

**To:** File

**From:** Patrick Skibicki  
Cleanup, Protection, and Redevelopment Section

**Date:** June 4, 2021

**Subject:** Supplemental Site Investigation Report, Per- and Polyfluoroalkyl Substances (PFAS) Emerging Contaminant Groundwater Investigation, dated April 2021; Montana Air National Guard - Great Falls International Airport, Great Falls, Montana

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Decision to be made       Information only       Requires Signature

On January 14, 2021, DEQ prepared a comment letter on the Draft Final *Supplemental Site Investigation Report, Per- and Polyfluoroalkyl Substances Emerging Contaminant Groundwater Investigation*, dated December 2020 (Draft Final Report). The Draft Final Report was prepared by EA Engineering, Science, and Technology, Inc., PBC (EA) on behalf of the Air National Guard (ANG). DEQ provided 20 comments.

DEQ received a Response to Comments (RTC) on March 19, 2021. EA acknowledged DEQ's comments based on the information provided in the RTC. DEQ sent a follow-up e-mail message to EA and ANG on March 26, 2021, with some additional final comments/thoughts. Please see below excerpt from that e-mail message:

*I reviewed EA's Response to Comments (RTC). Thank you for addressing DEQ's comments. Regarding Comment No. 6, please clarify in the final report text if monitoring well MW-7 was placed outside of, or up/cross gradient from, the former Site1 Fire Training Area (FTA) Aqueous Film Forming Foam (AFFF) release area. DEQ does not request any additional report changes.*

*Regarding Comment Nos. 9 and 10, DEQ may request the installation of additional groundwater monitoring wells to define the extent and magnitude of the PFAS contamination at Site 1. DEQ will request that future monitoring wells be installed at shallower and more uniform (consistent) depths within the saturated zone with a goal of better understating potential PFAS groundwater impacts and the groundwater flow direction in this area of the facility. DEQ will also request that the monitoring wells be installed with shorter well screens (10-foot versus 20-foot) and that groundwater samples be collected in the upper portion of those screened intervals. DEQ requests that additional groundwater monitoring be completed at Site 1 to further evaluate seasonal groundwater conditions, including PFAS concentrations and groundwater flow direction.*

DEQ received the subject (final) report on April 8, 2021. DEQ provided an initial review and prepared some draft notes. DEQ requested that a task and budget be included in the Federal Fiscal Year (FFY) 2021 Joint Execution Plan (JEP) to review this final report. That request was denied by the National Guard Bureau (NGB) because they considered the report final prior to DEQ and Department of Military

Affairs (DMA) signing the Memorandum of Agreement. Therefore, DEQ decided to memorialize those notes in this file memo.

1. *DEQ Comment No. 6: Page 5, Section 3.1 Monitoring Well Installation, 1<sup>st</sup> paragraph: Monitoring well MW-7 was proposed as a potential source area groundwater monitoring well near the former fire training area identified as ERP Site 1. Please discuss why monitoring well MW-7 was shifted to the east (approximately 300 feet and potentially up- or cross-gradient) of the location proposed in EA's Final Work Plan/Sampling and Analysis Plan Per- and Polyfluoroalkyl Substances Emerging Contaminant Groundwater Investigation, dated May 2020.*

This comment was acknowledged in the RTC, but no additional report text was added to the final report.

2. *DEQ comment No. 9: Page 9, Section 4.2 Groundwater Results, 1<sup>st</sup> paragraph, 2<sup>nd</sup> sentence: Please discuss if drilling and screening of some monitoring wells deeper than the ultimate depths to groundwater may have resulted in the shallowest groundwater interval not being sampled for potential PFAS impacts. And, if this is the case, please discuss if laboratory analytical results for groundwater samples collected from these wells potentially underrepresent potential PFAS impacts in this area of the Facility.*

This comment was acknowledged in the RTC, but no additional report text was added to the final report.

3. *DEQ comment No. 10: Page 9, Section 4.2 Groundwater Results, 1<sup>st</sup> paragraph: Please discuss if the varying monitoring well completion depths may have affected the measured groundwater flow direction in this area of the Facility. Monitoring wells were screened as follows: MW-1 (55 - 75 feet), MW-2 (28 - 48 feet), MW-3 (40 - 60 feet), MW-4 (65 - 85 feet), MW-5 (71 - 81 feet), MW-6 (40 - 60 feet), and MW-7 (81 - 101 feet). Based on EA's measured groundwater flow direction, the monitoring well (MW-3) with the highest reported PFOS and PFOA concentrations, is located upgradient from the former fire training area identified as ERP Site 1. Please discuss if there are any other known potential PFAS source areas that could be contributing to the PFOS and PFOA contamination identified in MW-3.*

The comment was acknowledged in the RTC, but no additional report text was added to the final report.

4. *DEQ comment No. 15: Figure 4, Notes: Please reference DEQ's human health groundwater standard of 70 ng/L for PFOS and PFOA, individually and combined.*

This comment was acknowledged in the RTC, but EA did not change from DEQ Tap Water RSL to DEQ's groundwater standard in the final report.

5. *DEQ Comment No. 17. Table 2, July 2020 Groundwater Data: Please reference DEQ's human health groundwater standard of 70 ng/L for PFOS and PFOA, individually and combined.*

This comment was acknowledged in the RTC, but EA included the incorrect reference in the final report. EA referred to it as a DEQ Tapwater RSL.

6. *DEQ comment No. 18: Appendix B Well Purging and Sampling Record: Please include the pump type and pump intake depth for each monitoring well purged and sampled.*

This comment was acknowledged in the RTC, but the requested information regarding pump type and intake depth was not included in the final report.

7. *DEQ Comment No. 19: General Comment: Please include a Groundwater Elevation Data Table in the revised report. The data table should include well ID, screened interval, top of casing elevation (feet), date, depth to water (feet), groundwater elevation (feet), and change from previous measurement (feet).*

This comment was acknowledged in the RTC, but a new data table (Table 3) was not included in the final report.