From:	Jacobson, Linda
To:	McCarter, Jennifer; Kilty, Quinn V; Bloomberg, Jon H
Cc:	Bailley, Treasure; Churchill, Stephen; Muller, Sheldon
Subject:	request for additional information
Date:	Thursday, June 3, 2021 11:40:00 AM

Hi Jennifer,

Thank you for your recent emails. We have identified additional information needs.

We have not yet seen the groundwater system certification required pursuant to 40 C.F.R. § 257.91(f) for Comanche Station and have a few questions to ensure the groundwater monitoring system required pursuant to 40 C.F.R. § 257.91(a) has been designed and constructed to meet the requirements of the section, including 40 C.F.R. § 257.91(a)-(c). From the documentation that has been provided thus far, we have made some observations and would appreciate explanations regarding some of the data presented.

Groundwater system certification:
Please include documentation demonstrating that all § 257.91(a-c) requirements have been met, including a demonstration that background wells accurately represent the quality of background groundwater (§ 257.91(a)(1)); that all potential contaminant pathways are being monitored at the waste boundary of each CCR unit (§ 257.91(a)(2)); that the monitoring system (number, spacing, and depths) is thoroughly characterized, including aquifer thickness, groundwater flow rates and direction, and fluctuations in groundwater flow (§ 257.91(b)); and that the monitoring system meets the minimum requirements necessary to meet the performance standards specified in § 257.91(a) (§ 257.91(c)).

Potentiometric surface maps:
Please identify which wells are being used to develop the potentiometric surface maps. Past presentations have differentiated between the "perched" and "weathered bedrock" groundwater surfaces, and the cross-sections display both perched and weathered bedrock groundwater surfaces. However, the potentiometric surface maps included in the 2020 Annual Groundwater Monitoring and Corrective Action Report appear to incorporate groundwater elevations from "perched" wells in the uppermost aquifer potentiometric surface.

Background samples:
Has Xcel tested for autocorrelation or statistical independence to verify that enough time elapsed between sampling events during the accelerated background sampling campaign? Examples of tests for autocorrelation or other statistical dependence can be found in Chapter 14 of EPA's Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, 2009. If such evaluation has been performed, please provide the results to EPA. If not, please evaluate temporal autocorrelation among sample results from each new well using autocorrelation methods identified in Chapter 14 of the Unified Guidance (e.g. Darcy's equation, first-order autocorrelation function, rank von Neumann ratio).

Identification of SSIs:
Have the identified SSIs been verified by resamples? What statistical method was used to determine BTVs?

Alternate source determination:
In your May 13, 2021 email you indicated that Xcel is evaluating potential alternate sources

for the SSIs. Please identify the potential alternate sources that are being considered.

Update of Location Restriction Criteria assessment:
Based on the data that Xcel Comanche has provided to EPA over the last several months, we believe that Section 2.1 of the October 2018 *Location Restriction Criteria – Certification Report* should be updated to more accurately reflect the current understanding of the relevant information, including the location of the uppermost aquifer.

We appreciate your continuing cooperation and responsiveness.

Linda Jacobson
Region 8 EPA