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Mr. John E. Kieling, Chief
 Hazardous Waste Bureau
 New Mexico Environment Department
 2905 Rodeo Park Drive East, Building 1
 Santa Fe, New Mexico 87505

**NMED
 Hazardous Waste Bureau**

Subject: Transmittal of CBFO Responses to NMED Comments on Recertification Audit A-12-16 of the Argonne National Laboratory Central Characterization Project Waste Characterization Program

Dear Mr. Kieling:

This letter transmits Carlsbad Field Office (CBFO) responses to New Mexico Environment Department (NMED) comments on Recertification Audit A-12-16 of the Argonne National Laboratory Central Characterization Project Waste Characterization Program. The applicable C6 checklist was revised to clarify the issue identified in a letter from the NMED dated May 1, 2013, and is enclosed as well.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions, please contact Mr. Martin P. Navarrete, Senior Quality Assurance Specialist, CBFO Office of Quality Assurance, at (575) 234-7483.

Sincerely,


 Jose R. Franco, Manager
 Carlsbad Field Office

Enclosures

cc: w/o enclosures
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 *ED denotes electronic distribution



RESPONSE TO NMED COMMENTS ON THE ANL/CCP
FINAL AUDIT REPORT A-12-16

The NMED letter dated May 1, 2013, for Final Audit Report A-12-16 included two comments (shown here in italics) related to the report and associated C6 checklists. The actions taken to address the comments are provided in the following responses.

1. *Question 144 of the C6 Checklist has nine parts (A-I). Part D was not addressed. In the comments column, there should be an explanation stating that ANL/CCP only performs sampling. The analysis is performed at INL/CCP Labs. Part F was also not addressed and could have the citation CCP-TP-500 (All) to fully answer the question.*

Response: Review of the submitted response to question 144 of Checklist C6-3 shows that while the response for parts D and F were not included in the **AK** portion of the question 144 response (documented on page 8 of 21), they are addressed in the **HG** and **VE** portion of the question 144 response (documented on page 9 of 21). No action required.

A comment regarding the analysis of headspace gas samples (Part D) at INL/CCP laboratories was added to question 144 for clarity. A redline copy of C6-3 is included.

2. *The Permittees must make careful WAP compliance determinations that are thoroughly justified. The Permittees must expand their April 12, 2013 response to address Permit Section C3-4b(1) in regards to the concern from BDRs ANLRHVE12008 and RHANLVE100015. The Permittees must submit their expanded response to NMED within 90 days from receipt of this letter.*

Response: Review of BDR ANLRHVE12008 confirms that during VE Data Generation activities, the operators identified plastic containers with a regional identifier (Clearboy) while also identifying the containers as “plastics.” While this regional identifier does not exactly match the identifier used in CCP-AK-ANLE-500, Rev. 10 (i.e., CWPC, carboy or LBC), the classification as “plastics” is correct, per the AK documentation. As VE of the drums included in BDR ANLRHVE12008 comply with Permit sections C3-2b, C3-4a, and C3-4b(1), the use of a regional identifier, as opposed to the AK identifier, did not affect the correct characterization of the containers and does not violate a specific WAP requirement. The CBFO maintains this does not constitute a WAP-related concern, but rather an administrative issue.

After further review and discussion of BDR RHANLVE100015, it has been determined that the identified condition is related to the permit-required SPM review/validation; however, the SPM signature evidences completion of the requirement for review/validation. In this instance, the lack of checking the box on the checklist was merely an oversight, since BDRs reviewed prior to and after this instance were appropriately completed. Therefore, this instance was considered a CAQ within the requirements of the QA program for complete records. This condition will be addressed as part of the CBFO CAR 13-023.

Revised Table C6-3 Acceptable Knowledge (AK) Checklist
ANL/CCP RH Recertification Audit A-12-16
August 28-30, 2012

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Acceptable Knowledge (AK) Checklist¹

	WAP Requirement ² ANL/CCP RH Recertification Audit A-12-16 Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
GENERAL REQUIREMENTS						
134	Are the primary document(s) required in Permit Attachment C4 containing acceptable knowledge information available? (Section C4-2)	CCP-TP-002 S. 4.3-4.5 CCP-TP-005 S. 4.4	Y	CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10 (AK-1) Waste Stream Profile Form and attachments for waste stream AERHDM (AK-2) QMIS Approval for AK Summary for waste stream AERHDM (AK-3)	Y	During the week of August 7, 2012, CTAC conducted a recertification audit of ANLE for the RH S5000 debris stream AERHDM. The AK audit team examined the AK record and process for this waste stream generated in the AGHCF and the K Wing at ANLE with particular focus on the application of the new WAP requirements and the availability the AK documentation in records.
135	Has the generator developed a methodology whereby a logical sequence of acceptable knowledge information that progresses from general facility to more detailed waste-specific information can be acquired? (Section C4-2)	CCP-TP-005 S. 4.0	Y	CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10 (AK-1) AK Source Document Summaries for waste stream AERHDM (AK-4)	Y	
136	Does the site have adequate procedures in place to ensure that the Acceptable Knowledge process is adequately implemented? Do these procedures facilitate the mandatory traceability analysis performed for each Summary Waste Category Group examined during the audit? (Section C4-2)	CCP-TP-005 S. 4.0	Y	CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10 (AK-1) Waste Stream Profile Form and attachments for waste stream AERHDM (AK-2) AK Source Document Summaries for waste stream AERHDM (AK-4) ANLRHVE12007	Y	A total of 5 drums were included in the required traceability exercise, consisting of four drums from three HSG lots sampled to date and one other drum randomly chosen. The drum numbers are RW49819 RW18901 RW18909 1053 959

	WAP Requirement ² ANL/CCP RH Recertification Audit A-12-16 Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				(AK-13) ANLRHVE11014 (AK-14) ANLRHVE11015 (AK-15) RHANLVE100013 (AK-16) RHANLVE100012 (AK-17) HSG ANHSG1201 (AK-18) ECL12014M (AK-19) ANHSG1202 (AK-20) ECL12017M (AK-21) ANHSGS100003 (AK-22) ECL10033M (AK-23) HSG Random Container Selection Memos, (AK-11) HSG Summary Reports (AK-12) AK Waste Stream Characterization Checklists (AK-24) IDC Database screenshots (AK-27) AK Tracking Spreadsheet (AK-28) AK attachment 8 container list (AK-9)		
137	Does the generator site's TRU mixed waste management program information clearly define (or provide a methodology for defining) waste categorization schemes and terminology, provide a breakdown of the types and quantities of TRU mixed waste generated/stored at the site, and describe how waste is tracked and managed at the generator site (including historical and current operations? Do procedures	CCP-TP-005 S. 4.2.2 S. 4.2.4 S. 4.2.5 S. 4.2.6	Y	CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10	Y	

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		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	ensure that waste streams are adequately identified? (Section C4-2a)	S. 4.4 Att. 8 CCP-TP-001 S. 2.7 S. 4.1 S. 4.2		(AK-1) IDC Database screenshots (AK-27) AK Tracking Spreadsheet (AK-28) AK attachment 8 container list (AK-9)		
138	Does site documentation procedures indicate that the site will document, justify, and consistently define waste streams and assign EPA hazardous waste numbers? (Section C4-2b)	CCP-TP-005 S. 4.4.16-4.4.21 Att. 5	Y	CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10, S. 5.4.2, tables 4, 5 (AK-1) AK Att. 5, Hazardous Constituents, for waste stream AERHDM (AK-7)	Y	

	WAP Requirement ² ANL/CCP RH Recertification Audit A-12-16 Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
REQUIRED AND ADDITIONAL INFORMATION						
140	<p>Does the generator site document that the following must be included in the acceptable knowledge record:</p> <ol style="list-style-type: none"> 1. Map of the site with the areas and facilities involved in TRU waste generation, treatment, and storage identified 2. Facility mission description as related to TRU waste generation and management (e.g., nuclear weapons research may involve metallurgy, radiochemistry, and nuclear physics operations that result in specific waste streams) 3. Description of the operations that generate TRU waste at the site (e.g., plutonium recovery, weapons design, or weapons fabrication) 4. Waste identification or categorization schemes used at the facility (e.g., item description codes, content codes) 5. Types and quantities of TRU mixed waste generated, including historical generation through future projections 6. Correlation of waste streams generated from the same building and process, as appropriate (e.g., sludge, combustibles, metals, and glass) 7. Waste certification procedures for retrievably stored and newly generated wastes to be sent to the WIPP facility <p>(Section C4-2a)</p>	<p><u>1-7</u> CCP-TP-005 S. 4.2.2 S. 4.4.5 Att. 1</p>	Y	<p>CCP-AK-ANLE-500 R10 (AK-1)</p> <p><u>1.</u> Att. 1 & 2 (AK-1)</p> <p><u>2.</u> S. 4.1.2, 4.1.3, 4.2.2 (AK-1)</p> <p><u>3.</u> S. 4.2.2 (AK-1)</p> <p><u>4.</u> S. 4.2, Att. 5 & 6 (AK-1)</p> <p><u>5.</u> S. 4.2.1 (AK-1)</p> <p><u>6.</u> S. 4.2, att. 5 & 6 (AK-1)</p> <p><u>7.</u> S. 1.0, 3.0 (AK-1)</p>	<p>Y</p> <p>Y</p> <p>Y</p> <p>Y</p> <p>Y</p> <p>Y</p> <p>Y</p>	
141	<p>Does the generator site document that the following shall be collected for each waste stream:</p> <ol style="list-style-type: none"> A. Area(s) and/or building(s) from which the waste stream was or is generated B. Waste stream volume and time period of generation (e.g., 100 standard waste boxes of retrievable stored waste generated from June 1977 through December 1977) C. Waste generating process described for each building (e.g., batch waste stream generated during decommissioning operations of glove boxes), including processes associated with U134 waste generation, if applicable. D. Documentation demonstrating how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mined waste) E. Process flow diagrams (e.g., a diagram illustrating glove boxes from a 	<p><u>A-F</u> CCP-TP-005 S. 4.2.4 S. 4.4.5 Att. 1</p>	Y	<p>CCP-AK-ANLE-500 R10 (AK-1)</p> <p><u>A.</u> S. 5.1 (AK-1)</p> <p><u>B.</u> S. 5.2 (AK-1) AK Source Document Summaries, C2025 (AK-4)</p> <p><u>C.</u> S. 5.3, Att. 3 & 4 (AK-1)</p> <p><u>D.</u> S. 5.4.2 (AK-1)</p>	<p>Y</p> <p>Y</p> <p>Y</p> <p>Y</p>	

	WAP Requirement ² ANL/CCP RH Recertification Audit A-12-16 Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	<p>specific building to a size reduction facility to a container storage area). In the case of research/development, analytical laboratory waste, or the similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included if this modification is justified and the justification is placed in the auditable record</p> <p>F. Material inputs or other information that identifies the chemical content of the waste stream and the physical waste form (e.g., glove box materials and chemical handled during glove box operations, events or processes that may have modified the chemical or physical properties of the waste stream after generation, data obtained through visual examination of newly generated waste that later undergoes radiography; information demonstrating neutralization of U134 [hydrofluoric acid] and waste compatibility.</p> <p>(Section C4-2b)</p>			<p>AK Source Document Summaries, C351 (AK-4) E. S. 4.2.2, att. 3 & 4 (AK-1)</p> <p>E. S. 5.4.1, 5.4.2, tables 3, 4 & 5 (AK-1)</p>	<p>Y</p> <p>Y</p>	
142	Do site documents/procedures require that the facility will provide a summary to the Permittees that summarizes all information collected, including basis and rationale for all waste stream designations? Is an example of this summary available for audit review? If discrepant hazardous waste data exist in required information, do sites consider applying all hazardous waste numbers, but assess and evaluate the information to determine the appropriate hazardous waste number consistent with RCRA requirements? (Section C4-2b)	CCP-TP-005 S. 4.4 S. 4.9	Y	CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10 (AK-1) AK Discrepancy Resolutions (AK-10)	Y	
143	Do site procedures indicate that if the required AK information is not available for a particular waste stream, that the waste stream will not be eligible for an AK Sufficiency Determination? (Section C4-2)	CCP-TP-005 S. 4.2 S. 4.4 S. 4.7	Y	AK Documentation Checklist, Attachment 1, for waste stream AERHDM (AK-5)	Y	No AK sufficiency determination requested for this waste stream.

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		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
144	Have the following procedures been prepared?:	AK				
	A. Procedures for identifying and assigning the physical waste form of the waste	<u>A.</u> CCP-TP-005 S. 4.4.13	Y	<u>A.</u> S. 5.4.1 (AK-1)	Y	
	B. Procedures for delineating waste streams and assigning Waste Matrix Codes	S. 4.4.14 <u>B.</u> CCP-TP-005		<u>B.</u> S. 5.4.1.1 (AK-1)	Y	
	C. Procedures for resolving inconsistencies in acceptable knowledge documentation	S. 4.4.11 NOTE above		<u>C.</u> AK Discrepancy Resolutions (AK-10)	Y	
	D. Procedures for headspace gas sampling and analysis, visual examination and/or radiography, and homogeneous waste sampling and analysis, if applicable	S. 4.4.12 <u>C & G.</u> CCP-TP-005		<u>E.</u> ANLRHVE12007 (AK-13)	Y	
	E. For newly generated waste, procedures describing process controls used to ensure prohibited items (specified in the WAP, Permit Attachment C) are documented and managed	S. 4.9 <u>E.</u> CCP-TP-500 (All)		ANLRHVE11014 (AK-14)		
	F. Procedures to ensure radiography and visual examination include a list of prohibited items that the operator shall verify are not present in each container (e.g. liquid exceeding TSDF-WAC limits, corrosives, ignitables, reactives, and incompatible wastes)	<u>H.</u> CCP-TP-005, S. 4.4.16 -4.4.21 Att. 5		ANLRHVE11015 (AK-15) RHANLVE100013 (AK-16) RHANLVE100012 (AK-17)		
	G. Procedures to document how changes to Waste Matrix Codes, waste stream assignment, and associated Environmental Protection Agency hazardous waste numbers based on material composition are documented for any waste	<u>I.</u> CCP-TP-005 S. 4.4.27		<u>G.</u> AK Discrepancy Resolutions (AK-10)	Y	
	H. Procedures that ensure the assignment of EPA hazardous waste numbers is appropriate, consistent with RCRA requirements, and adequately considers site historical waste management			<u>H.</u> CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10, S. 5.4.2, tables 4 & 5 (AK-1) AK Att. 5, Hazardous Constituents, for waste stream AERHDM (AK-7)	Y	
	I. Procedures for estimating waste material parameter weights (Section C4-2b)			<u>I.</u> CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10,	Y	

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		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
		HG Bullet D: CCP-TP-093 (All)	Y	S. 5.4.1.2, table 3 (AK-1) Memos attached to AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste stream AERHDM (AK-8)	Y	<u>CCP-ANL only performs HGS sampling. Analysis is performed at CCP-INL Lab.</u>
		VE Bullet D,E & F: CCP-QP-500 (All)	Y	Examined HSG Sampling BDRs ANHSG1201 (HG-1) ANHSG1202 (HG-2)	Y	
145	Does the generator provide procedures or written commitment to collect additional acceptable knowledge information, as available and as necessary to augment mandatory information? (Section C4-2c)	CCP-TP-005 S. 4.2.5 Att. 1	Y	AK Documentation Checklist, Attachment 1, for waste stream AERHDM (AK-5)	Y	

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		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
145a	<p>For waste containers that belong to LANL sealed sources waste streams, and for which headspace gas sampling and analysis is not required, are there procedures in place to assure the collection of the following additional AK?</p> <p>A. Documentation that the waste container contents meet the definition of sealed sources per 10 CFR 30.4 and 10 CFR 35.2 (effective January 1, 2004)</p> <p>B. Documentation of the certification of the sealed sources as U.S. Department of Transportation Special Form Class 7 (Radioactive) Material per 49 CFR 173.403 (effective October 1, 2003)</p> <p>C. Documentation of contamination survey results that validate the integrity of each sealed source per 10 CFR 34.27 (effective January 1, 2004).</p> <p>D. AK documentation does not indicate the use of VOCs or VOC-bearing materials as constituents of the sealed sources.</p> <p>E. The outer casing of each sealed source must be of a non-VOC bearing material, which must be verified at the time of packaging.</p> <p>F. AK documentation that includes but is not limited to, as available and as necessary to determine the hazardous constituents associated with sealed sources, the following: source manufacturer's sales catalogues, original purchase records, source manufacturer's fabrication documents, source manufacturer's drawings, source manufacturer's fuel capture assembly reports, source manufacturer's operational procedures for cleanliness requirements, source manufacturer's shipping documents, source manufacturer's welding records, transuranic batch material records, and information from national databases (e.g., NMMSS). All of this information may not and need not be available for each source, but sufficient information must be included in the auditable record to derive an adequate understanding of source construction and history to ensure that no VOCs are present in association with the sealed source itself that would render the source hazardous. If AK data indicate that assignment of a hazardous waste number related to organic materials is required in association with a source, this specific source will be assigned to a separate waste stream and that waste stream will be subject to headspace gas sampling unless a separate AK Sufficiency Determination is approved for the waste stream.</p> <p>(Section C4-2c)</p>	N/A	N/A	N/A	N/A	This is not a LANL audit
146	<p>Does the generator site document that all additional specific, relevant information used in the acceptable knowledge process will be identified and its use explained? Is all necessary information assembled and has it been appropriately used?</p> <p>(Section C4-2c)</p>	CCP-TP-005 S. 4.2.5 Att. 1	Y	AK Documentation Checklist, Attachment 1, for waste stream AERHDM (AK-5)	Y	

	WAP Requirement ² ANL/CCP RH Recertification Audit A-12-16 Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	<p>sites must include all sources of information in its records and may choose to either conservatively assign hazardous waste numbers, or assign only those numbers deemed appropriate and consistent with RCRA requirements. All information used to justify assignment of hazardous waste numbers must be placed in the auditable record. Further, the assignment of hazardous waste numbers shall be tracked in the auditable record to all required documentation.</p>			<p>AERHDM, CCP-AK-ANLE-500 R10 (AK-1) AK Documentation Checklist, Attachment 1, for waste stream AERHDM (AK-5) C. CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10, S5.4.5 (AK-1) AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste stream AERHDM (AK-8) ANLRHVE12007 (AK-13) ANLRHVE11014 (AK-14) ANLRHVE11015 (AK-15) RHANLVE100013 (AK-16) RHANLVE100012 (AK-17) D. AK Discrepancy Resolutions (AK-10)</p>	<p>Y</p> <p>Y</p>	
149a	<p>E. Sites must prepare and implement a written procedure to identify hazardous wastes and assign the appropriate hazardous waste numbers to each waste stream. The following are minimum baseline requirements/standards that site-specific procedures must include to ensure comparable and consistent characterization of hazardous waste:</p> <ol style="list-style-type: none"> 1. Compile all of the required information in an auditable record. 2. Review the compiled information and delineate waste streams. Delineation of waste streams must comply with the WAP definition in 	<p><u>E.1 - E.6</u> CCP-TP-005 S. 1.1 S. 4.2 S. 4.3 S. 4.4 CCP-TP-500 (All)</p>	<p>Y</p>	<p><u>E.1.</u> CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10 (AK-1) <u>E.2.</u> CCP AK Summary Report</p>	<p>Y</p> <p>Y</p>	

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		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	<p>Permit Attachment C, Section C-0a, and justify combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream.</p> <p>3. Review the compiled information to determine if the waste stream is compliant with the TSDF-WAC</p> <p>4. Review the required information to determine if the waste is listed under 20.4.1.200 NMAC (incorporating 40 CFR 261), Subpart D. Assign all listed hazardous waste numbers, unless the site chooses to justify an alternative assignment and document the justification in the auditable record.</p> <p>5. Review the required information to determine if the waste exhibits a hazardous characteristic or may contain hazardous constituents included in the toxicity characteristics specified in 20.4.1.200 NMAC (incorporating 40 CFR 261, Subpart C. If a toxicity characteristic contaminant is identified and is not included as a listed waste, sites may evaluate available data and assign the toxicity characteristic hazardous waste number consistent with RCRA requirements. All data examined to reach the hazardous waste number determination must be placed in the auditable record and must present a clear justification for the hazardous waste number analyses.</p> <p>6. Review the compiled information to provide an estimate of the material parameter weights for each container to be stored or disposed of at WIPP. For newly generated waste, procedures shall be developed and implemented to characterize hazardous waste using acceptable knowledge prior to packaging.</p>			<p>for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10, S. 2.0, 5.4 (AK-1) <u>E3.</u> CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10, S. 5.4.2.3, 5.4.4, 5.4.5 (AK-1) AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste stream AERHDM (AK-8) ANLRHVE12007 (AK-13) ANLRHVE11014 (AK-14) ANLRHVE11015 (AK-15) RHANLVE100013 (AK-16) RHANLVE100012 (AK-17) <u>E4&E5.</u> CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10, S. 5.4.2, tables 4 & 5 (AK-1) AK Att. 5, Hazardous Constituents, for waste stream AERHDM (AK-7) <u>E6.</u> CCP AK Summary Report</p>	<p>Y</p> <p>Y</p> <p>Y</p>	

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		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10, S. 5.4.1.2, table 3 (AK-1) Memos attached to AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste stream AERHDM (AK-8)		
149b	<p>F. Sites shall ensure that results of audits of the TRU mixed waste characterization programs at the site are available in the records.</p> <p>G. Sites shall identify all process controls (implemented to ensure that the waste contains no prohibited items and to control hazardous waste content and/or physical form) that have been applied to retrievably stored waste and/or may presently be applied to newly generated waste. Process controls are applied <u>at the time</u> of waste generation/packaging to control waste content, whereas any activities performed <u>after</u> waste generation/packaging to identify prohibited items, hazardous waste content, or physical form are waste characterization activities, not process controls. The AK record must contain specific process control and supporting documentation identifying when these process controls are used to control waste content. See Permit Attachment C, Section C-2 for programmatic requirements related to process controls.</p> <p>(Section C4-3b)</p>	<p><u>F.</u> CCP-PO-001 S. C4-3f S. C4-3b</p> <p>CCP-QP-021 (All)</p> <p>WP 13-QA.03 (All)</p> <p><u>G.</u> CCP-TP-005 S.4.2 - 4.4 Att. 1</p>	<p>Y</p> <p>Y</p>	<p><u>F.</u> Internal Audit (AK-26)</p> <p><u>G.</u> AK Source Document Summaries for AERHDM, P009, P055, P625, P626 (AK-4)</p>	<p>Y</p> <p>Y</p>	
150	<p>Does the site have implemented procedures which comply with the following criteria to establish acceptable knowledge records:</p> <p>A. Acceptable knowledge information shall be compiled in an auditable record, including a road map for all applicable information.</p> <p>B. The overview of the facility and TRU mixed waste management operations in the context of the facility's mission shall be correlated to specific waste stream information.</p> <p>C. Correlations between waste streams, with regard to time of generation, waste generating processes, and site-specific facilities shall be clearly described. For newly generated wastes, the rate and quantity of waste to be generated shall be defined.</p> <p>D. A reference list shall be provided that identifies documents, databases,</p>	<p><u>A-E</u> CCP-TP-005 S. 1.1 S. 4.2 S. 4.3 S. 4.4 S. 4.10 S. 4.11 Att. 1,4 & 8</p> <p>CCP-TP-001 S. 2.7</p>	<p>Y</p>	<p><u>A.</u> CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10 (AK-1) AK Documentation Checklist, Attachment 1, for waste stream AERHDM (AK-5)</p> <p><u>B.</u> CCP AK Summary Report</p>	<p>Y</p> <p>Y</p>	

	WAP Requirement ² ANL/CCP RH Recertification Audit A-12-16 Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	<p>Quality Assurance protocols, and other sources of information that support the acceptable knowledge information.</p> <p>E. Container inventories for TRU mixed waste in retrievable storage shall be delineated into waste streams by correlating the container identification to all of the required and additional AK information.</p> <p>(Section C4-3c)</p>			<p>for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10, S. 4.1.2, 4.1.3, 4.2.2, 5.3, 5.4 (AK-1)</p> <p>C. CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10, S. 4.2.1, 4.2.2, 5.1, 5.2, 5.4 (AK-1)</p> <p>D. Acceptable Knowledge Information List for waste stream AERHDM (AK-6)</p> <p>E. IDC Database screenshots (AK-27) AK Tracking Spreadsheet (AK-28) AK attachment 8 container list (AK-9)</p>	<p>Y</p> <p>Y</p> <p>Y</p>	
151	<p>If the generator site submitted an AK Sufficiency Determination Request for a specific waste stream, did the site provide all of the requisite information including the identification of the applicable scenario for which approval is sought?</p> <p>(Section C-0b)</p>	CCP-TP-005 S. 4.7	Y	N/A	N/A	An AK Sufficiency Determination is not being sought for any ANLE waste streams at this time.
AUGMENTATION OF ACCEPTABLE KNOWLEDGE						
152	<p>Does the generator site have written procedures for the augmentation of all acceptable knowledge information using sampling and analysis. Sampling and analysis consists of radiography, visual examination, headspace gas, and homogeneous waste sampling and analysis. Do site procedures indicate that the following sampling and analysis will be conducted based upon the results of the Determination Request</p> <p>Any scenario denied - 100% RTR or VE and statistical HSG or solids S&A Scenario 1 Granted -No sampling and analysis radiography/visual examination is</p>	<p>CCP-TP-005 S. 4.4 S. 4.5 S. 4.7</p> <p>CCP-TP-003 S. 4.0</p>	Y	<p>CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R10, (AK-1) ANLRHVE12007 (AK-13) ANLRHVE11014</p>	Y	

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		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	required Scenario 2 Granted-Radiography/visual examination is not required but statistical HSG or solids S&A is required Scenario 3 Granted-100% RTR or VE is required, sampling and analysis is not required (Section C4-1, C-0b)			(AK-14) ANLRHVE11015 (AK-15) RHANLVE100013 (AK-16) RHANLVE100012 (AK-17) ANHSG1201 (AK-18) ECL12014M (AK-19) ANHSG1202 (AK-20) ECL12017M (AK-21) ANHSGS100003 (AK-22) ECL10033M (AK-23) HSG Random Container Selection Memos (AK-11) HSG Summary Reports (AK-12) AK Waste Stream Characterization Checklists (AK-24)		
155	Does the generator site have procedures for reevaluating acceptable knowledge if the results of the waste characterization indicate that the waste to be shipped does not match the approved waste stream or if the data from radiography or visual examination for waste streams without an AK Sufficiency Determination exhibit this discrepancy? Does this procedure describe how the waste is reassigned, acceptable knowledge reevaluation, and appropriate hazardous waste numbers are assigned? (Section C4-3e)	CCP-TP-005 S. 4.8 S. 4.9 Att. 10	Y	N/A	N/A	There were no examples of discrepancy resolution during characterization and resultant AK reevaluations for this waste stream
156	Do site procedures indicate that debris wastes are assigned toxicity characteristic EPA numbers based on AK regardless of the quantity or concentration? (C4-3e)	CCP-TP-005 S. 4.4.17 Att. 5	Y	CCP AK Summary CCP-AK-ANLE-500 R10 S. 5.4.2.2, tables 4 & 5 (AK-1) AK att. 5 Hazardous Constituents for waste stream AERHDM (AK-7)	Y	

	WAP Requirement ² ANL/CCP RH Recertification Audit A-12-16 Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
CRITERIA FOR ASSEMBLING AN ACCEPTABLE KNOWLEDGE RECORD DELINEATING THE WASTE STREAM						
158	<p>If wastes are reassigned to a different waste matrix code based on site visual examination or radiography or Permittee confirmation activities, does the generator site have written documentation to ensure that the following steps are followed:</p> <ul style="list-style-type: none"> A. Review existing information based on the container identification number and document all differences in hazardous waste number assignments B. If differences exist in the hazardous waste numbers that were assigned, reassess and document all required acceptable knowledge information (Section C3-b) associated with the new designation C. Reassess and document all sampling and analytical data associated with the waste D. Verify and document that the reassigned waste matrix code was generated within the specified time period, area and buildings, waste generating process, and that the process material inputs are consistent with the waste material parameters identified during radiography or visual examination E. Record all changes to acceptable knowledge records F. If discrepancies exist in the acceptable knowledge information for the revised waste matrix code, document the segregation of the affected portion of the waste stream, and define the actions necessary to fully characterize the waste <p>(Section C4-3e)</p>	CCP-TP-005 S. 4.8 S. 4.9 Att. 10	Y	N/A	N/A	There were no examples of discrepancy resolution during characterization and resultant AK reevaluations
161	<p>Do site procedures ensure that headspace gas and solid/soil analytical data are used to resolve AK assignments for hazardous waste, as necessary? If a constituent is detected in headspace gas that the site believes isn't from the waste process, the site must provide documentation to support any determination that organic constituents are associated with packaging materials, radiolysis, or other uses not consistent with solvent use. If the source of the detected headspace gas solvents cannot be identified, the appropriate F listing will be assigned. If a constituent in a listed waste is present in solid/soil analytical results, the appropriate listed waste shall be added to the waste stream. F-listed waste assigned by acceptable knowledge shall not be removed based on headspace gas or solids analysis. In the case of totals/TCLP analysis, do procedures reflect the allowance for concentration assessments, wherein sites may add or remove total/TCLP and non-toxic F003 constituents found in headspace and solid/soil analyses?</p> <p>(Section C4-3e)</p>	CCP-TP-005 S. 4.5 S. 4.8 S. 4.9 CCP-TP-003 S. 4.0	Y	ANHSG1201 (AK-18) ECL12014M (AK-19) ANHSG1202 (AK-20) ECL12017M (AK-21) ANHSGS100003 (AK-22) ECL10033M (AK-23) HSG Summary Reports (AK-12)	Y	

	WAP Requirement ² ANL/CCP RH Recertification Audit A-12-16 Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
162	If sampling and analysis conducted to augment AK determines that a hazardous constituent as identified in headspace gas sampling or soil/homogeneous waste sampling is present in the waste, does the generator site indicate that they will: 1) assign the hazardous waste number to the entire waste stream as applicable, or 2) segregate drums containing detectable concentrations of solvent into a separate waste stream, and assign applicable hazardous waste numbers? (Section C4-3e)	CCP-TP-005 S. 4.5 S. 4.8 S. 4.9 CCP-TP-003 S. 4.0	Y	ANHSG1201 (AK-18) ECL12014M (AK-19) ANHSG1202 (AK-20) ECL12017M (AK-21) ANHSGS100003 (AK-22) ECL10033M (AK-23) HSG Summary Reports (AK-12)	Y	
163	Does the generator site document, justify, and consistently delineate waste streams and assign hazardous waste numbers based on site specific permit requirements or state-enforced agreements? (Section C4-3e)	CCP-TP-005 S. 4.4 S. 4.5 Att. 1	Y	N/A	N/A	No specific hazardous waste numbers for the state of Illinois.
164	Does the generator site have written methodologies for determining the mean concentration of solvent VOCs detected by either headspace gas analysis or homogeneous waste sampling for each waste stream or waste stream lot, and are all data ("U" flags designated as one half the MDL and "J" flags, which are less than the PRQL but greater than the MDL)? (Section C4-3e)	CCP-TP-003 Att. 3 & 4	Y	ANHSG1201 ECL12014M ANHSG1202 ECL12017M (GEN-2) CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote-Handled Waste Stream AERHDM at the Argonne National Laboratory with CIS Lot 1 (GEN-3) CP:12:01242 – Transmittal of Headspace Gas Data Summary for Remote-Handled Lot 5 AERHDM at the Argonne National Laboratory CP:12:01310 - Transmittal of Headspace Gas Data Summary for Remote-Handled Lot 6 AERHDM at the Argonne	Y	

	WAP Requirement ² ANL/CCP RH Recertification Audit A-12-16 Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				National Laboratory (GEN-4)		
165	Do procedures ensure that spent solvent assignments are made by using the UCL ₉₀ (of mean concentration), and comparing this with the PRQLs? If the UCL ₉₀ exceeds the PRQL, is acceptable knowledge reevaluated and determine potential source of the constituent? (Section C4-3e)	CCP-TP-005 S. 4.5 S. 4.8 S. 4.9 CCP-TP-003 S. 4.0	Y	ANHSG1201 (AK-18) ECL12014M (AK-19) ANHSG1202 (AK-20) ECL12017M (AK-21) ANHSGS100003 (AK-22) ECL10033M (AK-23) HSG Summary Reports (AK-12)	Y	
167	Does the site have written procedures for situations where concentrations of some VOCs are orders of magnitude higher than other target analytes? In these cases, elevated MDLs may be generated, and those constituents with an elevated MDL but "U" designation will not be used in mean calculations. (Section C4-3e)	PL CCP-TP-003 S. 4.2	Y	ANHSG1201 ECL12014M ANHSG1202 ECL12017M (GEN-2) CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote-Handled Waste Stream AERHDM at the Argonne National Laboratory with CIS Lot 1 (GEN-3) CP:12:01242 – Transmittal of Headspace Gas Data Summary for Remote-Handled Lot 5 AERHDM at the Argonne National Laboratory CP:12:01310 - Transmittal of Headspace Gas Data Summary for Remote-Handled Lot 6 AERHDM at the Argonne National Laboratory (GEN-4)	Y	This is evaluated at the Project Level

	WAP Requirement ² ANL/CCP RH Recertification Audit A-12-16 Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
		HG N/A	N/A	N/A	N/A	CCP-ANL only performs HGS sampling. Analysis is performed at CCP-INL Lab.
DATA QUALITY REQUIREMENTS						
168	<p>Are acceptable knowledge processes consistently applied among all generator sites, and does each generator site comply with the following data quality requirements for acceptable knowledge documentation:</p> <p>A. Precision - Precision is the agreement among a set of replicate measurements without assumption of the knowledge of a true value. The qualitative determinations, such as compiling and assessing acceptable knowledge documentation, do not lend themselves to statistical evaluations of precision. However, the acceptable knowledge information will be addressed by the independent review of acceptable knowledge information during internal and external audits.</p> <p>B. Accuracy - Accuracy is the degree of agreement between an observed sample result and the true value. The percentage of waste containers which require reassignment to a new waste matrix code and/or designation of different hazardous waste numbers based on sampling and analysis data and discrepancies identified by the Permittees during waste confirmation will be reported as a measure of acceptable knowledge accuracy.</p> <p>C. Completeness - Completeness is an assessment of the number of waste streams or number of samples collected to the number of samples determined to be useable through the data validation process. The acceptable knowledge record must contain 100 percent of the information (Permit Attachment C4-3) The usability of the acceptable knowledge information will be assessed for completeness during audits.</p> <p>D. Comparability - Data are considered comparable when one set of data can be compared to another set of data. Comparability is ensured through sites meeting the training requirements and complying with the minimum standards outlined for procedures that are used to implement the acceptable knowledge process. All sites must assign hazardous waste numbers in accordance with Permit Attachment C4-4 and provide this information regarding its waste to other sites who store or generate a similar waste stream.</p>	<p>A. CCP-PO-001 S. C4-3f</p> <p>CCP-QP-021 (All)</p> <p>WP 13-QA.03 (All)</p> <p>B. CCP-TP-005 S. 4.6</p> <p>C. CCP-TP-005 S. 4.0</p> <p>D. CCP-TP-005 S. 2.2 S. 4.4</p> <p>CCP-QP-002 S. 4.2.1</p>	<p>Y</p> <p>Y</p> <p>Y</p> <p>Y</p>	<p>A. Internal Audit (AK-26)</p> <p>B. AK Accuracy Report (AK-25)</p> <p>C. AK Documentation Checklist, Attachment 1, for waste stream AERHDM (AK-5)</p> <p>D. Acceptable Knowledge Expert (AKE) and Site Project Manager (SPM) Training files (GEN-14)</p>	<p>Y</p> <p>Y</p> <p>Y</p> <p>Y</p>	
	<p>E. Representativeness - Representativeness expresses the degree to which sample data accurately and precisely represent characteristics of a population. Representativeness is a qualitative parameter that will be satisfied by ensuring that the process of obtaining, evaluating, and documenting acceptable knowledge information is performed in accordance</p>	<p>E. CCP-TP-005 S. 2.2 S. 4.0</p>	<p>Y</p>	<p>E. Acceptable Knowledge Expert (AKE) and Site Project Manager (SPM) Training files</p>	<p>Y</p>	

	WAP Requirement ² ANL/CCP RH Recertification Audit A-12-16 Table C6-3 Acceptable Knowledge (AK) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	with the minimum standards established in Permit Attachment C4. Sites also must assess and document the limitations of the acceptable knowledge information used to assign hazardous waste numbers (e.g., purpose and scope of information, date of publication, type and extent to which waste parameters are addressed). (Section C3-9)	CCP-QP-002 S. 4.2.1		(GEN-14) AK Source Document Summaries for waste stream AERHDM (AK-4)		
169	Does the generator site address quality control by tracking its performance with regard to the use of acceptable knowledge by: 1) assessing the frequency of inconsistencies among information, and 2) documenting the results of waste discrepancies identified by the generator/storage site during waste characterization or the Permittees during waste confirmation using radiography, review of radiography audio/video recordings, or visual examination, or review of visual examination records. In addition, the acceptable knowledge process and waste stream documentation must be evaluated through internal assessments by generator/storage site quality assurance organizations. (Section C4-3e)	CCP-TP-005 S. 4.6 S. 4.9 CCP-QP-021 (All) WP 13-QA.03 (All) CCP-PO-001 S. C4-3f	Y	Internal Audit (AK-26) AK Accuracy Report (AK-25) AK Discrepancy Resolutions (AK-10)	Y	

1. NMED expects a traceability analysis to be performed, the results of which should be presented on this checklist under the "Examples of Implementation" column. Further, the traceability analysis process and results should be discussed in the Final Audit Report.
2. The WAP requirements should be presented in documents, such as procedures. Each of the questions posed under WAP requirements are meant to determine whether procedures are in place or whether documents are evident which demonstrate that the specific WAP requirement is or can be met.