



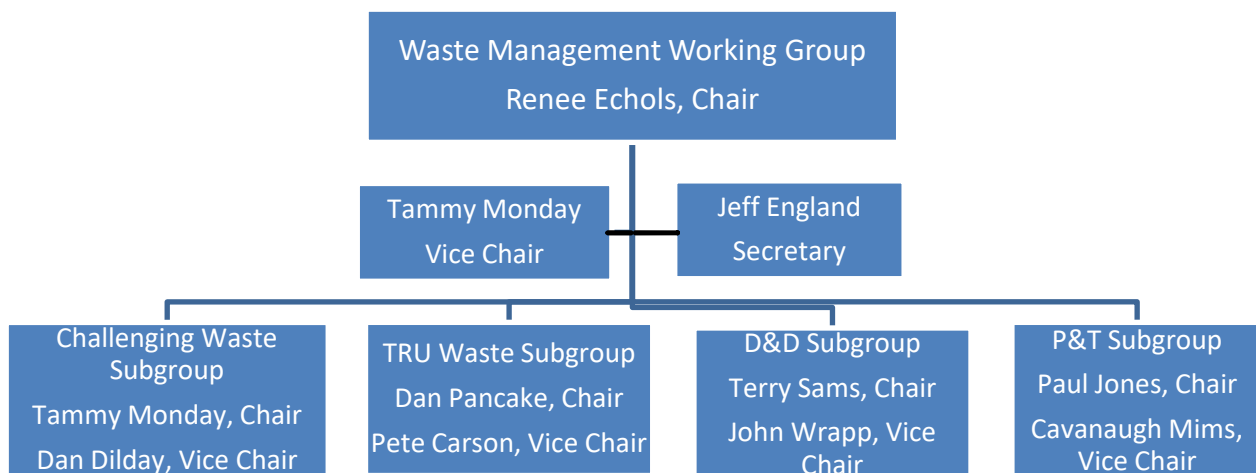
Waste Management Working Group FY2022 Annual Work Plan

Working Group Mission and Scope

The Waste Management Working Group (WMWG) is chartered to leverage the expertise and experience of contractors to the DOE. The purpose of the WMWG is to seek out and promote the best management and operating practices, cost effective technologies and disposal options for all waste streams generated at DOE facilities whether destined for DOE or commercial facilities. The WMWG is focused on complex wide integration and technology transfer while supporting cost effective and efficient waste options. This enhances complex wide communication and maintains a priority on safety, environmental stewardship, and security. The scope of the working group includes cradle-to-grave waste management that begins at waste generation and goes through final disposition.

The WMWG focuses on DOE complex waste management program support through work performed under four technical Subgroups:

1. Challenging Waste Subgroup
2. Packaging & Transportation (P&T) Subgroup
3. Decontamination & Decommissioning (D&D) Subgroup
4. Transuranic (TRU) Waste Subgroup



Working Group Main Focus Areas in 2022

- a. Provide continued technical support concerning Waste Classification issues across the DOE Complex. The WMWG membership has the technical expertise to provide recommendations on waste classification to the appropriate disposition category that is acceptable for compliance with DOE Order 435.1 and other applicable regulation all while being protective of the public and environment. This effort focuses specifically on the application of risk-based classification versus origin based. The WMWG will provide technical support and consultation to DOE for lower activity radioactive wastes that are currently managed as High-Level Waste (HLW) and Transuranic (TRU) wastes identifying alternative disposition pathways that are safe and cost effective.
- b. Through our Challenging Waste Subgroup, continue to collect challenging waste inventory information and provide a collaborative forum to discuss the most effective means to disposition these waste streams. This subgroup has selected a specific waste stream to work through a collaboration approach for FY2022. Information sharing is necessary so that sites do not create new treatment capabilities for waste streams that have a disposition path already established.

The Challenging Waste Subgroup continues to provide a platform for collaboration between sites related to reactive sodium wastes (e.g., new Prime Contractor at Hanford Plateau CPCCo, BEA Idaho, and UCOR) to provide information and understanding of technologies currently being evaluated and tested for treatment of sodium wastes.

This subgroup has taken on the new initiative to support DOE EM 4.3 with their efforts to identify DOE sites that potentially have contaminants from EPA's list of emerging contaminants (e.g., PFAS and 1-4 Dioxane). To date, DOE EM has made a concentrated initial effort to better understand what potential sources of PFAS are at sites across the Complex, but many data gaps still exist at most of the sites. To better understand what potential sources of PFAS are at DOE sites including what data may be available, the Challenging Waste Subgroup is providing the platform to convey the message to the Prime Contractors and offer technical expertise as needed to move this initiative forward.

- c. Continue to collect, detail, and share waste management best practices from member sites to provide process improvement recommendations in the areas of waste characterization, packaging, and transportation. The starting point for this effort was the best practices identified in EA-31's "Enterprise-wide Assessment of the Department of Energy's Packaging and Shipping of Radioactive Waste" (Final Report issued July 2020). Best practices will be posted on the WMWG website for reference.
- d. Through our Decontamination & Decommissioning (D&D) Subgroup, provide technical assistance for waste issues that will arise from future D&D activities. A specific focus in 2022, will be the continued collaboration between D&D planning and waste management organizations to adequately plan for challenging wastes to be generated from D&D activities at the Y-12 Nuclear Security Complex (e.g., hazardous/mixed wastes such as Mercury and Beryllium) and the Oak Ridge National Laboratory (high activity radioactive wastes). Of specific interest for the subgroup will be involvement with evaluation of

technologies that support mercury removal, vapor control, and waste disposition for mercury bearing waste.

- e. Provide continued support to DOE technical groups including the Low-Level Waste Disposal Facility Federal Review Group (LFRG), National Transuranic Program (NTP) User Group and Tank Closure Users Group.
- f. Provide technical support for the completion, response to comments, implementation and training associated with DOE Order 435.1 and future revisions (Radioactive Waste Management) with a focus on LLW disposal technical standards, etc.
- g. Through our Packaging and Transportation (P&T) Subgroup, provide continued technical consultation and support to DOE P&T organizations. Efforts will include providing technical comments on waste packages, radiation clearance surveys on commercial transport equipment and vehicles, and support to the Contractors Transportation Management Association (CTMA) and will incorporate a P&T Lessons Learned Program.
- h. Broaden and maintain a TRU Waste Subgroup that will provide support to EM and NNSA TRU Waste Generator Sites. FY2022 scope will include focus on application of complex-wide lessons learned and best practices related to TRU Waste Generation programs across DOE Generator Sites. This content will include, for example:
 - Idaho ARP V and Y-12 events (responsive to continued DNFSB and EA interests, including similar concerns in characterization at point of generation).
 - Program development successes in managing unique and challenging waste forms in Remote Handled (RH) TRU program space.
 - Collect/disseminate information on best practices for characterizing legacy waste with unknown hazards (responsive to ARP V extent of condition review).
 - Collect/disseminate best practices for generator performance at the point of waste origination or repackaging where the waste stream is most vulnerable to the introduction of prohibited items and waste stream or process changes (EA complex-wide review).
 - Drum venting best practices (responsive to ARP V extent of condition review and DNFSB follow-up).
 - Provide input for continuous improvement on TRU waste certification process.
 - A TRU Waste Subgroup communication hub will be established to document and store the information generated from these activities, as well as provide a repository for this information available to all generators at any time.

WMWG Planned Activities for FY 2022

Activity	Benefit	Deliverable/Key Milestone(s)
1.0		
1.1 Continue to assist EM in the evaluation and implementation of realistic “return to service” radiological contamination limits for commercial equipment that has transported DOE wastes to a DOE disposal facility per the recommendations of EFCOG Report.	Consistent application of DOE release criteria vs DOT Return to Service Limits results in cost Savings and reduces Contamination Incidents for DOE Transportation Programs.	1.1.1 Assist DOE, as desired, with implementation of recommendations from the P&T report “Return to Service Impacts for Non-DOE Owned Transport Conveyances” dated June 21, 2016.
2.0		
2.1 The EFCOG Chair or his/her representative will provide technical support to and attend scheduled meetings of the NTP User Group, DOE Tank Waste Closure Forum, the Contractors Transportation Management Association (CTMA), and the Low-Level Waste Disposal Federal Review Group (LFRG).	In providing technical and regulatory consultation to these groups allows the WMWG to stay abreast of the issues facing DOE and provide immediate advice and longer-term assistance on selected issues.	2.1.1 Attendance at each of these meetings, and report on EFCOG progress in addition to the expectation of requests for additional EFCOG assistance on specific issues.
3.0		
3.1 Provide technical support for the completion, response to comments, implementation and training associated with revision to DOE Order 435.1 (Radioactive Waste Management). Specific focus will be in the areas of LLW Disposal.	EFCOG contractor members benefit directly by providing consultation to DOE in setting requirements for radioactive waste generation, treatment, storage, and disposal.	<p>3.1.1 Training and implementation strategy will also be recommended. This will include assistance with expedited review of the latest revisions prior to issuance of the draft order for public review.</p> <p>3.1.2 Expect to develop and provide LLW Disposal requirements training to LFRG.</p> <p>3.1.3 Expect to assist in implementation of the Technical Standard Guidance for Disposal Authorization Statements and Tank Closure.</p> <p>3.1.4 Expect to Develop Training and continue to provide DOE O 435.1 training to DOE sites. Expect to develop and continue assists/assessments program for DOE O 435.1 to contractors and DOE staff around the complex.</p>

Activity	Benefit	Deliverable/Key Milestone(s)
4.0		
4.1 Develop and document a minimum of two additional Best Practices and/or technical recommendation documents.	Best practices are a good way to share information with the goal to improve program performance around the complex.	4.1.1 Post detailed Best Practices developed from the EA-31 assessment. 4.1.2 Post best practices on TRU Waste issues. 4.1.3 Post best practices on Challenging waste resulting from collaboration efforts.
5.0		
5.1 Provide support to DOE EM on waste classification efforts.	Significant schedule and cost benefits can be realized from utilizing risk-based standards versus origin based.	5.1.1. Provide technical support, document reviews, and public review comments in support of DOE waste classification initiatives. Specific, support can be provided for tank wastes (i.e., wastes managed as HLW but are LLW/MLLW and TRU (may fall below 100 nCi/g)).

Activity	Benefit	Deliverable/Key Milestone(s)
6.0		
<p>6.1 The Challenging Waste Subgroup will focus on the identification and resolution of challenging low level, mixed low level, TRU and high-level waste (tank waste) streams. Support DOE EM 4.2 organization by assistance with the identification and resolution of additional challenging waste streams.</p>	<p>Continue to expand collaboration between DOE, site prime contractors, and commercial treatment and disposal companies (TSDFs) through WMWG group meetings, workshops, etc. to facilitate sharing of information that is useful. Improved communication is important and allows site waste managers to be informed what capabilities are commercially available.</p>	<p>6.1.1 Facilitate collaborative discussions between generators on disposition options for challenging waste streams. The subgroup's performance and necessity will be measured by how it effects a decrease in inventory of challenging waste streams around the complex.</p> <p>6.1.2 Focus on DOE sodium bearing waste challenges.</p> <p>6.1.3 Focus on EPA's emerging contaminants constituents (such as PFAS and 1-4 Dioxane).</p>
7.0		
<p>7.1 Provide technical support and consultation for Disposal or Closure Authorization and future DOE LLW disposal activities at other DOE sites in the future (e.g. Paducah, Oak Ridge, Idaho, and Hanford).</p>	<p>The LFRG is responsible to review technical documents required by DOE Order 435.1, that provide DOE authorization of LLW disposal in DOE owned LLW disposal facilities. By the WMWG providing technical and regulatory consultation to the LFRG review, DOE can utilize additional resources that have years of Performance Assessment, Composite Analysis, key technical basis document preparation, and Operational experience to authorize and operate LLW Disposal Facilities.</p>	<p>7.1.1 Expect to provide specific recommendations and draft wording for Disposal Authorization Technical Basis Documents, definitions, and guidance. Continue to provide expertise for reviews, e.g., Paducah, Oak Ridge, Idaho, and Hanford.</p>
8.0		
<p>8.1 Focus D&D subgroup activities on waste generation issues. For FY22, specific activity will focus on D&D planning of facilities with high concentrations of mercury and beryllium.</p>	<p>Oak Ridge cleanup at Y-12 and ORNL will generate wastes that are not typical to DOE EM D&D projects. Ensuring that waste management works closely with D&D operations to minimize cost and schedule impacts is important for these upcoming projects.</p>	<p>8.1.1 Work with DOE OREM Mercury Technology Demonstration Initiative Program to ensure that waste disposition pathways are identified or provide recommendations for testing.</p>

Activity	Benefit	Deliverable/Key Milestone(s)
9.0		
<p>9.1 Provide technical support to NNSA/NFO by conducting a focused review of selected RWAP process improvement recommendations. This is a follow on to the FY15 task to assess NNSW Waste Generator Certification Programs (completed report published 4/20/15).</p>	<p>Prior reviews have included evaluations of proposed improvements to the profile form and instructions, and RWAP information sharing plan. The overall objective for this review is to assist EM-NV in addressing technical waste management issues. The primary benefit from this effort will be increased regulatory and stakeholder confidence in the rigor and protections associated with a strong and robust RWAP program. Further, having enhanced reviews of waste profiles and independent assessments for waste generator compliance to the NNSW WAC are intended to increase confidence.</p>	<p>9.1.1 Continue to support EM-NV applications for RWAP support including assessment of improvements in the waste profile reviews, stand-alone waste verification, the RWAP information sharing plan and other comments in support of EM-NV.</p>
10.0		
<p>10.1 Broaden and maintain the TRU Waste Subgroup to support EM and NNSA TRU waste generators. Activities will be coordinated with EM's NTP and the NTP User group to ensure subgroup does not duplicate or contradict these lead organization's efforts.</p>	<p>Provide a forum for TRU waste generators, including EM and NNSA leadership, to share information and lessons learned. Supplement activities by NTP User's group if needed. Be responsive to DNFSB and EA interests and concerns specifically for characterization at the point of generation.</p>	<p>10.1.1 Establish the TRU Waste Communications Hub and begin to document and categorize lessons learned and best practices.</p> <p>10.1.2 Focus on application of complex-wide lessons learned from events at Idaho, Los Alamos, and Y-12.</p> <p>10.1.3 Expand on EA-31 Enterprise Assessment best practices dealing with point of generation characterization.</p>

FY 21 Sunset Tasks

Completed Tasks

- Provided waste management program COVID-19 lessons learned as part of EFCOG's ongoing initiative with DOE to ensure that work is performed safely and compliantly.
- The TRU Waste Subgroup was established and completed the first task of assessing the combined communications challenges across all Programs (DOE-EM, NNSA, SC, and NE). This information is being used to focus efforts for FY22 activities in supporting TRU Waste Generators and the National TRU Program.

Cancelled Tasks

None

Other Working Group Activities

The WMWG holds two to three annual working meetings as well as conducts monthly conference calls that provide opportunities for communication, consultation, and direction with DOE Liaisons/Sponsors and our EFCOG membership. The face-to-face meetings will be conducted in concert with other planned conferences/meetings to minimize travel and other costs if allowed due to restrictions from COVID-19 policies. In addition, meetings and conference calls with DOE Liaisons will occur on an as needed basis to ensure that each task is proceeding successfully toward resolution, and to allow course correction when necessary. The overall management of the WMWG has, and is expected to continue, to take a considerable amount of time primarily performed by the Chair, Vice Chair, Secretary and Subgroup Chairs. It is critical to the successful performance of the WMWG for the planning and coordination to be done in an effective and efficient manner. The resulting reports and best practices will be of benefit to DOE, its contractors, and the EFCOG organization, and thus provide tangible value to the waste management community.

Reporting and Communications

The WMWG Chair, Vice Chair, and Secretary develops an agenda for each meeting or conference call distributed to DOE sponsors/liaisons and the WMWG membership. During these meetings, members use slide presentations to inform participants about specific Work Plan initiatives or waste management activities at their sites. The WMWG Secretary ensures all working meetings and monthly conference calls are documented with the identification of action items. The convention has been, and will continue to be, all white papers, reports, and best practices will be prepared and transmitted to all DOE and EFCOG involved parties prior to publishing on the EFCOG website for review and approval. In addition, meetings and conference calls with the DOE Liaisons will occur on an as needed basis to ensure each task is proceeding

successfully toward resolution, and to allow course correction as needed. It is anticipated that new tasks or ad hoc tasks may be added as emerging issues occur and are recommended by the WMWG, a task scope developed, and approval is received by DOE EM 4.2 or designee(s).

The EFCOG Annual Report will contain a final year-end report from the WMWG describing the accomplishments and changes that have occurred due to emerging issues.