

**DOCKET NO: A-98-49; II-A4-74**

**WASTE CHARACTERIZATION REPORT FOR TIER 1 CHANGE**

**EVALUATION OF THE**

**WIPP WASTE INFORMATION SYSTEM (WWIS) FOR REMOTE HANDLED**

**TRU WASTE IMPLEMENTED BY THE**

**CENTRAL CHARACTERIZATION PROJECT (CCP) at INL and ANL**

**U.S. Environmental Protection Agency**  
**Office of Radiation and Indoor Air**  
**Center of Federal Regulations**  
**1200 Pennsylvania Avenue, NW**  
**Washington, DC 20460**

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## **1.0 EXECUTIVE SUMMARY**

In accordance with 40 CFR 194.8(b), the U.S. Environmental Protection Agency (EPA or the Agency) conducted two baseline inspections of waste characterization (WC) programs for remote-handled (RH) transuranic (TRU) wastes at the following Department of Energy (DOE) sites:

- EPA Baseline Inspection No. EPA-INL-CCP-RH-6.06-8 of the Central Characterization Project's (CCP) RH WC program at DOE's Idaho National Laboratory (INL) in June and August 2006, reported in Docket No: A-98-49, II-A4-69; and
- EPA Baseline Inspection No. EPA-ANL-CCP-RH-9.06-8 of the CCP RH WC program at the DOE's Argonne National Laboratory (ANL) in September 2006, reported in Docket No: A-98-49, II-A4-70.

As a result of these two baseline inspections, EPA approved the INL-CCP and ANL-CCP RH TRU WC programs based on a demonstration of the sites' capabilities, with conditions and limitations as documented in the INL Baseline Final Inspection Report and the ANL Baseline Final Inspection Report, (see EPA Docket Nos: A-98-49; II-A4-72, January 12, 2007 and A-98-49, II-A4-73, January 16, 2007, respectively). The January 2007 baseline approvals of the CCP programs at INL and ANL for RH TRU wastes did not include the WIPP Waste Information System (WWIS). EPA's proposed approval (Federal Register, Volume 71, Number 216, November 8, 2006, Pages 25488 to 25493) stated that the WWIS would be evaluated independently and subject to evaluation and review through a Tier 1 (T1) change. CBFO subsequently requested a T1 change for WWIS that would apply to both sites and this evaluation was performed by EPA's participation in an interactive demonstration organized by CCP on November 21, 2006.

This report serves as EPA's evaluation of the WWIS for RH TRU wastes at INL-CCP and ANL-CCP as a T1 change. Using the information provided in this report, EPA has determined that the WWIS is adequate for tracking RH TRU waste components. This report, in conjunction with the INL Baseline Final Inspection Report and the ANL Baseline Final Inspection Reports (see EPA Docket Nos: A-98-49; II-A4-72, January 12, 2007 and A-98-49, II-A4-73, January 16, 2007, respectively) completes EPA's initial evaluation of INL-CCP and ANL-CCP for RH TRU wastes for the WC systems included in the respective inspection reports and allows for the disposal of RH TRU waste at WIPP, contingent upon all other approvals that are required for DOE. Note that so far only one RH waste type, debris waste (S5000) from INL and ANL, has been evaluated and approved by EPA. Today's approval will allow the disposal of debris waste (S5000) from INL and ANL at WIPP, contingent upon DOE receiving all other required approvals.

Additionally EPA is adding a Tier 2 element for WWIS as a result of this evaluation and is reflected in the attached tables for INL-CCP (approved January 12, 2007) and ANL-CCP RH (approved January 16, 2007).

## **2.0 PURPOSE OF TIER 1 CHANGE EVALUATIONS**

Certain changes to the WC activities from the date of the site's baseline inspection must be reported to, and, if applicable, approved by EPA according to the tiering requirements set forth in 40 CFR 194.8, regulation and incorporated in the INL and ANL Baseline Final Report cited above.

Under the changes to 40 CFR 194.8 promulgated in the July 16, 2004, *Federal Register* notice, EPA must perform a single baseline inspection of a TRU waste generator site's WC program. (Vol. 69, No.136, pages 42571–42583, July 16, 2004). The purpose of the baseline inspection is to evaluate the site's WC program based on the demonstration that the program's components, with applicable conditions and limitations, can adequately characterize TRU wastes and comply with the regulatory requirements imposed on TRU wastes destined for disposal at the WIPP. An EPA inspection team conducts an onsite inspection to verify that the site's system of controls is technically adequate and properly implemented.

Following the EPA's approval of WC processes evaluated during the baseline inspection, EPA is authorized to evaluate and approve, if necessary, changes to the site's approved WC program by conducting additional inspections under the authority of 40 CFR 194.24(h). Changes requiring EPA notification and approval prior to implementation (Tier 1 Change) and those requiring post-implementation (Tier 2) notification are identified in the site-specific baseline inspection reports. EPA may conduct a site inspection to observe, first-hand, the implementation of the change or can opt to conduct "desktop" review of information provided specific to a change. Under 40 CFR 194.24, EPA has the authority to conduct continued compliance inspections (both announced and unannounced) to verify that the site continues to use only the approved WC processes to characterize the waste and that those WC processes remain in compliance with all the applicable regulatory requirements.

### **3.0 PURPOSE OF THIS REPORT**

This report presents the results of the EPA's evaluation of a T1 change to the initial baseline approval of RH TRU WC programs at INL-CCP and ANL-CCP. Specifically, this report addresses the technical area of tracking waste components using the WWIS. The Baseline Final Inspection Reports referenced above describe the conditions that EPA has approved and document the basis for EPA's approval decision of the WWIS.

### **4.0 SCOPE OF REVIEW**

This T1 change review included the evaluation of information supporting the technical area of the WWIS.

### **5.0 EVALUATION TEAM**

The participants in the interactive demonstration of November 21, 2006, are listed in Table 1.

**Table 1. Interactive WWIS Demonstration Participants**

<b>Evaluation Team Member</b>	<b>Position</b>	<b>Affiliation</b>
Mr. Ed Felcorn	Evaluation Team Leader	U.S. EPA ORIA
Ms. Sharon White	Observer	U.S. EPA ORIA
Ms. Dorothy Gill	Inspector	S. Cohen & Associates, Inc.
Mr. Patrick Kelly	Inspector	S. Cohen & Associates, Inc.

Mr. J. R. Stroble	WCO	CCP
Ms. Creta Kirkes	WWIS Data Entry	CCP
Mr. Eric D'Amico	SPM	CCP
Mr. Court Fesmire	TRU Waste Cert. Work Coordinator	CBFO
Mr. Jim Sheutz	Observer	CTAC

## 6.0 PERFORMANCE OF THE WWIS REVIEW

On November 21, 2006, EPA participated in an on-line interactive audio/visual demonstration of the WWIS process for RH waste.

Procedure CCP-TP-530, Revision 3 was used by CCP to enter RH data into WWIS. EPA reviewed the procedure and determined that it was complete and technically adequate for this purpose. Note that at the time of the demonstration, CCP did not have complete characterization data for any RH container and only Dose-to-Curie (DTC) and Visual Examination (VE) data were used. Sufficient and complete characterization data were not available, because, in the absence of an EPA baseline approval, a Waste Stream Profile Form (WSPF) had not yet been approved by CBFO. Therefore, CCP chose to enter data into the test instance of the certification module for the demonstration.

The DTC and VE data for container No. 00789 were entered into WWIS prior to the demonstration. EPA was able to review both the Summary spreadsheet and Waste Container Data Form for this container. All the required data fields were present in the RH module of WWIS reviewed. Appendix H, Remote-handled TRU waste, from the Qualification Cards for one (1) Waste Certification Assistant and one (1) Waste Certification Official (WCO) were reviewed and found to be complete. The RH training was dated June 6, 2006 for the WCA and October 10, 2006 for the WCO. The enclosed inspection checklist provides additional information on EPA's evaluation of the WWIS.

## 7.0 SUMMARY OF RESULTS

During this desktop evaluation, the EPA did not identify any findings or concerns related to the use of the WWIS for entering and tracking waste RH TRU components at INL-CCP or ANL-CCP.

### Changes to WWIS tiering for RH waste characterization at INL-CCP and ANL-CCP

#### Tier 2:

The following Tier 2 element is added as a result from this evaluation:

DOE must report and submit documentation discussing changes include the following:

- Changes made to WWIS procedure(s) that require CBFO approval

Both the INL-CCP and ANL-CCP RH WC programs will provide information concerning T2 changes to EPA on a quarterly basis. EPA will evaluate the changes and will inform the INL-CCP and ANL-CCP RH programs whether the changes raise any concerns and require an INL-CCP and/or ANL-CCP

RH response, or whether the INL-CCP and ANL-CCP RH WC programs can continue to implement the proposed changes.

## **7.1 Conclusions**

During this T1 evaluation, EPA evaluated the use of the WWIS for tracking RH TRU waste components at INL-CCP and ANL-CCP. Based on the demonstration provided by CCP, EPA approves the use of WWIS for RH waste for both INL and ANL as a T1 change. This approval allows RH waste to be disposed of at WIPP, contingent upon all other approvals that are required for DOE. EPA will evaluate the submission of actual/complete RH WC data into the WWIS soon after the first shipment of RH waste containers from INL.

Additionally EPA is adding a T2 element for WWIS as a result of this evaluation which is reflected in the attached tables for INL-CCP (approved January 12, 2007) and ANL-CCP RH (approved January 16, 2007).

Attachment A

WWIS Checklist

Attachment B

WWIS Data Requirements

Attachment C

Revised Tiering Table for INL-CCP RH

Attachment D

Revised Tiering Table for ANL-CCP RH

## ATTACHMENT A: WIPP WASTE INFORMATION SYSTEM (WWIS) CHECKLIST

EPA Inspection No.:

Inspection Date: November 21, 2006

Establishment of Required Technical Elements in Procedures	Y/N Location	Execution of Procedures	Y/N	Objective Evidence/Comment
WWIS-1: WWIS and Data Entry Personnel must be trained to assess data and properly enter data into the WWIS.	Y CCP-QP-002 CCP-TP-530, R. 3, s. 2.2.1	WCO and Data Entry Personnel are trained to assess data and properly enter and transfer all data in the WWIS.  Training for Data Entry Personnel and data reviewers/verifiers include the WIPP Waste Information System User's Manual and the applicable site procedures.  Training records are available for review and are complete.	Y	Training requirements for personnel processing RH data have been incorporated in an RH addendum added to the qualification cards. At the time of the inspection, there were 4 Waste Certification Officials (WCO) and 7 Waste Certification Assistants (WCA) qualified for RH waste.  Addendum H – Remote-Handled TRU waste (all sites) contained in the Qualification Cards for 1 WCO and 1 WCA was reviewed. The documentation demonstrated that personnel had been appropriately trained for processing RH data in WWIS. The training records were complete and retrievable.  <u>Objective evidence:</u>  Training Qualification Cards for WCO and WCA
WWIS-2: Security measures for ensuring data integrity and accessing WWIS are sufficient.	Y CCP-TP-530, R. 3, s. 4.1	Access to WWIS is controlled. WWIS access requests are recorded in an access log, however named, that is available for review.	NA	This item was not reviewed during the on-line interactive audio/visual conference provided by CCP. Procedure CCP-TP-530 contains requirements for controlled access to WWIS and EPA will verify that these requirements are met at a later date when data for certification has been entered in to the production instance of WWIS.
WWIS-3: There are adequate procedures for entering data into the WWIS and transmitting data to WIPP.	Y CCP-TP-530, R. 3, s. 3.0, 4.0	Employee's explanation of job duties was consistent with applicable procedures. WWIS and Data Entry Personnel adequately explained how data are assessed, input, and transferred into WWIS.	Y	During the on-line demonstration provided to EPA by CCP, data entry was not observed. The summary sheets for container No. 00789 were reviewed to ensure that all required data was entered. The Waste Container Data Report for this container was also reviewed and contained radionuclide, Waste Material Parameter, and Dose to Curie information. These reports evidenced successful data entry into the certification test instance of WWIS.



## ATTACHMENT A: WIPP WASTE INFORMATION SYSTEM (WWIS) CHECKLIST

EPA Inspection No.:

Inspection Date: November 21, 2006

Establishment of Required Technical Elements in Procedures	Y/N Location	Execution of Procedures	Y/N	Objective Evidence/Comment
				<u>Objective evidence:</u> <ol style="list-style-type: none"> <li>1. Waste Container Data Report for container No.00789</li> <li>2. Attachment 2, CCP-TP-504, Dose to Curie data for container No. 00789</li> <li>3. Attachment1, CCP-TP-500, Visual Examination Data Form for container No. 00789</li> <li>4. WWIS Data Entry Summary – Charz &amp; Cert for container No. 00789</li> </ol>
WWIS-4: Procedures require that only verified and validated data are entered into WWIS.	Y CCP-TP-530, R. 3, s 4.3, Table 1	Data generation and project level reviews of container data for WWIS entry have been performed and review checklists are complete.	NA	During the on-line demonstration, no review documentation was reviewed. This aspect of WWIS data entry will form part of a future EPA inspection.
WWIS-5: Procedures include instructions for entering characterization data into the Characterization Data System (CDS) WCO Review Form and data discrepancy resolution	Y CCP-TP-530, R. 3, s 4.4, Table 1	WCA uses Table 1 to identify and enter required data into the CDS  Second WCA reviews data, initials and dates  If data discrepancies cannot be resolved the form is sent to WCO or SPM for resolution	NA	At the time of the on-line inspection all data was entered into the test instance of WWIS manually. There was no opportunity to inspect the review of data and resolution of data discrepancies during the on-line demonstration as the demonstration did not include the production instance of WWIS. This aspect of the WWIS process will form part of a future EPA inspection.
WWIS-6: Containers are not submitted to WWIS if there are open NCR/CARs	Y CCP-TP-530, R. 3, s 4.3.10, 4.5.16	WCA request SPQAO to confirm that there are no open NCR/CARs for the containers entered into the CDS	NA	The verification that there are no open NCR/CARs is required by procedure CCP-TP-530. The on-line demonstrated provided to EPA by CCP did not include this aspect of the WWIS process. EPA will inspect this aspect of the WWIS process at a future date. At present all data entry is performed manually and not through the CDS.
WWIS-7: Procedures provide instructions for WCO review of	Y CCP-TP-530,	The WCO verifies:	NA	Table 1 of the procedure provides the sources to be used for WWIS required data fields. The WCO is

## ATTACHMENT A: WIPP WASTE INFORMATION SYSTEM (WWIS) CHECKLIST

EPA Inspection No.:

Inspection Date: November 21, 2006

Establishment of Required Technical Elements in Procedures	Y/N Location	Execution of Procedures	Y/N	Objective Evidence/Comment
characterization and certification to WWIS	R. 3, s 4.5	<ul style="list-style-type: none"> <li>• TRU alpha activity is &gt; 100 nCi/g for each payload container</li> <li>• Confirm WWIS Data Spreadsheet or CDS WCO Review Form is information accurate and complete</li> <li>• TRUCON Code (waste is not incompatible)</li> <li>• WSPF number</li> <li>• If methane concentration is “U” flagged, calculates concentration from hydrogen concentration</li> <li>• Calculates flammable analytes if sample was composited</li> <li>• IF the container is to be overpacked, at least 1 TRU isotope &gt;LLD</li> <li>• Site-specific identifier precedes container #</li> <li>• Assess GGT requirements</li> </ul>		procedurally required to verify all items and to sign the summary spreadsheet. The summary spreadsheet for container No. 00789 was reviewed during the on-line demonstration provided by CCP. CCP was unable to provide evidence of a signed spreadsheet as the demonstration was in the test certification instance of WWIS. EPA will verify that the WCO signs the spreadsheet for each container at a future inspection.
WWIS-8: WMP weights for each SCG are entered into WWIS in accordance with the procedure.	Y CCP-TP-530, R. 3, s 4.5.7– 4.5.12	<p>S5000 Wastes: If calculated CPR weight is = or &lt; net weight of container, enter the net weight of the container as “plastic” If calculated CPR weight is = or &gt; than net weight of container, enter maximum weight of CPR as “plastic”</p> <p>S4000 Wastes: If container does <u>not</u> contain any debris material, assign net weight of container as WMP “soil” If container does contain any debris material, enter estimated weight of debris as “plastic” and the remaining net weight as “soil”</p> <p>S3000 Wastes: If container does <u>not</u> contain any debris material, assign net weight of container as appropriate</p>	Y	<p>An S5000 debris drum (Container No. 00789) was used for the on-line demonstration. The summary spreadsheet and the Waste Container Data Report showed that the waste weight for the container had been entered into the test certification instance of WWIS as plastic as is required. EPA did not observe any waste information for S4000 and S3000 containers.</p> <p><u>Objective evidence:</u> Waste Container Data Report for container No. 00789 Attachment1, CCP-TP-500, Visual Examination Data Form for container No. 00789 WWIS Data Entry Summary – Charz &amp; Cert for container No. 00789</p>

## ATTACHMENT A: WIPP WASTE INFORMATION SYSTEM (WWIS) CHECKLIST

EPA Inspection No.:

Inspection Date: November 21, 2006

Establishment of Required Technical Elements in Procedures	Y/N Location	Execution of Procedures	Y/N	Objective Evidence/Comment
		WMP, e.g., cement, solidified organic If container does contain any debris material, enter estimated weight of debris as "plastic" and the remaining net weight as appropriate WMP		
WWIS-9: Reviewed data are entered into WWIS	Y CCP-TP-530, R. 1, s 4.5.18-4.5.21	WCO signs and dates CDS or WWIS Data spreadsheet WCO or WCA submits data to WWIS (certification module if WSPF approved, characterization module if WSPF not approved) WWIS Administrator accepts/rejects data via email	NA	At the time of the on-line demonstration, CCP was entering RH data into WWIS manually. CCP demonstrated data for container No. 00789 in the test instance of the certification module because a Waste Stream Profile Form (WSPF) had not been approved. Even if there is no approved WSPF data can be entered into the production instance of the characterization module but CCP did not demonstrate this. CCP could not provide objective evidence of acceptance/rejection of data by WWIS because to date no RH data has been entered into the production instance of WWIS. Objective evidence of WCO signature and data acceptance will be obtained during a future inspection when CCP has submitted data to the production instance of WWIS.
WWIS-10: Resolution of data deficiencies	Y CCP-TP-530, R. 3, s 4.5.20- 4.5.22	Hold NCR	NA	Procedure CCP-TP-530 contains instructions for resolution of data deficiencies. CCP could not provide objective evidence of this process at the time of the on-line demonstration. EPA will inspect this process at a future inspection and obtain objective evidence that demonstrates compliance with requirements.
WWIS-11: Container selection for RH-TRU Waste canister/Load Management Containers using WWIS	Y CCP-TP-530, R. 1, s 4.6	After submission, the Waste Container Data Report is printed, signed and dated Copies of data, radiological survey, filter information, signed Waste Container Data Report, correspondence sent to CCP records custodian	NA	At this time RH load management is not accepted by WIPP.
WWIS-12: Records retention	Y CCP-TP-530, R. 1, s 5.0	QA/Lifetime records: WWIS Data SS or CDS WCO Review Forms Waste Container Data Report WWIS Data Approval/Rejection Reports Correspondence	Y	EPA reviewed the data spreadsheet and Waste Container Data Report for container No. 00789. At the time of the demonstration, CCP was entering data manually and was not using the CDS Database for uploading electronic data.

## ATTACHMENT A: WIPP WASTE INFORMATION SYSTEM (WWIS) CHECKLIST

EPA Inspection No.:

Inspection Date: November 21, 2006

Establishment of Required Technical Elements in Procedures	Y/N Location	Execution of Procedures	Y/N	Objective Evidence/Comment
		QA/Nonpermanent Records: CDS Database (electronic)		EPA will obtain objective evidence of WWIS data acceptance/rejection at a future inspection. <u>Objective evidence:</u> Waste Container Data Report for container 00789 WWIS Data Entry Summary – Charz & Cert for container No. 00789

## ATTACHMENT B: WWIS DATA REQUIREMENTS

### Certification Module Data Fields, Selected Items

The table below was completed from the objective evidence obtained during the on-line demonstration provided by CCP on November 21, 2006. CCP personnel used the test instance of the certification module for the demonstration. The spreadsheet used for data entry is titled *INL RH Template.xls Ver.1 WWIS Data Entry Summary – Charz and Cert* and it contains all of the required fields for both the characterization and certification modules. All items marked *Yes* in the table below were provided as required.

Specific Information – Was It Provided?	Specific Information – Was It Provided?
Container ID – Yes	TRU Alpha Activity Concentration – Yes
Generator EPA ID – Yes	TRU Alpha Activity Concentration Uncertainty – Yes
Site ID – Yes	Pu-239 Equivalent Activity - Yes
Waste Stream Profile Number – Yes	Pu-239 Fissile Gram Equivalent – Yes
Waste Matrix Code - Yes	Pu-239 FGE Uncertainty – Yes
Waste Type Code – Yes	Radionuclide Name – Yes
Waste Material Weight – Yes	Radionuclide Activity - Yes
Waste Material Parameter – Yes	Radionuclide Activity Uncertainty – Yes
Container Type – Yes	Radionuclide Mass –Yes
Container Weight – Yes	Radionuclide Mass Uncertainty –Yes
Layers of Packaging – Yes	Alpha surface Concentration – Yes
Liner Exists – Yes	Beta/Gamma Surface concentration –Yes
Liner Punctured – Yes	Neutron Dose Rate – Yes
Filter Model – Yes	Beta/Gamma Dose Rate – Yes
Number of Filters Installed – Yes	Headspace Gas Results – Yes
Decay Heat – Yes	Prohibited Item Requirements Met – Yes
Decay Heat Uncertainty – Yes	Container Certification Date - Yes
TRU Alpha Activity - Yes	Container Closure Date - Yes
TRU Alpha Activity Uncertainty - Yes	

# ATTACHMENT C: Revised Tiering Table for INL-CCP RH

## Tiering of RH TRU WC Processes Implemented by INL-CCP Revised January 17, 2007

RH WC Process Elements	INL-CCP RH WC Process - T1 Changes	INL-CCP RH WC Process - T2 Changes*
Acceptable Knowledge (AK)	<p>Modification of the approved waste stream ID-ANLE-S5000 to include additional containers, i.e., K Cell or other debris wastes; AK (1) and AK (5)</p> <p>Any new waste streams not approved under this baseline; AK (1) and AK (7)</p> <p>Substantive modification(s)*** that have the potential to affect the characterization process: CCP-AK-INL-500, CCP-AK-INL-501, or CCP-AK-INL-502; AK (6) and AK (7)</p> <p>Load management for any RH waste stream; AK (16)</p>	<p>Notification to EPA when updates to CCP-INL-AK-500, CCP-INL-AK-501, and CCP-INL-AK-502 are approved by CBFO; AK (4)</p> <p>Notification to EPA when changes to AK documentation as a result of WCPIP revisions** have been made (e.g., CRR); AK (7) and AK (9)</p> <p>Notification to EPA when a Correlation or Surrogate Summary Form is completed for each of the RH containers in this waste stream identified as CH based upon measured dose rates that present NDA results for assayed containers; AK (10), AK (14) and RC (8.2.2)</p> <p>Notification to EPA once waste stream data package for debris waste stream, and any modifications to the WSPF including the CRR and AK Summary are completed; AK (14)</p> <p>Notification to EPA that the final DTC determination is complete for RH containers numbers 728 through 737, as identified in AK Reference P030; all other AK accuracy reports prepared annually at a minimum; AK (15)</p>
Radiological Characterization, including Dose-to-Curie (DTC)	<p>Application of new scaling factors for isotopic determination other than those documented in CCP-AK-INL-501; RC (8.2.2 and 8.2.3)</p> <p>Use of any alternate radiological characterization procedure other than DTC with established scaling factors as documented in CCP-TP-504 or substantive modification of the DTC procedure***; RC (8.2.2 and 8.2.3)</p> <p>Any new waste stream not approved under this baseline or addition of containers to Waste Stream ID-ANLE-S5000 that requires changing the established radionuclide scaling factors; RC (8.2.3)</p>	Revisions of CCP-AK-INL-501 or CCP-TP-504 that require CBFO approval; RC (8.2.2 and 8.2.3)
Visual Examination of audio/video media (VE)	Implementation of VE following this baseline approval; if INL-CCP decides to use VE in the future, EPA approval is necessary	None

ATTACHMENT C: Revised Tiering Table for INL-CCP RH

**Tiering of RH TRU WC Processes Implemented by INL-CCP**  
**Revised January 17, 2007**

<b>RH WC Process Elements</b>	<b>INL-CCP RH WC Process - T1 Changes</b>	<b>INL-CCP RH WC Process - T2 Changes*</b>
Real-Time Radiography (RTR)	Any use of RTR requires EPA approval	None
WIPP Waste Information System (WWIS)	None	Changes made to WWIS procedure(s) that require CBFO approval

\* INL-CCP will report all T2 changes to EPA every three months.

\*\* Excluding changes that are editorial in nature or are required to address administrative concerns.

\*\*\* *Substantive modification* refers to a change with the potential to affect INL-CCP's RH WC process, e.g., the use of an inherently different type of measurement instrument or the use of the high-range probe as described in CCP-TP-504.

## ATTACHMENT D      Revised Tiering Table for ANL-CCP RH

### Tiering of RH TRU WC Processes Implemented by ANL-CCP Revised January 17, 2007

RH WC Process Elements	ANL-CCP RH WC Process - T1 Changes	ANL-CCP RH WC Process - T2 Changes*
Acceptable Knowledge (AK)	<p>Any new waste streams not approved under this baseline; AK (1)</p> <p>Modification of the approved waste stream AERHDM to include additional containers beyond the approximately 45 included in CCP-AK-ANLE-500, Revision 1. The 20 <i>additional</i> containers identified in the AK summary as being present are not included in this waste stream approval; AK (1)</p> <p>Substantive modification(s)*** that have the potential to affect the characterization process to CCP-AK-ANLE-500, CCP-AK-ANLE-501 or CCP-AK-ANLE-502; AK (8)</p> <p>Implementation of load management for any RH waste stream; AK (16)</p>	<p>Notification to EPA that the final DTC determination is complete for RH containers in the approved waste stream; AK (3)</p> <p>Notification to EPA when updates are made to AK documentation as a result of WCPIP revisions**; AK (4)</p> <p>Notification that updates have been completed to the following documents:</p> <ul style="list-style-type: none"> <li>• All future revisions of CCP-ANLE-AK-500, CCP-ANLE-AK-501; AK (4)</li> <li>• Listing of the references that document the assembly of fuel pin data and review process; AK (5)</li> <li>• All future revisions of CCP-ANLE-AK-502; AK (8)</li> <li>• CCP-AK-ANLE-500 and CCP-AK-ANLE-502 to address freeze file changes; AK (8)</li> </ul> <p>Notification to EPA that the data package for this debris waste stream is completed, including any modifications to the WSPF including the CRR and AK Summary; AK (9), and AK (14)</p> <p>Notification to EPA when AK accuracy reports are completed, prepared annually at a minimum; AK (15)</p>
Radiological Characterization, including Dose-To-Curie (DTC)	<p>Use of any alternate radiological characterization procedure other than DTC with established scaling factors as documented in CCP-TP-504 and CCP-AK-ANLE-501, Revision 0, respectively, or substantive modification thereof***; RC (8.2.2 and 8.2.3)</p> <p>Any new waste stream not approved under this baseline or addition of containers to waste stream AERHDM that require changing the established radionuclide scaling factors; RC (8.2.3)</p>	<p>Notification to EPA that revisions of CCP-AK-ANLE-501 or CCP-TP-504 that require CBFO approval** are complete; RC (8.2.2 and 8.2.3)</p>



## ATTACHMENT D      Revised Tiering Table for ANL-CCP RH

### Tiering of RH TRU WC Processes Implemented by ANL-CCP Revised January 17, 2007

RH WC Process Elements	ANL-CCP RH WC Process - T1 Changes	ANL-CCP RH WC Process - T2 Changes*
	Application of new scaling factors for isotopic determination other than those documented in CCP-AK-ANLE-501; RC (8.2.2 and 8.2.3)	
Visual Examination (VE)	VE by reviewing existing audio/visual recordings for Summary waste category not covered by this approval; VE (1) & VE (3) VE by any new process for S5000 debris wastes; VE (1) and VE (3)	Notification to EPA that revisions of any VE procedure that require CBFO approval are complete; VE (1) and VE (3) Addition of new S5000 debris waste streams; VE (2)
Real Time Radiography (RTR)	Any use of RTR requires EPA approval	None
WIPP Waste Information System (WWIS)	None	Changes made to WWIS procedure(s) that require CBFO approval

\* ANL-CCP will report all T2 changes to EPA every three months.

\*\* Excluding changes that are editorial in nature or are required to address administrative concerns. New references that are included as part of the document revision may be requested by EPA.

\*\*\* *Substantive modification* refers to a change with the potential to affect ANL's RH WC process, e.g., the use of an inherently different type of measurement instrument or the use of the high range probe as described for CCP-TP-504 for radiological characterization.