



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 10
1200 Sixth Avenue
Seattle, WA 98101

March 27, 2007

Reply to
Attn Of: ECL-117

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

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

Re: Stipulated Penalties for Violations of CERCLA Requirements at the Environmental Restoration Disposal Facility

Dear Mr. Klein:

This letter notifies the U.S. Department of Energy (DOE) regarding penalties for violations of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements established pursuant to the Hanford Federal Facility Agreement and Consent Order (HFFACO).

The Environmental Restoration Disposal Facility (ERDF) landfill at the Hanford site in eastern Washington is a critical resource for cleanup for one of the nation's largest and most complex Superfund sites. ERDF serves as the primary repository for contaminated soils, debris, and other hazardous and radioactive waste from cleanup operations across the Site. To date over 6.5 million tons of waste have been placed in the facility, much of it from along the Columbia River. The ERDF landfill is a CERCLA waste disposal site, but has been designed to meet the substantive requirements of a Resource Conservation and Recovery Act (RCRA) hazardous waste landfill. Constructed with a double liner system, leachate collection, and a robust monitoring system, ERDF is designed to be protective of human health and the environment. The public, the State of Washington, the Hanford Advisory Board, and tribal interests have all recognized ERDF as a key component of cleanup.

Recently, a number of significant operational concerns have been identified at ERDF, including improper compaction testing methods and the falsification of compaction data intended to assure the long-term structural stability of waste disposed in the landfill and the failure to inspect and monitor infrastructure required to manage landfill leachate. Stipulated penalties are being assessed given the serious nature of these failures to comply with ERDF operating requirements.

As you know, efforts are currently underway to conduct field testing to confirm that the waste that has been placed in ERDF to date meets design criteria. Initially, when it was discovered that compaction data had been falsified and that the heavy equipment specified to compact soils and debris was not being used, operations at ERDF were suspended. The

shutdown caused a ripple effect throughout site cleanup operations, resulting in work stoppages at several cleanup sites. Currently, ERDF has been permitted to begin limited operations under strict oversight.

The operational problems identified in this penalty action point to deficiencies in both contractor conduct of operations and DOE oversight. These failures have raised public concerns about ERDF's integrity as a safe and secure waste management facility and slowed cleanup across the site. The amount of this penalty action reflects the seriousness with which EPA views both the specific failures to comply with ERDF waste operations requirements and the underlying concern about conduct of operations, quality assurance mechanisms, and the adequacy of DOE contractor oversight.

The U.S. Environmental Protection Agency (EPA) has identified two serious violations for which EPA is fully prepared to assess the maximum stipulated penalty allowed under Article XX of the HFFACO. Under Article XX of the HFFACO, a stipulated penalty may be assessed in an amount up to \$5,000 for the first week (or part thereof), and up to \$10,000 for each additional week (or part thereof) for each failure to comply.

The violations are described below:

- 1) The ERDF Record of Decision (1995) states that Federal regulations found at 40 CFR Part 260 through 268 and Washington State Dangerous Waste regulations found at WAC-173-303 are applicable to ERDF.

40 CFR 264.303(b) and WAC 173-303-665(4)(b) both require that:

While a landfill is in operation, it must be inspected weekly and after storms to detect evidence of any of the following... [t]he presence of leachate in and proper functioning of leachate collection and removal systems, where present.

ERDF personnel failed to perform weekly inspections which would detect the presence of leachate and the proper functioning of the ERDF leachate collection and removal systems at Cells 1 and 2 between May 22, 2006 and December 20, 2006. The leachate removal pumps failed to operate in automatic mode during this period. This resulted in the accumulation of leachate in Cells 1 and 2 of 1-ft 1-in. and 1-ft 4-in., respectively. Pumping to remove the leachate that accumulated between May 22, 2006 and December 20, 2006 was not initiated until December 20, 2006.

- 2) ERDF operations did not comply with the approved ERDF Operations Plan, specifically the "Waste Materials Management Plan," which is part of the approved Operations Plan. Section 5.1 of the "Waste Materials Management Plan" requires that at least one compaction test be performed in each active placement area every operating shift in accordance with ASTM D 2922, "Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods." Each week during the period from June 1, 2005 through January 11, 2007, there was active placement of waste in ERDF. During this period, compaction tests were not performed in accordance with the ASTM standard

as required by the operations plan, either because required testing was not conducted and falsified data entered into the logs, or because testing was done, but was not done in accordance with the specified ASTM method.

Section 9.4 of ASTM D 2922 provides that:

The placement of the gauge on the surface of the material to be tested is always important. The optimum condition in all cases, is total contact between the bottom surface of the gauge and the surface of the material being tested.

Whenever compaction testing was conducted from June 1, 2005 until January 11, 2007, ERDF personnel failed to place the gauge on the surface of the material to be tested as required by the specified method. ERDF personnel placed a heavy plastic sheet under the gauge preventing contact of the instrument with the ERDF surface to be tested, resulting in compaction data that is unreliable.

Based on the information available to EPA, EPA has calculated stipulated penalties as follows. A penalty of \$305,000 for Violation 1, for failure to conduct weekly inspections to detect evidence of the presence of leachate in, and proper functioning of, ERDF leachate collection and removal systems from May 22, 2006 until December 20, 2006, a period of 31 weeks. Under paragraph 72 of the HFFACO, a maximum penalty of \$5,000 for the first week, and a penalty of \$10,000 for each of the 30 additional weeks (or part thereof) may be assessed.

A penalty of \$835,000 for Violation 2, for failure to perform compaction testing in accordance with the approved operations plan from June 1, 2005 through January 11, 2007, a period of 84 weeks. Under paragraph 72 of the HFFACO, a maximum penalty of \$5,000 for the first week of violations, and a penalty of \$10,000 for each of the 83 additional weeks (or part thereof) that compaction testing was either not performed or was not performed properly may be assessed.

Again, EPA is fully prepared to assess the maximum penalty of \$1,140,000 for these two serious and significant violations. However, under the HFFACO and applicable EPA policy, the amount of the penalty may be mitigated if DOE commits to an environmental project(s) acceptable to EPA. EPA will demand payment of the \$1,140,000 penalty unless DOE demonstrates to EPA's satisfaction an interest and commitment to develop and complete such a project(s) within 30 days of DOE's receipt of this letter.

A failure to correct violations and otherwise comply with applicable HFFACO requirements could subject DOE to an assessment of additional stipulated penalties. DOE needs to take action necessary to correct violations and ensure compliance with HFFACO requirements. In addition, in accordance with section 9.4 of the HFFACO Action Plan, EPA will be seeking modifications of the approved ERDF Operations Plan by separate letter to further address the ERDF monitoring and operations failures.

Under paragraph 73 of the HFFACO, DOE has 15 days upon receipt of this letter to invoke dispute resolution. DOE can invoke dispute resolution only on the question of whether

the failure to comply did in fact occur. The amount of the penalty is not subject to dispute resolution.

EPA reserves the right to take any action pursuant to the HFFACO, CERCLA, or any other applicable legal authority including, without limitation, the right to seek injunctive relief, implementation of response actions or corrective measures, and the right to seek penalties.

Please contact Mr. Nicholas Ceto, Program Manager, Hanford Project Office, at (509) 376-9529 if you have any questions or would like to discuss this matter.

Sincerely,



Daniel D. Opalski, Director
Office of Environmental Cleanup

cc: Chuck Spencer, Washington Closure Hanford
Susan Leckband, Hanford Advisory Board
Ken Niles, Oregon Department of Energy
Gabriel Bohnee, Nez Perce Tribe
Stuart Harris, Confederated Tribes of the Umatilla Indian Reservation
Russell Jim, Yakama Nation