Montana Department of
ENVIRONMENTAL QUALITY

Steve Bullock, Governor
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Via E-mail and U.S. Mail

Tom Henson
C/O Scott Davies
ARCADIS
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Re: Silvertip Surface Water Evaluation- Notice of Completion of Work Pursuant to Section XXIX of the Administrative Order on Consent, Docket No. WQA-12-08

Dear Mr. Henson:

The Montana Department of Environmental Quality (DEQ) has reviewed data and reports pertaining to surface water samples collected in response to the July 1, 2011 ExxonMobil Pipeline Company's (EMPCo's) discharge of approximately 1,500 barrels of crude oil from the Silvertip Pipeline into the Yellowstone River (the Discharge).

When the Discharge occurred, the Yellowstone River was experiencing a 30-year flood event. Water in the river was over its banks, and crude oil floating on the surface of the water was deposited on vegetation, debris, soils, and sediments as the flood waters receded. The presence of crude oil floating on surface water, whether as a layer, film, or sheen, during and after the Discharge constituted a visibly apparent violation of the Montana Water Quality Act. Surface water samples were not collected in water that had obvious crude oil, other than a few samples with some sheen. Occurrences of surface water impacted by visible crude oil that have been addressed through immediate clean up actions are not discussed herein. This letter addresses crude oil constituents that may have dissolved into surface water.

As per Paragraph 12.a. of Attachment A to the Administrative Order on Consent (AOC), DEQ compared surface water samples results to DEQ's Circular DEQ-7 Montana Numeric Water Quality Standards (DEQ-7 Standards) for those contaminants of concern that have standards published in DEQ-7. DEQ-7 Standards include standards for protection of human health and aquatic life, and the DEQ-7 Standards

direct that the more protective of these must be used if both standards are available. There are certain petroleum hydrocarbon analytes (the Extractable Petroleum Hydrocarbon and Volatile Petroleum Hydrocarbon Fractions) sampled in the Discharge that do not have a published DEQ-7 Standard, but do have risk-based screening levels (RBSLs) set forth in the Montana Tier 1 Risk-Based Corrective Action Guidance for Petroleum Releases. DEQ compared these results to the RBSLs, with the caveat that these screening levels were calculated to be protective of groundwater and human health, and may not be protective of ecological receptors.

DEQ reviewed surface water data from the following sources:

- The October 3, 2011 *Downstream Areas Surface Water Data Summary Report.* The work plan for surface water sampling is EMPCo's July 22, 2011 *Downstream Impacted Areas Surface Water Sampling Plan* (the July 2011 SW Plan), which the United States Environmental Protection Agency (EPA) approved, since at that time EPA was the lead regulatory agency overseeing response to the Discharge. This document provides results from 9 background and 28 downstream surface water samples. Out of the 37 samples, only two petroleum hydrocarbon compounds were detected (toluene at 1.7 micrograms per liter (ug/L) and naphthalene at 0.073 ug/L, which do not exceed their respective DEQ-7 Standards of 1,000 and 100 ug/L), and the detections were in background samples collected upstream of the Discharge. DEQ provided direct oversight of this sampling event and conducted split sampling.
- Public Surface Water Supply sampling: In DEQ's August 17, 2011Violation Letter, DEQ required EMPCo to collect additional surface water samples at Public Surface Water Supply intakes along the Yellowstone, and EMPCo collected those samples under the framework described in the *May 2012 Revised Public Surface Water Supply Sampling Plan Submittal* (the May 2012 PSWS Plan) approved by DEQ in a letter dated June 19, 2012. The results of the two rounds of sampling conducted per the May 2012 PSWS Plan are documented in two Public Surface Water Supply Data Summary Reports dated December 2011 (10 surface water samples, not including duplicate samples) and December 2012 (10 surface water samples, not including duplicates). Few petroleum hydrocarbons were detected in these samples above laboratory detection limits, and all were below DEQ-7 Standards and RBSLs. On May 16, 2013, DEQ issued a letter requiring no further remedial actions regarding Public Surface Water Supply sampling, and additional details about the results of the sampling are summarized in that document.
- The Montana Department of Justice's Natural Resource Damage Program's (NRDP's) April 4, 2013 data spreadsheet, which included both NRD trustee and EMPCo samples. Approximately 26 surface water samples were in this data set, with one sample identified as "oil slick." The "oil slick" sample (2012-09-12-A02-RB-01-SW41164, collected on September 12, 2012 by NRDP) had some low level detections of petroleum hydrocarbons, but none of the detections exceeded DEQ-7 Standards or RBSLs. None of the other 25 samples exceeded DEQ-7 Standards or RBSLs.
- Surface water samples collected by Montana Fish Wildlife and Parks (FWP) and NRDP, and EMPCo in response to the March 2012 Huntley Fish Kill. FWP/NRDP collected two water

samples from two pools of standing water with limited surface water connection to the flowing Yellowstone River water with suspected sheen on March 13, 2012. EMPCo collected 15 additional surface water samples from the Fish Kill area. Very few petroleum hydrocarbons were detected and all detections were below DEQ-7 Standards and RBSLs. In a letter dated September 5, 2012, DEQ required no additional remedial actions of EMPCo regarding the Huntley Fish Kill.

- At the request of property owners, EMPCo sampled surface water on private properties as part of its claims process. EMPCo summarized the data in its August 2014 Claims Surface Water Data Report. According to the report, most of the claims surface water sampled were collected from upland areas that had been inundated by flood waters during the time the Discharge occurred. These areas would generally be dry during times of normal in-bank river flow, as they would be above the level of the Yellowstone River. Out of the 71 surface water samples collected, only one sample had a detection of a petroleum hydrocarbon compound, and in that sample (LAMT-294-SW304) toluene was detected at an estimated concentration of 0.41 micrograms per liter (ug/L), which is less than the DEQ-7 Standard of 1,000 ug/L for toluene. The results of the other samples were all "not-detected" for organic compounds. DEQ has determined that the results of the claims sampling do not show unacceptable risk to human health or the environment, and DEQ requires no further action regarding the claims surface water results on private property.
- On April 3, 2012, DEQ collected 10 surface water samples to evaluate water quality within the Johnson Lane Gravel Pit. The gravel pit had been inundated by flood waters during time the Discharge occurred, and also contained waters that originated from ground water. No petroleum hydrocarbons were detected in any of the 10 surface water samples. In a May 3, 2012 letter, DEQ submitted the results and its evaluation to the owners of the gravel pit, and did not require additional remedial actions of EMPCo.
- In response to a complaint about sheen on surface water in pools along the river, on April 3, 2012, DEQ collected three surface water samples from a property along Thiel Road. The water in the pools partially may have been from earlier flooding, but more likely are an expression of groundwater flowing at the level of the Yellowstone River. No petroleum hydrocarbon compounds were detected in these samples. DEQ summarized and evaluated its findings in a May 5, 2012 email, and did not require additional sampling or remedial actions.
- Shortly after the Discharge occurred, DEQ and its contractor collected samples for property owners, including 11 surface water samples (not including duplicates). Out of the 11 surface water samples, one had a detection of toluene at 0.39 ug/L (this was an estimated detection due to the concentration being less than the laboratory's reporting limit), which is less than the DEQ-7 Standard of 1,000 ug/L for toluene in surface water.
- Shortly after the Discharge occurred, a number of samples were self-collected by property owners with little or no oversight from an environmental professional or with adequate quality assurance/quality control. DEQ has not included this sample set in its evaluation of surface water due to confounding issues of data quality. Based on landowner request, DEQ conducted follow-up sampling at some of these properties. The results of this follow-up sampling is discussed in the bulleted paragraph immediately above.

DEQ's review of the surface water sampling results finds that no sample contained dissolved petroleum hydrocarbons exceeding DEQ-7 Standards or RBSLs. As noted above, no surface water samples were collected that included free-product crude oil, since the presence of free product crude oil on surface water was a visibly apparent violation of the Montana Water Quality Act and immediate cleanup was required. Based on a review of the available data, DEQ has determined that petroleum hydrocarbons from the Discharge that may remain in the Yellowstone River surface water do not exceed the DEQ-7 Standards or RBSLs specified in Attachment A to the AOC, and thus do not appear to pose an unacceptable risk to public health, safety, welfare, or the environment. Based on current information, EMPCo has completed the requirements within the AOC for surface water, and DEQ will not require EMPCo to conduct additional investigation or remedial actions regarding surface water in the Yellowstone River in relation to the Discharge. However, DEQ reserves the right to conduct or require additional actions regarding surface water in the future if DEQ receives new or different information that indicates that the surface water remedial actions were not adequate to protect public health, safety, or welfare, or the environment, or if a new release occurs. In addition, this letter does not address EMPCo's potential liability under federal or State law related to natural resource damages.

Please contact me if you have any questions or concerns about this letter. On behalf of DEQ, I wish to thank EMPCo and Arcadis for appropriately addressing concerns regarding potential impacts from the Discharge to surface water as set forth in the AOC, and for compiling data at the request of DEQ.

Sincerely,

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