START
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 HANFORD PROJECT OFFICE
712 SWIFT BOULEVARD, SUITE 5
RICHLAND, WASHINGTON 99352

October 11, 1994

Mathew P. Johansen
U.S. Department of Energy
P.O. Box 550, Mail Stop A5-19
Richland, Washington 99353

Re: Hanford Site-Wide Groundwater Remediation Stategy Comments

Dear Mr. Johansen:

Enclosed are comments on the Hanford Site-Wide Groundwater Remediation Strategy from the U.S. Environmental Protection Agency (EPA) and its contractors.

For your convenience, comments were submitted electronically last week.

If you have any questions or concerns, please call me at (509) 376-8631.

Sincerely,

Dennis A. Faulk
Environmental Scientist

Enclosure

cc: Brian Drost, USGS
Dib Goswami, Ecology
Jeff Ross, PRC
Administrative Record (Milestone M-13-81)

Site-wide Generic per D. Faulk

General Comments

Overall this document appears to contain the information required by the M-13-81 milestone. However, in many places in the document statements are made in regards to remedial decisions. Care should be taken in this document as not to presuppose what remedial action may be taken as part of an operable unit specific record of decision. Also, in the executive summary and elsewhere in the document the definition of co-contaminant should include radionuclides.

This document uses an excessive amount of ACRONYMS without defining them anywhere in the text. EPA believes that the document as written will be very difficult for the general public to understand therefore rendering public comment difficult to obtain.

Specific Comments

1. Section 2.5.3, Page 2-7, Second Paragraph

   This paragraph states that reducing the discharge rates of liquid effluents has succeeded in reducing the spread of contaminants in the groundwater. If this is a true statement documentation of this fact should be presented in this section. If no documentation is available then this statement should be removed from the text.

2. Section 2.6, Page 2-8 & 2-9, bullets 1 and 3

   Bullet one mentions the WAC 173-216 regulations. This bullet should explain what the 216 regulation govern.

   Bullet three refers to LDR issues. To date LDR's have not been considered a problem in regards to groundwater actions and this bullet should be removed from the text or the text should be made more general to discuss that not all actions will be able to meet ARAR's.

3. Page 4-2, Section 4.1.2, line 1

   It is stated that the Ringold Formation sediments were deposited during the "past several million years". Their estimated age is 3.4 to 8.5 million years BP.

4. Page 4-2, Section 4.1.2, last sentence

   The Hanford gravels are equated with deposits in the "middle Ringold". Gravels occur in the Ringold at varying positions from the top to bottom of the formation. Drop "middle" from the statement.

5. Page 4-3, Section 4.1.5, 2nd paragraph, 1st sentence
The range of flow velocities is given as "several to 4.6 m/day". The 4.6 appears to be very precise relative to "several".

6. Page 4-3, Section 4.1.5., 2nd paragraph, last sentence

It is implied that an upward gradient exists everywhere. Although this is anticipated to be true everywhere along the river, there are data suggesting downward gradients in some locations (e.g., Hartman and Lindsey '93 discovered a downward gradient in the 100-N Area).

7. Page 4-3, Section 4.1.5., 4th paragraph, last sentence

The statement is made that where contaminants have reached the confined system their areal extent "should be very limited". Although this is probably true, it is too strongly stated. Very large hydraulic conductivities are known to exist in some places in the Columbia River Basalts. Therefore, considering the general lack of contaminant data in the confined system, we cannot assume "very limited" extent of contamination.

8. Page 4-11, Section 4.1.5., lines 1-3

It is stated that mobile contaminants are expected to take about 100 years and 10-20 years, respectively, to reach the river from the 200-W and 200-E Areas. Presumably these times reflect the entire traveltime from the center of these areas to the river. Some readers may misinterpret this statement to mean that these times represent the time before any of the present contamination will reach the river.

9. Page 5-3, Section 5.2, Table 5-1

The cleanup approach for the strontium-90 plume in the 100-N Area is listed as "Remediation". The present plan for this plume is a sheet-pile wall (containment) and some form of pump-and-treat (mass reduction). This plan does not represent a "remediation".

10. Page 5-6, Section 5.4.1, 1st sentence

It is stated that the fate of two-thirds of the carbon tetrachloride is unknown. Presumably this refers to the entire mass discharged to the ground.

11. Page 5-8, Section 5.7.2, 2nd paragraph, line 3
The N-Springs barrier length is given as 3800 feet but at present is 3000 feet.