



June 24, 2019

KIPP ECKERT
MULTISTATE TRUST
1920 232ND PL SE
BOTHELL WA 98021SUBJECT: Site Monitoring Report and Revised Tier 2 Site Cleanup Report Review – Former Kerr
McGee 36 Lincoln Way, Nevada
Registration No. 197910660 LUST No. 9LTQ97

Dear Mr. Eckert:

The Department of Natural Resources (DNR) received the March 2019 Site Monitoring Report (SMR) and June 2019 revised Tier 2 Site Cleanup Report (Tier 2 SCR) for the referenced site. Thank you for the submittal. A review of the reports has been conducted to determine whether criteria described in Subrule 135.12 of the Iowa Administrative Code have been met. We are accepting the risk classification and the DNR is relying on Dave Hruby, Iowa Certified Groundwater Professional No. 2073 and Darrick Turner Iowa Certified Groundwater Professional No. 1998, for accuracy and compliance with the DNR's rules and guidance. The site remains classified **high risk**.

Normally this report would be rejected however, since an excavation is proposed a revised Tier 2 SCR will have to be submitted to document the excavation. These deficiencies can be addressed in that Tier 2 SCR allowing the project to proceed to the remediation phase. If the excavation is not conducted a revised Tier 2 SCR will need to be submitted and approved before an alternate corrective action is implemented.

The June 13, 2019 Apex cover letter "*proposes additional subsurface investigation be performed via a direct-push drilling method to further delineate the extent of contamination. Following the contaminant delineation phase, source soil excavation is proposed to reduce contaminant levels at the site. Post-excavation annual groundwater monitoring is also recommended.*" The proposal is acceptable, please provide an tentative activity schedule by July 22, 2019. It can be emailed to all parties. Note after the excavation a six month stabilization period is required before sampling can be conducted and the results used in the assessment.

Regarding the revised Tier 2 SCR

1. The November 2018 soil sampling was not done in accordance with guidance SG1 was terminated at the high PID reading (1402), SG2 was terminated when the PID reading was increasing (889 to 1332), and SG3 was terminated before a PID reading of 10 was achieved (981). Field screening is used to determine the vertical extent of soil contamination and assist in selection of samples for laboratory analysis. Soil core samples must be screened the entire length of the boring and drilling must continue until the contamination is no longer detected (vapor reading are below 10 ppm). Ensure future soil sampling is conducted in accordance with guidance. The soil sample results must be used in the assessment because the benzene concentration from SG3 is higher than the previous source concentrations.
2. Why were the three soil gas wells installed after it was determined the soil source was submerged? Soil gas sampling cannot be done where the soil source is submerged.

3. All of the plume maps generated from the application and overlain on the site plan map are missing the Title see the example below. It appears this layer may have been turned off during the CAD process. Ensure the Title appears on the plume maps in future submittals it properly identifies map.

Soil Leaching RID: Vapor - Confined Space Residential
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T: SS<=T2 Default.
E: SS<=T2 Default.
X: N/A
TEHD: SS<=T2 Default.
TEHWO: N/A

4. The cover letter states the Groundwater to Water Main Pathway and the Soil Leaching to Groundwater to Water Main Pathway are high risk (p 2). The water line receptors were reclassified no risk in the September 2018 SMR when the water line receptors were evaluated with the application. Refer to appendix 13 of the September 2018 SMR.
5. The Site Hydrogeology Justification Section was not updated with discussion of the 2018 soil samples the last entire is from 2017. Please update and submit.
6. It appears the Soil Source Width and Length Selection was not revised with the 2018 data because the width and length measurements are from the previous Tier 2 SCR. Please clarify and provide all applicable sections.
7. The Field Screening Results table is incomplete the depth of the soil samples (*) and the static water level (v) were not provided for each location. Please revise and submit.
8. The Soil Boring and Monitoring Well Placement section is incomplete. The soil sampling methods was not provided as required. The statement provided, "*Due to groundwater levels, soil gas sampling was not conducted.*" is not warranted. Please revise and submit.
9. Where did the elevation measurements for the 2018 samples come from in the Soil Data table? There are no elevation measurements on the Soil Boring Log and Monitoring Well Construction Diagram for SG-1, SG-2, and SG-3.
10. The following statement in the soil gas Sampling Justification is questioned, "*Grqundwater concentrations remained elevated and did not provide justification for soil gas sampling.*" Should it be "groundwater levels" instead of "groundwater concentrations" because the soil source was submerged? The three soil gas well diameters and depths were not provided in the Sampling Justification section. Please revise and submit.
11. The Risk Justification and Corrective Action Proposed section (pgs 26-27) contains several errors. Please revised this section and submit:
 - Under the Groundwater Vapor to Enclosed Space Pathway the source concentration is 10,800 ug/L not 10 ug/L; the actual confined space SSTL is 1626 ug/L not 1642 ug/L
 - The Groundwater to Water Line Pathway is no risk and groundwater monitoring until exit monitoring is met is not required

- In the Soil Vapor to Enclosed Space Pathway the soil source is 9.05 mg/kg not 3.28 mg/kg; the potential confined space pathway is low risk not high risk; the potential sanitary sewer pathway is low risk not high risk
 - Under the Soil to Water Line Pathway section the groundwater to potential water line pathway should not be discussed these are two different pathways
 - The Soil Leaching to Groundwater to Water Line Pathway is a separate pathway from the Groundwater to Water Line Pathway and referencing the groundwater to water line pathway under this section is unacceptable; the Soil Leaching to Groundwater to Water Line Pathway is classified no risk instead of high risk.
12. The Soil Leaching RID: Water Lines - PE/PB/AC Mains or Service Lines map for benzene and ethylbenzene was not provided as required. This map is required based on the Preliminary Pathway Evaluation Requirements Soil Leaching. A map titled "Soil Leaching Water Lines" has been submitted instead. Please provide the correct application generated RID map.
 13. Based on the Preliminary Pathway Evaluation Requirements Soil - Vapor a receptor RID plume map is required for Confined Space Residential, Confined Space Non-Residential, Sanitary Sewer Residential, and Sanitary Sewer Non-Residential. These four maps were not provided. A map titled "Soil Vapor RID" has been submitted and it appears to contain simulated plumes. The actual plume, chemical of concern, target level, and receptor being evaluated have not been provided on the map. Please submit the four required maps generated from the application overlain on a site map, ensure the missing information is provided. Note this pathway is high risk for actual confined space and sanitary sewer receptors and low risk for potential confined space and sanitary sewer receptors.
 14. Based on the Preliminary Pathway Evaluation Requirements Soil – Water Lines a receptor RID plume map is required for the PVC or Non-resistant Gasket Iron Mains, PVC or Non-resistant Gasket Iron Service Line, and PE/PB/AC Mains or Service Lines. These maps were not provided instead two maps titled "Soil Leaching Water Lines" have been submitted. The soil leaching pathway is separate from the soil pathway. Please submit the three soil to water line maps generated from the application ensure the appropriate information is provided on each map.
 15. For the actual confined space residential receptors the Depth to Foundation has been set to 5 feet instead of the default depth of 9.84 feet. For the actual confined space non-residential receptors the Depth to Foundation has been set to 5 feet instead of the default depth of 9.84 feet and the Volume to Area has been set to 5 feet instead of the default 9.84 feet. For the actual sanitary sewer residential receptors the Depth to Sewer Bottom has been set to 10 feet instead of the default depth of 9.84 feet. Please provide justification for these changes or use the default depths and re-evaluate the soil leaching to groundwater vapor pathway.
 16. The Soil Boring Log and Monitoring Well Construction Diagrams for SG-1, SG-2, and SG-3 are incomplete. The UST number, LUST number, Ground Surface Elevation, Top of Casing Elevation, soil sample depths, and static water level were not provided on each diagram. Please complete the diagrams and submit.
 17. The Water Line – Utility Notification and the Sanitary Sewer Notification are incomplete. The soil source concentrations were not provided on either notification, page two of each notification is missing, the site maps showing the extent of soil and groundwater contamination were not submitted with either notification. A complete notification needs to be sent to all appropriate parties. Ensure the current version of the form is used the sanitary sewer notification was updated in 2016. The forms are available on the DNR UST web page.

18. For the Soil Summary Corrective Action Map benzene is the only high risk chemical of concern the toluene, ethylbenzene and xylenes maps were not required to be submitted.
19. The X, Y Coordinate Map does not contain SG-1, SG-2, and SG-3. Please provide an updated map.
20. The Source Width and Source Length map should contain the word Soil to identify it as the Soil Source Width and Source Length map. Simply labeling the map Source Width and Source Length map does not distinguish it as the soil or groundwater source width and source length map. Please revise and submit.
21. Best Management Practice is now appendix 14 and it was not requested to be submitted in the DNR email.
22. The June 13, 2019 Apex cover letter states a Tier 2 Site Assessment Report was submitted to document and evaluate soil gas data collected on November 13, 2018. Soil data was collected on November 13, 2018 not soil gas data.
23. The revised Tier 2 SCR was required to be submitted because soil samples were collected November 13, 2018 and the soil pathways required evaluation with the new data. Soil data is not evaluated by the SMR portion of the application. The benzene source concentration increase from 3.28 ppm to 9.05 ppm and changed locations from MW-7 to SG-3.
24. Ensure the soil plumes are defined after the excavation to allow proper evaluation of the receptors.

Regarding the SMR

1. The following statement in the March 25, 2019 cover letter is questioned, "*The site remains High Risk following the revisions and addition of soil sample analytical data in the SMR.*" Soil data cannot be entered into the SMR portion of the online application. The soil analytical data sheets provided in appendix 11 of the SMR should have been provided in appendix 13 Documentation with the revised Tier 2 sections for soil.
2. In the Groundwater Source receptor summary table the Calculated Risk and Current Risk for two actual receptors and three potential receptors do not correspond. The Calculated Risk is "N" no risk however the Current Risk is "H" high risk or "L" low risk respectively. The Current Risk is set by the user. Please clarify and provide an updated table.
3. The 300 foot well survey was conducted on 9/26/16. This survey is required to be conducted annually. Ensure a current 300 foot survey is conducted for the next report submittal.
4. The toluene, ethylbenzene and xylenes soil summary corrective action maps did not have to be submitted these chemicals of concern are not high risk.
5. The SMR was submitted to address the comments listed in the October 9, 2018 DNR letter. The SMR did not contain new soil gas or groundwater samples since the last SMR submittal. The affected sections of the SMR could have been submitted instead of an entire SMR.
6. The groundwater summary corrective action map is generated from the Tier 2 portion of the application not the SMR portion. It is found under the Pathway Evaluation GW Source.

Regarding the October 9, 2018 DNR Comment Letter

Comment #2 has not been adequately addressed. The November 2018 soil sampling was not done in accordance with guidance SG1 was terminated at the high PID reading (1402), SG2 was terminated when the PID reading was increasing (889 to 1332), and SG3 was terminated before a PID reading of 10 was achieved (981). Ensure future soil sampling is conducted in accordance with guidance.

Comment #6 has not been adequately addressed. The following information from Chapter 3 of Tier 2 guidance regarding water line sampling was not provided.

- A description of the water line sample location
- A description of sampling methods including a copy of the calculations used to determine the volume of water between the impacted line area and sampling location
- Time and date of sampling
- Analytical sample results and summary of data
- Justification from the groundwater professional indicating why the sampling procedures produce representative results
- If elevated contaminant levels are detected in the water samples, the DNR, water utility owner, and local health department must be notified immediately.

Note sampling of the water lines is not required in 2019 because there are no high risk water line receptors at this time.

The remaining comments have generally been addressed.

Attach a cover letter to the next report. In the cover letter provide a brief description of how each of the above listed deficiencies has been addressed in the revised report. With each response provide a reference identifying where revisions are located in the revised report. List and number your responses in the same order as the deficiencies. If a deficiency can be completely addressed solely with a brief, concise statement in the cover letter, rather than by inclusion of a revised page or section in the report, you may do so.

When the DNR receives an SMR proposing a "no action required" site classification, we may conduct a thorough review of the SMR and the associated Tier 1 Report and T2 SCR for completeness, accuracy, and compliance using the DNR's rules and guidance. We will determine whether the data and information contained in the reports support the site classification. Site data and report information determined to be materially incomplete, inaccurate or not in compliance with the DNR's rules and guidance must be revised before the "no action required" site classification will be considered.

The DNR must be informed of any changes in ownership or responsible party. You are also required to inform us immediately of any changes at the site (i.e., appearance of free product, water well installation, construction, development, etc.) which could affect site risk classification.

All monitoring wells used to assess this release should be maintained even if they are not included in the current monitoring plan. We strongly recommend wells be fitted with lockable protective devices and clearly labeled. Only after the site has been classified "no action required" must wells be plugged according to Chapter 567—39 of the Iowa Administrative Code and DNR Form 542-1226 be submitted.

If you are unable to meet the above schedule, notify the DNR in writing as soon as possible. Provide a detailed reason for the delay and a firm date by which the report will be submitted.

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Thank you for your cooperation with this site. If you have any questions or if we may be of further assistance please feel free to contact me at Tammy.Vander_Bloemen@dnr.iowa.gov or by telephone at 1-515-725-8329. In all correspondence regarding this project, please include the LUST number, which is indicated in the subject heading of this letter.

Sincerely,



Tammy Vander Bloemen
Environmental Specialist Senior
Underground Storage Tank Section

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