



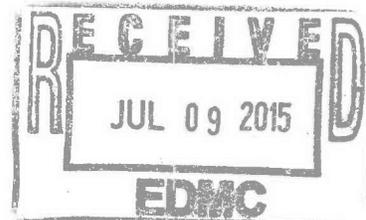
STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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July 7, 2015

15-NWP-122

Mr. Ray J. Corey, Assistant Manager for the River and Plateau
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: A5-11
Richland, Washington 99352



Re: Signature Sheet for the *Sampling and Analysis Plan for the Remedial Investigation Work Plan to Evaluate the 100-OL-1 Operable Unit Pre-Hanford Orchard Lands*, DOE/RL-2012-64 Rev. 0

Dear Mr. Corey:

Enclosed is the Signature Sheet for the referenced document. The Department of Ecology (Ecology) agreed to sign the Sampling and Analysis Plan (SAP), so the United States Department of Energy – Richland Operations Office (USDOE-RL) can proceed with collecting samples during the dry months of the year.

Ecology has issues concerning the work plan that were not resolved in the SAP and remain under discussion. These issues do not influence sampling methods or locations as described in the SAP. USDOE-RL and Pacific Northwest National Laboratory have agreed to work with Ecology staff to resolve the issues listed below:

- Page A.2 of the SAP states, “The design of the characterization effort for the Operable Unit is based on the screening levels of 250 mg/kg lead and 20 mg/kg arsenic.” From Table 2.4 (pg. 2.19) of the Work Plan, the screening level for protection of the environment for lead is identified for the killdeer, Tier 2, as 156 mg/kg.

Ecology concludes that the screening level for lead should be changed from 250 mg/kg to 156 mg/kg.

- Section 2.2.2 of the Work Plan, “Soil Pathway for Lead Arsenate Residues in Hanford Orchards,” presents the conclusions of a few studies on the vertical distribution of lead and arsenic in orchard soils in Washington State. Peryea and Creger (1994) conclude that lead could be expected to migrate down to 0.4 m (16 in.) and arsenic to 1 m (39.4 in.). Diagrams from this study, presented in Figure 2, indicate that levels of lead and arsenic are greater in subsurface soils than on the surface. Subsurface soil concentrations of lead and arsenic can be as much as 2 or 3 times greater than those of surface soils. The steps necessary to complete a cultural review prior to digging hinder performing a site-specific study profiling the orchard land’s concentrations of lead and arsenic with depth.



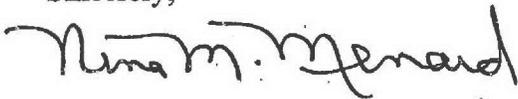
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Ecology concludes that if the screening levels for lead are to be compared against surface soil concentrations, a concentrations factor should be applied to the x-ray fluorescence data to account for the difference between surface and subsurface values for lead and arsenic.

If you have any questions, please contact me at nina.menard@ecy.wa.gov or (509) 372-7941, or Artie Kapell, Environmental Specialist, at artie.kapell@ecy.wa.gov or (509) 372-7895.

Sincerely,



Nina M. Menard
Environmental Restoration Project Manager
Nuclear Waste Program

ak/aa
Enclosure

cc electronic w/enc:

Dennis Faulk, EPA
Chris Guzetti, EPA
John Sands, USDOE-RL
Ken Niles, ODOE
Artie Kapell, Ecology
Nina Menard, Ecology
Environmental Portal
Hanford Facility Operating Record
USDOE-RL Correspondence Control

cc w/enc:

Administrative Record
NWP Central File

cc w/o enc:

Rod Skeen, CTUIR
Gabriel Bohnee, NPT
Russell Jim, YN
Rex Buck, Wanapum
Steve Hudson, HAB
NWP Reader File

Signature Sheet

Title Appendix A: Sampling and Analysis Plan for the Remedial Investigation Work Plan to Evaluate the 100-OL-1 Operable Unit Pre-Hanford Orchard Lands

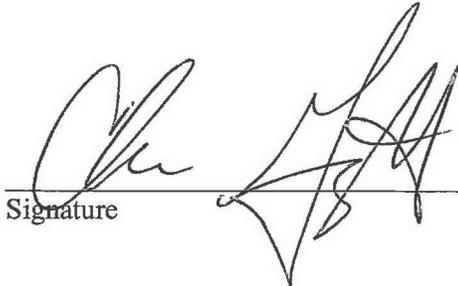
M.W. Cline
U.S. Department of Energy
Richland Operations Office



Signature

6/29/2015
Date

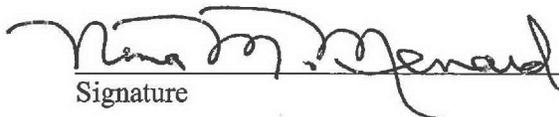
C.J. Guzzetti
U.S. Environmental Protection Agency



Signature

6/29/15
Date

N.M. Menard
Washington State Department of Ecology



Signature

6/29/15
Date