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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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September 29, 1995

Mr. Richard Holten  
TPA Project Manager  
U. S. Department of Energy  
P.O. Box 550  
Richland, WA 99350



Dear Mr. Holten:

Re: Milestone M-44-02

The Washington Department of Ecology (Ecology) has reviewed the annual submittal by the U.S. Department of Energy (USDOE) of the Tank Waste Remediation System (TWRS) Waste Analysis Plan (TWAP) and Tank Characterization Plans (TCPs) as dictated by Milestone M-44-02, and have found these documents to be seriously flawed. The major deficiencies are as follows:

- **Inadequate Data Quality Objective Documents (DQOs):** The DQOs used as a basis for these documents are seriously deficient and most have not been approved by Ecology. As dictated by Milestone M-44, the WAP and TCPs are based upon the DQOs from the various TWRS programs. USDOE has failed to follow the appropriate procedure for the DQO process as dictated by the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement or TPA). USDOE has not involved external stakeholders in the DQO process. Ecology has reviewed several of these DQO documents<sup>1</sup> and provided input. USDOE has committed to incorporate Ecology's comments in only a few, select circumstances.
- **Insufficient data:** Many of the TCPs to be implemented to fulfill Milestone M-44-09 contain insufficient new characterization data to justify the writing of a Tank Characterization Report (TCR). For example, four of the TCPs which will be used to satisfy M-44-09 indicate only the Safety Screening DQO will be implemented in FY 1996. The Safety Screening DQO requires very limited sample analysis and produces insufficient new characterization data on which to base a TCR. A further two TCPs will apply both the Organic DQO and Safety Screening DQO in FY 1996. The Organic DQO utilizes many of the same analyses as the

<sup>1</sup> May 8, 1995; Letter from Alex Stone of Ecology to Leif Erickson of USDOE

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Safety Screening DQO and therefore does not add substantial additional waste characterization data to produce an adequate TCR.

- **Insufficient TCRs to meet M-44-09:** Of the 43 TCRs delineated in the TWAP to fulfill the requirements of M-44-09, the TWAP contains a maximum of 37 which may contain adequate new data to justify a TCR. A minimum of six are inadequate (see previous comment for additional information). Therefore, USDOE has not demonstrated a strategy in this TWAP which will enable them to comply with Milestone M-44-09.
- **Non-submittal of TCPs completed in FY 1995:** As defined in M-4402, a TCP is to be written and presented to Ecology for review and comment prior to initiating the sampling event. Those TCPs listed in Appendix B of the TWAP used to direct sampling in FY 1995 were never formally submitted to Ecology for review and approval.
- **Inadequate sampling in FY 1995:** The TWAP correctly notes that in order to provide high quality TCRs for FY 1996, it is necessary for sampling to commence in FY 1995. USDOE has failed to maintain an adequate sampling schedule in FY 1995 which would provide sufficient new characterization data to meet Milestone M-44-09. Consistent with the TPA, Ecology expects USDOE to issue a corrective plan which addresses this issue and will demonstrate how USDOE will meet the requirements of M-44-09.
- **Incomplete DQO representation:** Milestone M-44 dictates the characterization of the three phases of the 177 high-level waste tanks at Hanford (i.e. the 'solids, liquids, gases'). USDOE has at TWRS Unit Manager Meetings committed to vapor sampling of all 177 tanks. The TWAP and TCPs fail to incorporate all relevant DQOs. For example, the Vapor DQO (one of the few DQOs for which Ecology has provided input and USDOE has committed to incorporate Ecology's comments) is not included in these documents.
- **Formal versus Informal Comments:** The appropriateness of formally responding to every deficiency of Milestone M-44 documentation was discussed in Ecology's letter to USDOE on May 8, 1995<sup>2</sup>. Refer to the May 8 letter for a more detailed discussion of this topic. In summary, Ecology feels a formal transmittal of all of its concerns with the M-44 documentation would significantly hamper the cost effectiveness and timeliness of the Hanford cleanup. Given the emphasis USDOE is placing on formal transmittal of comments, Ecology will, in the future, formally transmit all of its concerns.

Given the deficiencies with the TWAP and TCPs for FY 1996, USDOE needs to make a serious, short-term commitment to rectify these deficiencies. It should be made clear that Ecology places a high priority upon maintaining an aggressive sampling schedule for FY 1996. Ecology expects

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<sup>2</sup> May 8, 1995; Letter from Alex Stone of Ecology to Leif Erickson of USDOE

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the Characterization program to continue to place a strong emphasis upon obtaining samples while these issues are being resolved. Sampling of those tanks for which the maximum DQOs can currently be subjected should continue.

Ecology would like to take this opportunity to compliment Jim Thompson of USDOE, Bob Popielarczyk of Westinghouse Hanford Company, and their staffs. These individuals have worked cooperatively and professionally with Ecology to refocus the documentation and processes encompassed within Milestone M-44 as stated in Ecology's and EPA's letter of March 29, 1995<sup>3</sup>. Unfortunately, the documentation to fulfill M-44 suffers due to a failure by USDOE to provide both adequate DQO documents and sufficient sample for analysis. These two areas are vital to the production of TCRs which meet both the letter and the intent of Milestone M-44.

If you require any further clarification on these matter, please call me (509) 736-3018.

Sincerely,



Dr. Alex Stone  
 Tank Waste Remediation System Characterization Team Leader  
 Nuclear Waste Program

AS:mf

cc:	Jackson Kinzer, USDOE	Roger Bacon, WHC
	Ron Gerton, USDOE	Len Ermold, WHC
	Steve Burnum, USDOE	Bob Popielarczyk, WHC
	Jim Thompson, USDOE	Doug Sherwood, EPA
	Tom Perry, GAO	Rich Tontodonato, DNFSB
	TWRS Characterization Administrative Record	

<sup>3</sup> March 29, 1995; Letter from Alex Stone of Ecology and Kevin Oates of EPA to Leif Erickson of USDOE