



ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OAR-2023-0226; 10963-01-OAR]

Proposed Baseline Approval of the Contact-Handled Transuranic Waste Characterization Program Implemented at the Department of Energy's Argonne National Laboratory, Lemont, Illinois

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability; opening of a 45-day public comment period.

SUMMARY: The Environmental Protection Agency (EPA or the Agency) is announcing the availability of, and soliciting public comments on, the proposed “baseline” approval of the contact-handled (CH) transuranic (TRU) debris waste characterization program implemented by the Central Characterization Program (CCP) at the U.S. Department of Energy's (DOE) Argonne National Laboratory in Lemont, IL. The inspections supporting this proposed baseline approval took place from November 15–17, 2022 remotely and on site in Lemont, IL. EPA identified no findings or concerns and proposes to approve the ANL-CCP CH TRU debris waste characterization program. EPA's report documenting the inspection results and proposed baseline approval is available for review in the public docket listed in the **ADDRESSES** section of this document. Until the Agency finalizes its baseline approval decision, the DOE Carlsbad Field Office may not certify ANL-CCP's CH waste characterization program and the site may not ship transuranic waste to the Waste Isolation Pilot Plant for disposal.

DATES: Comments must be received on or before **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Submit your comments, identified by Docket ID No. **EPA-HQ-OAR-2023-0226**, to the *Federal eRulemaking Portal*: <http://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or withdrawn. EPA may publish any comment received to its public docket. Do not electronically

submit any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit: <http://www2.epa.gov/dockets/commenting-epa-dockets>.

FOR FURTHER INFORMATION, CONTACT: Jerry Ellis (202-564-2766) or Edward Feltcorn (202-343-9422). Radiation Protection Division, Center for Waste Management and Regulations, Mail Code 6608T, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, Washington, DC, 20460; e-mail addresses: ellis.jerry@epa.gov or feltcorn.ed@epa.gov.

SUPPLEMENTARY INFORMATION:

I. General Information

A. What Should I Consider as I Prepare My Comments for EPA?

1. *Submitting CBI.* Do not submit this information to EPA through www.regulations.gov or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in electronic media that you mail to EPA, mark the outside of the electronic media as CBI and then identify electronically within the files what specific information is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for Preparing Your Comments.* When submitting comments, remember to:

- Identify the rulemaking by docket number **EPA-HQ-OAR-2023-0226** and other

identifying information (subject heading, Federal Register date and page number).

- Follow directions: The Agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified.

II. Background

The DOE operates the Waste Isolation Pilot Plant (WIPP) facility near Carlsbad in southeastern New Mexico as a deep geologic repository for disposal of defense-related TRU radioactive waste. TRU waste contains more than 100 nanocuries of alpha-emitting TRU isotopes, with half-lives greater than twenty years, per gram of waste. Much of the existing TRU waste, which may also be contaminated with hazardous chemicals, consists of items contaminated during the production of nuclear weapons, such as debris waste (rags, equipment, tools) and solid waste (sludges, soil). Legacy weapons production facilities, including ANL, that have generated TRU waste for shipment to and disposal at WIPP are expected use approved waste characterization programs.

EPA's inspection and approval processes for waste generator sites, including quality assurance and waste characterization programs, are described at 40 CFR 194.8. The Agency has discretion in establishing technical priorities, the ability to accommodate variation in the site's waste characterization capabilities, and flexibility in scheduling site waste characterization inspections.

In accordance with the conditions in the WIPP compliance certification and relevant regulatory provisions, including 40 CFR 194.8, EPA conducts "baseline" inspections at waste generator sites, as well as subsequent inspections to confirm continued compliance. As part of a baseline inspection, EPA evaluates each waste characterization process component (equipment, procedures and personnel training and experience) for adequacy and appropriateness in characterizing TRU waste intended for disposal at the WIPP. During the inspection, the site demonstrates its capabilities to characterize TRU waste and its ability to comply with the regulatory limits and tracking requirements under §194.24. The baseline inspection can result in approval with limitations and conditions or may require follow-up inspection(s) before approval. Within the approval documentation, EPA specifies what subsequent program changes should be reported to the Agency, referred to as Tier 1 (T1) or Tier 2 (T2) changes, depending largely on the anticipated effect of the changes on data quality.

A T1 designation requires that the DOE Carlsbad Field Office (CBFO) provide to EPA documentation on proposed changes to the approved components of an individual site-specific waste characterization process (such as radioassay equipment), which the Agency must approve before the change can be implemented. T2 designated changes are minor changes to the approved components of individual waste characterization processes (such as visual examination procedures) which must also be reported to EPA, but the site may implement such changes without awaiting Agency approval. The inspections conducted to evaluate T1 or T2 changes are under the authority of EPA's WIPP compliance certification conditions and regulations, including 40 CFR 194.8 and 194.24(h). In addition to follow-up inspections, EPA may opt to conduct continued compliance inspections at TRU waste sites with a baseline approval under the authority of the WIPP compliance certification regulations, including §194.24(h).

In accordance with 40 CFR 194.8, EPA issues a **Federal Register** notice proposing a baseline compliance decision, docketing the inspection report for public review, and seeks public comment on the proposed decision for a minimum period of 45 days. The report describes the waste characterization processes the Agency inspected at the site, as well as their compliance with 40 CFR 194.8 and 194.24 requirements.

A. Proposed Baseline Decision

This notice announces EPA's proposed baseline approval of the CH TRU waste characterization program implemented by the CCP at the DOE's Argonne National Laboratory. In accordance with 40 CFR 194.8(b), EPA conducted Baseline Inspection No. ANL-CCP-CH-Baseline-2022 on November 15-17, 2022, remotely and at Argonne National Laboratory. Upon EPA's final approval, the DOE may emplace ANL-CCP CH TRU waste in the WIPP.

ANL is located in Lemont, Illinois, approximately 25 miles southwest of downtown Chicago. Originally founded in 1946 as the first national laboratory, ANL grew from conducting initial experiments performed at the University of Chicago to producing plutonium for nuclear weapons. Since then, ANL has supported research and development of nuclear reactors and

related systems, materials, and components for civilian and national defense programs. This work historically included development of essentially all domestic reactor systems in use today for isotope production, power generation and naval submarine propulsion, as well as applications for weapons destruction, defense waste management, defense safeguards and security and space propulsion. Currently, ANL is a multi-disciplinary research laboratory that performs basic and applied work in engineering, chemistry, physics, materials and environmental studies.

Transuranic waste-generating activities at ANL consist mainly of cleaning out buildings or other areas previously used for a variety of research activities.

EPA is proposing to approve the ANL-CCP waste characterization program implemented to characterize CH TRU waste as documented in the accompanying inspection report.

Specifically, the proposed approval includes:

- (1) The AK (Acceptable Knowledge) process for ANL CH TRU waste.
- (2) The MILCC5 (Mobile ISOCS Large Container Counter No. 5) NDA (Non-destructive assay) system and processes for characterizing CH TRU waste.
- (3) The VE (Visual Examination) process to identify waste material parameters and the physical form of CH TRU waste.

Any changes to the waste characterization activities after the date of the baseline inspection must be reported to and, if applicable, approved by EPA according to Table 1 below. All T1 changes must be submitted for approval before their implementation and will be evaluated by EPA. Upon approval, the Agency will post the results of the evaluations in EPA's general WIPP docket at [regulations.gov](https://www.regulations.gov) (Docket No. EPA-HQ-OAR-2001-0012). ANL-CCP must submit T2 changes at the end of the fiscal year quarter in which they were implemented.

EPA's final approval decision regarding the ANL-CCP CH waste characterization program will be conveyed to the DOE separately by letter following EPA's review of public comments received in response to this notice and proposed approval discussed in the inspection report. This information will be provided through EPA's WIPP docket provided for this action at [regulations.gov](https://www.regulations.gov) (Docket No. EPA-HQ-OAR-2023-0226), in accordance with 40 CFR 194.8(b)(3).

Table 1 (Based on November 15–17, 2022, Baseline Inspection ANL-CCP-CH-Baseline-2022)

| Process Elements | ANL-CCP CH Waste Characterization Process – T1 Changes | ANL-CCP CH Waste Characterization Process – T2 Changes* |
|-----------------------------|---|--|
| Acceptable Knowledge (AK) | Implementation of payload management | Submission of a list of active ANL-CCP CH AK experts and site project managers Notification to EPA upon availability of or substantive modification** to: <ul style="list-style-type: none"> • AK summary reports (e.g., CCP-AK-ANLE-002) • AK accuracy reports (annually, at a minimum) • Waste stream profile forms and any associated change notices • Add container memoranda • Site AK procedures requiring CBFO approval*** • Enhanced AK documents such as CCP-TP-005, Attachment 9 forms and AK Assessment, CCE and Basis of Knowledge memoranda (including addition of new figures or attachments) |
| Nondestructive Assay (NDA) | New equipment or substantive physical modifications** to approved equipment Extension of or changes to approved calibration ranges for approved equipment Measurement geometries other than 55-gallon drums | Submission of a list of ANL-CCP NDA operators, expert analysts and independent technical reviewers that performed work during the previous quarter Notification to EPA upon substantive modification** to: <ul style="list-style-type: none"> • Software for approved equipment • Operating ranges upon CBFO approval • Site NDA procedures requiring CBFO approval*** |
| Visual Examination (VE) | VE for non-debris waste VE by any process other than ANL-CCP VE operators observing ANL waste handlers package the waste in a glovebox, as demonstrated during the 2022 baseline inspection | Submission of a list of ANL-CCP VE operators, VE experts and independent technical reviewers that performed work during the previous quarter Notification to EPA upon substantive modification** to site VE procedures requiring CBFO approval*** |
| Real-time Radiography (RTR) | Implementation of RTR | |

* ANL-CCP will report all T2 changes to EPA every three months.

** “Substantive modification” refers to a change with the potential to affect ANL-CCP’s CH waste characterization processes or documentation of them, excluding changes that are solely related to the environment, safety and health; nuclear safety; or the Resource Conservation and Recovery Act; or that are editorial in nature or are required to address administrative concerns. EPA may request copies of new references that the DOE adds during a document revision.

*** Site procedures include any procedures used by ANL-CCP personnel that require Carlsbad Field Office (CBFO) approval. This includes ANL-CCP-specific procedures as well as applicable CCP-wide procedure.

III. Availability of the Baseline Inspection Report and Proposed Approval for Public Comment

EPA has placed the report discussing the results of the inspection of the CH TRU waste characterization program at ANL in the public docket as described in the **ADDRESSES** section of this document. In accordance with 40 CFR 194.8, the Agency is providing the public 45 days to comment on this and EPA's proposed decision to approve the ANL-CCP CH TRU waste characterization program. The Agency will accept public comment on this notice and supplemental information as described in **Section I** above. At the end of the public comment period, EPA will evaluate all relevant public comments and, as the Agency may deem appropriate and necessary, revise the report and proposed approval or take other appropriate action. If EPA concludes that there are no unresolved issues after the public comment period, the Agency will issue an approval letter and the final report. The letter of approval will authorize the DOE to approve the ANL-CCP waste characterization program implemented to characterize CH TRU waste at ANL.

Information on the approval decision will be filed in the official public docket opened for this action on www.regulations.gov, Docket ID No. EPA-HQ-OAR-2023-0226 (as listed in the **ADDRESSES** section of this document).

Jonathan Edwards,

Director, Office of Radiation and Indoor Air.

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