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From: Hynum, Tammie

Sent: Wednesday, February 19, 2014 03:29 PM Central Standard Time

To: Bunce, Jeff

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Subject: Downstream Area Data Assessment Report (Revision 4) Comments from ADEQ

The Arkansas Department of Environmental Quality (ADEQ) and the Arkansas Game and Fish Commission (AGFC) have completed their review of the Downstream Area Data Assessment Report (Revision 4; DADAR) for the Mayflower Pipeline Incident. Additional clarification and supplemental information must be provided in order for ADEQ to consider finalizing the DADAR. These clarifications and supplemental information should be provided in a Revision 5 DADAR no later than March 11, 2014 to the attention of Tammie J. Hynum, Chief of the Hazardous Waste Division of ADEQ. The clarifications and supplemental information needed is discussed below:

- Sheen Monitoring Standard Operating Procedures: There is mention of the “shake-jar test” method. Please note shaking the closed jar has the potential for organic matter in the sediment sample to sorb any sheens that might be present. Therefore, it is requested rather than shaking the closed jar for 5 seconds, the water and sediments be gently agitated/stirred with a device to encourage the release of any sheens that might be present. Please amend any written procedures and text of the main report as necessary to reflect this change.
- Sheen Monitoring Timeframes: At this time Sheen Monitoring needs to be conducted weekly and a written Sheen Monitoring Report should be submitted to ADEQ. In addition, Sheen Monitoring should occur after each ¼” rainfall event. The results of the rainfall event monitoring should be included in the weekly Sheen Monitoring Reports.
- Section 12 of the Main Text of the Report: Section 12.1 list the areas for remedial mitigation and sheen monitoring and are depicted in Figure 12-1. The approximate areas for sheen mitigation are shown in yellow on Figure 12-1. This area should be expanded to include the areas depicted in green (heavy vegetation) since it is highly probable the heavy vegetative area contains oil residuals from the pipeline release. By expanding this area, it is intended that sheen monitoring and mitigation measures both will be addressed.
- Section 12 of the Main Text of the Report: Section 12.3 list a series of remedial technologies that were considered; one being In-situ mixing of amendments. However, no In-situ technologies were retained and fully evaluated by the criteria originally requested by ADEQ. Please amend the report to include a full evaluation of In-situ technologies including agitation or air injection in the flooded areas. It is believed In-situ technologies can often net environmental benefit and cost profile relative to more intensive active remediation technologies.
- Appendix N, Section 2, 3rd paragraph states, “Because crude oil sheens were not observed in the drainage ways, no action is necessary in the drainage ways.” However, Appendix O, Section 2,

4th bullet states, "Drainage Ways: Three locations in the drainage ways where sheens with oil spots were observed in November and December 2013" (in reference to areas where activities for the pre-design study will be performed). These appendices appear to contradict each other. In addition, these drainage ways continue to show sheen observations in the sheen reports since December 2013. Please include all three areas in the Remedial Alternatives Evaluation of the final DADAR Revision 5.

- Appendix N, Section 3.3, Alternative 2 (MNR in the Inlet Channel and Open Water Area): ADEQ understands that alternative 2 was not the chosen alternative for ExxonMobil; however, semi-annual sheen monitoring would not be adequate. ADEQ requires sheen monitoring to continue to be conducted weekly and immediately following each ¼" rainfall in the Mayflower area.
- Appendix N, Section 3.4: The first paragraph states "Alternative 1 is the "No Action" alternative, and therefore no regulations apply to this alternative." ADEQ disagrees with this statement, APC&EC Regulation No. 2 §2.410 states, "Oil, grease or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the water body or adversely affect any of the associated biota." Performing no actions in these areas would be viewed by ADEQ to be a continuing violation of APC&EC Regulation No. 2.

Please note that these comments above or any submitted previously should not be construed to constitute an agreement with ExxonMobil on the conclusions presented in the final DADAR. The State agencies participating in the review of these reports neither admit nor deny any conclusions made by Arcadis or ExxonMobil in any reports/documents submitted for review.

Please submit a revised DADAR Revision 5 no later than March 11, 2014. Let me know if you have any questions or need any additional information.

Thanks,

Tammie J. Hynum
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