

From: [Gielniewski, Margaret](#)
To: [Dombrowski, Frank](#)
Cc: [DuFresne, Kristin I - DNR](#); [Jennifer Knoepfle](#); [Jennifer.Hagen@obg.com](#); [mbyker@naturalrt.com](#)
Subject: FW: Message from "R5-06-09"
Date: Wednesday, May 10, 2017 10:42:14 AM
Attachments: [20170510100736778.pdf](#)

Hello Frank,

It was nice to talk with you today. Because of that, I realized that I didn't send you my FS Rev. 2 Comments letter (originally dated for March 29), as outlined in the monthly progress report. I apologize.

Since I was delinquent in sending these comments, I was able to update existing ARAR Table comments with approved with minor modifications (as prescribed in an email sent on May 3).

There are only a few minor comments with the majority of the letter as approval of response to comments (as submitted) (see attached).

As mentioned in the call today, we can finalize the FS the week of June 5 (even if you require 30 days to respond to the new comments, the RTC letter will be due by COB on June 9). The proposed plan is scheduled for release for public comment the week of June 12 or 19 (depending on the quantity of headquarters' comments; review began May 2 and will run through June 2).

The ROD will be signed by August.

Please let me know if you have any questions on the comments or on the schedule.

Thanks,
Margaret

-----Original Message-----

From: R5-06-09@EPA.ORG [<mailto:R5-06-09@EPA.ORG>]
Sent: Wednesday, May 10, 2017 10:08 AM
To: Gielniewski, Margaret <gielniewski.margaret@epa.gov>
Subject: Message from "R5-06-09"

This E-mail was sent from "R5-06-09" (Aficio MP 6001).

Scan Date: 05.10.2017 10:07:36 (-0500)
Queries to: R5-06-09@EPA.ORG



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Mr. Frank Dombrowski
WEC Energy Group-Business Services—Environmental Department
333 West Everett Street A231
Milwaukee, WI 53203

REPLY TO THE ATTENTION OF

May 10, 2017

Subject: Review of the *Response to Comments (RTC) Letter on the Feasibility Study Report Revision 2 (FS Rev. 2)*, *Wisconsin Public Service Corporation's (WPSC) Former Marinette Manufactured Gas Plant (MGP) Site, Marinette, Wisconsin*, submitted by Wisconsin Energy Corporation (WEC).

Dear Mr. Dombrowski,

EPA and Wisconsin Department of Natural Resources (Wisconsin DNR or DNR) reviewed the RTC and FS Rev. 2 for the former WPSC Marinette MGP Site, dated February 25, 2017.

WEC's RTC letter was evaluated to assess if the responses satisfactorily address EPA's and DNR's comments from FS Rev. 1 comment letter, dated November 15, 2016, which included trailing comments regarding WPSC's Marinette former MGP Site from the *Alternatives Array Screening Technical Memorandum (AAS TM)* (May 25, 2015), *FS Report, Revision 0*, (July 10, 2015); *FS Report, Revision 1*, (February 18, 2016); and additional comments on the *FS Report, Revision 2*, (May 20, 2016). The RTC letter is presented by Natural Resource Technology, Inc. (NRT), on behalf of Wisconsin Energy Corporation (WEC).

Furthermore, in the RTC letter, WEC/NRT presents a discussion on the proposed sediment remedial alternative which includes performance monitoring. Additional details were provided regarding residual sand cover and reactive core mat (RCM) performance monitoring metrics, and contingency actions as applicable to the sediment alternative.

EPA has the following new comments:

Residual Sand Cover, Sediment Coring and Sampling Paragraph – The proposed sample interval scheme is consistent with the existing post-dredge data sampling intervals, which is appropriate.

Residual Sand Cover, Sediment Coring and Sampling Metric Paragraph – The text states “The goal of analyzing the 0- to 6-inch interval is to determine if an isolation layer remains present between MCP-affected sediment and the surface water column.” Actually, the target ecological receptors are benthic invertebrates, and the 0- to 6-inch surficial sediment layer represents the bioactive layer, or sediment depth to which the benthic invertebrates could be exposed to contaminants.

Reactive Core Mat, Contingency Action Paragraph – Surface water samples are not a good warning indicator of contaminant breakthrough, due to dilution. If rocks overlying the RCM are not identified, analyze the RCM for breakthrough, or erosion of the mat, in a more direct method, and in accordance with the manufacturer's recommendations.

Comments listed as “new” require further attention. All remaining comments that are listed under “addressed satisfactorily” are implemented in the FS Rev. 2 or in the revised ARAR table. Please see below.

NEW FS Report Revision 2 Comments and Responses

Page 52. Section 4.1.2.4. Plume stability monitoring should take advantage of monitored natural attenuation (MNA) processes. Excluding MNA monitoring should be reconsidered for this alternative.

NRT/WEC Response: Monitoring of MNA parameters will be included as part of Alternative 2; However, the goal of alternative 2 will remain to document that the plume is stable and not migrating toward the Marinette River.

EPA Response: The inclusion of MNA monitoring will be beneficial for plume stability monitoring should Alternative 2 be selected for implementation. The intent of Alternative 2 is understood. However, the revised document should reflect the basic fact that natural attenuation is the primary element responsible for maintaining long-term stability of the plume. For this reason, both the chemical composition and the parameters which are indicative of hydrocarbon degradation are relevant should be monitored to support future demonstration of groundwater plume stability at the site.

(Trailing) AAS TM Comments and Responses

NRT Comment 3, 4/EPA Specific Comment 19, 27. Sediment related comments have not been addressed as previously commented on. See past comments and the specific comments below regarding the Introduction to the May 20, 2016, RTC Letter.

NRT/WEC Response: Refer to WPC proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter.

EPA Response: This comment response is acceptable. New comments regarding the sediment monitoring approach and RCM contingency are described previously in response to the introduction of this response letter.

(Trailing) FS Report Revision 0 Comments and Responses

Original NRT Comment 6/EPA Specific Comment 3. Section 1.2.9.3, Sediment, Page 19, Paragraph 1. Please clarify that MCP-affected sediments were addressed in the Non-Time Critical Removal Action (NTCRA) and meet the Applicable or Relevant and Appropriate Requirements (ARARs), if this is the case.

Original WPC Response. The RAO for the NTCRA was as follows: Remove NAPL- and PAH contaminated sediments that have the potential to effect human health and ecological receptors. NAPL- and PAH-contaminated sediments were removed to the extent practical during the NTCRA and a residual sand cover was placed to mix with undredged sediment and minimize potential effect undredged sediment would have on ecological receptors. NTCRA RAO is referenced in Section 2.4.

EPA Response. The surface water quality standards Wis. Admin §NR 105 are applicable in this FS as part of the evaluation of the cap. The potentially responsible party (PRP) should provide documentation (or refer to prior documentation) of the surface water meeting these standards, or should include a statement that the alternatives will allow the remedy to meet these standards within a reasonable timeframe. Otherwise, the ARARs for this FS are not being met, and a global text change is needed.

NRT/WEC Response: Surface water quality standards are included as ARARs in the FS Revision 3 and are part of the WPC proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter.

EPA Response: EPA is satisfied with the revised ARAR table submittal and approves with minor modifications as sent on May 3, 2017.

NRT Comments 10-13/EPA Specific Comment 46, 49, 51, 52. Sediment related comments have not been addressed as previously commented on. See past comments and the specific comments below regarding the Introduction to the May 20, 2016, RTC Letter.

NRT/WEC Response: Refer to WPC proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter.

EPA Response: This comment response is acceptable. Comments regarding the sediment monitoring approach and RCM contingency are described previously in response to the introduction of this response letter.

Original NRT Comment 15/EPA Specific Comment 54. Additionally, regarding EPA Specific Comment 54, and as mentioned above for General Comment 10, EPA provided preliminary comments to WEC/NRT regarding Table 1, the ARAR table, through a February 16, 2016, e-mail. EPA awaits a revised ARAR table submittal before evaluating ARAR table comments. Additional ARAR comments may be submitted (as well).

Original WPSC Response. EPA provided additional ARAR comments on April 8, 2016. Upon consultation with legal counsel, all of the provided comments have been incorporated into Table 1 of the enclosed FS Revision 2, with the following exceptions:

1. Wis. Admin. §504.07: Minimum design and construction criteria for final cover systems were not included as relevant and appropriate. The scope of NR 504.07 is specific to landfills, which are not defined as solid waste facility for solid waste disposal Wis. Stat. §289.01 (20). The Wisconsin Department of Natural Resources (WDNR) provides more applicable guidance specific to soil cover systems installed as part of remedial action in WDNR PUBL-RR-809, October 2013.
2. Wis. Admin. §NR 105: The phrase "Surface Water Quality Standards are used to develop sediment cleanup goals" was removed from the column describing the criteria and alternative.

EPA Response. WDNR input was transmitted with the instruction that it needed to be meshed with prior input from EPA, and it was expected to be submitted in the format previously requested by EPA (e.g., a column for "Applicable" versus "Relevant and Appropriate" versus "TBC"), and identification of the alternative associated with the ARAR. For example, many of the cited air quality regulations are relevant and appropriate for Alternative 2-4; however, the question was previously asked about whether WAC§ NR 419.07 was applicable rather than relevant and appropriate. The response regarding Wis. Admin. §NR 504.07 is accepted.

NRT/WEC Response: Awaiting response from USPEA. The table format for Marinette FS Revision 2, submitted May 20, 2016 was consistent with USEPA's July 29, 2016 requested format for Manitowoc FS Revision 1 which was submitted September 13, 2016.

EPA Response: EPA is satisfied with the revised ARAR table submittal and approves with minor modifications as sent on May 3, 2017.

FS Report Revision 1 Comments and Responses

Original EPA General Comment 4. EPA will not provide additional comments at this time, regarding the ARAR table or FS text sections evaluating compliance with ARARs until a revised ARAR table is presented

Original WPSC Response. See response to EPA Specific Comment 54 on FS Revision 0.

EPA Response. See EPA Specific Comment 54 on FS Revision 0 above.

NRT/WEC Response: See Response Original EPA Specific Comment 54 (NRT Comment 15) on FS Revision 0 (above).

EPA Response: EPA is satisfied with the revised ARAR table submittal and approves with minor modifications as sent on May 3, 2017.

Comments Addressed Satisfactorily from WEC/NRT's May 20, 2016 Introduction to RTC Letter Comments and Responses

- 1. Page 2. Paragraph 1. Sentence 4.** In three of the sample locations (A1B33, A1E4, and A1B36 (A1F3), the subsurface sediment PAH concentrations are trending upward (increasing) over time.

NRT/WEC Response: The concentrations at the noted locations will be further evaluated and the proposed sediment monitoring approach is detailed at the introduction to this Response to Comments Letter.

- 2. Page 2. Paragraph 1. Sentence 5.** There is an exception to this statement according to the July 2, 2015, Residual Sand Cover Monitoring Results Memorandum. Figure 4, Isopach Contours, Comparison of 2013 Post-Sand to 2015 Bathymetry. This figure shows that a foot of material (12 inches) has eroded from the area around sample location A1B33.

NRT/WEC Response: The majority of the sand cover area continues to have 10-inches or more of sand which is the targeted thickness. The sand thickness will be further evaluated and the proposed sediment monitoring approach is detailed at the introduction of this Response to Comments Letter.

- 3. Page 2. Paragraph 2. Sentence 1.** It is also stated in several places in the FS Report and Removal Action Report that not all DNAPL could be completely removed from the shoreline due to site constraints.

NRT/WEC Response: The RCM was voluntarily installed by WBS over an area of 19,500 sf (including side slopes) as an added, conservative contingency measure to protect surface water quality by reducing potential contaminant loading at the point of groundwater to surface water interface and to prevent any potential small stringers of NAPL that may be sorbed to upland soil and debris from migrating into the Menominee River. The shoreline was excavated to the extent practical. Test pits were excavated along the shoreline prior to RCM placement, a series of test pits (UL1 – UL9) were advanced along the location where the RCM was installed to document the quality of the material that was unable to be removed due to constraints from the electrical tower guy wire. The test pits were logged (see Appendix S2 of the Removal Action Completion Report) and no visual NAPL was identified. If mitigated by the RCM and ongoing monitoring protocol.

- 4. Page 2. Paragraph 2. Sentence 3.** Where is a figure that shows the placement of the test pits?

NRT/WEC Response: Test Pit Locations are included in Figure 6 – Previous Remedial Actions – Sediment.

- 5. Page 2. Paragraph 2. Sentence 4.** A review of the photographs contained in Appendix T2 of the Focused NAPL and Sediment Removal Action Report, now added as an appendix to the FS Report, reveals that many photographs show evidence of mobile NAPL, such as oil sheening on the water surface in the excavator bucket, or dark oily stringers (photographs 7, 62, 93, 100, 107, 113, etc.).

NRT/WEC Response: Oil sheens within containment and observations of dark oily stringers on excavated material are common during remediation of MGP-affected sediment. See the proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter.

- 6. Page 3. Paragraph 1. Sentence 1.** According to page 36 of the Focused NAPL and Sediment Removal Action Report, Section 3.2, Upland Excavation of NAPL, “due to site constraints, not all NAPL impacts were able to be removed. Samples were collected of soils able to be removed. Samples were collected of soils visually free of NAPL.” Therefore, since soil samples were only collected when no visible NAPL was observed, such samples are not representative of the whole shoreline.

NRT/WEC Response: The RCM was installed over an area of 19,500 sf (including side slopes) as a conservative contingency measure to protect surface water quality by reducing potential contaminant loading at the point of upland soil and debris from migrating into the Menominee

River. The shoreline was excavated to the extent practical. Test pits were excavated along the shoreline prior to RCM placement, a series of test pits (UL1 – UL9) were advanced along the location where the RCM was installed to document the quality of the material that was unable to be removed due to constraints from the electrical tower guy wire. The test pits were logged (see Appendix S2 of the Removal Action Completion Report) and no visual NAPL was identified. If NAPL is present in this area, it is very limited in extent and its potential for impacting surface water is fully mitigated by the RCM and ongoing monitoring protocol.

Concerns for potentially remaining NAPL will be addressed through the proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter.

7. **Page 4. Paragraph 2. Sentence 1.** Neither of these wells is ideally located to provide this line of evidence. One is east of the old slough, and one is west of the old slough.

NRT/WEC Response: An additional monitoring well, proposed to be located in the former slough/log run, is included in the proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter.

8. **Page 5. Figure 1.** Regarding sampling on top of the RCM, the idea is to sample any newly deposited sediment that may have accumulated on top of the stone layer placed as the top layer of the RCM on the river bottom. Also, a review of bathymetry from immediately post-construction against the most recent bathymetric survey would indicate if there is newly deposited material that can be sampled.

NRT/WEC Response: There is a very obvious potential for material that has deposited within or on top of the stone layer to be impacted with PAHs not related to the MGP prior to deposition. See the proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter.

9. **Page 5. Paragraph 2. Sentence 3a (... no evidence of DNAPL in the upland soil areas).** This statement is contradicted by several statements within the Focused NAPL and Sediment Removal Action Report.

NRT/WEC Response: Please see the Response to “COMMENTS ON WEC/NRT’S INTRODUCTION TO MAY 20, 2016, RTC LETTER” Comment 6 above.

10. **Page 5. Paragraph 2. Sentence 3b (... impracticability of collecting RCM samples...).** This argument is only true based on the type of dredge equipment used. Hydraulic dredging would be able to handle dredging uneven bedrock surface better than mechanical dredging.

NRT/WEC Response: The soft sediment was removed to the extent practicable with the equipment used in the NTCRA. See the proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter regarding concerns for potential remaining DNAPL.

11. **Page 5. Paragraph 2. Sentence 3c (... we believe sampling of the RCM is not required).** Check post-construction bathymetry versus 2015 bathymetry to determine if new sediment has deposited on the RCM.

NRT/WEC Response: The post-construction bathymetry versus 2015 bathymetry was included as Figure 5 in the Residual Sand Cover Monitoring Results, dated July 2, 2015. See the proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter.

Comments Addressed Satisfactorily from EPA’s November 15, 2016 Comment Letter Comments and Responses

Page 1, Footnote 1. The sand cover and RCM were placed over non-residual sediment having higher PAH concentrations throughout a thicker deposit of material than is typical of a residuals management sand cover scenario. While PAH concentrations at the sand surface (0-6”) have been shown to meet the RAL of 22.8 mg/kg total PAHs (13), long-term conditions of the remedy must be taken into consideration

in order to determine the level of confidence behind removal of the dredging Beneficial Use Impairment for this area and to properly develop the required dredge management plan for the Area of Concern.

NRT/WEC Response: Additional monitoring is now included as part of Alternatives 3 and 4 of the FS Revision 3. Refer to WPSC proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter. Please note, as discussed in our call on February 1, 2017, the Sheboygan AOC includes residual sand covers and successfully removed restrictions on dredging. <https://www.epa.gov/sheboygan-river-aoc/about-sheboygan-river-aoc#bui>.

Page 1, Footnote 2. With this in mind, use existing data to calculate the likely volume of PAH-contaminated sediment inventory that remains under the existing sand cover and RCM. Mass estimates and modeled mixing-zone PAH concentration would also be beneficial information.

NRT/WEC Response: The likely mass and volume of the PAH-contaminated sediment inventory is included in FS Revision 3.

Page 2, Paragraph 1. Sediment and sand layer/RCM monitoring topics, and sediment as a pathway must be included and addressed. The RCM is an engineering control and supports future monitoring activities. Visible sheen monitoring alone is not an acceptable means to monitor sediment conditions or RCM function. This is due to the fact that total PAH remains in sediment (some located under the RCM) at 1-1.7 orders of magnitude above the cleanup action level of 22.8 mg/kg and 54 g/kg total PAHs; therefore, they cannot be considered residuals. Contingency plan for sediment and sand layer/RCM management must be included in FS options. Also, sediment is considered a pathway of concern and should be included in Sections 2.3.3, 2.5.4, 4.2.1, and Table 3.

NRT/WEC Response: Additional monitoring will be included as part of Alternatives 3 and 4 of the FS Revision 3 to document the ongoing effectiveness of the previously completed remedy. Refer to WPSC proposed sediment monitoring approach detailed at the introduction of this Response to Comments Letter.

Page 2, Paragraph 2. If WBS/NRT intends to utilize upland groundwater monitoring well data as a component of the RCM monitoring, EPA and DNR recommend the installation of additional monitoring wells closer to the RCM because MW-312 is located a significant distance away from the RCM. Incidentally, soil sampling during well installation is recommended to further define limits of residual soil contamination in the Boom Landing Zone/North Source Area.

NRT/WEC Response: A new monitoring well is proposed in the former log run and adjacent to the RCM as part of Alternative 3 and 4 of the FS Revision 3. Refer to WPSC proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter.

Page 2, Footnote 1. At least one more round of sediment sampling of the sand cover, and three rounds of sediment sampling of material deposited on the RCM are required, as well as visual inspection of the RCM and the area around the edges. Show that the RCM is in place and will continue to function as intended (e.g., it is not expected to reach capacity by showing calculations including groundwater upwelling and saturation capacity of RCM). EPA and Wisconsin DNR will use this information, as well as the volume of remaining PAH (13)-contaminated sediments above 22.8 mg/kg, to determine if there is a need to consider additional sediment remediation/removal, and/or if the placed sand should continue to be monitored as a sand cover or if it should be managed, alongside the RCM, as a remedial cap, requiring an agreed-upon plan for long-term monitoring and maintenance.

NRT/WEC Response: Refer to WPSC proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter. As discussed in the February 1 meeting, sampling material deposited on the RCM does not indicate the effectiveness of the RCM, particularly with the POTW discharges and other sources of non-MGP related depositional material in the area.

Page 2, Footnote 1. WPSC Marinette and Green Bay sites' sediments have been or are being addressed through excavation and placement of sand layer. For WPSC Green Bay, the sediment portion of the RI

will “restart” following changed sediment conditions. The WPSC Marinette sediment conditions also changed following the RI sediment sample collection through the Non-Time Critical Removal Action. The RI Sediment data was used in the creation of the EE/CA as well as the Removal Action Plan, and cannot be considered a wasted effort. Since the Site sediment conditions are drastically changed following the Removal Action, it makes sense to use the data collected following the Removal Action (and supplement with newly collected sediment data) to document the current Site sediment risks to the benthic and ecological community as a whole.

NRT/WEC Response: An updated baseline risk assessment will be included as an appendix to FS Revision 3, documenting the current Site sediment risks to the benthic and ecological community, based on post NTCRA data.

Comments Addressed Satisfactorily from FS Report Revision 2 Comments and Responses

1. Page 49. Section 4.1.2.2. Integrate the summary table of surface barrier construction areas and sizes (like Table M prepare for Alt 3).

NRT/WEC Response: A summary table of the surface barrier construction area for Boom Landing Zone is included in Section 4.1.2.2.

2. Page 59. Section 4.1.4.2. If biostimulants are more appropriate for use in Alternative 4, then it would make more sense to cost biostimulants in the estimate and supporting assumptions for alternative description/evaluation.

NRT/WEC Response: Section 4.1.4.2 has been updated to clarify selection of chemical oxidants

3. **Page 1. Introduction and Site Background.** Document revision history outlined in this section should be updated to include EPA comments on Revision 1 and subsequent production and submittal of Revision 2.

NRT/WEC Response: Section has been updated to include additional background information regarding submittal of FS Revision 2 and 3.

4. **Page 19. Section 1.2.9.3.** In addition to the sediment thickness and concentrations under the sand cover, a cross section detailing the sediment thickness and concentrations along with the sand cover thickness and new depositional material should be developed based on current data. This will further define PAH-impacted material that will remain in the river and assess long-term conditions of the remedy (mixing) in order to assess if the restrictions on dredging beneficial use impairment targets have been met.

NRT/WEC Response: The requested cross section is included in FS Revision 3.

5. **Page 23. Section 1.2.9.3.** Monitoring well MW-312 is located a significant distance away from the reactive core mat (RCM). If WPSC/NRT intends to utilize upland groundwater monitoring well data as a component of the RCM monitoring, the DNR recommends the installation of additional monitoring well(s) closer to the RCM. Soil sampling during well installation is recommend to further define the limits of residual soil contamination in the Boom Landing Zone – North Source Area.

NRT/WEC Response: An additional monitoring well, proposed to be located in the former slough/log run, is included in the proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter.

6. **Page 56. Section 4.1.3.3.** At this time, visual sheen monitoring alone is not an acceptable means to monitoring sediment conditions.

NRT/WEC Response: See the proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter.

7. **Table 3.** Add sediment to the table.

NRT/WEC Response: Sediment has been added to Table 3, as requested. See the proposed sediment monitoring approach detailed at the introduction to this Response to Comments Letter.

EPA and DNR thank you for the opportunity to comment. I encourage a discussion on new comments; if there are any questions or comments, do not hesitate to contact me.

Best regards,



Margaret T. Gielniewski
U.S. EPA

Electronic Cc:
WBS
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