From: Werner, Leah <Werner.Leah@epa.gov>
Sent: Thursday, January 6, 2022 3:56 PM
To: Luke, Glenn R
Cc: Krueger, Sarah E - DNR; Korpela, Adrienne/MKE; Klatt, David/CHC
Subject: Review of RI Rev 1, Green Bay Former MGP OU2
Attachments: EPA Comments on Green Bay OU2 RI Rev 1_1.6.22.pdf

Good afternoon Glenn,

EPA has reviewed the *Response to EPA Comments and Remedial Investigation Report – Revision 1* for the *Sediments Operable Unit* 2, Former Green Bay Manufactured Gas Plant Site, dated February 19, 2021. Comments are attached. Please let me know if you have any questions.

Thank you,

Leah K. Werner
Remedial Project Manager
U. S. Environmental Protection Agency, Region 5
Superfund & Emergency Management Division, SR-6J
77 West Jackson Boulevard
Chicago, IL 60604
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

VIA ELECTRONIC MAIL

REPLY TO THE ATTENTION OF:

January 6, 2022 SR-6J

Mr. Glenn Luke
Principal Environmental Consultant
WEC Energy Group – Business Services
700 North Adams Street
P.O. Box 19001
Green Bay, WI 54307

Re: Review of the Remedial Investigation Report – Revision 1, Sediments Operable Unit 2, Former Green Bay Manufactured Gas Plant Site, Green Bay, Wisconsin

Dear Mr. Luke,

The U.S. Environmental Protection Agency (U.S. EPA) has reviewed the document entitled: *Response to EPA Comments* and *Remedial Investigation Report – Revision 1 (RI Report)* for the *Sediments Operable Unit 2,* Former Green Bay Manufactured Gas Plant Site, dated February 19, 2021. Comments on the RI Report are provided in Attachment 1.

If you have any questions or wish to discuss any of the comments, please do not hesitate to contact me at 312-886-0552.

Sincerely,

LEAH WERNER Digitally signed by LEAH WERNER
Date: 2022.01.06 15:52:28 -06'00'

cc: Ms. Sarah Krueger (WDNR)

Specific Comments

1. *EPA Comment 4: Section 3.4.3, Page 23 and Section 4.1.1.3, Page 31: Please modify the language in this section to indicate that the mobility testing was conducted without an approved Sampling and Analysis Plan and Quality Assurance Project Plan.*

   WPSC Response: The RI report will clarify mobility testing was conducted following testing procedures received from USEPA on September 25 and 27, 2017. A scope of work for the 2017 NAPL mobility investigation was described in a draft Sampling and Analysis Plan (SAP) submitted by WBS to USEPA on October 30, 2017 but the report was not finalized, nor approved. Neither a SAP nor a Quality Assurance Project Plan (QAPP) incorporating the mobility sampling and laboratory methods were formalized.

   EPA Response: For the record, EPA would like to acknowledge Specific Comment 1 from WDNR Comments on WPSC's February 19, 2021 Sediment Remedial Investigation Report – Revision 1 Former WPSC Green bay MGP, Green Bay, Wisconsin, dated May 26, 2021, which states the following:

   > *Section 3.4.3, Page 23 and Section 4.1.1.3, Page 31, NAPL Mobility: NAPL product in soils and sediment are a risk due to toxicity to receptors and contribution to contamination of groundwater, surface water, and pore water. NAPL can be mobilized by pore to pore movement, facilitated transport via fissures and higher permeability lenses, preferential pathways, and transport of particles, including colloidals, containing NAPL in surface water and groundwater.*

   Although NAPL mobility testing indicates that DNAPL is immobile and upward DNAPL flux in clay is unlikely, the potential for DNAPL to be remobilized from under the cap exists under certain conditions (e.g., removal or disturbance of the cap). EPA acknowledges WDNR's comment and responds that the remedy will be evaluated during the Five-Year Review process for whether it continues to be protective of human health and the environment. EPA requests WPSC to acknowledge receipt of this comment and state that the remedy will be evaluated through the Five-Year Review mechanism.

2. *EPA Comment 6: Section 4.1.1.2, Page 30: Provide a discussion of DNAPL remaining in the full project area, rather than only referring to figures in Appendices D3 and D4. A review of the cross sections in Appendix D3 (Figures series C-300 - C-307) shows a fairly substantial wedge of soft sediment along the shoreline was not dredged to the Removal Action Design Surface as compared to the Removal Action As-Built Surface, due to "Stable slope from Shoreline to Sediment". This wedge of undredged inventory can be seen in Figures C-301 through C-305, and as evidenced in Figure c-305, contains known DNAPL. While the shoreline excavation removed a substantial of DNAPL source material, DNAPL in soft sediment near the shoreline remains, which needs to be acknowledged, and incorporated into future performance monitoring.*

   WPSC Response: Comment will be incorporated by adding clarifying discussion of where within the SFA and NFA footprints undredged inventory and DNAPL observations remain. Specifically, this content will be supplement existing discussions in Section 4.1.2.1 SFA RA Summary and 4.1.2.2 NFA RA Summary where it occurs in context. It will be noted that clean sand cover was placed to manage residuals.

EPA Response: The comment was addressed and incorporated, however, remove the statement in the last paragraph of new section 4.1.2.1 that states "shoreline soil is no longer a source area to the SFA." It is too early to make such a definitive statement at this time and further monitoring is required.

3. *EPA Comment 8: Section 4.1.2.1, Page 34: Reword the following sentence "These results also indicate that the shoreline soil removal performed adjacent to the SFA is no longer a source area." The soil removal was not the source area; the shoreline soils were a source area. Additionally, sediments immediately adjacent to the shoreline, some impacted with NAPL, were not removed, and remain in place. Please note that none of the 2018 post-removal sediment core samples were located in the areas with remaining NAPL. Further monitoring of the SFA is recommended and should be focused along the shoreline undredged wedge with known DNAPL.*

   WPSC Response: The text will be revised to provide clarity. Additional text will be added to discuss the occurrence of undredged inventory along the southern portion of the SFA and DNAPL within this inventory. Note that cores collected in 2019 did not observed DNAPL except in native clay and bathymetric survey indicates that natural deposition is occurring.

   EPA Response: As noted above, delete the statement that the shoreline is no longer a source area. Continued monitoring of the South Focus Area is needed.

4. *EPA Comment 10: Section 5.3, Page 40: Please incorporate comments on Appendix K - Baseline Risk Assessment (BLRA) into the "Media of Concern" section of the RI report.*

   WPSC Response: Comment will be incorporated, as discussed below.

   EPA Response: Section 5.2, 4th paragraph should be modified to indicate that the EPA risk management range of 10-4 to 10-6 was used for cumulative cancer risk (rather than solely a cancer risk of 10-4).

   Section 5.3.1, 1st sub-bullet under site-wide BLRA conclusions should be modified to indicate that there is a small area of shallow water, but it is unlikely that exposures occur in this area due to accessibility issues, etc.

   Section 5.3.1, 2nd sub-bullet under site-wide BLRA conclusions should be modified to indicate that if maintenance activities are needed under the NFA armored amended cap, construction workers may come into contact with DNAPL, which is assumed to be an unacceptable risk.

   Section 5.3.2, 1st bullet should be modified to indicate that surface water risk estimates are based on comparison to an RSL for drinking water, and surface water exposures are expected to be at least an order of magnitude less than the calculated risk estimates presented in the BLRA, and therefore at the low end of EPA's risk management range.

5. *EPA Comment 11: Section 6.0, Page 45: As previously noted, further monitoring of the SFA is also recommended, as construction limitations resulted in remaining NAPL near the south shoreline.*

   WPSC Response: Comment will be incorporated into the text and Appendix M.

   EPA Response: The new text added to Section 6 proposes only a hydrographic survey for monitoring of the South Focus Area. Sediment sampling and analysis for total PAHs and PVOCs

should also be continued in order to monitor for contaminant movement from known NAPL areas along the shoreline.

6. *EPA Comment 13: The most recent version of the USEPA Regional Screening Levels (RSLs) available at the time the BLRA is submitted should be used. In this case, the May 2020 RSLs should be used and referenced in text and all tables.*

   WPSC Response: The most current version of the USEPA Regional Screening Levels will be used in the revised BLRA.

   EPA Response: In the references section, update the date that the RSL table was accessed (currently says May 5, 2020 yet the reference used was November 2020).

7. *EPA Comment 15: Section 2.3, Page 11: The approved RAF states that arsenic, mercury, and selenium will be evaluated for fish consumption on a site-specific basis, depending on concentrations detected in sediments in comparison to ambient levels. Therefore, discuss these chemical concentrations in sediment compared to ambient levels and add the fish consumption scenario to the CSM and risk estimates if necessary, based on results of the comparison.*

   WPSC Response: While arsenic, mercury and selenium are generally not considered to be MGP constituents, a comparison was made between the mean Post Sand Cover (PSC) site concentrations and the background samples. As shown on Table 12 of the BLRA, the mean concentrations of mercury (0.59 mg/kg [PSC] vs 2.31 mg/kg [background]) and selenium (1.7 mg/kg [PSC] vs 1.9 mg/kg [background]) are slightly greater in the background samples and arsenic is slightly higher in the PSC dataset (3.4 mg/kg [PSC] vs 3.3 mg/kg [background]). Given these results, fish consumption will not be evaluated in the BLRA.

   EPA Response: Add a summary of this comparison to Section 7.1 also.

8. *EPA Comment 22: Section 4.1.7, Page 21 and Section 4.1.8, Page 21: Do not include lead in the hazard index calculations.*

   WPSC Response: Lead will not be included in the hazard index calculations. The maximum (for screening) and the 95% UCL (construction worker hazard) lead concentration will be discussed by directly comparing these concentrations to the appropriate RSL (i.e., residential RSL for screening and calculated construction worker RSL for construction worker hazard).

   EPA Response: The average (rather than 95% UCL on the mean) concentration of lead should be used when evaluating construction worker exposures, consistent with EPA guidance on the exposure point concentration to use in lead evaluations.

9. *EPA Comment 38: Section 7.3, Page 42: Identify the sediment chemicals of concern based on 3 target risk levels: 1x10-6, 1x10-5, and 1x10-4 and a target organ-specific hazard index of 1, consistent with other sites in the MGP program.*

   WPSC Response: Comment will be incorporated in to the revised BLRA.

   EPA Response: Modify the first bullet of Section 7.3 (Conclusions) to indicate that if maintenance activities are needed under the NFA armored amended cap, construction workers may come into contact with DNAPL, which is assumed to be an unacceptable risk. Currently the

bullet indicates that construction worker exposure to subsurface sediment does not pose a health concern.