START
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EPA

July 6, 1992

Steven H. Wisness
Hanford Project Manager
U.S. Department of Energy
P.O. Box 550, A5-15
Richland, Washington 99352

Re: Comments on the Expedited Response Action for the 316-5 Process Trenches

Dear Mr. Wisness:

Attached are the combined comments from the Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) on the Expedited Response Action Assessment for the 316-5 Process Trenches. Informal transmittal of a portion of the comments occurred on June 11 and June 22.

If you have any questions or concerns about these comments, please contact me at (509) 376-4919.

Sincerely,

Pamela S. Innis
Unit Manager

Enclosure

cc: Bob Stewart, DOE
Dave Jansen/Rich Hibbard, Ecology
Dave Nylander/Dib Goswami, Ecology
Tim Veneziano, WHC
Administrative Record

General Comments

The objective of the ERA, as stated in Chapter 1 was to "... reduce the potential for migration of the trench contaminants to the soil column, groundwater, and Columbia River." Though data clearly show that measurable contamination was removed from the trenches, the success of the ERA appears to be based on field screening background measurements. The tentative goal of three times the upper tolerance limit of background was established as an indicator for field activities. EPA and Ecology required stringent adherence to data quality objectives in the ERA sampling and analysis plan. The purpose of post excavation sampling was verification that the ERA in fact met the objective. Section 3.5 of the Action Assessment has a comparison of the sampling results however further evaluation of the results is necessary.

Specific Comments

1. **Section 1.0**
   Spell out the word "day" in place of the abbreviations "d" and "month" for the abbreviation "mo".

2. **Section 2.0**
   It would be effective to include a figure that indicates the final configuration of the process trenches, including the excavated sediments.

3. **Section 2.4, Page 5, First Paragraph**
   Please quantify "less contaminated/radioactive" and "more contaminated/radioactive".

4. **Section 3.1.2, Page 6, Fourth Paragraph**
   The first sentence should be rewritten to clarify that there were two separate sampling occasions.

   The word analysis should be in the plural.

5. **Section 3.2**
   This section does not adequately prove or disprove the success of the ERA. Numerous surveys were performed using different equipment, mainly using a Level 1 analysis (i.e., field screening using analog gages). Level 4/5 verification sampling was performed as required in the approved sampling and analysis plan. However, there is no equivalent Level 4/5 background data to measure against.

6. **Section 3.2, Page 8, Second Paragraph**
   Clarify whether "Ludlum" is the trade name.

7. **Section 3.2, Page 8, Fifth Paragraph**
Figures 1 and 2 are not labeled as such in Appendix C. Figure 2 of this section depicts the same information, therefore this reference could alternately be referenced.

8. **Section 3.2, Page 8 and Figure 2, Page 10**
The purpose of the USRADS survey is unclear. For example, why did the USRADS survey choose a threshold of twice background when the screening criteria for the ERA was three times background? What instrument was used to perform this survey? It appears that the "pancake" Geiger Mueller (GM), sodium iodide (Ludlum Model 2221 and Model 44-2), and the micro-R (Ludlum Model 19) detectors were used in the USRADS survey. There is no direct correlation or calibration curve to equate the results from surveys from different meters. Figure 2, Page 10 is of little use. How does this survey confirm the success of removing the top 3 to 4 feet of contaminated soil from the process trenches? Please clarify this section and qualify the analysis of the information presented.

9. **Section 3.3, Page 11**
The results of the NaI survey are not directly comparable to other data. Explain the derivation of the upper tolerance background limit. Does this represent area background or natural background? If background was determined using surficial soils, can a direct correlation be made to at depth soils that may have different physical properties?

10. **Section 3.4, Page 11, First Paragraph, Fourth Sentence**
Fill in the blanks for the conversion of meters to feet.

11. **Section 3.5, Page 12 and 13 and Appendix C**
The Action Memorandum, dated July 15, 1991, and the Expedited Response Action Proposal for 316-5 Process Trenches (DOE/RL-91-11) identify several metals that were detected at elevated levels in the process trenches. Appendix C does not include some of these metals, specifically, arsenic, selenium, thallium, and vanadium.

Gross gamma concentrations are not listed. This data would be useful for determining the other non-uranium radionuclides.

12. **Section 3.5, Table 7, Page 13**
Table 7 should include a comparison of pre- and postexcavation sample results for metals as well.

13. **Section 3.6, Page 14**
The Level I portable X-Ray Fluorescence (XRF) and Level II field laboratory XRF are not presented in the report. It is important to build a direct correlation of field screening and field laboratory methods to CLP and SW-846 methods to refine the observational approach. This information should be included in the report.

14. **Section 3.7, Page 14**
Spell out the word "day" in place of the abbreviations "d" and "month" for the abbreviation "mo".

15. **Appendix C**
Figures and tables should be labeled as such.

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