Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221

AUG 30 2012

ENTERED

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

Subject: Bettis Atomic Power Laboratory-Central Characterization Project Information

Dear Mr. Kieling:

This letter is to inform you that some errors have been identified in reference citations of checklist portions and in a table of the recently submitted Carlsbad Field Office (CBFO) Bettis Atomic Power Laboratory (BAPL) Audit Report.

Please replace the following sections with the corresponding enclosed sections:

- **Table C6-1 Waste Analysis Plan (WAP) Checklist**
- **Table C6-3 Acceptable Knowledge (AK) Checklist**
- **Attachment 2 – Personnel Contacted During the Audit, by Area**
- **CCP-TP-068 Rev. 8 (Objective Evidence File)**

The errors were identified on August 23, 2012. Review was requested to be halted on that date.

With the identification of the errors in the BAPL report, we also requested a halt for the review of the Oakridge National Laboratory (ORNL) report. Further review of the ORNL report did not reveal the same errors.

Please consider your receipt of these corrections as an initial submission of the BAPL and ORNL audit reports for purposes of resetting or restarting required review cycle times.

Site	Report Sent	Review Stopped	Review Restart
BAPL	July 30, 2012	August 23, 2012	August 29, 2012
ORNL	August 15, 2012	August 23, 2012	August 29, 2012

120834

CBFO:OQA:RU:CC:12-1498:UFC 2300.00

If you have any questions, please contact Mr. Randy Unger at (575) 234-7065.

Sincerely,

Jose R. Franco, Manager
Carlsbad Field Office

Enclosure

cc: w/ enclosure

E. Ziemianski, CBFO	* ED
R. Unger, CBFO	ED
J. R. Stroble, CBFO	ED
M. Pinzel, CBFO	ED
T. Morgan, CBFO	ED
G. Basabilvazo, CBFO	ED
C. Fesmire, CBFO	ED
S. McCauslin, CBFO	ED
T. Kliphuis, NMED	ED
S. Holmes, NMED	ED
R. Maestas, NMED	ED
M. Mager, CTAC	ED
WIPP Operating Record	ED
CBFO QA File	
CBFO M&RC	

*ED denotes electronic distribution

Table C6-1 Waste Analysis Plan (WAP) Checklist
BAPL/CCP Close-Out Audit A-12-10, April 24-26, 2012

(This page intentionally blank)

Waste Analysis Plan (WAP) General Checklist for use at DOE's Generator/Storage Sites

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
	WASTE STREAM IDENTIFICATION					
1	Does the generator/storage site define "waste stream" as waste materials that have common physical form that contain similar hazardous constituents, and that are generated from a single process or activity? (Attachment C Section C-0a)	CCP-PO-001 S. C-0a CCP-TP-005 S. 4.4.11 NOTE above	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)** Waste Stream Profile Form and attachments for waste stream BT-T001 **(AK-2)**	Y	
2	Are procedures in place to ensure that the generator/storage site assigns one of the Summary Category Groups (S3000-homogeneous solids, S4000-soils/gravel, S5000-debris waste) to each waste stream? (Section C-1b)	CCP-TP-005 S. 4.4.14 S. 4.4.15 CCP-TP-002 S. 4.3 Att. 2	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)** Waste Stream Profile Form and attachments for waste stream BT-T001 **(AK-2)**	Y	
3	Are procedures in place to ensure that the generator/storage site assigns Waste Matrix Code Groups (e.g., solidified inorganics, solidified organics, salt waste, soils, combustible waste, filters, graphite, heterogeneous debris waste, inorganic nonmetal waste, lead/cadmium metal, uncategorized metal) to each waste stream? (Section C-0a)	CCP-TP-005 S. 4.4.13 NOTE Above CCP-TP-002 S. 4.3 Att. 2	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)** Waste Stream Profile Form and attachments for waste stream BT-T001 **(AK-2)**	Y	
4	Are procedures in place to ensure that the generator/storage site assigns a Waste Stream WIPP Identifier (ID) to each waste stream? (Section C3-12b(1))	CCP-TP-002 Att. 2, Line 10	Y	Waste Stream Profile Form and attachments for waste stream BT-T001 **(AK-2)**	Y	

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
4a	Are procedures in place for generator/storage sites to submit an AK Sufficiency Determination (Determination Request) to the Permittees to meet all or part of the waste characterization requirements including: • All information specified in Permit Attachment C4, Section C4-3d • Identification of relevant hazardous constituents, and correctly identifies all toxicity characteristic and listed hazardous waste numbers • All hazardous waste number assignments must be substantiated by supporting data and, if not, whether this lack of substantiation compromises the interpretation • Resolution of data discrepancies between different AK sources must be technically correct and documented • The AK Summary includes all the identification of waste material parameter weights by percentage of the material in the waste stream, and determinations are technically correct • All prohibited items specified in the TSDF-WAC should be addressed, and conclusions drawn are technically adequate and substantiated by supporting information • If the AK record includes process control information specified in Permit Attachment C4, Section C4-3b, the information should include procedures, waste manifests, or other documentation demonstrating that the controls were adequate and sufficient. • The site must provide the supporting information necessary to substantiate technical conclusions within the Determination Request, and this information must be correctly interpreted. (Section C-0b, Section C4-3d)	CCP-TP-005 S. 4.7	Y	NA	NA	An AK Sufficiency Determination was not sought for any Bettis waste streams.
4b	If a generator/storage site does not submit a Determination Request or if the Determination Request is not approved, are procedures in place for the generator/storage site to perform radiography or VE on 100% of the containers in a waste stream and chemical sampling and analysis on a representative sample of the waste stream using headspace gas sampling and analysis (for debris waste) or solids sampling and analysis (for homogeneous solid or soil/gravel waste) as specified in Permit Attachments C1 and C2? (Section C-0b)	CCP-PO-001 S. C-0b CCP-TP-001 S. 3.1 CCP-TP-002 (All)	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)**	Y	

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
4c	Are procedures in place to ensure that the generator/storage sites complete a Waste Stream Profile Form (WSPF) and Characterization Information Summary (CIS) as specified in Permit Attachment C3, Sections C3-12b(1) and C3-12b(2)? (Section C-0c)	CCP-TP-002 S. 1.1	Y	CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	
5	Are procedures in place to ensure that the generator/storage site divides waste streams into waste stream lots if all of the waste within a waste stream is not accessible for sampling and analysis, as required, at one time? If so, is the division of waste streams into waste stream lots based on staging, transportation and handling issues? (Section C-1a)	CCP-PO-001 S. C-1a CCP-TP-002 (All)	Y	CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	
6	Are procedures in place to ensure that the generator/storage site assigns EPA hazardous waste numbers associated with the waste? If so, do these assigned EPA hazardous waste numbers correspond to the permitted EPA hazardous waste numbers in Table C-9? Are there any assigned EPA hazardous waste numbers that are not permitted EPA hazardous waste numbers on the Table C-9? If so, did the generator/storage site reject the waste for shipment to and disposal at WIPP? Did the generator assign a state hazardous waste codes or numbers? If so, is it assigned to waste that is permitted at WIPP? (Section C-1b)	CCP-TP-005 S. 4.4.13- 4.4.18 Att. 5	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	AK evaluated the hazardous constituents for this waste stream during audit A-11-12.
7	Are procedures in place to ensure that Summary Category Groups are defined as follows: S3000- Homogeneous solids are solid material, inorganic process residues, inorganic sludges, salt waste, and pyrochemical salt waste excluding soils, that do not meet NMED criteria for classification as debris and are at least 50 percent by volume homogeneous solids or comprise the majority of the waste stream S4000- Waste streams that are at least 50 percent by volume soil/gravel, or comprise the majority of the waste stream S5000- Waste streams that are at least 50 percent volume materials that meet the NMED criteria for debris, or comprise the majority matrix of materials. The criteria for debris are solid materials intended for disposal that exceed 2.36 inch particle size and is a manufactured object, plant or animal matter, or natural geologic material. Particles smaller than 2.36 inches in size may be considered debris if the debris is a manufactured object and if it is not a particle of S3000 or S4000 material. (Section C-0a)	CCP-TP-005 S. 4.4.14	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)** Waste Stream Profile Form and attachments for waste stream BT-T001 **(AK-2)**	Y	

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
8	Does the generator/storage facility have procedures in place to ensure that the following waste characterization parameters will be obtained: • Determination whether TRU mixed waste streams comply with the applicable provisions of the TSDF-WAC • Determination whether TRU mixed wastes exhibit a hazardous characteristic per 20.4.1.200 NMAC (incorporating 40 CFR 261 Subpart C) • Determination whether TRU mixed wastes are listed per 20.4.1.200 NMAC (incorporating 40 CFR 261 Subpart D) • Estimation of waste material parameter weights (Section C-2)	**AK** CCP-TP-005 S. 4.4.16 S. 4.4.17 S. 4.4.27 S. 4.4.31 S. 4.4.34[K], [L] & [M] CCP-TP-500 (All) CCP-TP-001 S. 4.2 CCP-TP-002 S. 4	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)** RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)** CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	The Waste Form Material Parameters, Prohibited Items, Packaging, Hazardous Constituents, and memoranda were evaluated during audit A-11-12.
9	Are procedures in place to ensure that waste streams identified to contain incompatible materials or materials incompatible with waste containers cannot be shipped unless treated to remove the incompatibility? (Section C-1c)	CCP-TP-500 S. 4.4 CCP-TP-005 S. 4.4.31 & 4.4.34[K] CCP-TP-001 S. 2.7 & 4.0 CCP-QP-005 S. 2.3.1 – 2.3.3 CCP-TP-068 S. 4.2, 4.4, Att. 1,2	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	The memoranda attached to AK Attachment 6 for Waste Form, Material Parameters, Prohibited Items, and Packaging were evaluated during A-11-12. The DTC screen shot with hold was also evaluated during A-11-12.
10	Are procedures in place to ensure that the generator/storage site uses acceptable knowledge and, as necessary, headspace-gas sampling and analysis, radiography, (visual examination), and homogeneous waste sampling and analysis as specified in Table C-5? (Section C-3)	**AK** CCP-TP-005 S. 4.4 S. 4.5 CCP-PO-001 S. C-3 CCP-TP-005 S. 4.4 and 4.5 CCP-TP-001 S. 4.2 CCP-TP-002	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)** RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M	Y	BDRs used as objective evidence during A-11-12 were the only OE for this audit pertaining to sampling and analysis.

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
		S. 4.2		**(GEN-2)** CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**		
	UNACCEPTABLE WASTE					

12	Are procedures in place to ensure that the generator/storage site ensures, through administrative and operational procedures and characterization techniques, that waste containers do not include the following unacceptable waste:
	• liquid waste is not acceptable at WIPP. Liquid in the quantities delineated below is acceptable
	  • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of radiography or visual examination
	  • Internal containers with more than 60 milliliters or 3 percent by volume observable liquid, whichever is greater, are prohibited
	  • Containers with Hazardous Waste number U134 assigned shall have no observable liquid
	  • Overpacking the outermost container that was examined during radiography or visual examination or redistributing untreated liquid within the container shall not be used to meet the liquid volume limits
	• non-radionuclide pyrophoric materials
	• hazardous wastes not occurring as co-contaminants with TRU wastes (non-mixed hazardous wastes)
	• wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes
	• wastes containing explosives or compressed gases (continued below)
		CCP-TP-001
		S. 4.2
		
		CCP-TP-002
		Att. 1 and 2
			Y	RHBAPLVE100001
				(GEN-1)
				
				BAHSGS100001
				ECL10037G
				ECL10037M
				(GEN-2)
				
				CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory
				(GEN-3)
					Y	

12a	• wastes with polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization • wastes exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)	CCP-TP-001 S. 4.2 CCP-TP-002 Att. 1 and 2	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)**	Y	

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
	• waste that has ever been managed as high-level waste and waste from tanks specified in Table C-8, unless specifically approved through a Class 3 permit modification • any waste container from a waste stream (or waste stream lot) which has not undergone either radiographic or visual examination of a statistically representative subpopulation of the wastes stream in each shipment pursuant to Permit Attachment C7 • any waste container from a waste stream which has not been preceded by an appropriate, certified Waste Stream Profile Form (see Section C-1d) (Section C-1c)			CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**		
	WASTE ACCEPTANCE CONTROL					
14	Are procedures in place to ensure that the generator/storage site uses a Waste Stream Profile Form (WSPF) which includes, at a minimum, the information indicated on the attached WSPF found in Figure C-1 and a Characterization Information Summary (CIS) prior to waste disposal at the WIPP? (Section C-1d)	CCP-TP-002 (All)	Y	CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	
16	Are procedures in place to ensure that additional WSPFs are provided to WIPP and NMED for waste streams or portions of waste streams that are reclassified based upon waste characterization information? (Section C-1d)	CCP-TP-002 (All)	Y	CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	The waste from BT-T001 did not require reclassification.
16a	Are criteria in place to determine the specific circumstances under which a WSPF is revised versus when a new WSPF is required? (Section C-1d)	CCP-TP-002 S. 4.7	Y	NA	NA	For the waste stream examined during the BAPL audit A-11-12, there were no examples of characterization data that would require a revision to an existing WSPF or the creation of a new WSPF
	LABORATORY QUALIFICATION					
17	Are procedures in place to ensure that the generator/storage site conduct analyses using laboratories that are qualified through participation in the Performance Demonstration Program (PDP) for headspace gas sampling and analysis, and PDP homogeneous waste sampling and analysis? (Section C-3a(3))	NA	NA	NA	NA	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab.

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
18	Are procedures in place to ensure that the generator/storage sites conduct analyses using laboratories that implement the analytical methods through laboratory-documented standard operating procedures (SOPs) that ensure that analytical QAOs are met? (Section C-3a(3))	NA	NA	NA	NA	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab.
19	Are procedures in place to ensure that documented laboratory QA/QC programs include the following: • Facility organization • List of equipment/instrumentation • Operating procedures • Laboratory QA/QC procedures • Quality assurance review • Laboratory records management (Section C-4a(4))	NA	NA	NA	NA	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab.
	GENERAL SAMPLING AND ANALYTICAL REQUIREMENTS					
20	Are procedures in place to ensure that headspace gas sampling and analysis shall be used to: • Determine the types and concentrations of VOCs in the void volume of waste containers • VOC constituents shall be compared to those assigned by Acceptable Knowledge (Section C-3a(1))	CCP-TP-005 S. 4.5.3	Y	BAHSGS100001 ECL10037G ECL10037M **(GEN-2)** CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	
22	Are procedures in place to ensure that compounds not on the list of target analytes are reported as tentatively identified compounds (TICs) and that the TIC will be added to the target analyte list if it appears in the 20.4.1.200 NMAC (incorporating 40 CFR 261) Appendix VIII list and if they are reported in 25% of the waste containers sampled from a given waste stream? (Section C-3a(1))	CCP-TP-003 S. 4.3	Y	BAHSGS100001 ECL10037G ECL10037M **(GEN-2)** CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory	Y	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab.

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	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	
				(GEN-3)		
23	Are procedures in place to ensure that a randomly selected set of samples will be collected through core sampling or other EPA approved sampling from the population of waste containers for homogeneous and soil/gravel waste streams? Are procedures in place that a sufficient number of samples are collected to evaluate the toxicity characteristic of a waste stream at a 90 percent Upper Confidence limit as specified in Attachment C2? (Section C-3a(2))	CCP-TP-162 (All)	Y	NA	NA	The waste stream evaluated for BAPL/CCP is debris (S5000). Solids sampling and analysis is not in the scope of this audit.
24	Are procedures in place to ensure that total analyses or TCLP of VOCs, SVOCs, and RCRA-regulated metals are performed on all core samples to determine if the waste exhibits a toxicity characteristic? (Section C-3a(2))	NA	NA	NA	NA	Solids sampling and analysis is not in the scope of this audit.
25	Are procedures in place to ensure that Acceptable Knowledge is used in waste characterization activities to delineate TRU mixed waste streams, to assess whether TRU mixed wastes comply with the TSDF-WAC, to assess whether TRU mixed waste exhibits a hazardous characteristic (20.4.1.200 NMAC, incorporating 40 CFR 261 Subpart C), and to assess whether TRU wastes are listed (20.4.1.200 NMAC, incorporating 40 CFR 261 Subpart D), and to estimate waste material parameter weights? (Section C-3b)	CCP-TP-005 S. 4.4.11 S. 4.4.16 S. 4.4.17 S. 4.4.27 S. 4.4.31 S. 4.4.34 [K], [L] & [M] CCP-TP-500 (All)	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	BDRs used as objective evidence during A-11-12 were the only OE for this audit pertaining to sampling and analysis. Hazardous Constituents, Waste Form, Material Parameters, Prohibited Items, and Packaging were evaluated during A-11-12.
26	Are procedures in place to ensure that radiography and/or visual examination are used as necessary to: • Examine a waste container to determine the physical form • Identify observable liquid in excess of TSDF-WAC limits and containerized gases • Verify the physical form matches the waste stream description (Section C-3c)	CCP-TP-500 S. 1.1 & Att. 1	Y	VE BDR: RHBAPLVE100001 **(VE-1)**	Y	

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
27	Are procedures in place to ensure that the following characterization activities shall occur for newly generated wastes: • Acceptable Knowledge for all wastes, with sampling and analysis as necessary to augment AK including; - Either visual examination during packaging or radiography (or VE in lieu of radiography) after packaging for all waste containers, ensuring this occurs prior to any treatment designed to supercompact waste - Headspace gas analysis for randomly selected containers, except for qualifying waste containers belonging to LANL sealed sources waste streams - Total VOC, SVOC, and Metals analyses for a selected number of homogeneous solids and soil/gravel waste containers as specified in Attachment C2 - Evaluation of any TICs found in headspace gas and totals analyses (Section C-3d(1))	**AK** CCP-TP-005 S. 4.4 S. 4.5 CCP-TP-002 (All) CCP-TP-162 (All)	Y	NA	NA	This was not a newly generated waste stream.
27a	Are procedures in place to ensure that the visual examination during packaging for all waste containers includes the documentation of packaging configuration, type and number of filters, and rigid liner vent hole presence and diameter necessary to determine the appropriate DAC in accordance with Permit Attachment C1, Section C1-1? (Section C-3d(1))	CCP-TP-500 Att. 1	Y	VE BDR: RHBAPLVE100001 **(VE-1)**	Y	
28	Are procedures in place to ensure that the following characterization activities shall occur for retrievably stored wastes: • Acceptable Knowledge for all wastes, with sampling and analysis as necessary to augment AK including; - Visual examination or radiography for all waste containers - Headspace gas analysis for randomly selected containers except for qualifying waste containers belonging to LANL sealed sources waste streams - Total VOC, SVOC, and Metals analyses for a statistically selected number of homogeneous solids and soil/gravel waste containers as specified in Attachment C2 - Evaluation of any TICs found in headspace gas and totals analyses (Section C-3d(2))	**AK** CCP-TP-005 S. 4.4 S. 4.5 CCP-TP-002 (All) CCP-TP-162 (All)	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)**	Y	BDRs used as objective evidence during A-11-12 were the only OE for this audit pertaining to sampling and analysis. Hazardous Constituents, Waste Form, Material Parameters, Prohibited Items, and Packaging were evaluated during A-11-12. The random selection documentation was evaluated during A-11-12.

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	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	
	DATA GENERATION, VERIFICATION, VALIDATION, DOCUMENTATION, AND QUALITY ASSURANCE					
30	Are procedures in place to ensure that the following Data Quality Objectives are met: • Use Acceptable Knowledge to delineate TRU mixed waste streams, assess whether TRU mixed wastes comply with the applicable requirements of the TSDF-WAC, assess whether TRU mixed wastes exhibit a hazardous characteristic, assess whether TRU mixed wastes are listed and to estimate waste material parameter weights • Use Headspace gas sampling and analysis, as necessary, to identify and quantify VOCs in waste containers to resolve the assignment of EPA hazardous waste numbers • Perform totals analyses of homogeneous solids and soils/gravel wastes to establish if the waste is hazardous based on the toxicity characteristics levels in 20.4.1.200 NMAC through a comparison of the upper confidence limits (UCL_{90}) of the mean concentrations to resolve the assignment of hazardous waste numbers • Use radiography or visual examination to determine physical waste form, the absence of prohibited items, and additional waste characterization techniques that may be used based on Summary Category Groups (Section C-4a(1))	CCP-TP-005 S. 4.4.11 S. 4.4.16 S. 4.4.17 S. 4.4.27 S. 4.4.31 S. 4.4.34 [K], [L] & [M] CCP-TP-500 (All) CCP-TP-002 (All)	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)** CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	BDRs used as objective evidence during A-11-12 were the only OE for this audit pertaining to sampling and analysis. Hazardous Constituents, Waste Form, Material Parameters, Prohibited Items, and Packaging were evaluated during A-11-12.
31	Are procedures in place to ensure that the following Quality Assurance Objectives are adequately defined and assessed for each characterization method: • Precision as a measure of the mutual agreement among multiple measurements. • Accuracy as the degree of agreement between a measurement result and a true or known value. • Completeness is a measure of the amount of valid data obtained from a method compared to the total amount of data obtained that is expressed as a percentage. • Comparability is the degree to which one data set can be compared to another data set. • Representativeness as an expression of the degree to which data represent characteristics of a population. (Section C-4a(2))	HG: CCP-TP-106 Att. 3 SS & SA: NA VE: CCP-TP-500 Att. 2 & 3	Y	HG: Examined HSG BDR BAHSGS100001 **(HG-1)** VE BDR: RHBAPLVE100001 **(VE-1)**	Y	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab.
32	With respect to data generation, are procedures in place to ensure that the generator/storage site's waste characterization program meets the following general	HG: CCP-TP-106	Y	HG: Examined HSG BDR BAHSGS100001	Y	BAPL/CCP only performs HSG sampling. Analysis is performed at

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
	requirements: • Analytical data packages and batch data reports must be reported accurately in a pre-approved format, must be maintained in permanent files, and must be traceable? • All data must receive a technical review by another qualified analyst? (Section C3-10a)	S. 4.1; 5.0 Att. 2 & 3 SS & SA: NA VE: CCP-TP-500 S. 4.3, 4.4, 5.0 & Att. 1 & 2		**(HG-1)** VE BDR: RHBAPLVE100001 **(VE-1)**		INL/CCP Lab. Solids sampling and analysis is not in the scope of this audit.
33	Are procedures in place to ensure that the generator/storage site performs validation of waste characterization data for each waste container? (Section C-4)	CCP-TP-001 S. 4.2 HG: CCP-TP-106 S. 4.1 and Att. 3 SS & SA: NA VE: CCP-TP-500 S. 4.4, Att. 2 & 3	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)** HG: Examined HSG BDR BAHSGS100001 **(HG-1)** VE BDR: RHBAPLVE100001 **(VE-1)**	Y	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab. Solids sampling and analysis is not in the scope of this audit.
34	Are procedures in place to ensure that the generator/storage site has a pre-approved format for reporting waste characterization data? (Section C-4a(4))	CCP-TP-001 S. 4.2 HG: CCP-TP-106 S. 4.1; Att. 2 & 3 SS & SA: NA VE: CCP-TP-500 S. 4.3 & Att. 1	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)** CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)** HG: Examined HSG BDR BAHSGS100001 **(HG-1)** VE BDR: RHBAPLVE100001	Y	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab. Solids sampling and analysis is not in the scope of this audit.

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
				(VE-1)		
35	Are procedures in place to ensure that the generator/storage site prepares analytical, testing, and sampling batch data reports to meet the requirements of their own site-specific QAPjP and/or SOPs? (Section C-4a(4))	CCP-TP-001 S. 4.2 HG: CCP-TP-106 S. 4.1 Att. 2 & 3 SS & SA: NA VE: CCP-TP-500 S. 4.3, Att. 1, 2 & 3	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)** HG: Examined HSG BDR BAHSGS100001 **(HG-1)** VE BDR: RHBAPLVE100001 **(VE-1)**	Y	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab. Solids sampling and analysis is not in the scope of this audit.
36	Are procedures in place to ensure that all raw data is collected and managed at the data generation level in accordance with the following criteria: • All raw data shall be signed and dated in reproducible ink by the individual collecting the data, or signed and dated using electronic signatures • All data shall be recorded clearly, legibly, and accurately in field and laboratory records and include all applicable sample identification numbers • All changes to original data shall be lined out, initialed, and dated by the individual making the change. Original data may not be obliterated or otherwise be made unreadable • All data shall be transferred and reduced from field and laboratory records completely and accurately • All field and laboratory records shall be maintained as specified in Table C-6 of Attachment C • Data shall be organized into standard reporting formats for reporting purposes. • All electronic and video data must be stored to ensure that waste container, sample and QC data are readily retrievable (Section C3-10a)	HG: CCP-TP-106 S. 4.1 Att. 2 & 3 S. 5.0 SS & SA: NA VE: CCP-TP-500 S. 4.3, 5.0 & Att. 2	Y	HG: Examined HSG BDR BAHSGS100001 (HG-1) VE BDR: RHBAPLVE100001 **(VE-1)**	Y	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab. Solids sampling and analysis is not in the scope of this audit.
37	Are procedures in place to ensure that 100 % of batch data reports are subject to independent technical review by an individual qualified to review the data who was not involved in the generation or recording of the data under review. The reviewer shall release the data through signature with an associated review checklist prior to characterization of the associated waste and	HG: CCP-TP-106 S. 4.1 Att. 3	Y	HG: Examined HSG BDR BAHSGS100001 **(HG-1)** VE BDR:	Y	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab. Solids sampling and analysis is not in the scope of this audit.

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
	shipment to the WIPP. The review shall ensure the following, as applicable: • Data generation and reduction were conducted according to the methods used and reported in the proper units and significant figures • Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or a 100 percent check of all hand calculations • The data have been reviewed for transcription errors • The testing, sampling, and analytical QA documentation for BDRs is complete and includes, as applicable, raw data, DAC and equilibrium calculations and times, calculation records, chain of custody forms, calibration records, QC sample results and copies or originals of gas canister sample tags. • All QC sample results are within established control limits, and if not, the data has been appropriately qualified • Reporting flags were assigned correctly • Sample holding times and preservation requirements were met, or exceptions documented • Radiography tapes are reviewed on a waste container basis at a minimum of once per testing batch or once per day of operation, whichever is less frequent. The radiography tape will be reviewed against the data on the radiography form to ensure that data are complete and correct • Field sampling records are complete • QAOs have been met (Section C3-10a(1))	SS & SA: NA VE: CCP-TP-500 S. 4.3.4, 4.3.4 Note, 4.3.6 & Att. 2		RHBAPLVE100001 **(VE-1)**		
40	Are procedures in place to ensure that 100 percent of all batch data reports receive a Site Project Manager signature release with an associated review checklist prior to characterization of the associated waste and shipment to the WIPP. This release shall ensure the following: • The Site Project Manager or designee shall determine the validity of the drum age criteria (**DAC**) assignment made at the data generation level based upon an assessment of the data collection and evaluation necessary to make the assignment. • Testing batch QC checks were properly performed. Radiography data are complete and acceptable based on evidence of videotape review of one waste container per day or once per testing batch, whichever is less frequent	CCP-TP-001 S. 4.2 CCP-TP-162 (All)	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)** CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	BDRs used as objective evidence during A-11-12 were the only OE for this audit pertaining to sampling and analysis. Hazardous Constituents, Waste Form, Material Parameters, Prohibited Items, and Packaging were evaluated during A-11-12. The random selection documentation was evaluated during A-11-12.

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
	• Sampling batch QC checks were properly performed, and meet the established QAOs and are within established data usability criteria • Analytical batch QC checks were properly performed and meet the established QAOs and are within established data usability criteria • Online batch QC checks were properly performed and meet the established QAOs and are within established data usability criteria • Proper procedures were followed to ensure representative samples of headspace gas and homogeneous solids and soil/gravel were taken • Data generation level independent technical review, validation, and verification have been performed as evidenced by the completed review checklists and appropriate signature releases. • Independent technical reviewers were not involved in the generation or recording of the data under review. • Batch Data review checklists are complete • Batch Data Reports are complete and data properly reported • Verify that data are within established data assessment criteria and meet all applicable QAOs (Section C3-10(b)(1))					
42	Are procedures in place to ensure that a repeat of the data review process at the data generation level will be performed on a minimum of one randomly chosen waste container every quarter to determine if the verification and validation is performed according to documented procedures? (Section C3-10b)	CCP-TP-001 S. 4.3	Y	NA	NA	Verified quarterly repeat data objective evidence during audit A-11-12
43	Are procedures in place and checklists are available to prepare a Site Project Manager (SPM) Summary and a Data Validation Summary (the summaries may be in the same document)? The SPM Summary includes a validation checklist for each batch that is of sufficient detail to document all aspects of a batch data report that could affect data quality. The Data Validation Summary must identify each Batch Data Report reviewed, describe how the validation was performed, identify all problems, and identify all acceptable and unacceptable data. Summaries must include release signatures. (Section C3-10b(2))	CCP-TP-001 S. 3.1.6, 3.1.8, and 4.2	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)**	Y	
44	Are procedures in place to ensure that non-administrative, WAP-related nonconformances first identified at the site project manager level are reported to the Permittees within seven calendar days of identification, that nonconformance reports are prepared within 30 calendar days, and that corrective action is implemented prior to waste shipment?	CCP-QP-005 S. 2.4	Y	There were no reportable RH NCRs since the previous recertification audit.	Y	Verified that there were no NCRs that needed to be reported to the Permittee (via email to CBFO through "WIPP Notify") within the required amount of days by the

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
	(Section C3-13)			RH BAPL Data Generation Level and RH BAPL Project Level NCR Log Reconciliation Reports for 2010 & 2011 **(GEN-4)**		Permit.
45	Are procedures in place to ensure that any waste container for which a nonconformance report (NCR) has been written will not be shipped to the WIPP facility unless the condition that led to the NCR for that container is appropriately identified, reconciled, corrected, and documented? Are nonconformance reports prepared for nonconformances identified? Are nonconformances identified and tracked, and does the Site Project Manager oversee the nonconformance report process? (Section C3-13)	CCP-QP-005 (All)	Y	Records packages for the following NCRs: NCR-RHBAPL-0001-10, NCR-RHBAPL-0200-10, NCR-RHBAPL-0300-11, NCR-RHBAPL-0501-11, NCR-RHBAPL-0502-11, NCR-RHBAPL-2143-11, NCR-RHBAPL-2453-11, NCR-RHBAPL-2454-11, NCR-ALD-0500-11 **(GEN-5)**	Y	NA
	SAMPLE CONTROL					
46	Are procedures in place to ensure that the site's sample handling and control program includes the following: • Field documentation of samples including point of origin, date of sample, container identification, sample type, analysis requested, and chain-of-custody (COC) number? • Proper labeling and/or tagging including proper sample numbering, sample identification, sample date, sampling conditions, and analysis requested? • COC record including name of sample relinquisher, sample receiver, and date and time of sample transfer? and • Proper sample handling and preservation? (Section C-4a(3))	HG: CCP-TP-093 S. 4.4.4; S. 4.5; Att. 1 SS: NA	Y	HG: Examined HSG BDR BAHSGS100001 **(HG-1)**	Y	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab. Solids sampling and analysis is not in the scope of this audit.
47	Are procedures in place to ensure that the site's QAPjP or site-specific procedures includes COC forms to control the sample from the point of origin to the final analysis result reporting? (Section C-4a(3))	HG: CCP-TP-093 S. 4; Att. 1 SS: NA	Y	HG: Examined HSG BDR BAHSGS100001 **(HG-1)**	Y	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab. Solids sampling and analysis is not in the scope of this audit.
	DATA TRANSMITTAL					

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	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	
48	Are procedures in place to ensure that the generator/storage site transmits data by hard copy or electronic copy from the data generation level to the site project level? If electronic, does the generator/site have a hard copy available on demand? (Section C-4a(6))	CCP-TP-001 S. 4.2	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)**	Y	
50	Are procedures in place to ensure that the generator/storage site inputs the data into the WWIS manually or electronically? (Section C-4a(6))	CCP-TP-530 (All)	Y	Characterization data packages for the following containers were reviewed including CCP data spreadsheet reports, pages from batch data reports showing analyses values, and WWIS/WDS Container Data Reports. RH Package for Canister BE0003 including three containers: HIP-41-27-14 HIP-41-05-13 HIP-41-24-7 and Canister BE0004 including three containers: HIP-41-23-4 HIP-41-30-3 HIP-41-32-6 **(GEN-6)**	Y	
51	Are procedures in place to ensure that the generator/storage site enters the data into the WWIS in the exact format required by the database? (Section C-4a(6))	CCP-TP-530 (All)	Y	Characterization data packages for the following containers were reviewed including CCP data spreadsheet reports, pages from batch data reports showing analyses values, and WWIS/WDS Container Data Reports. RH Package for Canister	Y	

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
				BE0003 including three containers: HIP-41-27-14 HIP-41-05-13 HIP-41-24-7 and Canister BE0004 including three containers: HIP-41-23-4 HIP-41-30-3 HIP-41-32-6 **(GEN-6)**		
51a	Are procedures in place to ensure that if a container was part of a composite headspace gas sample, the analytical results from the composite sample must be assigned as the container headspace gas data results, including associated TICs, for every waste container associated with the composite sample in the WWIS? (Section C3-12b(4))	NA	NA	NA	NA	BAPL/CCP does not composite headspace gas samples.

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	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	
52	Are procedures in place to ensure all of the data presented on Table C-7 of the Permit is transmitted to the WWIS? (Table C-7)	CCP-TP-530 (All)	Y	Characterization data packages for the following containers were reviewed including CCP data spreadsheet reports, pages from batch data reports showing analyses values, and WWIS/WDS Container Data Reports. RH Package for Canister BE0003 including three containers: HIP-41-27-14 HIP-41-05-13 HIP-41-24-7 and Canister BE0004 including three containers: HIP-41-23-4 HIP-41-30-3 HIP-41-32-6 **(GEN-6)**	Y	
	RECORDS AND RECORD MANAGEMENT					
55	Are procedures in place to ensure that the generator/storage site's hard copy and/or electronic data reports follow the Permittees' format requirements? (Section C-4a(4))	CCP-TP-001 S. 4.2	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)** CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	
56	Are procedures in place to ensure that hard copy or electronic Waste Stream Profile	CCP-TP-002 S. 4.3	Y	CP:11:01776 – Transmittal of Waste	Y	

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
	Form will include the following: • Generator/storage site name • Generator/storage site EPA ID • Date of audit report approval by NMED (if obtained) • Original generator of waste stream • Whether waste is Contact-Handled or Remote-Handled • Waste Stream WIPP Identification Number • Summary Category Group • Waste Matrix Code Group • Waste Material Parameter Weight Estimates per unit of waste • Waste stream name • A description of the waste stream • Applicable EPA hazardous waste codes numbers • Applicable TRUCON codes • A listing of acceptable knowledge documentation used to identify the waste stream • The waste characterization procedures used and the reference and date of the procedure • Certification signature of Site Project Manager, name, title, and date signed (Section C3-12b(1))			Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**		
56a	Are procedures in place to ensure that hard copy or electronic Characterization Information Summary will include the following: • Data reconciliation with DQOs • Headspace gas summary data listing the identification numbers of samples used in the statistical reduction, the maximum, mean, standard deviation, UCL_{90}, RTL, and associated EPA hazardous waste numbers that must be applied to the waste stream. • Total metal, VOC, and SVOC analytical results for homogeneous solids and soil/gravel (if applicable). • TIC listing and evaluation. • Radiography and visual examination summary to document that all	CCP-TP-002 S. 4.4	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)** CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory	Y	

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
	prohibited items are absent in the waste (if applicable). • A complete listing of all container identification numbers used to generate the Waste Stream Profile Form, cross-referenced to each Batch Data Report. • Complete AK summary, including stream name and number, point of generation, waste stream volume (current and projected), generation dates, TRUCON codes, Summary Category Group, Waste Matrix Code(s) and Waste Matrix Code Group, other TWBIR information, waste stream description, areas of operation, generating processes, RCRA determinations, radionuclide information, all references used to generate the AK summary, and any other information required by Permit Attachment C4, Section C4-2b. • Method for determining Waste Material Parameter Weights per unit of waste. • List of any AK Sufficiency Determinations requested for the waste stream. • Certification through acceptable knowledge or testing and/or analysis that any waste assigned the hazardous waste number of U134 (hydrofluoric acid) no longer exhibits the characteristic of corrosivity. This is verified by ensuring that no liquid is present in U134 waste. • A justification for the selection of radiography and/or VE as an appropriate method of characterizing the waste. (Section C3-12b(2))			**(GEN-3)**		
56b	Are procedures in place to assure that ongoing container characterization results are cross referenced to Batch Data Reports? (Section C3-12b)	CCP-TP-002 S. 4.4	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)**	Y	
58	Are procedures in place to ensure that project level reports are compiled into Characterization Information Summaries? (Section C3-12b)	CCP-TP-002 S. 4.4	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)** CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001,	Y	

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	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	
				Bettis Atomic Power Laboratory **(GEN-3)**		
59	Are procedures in place to ensure that the generator/storage site uses forms for data reporting that are pre-approved forms in site-specific documentation? (Section C3-12)	HG: CCP-TP-106 S. 4.1; Att. 1, 2, & 3 SS & SA: NA VE: CCP-TP-500 S. 4.3, Att. 1, 2 & 3	Y	HG: Examined HSG BDR BAHSGS100001 **(HG-1)** VE BDR: RHBAPLVE100001 **(VE-1)**	Y	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab. Solids sampling and analysis is not in the scope of this audit.
60	Are procedures in place to ensure that the generator/storage site's site project manager submits to the WIPP facility a summary of the waste stream information and reconciliation with data quality objectives (DQOs) once a waste stream is characterized? (Section C-4a(6))	CCP-TP-002 S. 4.6	Y	CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	
61	Are procedures in place to ensure that the generator/storage site project office completes a WSPF based on the Batch Data Reports? (C3-12b)	CCP-TP-002 S. 4.3	Y	RHBAPLVE100001 **(GEN-1)** BAHSGS100001 ECL10037G ECL10037M **(GEN-2)** CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	
62	Are procedures in place to ensure that the generator/storage Site Project Manager submits the WSPF to the Permittees for DOE's approval along with the accompanying Characterization Information Summary for that waste stream? (Section C-4a(6))	CCP-TP-002 S. 4.6	Y	CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	
63	Are procedures in place to ensure that the generator/storage site maintains records related to waste characterization sampling and analysis activities in the testing,	CCP-QP-008 (All) CCP-QP-028	Y	RH Records Inventory and Distribution Schedule	Y	

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
	sampling or analytical facilities files, or site project files for those facilities located on-site? (Section C-4a(7))	(All)		(RIDS) dated 08/15/2011 **(GEN-7)**		
64	Are procedures in place to ensure that the appropriate documented training and indoctrination is performed for all individuals and that procedures are documented in site specific QAPjPs and procedures? (Section C3-14)	CCP-PO-001 (All) CCP-QP-002 S. 4.0	Y	RH Program – BAPL List of Qualified Individuals dated 7/22/11 **(GEN-8)** Qualification records for selected CCP personnel. **(GEN-9)**	Y	
65	Are procedures in place to ensure that the generator/storage site requires contract waste analytical facilities to forward testing, sampling and analytical records along with testing, sampling and analytical batch data reports to the site project office for inclusion in the sites project files? (Section C-4a(7))	CCP-QP-008 S. 4.10 CCP-QP-028 (All)	Y	RH Records Inventory and Distribution Schedule (RIDS) dated 08/15/2011 **(GEN-7)**	Y	
66	Are procedures in place to ensure that the generator/storage site has an appropriate records inventory and disposition schedule (RIDS) or equivalent that was prepared and approved by appropriate site personnel? (Section C-4a(7))	CCP-QP-008 S. 3.1.2 CCP-QP-028 S. 3.1.1	Y	RH Records Inventory and Distribution Schedule (RIDS) dated 08/15/2011 **(GEN-7)**	Y	
67	Are procedures in place to ensure that the generator/storage site maintains all records relevant to an enforcement action, regardless of disposition, until they are no longer needed for enforcement action, and then dispositioned per the approved RIDS? (Section C-4a(7))	CCP-PO-001 S. C-4a(7) CCP-QP-008 S.4.15.1 "Note" CCP-QP-028 (All)	Y	RH Records Inventory and Distribution Schedule (RIDS) dated 08/15/2011 **(GEN-7)**	Y	
68	Are procedures in place to ensure that the generator/storage site maintains records that are designated as Lifetime Records for the life of the waste characterization program plus six years or that the records have been transferred to the WIPP Records Archive facility? Lifetime Records include: • Field sampling data forms, • Field and laboratory COC forms, • Test facility and laboratory Batch Data Reports, • Waste Stream Characterization Package, • Sampling plans, • Data reduction, validation, and reporting documentation,	CCP-PO-001 S. C-4a(7) TABLE C-6 CCP-PO-002 S. 5.5 CCP-QP-008 (All) CCP-QP-028 (All)	Y	RH Records Inventory and Distribution Schedule (RIDS) dated 08/15/2011 **(GEN-7)**	Y	

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
	• Acceptable knowledge documentation, • WSPF and Characterization Information Summary (Section C-4a(7), Table C-6)					
69	Are procedures in place to ensure that the generator/storage site maintains records that are designated as Non-Permanent Records for ten years from the date of record generation, and then dispositioned according per the approved RIDS or transferred to the WIPP Records Archive facility? Non-Permanent Records include: • Nonconformance documentation, • Variance documentation, • Assessment documentation, • Gas canister tags, • Methods performance documentation, • PDP documentation, • Sampling equipment certifications, • Calculations and related software documentation, • Training/qualification documentation, • QAPjP documentation (all revisions), • Calibration documentation, • Analytical raw data, • Procurement documentation, • QA procedures (all revisions), • Technical implementing procedures (all revisions), and • Audio/video recording (radiography, visual, etc.). (Section C-4a(7), Table C-6)	CCP-PO-001 S. C-4a(7) TABLE C-6 CCP-PO-002 S. 5.5 CCP-QP-008 (All) CCP-QP-028 (All)	Y	RH Records Inventory and Distribution Schedule (RIDS) dated 08/15/2011 **(GEN-7)**	Y	
70	Are procedures in place to ensure that the generator/storage site has raw data that is identifiable and legible, and provides documentary evidence of quality? (Section C-4a(7))	HG: CCP-TP-093 (All) CCP-TP-106 (All) SS & SA: NA	Y	HG: Examined HSG BDR BAHSGS100001 **(HG-1)** VE BDR: RHBAPLVE100001	Y	BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Lab. Solids sampling and analysis is not in the scope of this audit.

	WAP Requirement[1] *BAPL/CCP* Audit A-12-10 Table C6-1 Waste Analysis Plan (WAP) Checklist[1]	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	
		VE: CCP-TP-500 Att. 1, 2 & 3		**(VE-1)**		
71	Are procedures in place to ensure that if the generator/storage site ceases to operate, that all records be transferred before closeout? (Section C-4a(7))	CCP-QP-008 S.4.10.2	Y	RH Records Inventory and Distribution Schedule (RIDS) dated 08/15/2011. **(GEN-7)**	Y	
	SHIPMENT					
72	Are procedures in place to ensure that the generator/storage site accurately completes an EPA Hazardous Waste Manifest prior to shipping the waste to WIPP that contains the following information: • Generator/storage site name and EPA ID • Generator/storage site contact name and phone number • Quantity of waste • List of up to six state and/or federal hazardous waste numbers in each line item • Listing of all container IDS • Signature of authorized generator representative (Section C-5b)	CCP-TP-507 S. 4.2; 4.3; 4.4 & Att. 1 CCP-TP-033 S. 2.6.7; 4.2.9	Y	Examined Hazardous Waste Manifests: 003161381 JJK **(GEN-11)** 003161391 JJK **(GEN-12)** 003161393 JJK **(GEN-13)**	Y	
73	Are procedures in place to ensure that the generator/storage site accurately completes the following container specific information: • Waste stream identification number • List of hazardous waste numbers per container • Certification data • Shipping data (Section C-5b)	CCP-TP-507 S. 4.2; 4.3; 4.4; Att.1 CCP-TP-033 S. 2.6.7; 4.2.9	Y	Examined Hazardous Waste Manifests: 003161381 JJK **(GEN-11)** 003161391 JJK **(GEN-12)** 003161393 JJK **(GEN-13)**	Y	

1. The WAP requirements should be presented in documents, such as procedures. Each of the questions posed under WAP requirements is meant to ask whether procedures are in place or whether documents are evident which demonstrate that the specific WAP requirement is or can be met.

Table C6-3 Acceptable Knowledge (AK) Checklist
BAPL/CCP Close-Out Audit A-12-10, April 24-26, 2012

(This page intentionally blank)

Acceptable Knowledge (AK) Checklist[1]

	WAP Requirement[2] BAPL/CCP Audit A-12-10 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 Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)** Waste Stream Profile Form and attachments for waste stream BT-T001 **(AK-2)**	Y	During the week of April 18, 2011, the CTAC AK audit team reviewed the acceptable knowledge record for an RH S5000 TRU debris waste stream generated at the Bettis Atomic Power Laboratory (BAPL) in conjunction with a certification audit for S5000 RH waste for that facility. The waste stream examined was identified as BT-001 and was debris waste generated during operations in a series of hot cells in the Materials Examination Laboratory
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-002 S. 4.3-4.5 CCP-TP-005 S. 4.0	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)** Waste Stream Profile Form and attachments for waste stream BT-T001 **(AK-2)**	Y	Source documents were verified for this waste stream in A-11-12 by AK technical specialist and verified in records for this audit.
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 Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)** Waste Stream Profile Form and attachments for waste stream BT-T001 **(AK-2)**	Y	During A-11-12, the WAP required traceability exercise was performed on two containers from this waste stream including one container that was part of the HSG S&A lot. The containers were HIP-41-15-12 HIP-41-33-9
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 ensure that waste streams are adequately identified?	CCP-TP-005 S. 4.0, 4.2.2, 4.2.4, 4.2.5 Att. 8 CCP-TP-001	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	The memoranda attached to AK Attachments 6 and 8 for Container lists, Waste Form, Material Parameters, Prohibited Items, and Packaging were evaluated during A-11-12. The DTC screen shot with hold

	WAP Requirement[2]BAPL/CCP Audit A-12-10 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	
	(Section C4-2a)	S. 2.7 S. 4.1 S. 4.2				was also evaluated during A-11-12.
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 Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	The memoranda attached to AK Attachments 6 and 8 for Container lists, Waste Form, Material Parameters, Prohibited Items, and Packaging were evaluated during A-11-12. The DTC screen shot with hold was also evaluated during A-11-12.
	REQUIRED AND ADDITIONAL INFORMATION					
140	Does the generator site document that the following must be included in the acceptable knowledge record: 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 (Section C4-2a)	1-7 CCP-TP-005 S. 4.2.2 S., 4.4.5 Att. 1	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	Source Documents for number 4 were verified during audit A-11-12.
141	Does the generator site document that the following shall be collected for each waste stream: A. Area(s) and/or building(s) from which the waste stream was or is generated	A-F CCP-TP-005 S. 4.2.4 S. 4.4.5 Att. 1	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	Source Documents for letter D were verified during audit A-11-12.

	WAP Requirement[2]BAPL/CCP Audit A-12-10 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	
	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 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 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. (Section C4-2b)					
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 Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	AK Discrepancy Resolutions were verified during audit A-11-12.
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	NA	NA	An AK Sufficiency Determination is not being sought for any BAPL waste streams.

	WAP Requirement[2]BAPL/CCP Audit A-12-10 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	
144	Have the following procedures been prepared?: A. Procedures for identifying and assigning the physical waste form of the waste B. Procedures for delineating waste streams and assigning Waste Matrix Codes C. Procedures for resolving inconsistencies in acceptable knowledge documentation D. Procedures for headspace gas sampling and analysis, visual examination and/or radiography, and homogeneous waste sampling and analysis, if applicable 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 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) 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 H. Procedures that ensure the assignment of EPA hazardous waste numbers is appropriate, consistent with RCRA requirements, and adequately considers site historical waste management I. Procedures for estimating waste material parameter weights (Section C4-2b)	**AK** A. CCP-TP-005 S. 4.4.13 S. 4.4.14 B. CCP-TP-005 S. 4.4.11 NOTE above S. 4.4.12 C. & G. CCP-TP-005 S. 4.9 D. HG: CCP-TP-093 (All) E. CCP-TP-500 (All) H. CCP-TP-005 S. 4.4.16 -4.4.21 I. CCP-TP-005 S. 4.4.27 VE: D, E & F: CCP-TP-500 (All)	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)** HG: Examined HSG BDR: BAHSGS100001 **(HG-1)** D, E, & F: VE BDR: RHBAPLVE100001 **(VE-1)**	Y	The memoranda attached to AK Attachments 6 and 8 for Container lists, Waste Form, Material Parameters, Prohibited Items, and Packaging were evaluated during A-11-12. The DTC screen shot with hold was also evaluated during A-11-12. AK Discrepancy Resolutions were verified during audit A-11-12. BAPL/CCP only performs HSG sampling.
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	NA	NA	During A-11-12 AK Documentation checklist (Attachment 1) for waste stream BT-T001 was verified.

	WAP Requirement[2]BAPL/CCP Audit A-12-10 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	
145a	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? A. Documentation that the waste container contents meet the definition of sealed sources per 10 CFR Part 30.4 and 10 CFR Part 835.2 (effective January 1, 2004) B. Documentation of the certification of the sealed sources as U.S. Department of Transportation Special Form Class 7 (Radioactive) Material per 49 CFR Part173.403 (effective October 1, 2003) C. Documentation of contamination survey results that validate the integrity of each sealed source per 10 CFR Part 34.27 (effective January 1, 2004). D. AK documentation does not indicate the use of VOCs or VOC-bearing materials as constituents of the sealed sources. 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. 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. (Section C4-2c)	NA	NA	NA	NA	This is not a LANL audit.
146	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? (Section C4-2c)	CCP-TP-005 S. 4.2.5 Att. 1	Y	NA	NA	During A-11-12 AK Documentation checklist (Attachment 1) for waste stream BT-T001 was verified.

	WAP Requirement[2]BAPL/CCP Audit A-12-10 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	
147	Does the generator site discrepancy analysis documentation (for acceptable knowledge additional and required documentation) indicate that if discrepancies are detected, the site may consider applying all hazardous waste numbers indicated in the required and additional information, but must assess and evaluate the information to determine the appropriate hazardous waste numbers consistent with RCRA requirements? (Section C4-2c)	CCP-TP-005 S. 4.9	Y	NA	NA	AK Discrepancy Resolutions were verified during audit A-11-12.
	TRAINING					
148	Does the generator site have procedures to ensure that all personnel involved with acceptable knowledge waste characterization have the following training, and is this training documented? A. WIPP WAP in Permit Attachment C and the TSDF-WAC specified in this permit B. State and Federal RCRA regulations associated with solid and hazardous waste characterization C. Discrepancy resolution and reporting D. Site-specific procedures associated with waste characterization using acceptable knowledge (Section C4-3a)	CCP-QP-002 S. 4.3.1	Y	Training/Qualification records for Acceptable Knowledge personnel performing characterization related activities. **(GEN-10)**	Y	
	PROCEDURES					
149	Has the generator site developed the following procedures, and are these procedures technically sufficient? A. Sites must prepare and implement a written procedure outlining the specific methodology used to assemble acceptable knowledge records, including the origin of the documentation, how it will be used, and any limitations associated with the information (e.g., identify the purpose and scope of a study that included limited sampling and analysis data). B. Sites must develop and implement a written procedure to compile the required acceptable knowledge record. C. Sites must develop and implement a written procedure that ensures unacceptable wastes (e.g., reactive, ignitable, corrosive) are identified and segregated from TRU mixed waste populations sent to WIPP. D. Sites must prepare and implement a written procedure to evaluate acceptable knowledge and resolve discrepancies. For example, if different sources of information indicate different hazardous wastes are present, then	A-D CCP-TP-005 S. 4.2, 4.3, 4.4 & 4.9 CCP-TP-500 (All) CCP-TP-068 (All) CCP-QP-005 S. 2.3 CCP-TP-001 S. 2.7, 4.1 & 4.2	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	The memoranda attached to AK Attachments 6 and 8 for Contain lists, Waste Form, Material Parameters, Prohibited Items, and Packaging were evaluated during A-11-12. The DTC screen shot with hold was also evaluated during A-11-12. AK Discrepancy Resolutions were verified during audit A-11-12.

	WAP Requirement[2]BAPL/CCP Audit A-12-10 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	
	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.					
149a	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: 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 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. 3. Review the compiled information to determine if the waste stream is compliant with the TSDF-WAC 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. 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. 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	E.1 - E.6 CCP-TP-005 S. 1.1, 4.2, 4.3 & 4.4 CCP-TP-500 (All)	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	The memoranda attached to AK Attachments 6 and 8 for Container lists, Waste Form, Material Parameters, Prohibited Items, and Packaging were evaluated during A-11-12. The DTC screen shot with hold was also evaluated during A-11-12. AK Discrepancy Resolutions were verified during audit A-11-12.

	WAP Requirement[2]BAPL/CCP Audit A-12-10 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	
	knowledge prior to packaging.					
149b	F. Sites shall ensure that results of audits of the TRU mixed waste characterization programs at the site are available in the records. 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 at the time of waste generation/packaging to control waste content, whereas any activities performed after 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. (Section C4-3b)	**F.)** CCP-PO-001 S. C4-3b and C4-3f CCP-QP-021 (All) WP 13-QA.03 (All) **G.)** CCP-TP-005 S. 4.2 - 4.4 & Att. 1	Y	NA	NA	Internal Surveillances and Source Document summaries were verified during A-11-12.
150	Does the site have implemented procedures which comply with the following criteria to establish acceptable knowledge records: A. Acceptable knowledge information shall be compiled in an auditable record, including a road map for all applicable information. 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. 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. D. A reference list shall be provided that identifies documents, databases, Quality Assurance protocols, and other sources of information that support the acceptable knowledge information. 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. (Section C4-3c)	**A-E** CCP-TP-005 S. 1.1, 4.2, 4.3, 4.4, 4.11 & Atts. 1, 4 & 8 CCP-TP-001 S. 2.7	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	During A-11-12 AK Documentation checklist (Attachment 1) for waste stream BT-T001 was verified.
151	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?	CCP-TP-005 S. 4.7	Y	NA	NA	An AK Sufficiency Determination is not being sought for any BAPL waste streams.

	WAP Requirement[2]BAPL/CCP Audit A-12-10 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	
	(Section C-0b)					
	AUGMENTATION OF ACCEPTABLE KNOWLEDGE					
152	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 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 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)	CCP-TP-005, S. 4.4, 4.5 & 4.7 CCP-TP-003 S. 4.0	Y	CCP AK Summary Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	During A-11-12, the WAP required traceability exercise was performed as well as the verification of the Waste Stream Characterization Checklist.
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	NA	NA	For this waste stream, there are no instances of AK discrepancies identified during characterization.
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 Report for Bettis RH TRU Waste, CCP-AK-BAPL-500 R2 **(AK-1)**	Y	The Waste Form Material Parameters, Prohibited Items, Packaging, Hazardous Constituents, and memoranda were evaluated during audit A-11-12.

	WAP Requirement[2]BAPL/CCP Audit A-12-10 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	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: 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 (Section C4-3e)	CCP-TP-005 S. 4.8 S. 4.9 Att. 10	Y	NA	NA	For this waste stream, there are no instances of AK discrepancies identified during characterization.
161	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? (Section C4-3e)	CCP-TP-005 S. 4.5 S. 4.8 S. 4.9 CCP-TP-003 S. 4.0	Y	NA	NA	The headspace gas information including batch data reports, random selection, and HSG Summary report were verified during A-11-12.

	WAP Requirement[2] BAPL/CCP Audit A-12-10 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	NA	NA	The headspace gas information including batch data reports, random selection, and HSG Summary report were verified during A-11-12.
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, 4.5 & Att. 1	Y	NA	NA	There are no applicable State hazardous waste codes for Pennsylvania
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	CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	
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	NA	NA	The headspace gas information including batch data reports, random selection, and HSG Summary report were verified during A-11-12.
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)	CCP-TP-003 S. 4.1 HG: NA	Y	CP:11:01776 – Transmittal of Waste Stream Profile Form for Waste Stream BT-T001, Bettis Atomic Power Laboratory **(GEN-3)**	Y	HG: BAPL/CCP only performs HSG sampling. Analysis is performed at INL/CCP Labs.

	WAP Requirement[2]BAPL/CCP Audit A-12-10 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	
	DATA QUALITY REQUIREMENTS					
168	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: 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. 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. 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. 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.	A. CCP-PO-001 S. C4-3f CCP-QP-021 (All) WP 13-QA.03 (All) B. CCP-TP-005 S. 4.6 C. CCP-TP-005 S. 4.0 D. CCP-TP-005 S. 2.2 S. 4.4 CCP-QP-002 S. 4.2.1	Y	NA	NA	During A-11-12 Internal Surveillance, AK accuracy report, and checklists were verified.
	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 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	E. CCP-TP-005 S. 2.2 S. 4.0 CCP-QP-002 S. 4.2.1	Y	NA	NA	During A-11-12 AK source document summaries for waste stream BT-T001 were verified.

	WAP Requirement[2]BAPL/CCP Audit A-12-10 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	
	parameters are addressed). (Section C3-9)					
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-PO-001 S. C4-3f CCP-TP-005 S. 4.6 S. 4.9 CCP-QP-021 (All) WP 13-QA.03 (All)	Y	NA	NA	During A-11-12 AK Discrepancy resolutions, AK accuracy report, and internal surveillance were verified.

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.

Personnel Contacted During the Audit by Area	
Nonconformances	Mak Walker Christine Gomez
Training	Ryan Martin
Records	Sheila Pearcy Cheryl Armijo
Acceptable Knowledge	Jim Luginbyhl Ken Lickliter Trey Greenwood
Headspace Gas Sampling	Irene Quintana
Visual Examination	Irene Quintana
WIPP Waste Information System/Waste Data System (WWIS/WDS)	Creta Kirkes Mike Strum
Waste Certification/Project Level Validation & Verification	Irene Quintana

Controlled
Copy

CCP-TP-068

Revision 8

CCP
Standardized Container Management

EFFECTIVE DATE: 09/28/2010

Larry Porter

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	03/23/2005	Initial issue.
1	04/15/2005	Revised to incorporate changes to address CBFO DRR comments.
2	04/13/2006	Revised to provide a consistent and standardized container management procedure.
3	10/19/2006	Revised in response to CAR No.: 06-037.
4	12/14/2006	Revised to address United States Department of Energy (DOE) Carlsbad Field Office (CBFO) Document Review Record (DRR) comments to Revision 3.
5	09/20/2007	Revised to incorporate changes to Attachment 1 and add Oakridge National Laboratory (ORNL) requirements.
6	07/13/2008	Revised to clarify the order of performance for efficiency and to reflect the fact that waste containers will be sampled by SUMMA® and Flammable Gas Analysis (FGA) as the Idaho National Laboratory (INL) Laboratory no longer provides hydrogen or methane results for SUMMA® samples.
7	05/28/2010	Revised in response to Corrective Action Report (CAR)-Los Alamos National Laboratory (LANL)-0006-09 and to clarify when a waste container must be put through container management.
8	09/28/2010	Revised to clarify instructions.

TABLE OF CONTENTS

1.0 PURPOSE 4
1.1 Scope 4

2.0 REQUIREMENTS 5
2.1 References 5
2.2 Training Requirements 5
2.3 Procedure Implementation Requirements 5
2.4 Equipment List 7
2.5 Precautions and Limitations 7
2.6 Prerequisite Actions 7
2.7 Definitions 7

3.0 RESPONSIBILITIES 8
3.1 Container Management Personnel 8
3.2 CCP VPM/Designee 9
3.3 CCP SPM 9
3.4 NDE Operator 9
3.5 Nondestructive Assay (NDA) Operator 9
3.6 HSG/Flammable Gas Analysis (FGA) Operator 10
3.7 Gas Generation Testing Program (GGTP) Operator 10
3.8 VE Operator 10
3.9 Host Facility Waste Handling Personnel 10
3.10 Facility Records Custodian 10

4.0 PROCEDURE 11
4.1 Scale Calibration Check 11
4.2 Retrievably Stored Waste Container Acceptance 12
4.3 Container Weighing 14
4.4 Container Traveler Initiation 15
4.5 NDE Process 17
4.6 NDA Process 17
4.7 Headspace Gas (HSG)/ Flammable Gas Analysis (FGA) Process 18
4.8 Gas Generation Testing (GGT) 20
4.9 Characterization Completion 20

5.0 RECORDS 22

LIST OF ATTACHMENTS

Attachment 1 – CCP Container Traveler (Label) 23
Attachment 2 – Container Inspection Report 24
Attachment 3 – CCP Scale Calibration Check and Container Weight Information 25
Attachment 4 – Structural Integrity and Distortion Inspections Criteria 26

1.0 PURPOSE

This procedure describes and implements the Central Characterization Project (CCP) management, control, and tracking of transuranic (TRU) waste containers during the characterization process.

1.1 Scope

This procedure applies to personnel who support CCP TRU waste characterization activities at various Host sites. The Host site shall use their procedures for container movement and handling. Container tracking and management through CCP activities will be conducted using this procedure.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*

Referenced Documents

- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-QP-005, CCP *TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*

2.2 Training Requirements

2.2.1 None.

2.3 Procedure Implementation Requirements

NOTE

The requirements listed in Section 2.3 provide each site with guidance to implement the standardized instruction in Section 4.0.

2.3.1 Within the constraints of this procedure and in order to meet operational needs, the CCP Vendor Project Manager (VPM)/Designee may direct containers as required to allow for process efficiencies or corrective action for nonconforming conditions. Attachment 1, CCP Container Traveler (Label) serves as the container status indicator throughout characterization activities.

2.3.2 If a Nonconformance Report (NCR) is initiated at any time in the CCP process (from the initial introduction of the container into the CCP process to shipment of the container to the Waste Isolation Pilot Plant [WIPP]), the affected containers shall have a CCP Hold Tag applied and be physically segregated if practical. Normally, the container(s) will not continue through the characterization process. If this is **NOT** the case, limitations or actions required in the approved NCR disposition shall be included on the CCP NCR Hold

Tag. In NO case, shall the container(s) proceed to shipment until the NCR disposition is complete.

2.3.3 NO retrievably stored (Legacy) waste container may enter the normal characterization process (i.e., real-time radiography [RTR], nondestructive assay [NDA], flammable gas analysis [FGA]/head space gas [HSG]) without a completed Attachment 2, Container Inspection Report. Retrievably stored (Legacy) waste containers must be characterized at Nondestructive Examination (NDE) first, unless otherwise directed by the VPM/Designee.

2.3.4 The inspection criteria in Attachment 4, Structural Integrity and Distortion Inspections Criteria, are used as a guide to determine if the container can be safely handled in the characterization activities. Containers that DO **NOT** meet container integrity requirements and are **NOT** safe to handle, shall be returned to the Host site. Containers that are unsatisfactory for Structural Integrity and Distortion Inspection, but are safe to handle, may be processed through the characterization activities.

2.3.5 Steps 4.2.1 through 4.2.5 may be performed in any order to make the inspection more efficient. Sub-steps of steps 4.2.1 through 4.2.5 must be performed as written. Step 4.2 may be performed while the drum is sitting on the scale to allow the weight to stabilize as long as the bottom of the drum has been inspected for integrity prior to placing on the scale.

2.3.6 Retrievably stored waste containers provided to the characterization process are normally stored in unheated storage areas. The CCP VPM will determine if outside temperature dropped below the freezing temperature of water (32° F) during the 24 hours prior to delivery of the retrievably stored waste containers. Based on this information, the VPM will determine the need to heat the incoming containers and how long to heat the containers prior to NDE to ensure no frozen liquids exist in the waste container.

2.3.7 Not all characterization activities documented in Section 4.0 are conducted in each CCP characterization process. Container Management personnel will N/A characterization activities **NOT** performed at their site.

2.3.8 CCP will transfer sludge and soil/gravel containers selected for coring and solids samples analysis to outside programs, if necessary.

2.3.9 Attachment 1 may be a label or a paper copy on the container, in a protective sheet holder, as necessary.

2.3.10 Containers that are required to be reevaluated by another characterization process (e.g., NDA high-efficiency neutron counter [HENC] to tomographic gamma scanner [TGS]) based on an NCR generated by the first process, do not require a new container traveler be placed on the container. The second process will still be required to report container and status to the VPM per the applicable step.

2.4 Equipment List

2.4.1 Calibrated scale.

2.4.2 Scale check weight(s).

2.5 Precautions and Limitations

2.5.1 **IF** steps in this procedure CAN **NOT** be completed as written, **THEN** work must be STOPPED, equipment placed in a safe configuration, AND the CCP VPM/Designee notified.

2.5.2 Workers who will be working in a radiation area must have read and signed that they understand the applicable authorized documents (e.g., Advanced Mixed Waste Treatment Project [AMWTP] Approved Method of Work [AMOW], Radiation Work Permit [RWP], etc.) as implemented by the Host site.

2.5.3 When a retrievably stored waste container is selected for both Gas Generation Testing (GGT) and coring/solids analysis, the waste container will be sent through coring/solids analysis before going to GGT. GGT SHALL be performed on the waste container after it has completed the coring/solids analysis so that it can be tested in the final packaging configuration. GGT may be performed no earlier than 38 days following the completion of coring/solids analysis.

2.5.4 The VPM/Designee will ensure containers characterized on Non-Certified equipment or under non-certified conditions (e.g., a higher calibration limit requiring a Tier 1 approval) at a certified site are controlled by a VPM Hold Tag.

2.6 Prerequisite Actions

2.6.1 None.

2.7 Definitions

2.7.1 None.

3.0 RESPONSIBILITIES

3.1 Container Management Personnel

NOTE
Container Management personnel may be CCP and/or Host site personnel as determined by CCP and the Host facility.

3.1.1 Verifies containers, or parent containers, are on the acceptable knowledge (AK) Tracking Spreadsheet.

3.1.2 Verifies containers have a legible radiological label/tag with a radiation dose equivalent rate of less than 200 millirem/hour (mrem/hr).

3.1.3 Performs container integrity inspection using Attachment 4, as a guide and documents on Attachment 2.

3.1.4 Performs container filter inspection and documents results on Attachment 2.

3.1.5 Performs scale calibration check and container weighing.

3.1.6 Records container weight information on Attachment 3, CCP Scale Calibration Check and Container Weight Information.

3.1.7 Completes and provides Attachments 2 and 3 to the CCP VPM/Designee.

3.1.8 Enters the Gross Weight, Waste Stream ID, and the Container ID Number on Attachment 1.

3.1.9 Affixes an Attachment 1 to containers designated for CCP characterization activities.

3.1.10 Provides direction to move containers, as required.

3.1.11 Assists with the segregation of deficient containers.

3.1.12 Assists with the segregation of CERTIFIED containers ready to be shipped for final disposal.

3.2 CCP VPM/Designee

3.2.1 Schedules container movements with the Host site.

3.2.2 Provides the technical supervision for the following:

[A] Operation and calibration check of the container weighing scales.

[B] Container filter inspections.

[C] Container integrity inspections.

3.2.3 Ensures that containers requiring visual examination (VE) for Previously Packaged Waste, are annotated on Attachment 1.

3.2.4 Ensures that containers selected for GGT, if required, are annotated on Attachment 1.

3.2.5 Reviews Attachments 2 and 3.

3.3 CCP SPM

3.3.1 Selects containers for Waste Analysis Plan (WAP)-compliant HSG sampling (S5000 waste streams) and coring/solids sampling analysis (S3000 and S4000 waste streams).

3.3.2 Notifies the CCP VPM/Designee of selections for these activities.

3.4 NDE Operator

3.4.1 Records and updates the applicable NDE information on Attachment 1.

3.4.2 Provides the container processing information (Container ID Number, Batch Data Report [BDR] Number, NCR Number if applicable, and reason for NCR) to the CCP VPM/Designee.

3.5 Nondestructive Assay (NDA) Operator

3.5.1 Records and updates the applicable NDA information on Attachment 1.

3.5.2 Provides the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the CCP VPM/Designee.

3.6 HSG/Flammable Gas Analysis (FGA) Operator

3.6.1 Records and updates the applicable HSG/FGA information on Attachment 1.

3.6.2 Provides the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the CCP VPM/Designee.

3.7 Gas Generation Testing Program (GGTP) Operator

3.7.1 Records that GGT Sampling and Analysis is complete on Attachment 1.

3.7.2 Provides the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the CCP VPM/Designee.

3.8 VE Operator

3.8.1 Ensures a new Attachment 1 is on the container after VE is completed.

3.8.2 Records and updates the applicable VE information on Attachment 1.

3.8.3 Provides the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the CCP VPM/Designee.

3.9 Host Facility Waste Handling Personnel

3.9.1 Performs movement of containers to/from the characterization units and container staging/storage areas.

3.10 Facility Records Custodian

3.10.1 Receives, processes, and transmits all records generated by this procedure in accordance with CCP-QP-008, *CCP Records Management*.

4.0 PROCEDURE

NOTE
Before implementing this procedure, see Procedure Implementation Requirements in Section 2.3.

4.1 Scale Calibration Check

4.1.1 On each day the scale is used, perform the following:

[A] **IF** the scale is an electronic scale,
THEN either verify the scale is turned ON, **OR** turn the power ON to the scale.

[B] Verify the following, **AND** record on Attachment 3:

[B.1] Scale ID #

[B.2] Location

[B.3] Scale Calibration Due Date

[B.4] Scale Calibration Date Valid (YES/NO)

[C] Check that the scale reads zero when **NOT** loaded.

[C.1] **IF** the scale DOES **NOT** read zero,
THEN re-zero the scale in accordance with the manufacturer's instructions.

[C.2] Perform a calibration check to verify the scale response is satisfactory as follows:

(a) Place a known Check Weight on the scale, **AND** verify the scale reads within the accuracy of the calibration (as listed on the calibration sticker or data sheet, as applicable).

[C.3] **IF** the scale calibration check is satisfactory,
THEN record SAT on Attachment 3, Scale Cal Check column.

[C.4] **IF** the scale reads outside of the calibration range, **THEN** SUSPEND WORK, record UNSAT on Attachment 3, Scale Cal Check column, **AND** notify the CCP VPM/Designee.

[C.5] Return the Check Weight to its storage location.

[D] Initial and date Attachment 3, Part 1, Scale Calibration Check Information.

4.2 Retrievably Stored Waste Container Acceptance

Container Management Personnel

4.2.1 Verify Container ID is on the AK Tracking Spreadsheet.

[A] **IF** Container ID is **NOT** on the AK Tracking Spreadsheet, **THEN** DO **NOT** accept the container, contact the VPM/Designee, **AND** return the container to the Host site.

4.2.2 Record Container ID on Attachment 2.

4.2.3 Determine that the container is safe to handle by performing a container integrity inspection, using Attachment 4 as a guide.

[A] **IF** NO can be applied to all of the questions on Attachment 4,
THEN circle SAT on Attachment 2, circle YES on Attachment 2, **AND** proceed with the inspection.

[B] **IF** YES can be applied to any question on Attachment 4,
THEN notify the VPM/Designee.

VPM/Designee

[B.1] Inspect the suspect container in coordination with appropriate Host site personnel.

Container Management Personnel

[B.2] **IF** the VPM/Designee determines that the container can be safely handled in the characterization activities,
THEN circle SAT on Attachment 2, circle YES on Attachment 2, document the VPM/Designee

determination in the Comments section, **AND** proceed with the inspection.

[B.3] **IF** the VPM/Designee determines that the container CAN **NOT** be safely handled,
THEN circle UNSAT on Attachment 2, and circle NO on Attachment 2, **AND** return the container to the Host site.

4.2.4 Perform container filter inspection, **AND** document on Attachment 2:

[A] Check container filter vent(s) are legibly marked with:

[A.1] Manufacturer **AND** date of manufacture, lot number, or serial number,
AND record all data available in Attachment 2, Column 5.

[A.2] Confirm the filter is on the CBFO Approved Filter Vents list.

[B] Check filter for proper gasket seating, tightness, **AND** height above container as follows:

[B.1] Filter gasket is slightly compressed, when visible.

[B.2] Filter is snug against container.

[B.3] Filter is **NOT** extended excessively above the top rim of container.

[C] **IF** the filter vent(s) meets the criteria listed in steps 4.2.4[A] through 4.2.4[B.3],
THEN circle YES on Attachment 2, **AND** proceed with the inspection.

[D] **IF** the filter vent(s) DOES **NOT** meet the criteria listed in steps 4.2.4[A] through 4.2.4[B.3],
THEN DO **NOT** accept the container, contact the VPM for further direction.

4.2.5 Inspect each container for a completed radiological label/tag, **AND** ensure the completed radiological label/tag is legible and records a radiation dose equivalent of less than 200 mrem/hr.

[A] **IF** radiological label/tag or survey reports less than 200 mrem/hr is legible and complete,
THEN circle SAT on Attachment 2, **AND** proceed with the inspection.

[B] **IF** NO radiological label/tag is attached to the container,
THEN SUSPEND WORK on the container, and perform the following:

[B.1] Notify the VPM/Designee

[B.2] Request a radiation survey be performed

[B.3] Verify that a new radiological label/tag is attached

[B.4] Repeat step 4.2.5[A].

[C] **IF** radiological label/tag or survey reports greater than or equal to 200 mrem/hr,
THEN SUSPEND WORK on the container, notify the VPM/Designee, return the container to the Host site, **AND** circle UNSAT on Attachment 2.

4.2.6 Repeat steps 4.2.1 through 4.2.5[C] as required for additional containers.

NOTE

This information must be available before characterization of the container through NDA.

Container Management Personnel

4.3 Container Weighing

4.3.1 Load the container onto the scale, **AND** allow the scale reading to stabilize.

4.3.2 Record the Container ID Number on Attachment 3.

4.3.3 Record the container's Gross Weight (kilogram [kg]) on Attachment 3.

4.3.4 Initial and date Attachment 3 for obtaining the gross weight.

4.3.5 Remove the container from the scale.

4.3.6 Repeat steps 4.3.1 through 4.3.5 as required for additional containers.

4.4 Container Traveler Initiation

4.4.1 **IF** the container is Legacy waste,
THEN perform the following:

[A] Enter the Container ID Number on Attachment 1, **AND** initial and date.

[B] Enter Waste Stream ID on Attachment 1, **AND** initial and date Attachment 1.

[C] Record the container's Gross Weight (kg) on Attachment 1 from Attachment 3, **AND** initial and date.

[D] Affix Attachment 1 label or place a paper copy on the container, in a protective sheet holder, as necessary.

[E] Repeat steps 4.4.1[A] through 4.4.1[D] as required for additional containers.

[F] Print name, sign, and date the following completed forms:

[F.1] Attachment 2

[F.2] Attachment 3

[G] Submit Attachments 2 and 3 to the CCP VPM/Designee for review.

4.4.2 **IF** the container is Characterized by VE,
THEN perform the following:

<u>VE Operator</u>

[A] Make a copy of the VE Data Sheet ensuring the weight and percent fill data is available.

[B] Verify that a legible, completed radiological label/tag is attached to the waste container, **AND** that it records a radiation dose equivalent of ≤200 mrem/hr.

[B.1] **IF** no radiological label/tag is attached to the container,
THEN request that the RCT perform the required survey, **AND** attach a completed radiological label/tag.

[B.2] **IF** the radiological label/tag or survey reports a radiation dose equivalent of >200 mrem/hr,
THEN initiate an NCR on the container, notify the site project manager (SPM), **AND** return the container to the Host site.

[C] Enter the Container ID, Gross Weight (kg), Waste Stream ID, **AND** initial and date Attachment 1.

[D] Enter N/A in all NDE section data and associated Initial/Date blanks on Attachment 1.

[E] Mark the appropriate VE process to be performed (Newly Generated Waste or VE for Previously Packaged Waste) on Attachment 1.

[F] Document the VE Completion Date on Attachment 1, **AND** initial and date.

[G] Place a copy of the VE Data Sheet in a protective sheet holder and attach to the container.

[H] Provide the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the CCP VPM/Designee.

CCP VPM/Designee

4.4.3 Review, print name, sign, and date all Attachment 2s and all Attachment 3s, **AND** submit to the Facility Records Custodian.

Facility Records Custodian

4.4.4 Receive, process, and transmit Attachment 2s and Attachment 3s in accordance with CCP-QP-008.

4.5 NDE Process

NOTE
This section DOES **NOT** apply to Newly Generated Waste that has been processed through VE or retrievably stored waste containers that are processed in VE and returned to complete the characterization process.

NDE Operator

4.5.1 Verify an Attachment 1 is on the container or a paper copy is placed on the container, in a protective holder, as necessary.

[A] **IF** NO Attachment 1 is on the container,
THEN SUSPEND WORK on container, **AND** notify the CCP VPM/Designee.

[B] **IF** an Attachment 1 is on the container,
THEN perform the following:

[B.1] NDE in accordance with approved procedures.

4.5.2 Document the NDE completion date on Attachment 1, **AND** Initial and Date.

4.5.3 **IF** the container is rejected,
THEN ensure a CCP HOLD TAG is attached to the container.

4.5.4 Provide the container processing information (Container ID Number, BDR Number, NCR Number if applicable, reason for NCR) to the CCP VPM/Designee.

4.5.5 Place a copy of the Radiography Data Sheet in a protective sheet holder attached to the waste container.

4.6 NDA Process

NDA Operator

4.6.1 Verify an Attachment 1 is on the container or a paper copy is placed on the container, in a protective holder, as necessary, **AND** a copy of the Newly Generated VE or Radiography Data Sheet is available.

[A] **IF** NO Attachment 1 is on the container,
THEN SUSPEND WORK on container, **AND** notify the CCP VPM/Designee.

[B] **IF** an Attachment 1 is on the container,
THEN perform NDA in accordance with approved procedures.

4.6.2 Document the NDA completion date on Attachment 1, **AND** Initial and Date.

4.6.3 Document the Preliminary Plutonium (Pu)-239 FGE value (plus 2-sigma) on Attachment 1, **AND** Initial and Date on Attachment 1.

[A] **IF** the preliminary Pu-239 fissile gram equivalent (FGE) value (plus 2-sigma) is **NOT** immediately available,
THEN record N/A on Attachment 1, **AND** Initial and Date on Attachment 1.

4.6.4 **IF** the container is rejected,
THEN ensure a CCP HOLD TAG is attached to the container.

4.6.5 Provide the container processing information (Container ID Number, BDR Number, NCR Number, reason for NCR) to the CCP VPM/Designee.

HSG/FGA Personnel

NOTE

Procedure instructions for waste containers requiring WAP-compliant SUMMA® sampling begin with step 4.7.1. Procedure instructions for waste containers requiring FGA sampling begin with step 4.7.2.

4.7 Headspace Gas (HSG)/ Flammable Gas Analysis (FGA) Process

4.7.1 **IF** a waste container is identified for a WAP-compliant HSG SUMMA® sample,
THEN perform the following:

[A] Verify an Attachment 1 is on the container or a paper copy is placed on the container, in a protective holder, as necessary.

[A.1] **IF** NO Attachment 1 is on the container
THEN SUSPEND WORK on the waste container
AND notify the CCP VPM/Designee.

[B] Move the waste container to the thermal conditioning area.

[C] Record the date and time the waste container is placed in the Thermal Conditioning Area on Attachment 1, **AND** initial the entry.

[D] **AFTER** the waste container has been in the Thermal Conditioning Area for a minimum of 72 hours, **AND** the CCP VPM/Designee schedules the waste container for SUMMA® sampling,
THEN move the container to the HSG SUMMA® sampling area.

[E] GO TO step 4.7.3.

4.7.2 **IF** a waste container is identified for FGA sampling and analysis,
THEN perform the following:

[A] Verify an Attachment 1 is on the container or a paper copy is placed on the container, in a protective holder, as necessary.

[A.1] **IF** NO Attachment 1 is on the container
THEN SUSPEND WORK on the waste container,
AND notify the CCP VPM/Designee.

[B] **WHEN** FGA is ready to sample the waste container,
THEN move the waste container to the FGA sampling area.

[C] GO TO step 4.7.3.

4.7.3 Perform HSG **AND/OR** FGA Sampling in accordance with approved procedures.

4.7.4 Document the HSG/FGA Sampling completion date on Attachment 1, **AND** Initial and Date.

4.7.5 **IF** the container is rejected,
THEN ensure a CCP HOLD TAG is attached to the container.

4.7.6 Provide the container processing information (Container ID Number, BDR Number, NCR Number, reason for NCR) to the CCP VPM/Designee.

4.8 Gas Generation Testing (GGT)

NOTE
Waste containers are selected for GGT based on waste stream, implementation of the Long-Term Objective for the Unified Flammable Gas Test procedure, or other factors. The VPM/Designee will designate waste containers for GGT as directed by the SPM.

4.8.1 Move the waste containers identified for GGT Sampling and Analysis to the Designated Staging Area.

[A] Verify an Attachment 1 is on the container or a paper copy is placed on the container, in a protective holder, as necessary.

[A.1] **IF** NO Attachment 1 is on the container, **THEN** SUSPEND WORK on container, **AND** notify the CCP VPM/Designee.

4.8.2 **IF** the waste container has been identified for processing in GGT, **THEN** circle YES, **AND** Initial and Date on Attachment 1.

4.8.3 **IF** the waste container DOES **NOT** require GGT, **THEN** circle NO, record N/A in the GGT Completion Date, Initial and Date on Attachment 1, **AND** have the waste container moved to its designated staging area.

4.8.4 Perform GGT in accordance with approved procedures.

4.8.5 Document the GGT completion date on Attachment 1, **AND** Initial and Date.

4.8.6 **IF** the container is rejected, **THEN** ensure a CCP HOLD TAG is attached to the container.

4.8.7 Provide the container processing information (Container ID Number, BDR Number, NCR Number, reason for NCR) to the CCP VPM/Designee.

4.9 Characterization Completion

Container Management Personnel

4.9.1 **IF** Attachment 1 is a label on the container, **THEN** remove all copies of characterization data sheets, **AND** forward to the VPM/Designee for disposition.

4.9.2 **IF** Attachment 1 is a paper copy,
THEN remove the Attachment 1 and all copies of characterization data sheets, **AND** forward to the VPM/Designee for disposition.

VPM/Designee

4.9.3 Forward paper copy of Attachment 1 to the Facility Records Custodian.

Facility Records Custodian

4.9.4 Receive, process, and transmit the paper copy of Attachment 1 in accordance with CCP-QP-008.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Nonpermanent

[A] Attachment 1 – CCP Container Traveler (Label), paper copy only

[B] Attachment 2 – Container Inspection Report

[C] Attachment 3 – CCP Scale Calibration Check and Container Weight Information

Attachment 1 – CCP Container Traveler (Label)

Container Management Personnel:

Container ID:_____ _____ / _____
Date Initials

Waste Stream ID:_____ _____ / _____
Date Initials

Gross Weight:_____kg. _____ / _____
Date Initials

NDE

NDE: _____ _____ / _____
(Completion Date) Date Initials

NDA

NDA:_____ _____ / _____
(Completion Date) Date Initials

Preliminary Pu-239 FGE: _____ _____ / _____
Value (Plus 2-sigma) Date Initials

HSG

Container Placed in HSG Thermal Conditioning Area: _____/_____/_____
Date Time Initials

HSG:_____ _____ / _____
(Completion Date) Date Initials

FGA

FGA:_____ _____ / _____
(Completion Date) Date Initials

GGT

Selected for GGT (circle one)? YES NO _____ / _____
Date Initials

GGT:_____ _____ / _____
(Completion Date) Date Initials

VE

☐ Newly Generated Waste ☐ VE for Previously Packaged Waste

VE:_____ _____ / _____
(Completion Date) Date Initials

Attachment 2 – Container Inspection Report

Safe to Handle YES/NO		Container ID Number	Structural Integrity and Distortion Inspection (Circle)		Filters meet requirements YES/NO		Filter Information (Manufacturer, date of manufacture, lot number, unique serial number as applicable)	Rad Survey Label (Circle)	
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT
YES	NO		SAT	UNSAT	YES	NO		SAT	UNSAT

Comments:

Completed by: _____ _____ _____
Print Name Signature Date

CCP VPM/Designee Verification: _____ _____ _____
Print Name Signature Date

Attachment 3 – CCP Scale Calibration Check and Container Weight Information

PART I
Scale Calibration Check Information

Scale ID #	Location	Scale Calibration Due Date	Scale Calibration Date Valid (Yes / No)	Scale Cal Check (Sat / Unsat)	Initials	Date

PART II
Container Weight Information

Container ID #	Gross Weight (kg)	Initial	Date

Container Management Personnel: _____ _____ _____
Print Name Signature Date

CCP VPM/Designee Verification: _____ _____ _____
Print Name Signature Date

Attachment 4 – Structural Integrity and Distortion Inspections Criteria

CONTAINER EXAMINATION		DISCUSSION OF CRITERIA
1.	Is the payload container obviously degraded?	Obviously degraded means clearly visible and potentially significant defects in the payload container or payload container surface.
2.	Is there evidence that the payload container is, or has been, pressurized?	Pressurization can be indicated by a fairly uniform expansion of the sidewalls, bottom or top. Past pressurization can be indicated by a notable outward deflection of the bottom or top. Verify that the waste container is not warped.
3.	Is there any potentially significant rust or corrosion such that wall thinning, pin holes, or breaches are likely or the load-bearing capacity is suspect?	Rust shall be assessed in terms of its type, extent, and location. Pitting, pocking, flaking, or dark coloration characterizes potentially significant rust or corrosion. This includes the extent of the payload container surface area covered, thickness, and, if it occurs in large flakes or built-up (caked) areas. Rusted payload containers may **NOT** be accepted if: • Rust is present in caked layers or deposits. • Rust is present in the form of deep metal flaking, or built-up areas of corrosion products. In addition, the location of rust should be noted; for example on a waste container: top lid; filter region; locking chine; top one-third, above the second rolling hoop; middle one-third, between the first and second rolling hoops; bottom one-third, below the second rolling hoop; and on the bottom. Payload containers may still be considered acceptable if the signs of rust show up as: • Some discoloration on the payload container • If rubbed would produce fine grit or dust or minor flaking (such that wall thinning does not occur)
4.	Are any of the following apparent? • wall thinning • pin holes • breaches	Wall thinning, pin holes, and breaches can be a result of rust/corrosion (see discussion for #3).
5.	Are there any split seams, tears, obvious holes, punctures (of any size), creases, broken welds, or cracks?	Payload containers with obvious leaks, holes or openings, cracks, deep crevices, creases, tears, broken welds, sharp edges or pits, are either breached or on the verge of being breached. Verify that there is no warpage that could cause the container to be unstable or prevent it from fitting properly in the applicable package.
6.	Is the load-bearing capacity suspect?	The load-bearing capacity could be reduced for excessive rust (see discussion for #3), wall thinning (see discussion for #4), breaches, cracks, creases, broken welds, etc. (see discussion for #5).

Attachment 4 – Structural Integrity and Distortion Inspections Criteria (Continued)

CONTAINER EXAMINATION		DISCUSSION OF CRITERIA
7.	Is the payload container improperly closed?	Inspect the fastener and fastener ring (chine), if applicable, for damage or excessive corrosion. Check the alignment of the fastener to ensure that it is in firm contact around the entire lid and the payload container will not open during transportation.
8.	Are there any dents, scrapes, or scratches that make the payload container's structural integrity questionable or prevent the top and bottom surfaces from being parallel?	Deep gouges, scratches, or abrasions over wide areas are not acceptable. If top and bottom surfaces are not parallel, this would indicate that the container is warped. Dents should be less than ¼ inch deep by 3 inches long and between ½ inch to 6 inches wide. All other dents must be examined to determine impact of structural integrity.
9.	Is there discoloration which would indicate leakage or other evidence of leakage of material from the payload container?	Examine the payload container regions near vents, top lid fittings, bottom fittings, welds, seams and intersections of one or more metal sheets or plates. Payload containers must be rejected if evidence of leakage is present.
10.	Is the payload container bulged?	For the purposes of this examination, bulging is indicated by: • A fairly uniform expansion of the sidewalls, bottom, or top (e.g., in the case of a waste container, either the top or bottom surface protrudes beyond the planar surface of the top or bottom ring); • A protrusion of the side wall (e.g., in the case of a waste container, beyond a line connecting the peaks of the surrounding rolling hoops or a line between a surrounding rolling hoop and the bottom or top ring); or • Expansion of the sidewall (e.g., in the case of a waste container, such that it deforms any portion of a rolling hoop).

NMED COMMENTS ON THE
BETTIS ATOMIC POWER LABORATORY /CENTRAL
CHARACTERIZATION PROJECT (BAPL/CCP) AUDIT A-12-10

NMED's review indicated that the body of the Audit Report and the C6 checklists generally appear to address the applicable elements. NMED provides the following comments for the Permittees consideration:

1. Question 1 of the C6 Checklist indicates that the citation given, CCP-PO-001, Section B-0a, answers the question. This citation does not exist. The correct citation should be CCP-PO-001, Section C-0a.

Response: The section reference has been changed to S. C-0a on the revised C6-1 Checklist.

2. Question 1 of the C6 Checklist indicates that the citation given, CCP-TP-005, Section 4.4.8, NOTE above, answers the question. This citation does not answer the question referring to the definition of a waste stream. The correct citation should be CCP-TP-005, Section 4.4.11, NOTE above.

Response: The section reference has been changed to CCP-TP-005, Section 4.4.11, NOTE above on the revised C6-1 Checklist.

3. Question 2 of the C6 Checklist indicates that the citations given, CCP-TP-005, Sections 4.4.11 and 4.4.12. These citations do not answer the question referring to the assignment of a Summary Category Group. The correct citations should be CCP-TP-005, Sections 4.4.14 and 4.4.15.

Response: The section reference has been changed to CCP-TP-005, Sections 4.4.14 and 4.4.15 on the revised C6-1 Checklist.

4. Question 3 of the C6 Checklist indicates that the citation given, CCP-TP-005, Section 4.4.10 NOTE above, answers the question. This citation does not exist. The correct citation should be CCP-TP-005, Section 13, NOTE above.

Response: The section reference has been changed to CCP-TP-005, Section 4.4.13, NOTE above on the revised C6-1 Checklist.

5. Question 7 of the C6 Checklist indicates that the citation given, CCP-TP-005, Section 4.4.11, answers the question. This citation does not answer the question, which discusses Summary Category Group selection. The correct citation should be CCP-TP-005, Section 4.4.14.

Response: The section reference has been changed to CCP-TP-005, Section 4.4.14 on the revised C6-1 Checklist.

6. Question 8 of the C6 Checklist indicates that the citations given, CCP-TP-005, Sections 4.4.13, 4.4.14, 4.4.24, 4.4.28, and 4.4.31 [K], [L], & [M] answer the question. Sections 4.4.13, 4.4.14, and 4.4.28 do not answer the question referring to hazardous characteristics. Section 4.4.31 [K], [L], and [M] does not exist. The correct citations should be CCP-TP-005, 4.4.16, 4.4.17, 4.4.27, 4.4.31, and 4.4.34 [K], [L], & [M].

Response: The section reference has been changed to CCP-TP-005, Section 4.4.16, 4.4.17, 4.4.27, 4.4.31, and 4.4.34 [K], [L], & [M] *on the revised C6-1 Checklist.*

7. Question 9 of the C6 Checklist indicated that the citations given, CCP-TP-005, Sections 4.4.28 & 4.4.31 [K] answer the question. Section 4.4.28 does not answer the question referring to incompatible materials and Section 4.4.31 [K] does not exist. The correct citations should be CCP-TP-005, Sections 4.4.31 & 4.4.34 [K].

Response: The section reference has been changed to CCP-TP-005, Section 4.4.31 & 4.4.34 [K]

8. Questions 9 and 149 of the C6 Checklist indicate that the citation given, CCP-TP-068, Section 4.2, 4.4, and Attachment 1.2 answers the question. The procedure (CCP-TP-068) was not included in the Audit Report in both hard and electronic copies.

Response: Added procedure both hard and electronic and verified the citations in C6-1 Checklist.

9. Question 25 of the C6 Checklist indicates that the citations given, CCP-TP-005, Sections 4.4.8, 4.4.13, 4.4.14, 4.4.24, 4.4.28, and 4.4.31 [K], [L], & [M] answer the question. Sections 4.4.8, 4.4.13, 4.4.14, and 4.4.28 do not answer the question referring to utilize acceptable knowledge to delineate data for characterization and Section 4.4.31 [K], [L], & [M] does not exist. The correct citations should be CCP-TP-005, Sections 4.4.11, 4.4.16, 4.4.17, 4.4.27, 4.4.31, and 4.4.34 [K], [L]. & [M].

Response: The section reference has been changed to CCP-TP-005, Section 4.4.11, 4.4.16, 4.4.17, 4.4.27, 4.4.31, and 4.4.34 [K], [L], & [M] on the revised C6-1 Checklist.

10. Question 30 of the C6 Checklist indicates that the citations given, CCP-TP-005, Sections 4.4.8, 4.4.13, 4.4.14, 4.4.24, 4.4.28, and 4.4.31 [K], [L], & [M] answer the question. Sections 4.4.8, 4.4.13, 4.4.14, and 4.4.28 do not answer the question referring to ensure that Data Quality Objectives are met and Section 4.4.31 [K], [L], & [M] does not exist. The correct citations should be CCP-TP-005, Sections 4.4.11, 4.4.16, 4.4.17, 4.4.27, 4.4.31, and 4.4.34 [K], [L]. & [M]. Question 30 of the C6 Checklist indicates that the citations given, CCP-TP-005, Sections 4.4.8, 4.4.13, 4.4.14, 4.4.24, 4.4.28, and 4.4.31 [K], [L], & [M] answer the question. Sections 4.4.8, 4.4.13, 4.4.14, and 4.4.28 do not answer the question referring to ensure that Data Quality Objectives are met and Section 4.4.31 [K], [L], & [M]

does not exist. The correct citations should be CCP-TP-005, Sections 4.4.11, 4.4.16, 4.4.17, 4.4.27, 4.4.31, and 4.4.34 [K], [L]. & [M].

Response: The section reference has been changed to CCP-TP-005, Section 4.4.11, 4.4.16, 4.4.17, 4.4.27, 4.4.31, and 4.4.34 [K], [L], & [M] on the revised C6-1 Checklist.

11. Question 138 of the C6 Checklist indicates that the citations given, CCP-TP-005, Sections 4.4.13-4.4.18, answer the question. This is partially correct for 4.4.16-4.4.18. Sections 4.4.13-4.4.15 discusses the Waste Matrix Codes and the Question 138 refers to the assignment of EPA hazardous waste numbers. The correct citations should be CCP-TP-005, Sections 4.4.16-4.4.21.

Response: The section reference has been changed to CCP-TP-005, Section 4.4.16-4.4.21 on the revised C6-3 Checklist.

12. Questions 140 and 141of the C6 Checklist indicates that the citation given, CCP-TP-005, Section 4.4.2 answers the question. This is incorrect in that Section 4.4.2 discusses the waste meeting the definition of defense relationship and the question does not query defense relationship. The correct citation should be CCP-TP-005, Section 4.4.5.

Response: The section reference has been changed to CCP-TP-005, Section 4.4.5 on the revised C6-3 Checklist.

13. Question 144, Part A, and 168, Part A of the C6 Checklist indicate that the citations given, CCP-TP-005, Sections 4.4.10 and 4.4.11 answer the question. This is incorrect in that these citations discuss the definition of a waste steam and not assigning the physical waste form. The correct citations should be CCP-TP-005, Sections 4.4.13 and 4.4.14.

Response: The section reference has been changed to CCP-TP-005, Sections4.4.13 and 4.4.14 and the correct citation was corrected for CCP-PO-001, Section C4-3f, rather than B4-3f.

14. Question 144, Part B of the C6 Checklist indicate that the citation given, CCP-TP-005, Sections 4.4.8, NOTE above and 4.4.9 answer the question. Section 4.4.8, Note above does not exist and Section 4.4.9 discusses documenting and resolving discrepancies regarding AK information. The question discusses Waste Matrix Codes. The correct citations should be CCP-TP-005, Sectins4.4.11, Note above and 4.4.12.

Response: The section reference has been changed to CCP-TP-005, Section 4.4.11, NOTE above and 4.4.12 on the revised C6-3 Checklist.

15. Question 144, Part H of the C6 Checklist indicates that the citations given, CCP-TP-005, Sections 4.4.13-4.4.18, answer the question. This is partially correct for 4.4.16-4.4.18. Sections 4.4.13-4.4.15 discusses the Waste Matrix Codes and the Question 138 refers to the assignment of EPA hazardous waste numbers. The correct citations should be CCP-TP-005, Sections 4.4.16-4.4.21.

Response: The section reference has been changed to CCP-TP-005, Section 4.4.16-4.4.21 on the revised C6-3 Checklist.

16. Question 144, Part I of the C6 Checklist indicates that the citation given, CCP-TP-005, Section 4.4.24 answers the question. The citation given refers to radiological data and not estimating material parameter weights as the question states. The correct citation should be CCP-TP-005, Section 4.4.27.

Response: The section reference has been changed to CCP-TP-005, Section 4.4.27 on the revised C6-3 Checklist.

17. Question 149b of the C6 Checklist indicates that the citation given, CCP-PO-001, Section B4-3f answers the question. This citation does not exist. The correct citations should be CCP-PO-001, Sections C4-3b and C4-3f.

Response: The section reference has been changed to CCP-PO-001, Sections C4-3b and C4-3f on the revised C6-3 Checklist.

18. Question 156 of the C6 Checklist indicates that the citation given, CCP-TP-005, Section 4.4.14 answers the question. This citation discusses Waste Matrix Codes and the question refers to the assignment of toxicity characteristic EPA numbers. The correct citation should be CCP-TP-005, Section 4.4.17.

Response: The section reference has been changed to CCP-TP-005, Section 4.4.17 on the revised C6-3 Checklist.

19. Question 164 of the C6 checklist indicates that the citation given, CCP-TP-002, (All) answers the question. This citation is incorrect in that it refers to AK reconciliation of DQOs and reporting characterization data and the question actually refers to headspace gas characterization. The correct citation should be CCP-TP-003, Attachments 3 & 4.

Response: The section reference has been changed to CCP-TP-003, Attachments 3&4 on the revised C6-3 Checklist.

20. Question 167 of the C6 Checklist indicates that the citation given, CCP-TP-002 (All) answers the question. The citation is incorrect in that it refers to AK reconciliation of DQOs and reporting characterization data and the question actually refers to headspace gas characterization. The correct citation should be CCP-TP-003, Section 4.1.

Response: The section reference has been changed to CCP-TP-003, Section 4.1 on the revised C6-3 Checklist.

21. Question 169 of the C6 Checklist indicates that the citation given, CCP-PO-001, Section B4-3f answers the question. This citation does not exist. The correct citation should be CCP-PO-001, Section C4-3f.

Response: The section reference has been changed to CCP-PO-001, Section C4-3f on the revised C6-3 Checklist.