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| **From:** | Sarah Colee |
| **To:** | VANEK Todd * DEQ; SCHATZ Jeff * DEQ |
| **Cc:** | 76hillsboro@gmail.com; Hunter, Jeffrey (POR); David Weatherby |
| **Subject:** | RE: Hillsboro 76/Gas N Grub - 34-23-0263 |
| **Date:** | Friday, April 26, 2024 2:18:32 PM |
| **Attachments:** | image001.png<br>MFA SOPs Combined.pdf |

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Hi Todd,

Thank you for hopping on that call with David and I on Wednesday. Per our discussion, we are addressing DEQ's Work Plan comments by email and not reissuing the Work Plan. I have also compiled and attached all applicable MFA SOPs for activities covered in the Work Plan, or potentially needed during follow-up assessment. *MFA's responses are in orange italics.*

- Free-Phase Product and Dissolved-Phase Contaminant Assessment, Page 2 –
  - Depending on the depth to water (DTW) during drilling, borings may need to be advanced deeper than 15 feet below ground surface (bgs) to allow for accurate fluid level measurements and adequate volume for groundwater sampling. *MFA will plan to drill borings to a depth of 20 feet bgs.*
  - Conditions permitting, if evidence of vadose zone contamination is found above the water table, in addition to the sampling the impacted zone, suggest collecting a deeper soil sample and/or sample just above the water table to help constrain the vertical extent of contamination. *If these conditions are observed or any other conditions that warrant additional vertical characterization, MFA will collect additional soil samples to be placed on hold or analyzed at the lab. However, we currently anticipate observing evidence of contamination near the water table and may only need to collect one sample.*
  - Once the desired boring depth has been reached, suggest letting the boring sit for a period of time before gauging with the oil-water interface probe (note: comment not necessary if wells are installed in lieu of borings, since they should sit at least 24 hours after development prior to gauging/sampling-see comment below about monitoring wells). *Time permitting, MFA will let reconnaissance wells sit prior to measuring with an oil-water interface probe. The amount of time will need to be determined in the field, as we plan to complete all borings and well installations in one field day.*
  - DEQ appreciates the proposal to evaluate groundwater conditions in proximity to the strip mall south of the subject property. However, borings B-1 and B-2 at a minimum should be completed as monitoring wells. The monitoring wells should be installed to 20 feet bgs consistent with the onsite wells to account for seasonal water level fluctuations. DEQ believes that properly constructed and developed monitoring wells will provide more reliable information concerning the presence

of LNAPL or dissolved contaminants than grab samples from temporary wells or open borings. Furthermore, monitoring wells with surveyed top-of-casings tied into the existing elevation datum will provide additional data to help evaluate the potentially complex groundwater flow patterns at the site. *MFA will complete two of the borings as monitoring wells. The wells will be installed to a depth of 20 feet bgs and screened from 5 to 20 feet bgs, consistent with the other eight monitoring wells previously installed at the 76 Hillsboro/Gas N Grub site. These two wells will be developed, sampled, and surveyed as part of this scope of work. However, instead of pre-determined locations, MFA would like the placement of the two wells to be informed by our field observations and determined at that time.*

- DEQ appreciates the contingency to advance additional borings adjacent to the strip mall building (borings B-5 and B-6) in the event indications of contamination are observed. Please also consider that evolving understanding of groundwater flow patterns may inform decisions regarding the need for additional borings/wells west or east of the strip mall building. *DEQ's comment is noted, and we will keep this in mind when providing our recommendations during reporting.*

- Vapor Intrusion Assessment, Page 2 –
  - Is there a contingency to advance additional sub-slab sampling points further south in the occupied spaces of the strip mall if contaminants are detected above applicable RBCs in any or all of SV-1 through SV-3? DEQ assumes that the negotiated access agreement would cover the entire strip mall property. Please clarify. *MFA understands that the data from SV-1 through SV-3 together with the off-site groundwater samples will inform whether further vapor assessment to the south is needed to delineate the extent of potential vapor intrusion risk in the strip mall. MFA will be screening the data against applicable RBCs and will provide recommendations for additional assessment in our report, if warranted (e.g., additional sub-slab samples collected farther south in the strip mall, indoor/outdoor air sampling, etc.) If the analytical results appear to warrant more immediate action, MFA will set up a call with DEQ for interim discussion. We will also update DEQ once the access agreements have been reached, but we intend to establish broader agreements with owner and tenants such that additional assessment or monitoring could be coordinated without the need for brand new agreements established for each event.*
  - The sub-slab samples should be collected from permanent sampling points, as more than one sampling event may be required to capture seasonal variability. *MFA acknowledges that, at a minimum, one additional sub-slab sampling event will be needed in the restaurant to capture any seasonal variability in soil vapor conditions. At this time, MFA would like to proceed to install SV-1 through SV-3 as*

*temporary pins, patch the holes, and leave the restaurant as we found it. The client, client's legal counsel, and MFA have concerns about installing permanent soil vapor sampling ports in the restaurant during this initial assessment (i.e., the lack of control over who has access to these ports, potential accidents or damage to the ports, creating potential hazards, etc.) After this initial assessment is complete, we will provide recommendations on whether the installation of permanent sampling ports in that building would be in the client's best interest, and if so, would work with the strip mall property owner and restaurant owner to ensure the ports do not introduce a risk of liability to our client.*

- DEQ *recommends* that concurrent with the sub-slab sampling, ambient indoor and outdoor air samples be collected using passive diffusive samplers (e.g., Radiello®) deployed for 7-14 days. *DEQ's comment is noted. However, MFA would like to proceed with SV-01 through SV-03 as an initial assessment, the results of which will inform follow-up actions and additional assessment, if warranted. MFA will be screening the initial data against applicable RBCs and will provide recommendations at that time (e.g., additional sub-slab samples collected farther south in the strip mall, indoor/outdoor air sampling, etc.) If sample results appear to warrant more immediate action, MFA will set up a call with DEQ for interim discussion.*

- Sample Collection Methods, Page 3 –
  - DEQ assumes that the sampling regulator will be set at a rate not to exceed 200 ml/min. *This is correct. MFA requests that sample containers from the lab come with flow control valves that do not exceed that rate.*
  - This section mentions that the sample train will be appropriately purged prior to sample collection. Although the use of a shroud and helium as a leak-check compound is mentioned, there is no mention of using a hand-held helium meter to evaluate potential atmospheric contamination of the sample train. Please clarify. *Correct, MFA uses a hand-held helium detector during this step. The helium detector will be used to sample the air purged through the sampling train to verify the presence or absence of helium. A helium concentration greater than 10 percent of the concentration in the shroud indicates that a leak is occurring in the sampling train, and sampling will not commence until all leaks have been repaired and all leak detection measures have been passed. See attachment, MFA SOP 16.*
  - DEQ assumes that the sampling operations will be terminated at an appropriate time to ensure there is sufficient negative pressure in the summa canister. *Correct, MFA field staff leave the final canister pressure at or near -5 inches of mercury ahead of sample shipment. The sample will be rejected by the lab if the*

*initial canister pressure is not at least -25 inch of mercury or if the final canister pressure is greater than -0.1 inch of mercury. See attachment, MFA SOP 16.*

- It is DEQ's understanding that MFA has prepared SOPs that cover soil gas sampling. Suggest that at least the sub-slab sampling SOPs be included as an attachment to the work plan and referenced, as the foregoing points are likely addressed by them. *Correct. Although we are not reissuing the Work Plan, I have referenced this SOP in my comments above. See attachment, MFA SOP 16.*
- If groundwater recharge conditions permit, DEQ recommends purging the temporary wells and allowing to recharge prior to sampling to minimize the turbidity in collected samples as much as possible. *MFA agrees with this approach, conditions permitting.*

- Analytical Methods, Page 3 –
  - Soil and groundwater samples should be analyzed for all of the RBDM VOCs (including trimethylbenzenes, EDC/EDB, propylbenzene) *MFA will have soil and groundwater samples analyzed for RBDM VOCs (including trimethylbenzenes, EDC/EDB, propylbenzene), not just BTEX + naphthalene, as originally described in the Work Plan.*
  - Soil samples should be collected using the Method 5035 protocol for VOC analysis. *Correct, MFA will collect soil samples for VOC analysis using Method 5035. See attachment, MFA SOP 05.*

*MFA will provide a schedule for the drilling and soil vapor sampling activities once dates are scheduled.*

Thank you!

**SARAH COLEE** | MAUL FOSTER & ALONGI, INC.
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**From:** VANEK Todd * DEQ <Todd.VANEK@deq.oregon.gov>
**Sent:** Tuesday, April 9, 2024 1:59 PM
**To:** Sarah Colee <scolee@maulfoster.com>
**Cc:** 76hillsboro@gmail.com; David Weatherby <dweatherby@maulfoster.com>; Hunter, Jeffrey (POR) <JHunter@perkinscoie.com>; SCHATZ Jeff * DEQ <Jeff.SCHATZ@deq.oregon.gov>
**Subject:** Hillsboro 76/Gas N Grub - 34-23-0263

**[External Sender - Confirm Sender and Beware of Links and Attachments]**

Sarah:

Thank you for preparing and submitting the *Work Plan for Offsite Assessment* dated February 20, 2024, to delineate the LNAPL and dissolved phase plume south of the site and initiate a vapor intrusion assessment of the adjacent strip mall building. DEQ's comments and recommendations organized by the workplan sections are provided below.

- Free-Phase Product and Dissolved-Phase Contaminant Assessment, Page 2 –
    - Depending on the depth to water (DTW) during drilling, borings may need to be advanced deeper than 15 feet below ground surface (bgs) to allow for accurate fluid level measurements and adequate volume for groundwater sampling.
    - Conditions permitting, if evidence of vadose zone contamination is found above the water table, in addition to the sampling the impacted zone, suggest collecting a deeper soil sample and/or sample just above the water table to help constrain the vertical extent of contamination.
    - Once the desired boring depth has been reached, suggest letting the boring sit for a period of time before gauging with the oil-water interface probe (note: comment not necessary if wells are installed in lieu of borings, since they should sit at least 24 hours after development prior to gauging/sampling-see comment below about monitoring wells).
    - DEQ appreciates the proposal to evaluate groundwater conditions in proximity to the strip mall south of the subject property. However, borings B-1 and B-2 at a minimum should be completed as monitoring wells. The monitoring wells should be installed to 20 feet bgs consistent with the onsite wells to account for seasonal water level fluctuations. DEQ believes that properly constructed and developed monitoring wells will provide more reliable information concerning the presence of LNAPL or dissolved contaminants than grab samples from temporary wells or open borings. Furthermore, monitoring wells with surveyed top-of-casings tied into the existing elevation datum will provide additional data to help evaluate the potentially complex groundwater flow patterns at the site.
    - DEQ appreciates the contingency to advance additional borings adjacent to the strip mall building (borings B-5 and B-6) in the event indications of contamination are observed. Please also consider that evolving understanding of groundwater flow patterns may inform decisions regarding the need for additional borings/wells west or east of the strip mall building.

- Vapor Intrusion Assessment, Page 2 –
    - Is there a contingency to advance additional sub-slab sampling points further south in the occupied spaces of the strip mall if contaminants are detected above applicable RBCs in any or all of SV-1 through SV-3? DEQ assumes that the negotiated access agreement would cover the entire strip mall property. Please clarify.
    - The sub-slab samples should be collected from permanent sampling points, as more

than one sampling event may be required to capture seasonal variability.
    - DEQ *recommends* that concurrent with the sub-slab sampling, ambient indoor and outdoor air samples be collected using passive diffusive samplers (e.g., Radiello®) deployed for 7-14 days.

- Sample Collection Methods, Page 3 –
    - DEQ assumes that the sampling regulator will be set at a rate not to exceed 200 ml/min.
    - This section mentions that the sample train will be appropriately purged prior to sample collection. Although the use of a shroud and helium as a leak-check compound is mentioned, there is no mention of using a hand-held helium meter to evaluate potential atmospheric contamination of the sample train. Please clarify.
    - DEQ assumes that the sampling operations will be terminated at an appropriate time to ensure there is sufficient negative pressure in the summa canister.
    - It is DEQ's understanding that MFA has prepared SOPs that cover soil gas sampling. Suggest that at least the sub-slab sampling SOPs be included as an attachment to the work plan and referenced, as the foregoing points are likely addressed by them.
    - If groundwater recharge conditions permit, DEQ recommends purging the temporary wells and allowing to recharge prior to sampling to minimize the turbidity in collected samples as much as possible.

- Analytical Methods, Page 3 –
    - Soil and groundwater samples should be analyzed for all of the RBDM VOCs (including trimethylbenzenes, EDC/EDB, propylbenzene)
    - Soil samples should be collected using the Method 5035 protocol for VOC analysis.

Please provide a schedule for the drilling and soil vapor sampling activities once hard dates are secured. Let me know if you have any questions or need additional information.

Thank you.

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