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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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January 9, 2004

Mr. Kevin Leary
Richland Operations Office
United States Department of Energy
P.O. Box 550; MSIN: A6-38
Richland, Washington 99352

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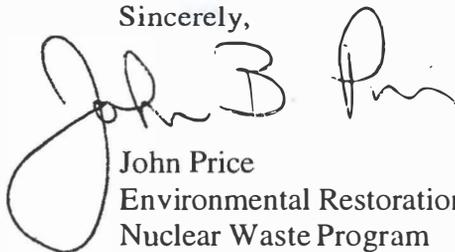
Dear Mr. Leary:

Re: Comments on 216-U-12 Treatment Storage and/or Disposal Closure Plan

The Washington State Department of Ecology (Ecology) has reviewed the U.S. Department of Energy's 216-U-12 Treatment Storage and/or Disposal (TSD) Closure Plan. Ecology's notice of deficiency (NOD) comments are enclosed. The closure plan elements were assembled from Comprehensive Environmental Response, Compensation, and Liability Act documents as described in Section 5.5 of the Hanford Federal Facility Agreement and Consent Order.

If you have any questions or comments regarding this letter, please contact me at (509) 736-3029, or Alicia Hamar at (509) 736-3032.

Sincerely,



John Price
Environmental Restoration Project Manager
Nuclear Waste Program

JP:AH:lkd
Enclosure

cc: Craig Cameron, EPA
Joel Hebdon, USDOE
Mary Todd, Fluor Hanford
Todd Martin, HAB
Stuart Harris, CTUIR

Pat Sobotta, NPT
Russell Jim, YN
Ken Niles, ODOE
Administrative Record: 216-U-12

**Washington State Department of Ecology
 Notice of Deficiency Comments on
 216-U-12 Closure Plan**

Item	Document	Page/Paragraph/ Line	Comment
1.	PNNL-14301	General	<p>The 216-U-12 Treatment, Storage, and Disposal (TSD) unit has never had a groundwater monitoring network that was in compliance with WAC 173-303-400 (or 40 CFR 265, Subpart F) standards. The report PNNL-14301 was cited as one of the closure plan elements in accordance with Section 5.5 of the Hanford Federal Facility Agreement and Compliance Order (HFFACO). Wells that are in the PNNL-14301 network were not located at the point of compliance (POC), but tens of meters away from both upgradient and downgradient POCs. Further, most of the identified wells are now dry. This groundwater monitoring plan does not meet the intent of RCRA regulations for groundwater monitoring at a TSD. Please address this deficiency by proposing a compliant monitoring network.</p>
2.	PNNL-14301	General	<p>Ecology agrees that remediation of existing groundwater contamination beneath this TSD may be remediated most efficiently via CERCLA; therefore, there is no need to specify RCRA corrective action (for groundwater) at this time. However, the closure plan still needs an explicit statement that CERCLA remediation must satisfy closure requirements for a RCRA TSD facility. This comment is submitted as a "General" comment because of the format of the closure plan (compiling several elements per HFFACO Section 5.5). For a typical, non-Hanford closure plan Ecology would typically request a change to a specific section of the closure plan.</p>
3.	PNNL-14301	Page 1.3 Lines 1 & 2	<p>Distribution of huge quantities of waste (approaching half a billion gallons) to this crib was via a vitrified clay pipe. If this is the type of pipe that was typically used in 1960s (the date of crib construction), then the entire length of this pipe likely leaked and in effect constitutes a "very long crib". There was no mass balance kept of the volume of liquid leaving generating facilities compared with the volume of liquid arriving at the crib, so there is no documentation of leakage; however, it is reasonable to assume that significant quantities of fluid leaked en route to the crib. This should be kept in mind as plans for characterization for closure of this unit are developed. Please respond to this comment as to how the VCP is addressed in the closure plan.</p>

Item	Document	Page/Paragraph/ Line	Comment
4.	PNNL-14301	Page 1.6 Paragraph 3 Line 1	Mention is made of well 699-36-70A, but this well is not anywhere close to the POC and is not shown on Figure 1.3, the map of groundwater monitoring wells.
5.	PNNL-14301	Page 1.7 Figures 1.4 & 1.5	This site was triggered into groundwater quality assessment monitoring under interim-status regulations because of exceedences of the Critical Mean for Specific Conductance. The report contends that NO3 and Tc-99 account for this result. However, these figures (trend plots) do not show conductivity to allow one to see the relationship. Please provide conductivity data.
6.	PNNL-14301	Page 1.8 Paragraph 2	While this document concedes that additional wells are needed, reliance is placed on deepening existing wells when no effective demonstration of well deepening techniques have been conducted to prove that this is cost effective and produces a WAC compliant well.
7.	PNNL-14301	Page 1.8 Last paragraph	The designation of Operable Units appears inconsistent with information that is in the HFFACO.
8.	PNNL-14301	Page 1.9 Table 1.1	Useful information, but trend plots of these data would be much more instructive to show changes over time.
9.	PNNL-14301	Page 1.11 Last Paragraph	Various options are listed for closure/remediation of the groundwater part of this TSD unit, but no statement is made that the requirements for closure of a RCRA TSD landfill should be satisfied by whatever means is selected to close/remediate this TSD unit.
10.	PNNL-14301	Page 3.1 Last bullet	<p>“Declining water levels are stranding wells dry above the water table and reducing the ability to track plumes and confirm these contaminant declines. Groundwater flow direction remains essentially unchanged, to date, since groundwater monitoring began.”</p> <p>This statement is contraindicated by the history of liquid waste discharges and attendant changes in groundwater flow direction, along with the operation of a 200-UP-1 Pump & Treat system. Please revise the statement.</p>

Item	Document	Page/Paragraph/ Line	Comment
11.	PNNL-14301	Page 4.1 Section 4.1 Paragraph 1	A statement is made that wells 299-W22-79 and 699-36-70A are RCRA compliant. These wells may comply with construction standards of WAC 173-160, but do not comply with location requirements at the POC for groundwater monitoring. Please revise the statement.
12.	PNNL-14301	Page 4.1 Section 4.1 Paragraph 1	A statement is made that two wells, "... monitoring the top of the unconfined aquifer which is believed to be where most contaminants travel in groundwater." No basis is provided for this statement, and it is contraindicated by Ecology's many requests (not specific to this unit for adequate depth profiling of contaminant distribution in groundwater. Please revise this statement.
13.	PNNL-14301	Page 4.1 Section 4.1 Paragraph 1	The wells proposed for this network are not shown on Figure 4.1, as stated in the text.
14.	General	General	All CERCLA documents listed that will incorporate any part of the RCRA closure plan requirements need to have an anticipated date attached. Please provide a list of CERCLA documents that will incorporate RCRA closure requirements and include a schedule to show when they will be available.
15.	General	General	Please respond as to where in the closure plan WAC 173-303-610(3)(a)(iv-vii) are addressed, giving a detailed description and schedule of decontamination and closure activities.