UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101-3188

LABORATORY SERVICES &
APPLIED SCIENCE
DIVISION

MEMORANDUM

SUBJECT: Comments to the FINAL Preliminary Assessment Report Camp Umatilla Hermiston, Oregon May 2020, and the DRAFT Final Site Inspection Quality Assurance Project Plan Addendum Camp Umatilla Hermiston, Oregon January 2022

FROM: Ted Repasky, Hydrogeologist
Risk Evaluation Branch

TO: Harry Craig, Remedial Project Manager
Superfund & Emergency Management Division

DATE: March 23, 2022

The following are comments to the 1) FINAL Preliminary Assessment Report Camp Umatilla Hermiston, Oregon dated May 2020, and the 2) DRAFT Final Site Inspection Quality Assurance Project Plan Addendum Camp Umatilla Hermiston, Oregon dated January 2022 and prepared by AECOM for the US Army Corps of Engineers, Seattle District. The purpose of these reports are to assess potential PFAS release areas and exposure pathways to receptors.

In the **FINAL Preliminary Assessment Report**, it is stated that it is likely there has been aqueous film forming foam releases at these AOIs and one of the potential receptors would be "nearby off Facility residents via ingestion." In addition, they note the adjacent agricultural lands identified by their circular shape supported by center pivot irrigation. Irrigation pumping of the shallow alluvial aquifer causes groundwater in the south and central part of UMCD to flow to the south during the summer and fall. However, as stated in the DRAFT Final Site Inspection Quality Assurance Project Plan Addendum, there are no plans to sample any of the off-site wells for potential exposure in this SI. Since the time of use of the PFAS, it is likely the PFAS has migrated to these off-site wells. This AFFF water has potentially been applied on these irrigated crops.

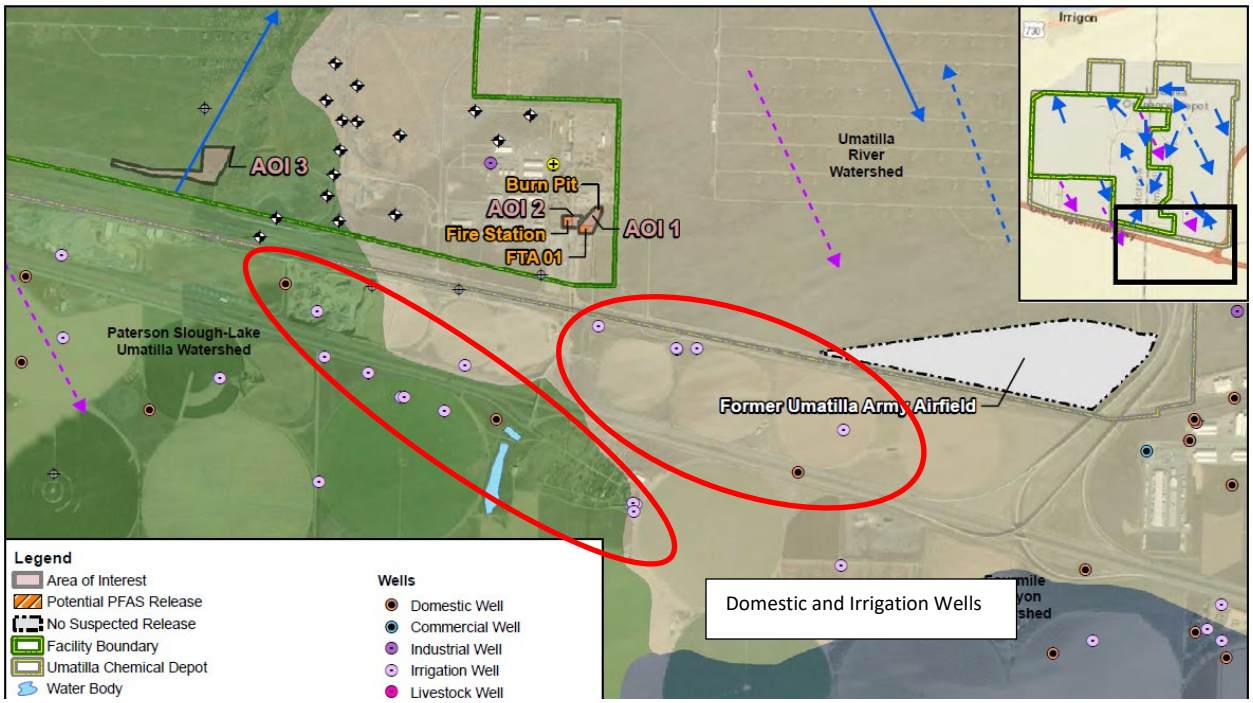
Section 1.5.2 Hydrogeology, Page 7
"*Groundwater flow in the unconfined aquifer generally is to the northwest, seen in Figure 1-2* (Dames and Moore, 1992)."
I don't see northwest flow displayed in this figure.

Section 1.5.3 Hydrology, Page 9
"*Domestic wastewater is run through an oil water separator (OWS) and then routed to the sewage treatment plant at the south-center part of the facility (Figure 1.3)*."
The sewage treatment plant is not displayed on this figure.

Section 1.5.4 Climate, Page 9
"Highs in can reach 100°F…"

Delete the "in".

In the document **DRAFT Final Site Inspection Quality Assurance Project Plan Addendum Camp Umatilla Hermiston, Oregon**, Figure 10-4 shows a number of irrigation wells and domestic wells that are directly down-gradient of AOI 1,2, and 3. These are active wells that influence the piezometric surface since "*Groundwater flow beneath Camp Umatilla exhibits seasonal variation due to groundwater extraction for irrigation and recharge from agricultural canals in the vicinity. In the summer and fall, groundwater flow direction is generally to the east and south, while in the winter and early spring, groundwater flow direction is generally to the northwest*". And "*drinking water wells are located within the facility boundary (a domestic well is located approximately 1,000 feet to the northwest and hydrologically downgradient of AOI 1), an irrigation well is located outside the facility boundary (approximately 2,000 feet south of AOI 1)*".



According to OMD, plans have been established to utilize three on-site wells and re-drill two additional wells in the immediate future for additional drinking water. Thus, the groundwater needs to be adequately characterized before any of these wells are used for a domestic supply.

The Burn Pit for the site was used daily or multiple times a week, and foam was used to control these burns. It is known that PFAS was used on the site. Thus, it is likely this has reached the aquifer.

It is concerning that the nozzle testing area locations are also unknown, and the type, quantity, and concentration of AFFF potentially released during the testing events are unknown. Even if water was only used in this testing, it is likely that remnant PFAS within these trucks was not completely removed prior to any of these tests. Thus, the PFAS contamination may be more pervasive than just the three investigated release areas.

The monitoring wells that are planned to be placed in these release areas are too few to adequately characterize this site. In fact, the ones that will be constructed will only be temporary monitoring wells where PFAS was potentially released. These "temporary wells" may not be representative of conditions found in the aquifer if there is not sufficient time for natural flow conditions to reestablish even with the purging before sampling. These are essentially groundwater grab samples that are potentially influenced by the drilling and by the seasonal flow direction.

Although they are planning to collect water level data to generate a piezometric surface, this doesn't make sense to make these temporary wells since the surface changes with the season. These need to be long-term monitoring wells with measurements in both concentrations and water levels taken at least twice a year. How and when the aquifer changes and the flow directions are currently unknown due to the lack of data. The report states they are only assuming flow directions. Collecting only one or two groundwater samples and soil in locations with known/suspected AFFF discharge and with changing groundwater flow directions will leave significant data gaps.