



0051594

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

99-EAP-450

AUG 18 1999



Mr. Michael A. Wilson, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504

Dear Mr. Wilson:

HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (TRI-PARTY AGREEMENT) MILESTONE M-26-01I 1999 LAND DISPOSAL RESTRICTIONS (LDR) REPORT COMMENT RESPONSES

This transmittal responds to a letter, from L. E. Ruud, State of Washington Department of Ecology (Ecology), to P. W. Kruger, U.S. Department of Energy (DOE), Richland Operations Office, et al., "Notice of Correction Resulting from the 1998 LDR Compliance Inspection at Hanford (Tri-Party Agreement Milestone M-26-01H)," dated June 3, 1999, which contains four alleged violations, thirteen concerns, and five corrective measures on the LDR reporting process performed under Tri-Party Agreement Milestone M-26-01. Ms. L. E. Ruud stated in a July 21, 1999, meeting that alleged violations 1, 2, and 3 contained in the reference were to be considered as comments on the 1999 Report on Hanford Site LDR for Mixed Waste (1999 LDR Report) (DOE/RL-99-01). As in previous years, DOE submitted the 1999 LDR Report in accordance with the primary document provisions of the Tri-Party Agreement.

50760

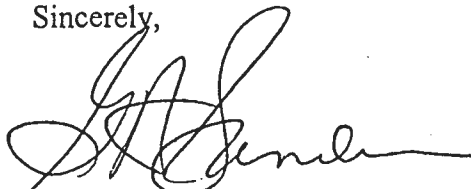
DOE is responding to Ecology's comments pursuant to the Tri-Party Agreement primary document process within 45-days of receipt of the comments as agreed to in the revised Stay of Proceedings signed by DOE and Ecology on July 27, 1999. Enclosed are responses to each of Ecology's three comments. At this time, the 1999 LDR Report is not being appended to address these comments.

As described in the Tri-Party Agreement Statement of Dispute, DOE submitted to Ecology on August 13, 1999, DOE and its contractors believe the LDR report requirements were negotiated under the Tri-Party Agreement. As such, deficiencies in the 1999 LDR report should be addressed under Tri-Party Agreement provisions. In addition, DOE, Ecology, and the U.S. Environmental Protection Agency (EPA) agreed mixed waste treatment and disposal at the Hanford Site would be addressed under the Tri-Party Agreement. If from discussion between DOE and Ecology it is determined the "Requirements for Hanford LDR Plan" signed by Ecology and EPA on April 10, 1990, requires revision, then DOE and its contractors are willing to renegotiate that document under Tri-Party Agreement processes to capture present mixed waste policy. In addition, the DOE and its contractors are willing to discuss modifying the M-26-01 language if such an action is warranted to address Ecology's comments.

AUG 18 1999

DOE and its contractors look forward to resolving this matter with Ecology. If you have any questions or concerns, please contact Mary Jarvis, of my staff, on (509) 376-2256.

Sincerely,



George H. Sanders, Administrator
Hanford Tri-Party Agreement

EAP:MFJ

Enclosure

cc w/encl:

K. R. Fecht, BHI
G. S. Robinson, BHI
J. R. Wilkinson, CTUIR
W. D. Adair, DESH
M. N. Jaraysi, Ecology
L. E. Ruud, Ecology
R. F. Stanley, Ecology
D. Bartus, EPA
J. Boller, EPA
D. Ingemansen, EPA
J. S. Hertzell, FDH
A. M. Miskho, FDH
S. A. Szendre, FDH
M. Reeves, HAB
P. Sobotta, NPT
M. L. Blazek, OOE
H. T. Tilden, PNNL
B. M. Barnes, WMH
D. E. Nester, WMH
R. Jim, YN

Administrative Record, H6-08

Environmental Portal, LMSI

ENCLOSURE

**Responses to State of Washington Department of Ecology Comments on
1999 Land Disposal Restrictions Report**

Responses to the State of Washington, Department of Ecology Comments on 1999 Land Disposal Restrictions Report

The State of Washington Department of Ecology (Ecology) stated in a July 21, 1999, meeting among the U.S. Department of Energy (DOE) and contractor personnel that alleged violations 1, 2, and 3 in Ecology's June 3, 1999, Notice of Correction were to be considered as comments on the 1999 Report on Hanford Site Land Disposal Restrictions for Mixed Waste (1999 LDR Report) (DOE/RL-99-01). DOE and its contractor's responses to these comments are provided below, following a quote of the specific alleged violation/comment.

Violation #1: Hanford LDR Plan, Section 1.a., Storage Report Requirements, per TPA Milestone M-26-01H

Section 1.a. of the Hanford LDR Plan requires USDOE to accurately identify and describe, by quantity and physical location, the mixed waste stored at Hanford.

In the 1998 LDR Report, USDOE failed to report the quantity and physical location of all mixed wastes stored at Hanford.

- *During Ecology's inspection, the Project Hanford Management Company (PHMC) representative said, "All RCRA mixed waste streams that are actively managed are included in the 1998 Hanford LDR report." WMH representatives advised Ecology that mixed wastes were accounted for as either inventoried waste or as waste projected for storage in the Central Waste Complex (CWC). When asked how the projected waste storage estimates were derived for the LDR report, WMH said the Solid Waste Information Forecast Tracking (SWIFT) report provided that information. However, the SWIFT report does not provide the quantity, physical locations, or methods of storage of the current inventory of mixed waste. Rather, the SWIFT report provides waste forecasts of waste generation. In addition, the SWIFT report states, "Waste streams held at PNNL with no defined disposal pathway were not included in the forecast." All mixed wastes are required to be included in the LDR report. This includes all LDR mixed waste at all locations at Hanford. Referencing the SWIFT report's waste generation projections as documentation of mixed waste storage at Hanford is inaccurate.*

Response:

The 1999 LDR report contains mixed waste streams being managed at the time of publication subject to the LDR storage prohibition contained in 40 CFR 268.50. DOE and its contractors have asked Ecology to identify a waste stream not in the report. Ecology has been unable to identify a waste stream.

The annual LDR report is prepared based on input received from a call for data prepared by Hanford Site personnel. Prior to initiating the call for data, the LDR report author confirms the Hanford Site facility representatives for the mixed waste

contained in the previous year's report. The formal data request is transmitted in December to the verified facility representatives. The transmittal includes guidance on what streams belong in the LDR report based on the language contained in the report (Ref: 1999 LDR report pages 1-3 and 1-4). Contacts in an oversight position have queried facility representatives to provide assurances applicable waste is not being stored at their facilities.

Information is collected year-round on potentially new waste streams for the LDR report. Typical information is obtained from new TSD units established in the Hanford Facility Part A Permit Application (e.g., cesium/strontium capsules were added in the 1999 LDR report) and from facility representatives. When information indicates a potentially new waste stream, the lead is followed up and, if applicable, facility representatives are established and data requests are sent to them to prepare the next year's report. There are a few locations on the Hanford Site where material is stored that is not considered waste, but may be declared/generated as waste at a future date (e.g., K Basin sludge). The status of these materials is monitored to see if they have been declared/generated as waste.

Since the original 1990 LDR Plan, the reporting method has been to combine waste streams to ensure completeness. Waste is reported by long term storage location. If a Hanford Site location generates LDR mixed waste and routinely transfers it to a long term storage location (e.g., the Central Waste Complex (CWC) or Double-Shell Tank (DST) System), that waste stream is combined with the long term storage location waste stream inventory by reporting the waste as a projected future generation. This projected waste methodology addresses mixed waste that will be generated and accumulated at the Hanford Facility, and any projected off-site waste. If a waste is located at a TSD unit and is not planned to be transferred, such as with Plutonium-Uranium Extraction Plant tunnel waste, then the storage location is considered a long term storage location and the location is reported as a separate waste stream in previous LDR reports. The reporting method and rationale for the combined waste stream reporting is described in the LDR report and the description was upgraded in the 1999 LDR report (Ref: 1999 LDR report pages 1-3 and 1-4).

The DOE/contractor established method of combining waste streams in the LDR report also helps to ensure all mixed waste subject to the storage prohibition in 40 CFR 268.50 is included in the LDR report. Because TSD units such as the CWC and the DST System use waste projections as part of the TSD unit projected waste inventory, other waste inventories planned for transfer to these TSD units are automatically included in the report. The waste stream combining method ensures treatment needs for mixed wastes are accounted for and are integrated with other similar waste.

An objective of the LDR report is to show the current planning (path-forward) towards treating and disposing of LDR mixed waste at Hanford. The current report accomplishes this objective in the most straightforward way possible consistent with

the "Requirements for Hanford LDR Plan." All known stored mixed waste (based on the definition of storage in Washington Administrative Code (WAC) 173-303-040) subject to the storage prohibition is included in the LDR report. As an example of mixed waste that is not subject to the storage prohibition, mixed waste treated and disposed as it is generated is being managed in compliance with 40 CFR 268.50. Satellite accumulation areas and 90-day accumulation areas are not directly included in the LDR report since these locations do not meet the definition of storage. Reporting on waste at each accumulation area would only represent a snapshot in time that would be invalid by the time the report was issued. It could also result in double-counting of some waste.

A separate annual report, the Hanford Site Annual Dangerous Waste Report (DOE/RL-99-10), provides inventory and other data on all generated dangerous waste (including mixed waste) for each calendar year. The data in this report are organized by waste streams and are compiled from the Solid Waste Information and Tracking System (SWITS) database.

A specific issue raised in the Ecology inspection report is Pacific Northwest National Laboratory (Pacific Northwest) 305-B Building wastes, although not specifically mentioned in this alleged violation. These wastes are sent to CWC routinely and are included in CWC waste receipt projections for the applicable CWC waste streams. 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.

The alleged violation mentions the Solid Waste Information Forecast Tracking (SWIFT) report as having been verbally referenced in meetings as providing information on quantity, physical location, etc., for waste. As Ecology notes, the SWIFT report only provides generation projections. The SWITS database provides waste quantity information, and there may be some confusion between the databases. Note that the SWIFT and SWITS reports are not referenced in the LDR report although they are a source of some data.

Violation #2: Hanford LDR Plan, Section 1.d., Storage Report Requirements, per TPA Milestone M-26-01H

Section 1.d. of the Hanford LDR Plan requires USDOE to assess the compliance status of the storage methods pursuant to applicable State and Federal standards. WMH cited the Facility Evaluation Board (FEB) assessments as the documentation used to satisfy Section 1.d. of the LDR Plan. Review of these assessments revealed that not all dangerous waste storage requirements were assessed by the FEB.

USDOE failed to perform a complete assessment of the compliance status of storage methods.

- *The FEB conducted a "performance-based" assessment of B Plant and the Waste Encapsulation and Storage Facility (WESF) in 1997. This assessment did not address storage in tank systems pursuant to Washington Administrative Code (WAC) 173-303-640. Both B-Plant and WESF are interim status facilities and, therefore, require compliance with WAC 173-303-400 interim status facility standards and, by reference, specific sections of 40 CFR 265. (Note: Due to the B Plant transition activities, Ecology previously granted USDOE conditional relief from specific interim status storage requirements for specific storage units at B Plant, i.e., inspections, labeling, secondary containment, leak detection. Based on the transitional status of B-Plant, the need for future assessments in accordance with the Hanford LDR Plan should be discussed with Mr. Shri Mohan, Ecology's Project Manager for Transition.)*
- *The FEB conducted a "performance-based" assessment of the double-shell tanks (DST) and Characterization Project in March 1997. This assessment did not address the compliance status of the DSTs themselves, pursuant to WAC 173-303-640. When asked about this apparent omission, the FEB investigator said that they [his assessment group] assumed the DSTs should meet RCRA rules; therefore, they did not look at their compliant storage status.*
- *The FEB conducted a "performance-based" assessment of the 222-S Lab and Waste Sampling and Characterization Facility (WSCF) in September 1997. This assessment did not address the compliance status of the interim status 219-S tank system at 222-S, pursuant to WAC 173-303-640. When asked, the FEB investigator said his group did not look at the interim status storage tanks. Also, the report does not suggest that drum storage areas were assessed.*

Response:

The format of the 1998 LDR report was significantly altered from previous reports based on Ecology comments. Ecology's comments were provided outside of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) primary document process on the 1997 LDR report. To address those concerns, the 1998 LDR report used Waste Stream Profile Sheets for the first time and also referenced Facility Evaluation Board (FEB) reports for the first time as evidence of storage compliance evaluation. Since the publication of the 1998 LDR report, the Project Hanford Management Contract (PHMC) contractors determined that the FEB reports are self-assessment tools used for PHMC activities to address many areas of operations and therefore should not be referenced in the LDR report. Consequently, FEB reports are not used as evidence in the 1999 LDR report.

The "Requirements for Hanford LDR Plan" content asks only for "the DOE's assessment of the compliance status of the storage methods pursuant to applicable State and Federal standards." To fulfill this requirement, the 1999 LDR report has a "yes/no" answer as a question for each waste stream of whether the storage area is

in compliance. This question is contained in section 3.4 of the Waste Stream Profile Sheets. The 1999 LDR report approach meets the requirement since the response represents "DOE's assessment." The phrase "DOE's assessment" refers to DOE drawing a conclusion about the storage status. The requirement does not indicate a need for a periodic assessment program. The term "assessment" is not defined in the Tri-Party Agreement, RCRA, CERCLA, RCW 70.105, or WAC 173-303 and thus has its "common, technical meaning" according to WAC 173-303-040.

It is the position of the DOE and its contractors that the factors used by responsible facility representatives in answering the yes/no question in the 1999 LDR report are sufficiently sound to meet the assessment requirement. The four main factors facility representatives informally used in answering these questions in the 1999 LDR report Waste Stream Profile Sheets are:

1. The historical and current milestones of the Tri-Party Agreement,
2. The permitting process to incorporate operating TSD units into the Hanford Facility (HF) RCRA permit,
3. Resolution of issues raised during Ecology compliance inspections, and
4. Periodic inspections required by WAC 173-303.

The historical and current milestones of the Tri-Party Agreement provide a large body of compliance knowledge. Assessments have been performed for TSD units on the Hanford Site and submitted to Ecology in accordance with M-21. From these assessments, M-22, M-23, and M-32 milestones were established to address actions identified in the M-21 assessments. Current milestones are also used to determine if a compliance issue has been addressed through Tri-Party Agreement processes. If a current milestone addresses a compliance issue for a TSD unit, the TSD unit would be considered in compliance for purposes of the LDR report as long as it complies with the requirements of the milestones.

Operating TSD units continue to be incorporated into the HF RCRA Permit in accordance with Attachment 27 of the HF RCRA Permit and Tri-Party Agreement M-20 milestones. In order for a TSD unit to transition from interim status and operate under final status, Ecology evaluates compliance with applicable State and Federal standards. If Ecology determines that the TSD unit is not in compliance, schedules may be used to bring the TSD unit into compliance in accordance with WAC 173-303-815. If a compliance issue would be addressed through development of a compliance schedule in the HF RCRA Permit, the TSD unit would be considered in compliance as long as it complies with the requirements of that schedule.

Ecology's compliance inspection program provides for a continual regulator presence across the Hanford Site. As DOE and its contractors resolve issues raised by Ecology resulting from compliance inspections, this exchange provides another feedback mechanism to allow DOE and its contractors to assess compliance. Interpretation of regulatory requirements pertaining to storage compliance is an ongoing process between Ecology and DOE and its contractors.

Finally, TSD units monitor mixed waste activities and storage compliance according to inspection schedules required by WAC 173-303. Based on these four provisions, sufficient information exists to allow the facility representatives the ability to make a sound determination regarding storage compliance. Ecology's suggestion to develop a program and create additional field activities assessing the compliance status of the storage methods are not necessary for compliance with the Tri-Party Agreement "Requirements for Hanford LDR Plan."

Violation #3: Hanford LDR Plan, Section 5, Treatment Plan Requirements, Per TPA Milestone M-26-01H

Section 5 of the Hanford LDR Plan requires the LDR Plan to include a Treatment Plan for the LDR wastes identified in the Treatment and Storage Reports, as well as all applicable Milestones and associated schedules for developing and implementing treatment, or management technologies, to achieve compliance with LDR requirements for each LDR waste, including, as appropriate, such items as waste characterization data.

USDOE failed to provide applicable Milestones or schedules for developing and implementing treatment technology for each LDR waste. In particular, USDOE's 1998 Treatment Plan single-shell tanks (SST), and DST waste is inadequate, and does not meet Hanford LDR Plan requirements.

- *On January 4, 1999, Mike Wilson, Ecology's Nuclear Waste Program Manager, issued a letter to USDOE expressing concerns regarding USDOE's compliance with LDRs for tank waste. In this letter, Ecology reaffirmed that no relief has been provided by Ecology from TPA tank waste treatment schedules currently in existence. Ecology expressed concern regarding USDOE's compliance with TPA regarding the acquisition and operation of tank waste treatment facilities. Specifically, existing schedules require that treatment capacity be acquired either on an agreed to "primary path" requiring two (2) competitive treatment facilities be operational by 2002, or an agreed to "alternate path," requiring initial low activity waste immobilization be operational by 2003, should USDOE deem the primary path to be infeasible, USDOE's intentions do not reflect any efforts underway to meet either of these approved compliance paths. Although USDOE is working towards other paths forward to LDR treatment for tank waste, namely, the Tank Waste Remediation System (TWRS) Privatization effort, this effort is not yet governed by TPA milestones, and is not reflected in the Hanford LDR Treatment Plan.*

Response:

The approach taken by DOE and its contractors to develop each year's LDR report has been virtually unchanged since the original 1990 LDR Plan. The practice has been to report available information in the LDR report. The practice is based on the Tri-Party Agreement milestone M-26-01 language requiring the submittal of an

annual LDR report in accordance with the LDR plan. As such, the LDR report is not considered to be a "plan" defining milestones and schedules such as a Project Management Plan prepared pursuant to section 11.5 of the Action Plan.

The LDR report preparation methodology is managed to collect available information about the wastes reported each year. This is based on the milestone description language stating that the "the report shall update all information contained in the LDR plan and the prior annual LDR report, including plans and schedules" and that "The report shall specify interim milestones for achieving compliance with LDR requirements at TSD mixed waste units." These statements are interpreted to mean available information is gathered and reported. As such, the DOE and its contractors have not viewed the LDR report as a Tri-Party Agreement milestone negotiation vehicle. Rather, after milestone negotiations related to mixed waste in the LDR report are completed, information is captured in the next published LDR report.

The M-26-01I milestone description includes the following statement: "Appropriate milestones will be incorporated in the agreement via the change process defined in Section 12 of the Action Plan upon issuance of the approved reports." DOE has interpreted this to mean that milestones relating to LDR treatment schedules should be proposed through the normal Tri-Party Agreement change process. This interpretation is supported by the language contained in the Tri-Party Agreement change control form M-91-96-01 that was signed by the parties on December 31, 1996. The first paragraph in the change control form section Impact of Change states:

"These M-91-96-01 agreements are made in partial fulfillment of Land Disposal Restriction (LDR) treatment requirements of Agreement milestone M-26-00 (which constitutes an existing Agreement or Order for treatment of mixed waste for purposes of the Federal Facility Compliance Act (FFCA)), and as companion documentation to Land Disposal Restrictions (LDR) documents submitted by DOE pursuant to Agreement milestone M-26-00. The Parties recognize and agree to establishment of additional schedules and milestones for completion of facility acquisition and for completion of treatment and disposal processes, as adequate information becomes available as determined by the lead regulatory agency or DOE."

Therefore, DOE and its contractors submit that the methodology taken in the 1999 LDR report to report available information is in compliance with the FFCA and the Tri-Party Agreement.

Regarding the January 4, 1999 letter, DOE and its contractors can provide no additional waste treatment information than that already included in the 1999 LDR report. Plans for Single Shell Tank (SST)/DST System waste (tank wastes) treatment are not fully approved. There are ongoing Tri-Party Agreement negotiations between Ecology and DOE to develop appropriate schedules for

treatment of tank wastes. The outcome of these negotiations may result in changes to the current schedules or cause some milestones to be placed in abeyance or deleted entirely.

Milestones for the treatment of tank waste are currently the subjects of ongoing negotiations between DOE and Ecology. On July 21, 1998, DOE submitted Tank Waste Remediation System Proposed Tri-Party Agreement and Consent Order Change Number M-62-98-01. Change number M-62-98-01 proposed changes to the milestones for tank waste treatment. When DOE issued the Authorization to Proceed to British Nuclear Fuels, Ltd. (BNFL) in August 1998, it was recognized that the existing Tri-Party Agreement schedule was not achievable, and this information was shared with Ecology both formally and informally. The existing Tri-Party Agreement schedule was based on a number of underlying assumptions, some of which did not hold true. Foremost was the belief that Phase I treatment facilities could be modular limited life facilities. This assumption was proved incorrect due to seismic and safety concerns. The overall impact of this is two fold:

1. more substantial treatment facilities would need to be built, and
2. the Tri-Party Agreement hot start dates for low activity waste treatment could not be met.

Improvements under the proposed changes over existing Tri-Party Agreement milestones include higher throughput, potential for expansion, and the accelerated start of high-level waste treatment and immobilization. The 1998 LDR report Waste Stream Profile Sheets identified that the tank waste treatment schedules were to be determined and negotiated through the Tri-Party Agreement as well as identifying the applicable Tri-Party Agreement milestones. Based on Ecology's concerns stated in the January 4, 1999, letter and the February 25, 1999, inspection close-out meeting, the 1999 LDR report Waste Stream Profile Sheets included identification of the schedule for tank waste treatment from the BNFL contract for treatment services, Contract No. DE-AC06-96RL13308, referenced the Tri-Party Agreement milestones, identified Tri-Party Agreement change number M-62-98-01, and identified that the proposed changes are the subject of ongoing negotiations between Ecology and DOE.

Discussion on an "Agreement in Principle" for negotiations to modify the Tri-Party Agreement commitments for tank waste treatment and immobilization based on the identified changes began in October 1998 with a draft agreement provided by Ecology. DOE, Ecology, and the U.S. Environmental Protection Agency approved the agreement on May 24, 1999, prior to the issuance of the Ecology June 3, 1999, Notice of Correction. Discussions and negotiations on tank waste treatment and immobilization schedules are underway and milestones are scheduled for completion in FY2000.