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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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March 6, 2000

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Mr. George H. Sanders, Director
Office of Regulatory Liaison
U.S. Department of Energy
P.O. Box 550, MSIN: A5-15
Richland, Washington 99352

Dear Mr. Sanders:

Re: Designation of Sand, Slag, and Crucible Waste at the Plutonium Finishing Plant

References:

- (1) Letter, George H. Sanders, USDOE, to Michael A. Wilson, Ecology, "Plutonium Finishing Plant Basis for Designation of the Sand, Slag, and Crucible Plutonium Containing (SS&C) Residue," dated February 2, 2000.

The Washington State Department of Ecology (Ecology) has reviewed the U.S. Department of Energy's (USDOE) designation records for the sand, slag, and crucible (SS&C) waste generated at the Plutonium Finishing Plant (PFP). Ecology acknowledges the USDOE's commitment to ensure the SS&C waste is properly characterized in support of treatment and disposal. The following recommendation and comments are provided with the intent of assisting in the successful completion of this treatment effort.

Ecology strongly recommends that USDOE conduct sampling and laboratory analysis of the SS&C waste to ensure proper and complete characterization.

Ecology is very concerned that the actual SS&C waste stream has never been sampled and analyzed for dangerous waste constituents. USDOE has estimated that approximately 2.2 tons of SS&C waste awaits treatment within the PFP Treatment Unit. After treatment, approximately 1,200 55-gallon drums of waste would be generated. This waste would be transported to the Central Waste Complex (CWC) for interim storage and eventually to the Waste Isolation Pilot Project (WIPP) for final disposal. Ecology expects for process knowledge to be based on known constituent inputs to the process and include initial analytical data of the waste.

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- If a generator's process has constituent inputs that may designate as hazardous waste but are not expected to be in the waste resulting from that process, laboratory analysis of the waste must be obtained at least initially to confirm that the waste does not contain these constituents. A mass balance method may be used to identify where in the process those constituents were removed. The characterization information based on process knowledge provided by USDOE (Reference 1, Attachment 4) discusses trace metal impurities in the SS&C resulting from the metal production process. However, the following information was not included:
 - 1) Identification of all the trace metals expected in the waste;
 - 2) how/when these trace metals (e.g., arsenic, cadmium, lead) were introduced into the process;
 - 3) "specific limits for numerous elements;"
 - 4) "generic limits for elements not having a defined specification;" and
 - 5) the laboratory analyses or "product purity data" that Westinghouse Hanford Company (WHC) reviewed and used as the basis for making the resultant trace element concentration determinations.

- The May 23, 1996, letter sent to USDOE by the WHC (Reference 1, Attachment 4) states, in part, "Further testing of SS&C materials are ongoing at the PFP, to validate the process knowledge basis and to evaluate the characteristics of the material with respect to reactivity of the calcium metal." Ecology requests USDOE provide to Ecology any such testing results of the SS&C waste that supports characterization of the dangerous waste constituents in the SS&C waste.

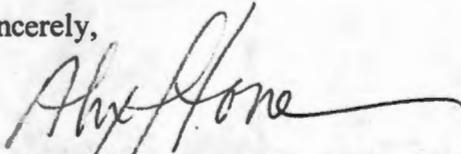
In addition, Ecology is very concerned with USDOE and their contractor's lack of adherence to dangerous or mixed waste management requirements associated with the generation and storage of waste at PFP. In this case, the SS&C waste appears to have been designated on January 12, 2000, (i.e., subsequent to Ecology's November 22, 1999, request for the documentation used to characterize and designate this waste). More importantly, the designation appears to have occurred years after the waste was generated. If dangerous or mixed waste management requirements are not followed, USDOE is at risk of an Ecology enforcement action.

Please advise Ecology of USDOE's plans for sampling and analyzing the SS&C waste. Ecology is in the process of making arrangements for our independent analysis of split samples. This letter serves as notification of Ecology's request for split sample material pursuant to Washington Administrative Code (WAC) 173-303-960(2)(a).

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If you have any questions regarding this letter, please feel free to contact me at (509) 736-3018. You may also direct questions to Oliver Wang, Ecology's Unit Manager for PFP, at (509) 736-3040.

Sincerely,



Dr. Alex Stone, Transition Project Manager
Nuclear Waste Program

AS:sb

cc: James Rasmussen, USDOE
Larry Romaine, USDOE
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