

June 30, 2015

Hi Dan -

As shown in Table 1, the detected metal concentrations are within range of typical natural background. *Often times background metal concentrations may be higher than their respective established environmental screening level.* In these situations, a regulatory agency typically does not require cleanup to levels below what is naturally occurring at a site.

The residential RSLs used in Table 1 are conservative. As discussed in Section 9.4, for non-carcinogenic compounds (such as metals), the Hazard Quotient is the ratio of potential exposure to a substance and the level at which no adverse effects are expected. If the Hazard Quotient is calculated to be less than 1, then no adverse health effects are expected as a result of exposure. As a conservative comparison, the RSLs presented in this report for non-carcinogenic compounds are based on a Hazard Quotient of 0.1. Thus, for a single compound, raising the Hazard Quotient from 0.1 to 1 raises its respective RSL by an order of magnitude, e.g. the RSL for cobalt becomes 23 mg/kg and vanadium becomes 390 mg/kg.

The TCE concentrations detected in the ground water samples are expected and consistent within the COE study area. The source of the TPH-impacted ground water is not known, ***but likely is related to minor releases/spills associated with 40+ years of auto repair related activities performed at the Site.*** Given that petroleum-related VOCs (e.g. benzene) and semi-VOCs were not detected in the ground water samples, the TPH-impacted ground water is not expected to pose a significant human health concern to future Site users.

If below ground parking is planned, *there is a potential that residual petroleum-impacted soil will be encountered during excavation activities.* This soil will require special handling and disposal and should be segregated from other soils excavated at the Site. To help identify potential sources of petroleum contamination, we recommend soil sampling be performed during facility closure activities (e.g. near the sump/clarifier, hydraulic lifts and associated equipment). We also recommend an Environmental Professional be present during demolition and removal of the slab and during excavation activities performed near the former waste oil UST to observe soil conditions and potential suspect impacted soil.

During our investigation, ground water was encountered in the borings at an approximate depth of 25 feet. If ground water dewatering is required associated with construction of a planned below grade garage, *the pumped ground water likely will need to be treated prior to discharge. We recommend preparing a Site Management Plan (SMP) for garage excavation activities to establish appropriate management practices for handling impacted soil and ground water if encountered.*

For a higher level of protection against potential vapor intrusion concerns associated with the contaminants detected in ground water, *we recommend incorporating vapor mitigation*

measures into site redevelopment plans. Vapor intrusion refers to the process by which volatile chemicals like TCE move from a subsurface source into the indoor air of an overlying building. Contaminated soil or ground water can release vapors into the pore spaces of the soil. These contaminated vapors can then migrate up through the soil column, through cracks in the foundation slab, and into the below ground parking garage and/or indoor air of the occupied building spaces.

Dan, hope this helps some. Let me know if you have further questions or would like to discuss.

Sincerely,

Kurt M. Soenen, P.E.
Principal Engineer

1259 Oakmead Parkway
Sunnyvale, California 94085
p 408-245-4600 x110
f 408-245-4620
c 408-605-3037
www.cornerstoneearth.com