERZINGER@deq.oregon.gov>; MAJOR Kaley * DEQ <Kaley.MAJOR@deq.oregon.gov>; Vaughan, Patrick <Patrick.Vaughan@stantec.com>
Subject: RE: LUST 22-08-0575

Sarah

I have attached the Conceptual Site Model (CSM) that includes all references to Volatile Petroleum Hydrocarbons (VPH)/ Extractable Petroleum Hydrocarbons (EPH). The results for (MW-3 and MW-8) are presented in the attached tables. Our tables have always incorporated both residential and urban residential Risk-Based Concentrations (RBCs) for comparison with the results. The depth of utilities could potentially be significant if they intersect with the water table, which is a likely scenario. This intersection could facilitate transport, potentially exposing workers in the street. However, please note that any worker exposure would be addressed by the CMMP.

- Dense utilities remain in W. Milton and S. Main Street restricting or prohibiting invasive assessment within the streets. Possible permanent groundwater monitoring well and soil gas sampling locations outside dense utilities would not provide information regarding the nature and extent of petroleum contamination in the streets.

- The Passive Soil Gas sampling has already identified that petroleum impacts are present within W. Milton Street and extend from near the three recently identified USTs and MW-8 to north and south of its intersection with S. Main Street.

- Groundwater monitoring has shown that petroleum impacts in groundwater do not extend across W. Milton to MW-6 nor to MW-7 south of the intersection with S. Main Street.

- The only receptors likely to be exposed to residual petroleum contamination would be municipal or private contractors performing utility work involving excavation within the W. Milton and S. Main Street public rights-of-way; however, worker exposure would be of short duration (sub-chronic), exposure that is not considered in the current RBCs.

- The results of any further sampling and analysis could not be directly compared to current DEQ RBCs that are based on chronic (30 or 25 year) continuous exposure. Furthermore, laboratory analysis of soil and groundwater indicates that the encountered petroleum is not fresh material on which the RBCs for generic gasoline is based.

- The presence of substantial petroleum impacts also would have odors alerting the workers of possible exposure and the need to employ appropriate health and safety precautions.

Please feel free to reach out if you have any questions or need further clarification.

Paul Fairbairn
Principal

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From: KINGERY Sarah * DEQ <Sarah.KINGERY@deq.oregon.gov>
Sent: Monday, May 20, 2024 9:56 AM
To: Fairbairn, Paul <Paul.Fairbairn@stantec.com>
Cc: SCHERZINGER Bruce * DEQ <Bruce.SCHERZINGER@deq.oregon.gov>; MAJOR Kaley * DEQ <Kaley.MAJOR@deq.oregon.gov>
Subject: LUST 22-08-0575

Hello Mr. Fairbairn,
I am managing this project now. My apologies for not communicating this with you sooner.
I have reviewed the file and reports including the CSM. In the CSM Stantec calculated site specific RBCs and referenced specific EPH/VPH analysis and chromatograms. I can not find that data and the chromatograms in the lab data or how you calculated the site-specific RBCs (from the text it is not clear how you calculated the RBCs). Could you point me to the report in which those are found or send me copies?

Stantec only considered commercial receptors in the CSM. There are two residences shown on your figures on the south side of E street. I realize that these are outside of your defined LOF and cross-gradient of typical groundwater flow direction. However, given the large number of utilities in E street and the levels of benzene detected in samples SG-6 and SG-10, I would like additional information to help rule out the risks of transport of soil gas through preferential pathways within the utility corridor. Could you please provide the utility depths and the backfill material (if the city has that information)?
Thank you,

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