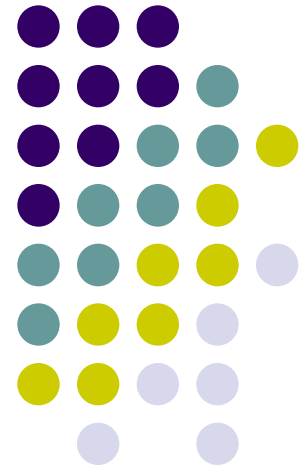


Waste Management Working Group 2015 EFCOG Work Shop



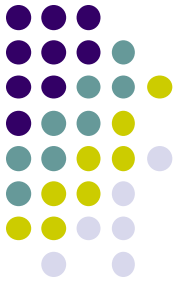
Sonny Goldston
Energy *Solutions*
Working Group Chair
February 3, 2015

Presented to EFCOG Session 115 @ WM15
March 19, 2015



*“Achieving Mission and Sustaining Operational Excellence in a
Challenging Budget Environment”*

Workshop Agenda



1. Overview of Waste Management Working Group (purpose, structure, governance)
2. Overview of DOE Expectations for Waste Management Working Group
3. Interactive Discussion on Purpose/Structure/Governance/Expectations
4. Overview of Annual Work Plans for Technical Subgroups (activities/deliverables and value proposition) to activities, outcomes)
5. Interactive Discussion on Proposed Technical Subgroup Activities (done after each Technical Subgroup brief)
6. Discussion of additional Tasks requested by DOE (NNSS Waste generator and possible D&D tasks)
7. Opportunities for Integration/Coordination and/or Changes to Annual Work Plan
8. Wrap-up/Review of actions and responsibilities for WMWG and opportunities for DOE Liaisons

Moses Jaraysi, Billy Morrison, Sonny Goldston

Frank Marcinowski and Christine Gelles

Moses Jaraysi, Billy Morrison, Sonny Goldston

Current Technical Subgroup Leads Current

Technical Subgroup Leads:

Scott Saunders, Chair, Tank/HLW Subgroup, WRPS, URS, Hanford

Karthik Subramanian, Vice Chair, Tank/HLW Subgroup, WRPS, Hanford

Jim Portsmouth, Chair, Packaging & Transportation Subgroup, CHPRC, Hanford

Mike Waters, Vice Chair, Packaging & Transportation Subgroup, CHPRC, Hanford

Syd Gordon, Vice Chair, Packaging & Transportation Subgroup, NSTec, Nevada

Jeannette Hyatt, Chair, National Laboratory Subgroup, Savannah River National Lab

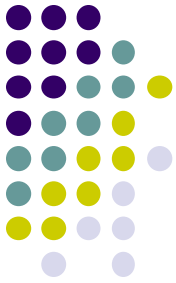
Paul Black, National Laboratory Subgroup, Neptune

Kelly Black, National Laboratory Subgroup, Neptune

Moses Jaraysi, Billy Morrison, Sonny Goldston

Syd Gordon / Rob Vellinger

Sonny Goldston



Waste Management Working Group



Waste Management Working Group
W. T. (Sonny) Goldston, EnergySolutions – Chair
Renee Echols, Perma-Fix – Vice Chair
Tammy Monday, Perma-Fix - Secretary

EFCOG Board of Director Sponsors
Billy Morrison, EnergySolutions,
Moses Jaraysi, CH2MHill

High-Level Waste Subgroup
Scott Saunders, Washington River Protection Solutions – Chair
Karthik Subramanian, WRPS – Vice Chair
Bob Petras, SRR – Vice Chair
Larry Ling, SRR

Packaging and Transportation Subgroup
Jim Portsmouth, CHPRC – Chair
Mike Waters, CHPRC – Vice Chair
Syd Gordon, NSTec – Vice Chair
Ted Giltz, RadCon

National Laboratory Subgroup
Jeannette Hyatt, SRNL – Chair
Kent McDonald, PNNL – Vice Chair
Jerry Cunningham, ORNL
Dan Pancake, ANL
Bev Crawford, LANL
Rob Black, INL

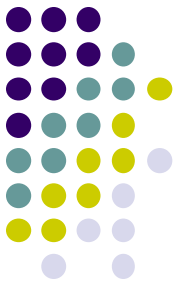
DOE-HQ and Site Liaisons

Frank Marcinowski, EM30
Christine Gelles, EM-30
Bill Levitan, EM-10
Tom Longo, NNSA
Dave Michlewicz, Science, SC-31
Ken Picha, EM-20
Doug Tonkay, EM-31
Linda Suttora, EM-10
Ray Corey, DOE-RL

Ashok Kapoor, EM-33
Ahmad Al-Daouk, NNSA
Vince Adams, DOE Ports
Dan Sullivan, DOE West Valley
Chris Harrington, DOE-ORP
Rob Boehlecke, DOE-NNSS
Gary Pyles, DOE-ORP
Ray Corey, DOE-RL

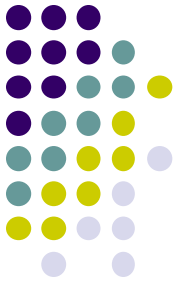
Webmaster
Ed Yatsko

Working Group Main Focal Areas in 2015



- a. Provide continued technical support and a report associated with the Workshop held in conjunction with the Radwaste Summit: During WIPP Shutdown, Develop Options and Alternatives for the Transuranic Waste Inventory Across the DOE Complex
- b. Provide continued support to the LLW (including the LFRG), TRU, and Tank Waste Corporate Boards and in particular the Office of River Protection (Hanford) for the Waste Incidentals to Reprocessing (WIR) Evaluations and Integrated Disposal Facility (IDF) Performance Assessment (PA) as a result of the High-Level Waste (HLW) WIR Lessons Learned Workshop conducted at WM13.
- c. Provide technical support for the completion, response to comments, implementation and training associated with DOE Order 435.1A (Radioactive Waste Management) with a focus on Consolidation, Waste Classification, and Waste Incidental to Reprocessing.
- d. Provide continued technical support to the Packaging and Transportation focusing on completion of the evaluation of realistic “return to service” radiological contamination limits for commercial equipment that has transported DOE wastes to a DOE disposal facility and development of overall performance standards for use by DOE sites when conducting rad release surveys on commercial transporter equipment and vehicles.
- e. Provide technical inputs for mechanisms to facilitate early collaboration among National Laboratories for challenging new waste streams.
- f. The inventory of Lessons Learned and Best Practices generated by the D&D Working Group will be maintained and made available to the users within the DOE Complex. Future specific D&D and/or Environmental Remediation issues related to waste characterization, minimization, disposition, and recycling/reuse will be addressed under ad hoc task groups to be agreed to with DOE on a case by case basis.

WMWG Planned Activities for FY 2015 – Continued



- 3. The EFCOG Chair or his/her representative will provide technical support to and attend scheduled meetings of the DOE Corporate Boards (LLW, Tank Waste, TRU) and the Low-Level Waste Federal Review Group (LFRG).**

Anticipated Benefits: In providing technical and regulatory consultation to the DOE Corporate Boards and the LFRG allows the EFCOG WMWG to stay abreast of the issues facing DOE and provide immediate advice and longer term assistance as DOE determines the need for continued EFCOG involvement on selected issues.

Sonny Goldston

DOE Liaisons:

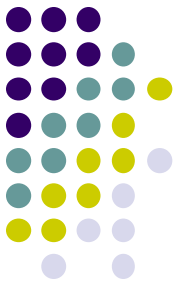
Christine Gelles

Doug Tonkay – LLW

Ken Picha – Tank Waste

J.R. Stroble - TRU

WMWG Planned Activities for FY 2015 – Continued



5. Provide technical support for the completion, response to comments, implementation and training associated with DOE Order 435.1A (Radioactive Waste Management) with a focus on Consolidation, Waste Classification, and Waste Incidental to Reprocessing. Also included in this task is the continued management of the EFCOG Waste Classification Library.

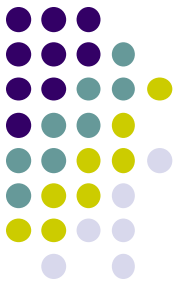
Anticipated Benefits: The EFCOG contractors benefit directly by providing consultation to DOE in the setting of requirements for radioactive waste generation, treatment, storage and disposal. For example, Consolidation and Classification (wording of requirement and guidance provided by the WMWG) requires that compatible waste types be combined to reduce costs of disposal (LLW vs. TRU) and improve safety of handling of the waste by no longer requiring segregation. A managed, treated, or processed waste should be dispositioned as the lowest classification technically defensible (For example, the National TRU Waste Management Plan, Rev 1, (8/2013) indicates that over 8,000 m3 of TRU waste is stored in the DOE Complex as potential TRU waste for WIPP disposal. If only 10 percent of that inventory were to be managed, treated, or processed to be dispositioned as LLW, a savings of over \$6 million would be achieved. This does not count cost & risk avoidance from not generating new TRU waste through use of Consolidation techniques. (see #13 for WIR benefits))

Sonny Goldston

DOE Liaisons:

Linda Suttora

WMWG Planned Activities for FY 2015



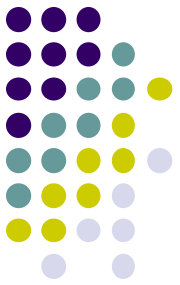
10. **Develop update to the Tank Integrity Program requirements and Guidance to update DOE Order 435.1A in concert with the Tank Waste Corporate Board.**

Anticipated Benefits: The Tank Integrity Program requirements in the current DOE Order 435.1 are out of date and inconsistent with the current state of the technology. Hanford, for example, must tell its regulator that they are not following the DOE Order requirements which cause considerable concern. The EFCOG is assisting DOE to update the requirements and guidance to make them consistent with current technology. Incorporating consistent, state of the art technology in the DOE Order 435.1 Requirements and Guidance for HLW Tank integrity programs will advance the safety of tank systems and strengthen the technical integrity of the DOE required program over the entire complex.

Scott Saunders
Karthik Subramanian

DOE Liaisons:
Linda Suttora
Ken Picha

WMWG Planned Activities for FY 2015



11. **Provide technical support and consultation to the Portsmouth Onsite Disposal Cell PA/CA LFRG Review for Disposal Authorization.**

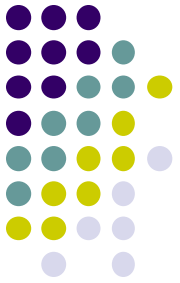
Anticipated Benefits: By the EFCOG providing technical and regulatory consultation to the LFRG review of DOE authorization of onsite LLW disposal, DOE is able to tap resources that have years of Performance Assessment, Composite Analysis, and Operational Experience to assist DOE in carrying out their authority to approve the operation of LLW Disposal Facilities.

Sonny Goldston

DOE Liaisons:

Linda Suttora

WMWG Planned Activities for FY 2015



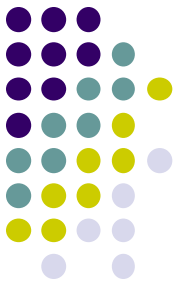
13. **Provide continued support to the Office of River Protection (Hanford) for the Waste Incidental to Reprocessing (WIR) Evaluations and Integrated Disposal Facility (IDF) Performance Assessment (PA) as a result of the High-Level Waste (HLW) WIR Lessons Learned Workshop conducted at WM13.**

Anticipated Benefits: The cost savings due to implementation of the lessons learned in interaction between NRC, DOE and the States are difficult to quantify as the end product of this work is methods, guides, and lessons learned. The goal is to reduce the review time of each organization and reduce the rework of regulatory documents resulting in HLW Tank closures in considerably less time. However, a conservative estimate of the accomplishments and activities exceeds \$5-10 million across the complex

Scott Saunders
Sonny Goldston
Jim McNeil

DOE Liaisons:
Linda Suttora
Ken Picha

WMWG Planned Activities for FY 2015



1. **Complete the evaluation of realistic “return to service” radiological contamination limits for commercial equipment that has transported DOE wastes to a DOE disposal facility.**

Anticipated Benefits: Consistent Application of DOE Release Criteria vs DOT Return to Service Limits Results in Cost Savings and reduces Contamination Incidents - \$160K per incident and a history of over 10 incidents per year results in cost avoidance of \$1.6 Million per year.

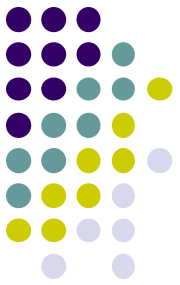
2. **Develop overall performance standards for use by DOE sites when conducting rad release surveys on commercial transporter equipment and vehicles.**

Anticipated Benefits: In conjunction with #1 above, development of a performance standard for Rad acceptance and release surveys will reduce the number of contamination incidents holding commercial equipment at DOE sites for decon (working with the EFCOG Rad Protection Subgroup).

Jim Portsmouth
Mike Waters
Syd Gordon
Ted Giltz

DOE Liaison:
Ashok Kapoor

WMWG Planned Activities for FY 2015 – Continued



6. **Provide technical inputs and interface with DOE with regard to the implementation and deployment of the Automated Transportation Logistics Analysis System (ATLAS) software product which replaces the currently used Automated Transportation Management System (ATMS) software product.**

Anticipated Benefits: The EFCOG team is working to develop, beta test and encourage use of the system across the DOE complex. Use DOE wide is expected to save DOE over \$1.5 million a year in cost reductions from the use of government tenders and pre-payment audit alone.

7. **Provide technical support to the DOE-EM Packaging Management Council to develop and implement a standard Freight Container Guide.**

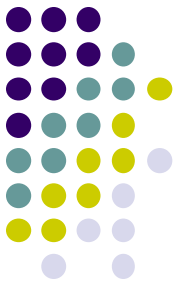
Anticipated Benefits: The purpose of the guide is to educate DOE site locations on the proper and compliant use of freight containers for the movement of radioactive materials. The cost reductions could be in the millions depending on the site location and how they are using freight containers. Example would be at MOAB where 18 million tons of radioactive mill tailing have to be moved for disposal. Large intermodal freight containers are used daily to do this and saved over \$1 million.

Jim Portsmouth
Mike Waters

DOE Liaisons:

Ashok Kapoor

WMWG Planned Activities for FY 2015



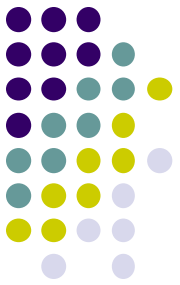
15. DOE RADCALC Software version 4.2 development and implementation.

Anticipated Benefits: This software product performs calculations relevant to the transportation of radioactive materials. Calculations that involve A1 and A2 values are performed in accordance with 49 CFR 173.433. This software is a PC based NQA-1 validated software product used by DOE sites complex wide to make radioactive material shipment determinations. Version 4.2 will entail the upgrade of the presently used 4.1 Radcalc software to include functions such as NRC radioactive waste classification in 10 CFR 61. The EFCOG Packaging and Transportation Subgroup of the WMWG will review and support development and support implementation of RADCALC Software version 4.2.

Jim Portsmouth
Mike Waters

DOE Liaisons:
Ashok Kapoor

WMWG Planned Activities for FY 2015 – Continued



4. **Provide technical input to DOE/HQ regarding NRC's performance-based revision to 10 CFR 61 as it affects LLW disposal performance requirements.**

Anticipated Benefits: NRC has been tasked by the Commissioners to modify 10 CFR 61 for LLW disposal requirements to make this rule more performance based, site specific, and have waste acceptance criteria that reflects the Performance Assessment. NRC is working with DOE to understand how DOE accomplishes this through DOE Order 435.1 and, as a result, the EFCOG continues to provide technical and regulatory assistance in document preparation and presentation material as well as attending public meetings.

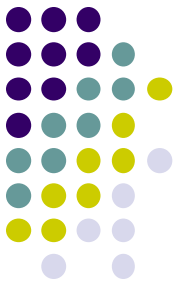
Sonny Goldston

DOE Liaisons:

Christine Gelles

Doug Tankay

WMWG Planned Activities for FY 2015



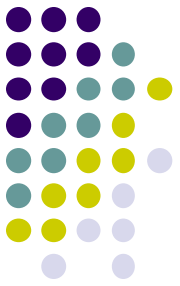
12. **Provide Technical assistance to West Valley's Waste Classification of spent fuel cuttings and vitrification cell/off-gas materials to enable disposition as TRU or LLW.**

Anticipated Benefits: The cost savings will be considerable since the alternative approach will be to classify these waste streams as Spent Fuel and HLW. If this waste is not examined to determine its actual classification and defaults to Spent Fuel or HLW, there is currently no disposition path for this waste. This waste consists of 79 30-gal drums of vitrification facility materials (about 320 cubic feet or 9 cubic meters, and the over 300 30-gal drums of HEC floor debris (about 35 cubic meters).

Sonny Goldston
Jim McNeil

DOE Liaisons:
Doug Tonkay

WMWG Planned Activities for FY 2015



14. **Provide continued technical support and a report associated with the Workshop held in conjunction with the Radwaste Summit: During WIPP Shutdown, Develop Options and Alternatives for the Transuranic Waste Inventory Across the DOE Complex.**

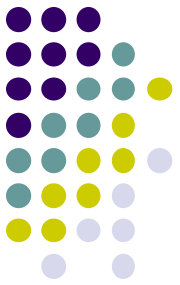
Anticipated Benefits: In light of the temporary unavailability of WIPP, the workshop kicked off discussions of site experiences and potential strategies to maintain progress in waste disposition. DOE Order 435.1 presents opportunities for Consolidation and Classification to manage waste inventories as Mixed Low-Level Waste vs. TRU Waste, thus allowing disposal, risk reduction and cost savings.

Sonny Goldston

DOE Liaisons:

Christine Gelles

WMWG Planned Activities for FY 2015



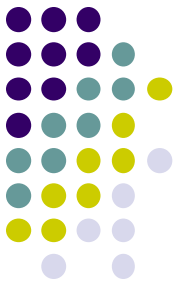
9. **Provide technical inputs for mechanisms to facilitate early collaboration among National Laboratories for challenging new waste streams.**

Anticipated Benefits: The end result of this effort is to develop a set of guidelines and a tool kit for waste managers at Laboratories to have a "catalog of diverse solutions "before" generation of tough waste streams, a process that makes available the complex's available expertise and experience to develop disposition paths rather than reacting to a waste problem. These efforts could compensate for the lack of resources at small waste generator laboratory sites. Providing these tools to Laboratory waste managers will reduce the need for more resources and reduce waste inventories that require storage since they will be dispositioned.

Jeannette Hyatt
Paul Black
Kelly Black

DOE Liaisons:
Christine Gelles
Dave Michlewicz

WMWG Planned Activities for FY 2015



19. **Assessment of NNSS Waste Generator Certification Programs**

Anticipated Benefits: Provide technical support to NNSA/NFO by conducting a focused review of current waste generator certification program assessments (Facility Evaluations – audits and surveillances) conducted by the NNSS Radioactive Waste Acceptance Program (RWAP). This review will emphasize the rationale by which approved NNSS generators can take credit for other program assessments that have been conducted on their waste certification processes and procedures – including independent assessments, internal assessments, outside reviews by organizations other than RWAP, local DOE Facility Representative inspections, and related activities.

The overall objective for this review is to assist NNSA/NFO in providing additional assurances to their State regulator and Stakeholders that accurate and adequate characterization is performed on wastes being certified to the NNSS WAC and shipped to the NNSS for disposal. The primary benefit from this effort will be the intangible benefit associated with increased regulatory and stakeholder confidence in the rigor and protections associated with a strong and robust RWAP program that reviews waste profiles and assesses waste generator compliance with the NNSS WAC

Syd Gordon

DOE Liaisons:
Rob Boehlecke – DOE NNSS