MINUTES

APPALACHIAN STATES LOW-LEVEL
RADIOACTIVE WASTE COMMISSION ANNUAL MEETING

October 28, 2016

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
- Albert Romanosky, Alternate 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

- James Barnhart, PA DEP
- Andrew Taverna, PA DEP
- Cheryl Miller Laatsch, 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, changes or clarifications with regard to the minutes of the November 6, 2015 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 2015-16

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) 2015-2016. This fund is being invested by the Pennsylvania Treasury Department under the INVEST Program. Interest from the Operating Fund during this FY was $217. Actual expenses for this period totaled $28,332. This is lower than the budgeted amount by $1,668; however, the Commission's expenditures exceeded its revenues by $28,115. Mr. Janati said at the current rate of expenditures, the balance in the Operating Fund would last about six to seven years.

Mr. Hammerberg stated that the Low-Level Radioactive Waste Forum (LLW Forum) has been encouraging the Appalachian Compact Commission to host a meeting of the LLW Forum, but because of the Commission's small budget, we have not yet responded positively to their request. Mr. Janati concurred and added that the Appalachian Compact may want to co-sponsor a meeting of the LLW Forum at a future time. Ms. Tung said co-sponsoring is certainly an option we might want to consider.

Review of Audit Report for FY 2015-16

Mr. Janati discussed the Independent Auditor's Report for FY 2015-2016. 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 $24,117 as of June 30, 2016. The Commission's total net assets were $2,853,237 as of June 30, 2016. The balance sheet also reflects an amount of $140,179 as appropriated funds, including $10,000 for legal services and $130,179 for fiscal stabilization. Mr. Janati explained that the surcharge fund is the money the Commission received from the Department of Energy (DOE) as part of incentives paid to regions and states to meet federally set milestones in the development of the regional LLRW disposal facilities. He also said the money received from the DOE is being retained in a restricted fund with the INVEST Program. As of June 30, 2016, this fund had a balance of $2,688,941 and earned an interest amount of $8,581 during FY 2015-16. 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 2015-16 as presented.

Status of Commercial LLRW Disposal Facilities

Mr. Janati provided an overview of the low-level radioactive waste (LLRW) disposal facility siting process in Pennsylvania, 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 Energy*Solutions* 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 Energy*Solutions* 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 state is currently conducting a regulatory review for disposal of large quantities of depleted uranium and Class A radioactive sealed sources at this facility. 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^3) to 9 million ft^3. Additionally, disposal of large quantities of depleted uranium and Greater-Than-Class C (GTCC) waste is being considered by the WCS. The current projected closure date for this facility is 2045.

Recent Developments

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

- In April 2016, the Nuclear Regulatory Commission (NRC) issued the final environmental impact statement (EIS) for Bell Bend Nuclear Power Plant Combined License (COL) application. The NRC and the Army Corps of Engineers concluded that environmental impacts would not prevent issuing a COL for the reactor at the Bell Bend site near Berwick, PA. Talen Energy (formerly PPL Bell Bend, LLC) submitted the COL application in October 2008 to build and operate a U.S. Evolutionary Power Reactor (EPR) at the site. In February 2015, AREVA, the designer of the EPR, requested that NRC staff suspend their safety review of the U.S. EPR design certification application. As a result, Talen Energy requested to withdraw the Bell Bend COL application from further review by the NRC.

- In February 2016, DOE issued a final environmental impact statement (EIS) for the disposal of GTCC waste and GTCC-like waste. Presently, there is no disposal capability for GTCC waste in the U.S., which has radionuclide concentrations exceeding the limits for Class C waste as established by the NRC. The DOE evaluated five alternatives for the disposal of GTCC and GTCC-like waste. The preferred alternative for the disposal is the DOE's Waste Isolation Pilot Plant (WIPP) facility in Carlsbad, New Mexico and/or land disposal at generic commercial facilities. Prior to making a final decision on a disposal alternative, which will be documented in a Record of Decision, the DOE will submit a report to Congress on disposal alternatives for GTCC waste and will await action by Congress.

- In February 2016, the NRC issued a construction permit to SHINE Medical Technologies for a facility to be built in Janesville, Wisconsin, for production of molybdenum-99 through fission of low-enriched uranium. SHINE applied for a permit in 2013, and the NRC completed its technical review in October 2016 under 10 CFR Part 50. The facility construction is expected to begin in early 2017, and SHINE expects to begin commercial sales from the facility in early 2019.

- In April 2016, the NRC released SECY-16-0046, Results of Byproduct Material Financial Scoping Study, to provide the Commission with the results of the staff's byproduct material financial scoping study and recommendations for further actions. The NRC reviewed current regulations and guidance, internal and external reports, and received feedback from the stakeholders. Based on their analysis, the NRC staff recommended that the financial assurance requirements of 10 CFR Part 30.35 should be expanded to include byproduct material Category 1 and 2 radioactive sealed sources that are tracked in the National Source Tracking System. The NRC staff plan to develop a rulemaking plan SECY paper to propose initiating rulemaking, including discussions of various options.

Mr. Allard said the Conference of Radiation Control Program Directors (CRCPD) are updating the Suggested State Regulations, Part S (Requirements for Financial Assurance). He said several states are ahead of the NRC in the area of financial assurance for radioactive sealed sources. He provided several examples of abandoned radioactive sealed sources in PA due to bankruptcy and lack of adequate financial assurance requirements.

INFORMATION ON LLRW GENERATION FOR THE APPALACHIAN COMPACT

Jim Barnhart 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.

During calendar year 2015, the Appalachian Compact generated about 109,490 ft^3 of LLRW. Pennsylvania disposed of about 91,223 ft^3, most of which was generated by the utility and industrial sectors. Maryland disposed of about 18,203 ft^3 of waste, most of which was generated by government and utilities. Delaware and West Virginia generated about 45 ft^3 and 19 ft^3, respectively. Almost all Class A waste generated within the compact was shipped to the Energy*Solutions* disposal facility in Clive, Utah. Mr. Barnhart also provided information on the radioactivity (curie) of waste generated in the compact. The Appalachian Compact generated about 4,175 Ci of LLRW. Pennsylvania disposed of about 4,147 Ci of waste, and Maryland generated about 28 Ci of waste. Delaware and West Virginia generated about 0.01 Ci and .023 Ci, respectively.

Mr. Barnhart provided a brief discussion of waste generation trends in the compact for the period of 1996 through 2015. He said as of July 2008, the Barnwell disposal facility in South Carolina no longer accepts waste from outside the Atlantic Compact. This resulted in the storage of Class B and C wastes, mainly by the nuclear utilities in the Appalachian Compact. The total activity reported in MIMS from 2009 through 2013 represents only Class A waste that was shipped to the Clive facility in Utah. In 2014 and 2015, the reported activity also includes Class B waste that was disposed of at the WCS facility in Texas.

Mr. Barnhart presented a chart showing that in 2015, 97.2% of the compact's LLRW by volume was disposed of at the Clive facility, and only 2.8% by volume was disposed of at the WCS facility. In comparison, 53.2% of the compact's LLRW by activity was disposed of at the WCS facility and 46.8% by activity was disposed of at the Clive facility.

UNFINISHED BUSINESS

Update on the NRC Proposed Rule to Amend 10 CFR Part 61 Regulations

Mr. Janati said 10 CFR Part 61, Licensing Requirements for Land Disposal of Radioactive Waste, was originally implemented in 1983 and since then, the NRC Agreement States have been responsible for the regulation of the commercial LLRW disposal facilities. He said the proposed changes to Part 61 would impact LLRW disposal facilities that are currently regulated by the NRC Agreement States.

Mr. Janati noted that in the Staff Memorandum (SRM-SECY-13-0075) published in February 2014, the Commission approved publication of the proposed rule and the draft guidance for public comment subject to several changes. These changes involve a period of performance, intruder assessment, Agreement State compatibility, defense-in-depth and outreach.

The proposed rule and the draft guidance on conducting technical analyses was published in the Federal Register in March 2015. As a result, the NRC received many comments from various

stakeholders, including the industry and the public on the proposed rule. Among the most significant comments was that the NRC's three-tiered approach to the LLRW disposal facility performance assessment (a compliance period, followed by a protective assurance period, followed by a performance period) is too complicated. Several other significant comments included the recommendation that many of the primary rule changes be assigned a Compatibility Category C, that the rule should not apply to the sites that have no plans to accept LLRW, that the reclassification of depleted uranium should be done before the final rule is issued, and that the NRC should develop a backfit analysis on the proposed rule.

Based on the comments received on the proposed rule, the NRC staff made several changes to the proposed final rule. The staff eliminated the three-tiered approach of the proposed rule and requires only a compliance period and a performance period. The compliance period would be either 1,000 years or 10,000 years, depending on the quantities of long-lived radionuclides contained in the waste. The performance period analysis would be required only if the licensee uses the longer 10,000-year performance period. The NRC also changed the compatibility category from Category B to Category C to allow greater flexibility for implementation by the Agreement States. The NRC also removed the requirement for defense-in-depth (DID) quantitative analysis. The requirement has been revised to indicate that disposal facility DID protections need only to be identified and their capabilities described, making it clear that a complex quantitative analysis is not required. The final proposed rule also eliminates many of the detailed requirements for the technical analysis that are addressed in the NRC guidance document (NUREG-2175).

Mr. Janati said the new rule would become effective one year after it is published in the Federal Register. He said the NRC Agreement States that currently regulate commercial disposal facilities would be required to adopt the new Part 61 within three years from the effective date of the final rule. He also said if there are no plans for the development of a LLRW disposal facility, the non-sited NRC Agreement States, such as Pennsylvania, would not be required to meet the NRC criteria for a compatible LLRW disposal program.

In response to a question by Mr. Raniowski regarding the disposal facility post-closure performance assessment, Mr. Janati said there will be a post-closure observation and assessment of the disposal facility's performance by the licensee for at least 5 years. He said following the transfer of the disposal facility to the Commonwealth, the Commonwealth's custodial agency, perhaps PA DEP, will conduct an active institutional control program for approximately 100 years beyond the facility closure date. This would include security, monitoring and maintenance activities. Following the active institutional control, there will be a passive institutional control and the monitoring of the facility will continue during this period. Mr. Barnhart said the majority of radionuclides in the LLRW will decay away during the first 100 years and during the active institutional period. Mr. Allard pointed out that shallow land disposal of LLRW in the Commonwealth is prohibited by law and that the PA facility will be an engineered design facility.

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 2016-17 Proposed Budget

Mr. Janati presented the proposed budget for FY 2017-18. He said the proposed budget is similar to the approved budget for FY 2016-17. The Commission voted unanimously to approve the proposed budget of $30,200 for FY 2017-2018.

2017 Annual Meeting

The Commission decided to hold its next annual meeting on October 27, 2017, with an alternate date of November 3, 2017. The meeting will be held at the Hilton Hotel in Harrisburg, PA.

Texas Compact Commission's Audit of Alaron Nuclear Services in Wampum, PA

Mr. Janati said in January 2016, Alaron Nuclear Services (Alaron) informed the Texas Compact Commission that they had sent a shipment of LLRW to the WCS facility in Texas prior to receiving a Conditional Removal Letter or proper authorization from the Texas Compact Commission. It was clear based on previous Import Agreements that Alaron was aware of the condition removal process but failed to comply with the process for this particular shipment. As a result, an enforcement letter was sent to Alaron in April 2016 indicating the intent of the Texas Compact Commission to audit the facility. The audit was conducted at Alaron facility in Wampum, PA in May 2016. Mr. Janati attended the audit on behalf of the Appalachian Compact Commission.

Mr. Janati said the audit team reviewed several documents including all the previous agreements with Alaron for shipments of waste to Texas. There were three findings associated with this audit, and they all involve the shipment of waste by Alaron without receiving prior approval from the Texas Compact Commission.

1. Process failure to provide export authorization from the Central Interstate Compact Commission to the Texas Compact Commission for review. Alaron did not abide by the terms of agreement for this shipment, primarily because of rush to ship.

2. Process failure to wait until authorization to ship waste had been received from the Texas Compact Commission. Again, Alaron did not abide by the terms of agreement for this shipment, primarily because of rush to ship.

3. Process failure to prepare and submit a generator authorization for Alaron to act as broker for waste generated at Alaron. This was a case of oversight and lack of internal review.

Mr. Janati said Alaron corrected all the discrepancies during the audit. Additionally, Alaron committed to making several corrective actions to prevent a recurrence of the audit findings for future shipments.

Action 1 - Alaron will update the shipping checklist to include steps to ensure export authorizations from other compacts will be provided to the Texas Compact Commission as appropriate, and approval to ship waste to WCS will be obtained from the Texas Compact Commission prior to shipments.

Action 2 - Alaron will update their Standard Operating Procedures (SOPs) to ensure that appropriate steps will be followed to comply with the Texas Compact Commission's requirements for shipment of waste to WCS including export authorizations from other compacts as appropriate, prior approval to ship waste to WCS, and generator authorizations to ship waste generated at Alaron.

Action 3 - Alaron will ensure that the previous versions of the SOPs and shipping checklist are taken out of circulation.

Mr. Janati said he recommended to the executive director of the Texas Compact Commission that WCS establish a process to ensure the generator/shipper has obtained authorization from the Texas Compact Commission prior to shipment of waste to the WCS facility. Mr. Janati also said he asked Alaron to pay more attention to waste attribution to ensure that the waste manifested for shipment is properly attributed to the compact from which the material or waste was originally shipped for processing at the Alaron facility.

PUBLIC COMMENT

There were no members of the public in attendance.

ADJOURNMENT

Ms. Tung adjourned the meeting at approximately 12:21 p.m.