

## **DRAFT MINUTES**

### **APPALACHIAN STATES LOW-LEVEL RADIOACTIVE WASTE COMMISSION ANNUAL MEETING**

**October 27, 2017**

#### **CALL TO ORDER**

Ms. Tung called the meeting to order at 10:03 a.m.

#### **INTRODUCTION AND ROLL CALL**

Mr. Janati conducted the roll call, and the members introduced themselves. The attendees are listed below:

##### **Members and Alternates**

- Dave Allard, Alternate Member from Pennsylvania
- Frieda Fisher-Tyler, Alternate from Delaware
- Jason Frame, Vice-Chair and Member from West Virginia
- Edward Hammerberg, Alternate from Maryland
- Matthew Higgins, Alternate from Delaware
- Clifford Mitchell, Member from Maryland
- Richard Roman, Alternate from Pennsylvania
- Matthew Smith, Alternate from West Virginia
- Mary Beth Tung, Chair and Member from Maryland

##### **Commission Staff**

- Rich Janati, Administrator, PA DEP
- Timothy Anderson, Esquire, Pepper Hamilton
- Michelle Skjoldal, Esquire, Pepper Hamilton

##### **Others Present**

- Andrew Taverna, Staff Member, PA DEP
- Stefanie Muzic, Administrative Support, PA DEP

## **ADOPTION OR MODIFICATION OF THE AGENDA**

There were no modifications to the proposed meeting agenda.

## **APPROVAL OF THE MINUTES OF THE PREVIOUS MEETING**

Ms. Tung asked if any member had modifications or changes to the minutes of the October 28, 2016 annual meeting. There were no comments, and the Commission voted to approve the minutes unanimously.

## **REPORT OF THE CHAIRMAN AND EXECUTIVE DIRECTOR**

### **Review of Treasurer's Report for FY 2016-17**

Mr. Janati discussed the Treasurer's Report, which is a statement of revenues and expenditures for the Commission's Operating Fund during fiscal year (FY) 2016-2017. This fund is being invested by the Pennsylvania Treasury Department under the INVEST Program. Interest from the Operating Fund during this FY was \$837. Actual expenses for this period totaled \$27,957, which is below the budgeted amount of 30,200 by \$2,243. However, the Commission's expenditures exceeded its revenues by \$27,120. Mr. Janati said at the current rate of expenditures, the balance in the Operating Fund would last about five to six years.

### **Review of Audit Report for FY 2016-17**

Mr. Janati discussed the Independent Auditor's Report for FY 2016-2017. The audit was conducted by Greenawalt and Company in accordance with the Government Auditing Standards and included a review of the Commission's internal control structure, laws, and regulations. The audit concluded that there were no findings or items of non-compliance.

Mr. Janati said the balance sheet reflects the Commission's assets, consisting of "cash" and "investments." The checking account maintained by Citizens Bank reflects a cash balance of \$11,160 as of June 30, 2017. The Commission's total net assets were \$2,836,394 as of June 30, 2017. The balance sheet also reflects an amount of \$126,016 as appropriated funds, including \$10,000 for legal services and \$116,016 for fiscal stabilization. Mr. Janati also said the money received from the Department of Energy (DOE), the surcharge fund, is being retained in a restricted fund with the INVEST Program. As of June 30, 2017, this fund had a balance of \$2,699,218 and earned an interest amount of \$8,798 during FY 2016-17. He said the audit report noted that the Commission was not involved in any litigation that could adversely affect its financial position. The Commission voted to accept both the Treasurer's Report as well as the Independent Auditor's Report for FY 2016-17 as presented.

Mr. Anderson explained that the surcharge fund was created under the Low-Level Radioactive Waste Policy Amendment Act of 1985. It was a surcharge on disposal at the existing LLRW disposal facilities, to create a fund that compacts could earn by meeting certain milestones in the development of the regional facilities. The federal statute states that the surcharge money is to be used for the establishment of a regional disposal facility. He said there are other compacts, which take the slightly aggressive view that the operations of the compacts are directly related to

the establishment of a regional facility, and that they can spend the surcharge money for routine operating expenses. He said the position taken by other compacts is entirely plausible and reasonable, but has not been tested. He also said we have not come to that point yet, but the compact will probably be able to use the surcharge money for operating expenses. Mr. Allard stated that it is important to keep the compact stable and financially operational, because at some point in the future there may be a need to develop a regional LLRW disposal facility here in Pennsylvania.

## **STATUS OF COMMERCIAL LLRW DISPOSAL FACILITIES**

Mr. Janati provided an overview of the federal and state laws pertaining to LLRW management and disposal and the formation of LLRW regional compacts. He also provided an update on the status of commercial LLRW disposal facilities and recent developments involving these facilities.

There are currently four (4) commercial LLRW disposal facilities in the United States. These facilities are Barnwell in South Carolina; the *EnergySolutions* facility in Clive, Utah; Richland in Washington; and the Waste Control Specialists (WCS) facility in Texas.

1. The Barnwell facility accepts all classes of LLRW from the three members of the Atlantic Compact (Connecticut, New Jersey and South Carolina). As of July 1, 2008, this facility no longer accepts LLRW from outside the Atlantic Compact. The current projected closure date for this facility is 2038.
2. The *EnergySolutions* Clive facility accepts Class A waste from all states except those in the Northwest and Rocky Mountain Compacts. The facility also provides for disposal of bulk waste and large components such as steam generators from the nuclear power plants. This facility is not a regional facility and is regulated by the state of Utah. The Utah Department of Environmental Quality is currently conducting a regulatory review for disposal of large quantities of depleted uranium and Class A radioactive sealed sources at this facility. Mr. Janati said this facility disposed of about 41,192 radioactive disused sealed sources between 2013 and 2016 under a variance granted by the state of Utah. He said the current projected closure date for this facility is 2050.
3. The Richland facility is a regional facility and accepts all classes of LLRW, but only from the member states of the Northwest and Rocky Mountain Compacts. This facility also accepts Naturally Occurring and Accelerator-Produced Radioactive Materials (NARM) from the Appalachian Compact and other states and compacts. The current closure date for this facility is 2056.
4. The WCS facility is a regional facility for the Texas Compact (Texas and Vermont) and accepts all classes of LLRW from both commercial and federal facilities. In April 2012, the Texas Commission on Environmental Quality (TCEQ) authorized WCS to accept waste and begin disposal activities. Additionally, the Texas Compact Commission has established rules for the importation and exportation of LLRW into and out of the Texas region. The annual limit on radioactivity for out-of-compact waste is 275,000 curies (Ci), but there is no annual

limit on volume for out-of-compact waste. The TCEQ recently granted an increase in the total capacity of the commercial facility from 2.3 million cubic feet (ft<sup>3</sup>) to 9 million ft<sup>3</sup>. Additionally, disposal of large quantities of depleted uranium and Greater-Than-Class C (GTCC) waste is being considered by WCS. The current projected closure date for this facility is 2045.

Mr. Janati said the WCS facility is currently facing economic challenges. Some of the contributing factors include storage of irradiated reactor components at the reactor sites due to the high cost of disposal of this type of waste at the WCS facility; blending of Class A and Class B wastes, and disposal of Class A waste at the *EnergySolutions* facility in Utah due to lower disposal fees; and the annual limit on the radioactivity of LLRW (curie content) for disposal of out-of-compact waste at the Texas facility. Additionally, the Texas Compact Commission is allowing the LLRW generators in the Texas Compact to ship their waste to the *EnergySolutions* facility in Utah. Mr. Hammerberg pointed out that there is also a limited number of certain transportation casks. He said he heard from a WCS official that at times they are unable to receive waste for disposal because they do not have the proper transport casks available.

## **Recent Developments**

Mr. Janati provided an overview of several significant national developments as follows:

- U.S. District Court Prohibits Proposed Acquisition of WCS by *EnergySolutions*

In November 2015, *EnergySolutions* announced that it has a definitive agreement to acquire WCS, the operator of the waste disposal facility in Texas. In November 2016, the U.S. Department of Justice (DOJ) filed a civil antitrust lawsuit seeking to block *EnergySolutions*' proposed acquisition of WCS. According to the lawsuit filed by the DOJ, the transaction would deny commercial generators of LLRW the benefits of vigorous competition that has led to significantly lower prices, better service and innovation in recent years. In June 2017, the U.S. District Court in Delaware entered judgement in favor of the DOJ and blocked the acquisition of WCS by *EnergySolutions*.

- NRC Staff Released SECY-16-0115 re Financial Assurance for Disposition of Category 1 and 2 Byproduct Material Radioactive Sealed Sources

In October 2016, NRC staff released SECY-16-0115, in which the agency staff seek Commission approval to initiate a rulemaking to require financial assurance for the disposition of Category 1 and 2 byproduct material radioactive sealed sources. The rulemaking would revise 10 CFR 30.35, "Financial Assurance and Record keeping for Decommissioning." The staff offers the following projected rulemaking schedule in SECY-16-0115: initiate regulatory basis phase in October 2017; complete regulatory basis in October 2018; publish proposed rule in October 2019; and publish final rule in October 2020.

- NRC Issues Staff Requirements Memorandum (SRM) re Final Rule for LLRW Disposal

In September 2017, the NRC issued an SRM in response to SECY-16-0106, which sought Commission approval to publish a final rule that would amend 10 CFR Part 20, “Standards for Protection Against Radiation,” and 10 CFR Part 61, “Licensing Requirements for Land Disposal of Radioactive Waste.” Mr. Janati said the SRM states that the draft final rule published in SECY-016-0106 should be revised to incorporate several changes. He said one of the most significant changes is to reinstate the “grandfathering provision” for applying requirements to only those sites that plan to accept large quantities of depleted uranium for disposal.

- NRC Plans to Issue a Federal Register Notice to Launch a Scoping Study for a New Category of “Very Low Activity” Radioactive Waste

The NRC staff recently announced that the agency plans on issuing a Federal Register Notice to launch a scoping study on the issue of whether and how to define, as well as the potential impacts of defining a new category of “very low activity” radioactive waste. Presently, there is no lower limit for LLRW so even very low activity materials from a licensed facility is considered LLRW, and it is being disposed of at a 10 CFR Part 61 disposal facility. The exception is case-by-case exemptions under 10 CFR Part 20.2002 through which a licensee could apply to NRC or an NRC agreement state for disposal of low activity radioactive materials in a facility other than a Part 61 licensed facility, i.e., RCRA Type D or Type C facility landfill. The main reasons for conducting this scoping study are the potential opportunity to improve regulatory efficiency and effectiveness, alignment with international standards and practices, and changes in assumptions regarding decommissioning waste volumes and timing. This task is given a medium priority in the NRC’s Low-Level Waste Programmatic Assessment since there is no significant safety issue driving very low activity waste disposal.

Mr. Mitchell pointed out the importance of understanding risk perception and risk communication as it relates to management and disposal of medical and radioactive waste. He also said there are similarities in transportation requirements for high pathogen medical waste and LLRW. He suggested that the Commission support educational activities in collaboration with academic institutions and further the understanding of radioactive waste disposal through the development of curriculum or case studies that could be used by those academic institutions including risk communication. Mr. Janati said this activity might be beyond the Commission’s scope of authority. He recommended a discussion on this at the next annual meeting. Mr. Anderson concurred and committed to providing an analysis of the appropriateness of the suggested action as an activity of the Commission and the appropriateness of the spending the surcharge money to conduct this activity.

### **INFORMATION ON LLRW GENERATION FOR THE APPALACHIAN COMPACT**

Mr. Janati provided background information on the DOE’s Manifest Information Management System (MIMS). The MIMS contains information on LLRW disposal at the current commercial LLRW disposal facilities. Mr. Janati said that, for the past several years, the Commission has significantly reduced the LLRW generator community’s administrative reporting requirements by obtaining the appropriate disposal information directly from the MIMS database.

During calendar year 2016, the Appalachian Compact generated about 245,049 ft<sup>3</sup> of LLRW. Pennsylvania disposed of about 237,692 ft<sup>3</sup>, most of which was generated by the government (decommissioning of the Safety Light site in PA by the EPA), the utility, and industrial sectors. Maryland disposed of about 7,351 ft<sup>3</sup> of waste, most of which was generated by the utility sector. Delaware and West Virginia generated about 4.5 ft<sup>3</sup> and 1.8 ft<sup>3</sup>, respectively. Almost all Class A waste generated within the Compact was shipped to the EnergySolutions Clive facility in Utah. Mr. Janati also provided information on the radioactivity (curie) of waste generated in the Compact. The Compact generated about 2,230 Ci of LLRW. Pennsylvania generated about 2,021 Ci of waste, and Maryland generated about 209 Ci of waste. West Virginia and Delaware generated about 0.35 and 0.014 Ci, respectively.

Mr. Janati provided a brief discussion of waste generation trends in the Compact for the period of 1996 through 2016. The Barnwell disposal facility in South Carolina stopped accepting waste from outside the Atlantic Compact in 2008, resulting in the storage of Class B and C wastes, mainly by the nuclear utilities, during 2009 through 2013. The total radioactivity reported in MIMS during this period represents only Class A waste that was shipped to the Clive facility in Utah. Beginning in 2014 and through 2016, the reported radioactivity also includes Class B waste that was disposed of at the WCS facility in Texas.

Mr. Janati presented a pie chart showing that in 2016, about 99.8% of the compact's LLRW by volume was disposed of at the Clive facility, and only 0.21% by volume was disposed of at the WCS facility. In comparison, about 56% of the compact's LLRW by radioactivity was disposed of at the Clive facility and about 44% by radioactivity was disposed of at the WCS facility.

Mr. Janati said the nuclear utilities in the Appalachian Compact are currently storing their irradiated reactor components in the spent nuclear fuel pools on-site, mainly due to the high cost of disposal of this waste stream at the WCS facility.

## **UNFINISHED BUSINESS**

### **Overview of LLW Forum's Disused Sources Working Group Report**

Mr. Janati provided an overview of the LLW Forum Report on Disused Sealed Sources. Mr. Janati is a member of the LLW Forum executive committee and serves on the Disused Sources Working Group (DSWG). He reported that the National Nuclear Security Administration (NNSA) had asked the LLW Forum, a national association of states, radioactive waste compacts, federal agencies, and industry representatives, to form the DSWG and develop recommendations for improving the management of disused sealed sources that pose a threat to national security. The DSWG solicited input from various stakeholders and issued its final report in March 2014.

Mr. Janati said the report points out that there are approximately two million sealed sources and thousands of disused sealed sources in the United States. He said the existing NRC's National Source Tracking System (NSTS) includes only Category 1 and 2 sources and not Category 3 through 5 sources. Some of these sources pose a threat to national security as they could be used

as a radiological dispersion device (RDD). He said the EPA has estimated that an RDD incident in a metropolitan area could result in about 39 million cubic feet of radioactive waste requiring disposal.

Mr. Janati said the report identifies six major factors contributing to the disused source problem:

- The life cycle costs of managing and ultimately disposing of sealed sources are not internalized;
- The practices of the NRC and the NNSA do not fully reflect a consistent view of the sources that 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 used, recycled, or disposed of in a timely manner;
- The opportunities for recycling and reusing sealed sources are underutilized; and
- Type B shipping containers needed to transport certain high-activity sealed sources are in short supply and very expensive.

Mr. Janati provided a summary of key recommendations in the DSWG report for addressing the problems associated with disused sealed sources. He said the report points out that the current regulatory system should be restructured to provide economic incentives for the prompt reuse, recycling, or disposal of disused sealed sources. Financial assurance requirements should be broadened to cover all Category 1 through 3 sources for the full cost of transportation and disposal. Licensees should also be required to pay an annual possession fee for each sealed source in inventory.

The report points out that the U.S. Government should reach an agreement across agencies regarding which sealed sources pose a threat to national security. The NRC considers only category 1 and 2 sealed sources to present a national security risk, but the NNSA believes that some Category 3 sealed sources pose a national security threat as well. The report recommends that a Specific License (SL) should be required for all Category 3 sources, and all such sources should be tracked in the NSTS. Mr. Janati said there are additional requirements for the possession of SL sources that are not required for the possession of Generally Licensed (GL) sources.

The report recommends that the NRC and Agreement States should develop regulations to limit the storage of disused sealed sources to two years unless there is a demonstrated future use. The report also recommends that a detailed study be conducted, possibly by the EPA, to identify measures to promote opportunities for the reuse and recycling of sources. It recommends the creation of a secure exchange program, administered by the EPA, to facilitate the transfer of sources among various licensees or users of sealed sources as needed. The report makes several recommendations associated with limited availability of Type B shipping containers. It

recommends that the NNSA should identify several foreign package designs that would have widespread applicability to disused sealed sources in the U.S. and seek NRC approval for domestic use.

Mr. Janati said the DSWG will continue dialogue with various stakeholders, including the Organization of Agreement States, the Conference of Radiation Control Program Directors, and the Health Physics Society and will pursue implementation of recommendations.

## **NEW BUSINESS**

### **Election of Officers**

The Commission members voted unanimously to elect Mary Beth Tung, Director of Maryland Energy Administration, as the chair; and Jason Frame, Chief, West Virginia Radiological Health Program, as the vice-chair of the Commission.

### **Adoption of FY 2018-19 Proposed Budget**

Mr. Janati presented the proposed budget for FY 2018-19. He said the proposed budget is similar to the approved budget for FY 2017-18 except that the projected interest income for the Operating Fund is higher by an amount of \$400. The Commission voted unanimously to approve the proposed budget of \$30,200 for FY 2018-19.

### **2018 Annual Meeting**

The Commission decided to hold its next annual meeting on October 26, 2018, with an alternate date of November 2, 2018. The meeting will be held at the Hilton Hotel in Harrisburg, PA. Mr. Anderson stated that the bylaws specify that the annual meeting be held in July. He suggested that at the next annual meeting, the Commission propose an amendment to the bylaws that would continue to require an annual meeting but without specifying in what month it will occur.

## **PUBLIC COMMENT**

There were no members of the public in attendance.

## **ADJOURNMENT**

Ms. Tung adjourned the meeting at approximately 12:27 p.m.