

**Allen, Pam, NMENV**

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**From:** Maestas, Ricardo, NMENV  
**Sent:** Tuesday, June 19, 2018 9:47 AM  
**To:** Allen, Pam, NMENV  
**Cc:** Biswell, David, NMENV  
**Subject:** FW: Scope of AMWTP May 2018 ISOCS and Dual Use evaluations  
**Attachments:** AMWTP Scope May 2018 ISOCS and Dual Use 5-1-18.pdf

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

**From:** Feltcorn, Ed [mailto:Feltcorn.Ed@epa.gov]  
**Sent:** Tuesday, May 01, 2018 11:31 AM  
**To:** Princen, Kenneth - FedNet <kenneth.princen@cbfo.doe.gov>  
**Cc:** Castaneda, Norma - FedNet <norma.castaneda@cbfo.doe.gov>; Herb Cruickshank <Herb.Cruickshank@cbfo.doe.gov>; Site Documents - DOE (Site.documents@wipp.ws) <Site.documents@wipp.ws>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Alton Harris <Alton.Harris@em.doe.gov>; Espinosa, Edgard <Edgard.Espinosa@Hq.Doe.Gov>; Maestas, Ricardo, NMENV <Ricardo.Maestas@state.nm.us>; Irene Joo (irene.joo@icp.doe.gov) <irene.joo@icp.doe.gov>; Gulbransen, Ed E <Ed.Gulbransen@icp.doe.gov>; Peake, Tom <Peake.Tom@epa.gov>; Rustick, Joseph <rustick.joseph@epa.gov>; Ellis, Jerry <Ellis.Jerry@epa.gov>; Patrick Kelly <pkelly@scainc.com>; Lee, Raymond <Lee.Raymond@epa.gov>  
**Subject:** Scope of AMWTP May 2018 ISOCS and Dual Use evaluations

Attached is the scope of our upcoming evaluation (May 15-16) of two Tier 1 changes at AMWTP/INL. Please contact me if you have any questions regarding this evaluation.

Ed Feltcorn  
703 508 4084

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**Scope of EPA's Tier 1 Change Evaluation at AMWTP:  
Non Destructive Assay – Mobile In-Situ Object Counting System  
Dual Use of Dose-to-Curie Data to Characterize CH Waste**

**DOE Site:** Advanced Mixed Waste Treatment Project (AMWTP) at Idaho National Laboratory

**Organizations Notified:** Department of Energy – Carlsbad Field Office (CBFO)  
New Mexico Environment Department (NMED)

**Evaluation Dates:** May 15–16, 2018

**Evaluation Schedule:** Tuesday 8:00 am–8:30 am, Entrance Meeting\*  
Tuesday 8:30 am–4:00 pm, Conduct Evaluation  
Wednesday 8:00 am–2:00 am, Conduct Evaluations  
Wednesday 3:00 pm, Close-Out Meeting\*  
\* With AMWTP Management and technical leads

**EPA Evaluation Team:** Edward Felcorn, US EPA HQ (Lead Evaluator)  
Patrick Kelly, EPA Contractor, NDA Technical Lead (SC&A)  
Dr. Joseph Rustick, AAAS Science and Technology Policy Fellow  
(EPA observer)

**Evaluation Scope:**

In accordance with 40 CFR 194.8(b), the EPA will conduct a Tier 1 evaluation to evaluate the adequacy, implementation, and effectiveness of technical processes implemented by AMWTP for using a mobile In Situ Object Counting System (ISOCS) Nondestructive Assay (NDA) to characterize contact-handled transuranic (CH TRU) waste containers. The EPA also will conduct a Tier 1 evaluation of the use of dose-to-curie (DTC) data obtained using the system that the EPA approved previously under the Idaho National Laboratory Central Characterization Project (INL-CCP) remote-handled (RH) waste program to characterize CH TRU waste containers. AMWTP refers to this approach as “dual use”.

**Characterization Systems to be Inspected:**

On May 15–16, 2018, the EPA will evaluate the addition of the AMWTP mobile ISOCS systems Z-295-100, Z-295-101, Z-295-200 and Z-295-201. This evaluation will include: observing actual measurement operations; personnel qualifications and/or training by reviewing records and conducting interviews; evaluating the system's technical adequacy as presented in operating procedures, reports and tests of equipment performance. These evaluations will be performed to assess the technical adequacy and determine the regulatory compliance of the AMWTP mobile ISOCS systems. The EPA intends to observe the entire ISOCS process at AMWTP, from initial system set up to the final validation of assay data to support the assays of record for the 10 WIPP-tracked radionuclides and other required parameters. This may entail observing the system performing multiple measurements in multiple locations onsite at AMWTP.

On May 15–16, 2018, the EPA will also evaluate the use of DTC data that AMWTP proposes to use under their CH waste characterization program. This evaluation will include the entire process by which AMWTP proposes to use DTC data to support the assay of record for the 10 WIPP-tracked radionuclides, including: observing the DTC process for CH drums; evaluating the applicability of previously-determined RH scaling factors to CH drums; personnel qualifications and/or training by reviewing records and conducting interviews; evaluating the system's technical adequacy as presented in operating procedures, reports and tests of equipment performance; the system of controls for drums and information that move from the INL-CCP RH program to the AMWTP CH program; and, the application of Acceptable Knowledge (AK) in terms of appropriate waste stream designation and related aspects to support the characterization of CH waste for WIPP.

**Additional Documents for the mobile ISOCS, Requested To Be Sent to EPA and/or SC&A as Soon as Possible:**

- A clear statement regarding AMWTP's understanding of the mobile ISOCS' range of operation, including detector serial number(s), containers type(s), range of applicability for matrix or activity, specific limitations and system location; EPA understands that these items may be contained in the documents requested in the following bullets, but if they are not, AMWTP must provide this information directly.
- The formal documents that present the technical basis and results of the mobile ISOCS' initial calibration (calibration of record), calibration confirmation, calibration verification and determination of the system's Total Measurement Uncertainty (TMU) and Lower Limit of Detection (LLD), as well as any other performance tests that support the Mobile ISOCS's use to assay CH TRU wastes, including the factory ISOCS detector characterization.
- Documents that present a clear delineation of the ISOCS process from initial set up to final validation/verification of the assay results to serve as the assay of record for WIPP.
- A clear explanation of the suitability of the use of the mobile ISOCS to discriminate TRU versus non-TRU waste at the 100 nanocuries per gram (nCi/g) criterion.
- A list of qualified personnel (operators, Expert Technical Reviewers, Expert Analysts and subject matter experts) and qualification packages for all personnel related to the ISOCS systems, plus a current List of Qualified Individuals (LOQI) for AMWTP personnel who support the ISOCS operations or the application(s) of ISOCS data.
- Current revision of the AMWTP procedures for calibration, operation and data analysis/evaluation for the mobile ISOCS.
- A list of mobile ISOCS Batch Data Reports (BDRs) that have been promoted through project level review or that have been generated to demonstrate the mobile ISOCS NDA process.
- Status of the mobile ISOCS with respect to the CBFO-Sponsored NDA Performance Demonstration Program (PDP).

- A listing of containers previously assayed on the mobile ISOCS from which EPA may select candidates for replicate analyses.

EPA requests to witness a demonstration of the mobile ISOCS assaying at least one container during the on-site evaluation from initial setup to assay completion. As stated above, the EPA anticipates requesting to observe this process more than once and in multiple locations during the onsite inspection to evaluate the range of the system's proposed applicability. EPA may select a small sample of the previously-assayed containers to be re-assayed for replicate analysis and evaluation.

**Additional Documents for the use of DTC data for CH drums, Requested To Be Sent to EPA and/or SC&A as Soon as Possible:**

- A clear statement delineation of the process whereby items (drums) and information will move from the EPA-approved INL-CCP RH program to the EPA-approved AMWTP CH program, and the documentation (procedures or reports) that controls and supports these directly. A flow chart or diagram of this process would be helpful.
- The EPA is particularly interested in interface documents that directly address this movement between TRU certification programs and the objective evidence that the process is appropriately controlled.
- The formal documents that present the technical basis and results of the DTC method's determination of TMU and LLD, as well as any other performance tests that support this use.
- A clear explanation of the suitability of the use of DTC for CH data to discrimination of TRU versus non-TRU waste at the 100 nCi/g criterion.
- A list of qualified personnel (operators, Expert Analysts and subject matter experts) and their qualification packages for all personnel related to the DTC use and development of scaling factors for CH TRU drums, plus a current LOQI for INL-CCP and/or AMWTP personnel, as appropriate.
- INL-CCP and/or AMWTP procedure(s) that support the DTC use for CH TRU drums.
- A list of BDRs that have been generated to demonstrate this process.
- Status of the use of DTC with respect to the CBFO-Sponsored NDA PDP.
- A listing of CH containers previously assayed using DTC from which EPA may select candidates for replicate analyses.

**Inspection Logistics:**

A week before the evaluation, AMWTP must inform EPA of the location to be used for the following meetings:

- The EPA Evaluation Team will meet with the appropriate AMWTP management at 8:00 am on May 15, 2018 for an opening meeting.

- A post-evaluation EPA briefing for the appropriate AMWTP management will be held May 16, 2018 at approximately 3:00 pm.

EPA requests that CBFO or AMWTP facilitates unfettered access to all areas and information required to conduct this evaluation on site at AMWTP. EPA also requests information regarding any required personnel protective equipment for the inspection team. CBFO QA is welcome to provide observers for this EPA evaluation.

**Pre-Inspection Telephone Call:**

A conference call between EPA, CBFO and AMWTP staff was held on Tuesday, May 1, 2018, at 11:00 PM eastern time to review the scope of EPA's inspection and identify additional document needs.