



Appalachian States Low-Level Radioactive Waste Commission

DRAFT MEETING MINUTES

November 7, 2025

CALL TO ORDER

Mr. Mitchell called the meeting to order at 10:00 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

- Jessica Shirley – Member from Pennsylvania
- Dwight Shearer – Alternate Member from Pennsylvania
- Adam Walters – Alternate Member from Pennsylvania
- Robert Brinsfield – Alternate Member from Delaware
- Clifford Mitchell – Member from Maryland
- Rick Kessler – Alternate Member for Maryland
- Tera Patton – Member from West Virginia
- Matthew T. Smith – Alternate Member for West Virginia

Commission Staff

- Rich Janati, Administrator
- Timothy Anderson, Esquire

Others

- Marc Pawlowski, Constellation Energy
- Erich Schuller, DE Natural Resources and Environmental Control
- Maria Dispenziere, PA Department of Health and Human Services
- Ed Hammerberg, MD Department of the Environment
- Dan Whetzel, PA Department of Transportation



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PA DEP Staff

- Ali Tarquino Morris
- Stephanie Banning
- Chad Duppsstadt
- David Baracco
- Ryan Bankert
- Troy Prutzman
- Michael Karchner
- Everette Whitlow
- Eduardo Muro
- Matthew Sims

ADOPTION OR MODIFICATION OF THE AGENDA

There were no modifications to the proposed meeting agenda.

APPROVAL OF THE MINUTES OF THE PREVIOUS MEETING

Mr. Mitchell asked if any member had modifications or changes to the minutes of the November 1, 2024, annual meeting. A minor spelling correction to a name was made and the Commission voted to approve the minutes unanimously.

REPORT OF THE CHAIRMAN AND ADMINISTRATOR

Review of Treasurer's Report for FY 2024-25

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) 2024-2025. Both the Operating Fund and Surcharge Fund are being invested by the Pennsylvania Treasury Department under the INVEST Program. Interest from the Operating Fund during this FY was \$1,210. Actual expenses for this period totaled \$45,920 which is \$2,416 less than the budgeted amount of \$48,336. The reason we were under the budgeted amount is because the travel expenses vary from year to year based on the location of the Low-Level Radioactive Waste Forum (LLW Forum) meetings.

The Commission's expenses exceeded the Operating Fund revenue by \$44,710. Mr. Janati stated that this happens every year as the Commission has no other revenue sources aside from the interest collected in the Operating Fund. To maintain the Operating Fund, funds are periodically transferred from the Surcharge Fund to the Operating Fund. The Surcharge Fund consists of restricted funds provided by the Department of Energy (DOE) and is accumulating interest. The Surcharge Fund had an interest amount of \$160,607. The Commission has been using the interest earned from the Surcharge Fund to fund day-to-day operations. Mr. Janati said at the end of June 2025, the Operating Fund had a balance of \$46,531. Mr. Janati broke down the Surcharge Fund



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to unassigned and restricted. The Surcharge Fund has accumulated an interest amount of \$1,400,362. The remaining amount of \$1,647,303 constitutes as the principal. Mr. Mitchell asked if the Federal Government budget impasse affects the Commission's finances. Mr. Janati confirmed that it does not impact Commission finances.

STATUS REPORT ON CLIVE AND WCS DISPOSAL FACILITIES

Mr. Janati provided an overview of the Clive Facility, located approximately 75 miles west of Salt Lake City, Utah. He noted that the facility holds a license from the State of Utah for the disposal of Class A low-level radioactive waste (LLRW), radioactive sealed sources, mixed waste containing both radioactive and hazardous chemical components, and technologically enhanced naturally occurring radioactive material (TENORM). The facility accommodates disposal of bulk waste, containerized waste, and large components. Mr. Janati also highlighted that Clive is seeking approval for several license applications, including the renewal of its Class A waste license, an amendment for a low-activity cell, an expansion for Class A waste, and licensing of a federal cell.

Mr. Janati also reviewed the Waste Control Specialists (WCS) site in Texas, situated approximately 30 miles from the city of Andrews. WCS holds a license from the State of Texas for the disposal of Class A, B, and C commercial and federal LLRW, mixed waste, and TENORM. Similar to Clive, the facility provides for disposal of bulk waste, containerized waste, and large components. He noted that construction of a new disposal cell at the site has been completed and is now operational, while the license renewal application for the facility is currently under review.

Mr. Janati highlighted several key factors that support the continued reliability of waste disposal at both the Clive and WCS facilities. He noted that both facilities are seeking license extensions, which would provide long-term operational certainty. He also explained that each facility is in the process of expanding its disposal capacity, helping ensure ongoing waste acceptance and improving long-term planning.

Mr. Janati emphasized that both facilities have strong safety records, which alleviates concerns about unexpected shutdowns or operational interruptions. Additionally, he stated that both Clive and WCS operate within stable political environments and generally receive support from state and local governments, further contributing to their reliability moving forward.

Mr. Shearer asked, considering the facility's new cell construction and license renewal approval, what is the site's approximate additional capacity? Mr. Janati replied that, based on the facility's current licensed capacity, it can accommodate additional LLRW for at least 8 to 10 years.

Mr. Shearer asked if the existing facilities could handle waste from small modular and



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microreactors coming online at a fast rate. Mr. Janati replied that these facilities have adequate capacity to handle LLRW from initial SMR and microreactor deployments.

Mr. Mitchell asked if both facilities stopped accepting waste on the same day, how much time would the compact have to implement a solution? Mr. Janati said he would immediately call a special meeting with the Commission members and the counsel to brainstorm solutions. He noted that a survey of waste generators showed that higher-activity Class B and C wastes could be safely stored for about five years, but low-activity waste from the compact, if these facilities are no longer available, could create a more urgent problem. Potential solutions include temporary storage of waste on-site, agreements with other compacts that have regional facilities, and expediting the restart of the siting process for a new regional facility in the Appalachian Compact, while ensuring environmental and public health protections. He emphasized that while such a shutdown is unlikely, these measures provide some options to manage the situation.

INFORMATION ON LLRW DISPOSAL FOR THE APPALACHIAN COMPACT

Mr. Janati stated that the Commission collects disposal information in a couple of ways. First, we use the national database called MIMS (Manifest Information Management System), which is somewhat complicated, but we have become proficient at using it. We have developed enough expertise that we offer assistance to other compacts if needed. In addition to MIMS, Mr. Janati noted that disposal information is also received directly from the disposal facilities.

Mr. Janati discussed the waste disposal information for calendar year 2024. The Appalachian Compact disposed of 120,403.9 ft³ of LLRW, with 117,963.8 ft³, coming from Pennsylvania, 2,411.9 ft³ from Maryland, 14.1 ft³ from West Virginia, and 14 ft³ from Delaware. Most of Pennsylvania's waste was generated by the industry and nuclear utilities. Maryland's waste was mostly generated by industry, nuclear power plants, and the government. Mr. Janati also provided information on the radioactivity of waste generated in the compact. The compact generated about 681.8 Ci of LLRW. Pennsylvania generated about 592.9 Ci, Maryland generated about 84.9 Ci, Delaware generated about 4 Ci, and West Virginia generated less than 0.1 Ci.

Mr. Janati provided a brief discussion of waste disposal trends in the compact for the period of 2004 to 2024. The Barnwell disposal facility in South Carolina stopped accepting waste from outside the Atlantic Compact in July 2008, resulting in the storage of Class B and C waste, mainly by the nuclear utilities in the compact, for about 5 years. From 2009 through 2013, volume of LLRW includes disposal only at the Clive Facility in Utah. Beginning in 2014 and through 2024, the reported volume and radioactivity also included Class B and C waste that were shipped to the WCS facility in Texas. In 2016, the U.S. Environmental Protection Agency (EPA) began cleanup efforts at the Safety Light facility in Pennsylvania under its Superfund Program. The remediation activities generated large quantities of Class A waste for several years.



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Mr. Janati provided a brief discussion concerning the radioactivity of waste for the period of 2004 through 2024. From the years 2004 through 2008, the activity level of waste being shipped was very high due to the availability of the Barnwell facility to our compact. In 2007 and 2008 the nuclear power plants in the compact shipped large quantities of high activity irradiated components to Barnwell knowing that they will no longer have access to this facility.

The shipment of Class B and C radioactive waste has been relatively low after the closure of the Barnwell facility to our compact beginning in 2009. We began shipping Class B and C waste that contain higher activity to the WCS facility in 2014. In 2018 and 2023, the reported activity was very high due to the shipments of irradiated reactor components from a nuclear power plant in Pennsylvania to the WCS facility in Texas.

Mr. Janati presented a pie chart showing the total volume of materials disposed at WCS in 2024 was 66,748.9ft³ or 55% percent of the total waste shipped. The total volume from EnergySolutions in 2024 was 53,654.9 or 45% of the total waste shipped. The total activity of materials disposed at EnergySolutions in 2024 was 559.1 Ci or 81% of the total activity. The total activity of materials disposed at WCS in 2024 was 122.6 Ci or 19% of the total activity. Mr. Anderson asked if the MIMS database is based entirely on waste that is manifested for disposal. Mr. Janati clarified that only waste that has been disposed of is being tracked in the MIMS. Mr. Janati and Mr. Anderson both agreed the current MIMS system is superior to the previous means of tracking waste disposal information in the compact.

Mr. Shearer noted that ongoing decommissioning activities at TMI-2 and expected increases in waste from TMI-2 in 2025–2026, and the planned restart of the Crane Clean Energy Center (formerly TMI-1) in 2027, are likely to result in a significant uptick in LLRW generation for the Commission to monitor. Mr. Janati agreed and said these increases are anticipated. He added that, in light of the expected growth in waste volumes and the complexity of past cleanup efforts, it would be beneficial to invite the U.S. Army Corps of Engineers (USACE) to provide a presentation on the cleanup of the Shallow Land Disposal Area (SLDA) in Pennsylvania at the next meeting of the Commission. Mr. Shearer indicated his agreement and noted that, based on the recent public meeting, one of the trenches at the SLDA is expected to be opened later this calendar year. Mr. Mitchell asked if a vote was necessary to add the USACE presentation to the next meeting. Mr. Anderson clarified that no vote was necessary.

Mr. Janati reviewed provisions of the Appalachian States Low-Level Waste Compact Act (1985), specifically Article 3(c), which allows the Commission to designate another state as the “host state” if it generates more than 25% of the total waste by volume or radioactivity over three consecutive years. Previously, Maryland’s waste exceeded 25% of Pennsylvania’s, but the Commission adopted a resolution stating that, given Pennsylvania’s suspension of the siting process, no other state is expected to commence a siting process or be designated as a host facility. Mr. Anderson clarified that the three-year period for determining the 25% threshold is



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fixed, not rolling. Mr. Janati said recent data for 2021–2023 show Maryland remained under the threshold. For the current year (2024), Maryland’s LLRW volume is about 2% of Pennsylvania’s volume, and the ratio of activity is 14% with the three-year period ending in 2026.

UNFINISHED BUSINESS

A. Independent Audit of Commission’s Finances

FY 2024-25 Independent Audit Results - Mr. Janati stated that the annual audit of the Commission’s financial statements for FY-2024-25 was conducted in July 2025 by MaherDuessel. The audit was conducted in accordance with the Government Auditing Standards. He said the audit did not result in any findings or deficiencies.

Evaluation of Costs and Benefits of Having Commission Personnel with the Ability to Prepare Financial Statements - Mr. Janati provided a discussion on the evaluation of costs and benefits of having Commission personnel capable of preparing financial statements. In 2022, following the audit of FY 2021-22, the former auditor, Trout CPA, recommended that the Commission annually assess the cost and benefits of having staff with the expertise to draft financial statements. The Commission noted that, given its small operating budget, limited financial transactions, single source of funds, and lean staffing, it is not feasible to hire personnel to prepare statements in conformity with US Generally Accepted Accounting Principles. The Commission committed to reviewing this matter annually as part of the regular meeting agenda.

Mr. Anderson stated that the difficulty is that an auditor is supposed to audit financial statements prepared by someone else. In this case, the auditor who conducts the audit also prepares the financial statements. While there has never been a problem and he does not expect one, he noted that many governmental and nonprofit clients separate these functions by outsourcing financial statement preparation to a firm that is not their auditor, even though doing so is not cost-free. So far, however, the Commission has seen no reason to change this practice.

At the direction of the Chair, A motion was adopted to continue the current practice of engaging an independent firm to conduct the audit and prepare the financial statements.

B. LLW Forum: Background and Highlights of Submitted Articles and Commentaries

Mr. Janati provided an overview of the Low-Level Radioactive Waste Forum, describing it as a national organization that serves as a platform for states, compacts, federal agencies, and industry stakeholders to exchange information and best practices related to LLRW management. The LLW Forum supports coordination among regulators, generators, disposal facilities, and policymakers, and promotes informed dialogue on challenges affecting the LLRW system. Mr. Janati stated that the LLW Forum publishes a newsletter on a bimonthly basis and that he has



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submitted four articles or commentaries for publication. He began his presentation by reading a disclaimer noting that these articles were submitted in his capacity as a member of the LLW Forum and not on behalf of the Commission.

Topic 1: Restart of Three Mile Island Unit 1 / Crane Clean Energy Center

Mr. Janati summarized the expected restart of the former Three Mile Island Unit 1, now the Crane Clean Energy Center (CCEC), and described it as a significant milestone for nuclear energy and carbon-free power generation. He noted the growing national support for nuclear energy, highlighted the long-term power purchase agreement between Constellation Nuclear and Microsoft, and emphasized the economic and workforce benefits for the region. Mr. Janati noted that the Palisades plant in Michigan and the Duane Arnold facility in Iowa are also expected to restart within the next few years. He also emphasized the importance of maintaining safe LLRW management in connection with the restart of shutdown plants.

Topic 2: Balancing Guidance and Regulation

Mr. Janati discussed how regulatory guidance can, in certain cases, serve as a more efficient and flexible alternative to formal rulemaking. Using the NRC's Reactor Oversight Process and the Branch Technical Position on Concentration Averaging as examples, he explained how guidance can address complex technical issues without lengthy rulemaking timelines. He contrasted this with the prolonged development of the revised 10 CFR Part 61 Integrated Rulemaking, noting that government agencies should consider whether guidance may achieve regulatory objectives more effectively before initiating formal rule changes.

Topic 3: Need for a Package Performance Demonstration (PPD) Program at DOE

Mr. Janati reviewed the importance of DOE establishing a robust Package Performance Demonstration (PPD) Program to validate the safety of radioactive material transportation packages. He highlighted PPD's role in safety assurance, compliance, public confidence, and continuous improvement. He noted that although DOE's program focuses on high-level waste and spent fuel, its success would also reinforce safety perceptions for all radioactive material shipments.

Topic 4: Promoting Waste Minimization Practices

Mr. Janati emphasized the need for more proactive waste minimization (WM) practices among both large and small generators of LLRW. He explained how inadequate WM planning can lead to unnecessary waste accumulation and missed opportunities. He underscored the importance of leadership commitment, measurable goals, employee training, and adherence to the Waste Management Hierarchy, noting that disposal should remain a last resort after source reduction,



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reuse, and treatment options are considered. Mr. Janati said the LLRW community has a responsibility to strengthen and promote WM. Collaboration through knowledge sharing, participation in industry forums, and engagement with regional compacts.

Mr. Mitchell expressed interest in receiving personal articles submitted for publication, not for pre-approval, but because of a general interest in the content, and Mr. Janati agreed to provide them.

NEW BUSINESS

Election of Officers

The Commission voted unanimously to elect Jessica Shirley, Secretary, PA Department of Environmental Protection, as the Chair; Clifford Mitchell, Director, Environmental Health Bureau, MD Department of Health and Mental Hygiene, as the Vice-Chair; Dwight Shearer, Director, Bureau of Radiation Protection, PA Department of Environmental Protection, as the Treasurer; and Tera Patton, Director, Radiation, Toxics and Indoor Air Division, WV Department of Health, as the Secretary of the Commission.

Adoption of the Revised Approved Budget for FY 2025-26 and Proposed Budget for FY 2026-27

Mr. Janati presented a revised budget for the 2025–2026 fiscal year. The revision reflects a decrease in the travel budget. He explained that the original estimate was \$7,500, but it has been reduced to \$5,000 because the fall meeting of the LLW Forum was held in Baltimore, which lowered overall travel costs.

The cost for conducting the annual meeting and associated expenses increased by \$500 to \$2,000, including room and meals. With these adjustments, the total budget for fiscal year 2025–2026 is \$58,836.

The proposed budget for fiscal year 2026–2027 is similar to the revised 2025–2026 budget, except that the travel budget returns to the previous amount of \$7,500, which could vary based on the location of the LLW Forum meetings (two per year).

The Commission approved the revised FY 2025–2026 budget of \$58,836 and the proposed FY 2026–2027 budget of \$61,836.

Attorney Anderson reminded that the Administrator should obtain a letter from the new Chair formally designating him as the Chair's designee with authority to sign checks, invoices, and related financial documents.



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2026 Annual Meeting

The Commission passed a motion to accept November 6th as the date for the 2026 annual meeting.

INFORMATIONAL PRESENTATION: ACCESSING U.S. DISPOSAL SITES

Mr. Marc Pawlowski provided an overview of Constellation's approach to LLRW management and accessing U.S. disposal sites. Management of LLRW follows a full life cycle, including onsite management, regulatory compliance, transportation, processing, and disposal. Standardized procedures are applied across the fleet to ensure safety, compliance, operational efficiency, and accountability.

Radioactive waste management begins with strict process controls, characterization, and handling. Waste streams are grouped by physical and radiological properties and are sampled, analyzed, and monitored over time. During refueling outages, contract personnel receive training in waste minimization and handling, with standard teams observing practices to ensure compliance. Knowledge gaps from generational workforce shifts are mitigated through enhanced procedures and guidance.

Compliance with federal, state, and compact requirements is central. Each site maintains a Process Control Program (PCP) mandated by the NRC, establishing administrative and operational controls for processing, monitoring, and surveillance. The PCP ensures all waste meets burial standards and is approved by senior leadership. Fleet-wide procedures include vendor auditing, process change approval, and monthly review of liquid and solid radwaste trends to correct deviations.

Transportation is mainly by truck, with occasional rail or air for special shipments. All shipments comply with DOT (49 CFR), NRC (10 CFR 71), and 10 CFR 37 security requirements. Pre-planning includes verifying receiving facility licenses, coordinating timing, monitoring threats, and overseeing transit. Nationwide shortages of Class 7 drivers require creative solutions like regional handoffs and advanced planning. Corporate oversight ensures vendor performance and addresses operational issues during transport.

Waste processing requires detailed planning to meet Waste Acceptance Guidelines (WAG) and burial site requirements. Processed waste must be shipped to licensed disposal facilities, following established profiles for each site. LLRW remains the responsibility of Constellation while at the processor, with tagging and tracking systems maintaining accountability from shipment to disposal. Limited suppliers and the niche nature of radioactive waste processing can constrain innovation, requiring coordination, planning, and continuous engagement with vendors to ensure timely and safe disposal.



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Waste streams are categorized by radiological and physical properties, including system origin. Packaging is matched to waste characteristics to ensure containment, compliance with NRC regulations, burial site acceptance, and safe transport. Conventional 55-gallon drums and specialized containers are used depending on the material.

LLRW is stored onsite in licensed, engineered facilities for decay, readiness, and secure containment. Storage capacity varies by site, e.g., Peach Bottom has ample space, while Limerick is constrained. Adequate storage provides flexibility in shipment timing and contingency handling in case of external disruptions.

Spent nuclear fuel is managed separately from LLRW. Fleet-wide standardization ensures uniform PCPs, consistent compliance, and coordinated operations. Sites trend liquid and solid radwaste data monthly, with corporate oversight and working groups promoting best practice sharing. Packaging and transport procedures are standardized across the fleet.

All transport follows strict regulations and security requirements. Corporate oversight ensures vendor compliance, equipment availability, and adherence to schedules. Special projects, such as oversized components, use rail or other methods. Security mandates pre-planning, coordination, monitoring, and contingency management.

Plants develop site-specific waste profiles for burial sites, including generator certification, state registration, and compliance with compact rules. Processors require formal waste profiles with detailed waste characterization. Processed waste is shipped to licensed sites with tagging and tracking for accountability. Burial site approvals comply with WAG and 10 CFR Part 61 standards.

Operational challenges include managing large contract workforces during refueling outages, addressing knowledge gaps from a generational shift in the workforce, and maintaining compliance in the field. Transportation is complicated by limited availability of qualified drivers and competition with other industries, requiring creative logistics solutions. Processing constraints from limited suppliers necessitate planning and engagement to maintain efficient, safe operations. These challenges emphasize the importance of workforce training, operational oversight, standardized procedures, and vendor collaboration to maintain Constellation's high standards for LLRW management.

Mr. Janati stated that the Commission currently maintains a highly flexible export policy for waste shipments. He explained that waste generators may ship material to processors and disposal facilities without prior approval, noting that this differs from the requirements in some other interstate compacts, where advance permission is required. He emphasized that this flexibility is due to the absence of a compact disposal facility. Mr. Pawloski responded that this approach is appreciated.



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Mr. Hammerberg asked whether workforce challenges are an industry-wide issue and inquired whether companies are collaborating to address the underlying problem. Mr. Pawlowski responded that utilities are working through the Electric Power Research Institute to develop training programs that go beyond basic DOT shipper training. He explained that the effort focuses on building practical proficiency through classroom instruction and the use of virtual reality to support hands-on experience with equipment and shipping requirements, with potential expansion to waste-related activities.

PUBLIC COMMENT

There were no members of the public in attendance.

ADJUREMENT

Mr. Mitchell adjourned the meeting at 12:15 pm.