

United States Government

Department of Energy

Carlsbad Field Office
Carlsbad, New Mexico 88221

memorandum



DATE: September 24, 2008

REPLY TO
ATTN OF: CBFO:NTP:NC:GS:08-0883:UFC 5822.00

SUBJECT: Expansion of AMWTP Recertification to include Container-in-Container Sampling Method – Audit A-08-09

TO: Elizabeth Sellers, DOE-ID Manager

The Carlsbad Field Office (CBFO) conducted audit A-08-09 on June 24-25, 2008 to evaluate the container-in-container sampling process performed to characterize and certify waste as required by Section II.C2.c of the WIPP Hazardous Waste Facility Permit. The certification audit performed for sampling of Summary Category Group S3000 homogeneous solids and S4000 soils/gravel, and generation-level data verification of S3000 homogeneous solids and S4000 soils/gravel container-in-container sampling methods. The technical and quality assurance (QA) programs were found to be in compliance with the "Waste Analysis Plan" (WAP) of the WIPP Hazardous Waste Facility Permit (HWFP), and the CBFO Quality Assurance Program Document (QAPD). The audit team also determined that INST-OI-75, *Container-in-Container Sampling* procedure was effectively implemented.

Based on the results of the audit and conditions and limitations provided by the New Mexico Environment Department (NMED) and the U.S. Environmental Protection Agency (EPA), the CBFO is including the container-in-container sampling method into the AMWTP certification. This expansion memo reflects the revision to Attachment 3, adding INST-OI-75, *Container-in-Container Sampling* procedure to its current certification. The attachments to this memorandum contain complete lists of currently certified processes, equipment, and procedures. TRU waste certification, characterization, or transportation using significantly revised or new processes, procedures, or systems must be evaluated by the CBFO prior to implementation.

080938



Characterization Process	S3000 Homogeneous solids		S5000 Debris	
	Newly generated	Retrievably- Stored	Newly generated	Retrievably- Stored
	Acceptable Knowledge	N/A	Approved	Approved
Load Management	N/A	Approved	Approved	Approved
Data Validation & Verification (V&V)	Approved	Approved	Approved	Approved
Visual Examination (VE)	Approved	N/A	Approved	N/A
Solid Sampling Activities *	Approved	Approved	N/A	N/A
Headspace Gas Sampling & Analysis (both canister & online techniques)	Approved	Approved	Approved	Approved
Nondestructive assay (NDA)	N/A	Approved	Approved	Approved
Real-time Radiography (RTR)	N/A	Approved	N/A	Approved
WIPP Waste Information System (WWIS)	Approved	Approved	Approved	Approved

*Solid Sampling Analysis is performed at the INL TWCP. Coring activities of soils/gravel (S4000) waste from other generator sites is approved.

TRU waste characterization, certification, or transportation using significantly revised or new processes, procedures, or systems must be evaluated by the CBFO prior to their implementation. Included in this memo are the following attachments:

- *Attachment 1* describes the AMWTP certification program status,
- *Attachment 2* contains the equipment certified at the AMWTP,
- *Attachment 3* contains the certified AMWTP procedures, and
- *Attachment 4* specific AMWTP waste characterization process elements that must be reported. These process elements are identified as Tier 1 changes and Tier 2 changes. The AMWTP shall not ship for disposal at WIPP any wastes affected by Tier 1 process element change without prior CBFO approval. AMWTP shall report Tier 2 changes to CBFO. AMWTP procedures shall be revised as necessary to incorporate this reporting and approval process.


David C. Moody
Manager

Attachment(s)

cc: w/attachments

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R. Provencher, DOE-ID	ED
J. Wells, DOE-ID	ED
E. Schweinsberg, AMWTP	ED
K. Torres, AMWTP	ED
J. Mousseau, AMWTP	ED
M. Eagle, EPA	ED
J. Edwards, EPA	ED
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R. Joglekar, EPA	ED
J. Bearzi, NMED	ED
S. Zappe, NMED	ED
D. Kump, WTS	ED
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D. Hofer, WTS	ED
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P. Gilbert, LANL	ED
G. Lyshik, LANL	ED
W. Ledford, CTAC	ED
CTAC Document Coordinator	
WIPP Operating Record	
CBFO M&RC	

*ED denotes electronic distribution

AMWTP CERTIFICATION PROGRAM STATUS

The CBFO Director of the Office of the National TRU Program and the Quality Assurance Manager have evaluated the documentation supporting the container-in-container sampling process performed to characterize and certify waste. Attachments 2 and 3 contain complete lists of all certified equipment and procedures. Attachment 4 contains specific AMWTP waste characterization process elements that must be reported quarterly to the EPA.

STATUS

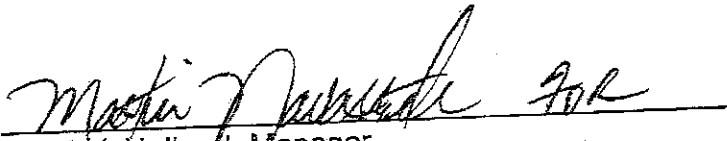
All program elements remain current and complete.

- The following required site documents that demonstrate how the AMWTP complies with the CBFO requirements are current and effectively implemented.
 - **Certification Plan for INL Transuranic Waste**, MP-TRUW-8.1, Revision 16, (CBFO:NTP:CF:KJB:08-0800:UFC 5822 dated July 7, 2008).
 - **Quality Assurance Project Plan**, MP-TRUW-8.2, Revision 11, (CBFO:NTP:CF:GS:08-0865:UFC 5822 dated August 29, 2008).
 - **CH-TRAMPAC**, MP-TRUW-8.3, Revision 7 (CBFO:NTP:MRB:GS:08-0619:UFC:5822.00 dated January 24, 2008).
- **Audit A-08-09** Final Audit Report was issued to NMED on July 15, 2008.
- NMED approved the Final Audit Report A-08-09 on August 28, 2008.
- EPA concurrence on the recertification memorandum was issued on September 23, 2008.

RECOMMENDATION

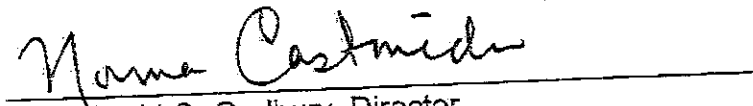
The recommendation to the CBFO Manager is to continue the authority for the INL AMWTP Expansion for the container-in-container sampling process performed to characterize and certify waste. Attachments 2, 3, and 4 list the systems and procedures that constitute the bounds of this authority.

CONCURRENCE



Ms. Ava Holland, Manager
CBFO Quality Assurance Manager

9-12-08
Date



Mr. Donald C. Gadbury, Director
Office of the National TRU Program

9-15-08
Date

INL AMWTP LIST OF CERTIFIED EQUIPMENT AND PROCESSES

WIPP #	Site Equipment #	Equipment Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
HEADSPACE GAS					
9HG4	Z-221-001A	Consonant Technology Inc. (CTI) –Gas Chromatography/Mass Spectrometry (GC/MS) System PDP ID # CTI-HGAS-A-001 (Approved Cycle 21A) Method described in procedure INST-OI-43	Agilent 5973N Network Mass Selective Detector – Unit 001	HGAS Software, Version 1.23	N/A
9HG6	Z-221-001C	Consonant Technology Inc. (CTI) –Gas Chromatography/Mass Spectrometry (GC/MS) System PDP ID # CTI-HGAS-A-004 (Approved Cycle 21A) Method described in procedure INST-OI-43	Agilent 5973N Network Mass Selective Detector – Unit 004	HGAS Software, Version 1.23	N/A
9HG5	Z-221-001B	Consonant Technology Inc. (CTI) –Gas Chromatography/Mass Spectrometry (GC/MS) System PDP ID # CTI-HGAS-A-002			Currently used for Flammability services only
NONDESTRUCTIVE ASSAY					
9DA1	Z-211-102	Canberra Integrated Waste Assay System (IWAS) for assay and isotopics on 55-gallon and 83/85-gallon drums DAS –102 - PDP Registration # AM01/AMN1 (Approved Cycle 14A) Drum Assay System, Unit 1. Method described in procedure INST-OI-14	<ul style="list-style-type: none"> ➤ Broad Energy Germanium (BEGe) gamma detectors ➤ 122 helium-3 tubes used in passive neutron coincidence counting modality and the active neutron differential die-away modality ➤ Cf-252/Cs-137 Add-A-Source (AAS) correction source 	NDA 2000 Canberra's Genie 2000 Multi-Group Analysis (MGA) Multi-Group Analysis-Uranium (MGA-U)	The calibration of IWAS system was verified and documented in the site acceptance reports CI-IDA-NDA-0051 through CI-IDA-NDA-0054 The determination of TMU for the IWAS unit is documented in CI-IDA-NDA-0055, Total Measurement Uncertainty for

INL AMWTP LIST OF CERTIFIED EQUIPMENT AND PROCESSES

WIPP #	Site Equipment #	Equipment Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
			<ul style="list-style-type: none"> ➤ 14 MeV neutron generator ➤ Fast Neutron Detector Packs (FNDP) 		the AMWTP Integrated Waste Assay Systems, Revision 1, July 30, 2003.
9DA2	Z-211-103	<p>Canberra Integrated Waste Assay System (IWAS) for assay and isotopics on 55-gallon and 83/85-gallon drums</p> <p>DAS-103 - PDP Registration # AM02/AMN2 (Approved Cycle 14A)</p> <p>Drum Assay System, Unit 2</p> <p>Method described in procedure INST-OI-14</p>	<ul style="list-style-type: none"> ➤ Broad Energy Germanium (BEGe) gamma detectors ➤ 122 helium-3 tubes used in passive neutron coincidence counting modality and the active neutron differential die-away modality ➤ Cf-252/Cs-137 Add-A-Source (AAS) correction source ➤ 14 MeV neutron generator ➤ Fast Neutron Detector Packs (FNDP) 	<p>NDA 2000</p> <p>Canberra's Genie 2000</p> <p>Multi-Group Analysis (MGA)</p> <p>Multi-Group Analysis- Uranium (MGA-U)</p>	<p>The calibration of IWAS system was verified and documented in the site acceptance reports CI-IDA-NDA-0051 through CI-IDA-NDA-0054</p> <p>The determination of TMU for the IWAS unit is documented in CI-IDA-NDA-0055; "Total Measurement Uncertainty for the AMWTP Integrated Waste Assay Systems", Revision 1, July 30, 2003.</p>
9DA3	Z-390-100	<p>Canberra Integrated Waste Assay System (IWAS) - DAS3 - 55 gallon drums</p> <p>DAS-100 - PDP Registration # AM03/AMN3 (Approved Cycle 14A - not approved for sludge-type waste)</p> <p>Method described in INST-FOI-01</p>	<ul style="list-style-type: none"> ➤ Broad Energy Germanium (BEGe) gamma detectors ➤ 122 helium-3 tubes used in passive neutron coincidence counting modality and the active neutron differential die-away modality ➤ Cf-252/Cs-137 Add-A-Source (AAS) correction source ➤ 14 MeV neutron generator ➤ Fast Neutron Detector Packs (FNDP) 	<p>NDA 2000</p> <p>Canberra's Genie 2000</p> <p>Multi-Group Analysis (MGA)</p> <p>Multi-Group Analysis- Uranium (MGA-U)</p>	<p>The calibration of IWAS system was verified and documented in the site acceptance reports CI-IDA-NDA-0051 through CI-IDA-NDA-0054</p> <p>The determination of TMU for the IWAS unit is documented in CI-IDA-NDA-0055, Total Measurement Uncertainty for the AMWTP Integrated Waste Assay Systems, Revision 1, July 30, 2003.</p>

INL AMWTP LIST OF CERTIFIED EQUIPMENT AND PROCESSES

WIPP #	Site Equipment #	Equipment Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
9DA4	Z-390-101	Canberra Integrated Waste Assay System (IWAS) - DAS4 – 55 gallon drums DAS-101 – PDP Registration # AM04/AMN4 (Approved Cycle 14A – not approved for sludge-type waste) Method described in INST-FOI-01	<ul style="list-style-type: none"> ➤ Broad Energy Germanium (BEGe) gamma detectors ➤ 122 helium-3 tubes used in passive neutron coincidence counting modality and the active neutron differential die-away modality ➤ Cf-252/Cs-137 Add-A-Source (AAS) correction source ➤ 14 MeV neutron generator ➤ Fast Neutron Detector Packs (FNDP) 	NDA 2000 Canberra's Genie 2000 Multi-Group Analysis (MGA) Multi-Group Analysis- Uranium (MGA-U)	The calibration of IWAS system was verified and documented in the site acceptance reports CI-IDA-NDA-0051 through CI-IDA-NDA-0054 The determination of TMU for the IWAS unit is documented in CI-IDA-NDA-0055, Total Measurement Uncertainty for the AMWTP Integrated Waste Assay Systems, Revision 1, July 30, 2003.
NON-DESTRUCTIVE EXAMINATION					
9RR1	Z-213-1001	Real Time Radiography System – 55 gallon drums, 83 gallon drums and SWBs Method described in INST-OI-12	RTR System	Waste Tracking System (WTS)	N/A
9RR2	Z-213-106	Real Time Radiography System – 55 gallon drums, 83 gallon drums and SWBs Method described in procedure INST-OI-12	RTR System	Waste Tracking System (WTS)	N/A
DRUM CORING					
9DC1	Z-250-802	Drum Coring and Sample Collection Glove Box Method – BN-MDC Method described in procedure INST-OI-16 and INST-OI-73	Drum Coring and Sample Collection Glove Box	Waste Tracking System (WTS)	N/A

INL AMWTP LIST OF CERTIFIED EQUIPMENT AND PROCESSES

WIPP #	Site Equipment #	Equipment Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
VISUAL EXAMINATION					
9VE2		Visual Examination (in lieu of RTR) (VEC) Method described in INST-OI-34			
9VE3		Newly Generated Waste Visual Examination Closure (VNC) Method described in INST-OI-34			
9VE5		Visual Examination (in lieu of RTR) (VEC) Method described in INST-FOI-17			
9VE6		Newly Generated Waste Visual Examination Closure (VNC) Method described in INST-FOI-17			
9VE7		Box Line Visual Examination (VEB) – Box to drum repackaging Method described in INST-FOI-17			
9VE8		Box Line Visual Examination (VEB) – Drum to new drum repackaging Method described in INST-FOI-17			
9VE9		Box Line Visual Examination (VEB) – Box to drum repackaging Method described in INST-OI-34			
9VE10		Box Line Visual Examination (VEB) – Drum to new drum repackaging Method described in INST-OI-34			

INL AMWTP DEACTIVATED EQUIPMENT LIST			
WIPP #	Site Equipment #	Equipment Description	Date Deactivated
HEADSPACE GAS			
9HG1	Z-220-001A	Nuclear Filter Technology Drum Vent System – Mass Spectrometer, Unit A PDP ID# 0478107242	8/6/06
9HG2	Z-220-001B	Nuclear Filter Technology Drum Vent System – Mass Spectrometer, Unit B PDP ID# 0477907240	8/6/06
9HG3	Z-220-001C	Nuclear Filter Technology Drum Vent System – Mass Spectrometer, Unit C PDP ID# 0478007241	8/6/06
9HG7	Z-221-001D	Consonant Technology Inc. (CTI) –Gas Chromatography/Mass Spectrometry (GC/MS) System PDP ID # CTI-HGAS-A-005	Currently being used for spare parts
VISUAL EXAMINATION			
9VE1		RTR Verification Visual Examination (VVE)	1/2007
9VE4		RTR Verification Visual Examination (VVE)	1/2007

AMWTP LIST OF CERTIFIED PROCEDURES		
#	Procedure Number	Procedure Title
1.	CI-IDA-NDA-0035	Calibration Verification & Confirmation Procedure for the Integrated Waste Assay (IWAS) at AMWTP, Canberra Industries
2.	CI-IDA-NDA-0055	Total Measurement Uncertainty for the AMWTP Integrated Waste Assay Systems, Canberra Industries
3.	INST-CD&M-11.1.2	Facility Modification Proposal Preparation
4.	INST-CD&M-11.2.1	Software Version Control
5.	INST-CD&M-11.2.2	Software Inventory Classification
6.	INST-CD&M-11.2.3	System Data Change Requests
7.	INST-CMNT-10.14.1	Testing In-Plant and Process Instrumentation
8.	INST-CMNT-10.5.1	Calibration and Control of Measuring and Test Equipment
9.	INST-FOI-01	In-Plant Drum Assay Operations
10.	INST-FOI-17	Facility Visual Examination Operations
11.	INST-OI-09	Retrieval Enclosure Waste Container Extraction
12.	INST-OI-11	Waste Container Handling
13.	INST-OI-12	Real-Time Radiography Operations (Drum)
14.	INST-OI-14	Drum Assay Operations
15.	INST-OI-16	Drum Coring Operations
16.	INST-OI-20	TRUPACT-II Operations
17.	INST-OI-21	Payload Assembly
18.	INST-OI-34	Non-Facility Visual Examination Operations
19.	INST-OI-43	HGAS Sampling and Analysis Operations
20.	INST-OI-45	Drum Vent Filter Installation
21.	INST-OI-50	WMF-615 Filter Insertion Operation
22.	INST-OI-52	Re-Lidding and Over-pack Reconfiguration Operations
23.	INST-OI-73	Manual Drum Coring
24.	INST-OI-75	Container-in-Container Sampling
25.	INST-TRUW-8.1.1	Drum Assay Post Maintenance Calibration & Verification
26.	MP-CD&M-11.1	Change Control
27.	MP-CD&M-11.2	Software Quality Assurance
28.	MP-CMNT-10.10	TRUPACT-II Maintenance Program
29.	MP-CMNT-10.14	In-Plant and Process Instrumentation Testing Program
30.	MP-CMNT-10.5	Calibration of Measuring and Test Equipment Program
31.	MP-DOCS-18.1	Developing Written Work Instructions
32.	MP-DOCS-18.2	Records Management
33.	MP-DOCS-18.3	Developing Management Procedures
34.	MP-DOCS-18.4	Document Control
35.	MP-M&IA-17.1	Management Assessment
36.	MP-M&IA-17.2	Independent Assessment
37.	MP-M&IA-17.3	Surveillances

AMWTP LIST OF CERTIFIED PROCEDURES		
#	Procedure Number	Procedure Title
38.	MP-PCMT-15.1	Acquisition of Materials and Services
39.	MP-PCMT-15.21	Materials Management
40.	MP-PCMT-15.7	Vendor Qualification and Performance Evaluation
41.	MP-Q&SI-5.1	Investigation and Root Cause Analysis
42.	MP-Q&SI-5.3	Corrective Action
43.	MP-Q&SI-5.4	Identification of Nonconforming Conditions
44.	MP-Q&SI-5.6	Graded Approach
45.	MP-Q&SI-5.8	Qualifying Test Engineers, Supply Chain Inspectors, Auditors, Lead Auditors and Technical Specialists
46.	MP-RTQP-14.16	Training Program Evaluation
47.	MP-RTQP-14.19	Training Records Administration
48.	MP-RTQP-14.20	Training Implementation Matrix
49.	MP-RTQP-14.4	Personnel Qualification and Certification
50.	MP-RTQP-14.6	Job Analysis
51.	MP-TRUW-8.1	Certification Plan for INL Transuranic Waste
52.	MP-TRUW-8.2	Quality Assurance Project Plan
53.	MP-TRUW-8.3	Contact-Handled Transuranic Waste Authorized Methods for Payload Control (CH-TRAMPAC)
54.	MP-TRUW-8.4	AMWTP QAPJP for Gas Generation Testing Program
55.	MP-TRUW-8.5	TRU Waste Certification
56.	MP-TRUW-8.8	Level I Data Validation
57.	MP-TRUW-8.9	Level II Data Validation
58.	MP-TRUW-8.11	Data Reconciliation
59.	MP-TRUW-8.12	Waste Receipt and Shipping Inspection
60.	MP-TRUW-8.13	Collection, Review, and Management of Acceptable Knowledge Documentation
61.	MP-TRUW-8.14	Preparation of Waste Stream Profile Forms
62.	MP-TRUW-8.17	Co-located Core Sampling Control Charts
63.	MP-TRUW-8.25	Random Selection of Containers for Headspace Gas and Solids Sampling Analysis
64.	MP-TRUW-8.26	Reports to Management
65.	MP-TRUW-8.27	CH-TRUCON Management
66.	MP-TRUW-8.34	WIPP Sample Shipments
67.	MP-TRUW-8.37	Long-Term Objective for Unified Flammable Gas Determination
68.	INST-OI-75	Container-In-Container Sampling

AMWTP LIST OF CANCELLED/DEACTIVATED PROCEDURES			
#	Procedure Number	Procedure Title	Deactivation Date
1.	MP-TRUW-8.6	Contact-Handled Transuranic Waste Authorized Methods for Payload Control (CH TRAMPAC) for HalfPACT (Incorporated into MP-TRUW-8.3)	12/04
2.	INST-OI-44	Sampling Port Installation	1/26/06
3.	INST-OI-48	Electronic TRUPACT-II Operations	2/2/06
4.	INST-CD&M-11.1.1	Facility Modification Screening	6/5/06
5.	MP-PCMT-15.4	Evaluation of Proposals (Superceded by MP-PCMT-15.21)	6/30/06
6.	MP-CMNT-10.3	Supply Chain Management (Superceded by MP-PCMT-15.21)	7/12/06
7.	MP-PCMT-15.6	Acceptance of Items and Services (Superceded by MP-PCMT-15.21)	7/12/06
8.	MP-Q&SI-5.7	Quality Inspections	7/12/06
9.	INST-OI-18	Gas Generation Testing Operations	8/15/06
10.	MP-TRUW-04-IM	TRU Waste Program Procedures Matrix for DOE-CBFO QAP	11/2/06
11.	INST-OI-49	Electronic Payload Assembly	12/11/06
12.	INST-TRUW-8.2.1	HSG Calibration	12/11/06
13.	MP-TRUW-8.19	RTR/VE Drum Selection	1/23/07
14.	MP-TRUW-8.16	WWIS Data Transfer (Incorporated into MP-TRUW-8.5)	7/3/07
15.	INST-OI-13	Drum Vent/Headspace Gas Sample Operations	8/07

**Tiering of TRU Waste Characterization Processes Implemented by AMWTP
(Based on March 28-30, 2005 EPA Baseline Inspection No. EPA-AMWTP-03.06-08)
DOCKET # A-98-49; II-A4-66**

WC Process Elements	AMWTP WC Process Specific T1 Changes	AMWTP WC Process Specific T2 Changes	AMWTP General T2 Changes
AK including Load Management	Any new waste category group. Load management of any unapproved waste stream Changes to WWIS algorithms specific to load management.	Waste Stream Profile Forms including updates or additions to waste stream(s) within an approved waste category. Changes in load management status of approved waste stream(s).	Changes to site procedures requiring CBFO approvals and other changes.
NDA	New equipment or physical modifications to approved equipment Changes to approved calibration range for approved equipment.	Changes to software for approved equipment. Changes to operating range upon CBFO approval.	Changes to site procedures requiring CBFO approvals and other changes.
RTR	N/A	New equipment or changes to approved equipment.	Changes to site procedures requiring CBFO approvals and other changes.
VE and VET	Changes in vendor performing VE and/or VET	Addition of new waste category. Addition of new procedure or site equipment identifier	Changes to site procedures requiring CBFO approvals and other changes.
WWIS	N/A	N/A	Changes to site procedures requiring CBFO approvals and other changes.

AK Tiers

Tier 1 AK changes that will require EPA review and approval prior to implementation and apply to any new waste category not evaluated during the baseline inspection include the following:

- Categories of waste not approved under this baseline (e.g., soils)
- Identification of wastes from sources other than Mound, RFETS, Battelle Columbus, and Bettis
- Implementation of load management for waste not approved under this baseline

Tier 2 AK changes that do not require EPA approval prior to implementation but require reporting and submitting documentation discussing changes include the following:

- Changes made to AK procedure(s) that require CBFO approval
- Complete waste stream data packages that include updates or additions to the WSPF, CIS# for waste streams within approved waste categories; and summaries of radiological data for those containers included on the CIS drum list
- Implementation of procedures and related documentation that formalize NDA-AK communication requirements
- Any waste identified outside of the waste profiles included in the 2002 TWBIR, when applicable
- AK accuracy reports, prepared annually at a minimum

NDA Tiers

Tier 1 NDA changes that will require EPA review and approval prior to implementation include the following:

- New NDA equipment¹
- Physical modifications to approved equipment²
- Extension or changes to an approved calibration range(s) for approved equipment³

Tier 2 NDA changes that do not require EPA approval prior to implementation but require reporting and submitting documentation discussing changes by AMWTP include the following:

- Changes to software for approved equipment
- Changes to the approved operating range(s) of approved NDA systems upon CBFO approval
- Changes to procedures that require CBFO approval

¹New NDA equipment refers to a system or component not previously evaluated by EPA. Specifically, this is defined as a physically distinct or different system or apparatus; an assay system that is reported to be the equivalent of or identical to a previously approved system but which has not been formally inspected and approved by EPA is a new system and must be approved by EPA prior to implementation to characterize WIPP wastes.

²Changes to existing NDA equipment include all changes and/or modifications to approved equipment that have the potential to affect the quality of NDA data used for the purposes of WC and/or waste isolation. This does not include minor changes or safety-related changes (e.g., addition of hand rails) that do not have the potential to affect WC data.

³Extension or changes to a system's approved calibration range include those changes that affect the determination of disintegration rate (activity) or physical characteristics (matrix) of any of the four NDA systems proposed for approval during this inspection

RTR Tiers

No **Tier 1 RTR** changes are assigned at this time.

Tier 2 RTR changes that do not require EPA approval prior to implementation but require reporting and submission of documentation discussing changes by AMWTP include the following:

- New RTR equipment or modifications to approved equipment
- Changes made to RTR procedure(s) that require CBFO approval

VET Tiers

Tier 1 VET change assigned at this time includes:

- Changes in vendor performing VET.

Tier 2 VET changes that do not require EPA approval prior to implementation but require reporting and submitting documentation include the following:

- Changes made to VET procedure(s) that require CBFO approval
- Addition of new waste category
- Addition of new procedure or site equipment identifier

VE Tiers

Tier 1 VE changes assigned at this time includes:

- Changes in vendor performing VE

Tier 2 VE changes that do not require EPA approval prior to implementation but require reporting and submitting documentation include the following:

- Changes made to VE procedure(s) that require CBFO approval
- Addition of new waste category
- Addition of new procedure or site equipment identifier

WWIS Tiers

Tier 1 WWIS changes that require EPA review and approval prior to implementation include the following:

- Changes to WWIS algorithms specific to load management

Tier 2 WWIS changes that do not require EPA approval prior to implementation but require AMWTP to report and submit documentation discussing changes include the following:

- Changes made to WWIS procedure(s) that require CBFO approval
- Changes in the load management status of approved waste category(s)