From: Unruh, David (ECY)
To: Lynn Green; Maninder Singh
Cc: Evan Bruggeman; Erik Chapman; Paul Trone
Subject: RE: Fmr Texaco 211544 - 2nd Quarter 2022 ground water monitoring
Date: Wednesday, June 8, 2022 09:15:00

Hi Lynn,

Thanks again for your initiative on the Site, it's been very helpful! I have just a few suggestions to your updated monitoring schedule, shown in the table below.

Well	DTW	TPH-G, -D, -O	Petroleum VOCs	CVOCs	PAHs	Pb+Cd
Well-2	X	X	X		X	
Well-3	X	X	X	X	X	
Well-4	X	X			X	
Well-5	X	X			X	
Well-6	X					
Well-7	X					
Well-8	X					
Well-9	X					
Well-10	X					
Well-11	X	X	X	X	X	
Well-12	X	X	X	X	X	X
Well-13	X					
EMW-01	X	X	X		X	
MW-8	X	X	X		X	

X - Ecology proposed addition

Since Well-4 and Well-5 had detections of PAHs below CULs for the last two rounds of sampling, seeing at least four consecutive quarters below CULs will provide us some extra assurance we don't have groundwater impacts in that area given the grab groundwater results from that area in the Partner investigation. Similarly for Well-11, given its location close to the former dry cleaners, a couple extra quarters of monitoring will provide some extra assurance we're not missing anything.

MW-8 has had some historical exceedances of benzene and total xylenes in the late 90's, so seeing some data from that well would be beneficial even though it is located so close to Well-2.

Thank you again for providing boring logs from the Well-2 through -13 investigation. I didn't find well screen interval noted on the logs anywhere, do you have an idea of what the well screen interval and construction is?

Finally, after talking with our cleanup level expert, it looks like the TPH cleanup level you calculated using half the method reporting limit (1706 mg/kg) will work for what we have right now. As we discussed in an earlier email chain, in the event that soil samples collected during the additional investigation contain detectable amounts of TPHs, additional EPH/VPH analyses will be really helpful for further refining the CUL.

Let me know your thoughts!

Thanks,
David

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From: Unruh, David (ECY)
Sent: Tuesday, May 31, 2022 15:58
To: Lynn Green <lynng@evren-nw.com>; Maninder Singh <MSingh@KAGreaterSeattle.Com>
Cc: Evan Bruggeman <evanb@evren-nw.com>; Erik Chapman <erikc@evren-nw.com>; Paul Trone <pault@evren-nw.com>
Subject: RE: Fmr Texaco 211544 - 2nd Quarter 2022 ground water monitoring

Thanks for the updated monitoring plan, Lynn. I'll review this plan within the next few weeks and get back to you about eliminating wells from the sampling strategy before the next monitoring event.

Thank you,
David

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From: Lynn Green <lynng@evren-nw.com>
Sent: Tuesday, May 31, 2022 15:42
To: Unruh, David (ECY) <dunr461@ECY.WA.GOV>; Maninder Singh <MSingh@KAGreaterSeattle.Com>
Cc: Evan Bruggeman <evanb@evren-nw.com>; Erik Chapman <erikc@evren-nw.com>; Paul Trone <pault@evren-nw.com>
Subject: RE: Fmr Texaco 211544 - 2nd Quarter 2022 ground water monitoring

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND

were expecting the attachment or the link

David, attached for your consideration is our requested modified ground water monitoring plan moving forward (starting in July, after the new monitoring well just installed has been developed). We proposed eliminating several MWs from further monitoring, other than depth to water measurements, with continued monitoring at just five locations (including the new location just installed). Moving forward we can discuss further changes in monitoring frequency and location, based on additional data. Let me know your thoughts on this proposed plan and if you have any questions. Thanks, David! Lynn

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From: Unruh, David (ECY) <dunr461@ECY.WA.GOV>
Sent: Monday, May 9, 2022 9:19 AM
To: Lynn Green <lynng@evren-nw.com>; Maninder Singh <MSingh@KAGreaterSeattle.Com>
Cc: Evan Bruggeman <evanb@evren-nw.com>; Erik Chapman <erikc@evren-nw.com>; Paul Trone <pault@evren-nw.com>
Subject: RE: Fmr Texaco 211544 - 2nd Quarter 2022 ground water monitoring

Super, thanks Lynn. Glad to hear things are stable for this quarter as well. Looking forward to the results of the next round of soil and groundwater sampling.

Best,
David

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From: Lynn Green <lynng@evren-nw.com>
Sent: Monday, May 9, 2022 09:10
To: Unruh, David (ECY) <dunr461@ECY.WA.GOV>; Maninder Singh <MSingh@KAGreaterSeattle.Com>
Cc: Evan Bruggeman <evanb@evren-nw.com>; Erik Chapman <erikc@evren-nw.com>; Paul Trone <pault@evren-nw.com>
Subject: Fmr Texaco 211544 - 2nd Quarter 2022 ground water monitoring

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link

David, attached is our 2nd quarter 2022 ground water monitoring report. Note, we did add the two

metals requested to Well-12 (both were ND). The data looks very good and supports previous conclusions. We hope to have the additional monitoring well installed later this month (along with additional data from the other two borings you requested) and will include the data from the new monitoring well in the 3rd quarter 2022 monitoring report (data from the other borings and observations during drilling will be included in a separate report). Once this well has been installed and before the next round of testing, I will send you an updated figure and suggestions for ongoing monitoring, since I do not think all the monitoring wells need to be samples in future monitoring events. Please let us know if you have any questions or comments related to this report. Thanks!
Lynn

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From: Unruh, David (ECY) <dunr461@ECY.WA.GOV>
Sent: Thursday, May 5, 2022 11:57 AM
To: Lynn Green <lynng@evren-nw.com>; Maninder Singh <MSingh@KAGreaterSeattle.Com>
Cc: Evan Bruggeman <evanb@evren-nw.com>; Erik Chapman <erikc@evren-nw.com>; Paul Trone <pault@evren-nw.com>
Subject: RE: Texaco 211544 - Site Status

Sounds good. In the event that we do have detections of those constituents in the western boring, it would be good to reserve a few samples from the monitoring well boring for those analyses in the event we need to bound impacts to the southeast of the former waste oil tank as well.

Thanks again,
David

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From: Lynn Green <lynng@evren-nw.com>
Sent: Thursday, May 5, 2022 11:47
To: Unruh, David (ECY) <dunr461@ECY.WA.GOV>; Maninder Singh <MSingh@KAGreaterSeattle.Com>
Cc: Evan Bruggeman <evanb@evren-nw.com>; Erik Chapman <erikc@evren-nw.com>; Paul Trone <pault@evren-nw.com>
Subject: RE: Texaco 211544 - Site Status

External Email

OK, how about we drill a bit further south of Partners' B5 soil boring location (so more west of the former WO UST location) and sample soil at that location for all the MTCA WO UST related constituents, as you had requested? If agreed, we can complete this work with the other two borings. Thanks for the clarification, David!

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From: Unruh, David (ECY) <dunr461@ECY.WA.GOV>
Sent: Thursday, May 5, 2022 11:29 AM
To: Lynn Green <lynng@evren-nw.com>; Maninder Singh <MSingh@KAGreaterSeattle.Com>
Cc: Evan Bruggeman <evanb@evren-nw.com>; Erik Chapman <erikc@evren-nw.com>; Paul Trone <pault@evren-nw.com>
Subject: RE: Texaco 211544 - Site Status

Hi Lynn,

From what I could figure out from the data you included in your Work Plan and from the historical reports, we have limited soil samples from the area around excavation samples WOFM3-7 and WOWWH-3 (roughly the location of Partner's B5). The soil around those samples was removed during a piping excavation in 1996, but new samples were not collected at the time. Partner sampled what appears to be native material for TPH and VOCs in this area, but missed the rest of the analytes in Table 7.2. Since we don't have confirmation that contaminated soil in this area has been removed, additional sampling of both fill and native material is needed. If at all possible, locating the boring in the alley just west of the Property boundary would be close enough to the former waste oil tank and provide off-property data missing in this area.

Let me know if you have additional questions, and thanks for keeping in touch.

Thanks,
David

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From: Lynn Green <lynng@evren-nw.com>
Sent: Thursday, May 5, 2022 10:03
To: Unruh, David (ECY) <dunr461@ECY.WA.GOV>; Maninder Singh <MSingh@KAGreaterSeattle.Com>
Cc: Evan Bruggeman <evanb@evren-nw.com>; Erik Chapman <erikc@evren-nw.com>; Paul Trone <pault@evren-nw.com>
Subject: RE: Texaco 211544 - Site Status

External Email

David, thanks again for all your comments related to this facility. I have a question for you regarding this specific comment:

- An additional boring on the west side of the site is needed to analyze soil in the vicinity of the former waste oil tank for compounds listed in Table 830.1 of the MTCA Rule and Table 7.2 in the Remediation of Petroleum Contaminated Sites Guidance.

I have attached two figures for your consideration. Figure 2 is from our recent ROW investigation and shows the former waste oil tank location, and Figure 3 is from the work plan and shows the former soil removal excavations. As you can see, the waste oil tank location was subject to a very large excavation associated with the 1990s cleanup effort. If we advance a boring near the former waste oil tank location we will likely be sampling fill that was placed as backfill. Do you still want this soil boring as described in your comments? Let me know. We are hoping to do this additional work later this month. Thanks, David! Lynn

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From: Unruh, David (ECY) <dunr461@ECY.WA.GOV>
Sent: Monday, April 25, 2022 11:48 AM
To: Lynn Green <lynng@evren-nw.com>; Maninder Singh <MSingh@KAGreaterSeattle.Com>
Cc: Evan Bruggeman <evanb@evren-nw.com>; Erik Chapman <erikc@evren-nw.com>; Paul Trone <pault@evren-nw.com>
Subject: RE: Texaco 211544 - Site Status

Lynn,

Thank you for the prompt response, I'm glad to hear we're thinking along the same lines. Since we have a good understanding of the conditions at the site based on the previous investigations and the additional scope is pretty limited, I don't think an additional work plan is necessary here; we can just rely on the one you've already prepared for the right-of-way investigation. For consistency, the well should be installed with a screened interval comparable to the existing wells on site.

I'll look for the boring logs and building plans and once you have the next groundwater monitoring report ready, I'll have another look at the results from existing wells. Hopefully we can eliminate a few of those to save on analytical costs.

Thanks again,
David

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From: Lynn Green <lynng@evren-nw.com>
Sent: Monday, April 25, 2022 11:29
To: Unruh, David (ECY) <dunr461@ECY.WA.GOV>; Maninder Singh <MSingh@KAGreaterSeattle.Com>
Cc: Evan Bruggeman <evanb@evren-nw.com>; Erik Chapman <erikc@evren-nw.com>; Paul Trone <pault@evren-nw.com>
Subject: RE: Texaco 211544 - Site Status

David, thank you for your encouraging email. Here are my thoughts:

- Complete boring logs and well completion diagrams from the borings and well installation activities performed by Environmental Specialties in 2021 (Well-2 through -13, and SB-1 through -8).
    - I will ask Maninder for these boring and well logs and submit to you once I review.
- Details of your planned floor replacement with vapor and moisture barriers.
    - I will prepare a simple letter outlining the scope of work and product details.
- Your right-of-way investigation was helpful in characterizing the current condition of soil and groundwater in the southeast corner of the Site, but to get to closure, a few additional borings and analyses are needed.
    - A permanent monitoring well closer to the existing area of impacted soil in the southeast corner of the Site is needed. An additional well in the loading dock or sidewalk close to this area will help in understanding the groundwater gradient and flow direction in this area.
        - Do you want a work plan for this work, or should we install based on this comment (since pretty clear) and include in the next monitoring event? Also, since we just sampled the onsite wells, I am hoping I can provide you with a report documenting the second quarter 2022 monitoring event and agree on wells that can be eliminated from further monitoring to reduce ongoing monitoring costs. Based on your last comments, sounds like we are on the same page.
    - An additional boring on the west side of the site is needed to analyze soil in the vicinity of the former waste oil tank for compounds listed in Table 830.1 of the MTCA Rule and Table 7.2 in the Remediation of Petroleum Contaminated Sites Guidance.
        - This can be done concurrent with installation of the new monitoring well. Do you want a work plan for this, or since the objective in your comment is pretty clear, just complete this work and submit a report documenting this work?
    - Ideally, an additional boring along Greenwood Avenue to better bound the northern and eastern extent of contaminated soil in the loading dock area reported during excavations in 1996 (sample EXE-5).
        - Same comment. This can be done concurrent with installation of the new monitoring well. Do you want a work plan for this, or since the objective in your comment is pretty clear, just complete this work and submit a report

documenting this work?

    - Ecology recognizes finding a location for these explorations may be difficult due to the location of utilities and the need for permits for the boring on the east side of the building.
- To calculate Method B cleanup levels, EPH/VPH analyses of soil samples with concentrations of TPH-G and –D above Method A are needed. See Section 8.5 of the Petroleum Contaminated Sites Guidance linked above for details on calculating cleanup levels. If the soil sample from 9 feet bgs in EB-1 you collected during your right-of-way investigation is still archived at the lab, it would be great to run the EPH/VPH analysis on that sample.
    - I have sent a request to the lab and will let you know what they say. We also are still waiting for the results of the TOC analysis from this same boring and will report this data once available since this data can be used to recalculated CULs.
- Please continue sampling Site wells on a quarterly basis. After another consecutive quarter of sampling, we can begin to exclude wells from the sampling program that do not contain Site contaminants of concern and are not located in areas where historical activities are cause for concern.
    - Please refer to Table 7.2 in the Petroleum Contaminated Sites Guidance for analytical needs for groundwater samples based on historical activities on the Property.
    - Based on the results of the Site Hazard Assessment for the SMI Inc. Trust Site, located north of your Property, include analysis of dissolved cadmium and lead in Well-12.
        - Will do.

Thanks, David! Lynn

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From: Unruh, David (ECY) <dunr461@ECY.WA.GOV>
Sent: Monday, April 25, 2022 11:01 AM
To: Lynn Green <lynng@evren-nw.com>; Maninder Singh <MSingh@KAGreaterSeattle.Com>
Subject: Texaco 211544 - Site Status

Hello Lynn and Maninder,

I had a chance to talk about your Greenwood Texaco Site with the Unit Supervisor for the VCP program about a path forward for the Site and I think we have a plan that should get the site to closure. Based on the low magnitude of the exceedances of TPH in soil and soil vapor, we're hoping we'll be able to use a model remedy with calculated Method B cleanup levels that will not require a new covenant and will eliminate the need for the existing one. There are a few data points we'll need to confirm this is the case:

- Complete boring logs and well completion diagrams from the borings and well installation activities performed by Environmental Specialties in 2021 (Well-2 through -13, and SB-1 through -8).

- Details of your planned floor replacement with vapor and moisture barriers.
- Your right-of-way investigation was helpful in characterizing the current condition of soil and groundwater in the southeast corner of the Site, but to get to closure, a few additional borings and analyses are needed.
    - A permanent monitoring well closer to the existing area of impacted soil in the southeast corner of the Site is needed. An additional well in the loading dock or sidewalk close to this area will help in understanding the groundwater gradient and flow direction in this area.
    - An additional boring on the west side of the site is needed to analyze soil in the vicinity of the former waste oil tank for compounds listed in Table 830.1 of the MTCA Rule and Table 7.2 in the Remediation of Petroleum Contaminated Sites Guidance.
    - Ideally, an additional boring along Greenwood Avenue to better bound the northern and eastern extent of contaminated soil in the loading dock area reported during excavations in 1996 (sample EXE-5).
    - Ecology recognizes finding a location for these explorations may be difficult due to the location of utilities and the need for permits for the boring on the east side of the building.
- To calculate Method B cleanup levels, EPH/VPH analyses of soil samples with concentrations of TPH-G and –D above Method A are needed. See Section 8.5 of the Petroleum Contaminated Sites Guidance linked above for details on calculating cleanup levels. If the soil sample from 9 feet bgs in EB-1 you collected during your right-of-way investigation is still archived at the lab, it would be great to run the EPH/VPH analysis on that sample.
- Please continue sampling Site wells on a quarterly basis. After another consecutive quarter of sampling, we can begin to exclude wells from the sampling program that do not contain Site contaminants of concern and are not located in areas where historical activities are cause for concern.
    - Please refer to Table 7.2 in the Petroleum Contaminated Sites Guidance for analytical needs for groundwater samples based on historical activities on the Property.
    - Based on the results of the Site Hazard Assessment for the SMI Inc. Trust Site, located north of your Property, include analysis of dissolved cadmium and lead in Well-12.

Ecology appreciates your efforts at the Site to date and we look forward to working with you to bringing the Site to closure. Please let me know if you'd like to schedule a video call to discuss further.

Thank you,
David

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