

MINUTES
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
LOW-LEVEL WASTE ADVISORY COMMITTEE (LLWAC) MEETING

October 2, 2014

Attendance

LLWAC Members and Alternates

Kevin Bohner, University of Pittsburgh
Sarah Clark, PA House of Representatives
Richard Fox, PA State Senate
Ernest Hanna, PA Chamber of Business and Industry
Ed Kohler, PA Society of Professional Engineers
Jeff Leavey, Pennsylvania State University
Jonathan Lutz, PA House of Representatives
William Ponticello, PA Council of Professional Geologists
Carole Rubley, League of Women Voters of PA
Jeff Schmidt, PA Chapter of Sierra Club
Katherine Shelly (Chairperson), PA Farm Bureau
Michele Tate, Citizens Advisory Council
James Wheeler, PA State Association of Township Supervisors
Cathleen Woomert, PA Medical Society

Department of Environmental Protection (DEP) Staff

David Allard, Bureau of Radiation Protection (BRP)
Rich Janati, BRP
Jim Barnhart, BRP
Ben Seiber, BRP
Dave Ralicki, BRP
Martin Felion, BRP
Alhaz Bah, BRP
Cheryl Miller, BRP
Laura Henry, Policy Office
Keith Salador, Bureau of Regulatory Counsel

Member of the Public

Craig Benson

Committee Business

Election of Officers

The LLWAC members voted to re-elect Katherine Shelly as Chairperson and Michael Akins as Vice-Chairperson for an additional year.

Approval of the Meeting Minutes

The LLWAC members voted unanimously to approve the minutes of the October 4, 2013, annual meeting.

Next Annual Meeting

The committee decided to hold its next meeting on October 2, 2015, with an alternate date of September 25, 2015.

Status of Commercial LLRW Disposal Facilities and Recent Developments

Mr. Janati provided an overview of the regional compacts and discussed the status of the commercial LLRW disposal 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 Utah, Richland in Washington and the new 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.
2. The EnergySolutions Clive facility accepts Class A waste from all states except those in the Northwest and Rocky Mountain Compacts. This facility is not a regional facility, and is regulated by the state of Utah. In April of 2012, Utah approved a variance request for the disposal of Class A sealed sources at this facility. The variance has a term of one year from the date the first shipment is received at the Clive facility and is partially funded by the Conference of Radiation Control Program Directors (CRCPD). Mr. Janati stated the first shipment of sealed sources was received at the EnergySolutions facility on September 30, 2013. As part of a sealed source round-up coordinated by the CRCPD Source Collection and Threat Reduction Program (SCATR), only the recovered Class A radioactive sealed sources are authorized for disposal at the Clive facility. Mr. Janati stated that under the SCATR Program, about 500 Class A sealed sources and about 400 Class B and C sealed sources were collected from the Appalachian Compact licensees as of mid-August, 2014. Mr. Janati also noted that on September 29, 2014, the State of Utah approved EnergySolutions' request to extend the expiration date of the license variance to December 31, 2014, allowing for disposal of additional disused sealed sources at the Clive facility.

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 continues to accept radium sources from the Appalachian Compact and other states and compacts.
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 including the collection and disposal of sealed sources. Additionally, the Texas Compact Commission has established rules for the importation and exportation of LLRW into and out of the Texas region. Mr. Janati stated that the current facility license limits disposal of out-of-region waste to a maximum of 30 percent of the total facility volume. The facility is able to receive and dispose of large components as non-containerized waste. Mr. Janati stated that Texas has recently approved several changes to the original license for the WCS facility, including removal of the annual limit on the volume of imported waste, increase in the radioactivity limit for the imported waste from 120,000 Ci to 275,000 Ci, increase in the total capacity of the commercial facility from 2.3 million ft³ to 9 million ft³, removal of radioactivity limits for isotopes C-14, TC-99 and I-129, and disposal of large quantities of depleted uranium.

Mr. Janati stated that the majority of the nuclear power plants in Pennsylvania and the Appalachian Compact have access to the WCS facility and some have already made shipments of LLRW to the facility for disposal.

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

Mr. Janati provided an update on the status of the draft proposed rule to amend 10 CFR Part 61, "Licensing Requirements for Land Disposal of Low-Level Radioactive Waste (LLRW)". He said this rule would impact LLRW disposal facilities that are regulated by the Nuclear Regulatory Commission (NRC) and Agreement States. He stated that if there are no plans for the development of a LLRW disposal facility, Agreement States such as Pennsylvania would not be required to meet the NRC criteria for a compatible LLRW disposal program.

Mr. Janati noted that in the Staff Memorandum (SRM-SECY-13-0075) published on February 20, 2014, the Commission approved publication of the proposed rule and the associated 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. Mr. Janati said the new SRM is silent on any proposed changes to Part 61 waste classification tables. At the direction of the Commission, NRC staff is proposing to amend LLRW disposal regulations to require new and revised site-specific technical analysis, to permit the development of site-specific criteria for LLRW acceptance based on analysis results, and facilitate implementation to better align the requirements with current health and safety standards.

The NRC staff is proposing a three-tiered approach to site-specific analysis including compliance period (1,000 years), protective assurance period (10,000 years beyond the compliance period) and performance period (10,000 years or more). Site-specific analysis for protection of the general public within the 1,000-year intruder assessment would specify a radiation dose limit of

25 mrem/yr. Additionally, the staff is proposing an intruder assessment analysis for a period of 10,000 years, built upon the same assumptions as the compliance and protective assurance analysis. Mr. Janati said the NRC would issue a guidance document which would further explain the staff's proposed performance assessment requirements. The intruder assessment analysis would specify a radiation dose limit of 500 mrem/yr. The radiation dose limit for the protective assurance period would be set at 500 mrem/yr; however, the radiation doses should be reduced to a level that is reasonably achievable based upon technological and economic considerations.

The NRC staff plans to add concepts of defense-in-depth (DID) and safety case to the revised Part 61 proposed rule to support analysis that demonstrate the land disposal facility includes DID protections and safety case as one of the standards for issuance of a license.

The NRC staff plans to assign compatibility category B for the most significant provisions of the revised Part 61 proposed rule including period of compliance, protective assurance analysis period and its analytical threshold, and waste acceptance criteria. Mr. Janati said a compatibility category C would be more desirable because it would allow the Agreement States to adopt more stringent requirements for disposal of LLRW.

The SRM directs NRC staff to ensure a thorough review of the draft guidance by the stakeholders, particularly as it relates to compatibility designations assigned to the various sections of the proposed rule and the radiation dose threshold for the Protective Assurance Analysis period.

Mr. Janati stated that he is a member of the LLW Forum Working Group on 10 CFR Part 61 rulemaking and that the working group has submitted extensive comments to the NRC on the proposed rulemaking and will continue to monitor the NRC's activities in this area.

Information on LLRW Generation Information for the Appalachian Compact

Mr. Barnhart provided background information on the Department of Energy's national database and that Manifest Information Management System (MIMS) contains information on waste disposal at the current commercial LLRW disposal facilities.

During calendar year 2013, the Appalachian Compact generated about 96,048 ft³ of Class A LLRW. Pennsylvania disposed of about 72,067 ft³, most of which was generated by the utility and industrial sectors. Maryland disposed of about 23,597ft³ of waste, most of which was generated by government and utilities. Delaware and West Virginia generated about 340 ft³ and 45 ft³, respectively. All Class A waste generated within the compact was shipped to the EnergySolutions disposal facility in Clive, Utah. Mr. Barnhart also provided information on the radioactivity of Class A waste generated in the compact. Pennsylvania disposed of about 459 Ci of waste. Delaware and Maryland generated about 45 Ci and 16 Ci of waste, respectively. West Virginia generated about 0.01 Ci of waste.

Mr. Barnhart provided a brief discussion of waste generation trends in the compact for the period of 1994 through 2013. As of July of 2008, the Barnwell disposal facility in South Carolina no

longer accepts waste from outside the Atlantic Compact. Mr. Barnhart discussed the impact of this closure on LLRW management and disposal within the Appalachian Compact, including storage of Class B and C wastes. He stated that the majority of the nuclear utilities in the compact are now sending their Class B and C wastes to Texas for disposal at the WCS facility.

Update on PA DEP Radiation Study of Oil and Gas Operations (TENORM Study)

Mr. Janati explained that while Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) is outside the scope of this committee, an update is being provided as a courtesy to interested parties. Mr. Allard provided an update on the Department's comprehensive radiation study of oil and gas operations in Pennsylvania. He began by reminding the committee that TENORM is regulated by the Bureau of Waste Management, not the Bureau of Radiation Protection. His presentation included background information and the impetus for the study, reiterating the points made at the 2013 meeting, regarding potential worker radiation exposure, public radiation exposure, and environmental (water, etc.) contamination. He stressed that this review will examine oil and gas waste from cradle to grave and that DEP has the authority to collect samples where needed to protect public health and safety.

Mr. Allard described field work and analysis that has been completed to date and the plan to complete the study report in 2014. The next step is to finalize the draft internally, then provide it to a peer review group for comment.

In response to committee questions, Mr. Allard said the study will include radon in natural gas sampling analysis so it can be compared to the United States Geological Survey data. Further, the committee asked Mr. Allard if the waste leaving PA is being tracked, to which he committed to getting a response from the Bureau of Waste Management and reporting back to the committee. There will not be a public comment period for the draft report; it will be published as final.

Finally, Mr. Janati committed to sending the committee members a web link to the final study report when it becomes available.

Public Comment

None

Adjournment

The meeting was adjourned at approximately 11:54 a.m.