

May 24, 2019

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From: Todd Lovinger  
Executive Director of Low-Level Radioactive Waste Forum (LLW Forum)  
Project Director of Disused Sources & Part 61 Working Groups (DSWG/P61WG)

**Re: Annual Report of Activities of the Low-Level Radioactive Waste Forum's  
Disused Source Working Group and Part 61 Working Group for the  
Period from April 1, 2018 Through March 31, 2019  
*Contract DE-NA0003197 (Issued March 31, 2016)***

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The following is an annual report of the activities that were carried out during the period from April 1, 2018 through March 31, 2019 pursuant to the Low-Level Radioactive Waste Forum's (LLW Forum's) contract with the U.S. Department of Energy's (DOE's) National Nuclear Security Administration (NNSA) for services of the Disused Source Working Group (DSWG) and Part 61 Working Group (P61WG). The information contained in this report is considered to be proprietary and confidential and should not be shared with outside parties.

The report is necessarily summary in nature. Additional information is available on request.

## **Progress Made During Reporting Period**

### **Narrative Description of Work Completed**

During the period from April 1, 2018 through March 31, 2019, the following activities were undertaken by the Disused Sources Working Group (DSWG) and Part 61 Working Group (P61WG) in conjunction with the Low-Level Radioactive Waste Forum's (LLW Forum's) contract for services with the National Nuclear Security Administration (NNSA):

- discuss with state officials opportunities to increase management and disposal options for radioactive sealed sources and devices at existing commercial disposal sites;
- continue working with partners at the Organization of Agreement States (OAS), Conference of Radiation Control Program Directors (CRCPD) and Health Physics Society (HPS) toward improved management and disposition of disused sources;
- conduct, and write a report regarding, a stakeholder survey to identify issues associated with and understand industry perspectives concerning the development of an enhanced secure source exchange program in preparation for an upcoming meeting at the CRCPD conference with the organization's Executive Director;
- edit the outline for a proposed workshop on issues related to source management and disposition that is intended to be offered to low-level radioactive waste compacts in association with, or independent from, regular compact commission meetings;
- finalize development, planning and outreach re agenda sessions on source management and disposition, alternative technologies and Part 61 rulemaking activities for spring 2018 Low-Level Radioactive Waste Forum (LLW Forum) and Disused Sources Working Group (DSWG) meetings in San Francisco, California;
- continued development of other agenda sessions for spring 2018 LLW Forum meeting including International Atomic Energy Agency (IAEA)-led panel on disused source management and disposal projects and activities in member countries; case-study project re three-year project regarding the removal of 36,000 sources – i.e. overview of what happened, issues/challenges during the clean-up and lessons to be learned therefrom; NRC agency activities re Part 61 rule and source issues; and revisions to Nuclear Radiological Incident Annex to the National Response Framework by Federal Emergency Management Agency (FEMA);
- research, discussions and assignments to DSWG/P61WG staff re spring 2018 meeting topics including: development of the proposal for the creation of a secure source exchange program via the CRCPD focusing on recycle and reuse or unwanted sources; updates regarding CRCPD's Part S Working Group on developing suggested state regulations; NNSA ongoing activities, projects, and initiative; revision of the HPS Position Statement re low-level radioactive waste management; upcoming report from the National Council on Radiation Protection and Measurements (NCRP) re sealed sources; discussion regarding NRC request for stakeholder input re technical

- issues that should be considered in the development of a regulatory basis for the disposal of Greater-than-Class C (GTCC) and transuranic (TRU) waste;
- attend, moderate, participate and facilitate agenda sessions regarding source management and disposition and the 10 CFR Part 61 rulemaking initiative at the spring 2018 LLW Forum meeting on behalf of the DSWG/P61WG;
  - attend, moderate, participate and facilitate the spring 2018 meetings of the DSWG in San Francisco, California at the Hyatt Regency Airport Hotel;
  - review materials, write and distribute memo re NRC request for stakeholder comment on the various technical issues that should be considered in the development of a regulatory basis or the disposal of GTCC and transuranic waste including sealed radioactive sources;
  - review and distribute information to P61WG and LLW Forum members re NRC request for public comment on VLLW scoping study;
  - attend and participate in the CRCPD annual meeting on behalf of the DSWG/P61WG including a meeting with NNSA and CRCPD officials about a proposed path forward to support the development of an enhanced secure source exchange program;
  - incorporate additional edits on a draft disposal cost document that will serve as a companion piece to the educational materials for current and prospective licensees;
  - review agendas, register and make travel arrangements re attendance at upcoming industry meetings on behalf of DSWG/P61WG;
  - write, edit and submit the annual report for the activities that were carried out during the period from April 1, 2017 through March 31, 2018 pursuant to the LLW Forum contract DE-NA-0003197 with NNSA for services of the DSWG and P61WG;
  - research, write, edit and copy detailed report for annual meeting of the Northwest Interstate Compact Commission on Low-Level Management re activities of DSWG/P61WG;
  - follow-up to DSWG/P61WG spring 2018 meeting topics including: development of the proposal for the creation of a secure source exchange program via the Conference of Radiation Control Program Directors (CRCPD) focusing on recycle and reuse or unwanted sources; updates regarding CRCPD's Part S Working Group on developing suggested state regulations; NNSA ongoing activities, projects, and initiative; revision of the Health Physics Society (HPS) Position Statement re low-level radioactive waste management; upcoming report from the National Council on Radiation Protection and Measurements (NCRP) re sealed sources; discussion regarding NRC request for stakeholder input re technical issues that should be considered in the development of a regulatory basis for the disposal of Greater-than-Class C (GTCC) and transuranic (TRU) waste;
  - attend and participate in Northwest Compact Commission annual meeting on behalf of the DSWG/P61WG;
  - attend and participate in annual CRCPD conference on behalf of the DSWG/P61WG;
  - respond to inquiries and follow-up re agenda sessions on source management and disposition, alternative technologies and Part 61 rulemaking activities at the spring 2018 LLW Forum and DSWG meetings in San Francisco, California;

- review materials, write and distribute News Flash and communicate with stakeholders re Southwestern Low-Level Radioactive Waste Commission workshops on the use and disposition of radioactive materials, including sealed sources and devices;
- write, edit and distribute stories for newsletters re disused source management, Part 61 rulemaking initiative and other issues;
- attend and participate in the annual meeting of the Northwest Interstate Low-Level Radioactive Waste Compact Commission in Anchorage, Alaska on behalf of DSWG and P61WG and side meetings re potential opportunities to increase access to Hanford site for disused sources;
- incorporate additional edits on a draft disposal cost document that will serve as a companion piece to the educational materials for current and prospective licensees;
- research, write and transmit to DSWG members, staff and organizational liaisons overview re U.S. Nuclear Regulatory Commission (NRC) Regulatory Issue Summary (RIS) 2018-03 to provide information on the U.S. Department of Homeland Security (DHS) National Terrorism Advisory System (NTAS) to licensees who are authorized to possess Category 1 and 2 quantities of radioactive material;
- review agendas, register and make travel arrangements re attendance at OAS annual meeting on behalf of DSWG/P61WG;
- respond to inquiries and follow-up re agenda sessions on source management and disposition, alternative technologies and Part 61 rulemaking activities at the spring 2018 LLW Forum and DSWG meetings in San Francisco, California;
- attend and participate in the 63<sup>rd</sup> annual conference of the Health Physics Society (HPS) in Cleveland, Ohio on behalf of the DSWG/P61WG and side meetings with interested stakeholders re potential opportunities to increase access for disused sources;
- research, outreach and communication with various stakeholders (Bionomics, National Institutes of Health, National Council of Radiation Protection and Measurements and local Washington state universities) to begin planning and development of agenda topics for the fall 2018 DSWG meeting in Richland, Washington in October 2018;
- review and discuss with P61WG members and staff the stakeholder comments on the NRC's Very Low-Level Waste (VLLW) scoping study and the implications thereof to future disposal availability;
- research, outreach and communication with various stakeholders (Bionomics, Conference of Radiation Control Program Directors (CRCPD) Part S Working Group, National Institutes of Health, National Council of Radiation Protection and Measurements and local Washington state universities) to continue planning and development of agenda topics for the fall 2018 DSWG meeting in Richland, Washington in October 2018;
- continue to review and incorporate additional edits from NNSA and DSWG Technical Consultant on a draft disposal cost document that will serve as a companion piece to the educational materials for current and prospective licensees;
- agenda development for fall 2018 LLW Forum meeting sessions related to DSWG/P61WG activities and projects;
- write and edit newsletter stories related to DSWG/P61WG projects and activities;

- communication with Southwestern Compact and Qal-Tek re new program for source reuse and reutilization and impacts thereof;
- discussion with Executive Director of Texas Compact Commission re potential for future workshop coordination;
- attend and participate in the OAS annual meeting on behalf of DSWG and P61WG and side meetings with interested stakeholders re potential opportunities to increase access for disused sources;
- continue communications with brokers and processors re suggestions for improved management and disposition of disused sources;
- planning and logistics for fall 2018 DSWG meeting that was held at Red Lion Hotel in Richland, Washington in October 2018;
- continue to review and incorporate additional edits from NNSA and DSWG Technical Consultant on a draft disposal cost document that is intended to serve as a companion piece to the educational materials for current and prospective licensees;
- agenda development for fall 2018 LLW Forum meeting sessions related to DSWG/P61WG activities and projects;
- attend and participate in the Rad Waste Summit annual meeting that is hosted by Exchange Monitor Publications in Summerlin, Nevada on behalf of DSWG and P61WG and side meetings with interested stakeholders re potential opportunities to increase access for disused sources and provide state input on the final Part 61 rule;
- develop, edit and distribute agenda and materials for fall 2018 DSWG meeting and prepare meeting packets;
- communicate with NRC staff agenda topics and presentations for the upcoming fall 2018 LLW Forum meeting re Part 61 rule and source issues;
- respond to communications from Nuclear Energy Institute re Staff Requirements Memorandum (SRM) directing U.S. NRC staff to decouple the issuance of the Greater-than-Class C (GTCC) Draft Regulatory Basis from Commission action on Part 61 rulemaking, review document, distribute to P61WG and LLW Forum;
- review *The 2018 Radiation Source Protection and Security Task Force Report*, distribute to DSWG and LLW Forum and discuss with members;
- review and negotiate terms, finalize outstanding items and execute contracts for spring 2019 DSWG meeting to be held in Alexandria, Virginia in April 2019 and fall 2019 DSWG meeting to be held in Chicago, Illinois in October 2019;
- respond to communications from NEI re upcoming International Atomic Energy Agency (IAEA) conference that will be held in Vienna, Austria on December 3-7, 2018, review documents, distribute to DSWG and LLW Forum and others;
- review, analyze, summarize, distribute information and respond to inquiries re the issuance of an NRC Staff Requirements Memorandum (SRM) in response to SECY-16-0106, which sought Commission approval to publish a final rule in the *Federal Register* that would amend Title 10 of the Code of Federal Regulations (10 CFR) Parts 20, “Standards for Protection Against Radiation,” and Part 61, “Licensing Requirements for Land Disposal of Radioactive Waste;”
- finalize, publicize, market and post to the Resources Page of the DSWG website the working group’s report titled, “Disposition Options and Costs for Certain Radioactive Sealed Sources and Devices,” as well as generic versions of the educational materials

(transmittal letters and brochures to current and prospective licensees of radioactive sealed sources and devices);

- re-formatting of the Resources Page of the DSWG website by dividing the documents into categories with sub-titles in order to make it more user friendly;
- plan logistics for agenda sessions related to disused source management and disposition, as well as the Part 61 rulemaking, for the LLW Forum meeting that was held at Red Lion Hotel in Richland, Washington in October 2018 and that included side meetings with interested stakeholders re potential opportunities to increase access for disused sources and provide state input on the final Part 61 rule;
- finalize logistics for fall 2018 DSWG meeting that was held at Red Lion Hotel in Richland, Washington in October 2018;
- schedule a P61WG conference call to discuss the possibility of coordinating state and compact comments on the final Part 61 rule draft regulatory analysis;
- correct, market and outreach re the DSWG working group's report titled, "Disposition Options and Costs for Certain Radioactive Sealed Sources and Devices," as well as generic versions of the educational materials (transmittal letters and brochures to current and prospective licensees of radioactive sealed sources);
- review, analyze and transmit comments and concerns from the State of Colorado on the new draft version of the Conference of Radiation Control Program Directors (CRCPD) SR-S suggested state regulations regarding financial assurance requirements;
- post, edit and announce availability of DSWG/P61WG related PowerPoint presentations from fall 2018 meetings in Richland, Washington in October 2018;
- follow-up re Staff Requirements Memorandum (SRM) directing U.S. Nuclear Regulatory Commission (NRC) staff to decouple the issuance of the Greater-than-Class C (GTCC) Draft Regulatory Basis from Commission action on Part 61 rulemaking, review document, distribute to P61WG and LLW Forum;
- write, edit and transmit for review and comment a draft survey to gather input and feedback from licensee's regarding participation in a potential secure exchange program for disused radioactive sealed sources;
- initial planning and coordination, as well as extension of formal invitations and follow-up, re *Hot Topics on Emerging Issues in US Commercial LLRW Management* panel for Waste Management 2019 conference;
- renew domain name and annual hosting services for the DSWG/P61WG websites;
- communicate and discuss proposals re consideration of the development of a database for disused radioactive sources and devices;
- plan logistics for agenda sessions related to disused source management and disposition, as well as the Part 61 rulemaking, for the LLW Forum meeting that was held at Hilton Hotel in Alexandria, Virginia on April 16-17, 2019;
- review, participate, write and outreach re implications to DSWG and P61WG of U.S. Department of Energy (DOE) Report to Congress titled, *Alternatives for the Disposal of Greater-than-Class C Low-Level Radioactive Waste and Greater-than-Class C-Like Waste*;

- review of materials and registration renewal for regulations.gov communications re associated federal rulemakings – i.e., Part 61 rule and draft regulatory analysis, Category 3 source security and accountability, financial assurance, etc.;
- organize, compile and teleconference re development of new website page re NRC rulemakings and stakeholder comments submitted in response thereto;
- work with DSWG Technical Consultant, DSWG members and organizational representatives re drafting of outline for development of program and database for reuse and recycle of sealed sources and comment thereon;
- work with Southeast Compact Commission Executive Director and Communications Consultant to develop plan re management and maintenance of National Directory of Brokers and Processors website;
- review, analyze and incorporate comments from DSWG and organizational representatives re draft survey to gather input and feedback from licensee's regarding participation in a potential secure exchange program for disused radioactive sealed sources;
- review, analyze and transmit information to DSWG members and staff, organizational liaisons and NNSA consultants and officials re source management including NRC proposals of a \$3,500 civil penalty to a Delaware medical firm for failing to properly secure licensed nuclear material and a \$29,000 civil penalty to Terracon Consultants Inc., of Olathe, Kansas for violations re transportation of a portable nuclear gauge;
- continued planning and coordination re *Hot Topics on Emerging Issues in US Commercial LLRW Management* panel for Waste Management 2019 conference;
- review, analyze and respond to inquiries re potential impact of Texas Low-Level Radioactive Waste Disposal Compact Facility Legislative Oversight Report on disused source management and disposal;
- attend and participate in EnergySolutions' conference in Charlotte, North Carolina on behalf of DSWG/P61WG in January 2019;
- review, edit and finalize listings for NNSA officials and DSWG Organizational Liaisons for 2019 issue of *Contact List of Persons Working in the Field of LLRW Management and Disposal* publication;
- communications with LLW Forum Officers re future direction, workload and staffing of DSWG/P61WG through end of project;
- outreach, communication, travel planning re upcoming industry meetings including those that are hosted by the Conference of Radiation Control Program Directors (CRCPD) and the Health Physics Society (HPS);
- review, incorporate and edit comments from DSWG members and organizational liaisons re licensee questionnaire about proposed development of a potential secure exchange program for disused radioactive sealed sources;
- work with Communications Consultant re conversion of licensee questionnaire about proposed development of reuse/recycle database into Survey Monkey document and subsequent testing thereof;
- communications and consultation with Technical Expertise Consultant re path forward for distribution of licensee questionnaire about proposed development of

- reuse/recycle database including as potential options use of GTRI/OSRP database, SCATR database and/or outreach via Health Physics Society (HPS);
- review of PowerPoint presentations, logistical preparations and planning re *Hot Topics on Emerging Issues in US Commercial LLRW Management* panel for Waste Management 2019 conference;
  - attend and participate in HPS mid-year meeting with plenary presentation re activities of DSWG/P61WG;
  - review comments, write and distribute report to DSWG members and organizational representatives re drafting of outline for development of program and database for reuse and recycle of sealed sources and comment thereon;
  - continue development of new website page re NRC rulemakings and stakeholder comments submitted in response thereto;
  - continue development of panel for Waste Management 2019 symposium on behalf of P61WG re Part 61 rule and associated draft regulatory analysis, very low-level radioactive waste (VLLW) scoping study and disposal of Greater-than-Class C (GTCC) and transuranic waste;
  - review and distribute information to DSWG, P61WG and LLW Forum members and organizational representatives re VLLW scoping study and regulatory analysis for disposal of GTCC and transuranic waste;
  - attend and participate in the NRC Regulatory Information Conference (RIC) on behalf of DSWG/P61WG;
  - attend and participate in Waste Management Conference on behalf of DSWG/P61WG including Co-Chairing Panel 16, *Hot Topics and Emerging Issues in U.S. Commercial LLW Management*, including presentations from a U.S. Nuclear Regulatory Commission (NRC) representative about various agency initiatives including the Part 61 rulemaking and from a National Nuclear Security Association (NNSA) representative regarding the impact of disposal access for foreign origin americium on security; Off-Site Source Recovery Program (OSRP) cesium irradiator replacement program; and, International Atomic Energy Agency (IAEA) Code of Conduct Supplemental Guidance on Disused Source Management;;
  - review materials, write and distribute memo re NRC request for stakeholder comment on the various technical issues that should be considered in the development of a regulatory basis or the disposal of GTCC and transuranic waste including sealed radioactive sources;
  - distribute and begin collecting responses for a Survey Monkey questionnaire to licensees about the proposed development of a potential secure exchange program for disused radioactive sealed sources;
  - review and distribute information to P61WG and LLW Forum members re NRC request for public comment on VLLW scoping study;
  - continue communications with brokers and processors re suggestions for improved management and disposition of disused sources; and,
  - update and add postings to the dedicated web sites focusing on proper management and disposition of disused sources and 10 CFR Part 61 rulemaking initiative.

*Please see the invoices for additional and more detailed information.*



## Key Milestones and Dates

During the period from April 1, 2018 through March 31, 2019, the following key milestones were achieved by the DSWG and P61WG in conjunction with the LLW Forum's contract for services with NNSA:

- throughout the period from April 1, 2018 through March 31, 2019, the DSWG and P61WG regularly updated and added postings to the dedicated web sites focusing on proper management and disposition of disused sources and 10 CFR Part 61 rulemaking initiative;
- from April 1, 2018 through March 31, 2019, the DSWG updated its report titled, *Disposition Options and Costs for Certain Radioactive Sealed Sources and Devices*, which is intended to serve as a companion document to educational materials that were previously released by the DSWG including educational brochures for current and prospective licensees of radioactive sealed sources and devices;
- held spring 2018 DSWG meeting in San Francisco, California in April 2018 in conjunction with the spring 2018 LLW Forum meeting;
- reviewed materials, wrote and distributed memo re NRC request for stakeholder comment on the various technical issues that should be considered in the development of a regulatory basis or the disposal of GTCC and transuranic waste including sealed radioactive sources;
- reviewed and distributed information to P61WG and LLW Forum members re NRC request for public comment on VLLW scoping study;
- participated in a workshop sponsored by the Southwestern Low-Level Radioactive Waste Compact Commission on the management and disposition of disused sources in April 2018;
- following the spring 2018 LLW Forum and DSWG meetings, the DSWG reviewed and considered broker and processor proposal for a centralized collection facility for disused sources and receipt of sources on bill of lading;
- attended the May 2018 annual meeting of CRCPD that included various sessions on disused sources;
- continued to manage and oversee a consortium with representatives of OAS, CRCPD and HPS to better coordinate our efforts moving forward;
- gave a presentation at the May 2018 meeting of the Northwest Interstate Compact Commission on Low-Level Radioactive Waste Management on DSWG activities and projects;
- researched, wrote and transmitted to DSWG members, staff and organizational liaisons overview re U.S. Nuclear Regulatory Commission (NRC) Regulatory Issue Summary (RIS) 2018-03 to provide information on the U.S. Department of Homeland Security (DHS) National Terrorism Advisory System (NTAS) to licensees who are authorized to possess Category 1 and 2 quantities of radioactive material;

- reviewed and discussed with P61WG members and staff the stakeholder comments on the NRC's Very Low-Level Waste (VLLW) scoping study and the implications thereof to future disposal availability;
- attended and participated in the July 2018 HPS annual meeting—including participation in a session on sealed source management;
- participated in the OAS annual meeting in August 2018 that included an update and overview of DSWG activities;
- continued to monitor developments on and implementation of the Branch Technical Position on Concentration Averaging and Encapsulation;
- wrote, edited, distributed and posted to Resources Page of DSWG web site information re theft and recovery of nuclear gauges;
- attended, participated and networked on behalf of the DSWG and P61WG at the Exchange Monitor Publication's Rad Waste Summit annual meeting in Summerlin, Nevada in September 2018;
- responded to communications from Nuclear Energy Institute re Staff Requirements Memorandum (SRM) directing U.S. NRC staff to decouple the issuance of the Greater-than-Class C (GTCC) Draft Regulatory Basis from Commission action on Part 61 rulemaking, review document, distribute to P61WG and LLW Forum;
- reviewed *The 2018 Radiation Source Protection and Security Task Force Report*, distribute to DSWG and LLW Forum and discuss with members;
- reviewed and negotiated terms, finalized outstanding items and executed contracts for spring 2019 DSWG meeting to be held in Alexandria, Virginia in April 2019 and fall 2019 DSWG meeting to be held in Chicago, Illinois in October 2019;
- responded to communications from NEI re upcoming International Atomic Energy Agency (IAEA) conference that will be held in Vienna, Austria on December 3-7, 2018, review documents, distribute to DSWG and LLW Forum and others;
- held the fall 2018 DSWG meeting in Richland, Washington in October 2018;
- wrote, edited, distributed information and provided significant written feedback in response to an NRC Staff Requirements Memorandum (SRM) re reevaluation of tracking and security issues related to Category 3 sources;
- reviewed, analyzed and transmitted comments and concerns from the State of Colorado on the new draft version of the Conference of Radiation Control Program Directors (CRCPD) SR-S suggested state regulations regarding financial assurance requirements;
- posted, edited and announced availability of DSWG/P61WG related PowerPoint presentations from fall 2018 meetings in Richland, Washington in October 2018;
- followed-up re Staff Requirements Memorandum (SRM) directing U.S. Nuclear Regulatory Commission (NRC) staff to decouple the issuance of the Greater-than-Class C (GTCC) Draft Regulatory Basis from Commission action on Part 61 rulemaking, review document, distribute to P61WG and LLW Forum;
- wrote, edited and transmitted for review and comment a draft survey to gather input and feedback from licensee's regarding participation in a potential secure exchange program for disused radioactive sealed sources;
- initial planning and coordination, as well as extension of formal invitations and follow-up, re *Hot Topics on Emerging Issues in US Commercial LLRW Management*

- panel for Waste Management 2019 conference;
- renewed domain name and annual hosting services for the DSWG/P61WG websites;
- reviewed, analyzed and incorporated comments from DSWG and organizational representatives re draft survey to gather input and feedback from licensee's regarding participation in a potential secure exchange program for disused radioactive sealed sources;
- reviewed, analyzed and transmitted information to DSWG members and staff, organizational liaisons and NNSA consultants and officials re source management including NRC proposals of a \$3,500 civil penalty to a Delaware medical firm for failing to properly secure licensed nuclear material and a \$29,000 civil penalty to Terracon Consultants Inc., of Olathe, Kansas for violations re transportation of a portable nuclear gauge;
- continued planning and coordination re *Hot Topics on Emerging Issues in US Commercial LLRW Management* panel for Waste Management 2019 conference;
- reviewed, analyzed and responded to inquiries re potential impact of Texas Low-Level Radioactive Waste Disposal Compact Facility Legislative Oversight Report on disused source management and disposal;
- attended and participated in the *EnergySolutions'* conference on low-level radioactive waste management and disposal issues in January 2019;
- reviewed, incorporated and edited comments from DSWG members and organizational liaisons re licensee questionnaire about proposed development of a potential secure exchange program for disused radioactive sealed sources;
- worked with Communications Consultant re conversion of licensee questionnaire about proposed development of reuse/recycle database into Survey Monkey document and subsequent testing thereof;
- communicated and consulted with Technical Expertise Consultant re path forward for distribution of licensee questionnaire about proposed development of reuse/recycle database including as potential options use of GTRI/OSRP database, SCATR database and/or outreach via Health Physics Society (HPS);
- attended and participated in the mid-year meeting the HPS in San Diego, California early February 2019;
- updated and republished a DSWG document identifying import and export authorities in response to inquiries from source manufacturers, brokers, processors;
- organized a panel including topics related to the proper management and disposition of disused sources and the Part 61 rulemaking initiative for the Waste Management symposium—and participated in the subsequent NRC public workshop—that were held in Phoenix, Arizona in March 2019;
- attended and participated in the NRC's RIC in Bethesda, Maryland in March 2019; and,
- worked with Southeast Compact Commission Executive Director and Communications Consultant to develop plan re management and maintenance of National Directory of Brokers and Processors website.

## Findings

During the period from April 1, 2018 through March 31, 2019, the DSWG and P61WG reached the following findings in conjunction with the LLW Forum's contract for services with NNSA:

- The impact of the implementation of the two-year storage rule by the State of Texas should be reviewed in late 2019 or early 2020 to determine the impacts (both intended and unintended), benefits, problems and other factors.
- The CRCPD provides information upon request regarding the reuse and recycle of sealed radioactive sources and devices. However, it appears worthwhile to explore the possible creation of a more comprehensive database, which the DSWG is currently considering and researching.
- The NRC has focused its efforts mainly on Category 1 and Category 2 sealed sources. However, the DSWG continues to receive input that some Category 3 sealed sources have a high enough activity level or can be aggregated and therefore require greater attention. Accordingly, the DSWG encourages the U.S. Government to reach an agreement across agencies on this issue.
- There is significant potential for users to considering the use of alternative technologies, which has gained traction with positive results, particular in the State of New York.
- There does not currently exist a good source of information regarding technologies and the actual costs of reusing, recycling, or disposing of sources when they are no longer needed. Research on alternative technologies to replace sealed sources should be a priority of the federal government and the private sector.
- Financial assurance requirements are not currently adequate to cover the full cost of transportation and disposal. Accordingly, in April 2017, the DSWG and our organizational liaisons sent a letter to the NRC to support an agency staff recommendation—as contained in SECY-16-0115 (ADAMS Accession No. ML16200A223) dated October 7, 2016—to proceed with rulemaking to expand the financial assurance requirements in 10 CFR 30.35 to include all byproduct material Category 1 and 2 radioactive sealed sources (RSSs) that are tracked in the National Source Tracking System (NSTS).
- Inventories of disused sources at sealed source manufacturers, suppliers, and waste brokers should be reduced.
- Comprehensive regulations should be considered to limit the storage of disused sources to two years and authorize regulators to require the disposition of sources in storage for more than two years unless there is a demonstrated future use.
- NRC should reconsider its decision to allow foreign sources that may not have a commercial disposal pathway to be imported.
- Federal and private research funding organizations should require grantees to budget for the disposal of sealed sources when they no longer are needed by the grantee.
- A sealed source “exchange” program should be further explored to facilitate the transfer of sources between those no longer needing sources and those looking to acquire sources.

- Additional steps should be undertaken to encourage the private sector to increase the supply of commercially available Type B shipping containers—including fabrication of the new containers developed by NNSA.
- Several internationally-certified Type B shipping containers should be identified that would have widespread applicability to disused sources in the U.S. and applications submitted to have these packages certified by NRC for domestic use.
- The NRC should continue to expeditiously review applications for Type B shipping containers and should aggressively notify licensees and the Agreement States well in advance of the expiration of shipping container certifications.
- An outreach program should be established, according to the DSWG, to assist licensees in identifying resources to assist with packaging, transport, and disposal of disused sources.
- The long-term solution to the disused source problem is to hold the licensees who have purchased and obtained the economic benefit from the sources responsible for the proper reuse, recycling, or disposal of the sources when they become disused.

## **Problems and Issues Encountered**

During the period from April 1, 2018 through March 31, 2019, the DSWG identified the following problems and issues that continue to hinder the proper management and disposition of disused sources:

- users are not sufficiently understanding and planning for the life-cycle costs of managing and ultimately disposing of sealed sources;
- the opportunities for recycling and reusing sealed sources are being underutilized;
- NRC should continue to consider potential revisions to regulations or processes requiring Category 3 source protection and accountability.
- the practices of the NRC and the NNSA do not fully reflect a consistent view of what sources pose a threat to national security;
- the regulatory system is not adequate for the post-9/11 threat environment;
- there are no financial incentives for disused sources to be reused, recycled, or disposed in a timely manner; and,
- Type B shipping containers needed to transport certain high activity sealed sources are in short supply and are very expensive.

## **Recommendations**

During the period from April 1, 2018 through March 31, 2019, the DSWG and P61WG pursued the following recommendations in conjunction with the LLW Forum's contract for services with NNSA:

- The creation of a secure “source exchange” program should be considered via an intermediary to work with licensees, source and device manufacturers, and recyclers

to provide them with information about sources still having a useful life, with the goal of increasing beneficial reuse and recycle opportunities. The program could identify sources meeting the specific application requirements being sought for reuse or recycling, identify sources containing radioisotopes that can be removed and used to manufacture new sources, and assist with paperwork required for source transfer.

- To prevent the accumulation of an excessive number of sources by manufacturers and suppliers, the NRC and Agreement States should require manufacturers and suppliers to dispose of those sources that have no recycle or reuse value on an annual basis.
- To encourage timely disposal, the NRC should develop robust financial assurance requirements for all licensees (Categories 1 through 3). The financial assurance requirements should be adequate to cover the entire cost of packaging, transport and disposal.
- The NRC should proceed with rulemaking to expand the financial assurance requirements in 10 CFR 30.35 to include all byproduct material Category 1 and 2 radioactive sealed sources (RSSs) that are tracked in the National Source Tracking System (NSTS)
- Create a program, possibly through the CRCPD, to educate proposed buyers of sealed sources about the life-cycle costs of sealed sources, including information about the cost of storage, transportation and disposal.
- Now that disposal access is available for most sources in the U.S., the NRC and the Agreement States should expand and make enforceable the General License (GL) storage limit regulation to address all Category 1 through 3 sources in storage for more than two years unless the licensee can make a clear demonstration of future use. There should be clear regulatory authority to direct the disposition (reuse, recycle or disposal) of Category 1 through 3 sources after they have been stored for two years. As part of the process, NRC should review and consider the impacts of the implementation of the new two year storage rule in the state of Texas.
- The NRC should amend its regulations to require a Specific License (SL) for all Category 3 sources.
- The NRC and Agreement States should incorporate procedures in their inspection programs to review the status of Category 1 through 3 sources in storage—including consideration of the length of, reason for, and location of storage.
- NNSA should identify several foreign package designs for Type B shipping containers that would have widespread applicability to a number of disused sources in the United States. NNSA should submit applications to have these packages certified by the NRC for domestic use.
- A detailed study should be conducted to identify measures to promote opportunities for the reuse and recycling of sources.
- The NRC and Agreement States should enhance the NSTS to include as a required field the date last used of all sealed sources. These data should be validated during routine inspections.
- Federal research agencies should encourage grantors to give preference to applicants proposing to use sealed sources from their existing inventories or alternative technologies; and require applicants to budget for the full life-cycle cost of use and disposition in grant applications.

## **Memos and Email Transmissions**

The following e-bulletins were sent out from April 1, 2018 through March 31, 2019 concerning activities of the LLW Forum's DSWG and P61WG:

- An April 1 memo to speakers for the spring 2018 Disused Sources Working Group (DSWG) and Low-Level Radioactive Waste Forum (LLW Forum) meetings reminding them that today is the deadline to submit Power Point presentations and other documents, as well as providing additional logistical information and details for the meeting.
- An April 5 memo to National Nuclear Security Administration (NNSA) officials transmitting the invoice, monthly report and supporting documentation for the activities that were carried out during the month of March 2018 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for services of the DSWG and P61WG.
- An April 10 memo to members and subscribers of the LLW Forum, as well as registered attendees for the spring 2018 LLW Forum and DSWG meetings, announcing that all Power Point presentations for the meetings are now available to members, subscribers and registered meeting attendees via Drop Box.
- An April 10 memo to DSWG members and staff, as well as to NNSA officials and consultants, reminding them to review and provide feedback in response to the *Federal Register* notice issued by the NRC in February 2018 to request stakeholder comment on the various technical issues that should be considered in the development of a regulatory basis for the disposal of Greater-than-Class C (GTCC) and transuranic waste.
- An April 12 memo to compact and state members of the LLW Forum, as well as members and staff of the P61WG, outlining a path forward for the LLW Forum/P61WG to compile and submit comments to the U.S. Nuclear Regulatory Commission (NRC) regarding their request for stakeholder comment on the agency's plans to conduct a Very Low-Level Radioactive Waste (VLLW) Scoping Study and asking for input and feedback thereon.
- An April 12 memo to members and staff of the DSWG, as well as designated organizational liaisons, transmitting a draft agenda for the upcoming working group meeting in San Francisco, California on April 18, 2018.
- An April 24 memo to Officers of the LLW Forum notifying them that earlier in the week, NNSA approved the payment for the monthly report and invoice for services to the DSWG/P61WG for the month of March 2018 and transmitting the documents for review and authorization by the Officers.
- An April 24 memo to members and staff of the DSWG, as well as organizational liaisons, transmitting information and paperwork for the submittal of travel expense reimbursement requests to Los Alamos National Laboratory (LANL) for attendance and participation in the spring 2018 working group meeting.

- An April 25 memo to compact and state members of the LLW Forum, as well as members and staff of the P61WG, reminding them of the upcoming deadline to provide input and feedback for the LLW Forum/P61WG to compile and submit comments to the NRC regarding their request for stakeholder comment on the agency's plans to conduct a VLLW Scoping Study and asking for input and feedback thereon.
- An April 30 memo to compact and state members of the LLW Forum, as well as members and staff of the P61WG, reminding them that today is the deadline to provide input and feedback for the LLW Forum/P61WG to compile and submit comments to the NRC regarding their request for stakeholder comment on the agency's plans to conduct a VLLW Scoping Study and asking for input and feedback thereon.
- A May 3 memo to National Nuclear Security Administration (NNSA) officials transmitting the invoice, monthly report and supporting documentation for the activities that were carried out during the month of April 2018 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for services of the DSWG and P61WG.
- A May 7 memo to compact and state members of the LLW Forum, as well as members and staff of the P61WG, transmitting two draft documents (specific and generic) that compile comments that were submitted to the LLW Forum in response to the NRC request for stakeholder comment on the agency's plans to conduct a VLLW Scoping Study and asking for input and feedback thereon.
- A May 14 memo to Officers of the LLW Forum notifying them that earlier in the week, NNSA approved the payment for the monthly report and invoice for services to the DSWG/P61WG for the month of April 2018 and transmitting the documents for review and authorization by the Officers.
- A May 15 memo to compact and state members of the LLW Forum, as well as members and staff of the P61WG, reminding them that comments are due by the close of business on the document that compiles comments that were submitted to the LLW Forum in response to the NRC request for stakeholder comment on the agency's plans to conduct a VLLW Scoping Study and asking for input and feedback thereon.
- A May 29 memo to NNSA officials transmitting the annual report of the activities that were carried out during the period from April 1, 2017 through March 31, 2018 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for services of the DSWG/P61WG.
- A June 4 memo to National Nuclear Security Administration (NNSA) officials transmitting the invoice, monthly report and supporting documentation for the activities that were carried out during the month of May 2018 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for services of the DSWG and P61WG.
- A June 4 memo to LLW Forum members and supporters notifying them of the availability, as a benefit of their membership and/or subscription with the organization, of all PowerPoint presentations from the spring 2018 LLW Forum meeting on the members-only, restricted-access portion of the website.



- A June 7 memo to LLW Forum members, subscribers and other stakeholders interested in the field of low-level radioactive waste management and disposal announcing that registration is now open for the fall 2018 LLW Forum meeting, which will be held at the Red Lion Hotel in Richland, Washington on October 3-4, 2018 including an optional site tour of the Historic Hanford B Reactor on October 2, 2018.
- A June 8 memo to DSWG members and staff, organizational liaisons and National Nuclear Security Administration (NNSA) officials and consultants transmitting the recently released NRC Regulatory Issue Summary (RIS) 2018-03 to provide information on the U.S. Department of Homeland Security's (DHS's) National Terrorism Advisory System (NTAS) to licensees who are authorized to possess Category 1 and 2 quantities of radioactive material.
- A June 10 memo to the Fall 2018 LLW Forum Agenda Planning Committee transmitting, in preparation for a conference call the following day, a document that outlines potential agenda topics for consideration including topics that are specific to this meeting location, current and relevant issues, suggestions from past meeting attendees and presentations from other industry conferences.
- A June 20 memo to LLW Forum members, subscribers and other stakeholders interested in the field of low-level radioactive waste management and disposal announcing that registration is now open for the fall 2018 LLW Forum meeting, which will be held at the Red Lion Hotel in Richland, Washington on October 3-4, 2018 including an optional site tour of the Historic Hanford B Reactor on October 2, 2018.
- A June 26 memo to Officers of the LLW Forum notifying them that earlier in the week, NNSA approved the payment for the monthly report and invoice for services to the DSWG/P61WG for the month of May 2018 and transmitting the documents for review and authorization by the Officers.
- A July 1 memo to National Nuclear Security Administration (NNSA) officials transmitting the invoice, monthly report and supporting documentation for the activities that were carried out during the month of June 2018 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for services of the DSWG and P61WG.
- A July 11 memo to LLW Forum members, subscribers and other stakeholders interested in the field of low-level radioactive waste management and disposal announcing registration for the fall 2018 LLW Forum and DSWG meetings, which will be held at the Red Lion Hotel in Richland, Washington on October 3-4, 2018 including an optional site tour of the Historic Hanford B Reactor on October 2, 2018.
- A July 17 memo to Officers of the LLW Forum notifying them that earlier in the week, NNSA approved the payment for the monthly report and invoice for services to the DSWG/P61WG for the month of June 2018 and transmitting the documents for review and authorization by the Officers.
- A July 22 memo to DSWG members and staff, as well as NNSA officials and consultants, providing a brief update on preparations for the fall LLW Forum and DSWG meeting, which will be held at the Red Lion Hotel in Richland, Washington

- on October 3-4, 2018 and will include an optional site tour of Hanford's Historic B Reactor for interested stakeholders from 1:00 – 5:00 p.m. on October 2, 2018.
- A July 25 memo to LLW Forum members, subscribers and other stakeholders interested in the field of low-level radioactive waste management and disposal announcing that registration is now open for the fall 2018 LLW Forum and DSWG meetings, which will be held at the Red Lion Hotel in Richland, Washington on October 3-4, 2018 including an optional site tour of the Historic Hanford B Reactor on October 2, 2018.
  - An August 1 memo to National Nuclear Security Administration (NNSA) officials transmitting the invoice, monthly report and supporting documentation for the activities that were carried out during the month of July 2018 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for services of the DSWG and P61WG.
  - An August 9 memo to LLW Forum members, subscribers and other stakeholders interested in the field of low-level radioactive waste management and disposal reminding them that registration is now open for the fall 2018 LLW Forum and DSWG meetings, which will be held at the Red Lion Hotel in Richland, Washington on October 3-4, 2018 including an optional site tour of the Historic Hanford B Reactor on October 2, 2018.
  - An August 14 memo to Officers of the LLW Forum and to members of the Part 61 Working Group (P61WG) notifying them of remarks by an NRC official at the Organization of Agreement States (OAS) annual conference regarding the status of the agency's efforts to amend Title 10 of the Code of Federal Regulations (10 CFR) Parts 20, *Standards for Protection Against Radiation*, and Part 61, *Licensing Requirements for Land Disposal of Radioactive Waste*.
  - An August 17 memo to Disused Sources Working Group (DSWG) members and staff, as well as designated organizational liaisons, transmitting information about a provision of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law No. 115-232) that directs the Administrator for Nuclear Security to continue working toward the voluntary phasing out of the use of blood irradiation devices in the United States that rely on cesium chloride by December 31, 2027.
  - An August 23 memo to Officers of the LLW Forum notifying them that earlier in the week, NNSA approved the payment for the monthly report and invoice for services to the DSWG/P61WG for the month of July 2018 and transmitting the documents for review and authorization by the Officers.
  - An August 23 memo to speakers for the fall 2018 LLW Forum and DSWG meetings transmitting the draft agenda for their review and comment, as well as other logistical details and information.
  - An August 23 memo to LLW Forum members, subscribers and other stakeholders interested in the field of low-level radioactive waste management and disposal reminding them that registration is now open for the fall 2018 LLW Forum and DSWG meetings, which will be held at the Red Lion Hotel in Richland, Washington on October 3-4, 2018 including an optional site tour of the Historic Hanford B Reactor on October 2, 2018.

- An August 27 memo to speakers for the fall 2018 LLW Forum and DSWG meetings transmitting the draft agenda for their review and comment, as well as other logistical details and information.
- An August 29 memo to speakers for the fall 2018 LLW Forum and DSWG meetings reminding them of the deadline later that day to submit comments and proposed edits on the draft agenda prior to publication.
- A September 2 memo to National Nuclear Security Administration (NNSA) officials transmitting the invoice, monthly report and supporting documentation for the activities that were carried out during the month of August 2018 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for services of the DSWG and P61WG.
- A September 2 memo to speakers for the fall 2018 LLW Forum meeting transmitting logistical issues and deadlines for the submittal of PowerPoint presentations and other documents for the fall 2018 LLW Forum meeting that will be held at the Red Lion Hanford House Hotel in Richland, Washington on October 3-4, 2018 including an optional site tour of the historic Hanford B reactor on October 2, 2018.
- A September 12 memo to speakers for the fall 2018 LLW Forum meeting transmitting logistical issues and deadlines for the submittal of PowerPoint presentations and other documents for the fall 2018 LLW Forum meeting that will be held at the Red Lion Hanford House Hotel in Richland, Washington on October 3-4, 2018 including an optional site tour of the historic Hanford B reactor on October 2, 2018.
- A September 14 memo to LLW Forum members and supporters notifying them that the July/August 2018 issue of the *LLW Notes* is now available on the members-only portions of the organization's website.
- A September 17 memo to Officers of the LLW Forum notifying them that earlier the prior week, NNSA approved the payment for the monthly report and invoice for services to the DSWG/P61WG for the month of August 2018 and transmitting the documents for review and authorization by the Officers.
- A September 17 memo to speakers for the fall 2018 LLW Forum meeting transmitting logistical issues and deadlines for the submittal of PowerPoint presentations and other documents for the fall 2018 LLW Forum meeting that will be held at the Red Lion Hanford House Hotel in Richland, Washington on October 3-4, 2018 including an optional site tour of the historic Hanford B reactor on October 2, 2018.
- A September 19 memo to speakers for the fall 2018 LLW Forum meeting reminding them that the deadline is that day for the submittal of PowerPoint presentations and other documents for the fall 2018 LLW Forum meeting that will be held at the Red Lion Hanford House Hotel in Richland, Washington on October 3-4, 2018 including an optional site tour of the historic Hanford B reactor on October 2, 2018.
- An October 2 memo to registered attendees of the fall 2018 LLW Forum meeting's optional Hanford B reactor site tour providing final logistical details.
- An October 2 memo to National Nuclear Security Administration (NNSA) officials transmitting the invoice, monthly report and supporting documentation for the

activities that were carried out during the month of September 2018 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for DSWG/P61WG services.

- An October 10 memo to Disused Sources Working Group (DSWG) members; designated liaisons of the Organization of Agreement States (OAS), Health Physics Society (HPS), Conference of Radiation Control Program Directors (CRCPD) transmitting information, logistics and details regarding the travel expense reimbursement process for attendance and participation at the recent DSWG meeting that was held in Richland, Washington on October 4, 2018.
- An October 24 memo to members of the P61WG, NNSA and Texas Commission on Environmental Quality (TCEQ) transmitting a Staff Requirements Memorandum (SRM) was issued that directs U.S. Nuclear Regulatory Commission (NRC) staff to "decouple to the extent practicable the issuance of the draft Regulatory Basis directed in SRM-SECY-15-0094, 'Historical and Current Issues Related to Disposal of Greater-than-Class C Low-Level Radioactive Waste,' from Commission action on Part 61." The SRM states, "This decoupling would allow for earlier public engagement on staff's analysis of any potential regulatory barriers to the disposal of Greater-than-Class C waste." The SRM was issued following a staff briefing for the Commission on topics associated with the decommissioning and low-level radioactive waste, as well as spent fuel storage and transportation business lines.
- An October 25 memo to DSWG members; designated liaisons of the OAS, HPS and CRCPD; and, NNSA officials and consultants transmitting *The 2018 Radiation Source Protection and Security Task Force Report* (2018 Task Force Report) for submittal to the President and the U.S. Congress by the Chair of the NRC as required under Public Law 109-58, *The Energy Policy Act of 2005* (Energy Policy Act).
- An October 29 memo to DSWG members; designated liaisons of the OAS, HPS and CRCPD; and, NNSA officials and consultants transmitting information about an upcoming International Atomic Energy Agency (IAEA) conference that will be held in Vienna, Austria on December 3-7, 2018. The conference is titled, "International Conference on the Security of Radioactive Material: The Way Forward for Prevention and Detection."
- A November 4 memo to Officers of the Low-Level Radioactive Waste Forum (LLW Forum) transmitting the following two documents detailing information related to services that are provided to the LLW Forum and to the Disused Sources and Part 61 Working Groups (DSWG/P61WG) including: (1) a nine-page overview and analysis documenting and (2) a shorter (three page) handout that only highlights certain issues and suggests a proposed path forward.
- A November 5 memo to National Nuclear Security Administration (NNSA) officials transmitting the invoice, monthly report and supporting documentation for the activities that were carried out during the month of October 2018 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for services of the DSWG and P61WG.
- A November 12 memo to DSWG/P61WG members and supporters announcing that all PowerPoint presentations from the fall 2018 meeting that was held in Richland, Washington on October 3-4, 2018 are now available on the members-only, restricted-access portion of our web site.

- A November 15 memo to DSWG/P61WG members; designated liaisons of the Organization of Agreement States (OAS), Health Physics Society (HPS), Conference of Radiation Control Program Directors (CRCPD) transmitting comments and concerns on the new draft version of the CRCPD SR-S suggested state regulations regarding financial assurance requirements that were transmitted earlier today by the State of Colorado.
- A November 16 memo to DSWG/P61WG members and supporters announcing that the September/October 2018 issue of the *LLW Notes* is now available on the members-only portions of the LLW Forum's web site.
- A November 23 memo to DSWG members; designated liaisons of the OAS, HPS and CRCPD transmitting comments and concerns on the new draft version of the CRCPD SR-S suggested state regulations regarding financial assurance requirements that were transmitted earlier in the month by the State of New Jersey.
- A November 23 memo to DSWG members transmitting for review and comment a draft survey to gather input and feedback from licensee's regarding participation in a potential secure exchange program for disused radioactive sealed sources.
- A November 28 memo to Officers of the LLW Forum notifying them that earlier in the month, NNSA approved the payment for the monthly report and invoice for services to the DSWG/P61WG for the month of October 2018 and transmitting the documents for review and authorization by the Officers.
- A December 2 memo to National Nuclear Security Administration (NNSA) officials transmitting the invoice, monthly report and supporting documentation for the activities that were carried out during the month of November 2018 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for services of the DSWG and P61WG.
- A December 6 memo to DSWG members, organizational liaisons and NNSA officials and consultants reminding them of the upcoming deadline to submit comments on a draft survey to gather input and feedback from licensee's regarding participation in a potential secure exchange program for disused radioactive sealed sources.
- A December 12 memo to DSWG members, organizational liaisons and NNSA officials and consultants notifying them that the U.S. Nuclear Regulatory Commission (NRC) has proposed a \$3,500 civil penalty to a Delaware medical firm for failing to properly secure licensed nuclear material.
- A December 18 memo to Officers of the LLW Forum notifying them that earlier in the month, NNSA approved the payment for the monthly report and invoice for services to the DSWG/P61WG for the month of November 2018 and transmitting the documents for review and authorization by the Officers.
- A December 19 memo to speakers for Waste Management Panel 016 titled, *Hot Topics and Emerging Issues in U.S. Commercial LLW Management and Disposal*, transmitting some important logistical details including notification of the upcoming early bird registration deadline on January 4, 2018 and a reminder of the need for all speakers and Co-Chairs to send a headshot and a short bio (100 words or less) for inclusion in the online program.
- A December 27 memo to DSWG members, organizational liaisons and NNSA officials and consultants notifying them that NRC has proposed a \$29,000 civil

penalty to Terracon Consultants, Inc. of Olathe, Kansas for violations associated with the transportation of a portable nuclear gauge.

- A December 31 memo to DSWG members, organizational liaisons and NNSA officials and consultants notifying them that the U.S. Nuclear Regulatory Commission (NRC) has announced plans to bring an enforcement action against Holtec International for adopting a new cask design before receiving federal approval therefore.
- A January 2 memo to speakers for Waste Management Panel 016 titled, *Hot Topics and Emerging Issues in U.S. Commercial LLW Management and Disposal*, transmitting some important logistical details including notification of the upcoming early bird registration deadline on January 4, 2018 and a reminder of the need for all speakers and Co-Chairs to send a headshot and a short bio (100 words or less) for inclusion in the online program.
- A January 2 memo to National Nuclear Security Administration (NNSA) officials transmitting the invoice, monthly report and supporting documentation for the activities that were carried out during the month of December 2018 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for DSWG/P61WG services.
- A January 8 memo to members and supporters of the LLW Forum notifying them that the November/December 2018 issue of the *LLW Notes* is now available on the members-only portions of the LLW Forum web site.
- A January 23 memo to members and supporters of the LLW Forum announcing that the calendar year 2019 issue of the *Contact List of Persons Working in the Field of Low-Level Radioactive Waste Management and Disposal* is now available on the restricted-access, members-only portion of the LLW Forum website.
- A January 24 memo to persons interested in the field of low-level radioactive waste management and disposal reminding them that registration is now open for the spring 2019 LLW Forum meeting, which will be held at the Old Town Hotel in Alexandria, Virginia on April 17-18, 2019.
- A January 28 memo to Officers of the LLW Forum notifying them that earlier in the month, NNSA approved the payment for the monthly report and invoice for services to the DSWG/P61WG for the month of December 2018 and transmitting the documents for review and authorization by the Officers.
- A February 3 memo to National Nuclear Security Administration (NNSA) officials transmitting the invoice, monthly report and supporting documentation for the activities that were carried out during the month of January 2019 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for services of the DSWG and P61WG.
- A February 6 memo to persons interested in the field of low-level radioactive waste management and disposal reminding them that registration is now open for the spring 2019 LLW Forum and DSWG meetings, which will be held at the Old Town Hotel in Alexandria, Virginia on April 17-19, 2019.
- A February 10 memo to compact and state members of the LLW Forum transmitting a brief overview of low-level radioactive waste management and disposal activities across the nation, which was prepared at the request of one of the compact

commissions for an upcoming meeting and was then distributed to everyone as a courtesy.

- A February 11 memo to the LLW Forum Agenda Planning Committee memo transmitting a list of confirmed and prospective agenda topics for the spring 2019 LLW Forum and DSWG meetings that will be held in Alexandria, Virginia on April 17-19, 2019 in preparation for a Committee conference call that is scheduled for 10:00 a.m. ET the following day (Tuesday - February 12, 2019).
- A February 13 memo to compact and state members of the LLW Forum notifying them that Dan Shrum had left his position at *EnergySolutions*; that Dan's last day was Thursday — January 17, 2019; that *EnergySolutions* had not yet hired a replacement at the time of his departure and it is unclear as to whether they will do so or will simply transfer his workload to other existing staff; and, that Vern Rogers will be the *EnergySolutions'* point of contact as of now.
- A February 14 memo to persons interested in the field of low-level radioactive waste management and disposal reminding them that registration is now open for the spring 2019 LLW Forum and DSWG meetings, which will be held at the Old Town Hotel in Alexandria, Virginia on April 17-19, 2019.
- A February 19 memo to speakers for Waste Management Panel 016 titled, *Hot Topics and Emerging Issues in U.S. Commercial LLW Management and Disposal*, transmitting some important logistical details including notification of the final program lineup, details of the required attendance at the scheduled speaker's breakfast and the submittal of PowerPoint presentations.
- A February 21 memo to persons interested in the field of low-level radioactive waste management and disposal notifying them that the hotel block will be closing in three weeks (on March 16, 2019) for the spring 2019 LLW Forum and DSWG meetings, which will be held at the Old Town Hotel in Alexandria, Virginia on April 17-19, 2019.
- A February 24 memo to LLW Forum Agenda Planning Committee members providing an update of agenda planning status for the spring 2019 LLW Forum and DSWG meetings that will be held in Alexandria, Virginia in April 2019 including a list of confirmed topics/speakers, as well as of topics/speakers still in development and of topics/speakers that have been declined or postponed.
- A February 25 memo to Officers of the LLW Forum notifying them that earlier in the month, NNSA approved the payment for the monthly report and invoice for services to the DSWG/P61WG for the month of January 2019 and transmitting the documents for review and authorization by the Officers.
- A February 25 memo to LLW Forum members and supporters notifying them that DOE has confirmed that Anne White, Assistant Secretary for Environmental Management, will give the plenary presentation for the upcoming LLW Forum meeting on the morning of Wednesday (April 17, 2019) and reminding them that the hotel block for the spring 2019 LLW Forum and DSWG meetings will be closing in less than three weeks (on March 16, 2019).
- A February 26 memo to the Executive Committee of the LLW Forum transmitting an agenda for the upcoming meeting of the Texas Low-Level Radioactive Waste Disposal Compact Commission that will be held in Andrews County, Texas on

Thursday (February 28, 2019) and noting that, of particular interest, are items 6 through 8 regarding discussion and possible action on issues of common interest to the Texas and Southwestern Compact Commissions including the viability of the low-level radioactive waste compact system (item 7a), as well as outreach to federal and state agencies, low-level radioactive waste generators and other organizations (items 7c and 8b).

- A February 27 memo to persons interested in the field of low-level radioactive waste management and disposal announcing that DOE Assistant Secretary for Anne White has agreed to give the plenary presentation for the spring 2019 LLW Forum and DSWG meetings, which will be held at the Old Town Hotel in Alexandria, Virginia on April 17-19, 2019.
- A March 2 memo to National Nuclear Security Administration (NNSA) officials transmitting the invoice, monthly report and supporting documentation for the activities that were carried out during the month of February 2019 pursuant to the LLW Forum's contract DE-NA-0003197 with NNSA for services of the DSWG and P61WG.
- A March 2 memo to speakers for Waste Management Panel 16 (Monday – March 4, 2019) titled, *Hot Topics and Emerging Issues in US Commercial LLW Management Organized by the Low-Level Radioactive Waste Forum*, reminding them of the final logistics including the submittal of PowerPoint presentations and copyright release forms, speakers' breakfast, session timing and so forth.
- A March 4 memo to members and supporters of the LLW Forum notifying them that the January/February 2019 issue of the *LLW Notes* is now available on the members-only portions of the organization's web site.
- A March 5 memo to speakers for the Spring 2019 Meeting of the LLW Forum (Alexandria, Virginia on April 17-18, 2019) transmitting the draft agenda for their review and comment, as well as important meeting information and deadlines – i.e., hotel block.
- A March 6 memo to members and staff of the Disused Source Working Group (DSWG), as well as Designated Organizational Liaisons and National Nuclear Security Administration (NNSA) Officials and Consultants distributing a questionnaire on the proposed disused sources exchange program has been converted into a brief Survey Monkey document.
- A March 7 memo to compact and state members of the LLW Forum transmitting a PowerPoint presentation regarding ongoing activities and initiatives at the U.S. Nuclear Regulatory Commission (NRC) as presented earlier this week by John Tappert during the Low-Level Radioactive Waste Forum (LLW Forum)-organized panel presentation for the Waste Management conference titled, *Hot Topics and Emerging Issues in U.S. Commercial LLRW Management*.
- A March 8 memo to compact and state members of the LLW Forum transmitting a copy of SB 1753, by State Representative Jose Rodriguez (D), relating to the regulation of low-level radioactive waste – a bill that addresses emergency planning for responding to transportation accidents and associated fees, the enactment of a contingency plan, standards for inspections of a low-level radioactive waste disposal site and adjusted financial assurance requirements.



- A March 8 memo to speakers for the Spring 2019 Meeting of the LLW Forum (Alexandria, Virginia on April 17-18, 2019) reminding them that comments and suggested edits on the draft agenda are due by the close of business that day.
- A March 10 memo to LLW Forum Agenda Planning Committee members transmitting, for their information and convenience, a copy of the final agenda for the spring 2019 LLW Forum meeting that incorporates all of the edits and suggested comments received from speakers, Officers and other interested parties.
- A March 19 memo to Officers of the LLW Forum notifying them that earlier in the month, NNSA approved the payment for the monthly report and invoice for services to the DSWG/P61WG for the month of February 2019 and transmitting the documents for review and authorization by the Officers.
- A March 20 memo to speakers for the Spring 2019 Meeting of the LLW Forum (Alexandria, Virginia on April 17-18, 2019) transmitting logistical issues and deadlines regarding the submittal of PowerPoint presentations and other documents for the upcoming LLW Forum meeting.
- A March 26 memo to speakers for the Spring 2019 Meeting of the LLW Forum (Alexandria, Virginia on April 17-18, 2019) transmitting logistical issues and deadlines regarding the submittal of PowerPoint presentations and other documents for the upcoming LLW Forum meeting.

## Meetings

DSWG and P61WG members and staff participated in the following meetings on behalf of the working groups from April 1, 2018 through March 31, 2019:

- DSWG members, staff and other interested stakeholders met in San Francisco, California on April 16-17, 2018 in conjunction with the spring 2018 LLW Forum meeting. In preparation for the meeting, during the month of April 2018, we reached out to working group members, staff and organizational representatives re scheduling and worked with the hotel on room reservations and logistical arrangements. In advance of the spring 2018 DSWG meeting, during the month of April 2018, we continued communications with boards of CRCPD, OAS and HPS to get their perspectives and input on a list of outstanding action items and priorities; distributed for review and comment edits to a disposal cost document that is intended to serve as a companion piece to the educational materials for current and prospective licensees; conducted, and wrote a summary report regarding, a stakeholder survey to identify issues associated with and understand industry perspectives concerning the development of an enhanced secure source exchange program; and, posted and reviewed formal comments in response to the *Federal Register* notice in which the NRC announces that the agency is seeking input from licensees, Agreement States and the public to inform the staff's assessment of potential revisions to regulations or processes requiring Category 3 source protection and accountability.
- Some of the items that were developed for the spring 2018 LLW Forum meeting include an International Atomic Energy Agency (IAEA)-led panel on disused source

management and disposal projects and activities in member countries; case-study presentation re three-year project regarding the removal of 36,000 sources – i.e. overview of what happened, issues/challenges during the cleanup and lessons to be learned therefrom; agenda sessions regarding NRC agency activities re Part 61 rule and source issues; and FEMA presentation regarding revisions to the Nuclear Radiological Incident Annex to the National Response Framework.

- The DSWG/P61WG Executive Director and Communications Consultant attended and participated in the annual meeting of the Conference of Radiation Control Program Directors (CRCPD) in Charleston, South Carolina from May 20-24, 2018.
- The DSWG Project Director traveled to Anchorage, Alaska in May 2018 to attend and participate in the annual meeting of the Northwest Interstate Compact on Low-Level Radioactive Waste Management on behalf of the DSWG.
- The DSWG Project Director attended and participated in the July 2018 annual meeting of the Health Physics Society (HPS) in Cleveland, Ohio on behalf of the DSWG and P61WG.
- The DSWG Project Director attended and participated in the August 2018 annual meeting of the Organization of Agreement States (OAS) in Montgomery, Alabama on behalf of the DSWG and P61WG.
- From September 3-7, 2018, the DSWG/P61WG Project Director traveled to Summerlin, Nevada in September 2018 to attend and participate in the annual Rad Waste Summit conference that was hosted by Exchange Monitor Publications on behalf of the DSWG and P61WG.
- From September 30, 2018 through October 5, 2018, the DSWG/P61WG Project Director traveled to Richland, Washington to attend, participate, moderate and facilitate the fall 2018 meetings of the LLW Forum and DSWG on behalf of the DSWG and P61WG.
- The DSWG/P61WG Project Director and Communications Consultant attended and participated in the January 2019 *EnergySolution's* conference in Charlotte, North Carolina on behalf of the DSWG/P61WG.
- The DSWG/P61WG Project Director and Communications Consultant traveled to San Diego, California in February 2019 to attend and participate in the HPS mid-year meeting on behalf of the DSWG/P61WG.
- The DSWG/P61WG Project Director traveled to Bethesda, Maryland in March 2019 to attend and participate in the U.S. Nuclear Regulatory Commission (NRC) Regulatory Information Conference (RIC) on behalf of the DSWG/P61WG. (See above for additional information.)
- The DSWG/P61WG Project Director traveled to Phoenix, Arizona in March 2019 to attend and participate in the Waste Management Conference—including the Co-Chairing of Panel 16 titled, *Hot Topics and Emerging Issues in U.S. Commercial LLW Management*—and the NRC public meeting on 10 CFR Part 61 and other low-level radioactive waste activities, initiatives and rulemakings on behalf of the DSWG/P61WG. (See above for additional information.)

## Phone Calls and Conference Calls

From April 1, 2018 through March 31, 2019, the following phone calls and conference calls were undertaken in support of activities of the DSWG and P61WG as follows:

- to prepare for the spring 2018 meeting that was held in San Francisco, California in April 2018 in conjunction with the spring 2018 LLW Forum meeting;
- to obtain input and feedback regarding updates to a disposal cost document that is intended to serve as a companion piece to the educational materials for current and prospective licensees of sealed radioactive sources and devices;
- to conduct a stakeholder survey to identify issues associated with and understand industry perspectives concerning the development of an enhanced secure source exchange program;
- to continue follow-up tasks and assignments from the spring 2018 meeting that was held in San Francisco, California in April 2018;
- to gather input and feedback on draft petitions for rulemaking related to enhanced financial assurance;
- to receive comment and perspectives regarding a recently-published report that provides an overview of compact import and export permit requirements;
- to follow-up on a letter to the NRC in support of a proposed ANPR to review and increase financial assurance for the management and disposition of disused sources;
- to plan for the upcoming meetings that would be held in Richland, Washington in October 2018;
- to continue follow-up tasks and assignments from the fall 2018 meeting that was held in Richland, Washington in October 2018;
- to develop agenda sessions related to sealed source management and disposition for the spring 2019 LLW Forum and DSWG meetings that would be held in Alexandria, Virginia from April 16-18, 2019;
- to draft and incorporate DSWG comments in response to the NRC *Federal Register* notice seeking input from licensees, Agreement States and the public to inform the staff's assessment of potential revisions to regulations or processes requiring Category 3 source protection and accountability;
- to collect information from individual states re source calculation and methodology re number of sealed sources; and,
- to coordinate implementation of the updated list re DSWG recommendations and priorities.

(See above for additional information.)

## Travel

The following travel was undertaken from April 1, 2018 through March 31, 2019 concerning activities of the LLW Forum's DSWG and P61WG:

- DSWG members and staff traveled to San Francisco, California from April 14-19, 2018 to attend and participate in the spring 2018 DSWG meeting and the spring 2018 LLW Forum meeting.
- The DSWG Project Director traveled to Anchorage, Alaska from May 7-10, 2018 to attend and participate in the annual meeting of the Northwest Interstate Compact on Low-Level Radioactive Waste Management on behalf of the DSWG.
- The DSWG/P61WG Executive Director and Communications Consultant traveled to Charleston, South Carolina from May 20-24, 2018 to attend and participate in the annual meeting of the Conference of Radiation Control Program Directors (CRCPD).
- The DSWG Project Director traveled to Cleveland, Ohio from July 15-19, 2018 to attend and participate in the annual meeting of the Health Physics Society (HPS) on behalf of the DSWG and P61WG.
- The DSWG Project Director traveled to Montgomery, Alabama from August 12-16, 2018 to attend and participate in the annual meeting of the Organization of Agreement States (OAS) on behalf of the DSWG and P61WG.
- The DSWG/P61WG Project Director traveled to Summerlin, Nevada in September 2018 to attend and participate in the annual Rad Waste Summit conference that was hosted by Exchange Monitor Publications on behalf of the DSWG and P61WG.
- The DSWG/P61WG Project Director traveled to Richland, Washington from September 30, 2018 to October 6, 2018 to attend, participate, moderate and facilitate the fall 2017 meetings of the LLW Forum and associated optional tour of the Hanford B reactor and DSWG meeting on behalf of the DSWG and P61WG.
- The DSWG/P61WG Project Director and Communications Consultant traveled to Charlotte, North Carolina in January 2018 to attend and participate in the *EnergySolution's* conference on behalf of the DSWG/P61WG.
- The DSWG/P61WG Project Director and Communications Consultant traveled to San Diego, California in February 2019 to attend and participate in the HPS mid-year meeting on behalf of the DSWG/P61WG.
- The DSWG/P61WG Project Director traveled to Bethesda, Maryland to attend and participate in the U.S. Nuclear Regulatory Commission (NRC) Regulatory Information Conference (RIC) from March 2-8, 2019 on behalf of the DSWG/P61WG. (See above for additional information.)
- The DSWG/P61WG Project Director traveled to Phoenix, Arizona to attend and participate in the Waste Management Conference from March 11-15, 2019 — including the Co-Chairing of Panel 21 titled, *Hot Topics and Emerging Issues in U.S. Commercial LLW Management* — and the NRC public meeting on 10 CFR Part 61 and other low-level radioactive waste activities, initiatives and rulemakings on behalf of the DSWG/P61WG. (See above for additional information.)

(See above for additional information.)