



FW: Transmittal of enclosures referenced in EPA's April 10 Letter discussing Streamlined Approach

Maestas, Ricardo, NMENV

Sent: Thursday, June 13, 2013 8:12 AM

To: Allen, Pam, NMENV

Attachments: Transmittal of documents r~1.pdf (334 KB) ; Enclosure 2B - Step 2 Chec~1.pdf (50 KB) ; Enclosure 1 - Annotated Ou~1.pdf (97 KB) ; Enclosure 2A - Step 1 Chec~1.pdf (41 KB)

Email and attachments for WIPP file

From: Kliphuis, Trais, NMENV

Sent: Thursday, May 30, 2013 5:12 PM

To: Maestas, Ricardo, NMENV; Holmes, Steve, NMENV; Smith, Coleman, NMENV

Subject: FW: Transmittal of enclosures referenced in EPA's April 10 Letter discussing Streamlined Approach

fyi

From: Pinzel, Marcus - DOE [mailto:Marcus.Pinzel@wipp.ws]

Sent: Thursday, May 30, 2013 5:08 PM

To: Kliphuis, Trais, NMENV

Subject: FW: Transmittal of enclosures referenced in EPA's April 10 Letter discussing Streamlined Approach

Trais,

I have forwarded the email from EPA that finalizes the Tier 1 approach that we have been developing since last fall. When I return from my TDY in mid June I can brief you in more detail on why it took such a circuitous route. Thank you

Sent with Good (www.good.com)

Colt01

-----Original Message-----

From: Joglekar, Rajani [Joglekar.Rajani@epa.gov]

Sent: Thursday, May 30, 2013 11:49 AM Mountain Standard Time

To: Stroble, J. R. - DOE

Cc: Douglas Tonkay; Harris, Alton - DOE EM; Franco, Jose - DOE; Pinzel, Marcus - DOE; Morgan, Thomas - DOE; Castaneda, Norma - DOE; 'Roberts, Benjamin B'; 'Wells, Jerry L'; Dave Haar; Gulbransen, Ed -- NWP; Site Documents - DOE; Lee, Raymond; Felcorn, Ed - EPA

Subject: Transmittal of enclosures referenced in EPA's April 10 Letter discussing Streamlined Approach

Please distribute as needed





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 30 2013

OFFICE OF
AIR AND RADIATION

Mr. J. R. Stroble
Manager, National TRU Program
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, NM 88221-3090

Dear Mr. Stroble:

This letter forwards two documents we referenced in the enclosure to our April 10 letter transmitting actions we may take to improve efficiency when evaluating Department of Energy's (DOE) Tier 1 (T1) change requests. We have provided these documents previously. Enclosure 1 is an annotated outline indicating which waste characterization-related documents EPA uses when evaluating site-specific transuranic (TRU) waste characterization programs and reporting results of our evaluation. Enclosures 2A and 2B are checklists that EPA inspectors use to determine the completeness of DOE T1 change requests and baselines and request additional documents, as necessary. We believe that implementation of these enclosures by TRU Sites' waste characterization staff in preparing EPA's approval request package will facilitate efficient transfer of documents to EPA. In turn, these actions will support EPA's timely evaluation of T1 change requests.

We look forward to learn what actions CBFO intends to undertake to meet the essence of the streamlined approach both DOE and EPA agreed upon at the November 2012 meeting.

If you have any questions regarding this approval, please contact Ed Felcorn at (202) 343-9422 or Rajani Joglekar at (202) 343-9462.

Sincerely,

A handwritten signature in black ink that reads "Tom Peake". The signature is written in a cursive style with a large, sweeping initial "T".

Tom Peake, Director
Center for Waste Management and Regulations

Enclosures

cc: Electronic Distribution
Doug Tonkay, DOE HQ EM
Alton Harris, DOE HQ EM
Joe Franco, CBFO
Tom Morgan, CBFO NTP
Marcus Pinzel, CBFO NTP
Norma Castaneda, CBFO NTP
Manager, CBFO QA
Ben Roberts, DOE ID
Jerry Wells, DOE ID
Dave Haar, AMWTP ITG
Tim Hall, NMED
Raymond Lee, EPA HQ
Site Documents

EPA Inspection Elements Applicable to Both Contact-Handled and Remote-Handled Transuranic Wastes

This annotated outline presents the elements¹ for baseline inspections and Tier 1 (T1) evaluations for both contact-handled (CH) and remote-handled (RH) transuranic (TRU) wastes intended for disposal at the Waste Isolation Pilot Plant (WIPP). The elements common and unique to CH and RH TRU wastes are specified. The intended audience for this outline is the Department of Energy (DOE) Carlsbad Field Office (CBFO) and waste characterization personnel at TRU generator sites. The purpose is to delineate why EPA needs specific documents that EPA has consistently requested prior to and during previous inspections and T1 evaluations. The documents that EPA needs are those that support a waste characterization program's demonstration of compliance with the requirements of 40 CFR 194.8 and 194.24. EPA expects to receive most of these documents with CBFO's initial request for approval. EPA inspection personnel use this information to prepare for inspections and evaluations, i.e., to prepare checklists for assessing technical adequacy, identify inconsistencies or gaps in the available information, and formulate questions. The information extracted from these documents and from discussions with waste characterization personnel, in conjunction with other objective evidence collected during the inspection/evaluation, forms the basis for EPA's approval decision. By providing this information in a complete and timely manner, DOE can receive approvals more quickly.

The items identified in this outline represent the typical activities, procedures and processes that EPA evaluates during the course of a baseline inspection or T1 evaluation. However, this list is not comprehensive, nor does it necessarily represent all of the items that EPA will evaluate during a given inspection or T1 evaluation. As EPA inspection personnel proceed, additional documents and/or information may be necessary, as warranted by the specifics of the waste category, waste stream(s) or processes under evaluation.

EPA verifies compliance with the upper tier requirements in 40 CFR 194.8 and 194.24. EPA does not directly evaluate TRU sites' compliance with the DOE's key documents, including the TRU Waste Acceptance Criteria (WAC) for CH, the Waste Characterization Program Implementation Plan (WCPIP) for RH, and other documents cited in the Compliance Recertification Application as evidence of a system of waste characterization controls. EPA uses these documents as evidence of DOE's commitment to a system of controls and, in fact, during the course of evaluation of waste characterization activities, EPA may identify additional elements that require evaluation. For example, during the T1 evaluation of an RH waste stream from the Idaho National Laboratory-Central Characterization Project (INL-CCP) in early 2010, information presented during the evaluation prompted EPA to schedule a site visit to Argonne National Laboratory (ANL) to observe sample collection and radiochemical analysis. EPA had not evaluated these aspects previously.

This document covers the four key waste characterization elements that EPA evaluates for technical adequacy during a baseline inspection or T1 evaluation:

¹ Much of the information cited here was discussed during the April 2009 face-to-face meeting between EPA and CBFO staff at CBFO Headquarters in Carlsbad.

- Acceptable Knowledge (AK) for CH and RH
- Non Destructive Examination (NDE), consisting of Real-Time Radiography (RTR), and Visual Examination (VE), typically for CH and RH
- Non Destructive Assay (NDA), typically for CH
- Radiological Characterization (RC) for RH

EPA also verifies two other elements, the data tracking system (Waste Data System, formerly known as WWIS) and container management for CH and RH, but these are not included in this document. EPA does review implementing procedures for these activities on an as-needed basis and EPA has conducted announced and unannounced continued compliance inspections at specific TRU sites (CBFO, Los Alamos National Laboratory, INL, Oak Ridge National Laboratory) to evaluate these aspects.

I. Acceptable Knowledge

A. Waste Characterization Element Description

As part of the inspection, EPA typically examines the following items noting that some documents are always applicable to each waste stream or Summary Category Group:

- Waste stream identification and the definition, including radiological and physical content of the waste, and waste generating processes
- Identification of HLW, TRU vs. LLW, SNF and defense status
- Role of AK in the Characterization Methodology (e.g., NDA memorandum)
- Compiling AK documentation and assembly of required information
- Adequacy of the procedures used to implement the AK process (e.g., CCP-TP-005 and related attachments)
- AK data traceability
- AK source document sufficiency
- AK verification or qualification pathway if AK is used to quantify parameters (RH only)
- Certification Plan Preparation and adequacy (RH only)
- Confirmatory Test Plan preparation and adequacy (RH only)
- Characterization Reconciliation Report preparation and adequacy (RH only)
- Correlation and Surrogate Summary Form and CH-RH correlation (RH only)
- Waste Stream Profile Form preparation and contents, including applicable elements of the Characterization Information Summary and Summation of Aspects
- Personnel Training

- NCRs and AK Discrepancy Resolution
- AK Accuracy
- Load Management
- Identification of DQO determination method including those to be qualified by AK (RH only)
- DQOs attained through AK Qualification (RH only)
- NDA-AK communication (typically CH only, per the NDA memorandum)

B. Documents and Other Information Reviewed

When a request for approval is made, EPA asks for numerous technical documents pertinent to the inspection, which EPA must have at least one-month before the inspection. EPA, however, recognizes that some may be only available at the beginning of the inspection. This information includes, but is not limited to:

- AK Summary Report (AKSR), including the 500 and 501 documents for RH
- Relevant procedures (e.g., CCP-TP-005)
- Certification Plan (including those for RH waste as defined in the WCPIP, e.g., 502 series documents)
- Source documents (as referenced in the AKSR)
- All CCP-TP-005 attachments (excluding Attachment 5) including the AK-NDA memorandum for CH
- All WCPIP-specified information including, but not limited to, the Correlation and Surrogate Summary Form (CSSF), Characterization Reconciliation Reports (CRR) (typically part of the WSPF), Certification Plan, all Sampling/Analysis Plans, Test Plans, etc.
- Waste Stream Profile Forms (WSPF) and all attachments including the Characterization Information Summary and Summation of Aspects
- Listing of all available/fully characterized drums and respective batch data reports (BDRs) typically available in the CRR, CIS,
- BDRs (summary results only for radiological and VE/RTR)
- AK Accuracy Reports
- Training Records for AK Experts (AKE) and site project managers (SPM)
- Traceability information, noting that some may not be in source documents
- Discrepancy Resolution/NCRs (examples, noting that these are also source documents and may be contained in BDRs)
- QA Equivalency Document (RH)

C. Technical Evaluation

The following AK technical elements are examined by EPA during a typical baseline inspection or T1 evaluation.² Each EPA inspection report typically discusses EPA's evaluation of the elements listed below; elements are evaluated for technical adequacy and EPA's report cites objective evidence examined including source documents, inspection interview results, and other information. This listing is a starting point, and items are typically added or removed as a result of the pre-inspection review process or during the inspection. For example, addition of containers to an approved waste stream may require less analysis than evaluation of a full CH Summary Category Group (SCG) or a baseline request. The elements below are not listed by priority but are included to indicate how EPA inspectors proceed with an AK evaluation. For this examination, EPA relies on the AK AKSR³ and expects it to contain detailed narration and sufficient references to demonstrate that the waste is WIPP-eligible, including adequate waste stream determinations, sufficient discussion of physical/radiological characteristics, and complete analysis of the presence of SNF, HLW, and waste defense status.

1. Waste Stream identification and justification (RH and CH): Depending on the waste type (RH or CH), EPA determines whether the waste category and waste streams have been appropriately defined. This examination includes a review of processes, which resulted in the generation of waste and how the waste is managed (segregated versus non-segregated). The review also includes physical form analysis and detailed radiological information. The waste stream definitions for RH and CH waste are presented in the WCPIP, WAC, and WAC.
2. The identification of High-Level Waste, Spent Nuclear Fuel, and the waste's defense determination (RH and CH): A TRU generator site must succinctly describe in AKSR why the given waste is not HLW, SNL, and has a defense pedigree. **The DOE is fully responsible for making this determination with a site-specific well documented supporting rationale.**
3. Sufficiency of the AKSR (RH and CH): The AKSR has a specified content in CCP-TP-005, and EPA evaluates whether the AKSR follows that outline. Additionally, both RH and CH AKSRs are examined to determine whether the arguments therein are complete and technically adequate, and to ensure that sample source documents cited support the AKSR.

² When preparing for EPA inspections, it is recommended that CBFO/CCP/TRU generator sites refer to the previously-issued site-specific inspection reports for the types of documents EPA typically requires for evaluation, recognizing that site-specific documents, such as Sampling Reports, are also required.

³ EPA considers the AKSR to be a key summary document describing the waste. EPA recognizes that the AKSR is used by site waste characterization personnel; however, that does not justify a lack of details or insufficient referencing in the AKSR. To address EPA's concern about the lack of details, a TRU generator site could include relevant details in appendices and appropriately identified in the AKSR sections.

4. Implementation of the associated AK Procedure (RH and CH), typically CCP-TP-005: EPA examines the overall AK data acquisition, assembly, review, and re-evaluation processes, including preparation of NCRs and DRs (see No. 14 below).
5. Data traceability including data management (RH and CH): Drum traceability from original generator paperwork through BDR development and drum tracking in the IDC and WDS is examined, and may include CCP-specific data management tools.
6. Sufficiency of AK Support Documents including data limitations and exclusions (RH and CH) by taking a sample of supporting documents for relevancy to the AKSR and to determine whether all of the necessary AK support documents have been assembled.
7. Document Tracking (RH and CH): The AK Record, as presented in the waste stream-specific and overall AK reference list, is examined for completeness.
8. The Certification Plan and Confirmatory Test Plan are evaluated for technical content (RH only).
 - The Certification Plan and CTP are evaluated to determine whether the required contents are included, the clarity of the information provided and technical adequacy of the documents.
 - A description of how the tested subpopulation will be representative of the waste stream or waste stream lot.
9. Content and technical adequacy of the CRR (RH only): CCP-TP-506, Rev. 1, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*, specifies contents of the CRR. The CRR Report is typically evaluated to determine the completeness and adequacy of its contents.
10. Use of a Correlation and Surrogate Summary Form (CSSF) (RH only): Contents of the CSSF are evaluated for content and relevance to the waste stream.
11. Review of personnel training records (RH and CH) of AKEs and SPM to determine whether the training covers EPA requirements and is up to date and addresses the subject streams/topical matter.
12. Sufficiency and completeness of the Radiological Characterization portion of the AKSR (RH and CH): EPA examines the AKSR to confirm that the radiological information presented ensures that the data support the waste stream designation and provides a reasonable representation of the radiological composition of the waste stream, including overall radionuclide composition (mass and activity), as well as the general isotopic distribution of the 10 EPA WIPP-tracked radionuclides and other radionuclides, as applicable. AK radiological data are also presented in the RH Radiological Characterization Report, which is examined to ensure consistency with the AKSR and the inclusion of necessary radionuclide information.

13. Site-specific waste evaluation or characterization methods, such as Confirmatory Testing Plans, Sampling Plans, or Sampling Reports/memorandum (RH and CH): Confirmatory Test Plans or Sampling and Analysis plans or other documents are sometimes prepared to support the waste stream characterization processes. “Fast Scan” (both RTR and VE) may also be evaluated, depending upon site-specific conditions. **The sampling and analysis plans are examined separately for completeness and technical adequacy.**
14. NCRs and Discrepancy Resolution Forms (RH and CH): These elements may be evaluated as part of other characterization review activities (e.g., RTR, VE, and NDA).
15. The Waste Stream Profile Form (RH and CH): WSPFs are examined for completeness and to be sure they agree with AK information; forms are also examined to be sure they include required attachments (e.g., CRR and CIS).
16. **AK Accuracy (RH and CH): The content of the AK accuracy report is assessed in three areas: reassignment of the waste to a different SCG, reassignment of the waste to a different waste stream, and waste stream-specific assessment of radiological parameter accuracy.**
17. Physical characteristics of the waste including the presence of liquids/prohibited items (RH and CH): Physical characteristics of the waste stream are evaluated with the SCG, but the composition of the waste stream with respect to individual components and general percentages (mass or volume) is also important to the waste stream designation. Data presented in the AKSR (including tables and supporting Attachments/memoranda) are evaluated.
18. Load Management (RH and CH).
19. **NDA-AK communication (CH only, although the 501 series documents are an important demonstration of this element in the RH program) through examination of the AK-NDA memorandum. This communication is key to the AK and NDA personnel having similar understanding (full disclosure) of the waste.**
20. **AK Qualification Method identification for each DQO (RH only): The Certification Plan presents this information.**
21. Attainment of DQOs: EPA assesses how each DQO is addressed including the correct identification of waste streams. The following DQOs are presented in the WCPiP:
 - Defense, HLW, and SNF determination
 - TRU waste determination
 - RH waste determination
 - Activity determination (total and activity per canister, including quantification and identification of the 10 EPA WIPP-tracked radionuclides)

- Liquids
- Physical Form, including metals and CPR

II. Non Destructive Examination – Real-Time Radiography and Visual Examination

The following elements are evaluated during each inspection or T1 evaluation for both CH and RH wastes. Some sites require site-specific inspection elements, but these are documented in the individual inspection reports.⁴ Each EPA inspection report discusses EPA’s evaluation of the elements listed below; elements evaluated for technical adequacy and EPA’s report cite objective evidence examined including source documents, inspection interview results, and other information. This listing is a starting point, and items are typically added or removed as a result of the pre-inspection review process or during the inspection.

Real Time Radiography (RTR)

A. Waste Characterization Element Description

This section lists the reason each technical area is inspected.

B. Documents and Other Information Reviewed

A list of documents, written BDRs, audio/visual recordings, and records reviewed during the inspection is provided.

C. Technical Evaluation

1. Overall procedural adequacy and implementation: The Standard Operating Procedures (SOPs) used to perform RTR are reviewed to ensure they are complete and adequate. Implementation of each SOP is verified by review of records, and BDRs are reviewed in conjunction with other pertinent documents such as work instructions and Non Conformance Reports (NCRs).
2. Characterization of WMPs and prohibited items: All types of records are reviewed and, whenever possible, an RTR event is observed. A description of the RTR process is provided in this section. Whenever possible, a demonstration is observed to verify set up of equipment, identification of WMPs and assignment of WMP weights. Operators are interviewed as necessary.
3. Documentation of radiography activities: Comparison of written and audio/visual records reviewed to ensure consistency.

⁴ When preparing for EPA inspections/T1 evaluations, it is recommended that CBFO/CCP/TRU generator sites refer to the site-specific inspection reports for the types of documents EPA typically requires for evaluation, recognizing that site-specific documents may be required.

4. Adequate documentation of procedures and processes: BDRs are examined to ensure complete records and NCRs are reviewed; consistent review of RTR data is determined.
5. Training of personnel: Both written and audio/visual training records are reviewed to ensure that they are current and only qualified operators perform the examinations. Packaging records for the training drums are evaluated against the items identified by the operators.

Visual Examination and (VE)

A. Waste Characterization Element Description

This section lists the reason each technical area is inspected.

B. Documents and Other Information Reviewed

A list of documents, BDRs, and records reviewed during the inspection is provided.

C. Technical Evaluation

1. Overall procedural adequacy and implementation: The SOP(s) used to perform VE are reviewed to ensure they are complete and adequate. Implementation of the SOP(s) is verified by review of records. BDRs are reviewed in conjunction with other pertinent documents such as work instructions and NCR forms.
2. Characterization of WMPs and prohibited items: All types of records are reviewed and, whenever possible, a VE event is observed. A description of the VE process is provided in this section. During the demonstration, EPA verifies the correct assignment of WMPs and their estimated or actual weights. Operators are interviewed as necessary.
3. Documentation of VE activities: Comparison of written and/or audio/visual records reviewed if such recordings are available. Written records are reviewed if the VE event was performed by 2 operators.
4. Adequate documentation of procedures and processes: BDRs are examined to ensure complete records and NCRs are reviewed. Consistent review of VE data is determined
5. Training of personnel: Training records are reviewed to ensure that only qualified individuals generate and review VE data. Training material is occasionally reviewed to verify content. Appointment records for VEEs are reviewed to ensure only qualified personnel are designated to fulfill this function.

III. Non Destructive Assay – CH TRU Wastes

A. Waste Characterization Element Description

As part of the inspection, EPA typically examines the following items:

- System design and history
- Reports that document the system's calibration, calibration verification and calibration confirmation, as appropriate
- Applicability of the system's calibrated/operational range for typical wastes, i.e., with respect to matrix, radionuclide content (type and concentration), and the ability of system to provide activity and uncertainty values for the 10 WIPP-tracked radionuclides
- Ability of system to meet measurement DQOs for Lower Limit of Detection (LLD), and discrimination of TRU versus Non-TRU materials
- Technical basis and documentation of the system's Total Measurement Uncertainty (TMU)
- Training of NDA operational and data reduction personnel
- Documentation of performance testing in NDA Batch Data Reports (BDRs), equipment log books or other formats, as appropriate

This section lists the reason each technical area is inspected.

B. Documents and Other Information Reviewed

A list of documents and records reviewed during the inspection is provided.

C. Technical Evaluation

The following aspects of each NDA system within the scope of an inspection or T1 evaluation are assessed—two separate but related aspects, namely, the technical merits of the activities that support the radionuclide values produced by each system, and the ability of the available records to document these operations.

1. The design and operational range of each NDA system within the scope: For multi-modal systems this must be assessed for each operational mode, e.g., integrated gamma-neutron systems and passive active neutron systems. This includes the system's ability to identify and quantify the 10 WIPP-tracked radionuclides, provide unbiased values for other radionuclides important to waste isolation and the suitability of the system for range of matrices, nuclear material types and content.
2. Each system's calibration, calibration confirmation and calibration verification, as appropriate: This varies, depending on the system's approval history with EPA and operating history, and includes an evaluation of the radionuclide and matrix standards used for all calibration-related activities.

3. Each system's performance indicators, e.g., radionuclide performance checks, background determinations and weekly interfering matrix checks; ability of each NDA system to attain the appropriate data quality objectives.
4. Training for all NDA personnel (including data reduction and validation) and the adequacy of written procedures to technically support NDA data.
5. Batch data reports (BDRs) that document the results of the NDA systems, including evidence of all system performance and background checks.
6. The total measurement uncertainty (TMU) of each NDA system within the activity's scope.
7. The system's lower limit of detection (LLD), including each system's ability to make TRU/Non TRU distinctions at concentrations of TRU radionuclides at 100 nCi/g.
8. The status of each system with respect to participation in the CBFO-sponsored Performance Demonstration Program (PDP).
9. EPA replicate testing with respect to the EPA Replicate Testing Protocol, as deemed appropriate by EPA to assess the system's precision.

IV. Radiological Characterization – RH TRU Wastes

A. Waste Characterization Element Description

The technical adequacy of the radiological characterization processes that EPA observed initially depended largely on the development and application of radionuclide scaling factors that correlate a waste container's external exposure (dose) rate with isotopic distributions for specific TRU radionuclides, Dose-to-Curie or DTC. In some cases, the scaling factors were developed or supported by the use of radiometric data from destructive or nondestructive testing at DOE laboratories at INL and ANL, or ancillary measurement techniques such as the OSPREY or the In Situ Object Counting System (ISOCS). More recent RH waste streams have used other techniques such as weight and length measurements, coupled with the application of the waste-specific radionuclide information (ANL AGHCF or K-Wing FEW). The specific manner in which these correlations are developed varies, and it is instructive to outline the characterization process, as shown below.

B. Documents and Other Information Reviewed

The list provided below includes the general types of documents that EPA evaluates for RH TRU wastes.

- CCP-AK-XXXX-5X1, Central Characterization Project Remote-Handled Radiological Characterization Technical Report For Remote-Handled Transuranic Waste From the Specific Site; current revision

- CCP-AK-XXXX-5X0, Central Characterization Project Acceptable Knowledge Summary Report For Specific Site; current revision
- CCP-AK-XXXX-5X2, Central Characterization Project RH TRU Waste Certification Plan for 40 CFR Part 194 Compliance and Confirmation Test Plan for Specific; current revision
- CCP-TP-504, CCP Dose-To-Curie Survey Procedure for Remote-Handled Transuranic Waste; current revision
- DTC BDRs, or equivalent documentation
- Calculation packages, as applicable, typically numbered XXXX-RH-01 through XXX-RH-XX
- Documents that support other aspects of radiological characterization, e.g. laboratory qualifications, procedures, reports, data packages, instrument calibrations or performance testing)

C. Technical Evaluation

The following technical elements are examined by EPA during a typical baseline inspection or T1 evaluation. This listing is a starting point, and bullets or items are typically added or removed as a result of the pre-inspection review process or during the inspection. These elements are not listed by priority.

1. The technical adequacy and documentation of radionuclide inventory or other historical data to support radiological characterization.
2. Data obtained from the application of a measurement technique that supports radiological characterization (radiochemical, NDA, mass spectrometry, ICPMS, ISOCS) are evaluated, including an evaluation of the technique's technical basis and regulatory status, including ancillary documents.
3. Data obtained from the application of other techniques that support radiological characterization (length or mass determination) are evaluated, including the technique's technical basis and regulatory status and ancillary documents.
4. The development of radionuclide scaling factors is evaluated, including the application of modeling (ORIGEN, MCNP, Microshield®) or other techniques.
5. Training for all radiological characterization personnel (including data reduction and validation) and the adequacy of written procedures to technically support radionuclide data are evaluated.
6. The technical basis of the Dose-to-Curie (DTC) correlation is evaluated, if applicable, or the applicable alternate technique.

7. Other technical aspects and documentation of the radiological characterization process are evaluated, including attainment of appropriate DQOs.
8. The technical basis, derivation and documentation of TMU are evaluated.
9. Documentation for WIPP-tracked radionuclides in DTC BRDs (or equivalent documentation) is assessed.
10. RH and TRU determinations are evaluated.

DOCUMENTATION CHECKLIST FOR _____ EVALUATION

Acceptable Knowledge:

Needed ^a	Documents	Provided to EPA [indicate document name, source document #, or N/A]
	CCP-TP-005 Attachments: Attachment 6 (Waste form, parameters, prohibited items, and packaging), including WMP Calculation Memorandum	
	Attachment 7 (Radionuclides), including NDA memorandum (CH only)*	
	Attachment 8 (Waste Containers list)	
b	Attachment 10 (AK Re-evaluation)	
b	Attachment 11 (AK Discrepancy)	
	Attachment 13 (Characterization checklist)	
	Attachment 14 (AK Accuracy Report)	
	Attachment 15 (Correlation and Surrogate Summary Form)	
<p>Note: Attachments 2 and 3 are submitted as AK source documents; Attachment 5 is not in EPA's purview; Attachments 9 and 12 are not forms for completion/review</p>		
	AK Procedures (provide the specific revision requested)	
	AK Tracking Spreadsheet and Add Container Memoranda	
	AKE Training records	
	SPM Training records	
	Source Documents and Related CCP-TP-005 Attachment 3s	
	Characterization Reconciliation Report (RH only)	
	Characterization Information Summary	
	Waste Stream Profile Form and Change Notices (as applicable) and Summation of Aspects (Draft is acceptable)	
	NCRs*	
	AK records used by radiological characterization team submitted to AKE for inclusion as AK source documents (list AK source document numbers if not identified elsewhere)	

*May also have been requested for NDE or NDA/RC evaluation

a – All documents marked with "✓" are required for EPA's review if applicable to this T1 request. Specific documents or revisions of documents may be listed along with the "✓."

b – These items are always required **if applicable** to the T1 scope. For example, if EPA's scope of review includes physical characteristics and Attachment 6 has been requested, any AK re-assessments or discrepancy resolutions related to physical characteristics should also be provided.

DOCUMENTATION CHECKLIST FOR _____ EVALUATION

Non Destructive Examination (RTR & VE):

Needed ^a	Documents	Provided to EPA [indicate document name, source document #, or N/A]
	VE/RTR Procedures and SOPs (provide the specific revision requested)	
	Visual Examination Expert (VEE) appointment letters	
	Training Records for operators, including video of training drum	
	VE/RTR A/V Recordings	
	VE/RTR BDRs	
	NCRs*	
	Training and Qualification cards for SPMs, ITRs, and operators, training visual and/or audio recordings where applicable	
	Current LOQI, RTR & VE, as applicable	

*May also have been requested for AK evaluation

a – All documents marked with "✓" are required for EPA's review if applicable to this T1 request. Specific documents or revisions of documents may be listed along with the "✓."

DOCUMENTATION CHECKLIST FOR _____ EVALUATION

Non Destructive Assay, CH TRU/Radiological Characterization, RH TRU:

Needed ^a	Documents	Provided to EPA [indicate document name, source document #, or N/A]
	NDA system description, design and history performing WIPP assays	
	System calibration, confirmation, and verification(s)	
	System performance indicators, e.g. radionuclide performance checks, background determinations and weekly interfering matrix checks, typically in NDA BDRs	
	Total measurement uncertainty (TMU) documentation for system	
	System's lower limit of detection (LLD) documentation, including system's ability to discriminate TRU/Non TRU	
	Performance Demonstration Program (PDP) status	
	Replicate testing with respect to the EPA Replicate Testing Protocol	
	Documentation of RH determination, Health Physics surveys or the equivalent (RH only)	
	Calculation packages referenced in RCTR and applicable excel files and attachments (RH only)	
	Software code (MCMP5, MicroShield etc.) input and output documentation, if not included in calculation packages	
	NDA/RC Procedures (provide the specific revision requested)	
	NDA/DTC/Sampling/Analytical/Measurement/Other BDRs and BDR equivalents	
	Analytical laboratory instrument calibrations, analyst qualifications	
	Operator, Expert Analysis, Radiological Technical Staff Qualification Cards	
	AK records used by radiological characterization team submitted to AKE for inclusion as AK source documents (list AK source document numbers if not identified elsewhere)*	
	Training documentation for radiological characterization personnel, LOQI (CH & RH)	
	NDA memorandum, or equivalent document*	

*May also have been requested for AK evaluation

a – All documents marked with “✓” are required for EPA’s review if applicable to this T1 request. Specific documents or revisions of documents may be listed along with the “✓.”

DOCUMENTATION CHECKLIST FOR BASELINE OR TIER 1 EVALUATIONS CH AND RH WASTE – STEP 1

Name for Tier 1 Evaluation Request: _____

Documents Provided with Request:

Needed ^a	Documents	Provided to EPA [indicate document name, source document #, or N/A)] ^b
✓	AK Summary Report	
✓	Radiological Characterization Technical Report (RH only)	
✓	Certification Plan (RH only)	
✓	Confirmation Test Plan (RH only)	
✓	Sampling Plan and Post Sampling Memorandum	
✓	QA Equivalency Document, Peer Review, Corroborating Data	
✓	Batch Data Reports (BDRs) or BDR equivalents of fully characterized containers or list of available BDRs if total available is extensive (NDA, DTC, VE, RTR, sampling, analytical, etc.), indicating how many have been through SPM &/or Project Level review	
✓	List of all applicable procedures and SOPs, including but not limited to: AK, VE and/or RTR, NDA, DTC, laboratory sampling and analysis procedures (indicate applicable revisions and if the applicable revision has been superseded)	
✓	CCP-TP-005 Attachments: Attachment 1 (AK Documentation checklist)	
✓	Attachment 4 (AK Information List)	

a – All documents marked with "✓" are required for EPA's review if applicable to this T1 request.

b – Use Notes box below if additional space is needed.

Notes or Additional Documents Provided: