



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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September 10, 2020

20-NWP-149

Brian T. Vance, Manager  
Office of River Protection  
United States Department of Energy  
PO Box 450, MSIN: H6-60  
Richland, Washington 99352

Re: Waste Management Area A/AX Conceptual Site Model

References: See page 3

Dear Brian T. Vance:

Thank you for your letter 20-TF-0021(Reference 1), which responded to Ecology letter 19-NWP-193 (Reference 2). Your letter discusses the steps to efficiently develop an RCRA Facility Investigation/ Corrective Measures Study (RFI/CMS) Work Plan for Waste Management Area A/AX (WMA A/AX). The Work Plan is required by Tri-Party Agreement Milestone M-045-98, due September 30, 2022.

This letter provides clarification of Ecology's expectations, summarized in Letter 19-NWP-193, for the development of the Work Plan for the WMA A/AX RFI/CMS under Milestone M-045-98. In particular, the Work Plan should address a Conceptual Site Model (CSM) that evolves over the life cycle of the site investigation and cleanup efforts.

Ecology requests that an accurate CSM for the WMA A/AX be developed as a starting point for soil characterization and the RFI/CMS process (Reference 2). The baseline CSM will guide the facility investigations under the RFI, and then support the evaluation of corrective measures for the CMS.

In Letter 20-TF-0021, the United States Department of Energy (USDOE) acknowledges that a CSM will be developed for the site. Ecology concurs with USDOE that an agreement on the WMA A/AX boundary is needed and expects the site boundary to be defined in the Preliminary CSM. Ecology notes that the WMA boundary definition should consider the RFI/CMS, Performance Assessment, and future closure decisions. We acknowledge that USDOE has scheduled a meeting on this topic.

Ecology expects the Preliminary CSM to be included in the Integration Study for WMA A/AX. Including a current CSM will assure that all necessary elements are considered when USDOE provides the logical sequence of events that lead to efficient and effective closure for this WMA.

Following the development of the Preliminary CSM in the Integration Study and after obtaining input from other stakeholders, USDOE should develop a Baseline CSM to be included in the RFI/CMS Work Plan. It should identify data gaps that would need to be addressed during the subsequent Data Quality Objective (DQO) and the site characterization during the RFI.

The Preliminary CSM for the WMA should contain written and pictorial representations of physical features and characteristics of the WMA. This includes:

- Known and suspected sources of contaminants.
- Biological, physical, and chemical processes that determine the transport of contaminants from contaminant sources through environmental media to environmental receptors.
- Ecological and human receptors.
- Circumstances under which exposure is anticipated.

The Preliminary CSM should transparently summarize pertinent data and information that currently reside in various documents, e.g. leak assessments, engineering drawings and reports, and groundwater impacts evaluations.

Ecology notes that some information required for the CSM can be found in *Data Quality Objectives for Vadose Zone Characterization at WMA A-AX*, RPP-RPT-60227 (DQO). However, the DQO is incomplete and is missing items. For the CSM, we would also like to see a more comprehensive set of information from the site than is presented in the DQO. The CSM should include vertical profiles of the site, preferably supported by boring logs, tabular data to support groundwater flow and contaminant distribution maps, and flow diagrams to help illustrate the interrelationships from the original sources to the final receptors.

Ecology offers to work collaboratively with USDOE to successfully and efficiently complete the following steps:

1. Development of the Preliminary CSM for inclusion in the Integration Study.
2. Development of the Baseline CSM for inclusion in the RFI/CMS Work Plan to identify data gaps that should be addressed during the RFI.
3. Conduct a DQO to address data gaps identified in the Baseline CSM and to define objectives for the soils characterization during the RFI.

We would appreciate the opportunity to do an early review of a draft Preliminary CSM as it is developed in order to assist USDOE with successful completion of this task.

If you have any questions, please contact me at [jeff.lyon@ecy.wa.gov](mailto:jeff.lyon@ecy.wa.gov) or (509) 372-7914.

Sincerely,

**Lyon, Jeffery (ECY)**  Digitally signed by Lyon, Jeffery  
(ECY)  
Date: 2020.09.11 14:05:34 -07'00'

Jeffery J. Lyon  
Tank Systems Operation and Closure Project Manager  
Nuclear Waste Program

kr/aa

cc: See page 3

References:

1. Letter 20-TF-0021, dated May 14, 2020, "The U.S. Department of Energy, Office of River Protection Response to Letter 19-NWP-193, Resource Conservation Recovery Act Facility Investigation/Corrective Measures Study Work Plan for Waste Management Area A/AX, Milestone M-045-98"
2. Letter 19-NWP-193, dated December 3, 2019, "RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) Work Plan for Waste Management Area (WMA) A/AX, Milestone M-045-98"

cc electronic:

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