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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99352 • (509) 372-7950

November 10, 2004

Mr. Keith A. Klein  
Richland Operations Office  
United States Department of Energy  
P.O. Box 550 MSIN: A7-50  
Richland, Washington 99352

**RECEIVED**  
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**EDMC**

Ronald G. Gallagher  
Fluor Hanford Incorporated  
P.O. Box 1000, MSIN: H5-20  
Richland, Washington 99352

Dear Messrs. Klein and Gallagher:

Re: Ecology's M-26 Land Disposal Restrictions Report Inspection of the  
241 CX Tank System

Thank you for the assistance of the United States Department of Energy (USDOE) and Fluor Hanford Incorporated (FH) personnel during the Washington State Department of Ecology's (Ecology) recent inspection of the 241-CX tank system.

The purpose of this inspection was to determine USDOE's compliance with M-26 by investigating the accuracy of information in the Land Disposal Restrictions (LDR) Report about the 241-CX Tank System treatability group, and the appropriateness of future plans for the tank system based on available information. The 241-CX Tank System includes three tanks; 241-CX-70, 241-CX-71, and 241-CX-72.

No violations will be assessed; however, two concerns are described below. Ecology issues concerns to notify owners/operators of conditions, which if not improved, may evolve into violations.

**CONCERNS:**

1. Washington Administrative Code (WAC) 173-303 requires the characterization of wastes as well as integrity assessments of waste tanks. A substantial number of the requirements of WAC 173-303 have not been fulfilled. The designation of the wastes stored in the



241-CX Tank System is incomplete and the condition of the three tanks is currently unknown. Inspection observations include the following:

241-CX-70:

A subsidence of the soil above this tank occurred in the spring of 2004. It is unknown whether any liquid has accumulated inside or above the tank. The structural integrity of the tank is unknown.

241-CX-71:

Samples were taken from tank 241-CX-71 in 1990. The waste was designated as state only waste, but further documentation review showed that the analysis performed to obtain this information was inadequate for a complete designation of the waste in the tank. In addition, the size of this tank, the integrity of the tank, and volume of waste remains unconfirmed.

241-CX-72:

This tank is thought to contain 3.3 cubic meters of high level waste in a solid form; however, this volume remains unconfirmed. A review of the process knowledge used to designate the waste contained in this tank showed it to be inadequate for designation. No sampling or direct observation has occurred to verify whether the waste is in a solid or liquid state. The integrity of the tank is unknown.

2. The LDR Report Location Specific Data Sheet for the 241-CX tank system leads the reader to believe that the three tanks are being actively managed and are in a safe configuration for continued storage. In fact, it can not be known whether continued storage would pose a risk to the environment, given the amount of information currently known about the tanks.

The 241-CX tank system was removed from the Potential Mixed Waste (PMW) table (Table C-2) of the LDR Report after the calendar year 2001 report because a Part A application was approved for the unit. The PMW table is used to identify waste sites where mixed waste may be found that are not being actively managed and/or further characterization of the sites are necessary. Based on the observed lack of information about the tanks, the condition of the 241-CX tank system not being included in the PMW Table is not aligned with one of the main purposes of the LDR Report which is to make transparent to the reader the location of waste and its need for further characterization in support of storage, treatment, or disposal.

FH is scheduled to conduct an LDR storage assessment during the first quarter of calendar year 2005. Ecology will review the storage assessment when completed and anticipates that the

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assessment will be, at a minimum, just as thorough as Ecology's inspection. Ecology further expects that a Data Gap Plan will be developed within fiscal year 2005, based on the findings from Ecology's inspection and the results of FH's storage assessment that will specify actions to be taken to gather missing data (i.e. waste characterization and volumes, tank size and volumes, waste physical characteristics, and any other missing data).

The 200-IS-1 operable unit Remedial Investigation/Feasibility Study work plan is due to Ecology in December 2004. Ecology expects the work plan to propose specific sampling and analysis for the 241-CX tank system. The proposal should be designed to characterize the waste as well as characterize the nature and extent of releases from the tanks. Ecology also refers your attention to Ecology's letter about the 200-IS-1 operable unit work plan, dated August 29, 2003<sup>A</sup>. In that letter, Ecology referred to USDOE's earlier commitment to take advantage of cost savings related to "the cost of an enclosure for [radiological controls] over multiple facilities." USDOE is required<sup>B</sup> to identify in the work plan any necessary treatability studies. USDOE shall identify in the work plan the treatability studies, if any, required to evaluate ex-situ processing of the 241-CX tank system, the 276-S-141/142 (hexone) tanks, and other similar tanks.

Please be aware that Ecology will be focusing future inspections on the requirements of M-26 and will be paying particular attention to the quality of the storage assessments.

Do not hesitate to call me at (509) 372-7929 if you have any questions regarding this letter.

Sincerely,



Eric Van Mason  
Compliance Inspector  
Nuclear Waste Program

EVM:nc

cc:	Dave Bartus, EPA	Tony Miskho, FH	Russell Jim, YN
	Craig Cameron, EPA	Steve Szendre, FH	Todd Martin, HAB
	Greg Sinton, USDOE	Joel Williams Jr., FH	Ken Niles, ODOE
	Cliff Clark, USDOE	Stuart Harris, CTUIR	<b>Administrative Record</b>
	Larry Romine, USDOE	Pat Sobotta, NPT	Environmental Portal
	Greg LeBaron, FH		

<sup>A</sup> "Re: Tanks/Lines/Pits/Boxes/Septic Tank and Drain Field Waste Group Operable Units Remedial Investigation/Feasibility Study Work Plan and RCRA TSD Unit Sampling Plan, DOE/RL-2002-14, Revision 0," letter from John B. Price, Ecology to Bryan Foley, Richland Operations Office, August 29, 2003.

<sup>B</sup> "40 CFR 300.430(b)(4)