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Ms. Laura Price
Remedial Project Manager / Superfund Redevelopment Initiative Coordinator
United States Environmental Protection Agency, Region 7
Superfund Division
11201 Renner Boulevard
Lenexa, Kansas 66219

Response to Comments
MW-150 and MW-151 Construction Completion Report
Chemplex Site, Clinton, Iowa

Dear Ms. Price:

This letter was prepared in response to the United States Environmental Protection Agency's (USEPA's) comments provided in a letter signed December 16, 2024, from Ms. Laura Price. The comments were related to the October 22, 2024 MW-150 and MW-151 Construction Completion Report. An updated document (Report) accompanies this letter with updates noted below.

For clarity, USEPA's comments are set forth below in bold type, followed by the Chemplex Parties' responses.

1. Response to Comments

Comment 1

Section 2 (p. 1). The report states, "an unidentified second source is believed to exist in the east region". As previously requested, an investigation should be conducted to determine the location of this source area and address it.

Chemplex Parties Response:

In the 1992 Remedial Investigation (RI) Report, two areas of suspected DNAPL were identified. A western area of DNAPL is centered around the former Chemplex Landfill. An eastern area of DNAPL includes the east side of the LyondellBasell facility – this is the location of the "unidentified second source" referenced in the EPA comment. The source of this DNAPL is described as "unidentified" because there is no specific former or present use in this area that qualifies as a source. The estimated extent of DNAPL was identified in the RI Report and groundwater monitoring continues in this area. Thus, no further investigation is deemed necessary to determine the location of the eastern DNAPL source(s). This eastern area is addressed by the Technical Impracticability waiver and ongoing consideration of potential source control including possible thermal

treatment. A letter will be provided to USEPA to summarize thermal treatment evaluations by February 21, 2025.

Comment 2

Section 4.4 (p.6). The report states that work was done in accordance with the 2018 QAPP. Per the EPA requirements, all QAPPs are to be revised every five years. According to EPA records the last QAPP revision was approved January 10, 2020. Please revise the QAPP as necessary and submit it for review and approval.

Chemplex Parties Response:

The Chemplex Parties plan to submit a QAPP amendment or addendum for review in 2025.

Comment 3

Section 4.5.2 (p. 8), and Appendix G. While artesian conditions presented a unique well development situation at MW-150, the text and associated field records do not indicate that the MW-151 well development was consistent with SOP #2 or that the criteria for successful development identified in SOP #2 were met at either location prior to sampling. In which some field sheets indicated strongly elevated turbidity levels and visible cloudiness at the conclusion of development or prior to sampling. Revise to address this further.

Chemplex Parties Response:

SOP #2 states a minimum of three well volumes be pumped, with no specific turbidity requirements. In the case of MW-151, three well volumes equaled 92 gallons and a total of about 320 gallons was purged but it ended as "cloudy white" with a turbidity of 885 nephelometric turbidity units (NTU). There was no observed sediment in the purge water at the conclusion of well development. MW-150 also self-purged hundreds of gallons during well construction. The well development form included was the sampling sheet prior to the first well sample. Prior to the first sample, approximately 30 gallons or one well volume was purged. The water was noted as clear, but turbidity was about 176 NTU prior to sampling.

During the second quarter sampling event in 2025, consistent with SOP #2, MW-150 will be sampled after a minimum of one well volume is purged and turbidity has stabilized, or after three well volumes are purged. A SnapSampler© sample will be collected at MW-151. Following sample collection, MW-151 will be purged up to five well volumes with a well development approach using Waterra tubing. Specific observations of sediment will be noted during development, and turbidity will be a recorded parameter. Well development will cease after five well volumes are purged, or when turbidity is below 100 NTU. The SnapSampler© will be redeployed for collection of the third quarter 2025 sample.

Comment 4

Section 6.1 (p. 10).

a. **Section 6.1 indicates MW-150 and MW-151 will be incorporated into the Chemplex groundwater monitoring network. Revise to identify the Performance Monitoring Evaluation Plan and Quality Assurance Project Plan (QAPP) or QAPP Amendment under which this work will be completed.**

Data used in EPA decision making must be collected under an approved QAPP, and past QAPP approval is effective for up to five years per the EPA Region 7 Quality Management Plan.

b. Section 6.1 proposes sample MW-150 and MW-151 quarterly for one year, and then reevaluate the sampling frequency after the fall 2025 sampling event. Considering the limited number of Blanding Formation wells, at least eight quarters of groundwater monitoring data are needed to assess temporal fluctuations in these wells before the sampling frequency is reevaluated. Revise the approach accordingly.

Chemplex Parties Response:

a. The text has been revised to state the work will be conducted in accordance with the 2018 Quality Assurance Project Plan for the Performance Monitoring Evaluation, which was amended in 2020. The analytes for MW-150 and MW-151 are addressed in the current QAPP. An annual Performance Monitoring Evaluation (PME) Plan update is provided to USEPA for review of the proposed sampling plan. The new wells will be included in this PME update.

b. The text has been updated to propose sampling MW-150 and MW-151 quarterly until the eight quarters of groundwater monitoring data are collected, followed by reevaluation of sampling frequency.

Comment 5

Section 6.2 (p. 10).

a. Section 6.2 proposes to employ passive flux meters in artesian well MW-150, but the approach is not clearly documented within the context of site-specific conditions or objectives. The text simply notes that the standard operating procedure will be modified for artesian conditions and that the Chemplex parties will "work with EnviroFlux to validate the data and ensure representative interpretations are derived despite the long water column and artesian conditions." Revise to clearly define the approach in the context of site-specific conditions and objectives and provide the modified SOP and associated planning documents for EPA review.

b. No passive flux meters are proposed for installation in well MW-151. While the unique artesian characteristics of MW-150 are acknowledged, evaluating passive flux at additional locations would provide considerable information about contaminant transport throughout the site. Discuss whether additional locations will be evaluated in the future, or why this approach is not being considered.

Chemplex Parties Response:

a. As discussed in the revised Section 6.2, a modified procedure will be prepared and submitted as a QAPP amendment or addendum under separate cover. The process has the potential to be iterative if initial data are not promising, as the artesian conditions at well MW-150 are not representative of where these devices are typically used.

b. The use of passive flux meters at additional locations will be assessed in the future, depending on the effective deployment and retrieval of the passive flux meters in MW-150 and evaluation of the data. Although the Chemplex parties look forward to the use of passive flux meters to improve understanding

of PCE transport, the technique is new to the project, and its level of success at MW-150 is not yet known.

Comment 6

Section 6.3 (p. 10).

a. **Similarly, Section 6.3 suggests potential plume management approaches but provides no detail. The EPA would appreciate continued conversation on this topic and expects associated planning documents for EPA review.**

b. **A significant amount of high resolution hydrogeologic data were collected as part of this investigation. Revise to also discuss how these data will be applied in building out the conceptual site model to support delineation efforts and avoid exposures.**

Chemplex Parties Response:

a. As a potential plume management approach is better defined, the Chemplex Parties will meet with the EPA prior to submitting a workplan. The data from the passive flux meters will help determine an approach by improving understanding of the actual moving of PCE through the potential treatment zone.

b. The conceptual site model can be updated as potential pathways and areas of mass flux are identified. Highly weathered zones and potential vertical flow measured by the geophysical tools may indicate areas of greater connectivity, suggesting places where contaminants may be moving into deeper zones either vertically and/or laterally. The Chemplex Parties plan to use the geophysical data and the updated bedrock surface map to help identify such areas and to better target zones for treatment and plume management. Some data have not led to improved understanding such as fracture angle which appears to vary significantly; however other data, such as more weathered zones observed via caliper and televiewers, are apparently indicative of more reliable flow paths.

Comment 7

Appendix A. The Iowa Geological Survey "Supplemental Geophysical Investigation and Geologic Evaluation at the Chemplex site, Camanche, Iowa," prepared for GHD and dated September 2023, was previously provided to EPA as Attachment C to the "Direct Push Investigation Report, Chemplex site," prepared by GHD on behalf of the Chemplex Parties and dated September 23, 2024. Note that the EPA submitted comments on this appendix in a letter dated October 22, 2024, and GHD provided a response and revised report December 5, 2024. Revise the survey data report.

Chemplex Parties Response:

In the Chemplex Parties' Response to Comments letter dated December 5, 2024, text was revised in the 2024 Direct Push Investigation Report to clarify discrepancies between MiHPT-48, -49, and -52 as well as any additional control points that were used in bedrock mapping. The IGS Supplemental Report was not edited in

these revisions. Additional text has been added to the MW-150 and MW-151 Construction Completion Report to reference the revised Direct Push Investigation Report that includes these revisions and clarifications.

2. Closing

Please feel free to call me at 515-414-3934 or Dave Umezaki of EKI Environment & Water, Inc. at 650-292-9079 if you have questions.

Regards,

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