



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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September 17, 1999

Mr. George H. Sanders, Administrator  
Hanford Tri-Party Agreement  
U.S. Department of Energy  
P.O. Box 550, MSIN: A5-15  
Richland, Washington 99352



Dear Mr. Sanders:

References:

- 1) Letter, Washington State Department of Ecology (Ecology) to U.S. Department of Energy (USDOE), Ecology's Review of USDOE's 1997 Report on Land Disposal Restrictions (LDR) for Mixed Waste, dated September 19, 1997. /
- 2) Letter, USDOE to Ecology, Completion of Tri-Party Agreement (TPA) Milestone M-26-01I, April 15, 1999 (99-EAP-263).
- 3) Letter, Ecology to USDOE, Completion of TPA Milestone M-26-01I, dated May 11, 1999. 50704
- 4) Letter, Ecology to USDOE, Notice of Correction (NOC) Resulting from the 1998 LDR Compliance Inspection at Hanford, dated June 3, 1999. 50760
- 5) Stay of Proceedings for Hanford LDR Enforcement Actions, dated July 8, 1999. 5145
- 6) Letter, USDOE to Ecology, TPA Milestone M-26-01I LDR Report Comment Responses, dated August 18, 1999 (99-EAP-450). 51594

On April 15, 1999, USDOE submitted Hanford's 1999 LDR Report per TPA Milestone M-26-01I (Reference 2). In accordance with the TPA primary document process, Ecology reviewed and responded within forty-five (45) days (References 3 and 4). USDOE was then required to either respond identifying issues with comments within thirty (30) days or update the 1999 LDR Report within forty-five (45) days. Ecology subsequently extended the response date by twenty-one (21) days (Reference 5), and again by fourteen (14) days (based on agreement reached during the July 1999 IAMIT meeting). On August 20, 1999, Ecology received USDOE's August 18, 1999, response letter (Reference 6).

Mr. George H. Sanders  
September 17, 1999  
Page 2

Since deficiencies in the 1998 LDR Report mirror deficiencies in the 1999 LDR Report, Ecology has chosen to pursue one pathway of compliance. Specifically, Ecology will follow the 1999 primary document process to address deficiencies associated with the 1999 LDR Report. As stated in Ecology's letter dated May 11, 1999, USDOE is required to revise the 1999 LDR Report, pursuant to the specificity given by the corrective measures in the June 3, 1999, letter, in accordance with the primary document process.

In accordance with the TPA primary document thirty (30)-day response requirement, this letter is Ecology's response to USDOE's August 18, 1999, letter and reiterates the deficiencies associated with the 1999 LDR Report. Since Ecology and USDOE have major issues outstanding, the parties shall now enter the dispute resolution process per TPA, Chapter 9.

1. USDOE's cover letter and enclosure incorrectly suggest that Ecology first informed USDOE, verbally during a meeting, that the violations cited during the 1998 LDR inspection were to be considered as comments on the 1999 LDR Report. On May 11, 1999, Ecology sent written direction to USDOE, as part of the primary document response process, stating that the "technical evaluation included with [the June 3, 1999] compliance action will provide adequate specificity so that USDOE can make necessary changes to the 1999 LDR Report, as deficiencies in the 1998 Report mirror deficiencies in the 1999 Report . . . The upcoming [June 3, 1999] compliance response, in conjunction with this letter, will fully satisfy Ecology's initial response requirements for reviewing and commenting on primary documents per TPA Chapter 9." (Reference 3)
2. USDOE's cover letter presents the idea of revising the LDR Plan to address deficiencies in the 1999 LDR Report. Although Ecology is willing to participate in reviewing these requirements to ensure equivalency with Site Treatment Plan elements pursuant to the Federal Facility Compliance Act and improve future LDR management at Hanford, Ecology will not entertain retroactively changing the requirements in effect during the 1998 and 1999 reporting period.
3. The Hanford LDR Plan requires "an identification and description of the mixed waste at Hanford." The LDR Plan does not specifically limit identification to only that mixed waste subject to the storage prohibition of 40 Code of Federal Regulations (CFR) 268.50. Ecology's response to USDOE after performing a technical review of USDOE's 1997 LDR Report stated that the LDR Plan addresses *all* mixed wastes at Hanford. (Reference 1). For example, the LDR Plan requires "a comprehensive Waste Characterization Plan, that includes a plan and schedule to characterize all waste stored at Hanford and all waste streams generated at Hanford . . ." During our LDR technical team meetings held earlier this year, we discussed the concept of what "all mixed waste" means and, specifically, if this definition includes mixed wastes being managed in satellite accumulation or less than ninety (90)-day waste storage areas. It is Ecology's determination that USDOE shall include all mixed at Hanford in the annual LDR Reports, including mixed waste not yet in compliant storage.

Mr. George H. Sanders  
September 17, 1999  
Page 3

However, at this time, USDOE may exclude reporting mixed waste currently being managed in accordance with satellite and less than ninety (90)-day storage requirements, assuming such waste will be moved to compliant treatment, storage, and disposal (TSD) storage and accounted for in the next LDR annual report.

Ecology has repeatedly cited requirements in the LDR Plan for identifying mixed waste by quantity and the physical location. USDOE continues to argue that reporting the combination of existing mixed waste in major storage facilities with projected future generation of mixed waste from other facilities satisfies these requirements. It does not. Again, USDOE's reporting method and rationale for the combined waste stream reporting described in the August 18, 1999, letter and the 1999 LDR Report is unacceptable. For example, if 100 m<sup>3</sup> of mixed waste is located in the 300 Area then the annual LDR Report needs to identify 100 m<sup>3</sup> of mixed waste located in the 300 Area. It is inaccurate to combine this 300 Area waste stream with the quantity and physical location of mixed waste being identified for the Central Waste Complex. The only mixed waste identified in the 1999 LDR Report for the entire 300 Area is approximately 2.66 m<sup>3</sup> stored in the 324 Radiochemical Engineering Cell. It is widely acknowledged that additional mixed waste exists in the 300 Area. One example is 300 Area Special Case Waste which includes "high-activity, high dose rate streams of low-level mixed waste," according to the M-92 Milestone series.

USDOE's August 18, 1999, letter suggests that Ecology mistook the Solid Waste Information Forecast Tracking (SWIFT) report for the Solid Waste Information Tracking (SWITS) report. Ecology is familiar with these two reports and aware of their differences. USDOE and contractors repeatedly cited the SWIFT report as the mechanism for identifying mixed waste by quantity and physical location for those streams not specifically identified in the LDR Report (i.e., streams subject to USDOE's combining waste stream scenario).

USDOE's August 18, 1999, letter states, "The partial quote Ecology made in the Notice of Correction regarding Pacific Northwest waste is not relevant because the entire quote related only to spent nuclear fuel fragments stored in the 325 Building hot cells that are not a mixed waste, and therefore, not subject to LDRs." Ecology's quote from the NOC reads, "Waste streams held at PNNL with no defined pathway were not included in the forecast." The actual quote in PNNL's SWIFT Report goes on to state, "These waste streams include fuel-like material stored in the 325 facility hot cells. The minimum and maximum ranges for this waste are 1% and 1,000%, respectively, and are based on the variability in Research and Development projects." This quote does not specify the designation of the waste streams that have no defined pathway, nor does it define the number of waste streams being excluded. Another quote in the same PNNL report reads, "... MLLW [mixed low level waste] greater-than-category III included in some previous estimates is no longer forecast. This reduction arises because PNNL only included that waste or potential waste for which a disposal path

exists." Noting Ecology's position described in the paragraph above disagreeing with USDOE's concept on combining projected waste streams as a means for identifying current inventory, the point being made by Ecology in reference to PNNL's report is that excluding a waste stream from the LDR Report because a disposal path does not exist is unacceptable. The goal is to identify all mixed waste streams for the purpose of creating and/or implementing treatment and disposal pathways.

As detailed in two (2) Ecology letters to USDOE (References 3 and 4), the following comments are provided with adequate specificity so that USDOE can make necessary changes to the 1999 LDR Report:

- A. USDOE must submit to Ecology an addendum to the 1999 Storage Report that identifies and describes all mixed waste stored at Hanford. This addendum must contain the following information for all mixed waste not already identified in the 1999 LDR Report, and/or to complete information on mixed waste provided in the 1999 LDR Report. This addendum, according to the Requirements for Hanford LDR Plan, must contain:**
- 1) An identification and description of the mixed waste.**
  - 2) The quantity of waste identified and described.**
  - 3) The physical location and method of storage.**
  - 4) The USDOE's assessment of the compliance status of the storage methods pursuant to applicable State and Federal standards.**
  - 5) Identification of any releases of hazardous waste or hazardous constituents into the environment from the storage units.**
  - 6) Identification of LDR waste generation rates, an estimate of the storage capacity and when storage capacity will be reached, including an identification of the bases and assumptions used in making such an estimate.**
  - 7) Plans to submit requests for variance(s), case-by-case extension(s) of LDR requirements, or other exemptions pursuant to Section 3004 of RCRA, for those wastes identified in the Storage Report.**
4. The Hanford LDR Plan requires "the Department of Energy's assessment of the compliance status of the storage methods pursuant to applicable State and Federal standards." During Ecology's 1998 LDR inspection, Ecology requested copies of USDOE's documented assessments. USDOE stated that the Fluor Daniel Hanford Facility Evaluation Board performs the assessments to comply with this specific LDR Plan requirement and provided copies of the written assessments to Ecology. Ecology's review found that the assessments for Double-Shell Tanks and 222-S Laboratory did not focus on interim status tank system requirements. The 1999 LDR Report does not provide information as to how this LDR Plan requirement is satisfied. However, USDOE's August 18, 1999, letter states that the phrase "assessment" does not indicate the need for a periodic assessment program. Rather, USDOE

suggests that it is satisfactory for USDOE to "draw a conclusion" about the storage status. Ecology disagrees. Further, in technical meetings between USDOE and Ecology earlier this year, USDOE stated that, upon request, Ecology inspectors would not be provided written documentation of the criteria being evaluated nor the written results of any assessment performed by USDOE in order to satisfy this Hanford LDR Plan requirement.

As detailed in two (2) Ecology letters to USDOE (References 3 and 4), the following comments are provided with adequate specificity so that USDOE can make necessary changes to the 1999 LDR Report:

- A. USDOE must report to Ecology the responsible party/organization that will carry out the assessment. Also, USDOE must report to Ecology the schedule for when inspections will be carried out to meet assessment requirements.**
  
  - B. In addition, USDOE, in conjunction with the responsible party/organization that will carry out the assessments, must implement a written procedure to be used to assess the compliance status of the storage methods per applicable State and Federal regulations and Section 1.d. of the Requirements for Hanford LDR Plan. This procedure must include WAC 173-303 requirements for storage (interim status facility or final facility), including, by reference of WAC 173-303-400, the interim status storage requirements set forth in 40 CFR Part 265. The written procedure must be submitted to Ecology. This procedure, and the assessments performed in accordance with this procedure, must be provided to Ecology, upon request.**
5. The Hanford LDR Plan requires "a Treatment Plan for the LDR wastes identified in the Treatment and Storage Reports . . ." as well as, "all applicable Milestones and associated schedules for the development and implementation of treatment or management technologies to achieve compliance with LDR requirements for each LDR waste including, as appropriate, such items as waste characterization data . . ." Ecology's response to USDOE after performing a technical review of USDOE's 1997 LDR Report (Reference 1) and after the 1998 LDR compliance inspection (Reference 4) restate and clarify the requirement for milestones and schedules for characterizing and treating all LDR mixed waste. Despite Ecology's written and verbal direction, USDOE continues to argue that the LDR Plan does not drive the establishment of milestones or schedules. USDOE contends that only those milestones or schedules in place in the TPA will be reported. Ecology disagrees. It is a violation of the LDR Plan if milestones and schedules for characterizing and treating mixed waste are not established for each LDR waste. Consequently, USDOE is required to develop proposed milestones and schedules for characterizing and treating each LDR waste and include them in the LDR Report. Ecology will negotiate with USDOE in an effort to reach agreement on these milestones and schedules, and then include them as formal, enforceable milestones and schedules into the TPA.

As detailed in two (2) Ecology letters to USDOE (References 3 and 4), the following comments are provided with adequate specificity so that USDOE can make necessary changes to the 1999 LDR Report.

- A. USDOE must submit to Ecology an addendum to the 1999 Treatment Plan that identifies Milestones and schedules for the development and implementation of treatment technologies for all LDR waste. This addendum must be based on the universe of LDR waste after completely identifying all mixed waste at Hanford, as described above, and must contain the following:**
- 1) For mixed wastes *for which treatment technologies exist*, a schedule for submitting all applicable permit applications, entering into contracts, initiating construction, conducting systems testing, commencing operations, and processing backlogged and currently generated mixed wastes.**
  - 2) For mixed wastes *for which no treatment technologies exist*, a schedule for identifying and developing such technologies, identifying the funding requirements for the identification and development of such technologies, submitting treatability study exemptions, and submitting research and development permit applications. If constraints to this requirement exist, such constraints must be identified.**
  - 3) For all cases where USDOE proposes radionuclide separation of mixed wastes or materials derived from mixed wastes, an estimate of the additional volume of dangerous waste generated by these activities.**
- B. USDOE must submit to Ecology an addendum to the 1999 Waste Characterization Plan that includes a plan and schedule to characterize all waste stored at Hanford and all waste streams generated at Hanford. This addendum must be based on the universe of LDR waste after completely identifying all mixed waste at Hanford, as described above, must meet the Requirements of the Hanford LDR Plan, and must contain the following:**
- 1) Existing plans and schedules for characterizing all waste stored at Hanford and all waste streams generated at Hanford, including an inventory of each type of waste that has not been characterized by sampling and analysis.**
  - 2) A proposed plan and schedule, for Ecology review and approval, to characterize all waste stored at Hanford and all waste streams generated at Hanford not already under an existing plan or schedule.**
- C. USDOE must identify and report to Ecology the mixed waste, if any, for which the requirements will be satisfied through the development of Project Management Plans under Milestones M-91.**

Mr. George H. Sanders  
September 17, 1999  
Page 7

Ecology will be available to discuss the expectations of this letter or other related issues. You may contact me at (509) 736-5715.

Sincerely,



Laura Ruud, Permitting Specialist  
Nuclear Waste Program

LR:sb

cc: Dave Bartus, EPA  
Andy Boyd, EPA  
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Administrative Record: Milestone M-26-01 I