



U.S. Department of Energy
Office of River Protection

P.O. Box 450, MSIN H6-60
Richland, Washington 99352

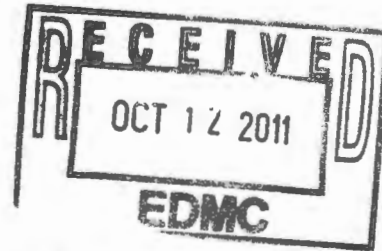
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OCT 07 2011

11-ESQ-248

Mr. Mikel Elsen, Supervisor
Waste Management Section
Office of Radiation Protection
Washington State Department of Health
P.O. Box 47827
Olympia, Washington 98504

Dear Mr. Elsen:



U.S. DEPARTMENT OF ENERGY (DOE), OFFICE OF RIVER PROTECTION (ORP) SUBMITS THE RESPONSE REGARDING SHIPMENT OF WASTE TO THE COMMERCIAL LOW-LEVEL RADIOACTIVE WASTE PROCESSING FACILITY IN RICHLAND, WASHINGTON, OPERATED BY PERMA-FIX NORTHWEST, INC.

Reference: WDOH letter S. Murphy to S. L. Samuelson, ORP, and C. G. Spencer, WRPS, "Shipment of Radioactive Waste Material, TF991, Sent to Perma-Fix Northwest (PFNW)," dated August 30, 2011.

DOE ORP received the Reference on September 6, 2011, and herein provides response to the Washington State Department of Health (WDOH).

Our contractor, WRPS, transported a waste shipment to Perma-Fix Northwest (PFNW) on August 17, 2011, and the highest external radiation dose measured was 50 milli-rem/hour (mrem/hr) as recorded on the manifest. The dose measured at PFNW at the time of receipt was 85 mrem/hr, and 75 mrem/hr when measured by WDOH. Both external radiation measurements are well within allowable transportation limits. However, PFNW has a condition in their operating license (WN-I0393-1), specifically Condition 29.C, that requires, in relevant part, that material received not show an increase in external radiation levels outside "instrument tolerances." The difference between 50 mrem/hr and either 75 mrem/hr or 85 mrem/hr exceeded this condition.

When ORP and WRPS received information regarding the definition and details of this specific PFNW license condition, and to further evaluate the potential cause in the radiation level difference, a meeting with WDOH was scheduled immediately. A meeting was held with Sean Murphy, WDOH, on August 26, 2011, and radiological controls staff visited PFNW on August 30, 2011, to observe PFNW's radiological survey methods and techniques.

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Actions taken and completed include:

1. Met with WDOH on August 26, 2011, to discuss Condition 29.C and definition of "instrument tolerances," which is defined as 20%.
2. Observed PFNW conduct a duplicate external radiation survey of the WRPS shipment on August 30, 2011, to assist in evaluating survey differences. PFNW uses the Ludlum 44-6 GM Probe, whereas WRPS uses the Thermo R0-20 Ion Chamber. Both are suitable, but the response time of the Ludlum 44-6 is superior.
3. Obtained a copy of PFNW radiological survey procedure to assist in evaluating radiological survey techniques prior to shipment.
4. Obtained from WDOH a copy of their internal point system used for tracking issues or notifications dealing with waste shipments to the PFNW facility. Once a certain number of points are tallied in a rolling 12-month period for a specific generator, enforcement by WDOH may be triggered.
5. Provided additional radiological oversight on conduct of radiation surveys prior to shipment. Emphasis has been heightened to ensure compliance.
6. Communicated the definition of instrument tolerance to waste management and radiological control staff responsible for radiological shipments to PFNW.

The actions taken above will address compliance with the specific condition in question, which as noted above, is contained in a license issued to PFNW. Additional actions being considered are:

1. Evaluate purchasing the Ludlum 44-6 GM probe. Improved survey methods to locate and quantify the highest dose rate on an external surface are being employed. This involves the use of a GM probe to locate the highest activity, followed by quantification with an RO-20.
2. Establish a routine interface meeting or periodic status forum with ORP, WRPS, PFNW, and WDOH to facilitate communications regarding common topics and issues of concern.
3. Request PFNW and/or WDOH to modify, delete, or clarify Condition 29.C as it is not clearly defined as written, and determine the basis for the requirement considering the transportation limit for external radiation dose is 200 mrem/hr.

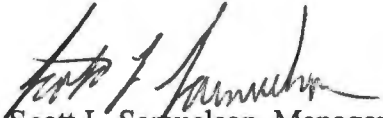
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If you have any questions, please contact either of us, or your staff may contact
Lori A. Huffman, Director, Environmental Compliance Division, (509) 376-0104.

Sincerely,


Scott L. Samuelson, Manager
Office of River Protection


Charles G. Spencer
President and Project Manager
Washington River Protection Solutions LLC

ESQ:GMN

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