



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
 REGION 10  
 1200 Sixth Avenue  
 Seattle, WA 98101

November 17, 1999

Keith Klein, Manager  
 Richland Operations Office  
 U.S. Department of Energy  
 P.O. Box 550, A7-50  
 Richland, WA 99352

S. D. Liedle, President  
 Bechtel Hanford Incorporated  
 3350 George Washington Way  
 Richland, WA 99352



Re: Violations of CERCLA Requirements at 221-U Facility

Dear Messrs. Klein and Liedle:

This letter is to inform you that the U.S. Department of Energy (DOE) and your contractor, Bechtel Hanford Incorporated (BHI), violated the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements agreed to in the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) with respect to waste management practices at the 221-U Facility (U Plant) located at Hanford. Please be aware that the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) consider the waste management activities described below to be a serious breach of trust. The following is a chronology of events that led to the breach of trust and a description of the CERCLA violations.

Bob Wilson, a Resource Conservation and Recovery Act (RCRA) inspector with Ecology, conducted an inspection of the 271-U 90-day accumulation area within the U-Plant Complex of the 200 West Area of the Hanford Site on September 16, 1999. As you are aware, the U-Plant Complex is operated by BHI for the DOE. The area was included on a list of RCRA less-than-90-day accumulation areas which DOE is required to maintain by the provisions of the RCRA Sitewide Permit. Mr. Wilson's inspection revealed a waste container within the non-radioactive portion of the less-than-90-day accumulation waste pad (pad HS002). The container had an accumulation start date of June 22, 1999, and a label which stated "waste pending analysis." Mr. Wilson was informed by BHI personnel that it had not been sampled, and that process knowledge suggested it contained tributyl phosphate (TBP). Mr. Wilson informed the BHI personnel that 87 days had expired on the 90-day accumulation period and that sampling should proceed immediately.

On September 21, 1999, Mr. Wilson spoke with Ray Collins of BHI to inquire whether the "waste pending analysis" had been sampled and where it was stored. Mr. Collins replied that it was CERCLA waste and that the 90-day accumulation date was not applicable. Mr. Wilson then asked for the CERCLA Waste Control Plan (WCP) that it was managed under, and the BHI personnel said there was no WCP for the U-Plant Canyon Disposition Initiative (CDI) pilot project which generated the waste. A WCP details the appropriate management from the time of generation through disposal. Mr. Wilson advised Mr. Collins that because there was no WCP and the waste was managed in a RCRA unit, Ecology considered the waste a RCRA waste. Mr. Wilson advised Mr. Collins to request a 30-day extension so that the waste could be managed in a compliant manner while being sampled for analysis.

On September 28, 1999, a BHI member of the CDI team presented a WCP for approval to EPA and Ecology U-Plant CERCLA project managers. BHI did not inform the EPA or Ecology project managers that a RCRA inspection had discovered the absence of a WCP or that discussions with Mr. Wilson were ongoing. The WCP was signed on the following day by EPA and Ecology project managers who were still unaware of the compliance issues raised by the Ecology inspection. The drafting and approval of a WCP were not done in consultation with the inspector. Thus, the regulators were kept in the dark with regard to critical facts of the waste management incident. In our opinion, this failure to inform the EPA and Ecology CERCLA project managers of the compliance issues constitutes a serious breach of trust on the part of DOE and contractor personnel.

On September 30, 1999, Mr. Wilson again spoke to Mr. Collins and was informed that the "waste pending analysis" had been designated based on process knowledge. Mr. Wilson requested the information used by BHI to designate the waste.

Once the WCP was approved, the contractor removed the waste from the non-rad portion of the pad on October 4, 1999, and placed it on the rad portion of the pad after designating the waste as radioactive based on assumed radionuclide concentrations from the U-Plant facility. On October 6, 1999, the waste was moved from the pad for treatment at U-Plant and disposal at the Environmental Restoration Disposal Facility (ERDF) despite the waste designation concerns raised by Mr. Wilson. Disposal was carried out without notice to Mr. Wilson and without providing the information he had requested. Once placed in ERDF, retrieval of the waste became problematic because within days several tons of waste had been disposed of over the drum.

Two violations of CERCLA and Tri-Party Agreement requirements have resulted from the mismanagement of this waste:

- 1) Failure to have an approved WCP prior to generation of waste. This violates the Sampling and Analysis Plan for 221-U Facility, DOE/RL-97-68 Revision 0 (SAP), which is a portion of the Remedial Investigation/Feasibility Study (RI/FS) document approved by the Tri-Parties. The SAP references the BHI policy by which investigation derived waste (IDW) must be managed. The policy, BHI-EE-10, spells out the procedure that is to be used for IDW management. The procedure specified in BHI-FS-03 W-011, "Control of CERCLA and Other Past Practice Investigation Derived Waste," was not followed. This procedure is enclosed for your information. It clearly indicates the requirement for an approved WCP prior to generation of waste.
- 2) Failure to sample the waste as per the approved SAP. The SAP specifies in Table 3-3 that liquid waste from a number of locations where TBP is a Contaminant of Potential Concern must be sampled. The waste in question was drained from piping that was cut for access to the ventilation tunnel which was part of the characterization of the ventilation tunnel. The liquid waste from characterization of the ventilation tunnel was required to be sampled per the SAP.

Additionally, the waste profile provided to ERDF was inadequate and misleading because the waste was not sampled and the information in the waste profile was based on assumptions and questionable process knowledge. There were only three contaminants listed in the waste designation information provided to ERDF personnel. The contaminant information was developed from a "similar" sample taken in 1991, rather than the actual waste. There is a question of whether the waste from the pipe cut in the recent characterization activities is from the same process as the waste sampled in 1991. If BHI personnel are unsure whether the wastes are the same, as Mr. Wilson indicated, then the use of the sample results from

1991 to designate the waste is inappropriate. The 1991 waste and the waste that is the subject of this letter came from pipes which were sampled in different locations with respect to uranium concentration processes. The wastes might be the result of backwash that is very different in composition depending on which end of the pipe they were closest to.

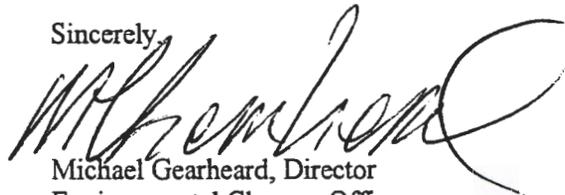
Finally, BHI's request that the Centralized Waste Container Storage Area (CWCSA) be located at an identified RCRA less-than-90-day accumulation area raises some practical concerns. The EPA and Ecology require that from now on RCRA and CERCLA wastes be stored separately to avoid any confusion about permit requirements that might result from storing them side by side. This can be accomplished by removing the RCRA 90-day designation from the U Plant storage pad and only using it for CERCLA wastes. This requirement to separate RCRA and CERCLA waste management areas needs to be followed in any future WCPs. The present WCP for CDI needs to be updated to include this requirement to ensure the use of separate storage areas.

Stipulated penalties that may be assessed under paragraph 72 of the Tri-Party Agreement for violations of CERCLA are \$5,000 for the first week and \$10,000 for each additional week. The penalty that could be assessed for DOE's failure from June 22, 1999, until September 29, 1999, to have an approved WCP is \$135,000. Stipulated penalties that could be assessed for violation #2 include a one-time \$5,000 fine. The maximum penalty for both violations is \$140,000.

The efforts of BHI and DOE to dispose of the waste before resolving important questions about its regulatory status and the failure to inform EPA and Ecology project managers of regulatory issues and concerns before seeking approval of the WCP constitute a serious breach of the trust between cleanup partners.

EPA and Ecology require a written response within 10 days that explains the actions that DOE and BHI plan to take to correct deficiencies mentioned in this letter and prevent future occurrences. Please call Doug Sherwood at (509) 376-9529, or Michael Wilson at (360) 407-7150, if you have any questions.

Sincerely,



Michael Gearheard, Director  
Environmental Cleanup Office  
U.S. Environmental Protection Agency



Michael Wilson, Manager  
Nuclear Waste Program  
Washington State Department of Ecology

Enclosure

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**BHI-FS-03, Field Support  
Waste Management Instructions**

Instruction No. W-011

Rev. 1

Effective Date 06/14/99

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**Control of CERCLA and Other Past  
Practice Investigation Derived Waste**

initially based upon existing process knowledge and environmental monitoring data and then substantiated in the field with the use of field screening instrumentation. Waste site boundaries shall be documented in the WCP.

2. The lead regulatory agency shall determine, and it shall be documented in the WCP, whether decontamination fluids (water and/or non-dangerous cleaning solutions) generated from operations conducted within the boundaries of a waste site or suspect waste site will be contained and managed in accordance with the Purgewater Agreement, "Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington" (DOE-90-ERB 073) or as IDW in accordance with this WMI.
3. Agreement shall be reached between the U.S. Department of Energy, Richland Operations (RL) and the lead regulatory agency to determine the need for IDW collection outside or near the boundaries of a known waste site.

**6.1.1 Waste Control Plan**

1. A WCP shall be utilized to conduct IDW activities and control waste. IDW generation activities and control of waste shall be in accordance with this WMI, except as explicitly identified and documented in the WCP.
2. The PTL shall develop a WCP before IDW generation activities. The PTL shall submit the WCP to the lead regulatory agency, RL and the IDW Coordinator for concurrence. WCP approvals shall be as detailed in Attachment 1, "Waste Control Plan".
3. The WCP shall identify actual waste site boundaries, the required IDW collection location and method, container storage location(s) and IDW disposal points, if any, need for soil piles and/or slurry pits and slurry pit location, if any, requirements for IDW sampling, IDW final disposition, and IDW control activities, e.g., decontamination fluid management.

**6.1.2 IDW Storage Area(s)**

1. The location of IDW container storage area(s) shall be determined and documented in the WCP.
2. Contained IDW that has not been chemically/radiologically released shall be stored in a storage area located at the waste site or at a designated central storage location specified in the approved WCP.