Nowell, Keith, Env. Health

From: Nowell, Keith, Env. Health
Sent: Monday, December 22, 2014 10:07 AM
To: 'dcs@youngdahl.net'
Cc: Roe, Dilan, Env. Health
Subject: RE: Site Cleanup Program Case RO002981, Red Hanger Kleaners, 6335-6339 College Ave., Oakland

Dear Mr. Sederquist,

Please submit a figure indicating which sampling location you are proposing to eliminate from the sampling program. Provide via email by December 31, 2014.

Thank you ,
Keith Nowell

From: David Sederquist [mailto:dcs@youngdahl.net]
Sent: Friday, December 12, 2014 2:26 PM
To: Nowell, Keith, Env. Health
Cc: 'Bates, Gary'
Subject: Site Cleanup Program Case RO002981, Red Hanger Kleaners, 6335-6339 College Ave., Oakland

Dear Mr. Nowell:

In regards to the Red Hanger Kleaners, 6335-6339 College Ave., Oakland, Site Cleanup Program Case RO002981, we have some questions regarding your email to Mr. Elvidge dated December 5, 2014.

We deeply appreciate your review and conditional approval of the Work Plan prepared by Youngdahl Consulting Group, Inc. (Youngdahl) dated October 21, 2014. We are planning to use an on-site mobile laboratory in order to provide significantly better quality control and quality assurance than can be achieved using vacuum canisters. One major limitation of a mobile laboratory is that it cannot operate for more than a 12-hour period without having to undergo a full recalibration. Most mobile labs are equipped with a single chromatograph with the ability to run only a limited number of analyses in a day. For soil gas surveys, a mobile laboratory typically has to run a probe blank and at least one duplicate analysis. If there is any difficulty in collecting samples, it is common for sampling points to have to be resampled and reanalyzed. For soil gas probes deeper than 5 feet, the DTSC protocol requires purge volume testing at 1, 3, and 10 purge volumes. None of our soil gas probes are proposed to go deeper than 5 feet, so we will use the default of 3 purge volumes. The Work Plan proposed a total of 11 soil gas samples and two sub-slab samples. Each sample point is required to have at least 2 hours of equilibration time before being sampled. The proposed maximum scope will require a minimum of 17 chromatograph analyses, each taking from 20 to 30 minutes to run. There are almost always some reruns required.

Another constraint on getting the assessment done in a single day is the grouting inspection. If the Alameda County Public Works Agency needs to observe the grouting back of the soil vapor probe borings, then the last boring must be installed no later than 2:00 PM for a 4:00 pm grouting time due to the 2 hour required equilibration time before the sample can be drawn for analysis. The scope that Youngdahl has outlined will most likely require at least 10-hours of laboratory time to achieve (12 hours of onsite time) if we do not need a grout inspection and must be reduced if we do need a grout inspection, so it is unlikely that we will be able to add any samples beyond what is proposed.

When we prepared the work plan, it assumed that the dry cleaning machines would remain in place and that sample locations would be constrained by their presence. The machines have been removed. We proposed four soil gas samples and one subslab sample in close proximity (surrounding) to the dry cleaning machines. The Work Plan proposed a total of 11 soil gas samples and two sub-slab samples. We believe that we should reduce the number of soil gas samples near the former dry cleaning machine location to allow us to collect alternative samples in locations you have recommended.

Alameda County Environmental Health (ACEH) has requested that we collect at least three subslab samples and that these be from permanent locations so as to allow follow up samples to account for temporal conditions. Two locations were shown in the work plan. ACEH has requested that we also place one in the boiler room. If we switch one of the soil gas sampling locations next to the former dry cleaning machine to a subslab sample for the boiler room, this can be done. We would also like to move the subslab sample proposed next to the dry cleaning machines to the location directly beneath where they used to be.

ACEH provided an opinion that the full EPA Method 8260B volatile organic compound suite be run for each sample. That is what is planned. The typical reporting limits for most compounds are 100 micrograms per cubic meter. Lower limits can be achieved by using the selected ion monitoring mode (SIM mode), but this then reduces the potential analytes to only a few compounds.

ACEH has requested that the lab analyses include the tracer gas isopropanol (IPA). This is planned. ACEH has also requested that the concentration of IPA in the shroud be measured so that the percent leakage can be estimated, should leakage occur. This will be done using the mobile lab for the first sample only. Youngdahl will use a handheld photo-ionization detector (PID) to obtain a correlative measurement and then use only the PID to estimate the scaled concentration of IPA for each sampling after the first one. Be advised that the additional lab analysis may impact the total number of soil gas and subslab samples that can be collected within a 12-hour period.

We will measure oxygen and carbon dioxide in at least two samples as ACEH has requested.

The analytical data will be compared to the San Francisco Bay Region, Regional Water Quality Control Board Environmental Screening Levels (ESLs). We will also address the EPA Region 9 Response Action Levels and Recommendations to Address Near-Term Inhalation Exposures to TCE in Air from Subsurface Vapor Intrusion, memorandum dated July 9, 2014. We are also planning to use the analytical results in a Johnson and Ettinger Model modified to incorporate DTSC toxicity values as part of a screening human health risk assessment. The EPA memorandum doesn't provide soil gas risk screening values. The TCE reporting limit using EPA Method 8260B will be 100 micrograms per cubic meter. If TCE is not detected, it may be necessary to apply the reporting limit value to the Johnson and Ettinger Model to see if projected indoor concentrations of TCE (from soil gas at the reporting limit) are below those recommended in the EPA memorandum.

We look forward to your response at which point we will schedule the field work.

David C. Sederquist, C.E.G., C.HG.
Senior Engineering Geologist / Hydrogeologist

Youngdahl Consulting Group, Inc.
1234 Glenhaven Court, El Dorado Hills, CA 95762
Office: (916) 933.0633 Fax: (916) 933.6482

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Electronic Documents (if attached):

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