



Department of Energy

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June 8, 2000



John Kieling, Hazardous Waste Permits Program Manager
Hazardous & Radioactive Materials Bureau
New Mexico Environment Department
2044 Galestio Street
Santa Fe, New Mexico 87505

Dear Mr. Kieling:

The attachment to this letter contains a narrative of the process used by Hanford to demonstrate compliance of their radiography and visual exam data collected prior to the issuance of the WIPP Hazardous Waste Facility Permit.

If you have any question please contact me at (505) 234 – 7357.

Sincerely,

Kerry W. Watson
Assistant Manager
Office of National TRU Waste Program

Attachment

cc:

S. Zappe, NMED
J. Bearzi, NMED
C. Walker, Tech Law
Ines Triay, CAO

CAO:NTP:RRS:NM 00-1106 UFC 5822.00



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Description of the Process Used to Review Preexisting RTR and VE Data at Hanford

The processes used by Hanford to upgrade VE and RTR testing batch data reports generated under the requirements of the CAO Transuranic Waste Characterization Quality Assurance Program Plan (QAPP, CAO-94-1010) to meet the requirements of the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP) Waste Analysis Plan (WAP) were reviewed during the recent Hanford audit. References to "TAB" numbers refer to the objective evidence reference tabs provided with the Hanford Final Audit Report. The process Hanford used to demonstrate compliance with the WIPP HWFP WAP consisted of the following basic steps:

1. Document on Corrective Action Reports (CARs) that RTR and VE data was collected to QAPP requirements. These CARs are included in each batch report (TAB PE5 – PE13)
2. Develop a corrective action plan to demonstrate compliance with the WIPP HWFP WAP
3. Implement the corrective action plan
4. Verify completion of corrective actions

Each of these steps is discussed in detail below.

- 1) Document on Corrective Action Reports (CARs) that RTR and VE data was collected to QAPP requirements

Hanford issued CARs per their procedure WMH-400, Section 1.3.1, *TRU Corrective Action Management*, against the RTR and VE data collected to the requirements of the QAPP. These CARs were TRU-SPO-00CAR-0012 for VE and TRU-SPO-00CAR-011, TRU-SPO-00CAR-018, and TRU-SPO-00CAR-021 through TRU-SPO-00CAR-040 for RTR. These CARs served to control the data to prevent use and served as a mechanism to develop a corrective action plan that could be implemented to demonstrate compliance with the WIPP HWFP WAP.

- 2) Develop a corrective action plan to demonstrate compliance with the WIPP HWFP WAP

The corrective action plans for each of these CARs required that the following steps be completed prior to closing the CAR:

- Verify that training to WIPP Permit (attachment B1) requirements/procedures has been completed for personnel completing RTR and VE data reviews (videotapes and RTR/VE data forms)
- Complete evaluation of RTR and VE requirements of the Permit in comparison to the RTR and VE requirements prior to the issuance of the Permit
- Review RTR and VE documentation/data reviews (videotapes and RTR/VE data forms) and document additional information required by the Permit
- Revise/addend RTR and VE data packages (testing batch data reports)
- Complete data generation level review, verification, and validation of the RTR and VE data packages (testing batch data reports) in accordance with current TRU procedures (in compliance with WIPP HWFP WAP section B3-10)
- Complete project level review, verification and validation of RTR and VE data packages (testing batch data reports) in accordance with current TRU procedures (in compliance with WIPP HWFP WAP section B3-10)

3) Implement the Corrective Action Plan

Verify that training to WIPP Permit (attachment B1) requirements/procedures has been completed for personnel completing RTR and VE data reviews (videotapes and RTR/VE data forms).

Section B1-3b of the WIPP HWFP WAP details the training required for RTR and VE operators. This training is key to the quality control applied to RTR and VE. Before the Hanford RTR and VE operators reviewed the data (videotapes and RTR/VE data forms) obtained under the QAPP to demonstrate compliance with the WIPP HWFP WAP, they were trained to WIPP HWFP WAP section B1-3b requirements. This was accomplished through Hanford WMP Training Bulletin TB-T-99-002, *Hanford TRU Waste Project Quality Assurance Project Plan Refresher*. Section EO-7 of TB-T-99-002 (TAB PE1) contains the description of the changes to RTR and VE that occurred upon the issuance of the WIPP HWFP WAP. This training assured that the review of preexisting RTR and VE data (videotapes and RTR/VE data forms) would be performed by qualified operators trained to the WIPP HWFP WAP requirements.

Completion of RTR and VE operator training was verified and documented by the project manager, Paul Crane in a memo to T. Blackford dated 2/11/00 (TAB PE1). The signed training documentation forms for Aaron Anderson (RTR), John Keve (RTR), and Joyce McGuffy (VE) are also contained in TAB PE1.

Complete evaluation of RTR and VE requirements of the Permit in comparison to the RTR and VE requirements prior to the issuance of the Permit

Hanford performed an internal evaluation of the differences between the RTR and VE characterization methods used prior to the issuance of the WIPP HWFP WAP against the requirements of the WIPP HWFP WAP. These evaluations were documented in interoffice correspondence 3T000-PTC-024 for RTR (TAB PE2) and 3T000-PTC-025 for VE (TAB PE3). The conclusion was that, due to the changes in requirements for identification of prohibited items, specifically PCBs and non-TRU waste, the data (videotapes and RTR/VE data forms) for both RTR and VE would be reviewed by WIPP HWFP WAP qualified operators. Data generator level and project level data review, validation, and verification (V&V) would then be performed using Hanford procedures WMP-350, section 2.3 (data level) and WMH-400, section 7.1.6 (project level).

Review RTR and VE documentation/data (videotapes and RTR/VE data forms) and document additional information required by the Permit.

The review of existing data (videotapes and RTR/VE data forms) for both VE and RTR was controlled using Hanford's corrective action process as described in Hanford procedure WMH-400, Section 1.3.1, *TRU Corrective Action Management*. Due to the controls provided by the corrective action process and the one time nature and limited duration of the activity, a separate procedure to perform this review was not required.

Direction for performing the data reviews was provided in memorandums from Paul Crane to Glen Triner (Hanford Manager of Generator Servicest) and John Keve (Hanford RTR Project Lead). These memorandums are included in TAB PE1. For both RTR and VE, the direction required the following:

"The review must confirm the following items:

- 1) There is no evidence that the waste contains items with PCBs at concentrations greater than 50 ppm*
- 2) There is no evidence that the waste contains items that are not radiologically contaminated TRU waste (i.e., low level waste, non-radioactive waste)*
- 3) The physical form of the waste is consistent with the current waste stream description (NPFDP)*
- 4) The waste is consistent with the waste matrix code group (heterogeneous debris).*

Please document completion of the review of each waste container on the attached form”

The data form provided spaces to document the drum numbers and captures the differences between the procedure used to perform RTR and VE prior to issuance of the WIPP HWFP WAP and current requirements.

In the memorandum, the project manager directed that each of the existing data packages must be reviewed by a qualified operator. Data packages, as the term is used in this memorandum, are the testing batch data reports and consist of videotapes and data forms.

For RTR, the operators (trained to the WIPP HWFP WAP, section B1-3b) obtained record copies of the applicable RTR videotapes and RTR data packages from the QA records center. Videotapes of RTR scans applicable to each drum were reviewed against the criterion established in the direction memorandum. The review was documented on the form provided. The data package was revised as necessary. These reviews were conducted in the WRAP 2336 Building and the MO-720 trailer at Hanford.

The videotapes of independent replicate scans for each testing batch were reviewed. The independent observations were repeated using the existing videotapes to demonstrate compliance with the WIPP HWFP, section B1-3b(2). The independence of the operators, independent reviewers, personnel performing the replicate scans and independent observations was maintained.

For VE, the operators (trained to the WIPP HWFP WAP, section B1-3b) obtained record copies of the applicable VE videotapes and VE data packages from the QA records center. Videotapes of visual examinations and VE data forms applicable to each drum were reviewed against the criterion established in the direction memorandum. The review was documented on the form provided. The testing batch data report was revised as necessary.

Revise/addend RTR and VE data packages (testing batch data reports)

The RTR and VE data forms were revised, as necessary, during the data (videotapes and RTR/VE data forms) review by WIPP HWFP WAP qualified operators. This is documented in the testing batch data reports. Changes were made with a single lineout, initial, and date as required for changes to QA records. Each RTR and VE data sheet was addended by adding a form documenting verification that:

- There is no evidence that the waste contains items with PCBs at concentrations greater than 50 ppm
- There is no evidence that the waste contains items that are not radiologically contaminated TRU waste (i.e., low level waste, non-radioactive waste)
- The physical form of the waste is consistent with the current waste stream description (NPFDP)
- The waste is consistent with the waste matrix code group (heterogeneous debris).

Complete data generation and project level validation of the RTR and VE data packages (testing batch report) in accordance with current TRU procedures

Each revised RTR and VE testing batch data report was subjected to review, verification, and validation using the revised WIPP HWFP WAP compliant procedures (Hanford procedure WMP-350, Section 2.3, *Data Management for NDE/NDA Results*, WMH-400, Section 7.1.6, *TRU Waste Project Level Data Validation and Verification*). The review, verification, and validation at both data generation and project level were documented on the applicable forms per these procedures and are included in the testing batch data reports (TAB PE5 – PE13).

4) Verify completion of corrective actions

The CAR applicable to each RTR or VE testing batch is included in the testing batch data report. The last action item required by the corrective action plan for these CARs is the completion of project level review, verification, and validation. After completion of project level review, verification, and validation, the Site Project Quality Assurance Officer verifies that all actions have been completed and signs in block 17 of the CAR form indicating the verification of completion of the corrective actions. Copies of these CARs are included in the applicable testing batch data reports.

Conclusion

Based on the CAO audit of Hanford and the review of the methodology for reviewing existing data (videotapes and data forms), the RTR and VE data generated by Hanford are compliant with the WIPP HWFP.

Examples of Implementation in Batch Report WR-TB-1999-59

The following citations from NDE (RTR) Testing Batch Number WR-TB-1999-59 are examples of implementation of the corrective action plan developed by Hanford to bring preexisting RTR data into compliance with the WIPP HWFP WAP.

Page iv – this section of the “Executive Summary/Roadmap” provides a description of the background and process used to review the data (videotapes and RTR data forms) to demonstrate compliance with the WIPP HWFP WAP.

Page 3A – Form, *Review of NDE (RTR) Data Generated Prior to WIPP Permit*. This form documents the review of the data (videotape and radiography data sheets) for each container. It is included in the batch report with every container data sheet (see pgs 5AA, 7AA, 22A, etc).

Pages 5A through 5F – Deleted visual examination data. The data had been invalidated per CAR TRU-SPO-00CAR-012. All other VE data has been marked out in this batch report.

Pages 43 and 44 – *WIPP Waste Container Description Data Sheet*, these sheets provide the overall container weights to the RTR operator

Pages 45 and 46 – Original independent technical review of the batch report

Page 47 – Original technical supervisory review of the batch report

Page 48 – Original facility QA officer review of the batch report

Page 56 and 57 – CAR TRU-SPO-99CAR-080. Original CAR written against this batch report. This CAR was a subject of a Carlsbad Area Office (CAO) CAR written during CAO Audit A-00-05 (CAR 00-12, TAB CAR1)

Page 67 and 68 – CAR TRU-SPO-00CAR-018. The CAR controlling the review of preexisting data for this batch report. This particular CAR is not shown as closed in this batch report because the CAR cannot be closed until the other batches covered by the CAR (WR-TB-1999-36 and WR-TB-1999-57) are through project level V&V. See page 83 of batch report for explanation by the SQAQO.

Page 74 and 75 – New independent technical review checklist performed to the WIPP HWFP WAP compliant procedure

Page 76 - New technical supervisor review checklist performed to the WIPP HWFP WAP compliant procedure

Page 77 and 78- New facility QA officer review checklist performed to the WIPP HWFP WAP compliant procedure

Page 79 through 81 - New site quality assurance officer checklist performed to the WIPP HWFP WAP compliant procedure

Page 84 through 87 - New site project manager validation performed to the WIPP HWFP WAP compliant procedure