

# UPDATE ON LOW-LEVEL RADIOACTIVE WASTE DISPOSAL ISSUES

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## HEARING BEFORE THE SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY OF THE COMMITTEE ON ENERGY AND COMMERCE HOUSE OF REPRESENTATIVES ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

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## **UPDATE ON LOW-LEVEL RADIOACTIVE WASTE DISPOSAL ISSUES**

**WEDNESDAY, OCTOBER 28, 2015**

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY,  
COMMITTEE ON ENERGY AND COMMERCE,  
*Washington, DC.*

The subcommittee met, pursuant to call, at 10:20 a.m., in room 2322 Rayburn House Office Building, Hon. John Shimkus (chairman of the subcommittee) presiding.

Members present: Representatives Shimkus, Harper, Whitfield, Pitts, Murphy, Latta, McKinley, Johnson, Bucshon, Flores, Upton (ex officio), Tonko, Schrader, Green, McNerney, and Pallone (ex officio).

Staff present: Gary Andres, Staff Director; Will Batson, Legislative Clerk; David Bell, Staff Assistant; Jerry Couri, Senior Policy Advisor; A.T. Johnston, Senior Policy Advisor; Dave McCarthy, Chief Counsel, Environment and the Economy; Chris Sarley, Policy Coordinator, Environment and the Economy; Dan Schneider, Press Secretary; Andy Zach, Counsel, Environment and the Economy; Christine Brennan, Democratic Press Secretary; Jeff Carroll, Democratic Staff Director; Meredith Jones, Democratic Director of Communications, Member Services and Outreach; Rick Kessler, Democratic Senior Advisor and Staff Director, Energy and Environment; Deborah Letter, Democratic Staff Assistant; and Alexander Ratner, Democratic Policy Analyst.

Mr. SHIMKUS. The hearing will come to order, and I will recognize myself for 5 minutes for an opening statement.

### **OPENING STATEMENT OF HON. JOHN SHIMKUS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS**

Today's hearing on the disposal of low-level radioactive waste continues our detailed examination of what it takes to manage, store, and dispose of nuclear material.

Nuclear science and technologies take advantage of radiation and nuclear properties of the atom to perform many useful activities such as improving food safety, protecting our homeland, and providing for precise industrial production.

However, these invaluable technologies generate low-level radioactive waste which must be carefully managed and transported for disposal, even though it has a lower level of radioactivity and a shorter decay time than spent fuel from a nuclear power plant.

Additionally, as our fleet of nuclear power plants ages, more reactors must go through the decommissioning process. For example,

the decommissioning plan for the Vermont Yankee plant will outlast the license for the West Texas facility where the low-level waste is currently planned to be sent.

Over 35 years ago, Congress passed the Low-Level Radioactive Waste Policy Act of 1980 to establish a system by which States would form regional compacts to have a consent-based siting process for low-level waste disposal facilities.

In 1985, after limited success in implementing the act, Congress had to amend the law to provide greater authority to host States. Ten compacts are in place today, 6 of which do not have an active disposal site, including the Central Midwest Compact, which is comprised of Illinois and Kentucky.

Eight States and the District of Columbia are not affiliated with a compact. Prior to 2008, the 6 compacts without a disposal site and the unaffiliated States had access to the Barnwell, South Carolina facility for Class B and C waste.

However, starting in 2008, the South Carolina legislature made a political decision and opted to allow access only to members of the Atlantic Compact. As we will hear today, that left a significant portion of the country without a disposal pathway for Class B and C waste until 2012, when the Texas Compact opened for business, the only facility to open as a result of the Low-Level Waste Policy Act.

While Texas is currently filling a national need, political considerations could once again shift and force States to store material onsite until a new facility is located, licensed, and accepting waste.

It is important for Congress to provide oversight of low-level waste policy to make sure States have uninterrupted access to a disposal site. While compacts must address commercially generated low-level waste, the Department of Energy must manage the low-level waste generated by its research activities and the nuclear enterprise. DOE works with the communities around the Nation to assure safe management and permanent disposal.

Today we will hear how DOE can improve its engagement to assure those communities are heard and a part of the process. Additionally, the Federal Government is responsible for disposing of greater-than-Class C waste, or GTCC, which is more hazardous than other classes of low-level waste.

The Nuclear Regulatory Commission requires that GTCC waste be disposed of in a geologic repository. In 2005, Congress directed DOE to examine disposal options for GTCC waste and to make recommendations to Congress.

Congress has not yet received any GTCC recommendations. However, DOE walked away from the most practical disposal pathway for GTCC waste when President Obama quit work on the Yucca Mountain project.

The longer DOE puts off its recommendation, the longer this material must remain onsite in temporary storage instead of in a permanent disposal repository.

The sole geologic repository that has been in operation for the Federal Government to dispose of radioactive waste is the Waste Isolation Pilot Project, or WIPP.

In 2014, WIPP experienced an incident that closed the facility. I am interested in hearing from DOE how this incident has had re-

percussions in the Federal Government's waste management strategy.

Today's hearing will inform this committee's efforts to advance a comprehensive policy to manage spent nuclear fuel and high-level waste.

Let us look closely at the experience of siting low-level waste repositories and how the Federal Government engages States and local communities in the decision making process.

The Department of Energy carefully and constructively engaged with the State of Nevada to provide for a mixed-level waste disposal site at the Nevada National Security Site adjacent to Yucca Mountain.

We should consider how these conversations between the Federal Government and Nevada can continue to advance the development of a deep, geologic repository for used fuel.

Thank you again to our witnesses, and I look forward to your testimony this morning.

[The prepared statement of Mr. Shimkus follows:]

#### PREPARED STATEMENT OF HON. JOHN SHIMKUS

Today's hearing on the disposal of low-level radioactive waste continues our detailed examination of what it takes to manage, store, and dispose of nuclear material.

Nuclear science and technologies take advantage of radiation and nuclear properties of the atom to perform many useful activities, such as improving food safety, protecting our homeland, and providing for precise industrial production. However, these invaluable technologies generate low-level radioactive waste, which must be carefully managed and transported for disposal, even though it has a lower level of radioactivity and shorter decay time than spent fuel from a nuclear power plant.

Additionally, as our fleet of nuclear power plants ages, more reactors must go through the decommissioning process. For example, the decommissioning plan for the Vermont Yankee plant will outlast the license for the West Texas facility where the low-level waste is currently planned to be sent.

Over 35 years ago, Congress passed the Low-Level Radioactive Waste Policy Act of 1980 to establish a system by which States would form regional compacts to have a consent-based siting process for lowlevel waste disposal facilities. In 1985, after limited success in implementing the Act, Congress had to amend the law to provide greater authority to host States.

Ten compacts are in place today, six of which do not have an active disposal site, including the Central Midwest Compact which is comprised of Illinois and Kentucky. Eight States and the District of Columbia are not affiliated with a compact.

Prior to 2008, the six compacts without a disposal site and the unaffiliated States had access to the Barnwell, South Carolina, facility for Class B and C waste. However, starting in 2008, the South Carolina Legislature made a political decision and opted to allow access only to members of the Atlantic Compact. As we will hear today, that left a significant portion of the country without a disposal pathway for Class B and C waste until 2012, when the Texas Compact opened for business, the only facility to open as a result of the Low-Level Waste Policy Act.

While Texas is currently filling a national need, political considerations could once again shift, and force States to store material onsite until a new facility is located, licensed, and accepting waste. It is important for Congress to provide oversight of low-level waste policy to make sure States have uninterrupted access to a disposal site.

While compacts must address commercially generated low-level waste, the Department of Energy must manage the low-level waste generated by its research activities and the nuclear enterprise. DOE works with the communities around the Nation to assure safe management and permanent disposal. Today we will hear how DOE can improve its engagement to assure those communities are heard and a part of the process.

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level waste. The Nuclear Regulatory Commission requires that GTCC waste be disposed of in a geologic repository.

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Today's hearing will inform this committee's efforts to advance a comprehensive policy to manage spent nuclear fuel and high-level waste. Let's look closely at the experience of siting low-level waste repositories and how the Federal Government engages State and local communities in the decision making process.

The Department of Energy carefully and constructively engaged with the State of Nevada to provide for a mixed low-level waste disposal site at the Nevada National Security Site, adjacent to Yucca Mountain. We should consider how these conversations between the Federal Government and Nevada can continue to advance the development of a deep, geologic repository for used fuel.

Mr. SHIMKUS. I now recognize the ranking member, Mr. Tonko, for his opening statement.

**OPENING STATEMENT OF HON. PAUL TONKO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK**

Mr. TONKO. Thank you, Mr. Chair, and thank you to our witnesses and good morning.

We are here this morning to hear about the status of facilities and programs to dispose of low-level radioactive waste. Low-level radioactive waste includes a wide variety of materials that have become radioactive or that were contaminated by exposure to radioactive substances.

It includes cleaning items, protective equipment and medical waste, materials used in research and equipment and tools, among various other items.

The amounts of waste generated vary considerably from year to year but the volumes are significant. These materials are disposed of at three commercially operated sites here in the United States. The sites are regulated by the Nuclear Regulatory Commission.

States are responsible for the waste generated within their borders. However, groups of States have entered into compacts or other agreements that allow some to dispose of waste in one of the three existing facilities.

These are not the sites that can or will accept spent fuel from nuclear reactors. We have benefitted from our research and applications in nuclear medicine and nuclear power but these have come at a high cost.

Projections for many of the DOE-managed sites are that it will be decades before cleanup and decontamination are completed at costs in the billions of dollars.

We are fortunate to have Mark Whitney of the Department of Energy and Michael Weber of the Nuclear Regulatory Commission here with us this morning on the first panel. Again, welcome.

Thank you both for being here this morning to testify on the important work that you are doing to ensure these materials are han-

dled and disposed of properly. We also have an excellent group of witnesses on our second panel.

On our second panel, we will hear from Mr. Chuck Smith, the chair of the Energy Communities Alliance. Mr. Smith represents the communities that live nearby contaminated sites and deal with the issues of nuclear waste cleanup and disposal on a daily basis.

Mr. Smith offers some interesting ideas for speeding cleanups and reducing cleanup costs. I agree that we should be looking at all options for nuclear waste disposal in an effort to find the safest and most cost effective ways to move forward.

We must recognize and deal with both the technical and political challenges of disposing of all classes of nuclear waste.

In addition to Mr. Smith, we will have the benefit of testimony from Ms. Leigh Ing and Ms. Jennifer Opila to provide perspectives of different State organizations responsible for these issues.

More than 60 years after beginning and expanding our use of nuclear materials, nuclear waste disposal remains a difficult and expensive problem.

The large volumes of waste generated, the high cost of treatment and disposal and the limited locations willing to host disposal facilities for any type of waste generated considerable or generate considerable an ongoing public concern and resistance.

Until we find better solutions for this problem, further development of nuclear power will be seriously constrained. So I thank you all for your participation this morning at the hearing. I look forward to your testimony and further discussion of these important issues.

With that, I yield back, Mr. Chair.

Mr. SHIMKUS. Ranking member yields back his time.

Chair now recognizes the chairman of the full committee, Mr. Upton, for 5 minutes.

**OPENING STATEMENT OF HON. FRED UPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN**

Mr. UPTON. Thank you, Mr. Chairman.

Nuclear technology is deployed throughout our economy in a variety of different ways. For example, radioactive monitors accurately map subsurface geology to assist the U.S. efforts to capitalize on the oil and gas renaissance.

Nuclear medicine provides medical treatments that save thousands and thousands of lives and this technology will only grow and advance with the research and innovation that the 21st Century Cures Act will spawn.

However, all of these activities generate low-level radioactive waste, which must be properly managed, transported and disposed. Congress provided this responsibility to the States, which were to form interstate compacts to collaborate to site a disposal facility.

However, not all States joined compacts, including my home State of Michigan. There is currently only one available disposal site, located in Texas, for noncompact States.

I am pleased to welcome the Texas Low-Level Radioactive Waste Disposal Compact Commission this morning to understand how this compact is operating and to learn how they intend to dispose of the Nation's low-level waste.

In the years since Congress passed the Low-Level Radioactive Waste Policy Act of 1980, we have struggled to develop the system that Congress envisioned. Today, Canada, our neighbor in the Great Lakes region, is facing a similar challenge.

Our experience addressing permanent disposal of nuclear material may offer some lessons learned from Canada. I am hopeful that today's hearing will serve to inform this committee about ongoing challenges and opportunities in managing nuclear waste.

I also want to briefly comment on the markup that we are going to have immediately following the hearing. At last week's hearing, members discussed moving S. 611 without amendment so that we can put it on a fast track to enactment.

By unanimously passing S. 611, the Senate has given us a rare opportunity. We can do our part to help this reauthorization become law if we can all agree to approve the bill exactly as it passed the Senate so that if the House passes it, it will go directly to the President for signature.

Many smaller and rural communities across the U.S. including many in Michigan face significant challenges in replacing, maintaining and upgrading their aging water infrastructure. It is in every community.

It is also clear that many of our constituents responsible for managing small rural drinking systems do support S. 611 as well.

Many of us have discussed various ideas to improve the Safe Drinking Water Act, from addressing the State Revolving Fund to developing statutory flexibility for small systems to meet the growing technical challenges of complying with changing drinking water standards.

The bill before us today would help communities across Michigan and across the country manage increased costs and the burden of meeting complex regulatory requirements under the Safe Water Drinking Act.

So we want to make law in this area. Our best chance to do it is to take this bill, pass it without any hitches. I urge all members to support it.

I yield back.

[The prepared statement of Mr. Upton follows:]

#### PREPARED STATEMENT OF HON. FRED UPTON

Nuclear technology is deployed throughout our economy in a variety of different ways. For example, radioactive monitors accurately map subsurface geology to assist the United States' efforts to capitalize on the oil and gas renaissance. Nuclear medicine provides medical treatments that save thousands of lives. And this technology will only grow and advance with the research and innovation that the 21st Century Cures Act will spawn.

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Many smaller and rural communities across the United States, including many in my home State of Michigan, face significant challenges in replacing, maintaining, and upgrading their aging water infrastructure. It's also clear that many of our constituents responsible for managing small rural drinking water systems support S. 611 too.

Many of us have discussed various ideas to improve the Safe Drinking Water Act, from addressing the State Revolving Fund, to developing statutory flexibility for small systems to meet the growing technical challenges of complying with changing drinking water standards. The bill before us today would help communities in Southwest Michigan and across the country manage increased costs and the burden of meeting complex regulatory requirements under the Safe Water Drinking Act.

We want to make law in this area. Our best chance to do that is to take up the Senate-passed bill and pass it on to the President's desk where it will become law with no hitches, and all of our small and rural communities will be better for it. I urge all Members to vote yes to approve S. 611 and to oppose any amendments.

Mr. SHIMKUS. The gentleman yields back his time.

The Chair now recognizes the ranking member of the full committee, Mr. Pallone, for 5 minutes.

**OPENING STATEMENT OF HON. FRANK PALLONE, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY**

Mr. PALLONE. Thank you.

Unfortunately, there is a great deal of low-level nuclear waste generated in this country from a variety of source and those sources include not just activities at commercial nuclear reactors but also manufacturing plants, academic institutions and medical facilities and, of course, it also comes from Government activities including the cleanup of Department of Energy sites.

So having a number of safe, secure and environmentally sound options for disposal of low-level radioactive waste is important to a lot of stakeholders.

But it is also critically important for our local communities that once hosted facilities central to our national security yet continue to live with low-level and other radioactive waste even after those facilities close their doors.

The Low-Level Radioactive Waste Policy Amendment Acts of 1985 gave each State responsibility for disposing of low-level radioactive waste generated within its borders.

In doing so, it encouraged States to enter into interstate compacts so that a group of States could agree to develop a common site to dispose of their waste and to date 10 regional compacts have been formed while 8 States, Puerto Rico, and the District of Columbia remain unaffiliated.

Unfortunately, however, the track record of these sites hasn't been entirely successful. Environmental justice concerns halted a

number of early efforts to site facilities in poor communities that did not desire to have them.

And so while numerous compacts were formed, only 4 are home to disposal facilities and as a result those facilities have become the de facto sites now accepting waste from a variety of other compacts in individual States.

And while that solution is currently working, I believe we need a more rational predictable policy going forward and we need to do that in a way that addresses the concerns of the communities that are home to radioactive waste generated as a result of activities that benefit us all.

Mr. Chairman, I am very interested to learn more about DOE's efforts to clean up and dispose of waste generated from its activities, particularly with regard to disposal of the most dangerous low-level radioactive waste, the greater-than-Class C waste.

I understand that the Department is working to complete a final evaluation of the potential environmental impacts associated with the proposed development of a disposal facility or facilities for greater-than-Class C and other similar waste.

I am also interested in hearing about the Nuclear Regulatory Commission's recent activities in this area. It is my understanding that NRC is currently in the process of updating its regulations regarding the disposal of low-level waste to a more risk-based system that will better align disposal requirements with current health and safety standards.

I also would like to learn more about the July 2015 NRC staff paper recommending that the commission allow the State of Texas to license the disposal of greater-than-Class C waste.

While I take no position on the Texas issue, I do think that the NRC process is important. If the commissioners are confident that Texas can license and manage a program that includes the most dangerous low-level waste then this opens up a real potential for benefit to communities around the country and it would also serve as a step on the road to considering the siting of facilities to dispose of material that pose risks greater than low-level waste.

[The prepared statement of Mr. Pallone follows:]

#### PREPARED STATEMENT OF HON. FRANK PALLONE, JR.

Thank you, Chairman Shimkus and Ranking Member Tonko, for holding today's hearing on low-level nuclear waste issues.

Unfortunately, there is a great deal of low-level nuclear waste generated in this country from a variety of sources. These sources include—not just activities at commercial nuclear reactors—but also manufacturing plants, academic institutions and medical facilities. And, of course, it also comes from Government activities including the cleanup of Department of Energy sites.

So having a number of safe, secure, and environmentally sound options for disposing of low-level radioactive waste is important to a lot of stakeholders. But it is also critically important for our local communities that once hosted facilities central to our national security, yet continue to live with low-level and other radioactive wastes, even after those facilities closed their doors.

The Low-Level Radioactive Waste Policy Amendments Act of 1985 gave each State responsibility for disposing of low-level radioactive waste generated within its borders. In doing so, it encouraged States to enter into interstate compacts so that a group of States could agree to develop a common site to dispose of their waste. To date, 10 regional compacts have been formed, while 8 States, Puerto Rico, and the District of Columbia remain unaffiliated.

Unfortunately, however, the track record of these sites hasn't been entirely successful. Environmental justice concerns halted a number of early efforts to site facilities in poor communities that did not desire to have them. So, while numerous compacts were formed, only four are home to disposal facilities. As a result, those facilities have become the de facto sites, now accepting waste from a variety of other compacts and individual States.

While that solution is currently working I believe we need a more rational, predictable policy going forward. And, we need to do that in a way that addresses the concerns of the communities that are home to radioactive waste generated as a result of activities that benefited all of us.

I am very interested to learn more about DOE's efforts to clean up and dispose of waste generated from its activities, particularly with regard to disposal of the most dangerous low-level radioactive waste, greater-than-Class C wastes. I understand that the Department is working to complete a final evaluation of the potential environmental impacts associated with the proposed development of a disposal facility or facilities for greater-than-class C and similar wastes.

I'm also interested in hearing about the Nuclear Regulatory Commission's (NRC) recent activities in this area. It's my understanding that NRC is currently in the process of updating its regulations regarding the disposal of low-level waste to a more risk-based system that will better align disposal requirements with current health and safety standards.

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I want to thank our witnesses and I look forward to discussing these matters with them. I yield back.

Mr. PALLONE. I would like to yield the balance of my time, Mr. Chairman, to Mr. McNerney.

Mr. MCNERNEY. I thank the ranking member, and I thank the chairman for holding this important hearing.

Low-level nuclear waste may not be as dangerous as high-level nuclear waste but it is still a risk and people are justifiably concerned about that risk.

There are engineering solutions that would allow us to find disposal sites, to transport nuclear materials for those disposal sites and there is an urgency to this problem.

But the real challenge is the politics. In order to get this accepted we have to be transparent. We have to let the public know what the risks are and what benefits there might be to local communities.

We need to let them buy into it because if we try to enforce nuclear waste on any communities it is not going to work. So I urge that we develop a system that is very transparent, that is very public friendly and I think if we do that we will be able to find a solution.

So with that, I will yield back.

Mr. SHIMKUS. Gentleman yields back his time.

So we want to welcome our witnesses today and first, I would like to recognize for his opening statement Mr. Mark Whitney, Principal Deputy Assistant Secretary for Environmental Management with the Department of Energy.

Your full statement is in the record, and you have 5 minutes. Welcome.

**STATEMENTS OF MARK WHITNEY, PRINCIPAL DEPUTY ASSISTANT SECRETARY FOR ENVIRONMENTAL MANAGEMENT, DEPARTMENT OF ENERGY, AND MICHAEL F. WEBER, DEPUTY EXECUTIVE DIRECTOR FOR MATERIALS, WASTE, RESEARCH, STATE, TRIBAL, AND COMPLIANCE PROGRAMS, NUCLEAR REGULATORY COMMISSION**

**STATEMENT OF MARK WHITNEY**

Mr. WHITNEY. Thank you, sir.

Good morning, Chairman Shimkus, Ranking Member Tonko and members of the subcommittee. I do appreciate the opportunity to be here with you today to discuss the Office of Environmental Management's activities to safely and properly dispose of DOE-generated low-level radioactive waste and our ongoing planning efforts for disposal of greater-than-Class C low-level radioactive waste.

First, let me state that safe performance of our work is our overarching priority. The Department's first responsibility is to protect our workers, the public and environment during our cleanup mission.

Safety first is the clear expectation for every activity that we undertake in implementing that mission. The Department of Energy is the largest generator of low-level radioactive waste by volume in the Nation with most waste derived from the Office of Environmental Management's cleanup efforts.

Since 2005, the Department has safely disposed of over 330 million cubic feet of low-level radioactive waste. The overwhelming majority of the Department's low-level radioactive waste is disposed of on the site where generated.

In fiscal year 2014, 23 million cubic feet of mixed and low-level radioactive waste were disposed of at the site where generated.

The Department sites that have the capability to dispose of all or a portion of their onsite-generated waste include the Hanford site, the Idaho site, the Los Alamos National Laboratory, which has limited capability, the Nevada National Security Site, Savannah River Site and the Oak Ridge Reservation.

In fiscal year 2015, a decision was made to construct a future new disposal facility for decommissioning and remediation waste at the Portsmouth Gaseous Diffusion Plant and similarly the Department is continuing to evaluate options for similar waste disposal onsite at the Paducah Gaseous Diffusion Plant.

The Department of Energy sites without an onsite disposal facility mixed and low-level radioactive waste may be disposed of at the Department's regional disposal site.

At present time, the Nevada National Security Site remains the Department's only regional disposal site available to serve the needs of the Department's cleanup complex.

Commercial firms also provide each of the Department sites with options for mixed and low-level radioactive waste disposal. The Department's policy is generally not to utilize the commercial disposal facilities operated by the regional disposal compacts.

However, when compliant, cost effective and in the best interest of the Government and after formal approval process the Department may utilize commercial disposal firms.

Finally, I would like to provide you with an update on where the Department of Energy is with the disposal of greater-than-Class C low-level radioactive waste, GTCC.

The Department is currently finalizing the final environmental impact statement for the disposal of GTCC waste and GTCC-like waste.

The final environmental EIS will evaluate the potential impacts associated with the proposed development, operation and long-term management of a disposal facility or facilities for GTCC low-level radioactive waste and GTCC-like waste.

GTCC-like waste is radioactive waste that is owned or generated by DOE and has characteristics similar to those of GTCC waste such that a common disposal approach may be appropriate.

The Department plans to identify a preferred alternative in the final environmental impact statement. In developing the final EIS, the Department will have considered public comments on the draft GTCC EIS, human health, disposal methods and waste types.

The Department anticipates publication of the final environmental impact statement within the next quarter. After the publication of the final environmental impact statement the Department will submit a report to Congress as required by the Energy Policy Act of 2005.

The report to Congress will include a description of the disposal alternatives considered in the final environmental impact statement and must await action by Congress.

Congressional action would enable the Department to proceed with issuing a record of decision on greater-than-Class C low-level radioactive waste disposal.

The Department is eager to work with members of Congress on the path forward for GTCC low-level radioactive waste and GTCC-like waste disposal.

Thank you again for the opportunity to discuss the Department's low-level radioactive waste disposal activities.

[The prepared statement of Mr. Whitney follows:]

**Testimony of Mark Whitney  
Principal Deputy Assistant Secretary for Environmental Management  
Before the  
Subcommittee on Environment and the Economy  
Committee on Energy and Commerce  
U.S. House of Representatives**

**Disposal of Low-Level Radioactive Waste and Greater-Than-Class C Waste**

**October 28, 2015**

Good morning and thank you Mr. Chairman, Ranking Member Tonko, and distinguished members of the Subcommittee on Environment and the Economy. I appreciate the opportunity to be here with you today to discuss the Office of Environmental Management's (EM) activities to safely and properly dispose of Department of Energy (DOE)-generated low-level radioactive waste and our ongoing planning efforts for disposal of greater-than-class C low-level radioactive waste.

I want to thank the Committee for their interest in EM's environmental cleanup mission. I know we share a common goal of completing the safe cleanup of the environmental legacy resulting from five decades of nuclear weapons development and government-sponsored nuclear energy research.

First let me state that safe performance of our cleanup mission is our over-arching priority. This has been the Assistant Secretary's and my commitment and is shared by the Secretary. This will not be compromised. The Department's first responsibility is to protect the workers, the public, and the environment. Safety first is the clear expectation behind every decision and activity we undertake in our waste management and environmental cleanup efforts.

Low-Level Waste Disposal

DOE is the largest generator of low-level radioactive waste by volume in the nation, with most waste derived from EM cleanup projects. From 2005 to 2014, DOE has safely disposed of over 330 million cubic feet of low-level radioactive waste and mixed low-level radioactive waste. Low-level radioactive waste is defined as radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material (as defined in 10 CFR Part 61.2). Mixed low-level radioactive waste is defined as low-level radioactive waste that has a hazardous waste component that is subject to the requirements of the Resource Conservation and Recovery Act. Approximately seven percent of the low-level radioactive waste that DOE disposed of from 2005 to 2014 is mixed low-level radioactive waste.

The Nuclear Regulatory Commission classification scheme for low-level radioactive waste sets numerical concentration limits for class A, class B, and class C low-level radioactive waste. These classes are defined in the Nuclear Regulatory Commission

(NRC) regulations (Title 10, Part 61, of the *Code of Federal Regulations* (10 CFR Part 61), "Licensing Requirements for Land Disposal of Radioactive Waste") and delineate the relative isolation measures NRC believes are warranted to be protective, based on the radioactive characteristics of the waste. The concentrations limits associated with these classes were derived using generic examples of disposal situations. Class A waste contains the least radioactivity, most of which comes from relatively short-lived radionuclides, which decay to background levels within a few decades. Class B waste is also relatively short-lived, but contains higher concentrations of short-lived radionuclides than class A. Class C waste contains higher concentrations of both short-lived and long-lived radionuclides. It is important to note that these classifications apply to low-level radioactive waste generated by NRC or NRC Agreement State licensees. Although these classifications do not apply to low-level radioactive waste generated by DOE, these the classifications are relevant when DOE sends its low-level radioactive waste to a commercial facility regulated by NRC or by an NRC Agreement State for disposal. While the states and regional disposal compacts are responsible for disposal of class A, B, and C low-level radioactive waste, the Federal Government, in this case DOE, is responsible for developing a disposal facility for greater-than-class C waste from NRC or NRC Agreement State licensees.

The Atomic Energy Act gives authority to the DOE to oversee the disposal of DOE low-level radioactive waste. Management of DOE radioactive waste is governed by DOE Order 435.1, *Radioactive Waste Management*, and the associated DOE Manual 435.1-1, *Radioactive Waste Management Manual*. These documents establish stringent requirements to ensure that all DOE radioactive waste is managed and disposed of in a manner that is protective of worker and public health and safety, and the environment, and define the technical and regulatory framework for all mixed and low-level radioactive waste activities within the Department, including disposition planning and reporting.

Departmental policy, as expressed in DOE Manual 435.1-1 has been that DOE mixed and low-level radioactive waste will be disposed of in the following order of preference: (1) on-site whenever feasible, (2) off-site at one of the Department's regional disposal sites when on-site disposal is not feasible, and (3) as approved, off-site at a commercial disposal facility when such disposal is compliant, cost-effective, and in the best interest of the Government. The Department is in the process of updating DOE order 435.1.

Central to the EM mission is the cleanup of sites contaminated from nuclear weapons research and production activities and the disposal of the resulting radioactive and hazardous wastes. Deactivation, decontamination, and demolition of unneeded facilities and the environmental restoration of contaminated sites generate large amounts of radioactive waste, including low-level radioactive waste and mixed low-level radioactive waste. In addition, the Department generates these materials from its ongoing research and development and defense missions.

EM generates and manages the vast majority of DOE's mixed and low-level radioactive waste, and has the lead responsibility within the Department for developing and implementing radioactive waste management policy. National Environmental Policy Act

(NEPA) documentation provides analysis and information that assists in the decision-making in the selection of disposal method(s) and site(s) for the management and disposal of DOE's radioactive waste. EM's overarching analyses for the potential environmental impacts associated with the management and disposal of radioactive wastes are contained in *The Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage and Disposal of Radioactive and Hazardous Waste (EIS-0200)*, published in 1997, and Records of Decision related to mixed and low-level radioactive waste treatment, storage and disposal paths, subsequently published in 2000.

#### On-site Disposal

The overwhelming majority (over 90% by volume) of DOE low-level radioactive waste is disposed on the site where generated. In fiscal year 2014, 23 million cubic feet of mixed and low-level radioactive waste were disposed at the site where generated. DOE sites having the capability to dispose of all or a portion of their on-site generated waste, include: Hanford, Idaho Site, Los Alamos National Laboratory (very limited capability), Nevada National Security Site, and Savannah River Site. In fiscal year 2015, a decision was made to construct a future new disposal facility for decommissioning and remediation waste at the Portsmouth Gaseous Diffusion Plant, and the Department is continuing to evaluate options for disposal of similar waste onsite at the Paducah Gaseous Diffusion Plant.

#### Federal, Off-site Disposal

For DOE sites without an on-site disposal facility, mixed and low-level radioactive waste may be disposed at a DOE regional disposal site. Two DOE sites, Hanford and the Nevada National Security Site have historically accepted significant quantities of low-level radioactive waste from DOE sites without onsite disposal facilities. These sites were specified as regional disposal sites in Records of Decision issued in 2000. Currently, Hanford is not accepting waste from other DOE sites pending the start of operations of the Waste Treatment and Immobilization Plant (WTP). This restriction is based on a Settlement Agreement with the State of Washington; however, it does have a few exceptions, such as allowing the disposal of certain naval waste generated at other locations.

Thus, at the present time, the Nevada National Security Site remains the only DOE regional disposal site available to serve the needs of the DOE complex. In 2014, the Secretary of Energy and the Nevada Governor signed a Memorandum of Understanding to establish the senior-level Nevada National Security Site Working Group, to address issues of interest related to the Nevada National Security Site. This group meets quarterly to address the broad national security mission of the site, including low-level radioactive waste disposal, public safety and environmental stewardship, and missions at the site.

In fiscal year 2014, the Nevada National Security Site disposed of 1.27 million cubic feet of mixed and low-level radioactive waste. The Nevada National Security Site typically

disposes of about 5 percent of DOE mixed and low-level radioactive waste, as well as, disposal of certain classified waste.

#### Commercial Facility Disposal

Commercial firms provide all DOE sites with options for mixed and low-level radioactive waste disposal. DOE policy is generally not to utilize commercial disposal facilities operated by the regional disposal compacts, for example, the Atlantic Compact, Northwest Compact, and Texas Compact. However, when compliant, cost-effective, and in the best interest of the Government, DOE sites dispose of Class A mixed and low-level radioactive waste at EnergySolutions Utah in Clive, Utah, and Class A, B, and C waste at the Waste Control Specialists LLC, facility in Andrews County, Texas. The location of the disposal cell located at the Waste Control Specialists facility is identified as the "Federal Waste Disposal Facility." This cell is licensed by the state of Texas for disposal of DOE waste, and DOE has agreed to take title to the facility after closure of the cell for long-term stewardship. DOE offered a similar post closure agreement to EnergySolutions. These facilities have radioactive material disposal licenses issued by their respective State regulators, as NRC Agreement States. Typically about 5 percent of DOE mixed and low-level radioactive waste by volume is disposed at commercial facilities. In 2014, DOE disposed of 0.56 million cubic feet of waste at these facilities. DOE values its partnership with commercial disposal firms, because multiple disposal sites provide flexibility and options for disposal.

#### The Future of DOE's Low-Level Radioactive Waste Disposal

Disposal capacity exists to meet near term needs for EM. There is currently sufficient capacity using DOE and commercial disposal facilities for the Department's mixed and low-level radioactive waste. The Department benefits from the existence of multiple disposal sites, both federal and commercial, which provide disposal alternatives. The management of the Department's mixed and low-level waste disposition is a complex undertaking that requires flexibility. We will continue to strive to make DOE's waste management system as flexible as possible to respond to sudden changes and dynamic circumstances.

These federal and commercial disposal facilities, as well as the commercial treatment facilities required to ensure that waste meets disposal site requirements, are very limited in number, unique in capabilities, and very important for completion of the EM cleanup mission.

#### NRC's Low-Level Radioactive Waste Disposal Rulemaking

The proposed rule indicates progress for NRC in moving towards its goal of a more risk-informed approach to low-level radioactive waste disposal regulation. The proposed changes would bring 10 CFR Part 61 into closer alignment with DOE's approach and we support many aspects. We provided detailed comments to NRC on these and other points for consideration suggesting changes to the proposed rule to make it more risk-informed.

### Greater-Than-Class C Low-Level Radioactive Waste

Greater-than-class C low-level radioactive waste is defined by the NRC as low-level radioactive waste that has radionuclide concentrations exceeding the limits for class C low-level radioactive waste established in 10 CFR Part 61. These wastes are generated by activities licensed by the NRC or Agreement States and cannot be disposed of in currently licensed commercial low-level radioactive waste disposal facilities. In accordance with Section 3(b)(1)(D) of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (P.L.99-240), the responsibility for the disposal of greater-than-class C low-level radioactive waste was assigned to the federal government. EM was later designated as the specific office to oversee greater-than-class C low-level radioactive waste disposal.

Greater-than-class C-like waste is radioactive waste that is owned or generated by DOE and has characteristics similar to those of greater-than-class C low-level radioactive waste such that a common disposal approach may be appropriate. Greater-than-class C-like waste consists of low-level radioactive waste and non-defense-generated transuranic waste that has no identified path for disposal. The use of the term “greater-than-class C-like” is not intended to and does not create a new DOE classification of radioactive waste.

The total volume of greater-than-class C low-level radioactive waste and greater-than-class C-like waste that will be analyzed in the *Final Environmental Impact Statement for the Disposal of Greater-Than-Class C Low-Level Radioactive Waste and Greater-Than-Class C-Like Waste* is about 12,000 cubic meters, and contains about 160 million curies of radioactivity. About three-fourths of this volume is greater-than-class C low-level radioactive waste, with greater-than-class C-like waste making up the remaining one-fourth of the volume. For environmental impact statement analysis purposes, DOE established two waste groups. Group 1 consists of wastes generated from currently operating facilities including wastes that are currently in storage or are expected to be generated from these operating facilities. Group 2 consists of projected wastes from proposed facilities and/or actions some of which may never be generated.

There are three types of greater-than-class C low-level radioactive waste and “greater-than-class C-like” waste: activated metals, sealed sources, and other waste. Activated metals result primarily from the decommissioning of commercial nuclear power plants and include portions of the nuclear reactor vessel, such as the core shroud and core support plate. Most of this waste will not be generated for decades, but represents over 98 percent of the total curies that will be the subject of the analysis in the *Final Environmental Impact Statement for the Disposal of Greater-Than-Class C Low-Level Radioactive Waste and Greater-Than-Class C-Like Waste*. Sealed sources are used in equipment to diagnose and treat illnesses (particularly cancer), sterilize medical devices, and irradiate blood for transplant patients. Sealed sources are used in hospitals, industries, and universities throughout the United States. The securing of sealed sources assists with national security concerns. Other waste primarily includes contaminated

equipment, debris, scrap metal, and decommissioning waste from the production of medical isotopes (e.g., Mo-99) and waste from DOE cleanup missions including at the West Valley site in New York.

NRC regulations 10 CFR 61.55 (a)(2)(iv) require that greater-than-class C low-level radioactive waste be disposed of in a geologic repository unless alternative methods of disposal are proposed to and approved by the NRC. The NRC states in 10 CFR 61.7 (b)(5) that “there may be some instances where waste with Class C concentrations greater than permitted for Class C waste would be acceptable for near-surface disposal with special processing or design.”

The Department is currently finalizing the *Final Environmental Impact Statement for the Disposal of Greater-Than-Class C Low-Level Radioactive Waste and Greater-Than-Class C-Like Waste* that will evaluate the potential environmental impacts associated with the proposed development, operation, and long-term management of a disposal facility or facilities for greater-than-class C low-level radioactive waste and greater-than-class C-like waste. DOE plans to identify a preferred alternative in the final environmental impact statement. In developing the final environmental impact statement, DOE will have considered public comments on the draft greater-than-class C environmental impact statement, human health risks, disposal methods and waste types. The final environmental impact statement will also include a Comment Response Document that will respond to nearly four thousand individual comments received by DOE on the draft environmental impact statement. DOE anticipates publication of the final environmental impact statement within the next quarter, contingent on formal review by the Department.

The final environmental impact statement will evaluate the potential environmental impacts associated with the range of reasonable alternatives for disposal of greater-than-class C low-level radioactive waste and “greater-than-class C-like waste. Specifically, DOE will evaluate the potential environmental impacts associated with five alternatives including a No Action Alternative. One of the four action alternatives is disposal of greater-than-class C low-level radioactive waste and greater-than-class C-like waste in a geologic repository at the Waste Isolation Pilot Plant. The other three action alternatives involve the use of land disposal methods at six federally owned sites (Hanford, Idaho Site, Los Alamos National Laboratory, Nevada National Security Site, Savannah River Site, and in the vicinity of Waste Isolation Pilot Plant) and at generic commercial sites. The land disposal alternatives will consider the use of intermediate-depth borehole, enhanced near-surface trench, and above-grade vault facilities. Each disposal alternative assumes that the total waste inventory would be disposed of at a single disposal site. Depending on the selected option for disposal, DOE could decide to dispose of the waste at more than one location. The final greater-than-class C environmental impact statement is structured so that decisions on disposal method(s) or site(s) can be made by waste type.

After the publication of the final environmental impact statement, DOE will submit a Report to Congress as required by Section 631(b)(1)(B) of the Energy Policy Act of 2005 (P.L. 109-58). The Report to Congress will include a description of the disposal

alternatives considered in the final impact statement and all of the information required for the comprehensive report on ensuring the safe disposal of greater-than-class C low-level radioactive waste that was submitted by the Secretary of Energy in February 1987 and must await action by Congress. Congressional action would enable DOE to proceed with issuing a Record of Decision on greater-than-class C low-level radioactive waste disposal. The Department is eager to work with members of Congress on the path forward for greater-than-class C low-level radioactive waste and greater-than-class C-like waste disposal.

#### Summary

In summary, EM continues to safely dispose of mixed and low-level radioactive waste and plan for the disposition greater-than-class C low-level and greater-than-class C-like waste as key parts of its environmental restoration and waste management mission. Our goal is to keep all waste disposal costs as low as possible, while maximizing the number of disposal options, and keeping the safety of workers, the public, and the environment first and foremost.

Thank you again for the opportunity to discuss the Department's low-level radioactive waste disposal activities. I would be happy to answer any questions you may have.

Mr. SHIMKUS. Thank you very much.

Now, I will turn to Mr. Michael Weber, deputy executive director of operations for materials, waste, research and compliance program with the Nuclear Regulatory Commission.

Again, your full statement is in the record. You have 5 minutes. Welcome.

#### **STATEMENT OF MICHAEL F. WEBER**

Mr. WEBER. Good morning, Chairman Shimkus, Vice Chairman Harper, and Ranking Member Tonko, and distinguished members of the subcommittee and the committee.

I appreciate the opportunity to testify this morning on the U.S. Nuclear Regulatory Commission's regulation of low-level radioactive waste.

In my testimony I will highlight, one, NRC's regulatory role working in partnership with the States, two, the current regulatory framework, and three, two current regulatory improvement initiatives.

Since the Congress established the Nuclear Regulatory Commission in 1975, the agency has worked with our State partners to ensure protection of the public health and safety associated with low-level waste management.

This waste is generated by thousands of industrial, academic, medical, and Government licensees across the United States. Disposal of the waste is permitted in 4 operating facilities and the importance of the safe management of commercial low-level waste has long been a matter of congressional interest.

In 1980, the Congress enacted the Low-Level Radioactive Waste Policy Act and amended it in 1985. Under the Atomic Energy Act of 1954, the NRC regulates the safety and security of the generation, storage, transportation and disposal of commercial low-level waste.

Pursuant to the law, the NRC has relinquished its licensing and enforcement authority over most nuclear materials in 37 States that have entered an agreement with the NRC—so-called agreement States.

An agreement State conducts the regulatory programs that are adequate and compatible with the NRC regulatory requirements and oversees agreement State programs.

The four commercial low-level waste disposal facilities and more than 85 percent of the licensees that generate low-level waste are regulated by the agreement States.

The NRC and agreement States have established a comprehensive regulatory framework that ensures the safety of low-level waste management.

Among the regulations the NRC has established, 10 CFR Part 61 contains the primary regulations governing the disposal of low-level waste.

The promulgation of Part 61 in 1982 was driven by some of the same factors that prompted the Congress to enact the Low-Level Radioactive Waste Policy Act of 1980, including the need to establish a stable regulatory regime to govern safe disposal of the waste.

The NRC is currently working to improve the regulations and the regulatory framework. Several years ago, the commission initi-

ated development of a rule making proposal to improve Part 61 with respect to waste streams that were not contemplated at the time of the initial development of the rule in the late 1970s such as the disposal of significant quantities of depleted uranium waste.

On March 26th of this year, the commission published for public comment a proposed rule and associated draft guide and NRC solicited comments from the public and also conducted five public meetings in the vicinity of the operating disposal facilities.

The comment period for this proposed rule closed last month, September 21st. The NRC staff is currently analyzing public comments.

As we develop the final rule, we will continue to work closely with the agreement States and we expect to provide a draft rule for commission consideration in 2016.

The second initiative is the disposal of greater-than-Class C waste. This waste has concentration of radio nuclides that exceed the limits established by the NRC for Class C waste and is generally not therefore suitable for near surface disposal.

Congress assigned the responsibility for the disposal of this waste to the Federal Government and required that the waste be disposed of in a facility licensed by the Nuclear Regulatory Commission.

In 1989, the commission amended its regulations in Part 61 to require such waste be disposed of in a geologic repository or in an alternative disposal facility approved by the commission.

On January 30th, 2015, the State of Texas sent a letter to the NRC enquiring whether a State, as an agreement State, can regulate the disposal of this waste.

In July 2015, the NRC staff provided the commission with an analysis of the associated issues along with options and a recommendation that the NRC allow the State of Texas to regulate the disposal of the waste.

NRC also recommended that NRC conduct a rule making to establish regulatory requirements covering this waste and on August 13th, 2015 the commission held a public meeting with the staff, the State of Texas and stakeholders to discuss the issue and the commission is currently considering how best to proceed.

NRC believes its regulatory program adequately protects the public health and safety. We work with our agreement State partners to accomplish the safety mission.

I want to thank you for the opportunity to testify before you today and I would be pleased to respond to your questions.

[The prepared statement of Mr. Weber follows:]

STATEMENT OF  
MICHAEL F. WEBER  
DEPUTY EXECUTIVE DIRECTOR FOR MATERIALS, WASTE, RESEARCH, STATE,  
TRIBAL, AND COMPLIANCE PROGRAMS  
U.S. NUCLEAR REGULATORY COMMISSION

BEFORE THE  
HOUSE ENERGY AND COMMERCE COMMITTEE  
ENVIRONMENT AND ECONOMY SUBCOMMITTEE

October 28, 2015

Chairman Shimkus, Vice Chairman Harper, Ranking Member Tonko, and distinguished Members of the Subcommittee, I appreciate the opportunity to testify this morning on the U.S. Nuclear Regulatory Commission's (NRC) regulation of low-level radioactive waste (LLW). In my testimony, I will highlight: (1) NRC's regulatory role working in partnership with the States, (2) the current regulatory framework, and (3) two current regulatory improvement initiatives.

Since the Congress established the NRC in 1975, the agency has worked with our State partners to ensure protection of the public health and safety in the commercial generation, storage, transportation, and disposal of LLW. Commercial LLW is generated by thousands of industrial, academic, medical, and government licensees across the United States. Disposal of the LLW generated by these activities is permitted in only four operating facilities. These disposal facilities are operated by: *EnergySolutions* (Barnwell, South Carolina);

EnergySolutions (Clive, Utah); US Ecology (Richland, Washington); and Waste Control Specialists (WCS) (Andrews, Texas). The importance of safe management of commercial LLW has long been a matter of Congressional interest. In 1980, Congress enacted the Low-Level Radioactive Waste Policy Act and amended this Act with the Low-Level Radioactive Waste Policy Amendments Act of 1985.

### **Regulatory Role**

Under the Atomic Energy Act of 1954, as amended (AEA), the NRC regulates the safety and security of the generation, storage, transportation, and disposal of commercial LLW. Pursuant to Section 274b of the AEA, the NRC has relinquished its licensing and enforcement authority over most nuclear materials to 37 states that have entered into an agreement with the NRC (i.e., Agreement States). An Agreement State conducts regulatory programs that are adequate and compatible with NRC regulatory requirements. Under the AEA, the NRC oversees the Agreement State programs. The four commercial LLW disposal facilities and more than 85% of the licensees that generate LLW are regulated by the Agreement States.

### **Current Regulatory Framework**

The NRC and Agreement States have established a comprehensive regulatory framework that ensures the safety of LLW management. Among the regulations that the NRC has established, 10 CFR Part 61 contains the primary regulations governing the disposal of LLW.

The promulgation of Part 61 in 1982, was driven by some of the same factors that prompted the Congress to enact the Low-Level Radioactive Waste Policy Act in 1980, including the need to establish a stable regulatory regime to govern the safe disposal of LLW. Part 61 was one of NRC's earliest rules to adopt a risk-informed, performance-based, and systems approach to regulation. Part 61 and compatible Agreement State regulations and implementing guidance are used by the Agreement States to regulate disposal of LLW in their states. LLW is typically stored onsite by licensees until it is transferred for disposal. LLW is shipped in either containers that are self-certified by the shipper in accordance with U.S. Department of Transportation (DOT) regulations or, for higher activity shipments, in packages certified by the NRC in accordance with NRC regulations in 10 CFR Part 71 and transported in conformance with DOT regulations.

#### **Regulatory Improvement Initiatives**

The NRC has identified opportunities to improve the regulations and the regulatory framework, and to address new waste streams and the disposal of greater-than-Class C wastes.

Several years ago, the Commission initiated development of a rulemaking proposal to clarify and improve Part 61 with respect to waste streams that were not contemplated during its initial development in the late 1970s, such as disposal of significant quantities of depleted uranium waste. On March 26 of this year, the Commission published for public comment a proposed rule and associated draft guide. Major provisions of the proposed rule include: (1) requiring technical analysis for protection of the general population to span a 1,000-year compliance period; (2) requiring additional technical analyses, including public protection over a

10,000 year performance period for certain long-lived waste and identification of design and site characteristics that provide defense-in-depth protection; and (3) requiring development of site-specific criteria for the future acceptance of LLW for disposal. The NRC solicited comments from the public via *Federal Register* notices on March 26 and August 27, 2015, and also conducted five public meetings, primarily in cities close to existing LLW disposal facilities. The comment period for this proposed rule closed on September 21, and the NRC staff is currently analyzing public comments. As we develop the draft final rule, we will continue to work closely with the Agreement States and expect to provide the draft rule for Commission consideration in 2016.

A second initiative is disposal of both Greater-Than-Class C (GTCC) waste and transuranic waste. Consistent with Part 61, GTCC waste is LLW with concentrations of radionuclides that exceed the limits established by the NRC for Class C waste and is, therefore, not generally suitable for near surface disposal. GTCC waste is generated by a variety of licensees, including nuclear power reactors, certain nuclear fuel cycle facilities, radioisotope manufacturers, and industrial users of radiation sources. In the Low-Level Radioactive Waste Policy Amendments Act of 1985, Congress assigned the responsibility for the disposal of GTCC waste to the Federal Government and required that GTCC waste be disposed of in a facility licensed by the NRC. Congress did not explicitly address the question whether that authority could be relinquished to an Agreement State. In 1989, the Commission amended the regulations in Part 61 to require GTCC waste to be disposed of in a geologic repository or in an alternative disposal facility approved by the Commission.

On January 30, 2015, the State of Texas sent a letter to the NRC inquiring whether the State of Texas, as an Agreement State, can regulate the disposal of GTCC and transuranic waste. In July 2015, the NRC staff provided the Commission with an analysis of the issues included in Texas's inquiry, along with options and a recommendation that NRC allow the State of Texas to license and regulate the disposal of GTCC waste at the WCS site. The staff also recommended that the NRC conduct a rulemaking to establish regulatory requirements covering GTCC or transuranic waste. On August 13, 2015, the Commission held a public meeting with the staff, the State of Texas, and stakeholders to discuss this issue. The Commission is currently considering the staff's analysis and recommendation.

**Conclusion**

The NRC believes its regulatory program adequately protects public health and safety. To ensure this, we assess with our Agreement State partners the lessons learned from regulation of commercial LLW to identify appropriate improvements. I thank you for the opportunity to appear before you today and I would be pleased to respond to any questions.

# # #

Mr. SHIMKUS. Thank you very much. Now I will recognize myself 5 minutes to start the round of questioning and I would start with Mr. Whitney first.

The Nevada National Security Site currently serves as a disposal Site for DOE-mixed waste. I understand that there was extensive conversations between the Department and the Governor in order to come to an agreement on the type and amount of material to be disposed there.

Will you please describe the process and the lessons learned from DOE's engagement with the State of Nevada to agree on the memorandum of understanding?

Mr. WHITNEY. Thank you, Mr. Shimkus.

Yes, the memorandum of understanding between the Department and the State of Nevada was really the culmination of over a year of really close collaboration, regular meetings with the State at fairly senior levels with both the DOE and the State of Nevada, and it covered a wide range of issues, not just low-level radioactive waste disposal at the Nevada National Security Site. The limits for what we can put into that facility are really governed by the waste acceptance criteria.

The discussions did not go into that technical detail but they were broad discussions on general areas where our interests overlap and they are significant and great. And so I think at the end of the day, the MOU really kind of solidified our agreements to date and our path forward on many areas in addition to low-level radioactive waste.

Mr. SHIMKUS. So when you say broad discussions on numerous things, can you give us some examples?

Mr. WHITNEY. Yes. The site, of course, has a national security mission so there was discussion of the NNSA mission, other potential missions that may happen in NNSA, and protocols for how we communicate, how we work with not just the State of Nevada but the surrounding communities, and we exercised a lot of those already and for various reasons.

Mr. SHIMKUS. Transportation discussions?

Mr. WHITNEY. Transportation.

Mr. SHIMKUS. Are part of the protocols?

Mr. WHITNEY. Yes, sir.

Mr. SHIMKUS. OK. Good. Thank you.

Mr. Weber, the proposed revision to Part 61 standards include a provision that, and I quote, "defense in depth is considered."

Will you please describe how defense in depth is intended to be implemented for a facility that has very limited operating component?

Mr. WEBER. Yes, I would be pleased to.

In fact, there are multiple barriers that are required as part of a low-level waste disposal facility. So the very design of a facility is intended to provide defense in depth to accomplish the safety of the operation and the long-term protection of the environment from the waste.

These are site characteristics, engineered features, barriers that are incorporated in the disposal facility, waste characteristics.

These all contribute to the defense in depth, and defense in depth is one of the fundamental principles of nuclear safety and it

is applied not just for disposal facilities but also for nuclear power plants and other facilities.

Mr. SHIMKUS. And that would also—you use that same theory in high-level waste disposal?

Mr. WEBER. Absolutely.

Mr. SHIMKUS. Thank you.

Again, Mr. Weber, in its proposed changes to Part 61 requirements the NRC has concluded that a back fit analysis is not required.

Given the potential for disruption to existing low-level waste disposal facilities and for entities like the Nation's uranium enrichment facility that must dispose of depleted uranium would the NRC consider or reconsider the decision to conduct a cost benefit analysis?

Mr. WEBER. We did a cost benefit analysis as part of the regulatory analysis to support the proposed rule and we got comment on that.

One of the principal areas of public comment that we received is on this whole topic of retrospective application of those requirements.

So it will be one of the key issues the commission will consider in finalizing the rule.

Mr. SHIMKUS. Great. Thank you, and I will try to get this last one done.

Current regulations require the disposal of greater-than-Class C and transuranic waste in a geological repository. However, NRC staff recently recommended that the commission delegate authority to the State of Texas to develop disposal criteria for a near surface facility.

Has the NRC established limits on how much greater-than-Class C or transuranic waste could safely be disposed in a near surface site and if not would limits need to be established as part of any rule making process?

Mr. WEBER. We have not established those limits and that is one of the issues that currently is pending before the commission.

Mr. SHIMKUS. Is NRC contemplating allowing the State of Texas to establish these limits or would they just be considering granting a license that complies with NRC limits?

Mr. WEBER. We offered several options for the commission's consideration and until the commission makes its decision we don't have a final position on it.

Mr. SHIMKUS. Based on your knowledge of greater-than-Class C and transuranic material, do you expect the limits would be necessary prior to licensing such a facility?

Mr. WEBER. Yes.

Mr. SHIMKUS. Thank you very much, and I will turn to the ranking member, Mr. Tonko, for 5 minutes.

Mr. TONKO. Thank you, Mr. Chair, and Chuck Smith of the—and I will direct this to both of you gentlemen.

Chuck Smith of the Energy Community Alliance's statement recommends the NRC and DOE work together to change the way that the United States classifies waste for disposal, citing the International Atomic Energy Agency's more risk-based approach according to the, and I quote, "intrinsic qualities of the material."

There seems to be a movement to a more risk-based approach to low-level waste disposal on both your parts including an assessment of what constitutes low-level waste. Is that a correct interpretation by me?

Mr. WHITNEY. Yes, sir.

I would say for the Department of Energy, for environmental management, our low-level waste management, we do use a risk-based approach. It is based on performance assessments, site specific.

So it is very quantitative and, like I said, specific to the site where the disposal facility would be located.

Mr. TONKO. Thank you.

Mr. WEBER. Categories of radioactive waste that are managed in the United States are established in statute. So it would require legal changes to afford that kind of an approach.

Now, NRC actually explored the merits of this back in the 1980s through a notice and comment rule making and the conclusion of that rule making was such that the commission decided to continue with adherence to the existing statutory definitions.

Mr. TONKO. Mm-hmm. If we were to assume this risk-based, would that include assessing the actual radiological content and activity of these wastes?

Mr. WHITNEY. Sir, I am not real familiar with the ECA proposal. I did read Mr. Smith's testimony and we work closely with ECA and they are a great partner in a lot of things.

And so we are interested in hearing more about that as we do a range of other issues, sitting down with them and talking to them. We are always open to listening to their concerns.

Mr. TONKO. Right. Now, I hear Mr. Weber saying that you would need legislative authority to move in that direction.

Mr. Whitney, would that be the case for—you obviously are dealing with it in somewhat of a risk-based scenario.

Mr. WHITNEY. Yes. On our low-level waste, we are. Mr. Smith is proposing potentially a reclassification for how we classify waste including high-level waste and so, again, I am not real familiar with the details of their proposal but am interested in sitting down with them.

My understanding is it would require a—the Atomic Energy Act clearly defines what is high-level waste, TRU waste, spent nuclear fuel, and byproduct material, and if it doesn't fit into one of those categories it is low-level waste.

Mr. TONKO. And does DOE need NRC to take any action to aid in the disposal of greater-than-Class C waste or greater-than-Class C-like waste?

Mr. WHITNEY. The GTCC environmental impact statement, the final EIS, we anticipate issuing that within the next quarter. Once that is issued, depending on the preferred alternative it could potentially need NRC action, particularly with respect to the near surface disposal.

Mr. TONKO. And are you engaged in discussions on these actions? You both are?

Mr. WHITNEY. Yes, sir.

Mr. TONKO. Both agencies. And have you and will you involve public stakeholders in deliberations on reclassification of waste?

Mr. WHITNEY. We don't have any formal review for reclassifying waste right now within the Department of Energy. So I don't know if there would be a public participation process for that for us.

Mr. WEBER. If I could respond.

From NRC's perspective that was a subject of the proposed rule that we put out for public comment. So we have discussed and engaged members of the public stakeholders in both public meetings and in consideration of their comments on the proposed rule.

Mr. TONKO. And are there other waste streams that can be considered for a more risk-based approach to disposal?

Mr. WEBER. I would say from NRC's perspective, actually our disposal requirements dating back to 1982 were one of the earliest risk-informed performance-based regulations that the NRC issued.

While you can always refine that as we learn through experience and also the development of enhanced analytical techniques, that is part of why we continually review our regulations to ensure that they are delivering on the safety and protection of the environment while not imposing an undue burden on the parties that we regulate.

Mr. TONKO. Mr. Whitney, any further comment on that or—OK. With that, I yield back, Mr. Chair.

Mr. SHIMKUS. The gentleman yields back his time.

The Chair now recognizes the gentleman from Mississippi, Mr. Harper, for 5 minutes.

Mr. HARPER. Thank you, Mr. Chairman, and thanks to each of you for being here. This is an issue that is very important.

Obviously, we made—sometimes in the public when you hear low-level you let your guard down and don't realize that these are issues that are—have to be addressed and certainly we expect to figure out a way to cooperate and work together to achieve those goals, both with DOE and with the NRC.

And first, for you, Mr. Weber, if I could, the NRC, I know, is evaluating changes to its regulations affecting LLW disposal including Part 61 regulations—how low-level waste is classified and greater-than-Class C disposal pathways.

There appear to be areas of overlap and a precedence among these various initiatives.

Has the NRC conducted a high-level analysis to determine whether there should be more—a more comprehensive rule making or at least greater coordination of seemingly disparate activities? If not, why not?

Mr. WEBER. OK. NRC—the rule that I mentioned previously back in the 1980s we did consider whether there should be an overarching framework regulation established to ensure that there is consistency and coherency to the national radioactive waste management framework.

The conclusion of that rule at that time was that such an overarching framework was not necessary. Now, having said that, the initial development of these regulations dates back to the 1970s and there was a high-level interagency group that established the basic foundations of the way that we manage radioactive waste in the United States today.

Mr. HARPER. OK. And in March of 2015 the proposed rule was released for public comment. What type of responses have you been getting?

Mr. WEBER. We received about a hundred separate distinct comment letters, many very thoughtful comments. We also received a large number of form responses.

So we have our work cut out for us to go through the range of issues that we heard comments on.

Mr. HARPER. And that public comment period is still ongoing?

Mr. WEBER. No, it closed in late September.

Mr. HARPER. OK. Great. Thank you.

Mr. Whitney, the Federal Government is responsible for the permanent disposal of greater-than-Class C waste which the NRC determines is not suitable for a near surface disposable facility.

In addition to commercially generated GTCC, the Department of Energy has an inventory of GTCC waste, which must be stored until Congress approves the disposal facility.

So, Mr. Whitney, what is the current inventory of GTCC waste owned by the Department of Energy?

Mr. WHITNEY. Thank you, sir.

So the Department doesn't formally have a classification for greater-than-Class C, and we do, for the purpose of the environmental impact statement, call it GTCC-like, and it consists of the low-level radioactive waste that might have a characteristic similar to the GTCC waste as classified by NRC as well as some of our transuranic wastes that don't have a disposal pathway.

But the EIS evaluated about 12,000 cubic meters of waste, and about a quarter of that is present and future, is owned by the Department.

Mr. HARPER. Got it. Congress directed DOE to recommend a disposal pathway for GTC or, I guess, GTCC-like waste in 2005. When do you expect DOE will provide the final report to Congress and what are the costs and risks of delay?

Mr. WHITNEY. We anticipate issuing that final EIS within the next quarter and then we will submit the report to Congress that outlines the disposal alternatives, the options, the preferred alternative and some of the things associated with cost, who pays, and how we can ensure the safety.

We will follow that and we will, of course, await congressional action prior to issuing a decision.

Mr. HARPER. So when you say next quarter, you don't mean the quarter that we are in—you mean the first quarter of 2016?

Mr. WHITNEY. Yes, sir.

Mr. HARPER. OK. I believe my time will expire before I can get an answer here, so I will yield back.

Mr. SHIMKUS. Aren't we in the first quarter of 2016, so you mean the second quarter? Is that right?

Mr. WHITNEY. By the end of the next quarter, so by the end of March. It could be sooner. We are going through the formal DOE review process, so we are at the very late stages of the process right now.

Mr. SHIMKUS. Thank you for clearing that up.

Very good. Now I would like to recognize the gentleman from Texas for 5 minutes, Mr. Green.

Mr. GREEN. Thank you, Mr. Chairman, you and ranking member, for holding the hearings on low-level radioactive waste.

I would like to thank all our panelists for being here. I share concerns of many of the subcommittee that the Federal Government needs to move forward to find a suitable site for greater-than-Class C radioactive waste.

It is my hope that Department of Energy and NRC are taking all safe options under strong consideration in working with private sector and local communities to find a solution that is the best interest of all the impacted stakeholders.

Mr. Weber, on January 30th of 2015, the Texas Commission on Environmental Quality sent a letter to the NRC requesting responses to questions concerning the State of Texas' authority to license of disposal cell for the greater-than-Class C, GTCC-like and transuranic waste.

I understand that in July in a paper to the commission the NRC developed three options and recommended one of these options, Option two, in allowing the State of Texas to license and regulate the disposal of GTCC waste.

Is this correct?

Mr. WEBER. That is correct.

Mr. GREEN. I know the NRC has yet to vote on this. But can you talk a bit more about the proposal and why the staff recommended allowing Texas to license and regulate the disposal of the GTCC waste?

Mr. WEBER. Some of the commissioners have voted, but until they all complete their votes there won't be a decision from—

Mr. GREEN. Is there a time frame for that?

Mr. WEBER. They try to do it as expeditiously as they see fit. In terms of your request on the alternatives, the staff recommended alternative two, which would allow the State of Texas to license the disposal of it.

But they would require the commission to move forward and develop the criteria upon which that decision would be based so that the commission could fulfill its responsibilities under the Low-Level Radioactive Waste Policy Act of approving the disposal of the greater-than-Class C waste.

And the other options NRC could issue the license. That is not very appealing from the NRC's perspective—the staff's perspective as laid out in the paper for a variety of reasons.

And the final option is the do nothing or the no action alternative. That is also not very appealing, given that the waste exists and the commission's obligation is to fulfil its mission, which is protecting the public health and safety.

Given that, disposal of that waste is a prudent approach.

Mr. GREEN. Is there any guidance from the NRC on if the commission decides to go forward with it and develop it is there any guidance from NRC? Do you work with the commission in Texas? Has this happened before with any other State the NRC is working with?

Mr. WEBER. Only on a very limited basis. After the Congress enacted the legislation, the Low-Level Radioactive Waste Policy Amendments Act, in 1985, there were a handful of instances where the operating disposal facilities, the States, came to the NRC and

said we would like permission to dispose of this small quantity of waste and so NRC did work with the States.

Clearly, if the commission moves forward on the options that were presented to it by the NRC staff, we would be working quite closely with the State of Texas.

Mr. GREEN. Our committee, obviously, has jurisdiction—the subcommittee and the full committee over the NRC and we have had innumerable hearings over the last few years about what we are going to do with not only the low-level but also ultimately the high-level.

And so I just hope that the NRC would work with our Texas commission because if this is the first location in the country that would be able to accept this GTCC waste, it could be a prototype, I would hope, because the rest of the country needs to also develop their own waste sites because west Texas is a big place but I don't know if it is that big.

So, Mr. Chairman, I have no other questions and thank you. I yield back.

Mr. SHIMKUS. Oh, it is that big. It is that big. It is the first time I have heard a Texan say it is not that big. Now, I don't know what is going on here. If you don't mind, I will correct the record. It is that big.

Mr. GREEN. OK. Well, Bill, you are closer to west Texas than I am.

Mr. SHIMKUS. The Chair now recognizes the gentleman from Indiana, Mr. Bucshon, for 5 minutes.

Mr. BUCSHON. Thank you, Mr. Chairman.

Mr. Whitney, the USEC Privatization Act assigned responsibility to the Department of Energy to dispose of depleted uranium, a by-product of uranium enrichment.

Has the NRC worked with the DOE to develop a disposal pathway for depleted uranium?

Mr. WHITNEY. Sir, I believe those discussions are ongoing. We have had discussions, and they are ongoing.

Mr. BUCSHON. OK. I don't have the date here. When was the privatization act? When were you first directed to that?

Mr. WHITNEY. And I don't know, either. I would have to get back with you on that.

[The information follows:]

The USEC Privatization Act was enacted in 1996.

Mr. BUCSHON. It is always surprising me in hearings where Congress has said to do things, like, 10 years before and we are still talking about it. But this may not be one of those instances.

Will the NRC's current Part 61 rule making affect the DOE's plans to dispose of depleted uranium at commercial disposal sites?

Mr. WHITNEY. I don't believe it would.

Mr. BUCSHON. OK. And what would the effect of the DOE's disposal plans for depleted uranium—effect on the DOE's disposal plans for depleted uranium if the NRC decides to incorporate greater-than-Class C and transuranic waste as part of their Part 61 rule making?

Mr. WHITNEY. It is unclear to me at this point, sir.

One, it would depend on the ultimate disposal pathway for the depleted uranium, of course, and then what the final rule making is.

Mr. BUCSHON. OK.

Mr. WHITNEY. I am just unaware of any direct implications. I apologize.

Mr. BUCSHON. OK. Thank you, Mr. Chairman. I yield back.

Mr. SHIMKUS. The gentleman yields back his time.

The Chair now recognizes the gentleman from Texas, Mr. Flores, for 5 minutes.

Mr. FLORES. Thank you, Mr. Chairman.

I believe that Mr. Green asked most of my questions so I will pass at this point.

Mr. SHIMKUS. OK. The Chair now recognizes the gentleman from Pennsylvania. Do you have any questions, Joe?

Mr. PITTS. Mr. Weber, as a part of the public comment process for NRC's revisions to Part 61 regulations—the governmental low-level waste disposal facility—the agreement States requested that NRC revise the compatibility requirements from what is known as compatibility B, which require agreement States to have the same regulatory standards as NRC, to compatibility C, which permit agreement States to have more stringent regulatory standards than NRC regs.

Will the NRC staff address this issue as part of the rule making process prior to providing the rule to the commission for approval?

Mr. WEBER. Absolutely, sir.

That is part of our process. The staff will formulate a recommendation. We will also work with the agreement States in formulating the recommendations to go back to the commission.

So there will be lots of discussion on that topic. It did get a lot of comments.

Mr. PITTS. Mr. Whitney, has the NRC solicited DOE input on the matter of revising the current Part 61 rule making as opposed to initiating a new rule making after this one is completed to include the disposal of greater-than-Class C and transuranic waste?

Mr. WHITNEY. I believe discussions did occur, sir, yes, between DOE and NRC.

Mr. PITTS. Would a DOE site to dispose of greater-than-Class C waste have to be licensed by the NRC?

Mr. WHITNEY. The Department of Energy does not have the classification of GTCC—we have “GTCC-like waste,” which is regulated by the Department of Energy.

So if a preferred alternative was a DOE site and our GTCC-like waste went there, we would not need an NRC license.

Mr. PITTS. Given the need to dispose of GTCC and TRU waste, is it reasonable to delay the current rule making to include GTCC and TRU waste?

Mr. WEBER. I believe that is a topic that is currently under commission consideration.

Mr. PITTS. What would be the effects on the DOE if the current Part 61 rule making is delayed?

Mr. WEBER. Do you want to answer that?

Mr. WHITNEY. I am not aware of any direct implications of a delay in the rule making. We are, of course, moving forward with

the environmental impact statement, which will outline the alternatives and the preferred alternative. And so at this point, I don't see any implications or impacts to delaying the rule making.

Mr. PITTS. OK. And I am not sure which one to ask this but did the Yucca Mountain license application include the option of disposing of greater-than-Class C material in the repository?

Mr. WEBER. Yes.

Mr. PITTS. In light of the fact that the Department previously submitted a license for the disposal of GTCC waste at Yucca Mountain, if the NRC issues the Yucca Mountain license, will that site be considered as part of the process for DOE to recommend a disposal pathway?

Mr. WHITNEY. I am sorry. Can you repeat the question, sir? I apologize.

Mr. PITTS. Yes. In light of the fact that the Department previously submitted a license for the disposal of GTCC waste at Yucca Mountain, if the NRC issues the Yucca Mountain license will that site be considered as part of the process for DOE to recommend a disposal pathway?

Mr. WHITNEY. Yucca Mountain was not considered an alternative since the administration deemed it an unworkable solution and so it was not considered and has not been considered in the GTCC siting process.

Mr. PITTS. Well, Mr. Weber, as part of the developing recommendation on providing Texas authority to license GTCC facility, did NRC staff consider proceeding with the Yucca Mountain license application as an alternative disposal pathway? If not, why not?

Mr. WEBER. The staff completed the safety evaluation report for Yucca Mountain and we are currently working on the supplement to the environmental impact statement on Yucca Mountain.

And when we conclude that, we will have largely exhausted the congressionally appropriated funds for NRC licensing work on Yucca Mountain.

What we considered in formulating our recommendations to the commission on greater-than-Class C waste is a response to the State of Texas proposal as an alternative to what is required today in Part 61. That would be something other than a geologic repository.

So the advice—the recommendations we provided to the commission was the consideration of near surface or sub near surface disposal as an alternative for geologic repository disposal of greater-than-Class C waste.

Mr. PITTS. Thank you.

My time has expired.

Mr. SHIMKUS. Gentleman's time has expired.

The Chair now recognizes the ranking member of the full committee, Mr. Pallone, for 5 minutes.

Mr. PALLONE. Thank you, Mr. Chairman.

I guess I can ask both of you this question. Earlier this month, there was a serious incident at a closed down low-level waste disposal site in Nevada that involved an explosion and fire and the successor to that company that operated that site currently manages one of the low-level waste sites currently in operation.

Meanwhile, in February, the Nation's only facility for disposal of transuranic, or TRU waste, generated by DOE activities was shut down indefinitely as a result of a series of incidents there.

So given these recent disturbing developments can each of you tell us why the public should have confidence in DOE's ability or NRC's or the State's ability to safely regulate the sites?

I think we can—I think we can but I just think the public needs to be reassured. We will start with Mr. Whitney, I guess.

Mr. WHITNEY. I thank you, sir.

The incident in Nevada was at a non-DOE-owned facility. I believe it was in or near Beatty, Nevada. The Department did provide some technical assistance on the emergency response side.

I believe we are still trying to understand what happened and work with them because we would like to make sure we learn any lessons from that just like we would like to learn from any incidents that might occur at DOE facilities.

With respect to the Waste Isolation Pilot Plant that did shut down in February of 2014 as a result of a couple of incidents there and we had some significant failures in many areas with respect to our operation of a facility there, with respect to packaging at the generator site where—in the processing where the packaging occurred before it got to WIPP.

And we are taking those lessons learned and not just applying them at WIPP. A tremendous amount of work has happened in the last year and a half to ensure the safety of that facility and when we recover and resume operations that we are able to do so in a safe manner, but also across the complex, taking those lessons learned to make sure that we don't repeat those at all our sites, whether they are generator sites, generate transuranic waste that will go to WIPP, or any of our sites where there might be issues that we can apply whether they are TRU waste generators or not.

I believe that the public should and hope the public will have confidence in DOE's ability to manage its low-level and transuranic waste.

Mr. PALLONE. Thank you. Mr. Weber.

Mr. WEBER. I would like to add to what my colleague offered. We are working with the State of Nevada to understand what happened at the Beatty low-level radioactive waste disposal facility.

The part of the facility that was affected by the explosion and fire. I understand there is a trench that was—waste was placed into and the—around 1972, perhaps '69 to 1973 time frame, far predating the requirements that we put in place in 1982, and those regulations were put in place in Part 61 specifically to enhance the level of protection associated with the safe management of the radioactive waste—things like waste characteristics, waste forms that did not exist at that time. So we are trying to learn with the State about what happened.

My understanding is that there were no elevated levels of radiation associated with the fire and the explosion. So while it is not something that is desired to occur at a disposal facility. The public is safe in the vicinity of that facility.

Mr. PALLONE. All right. Thank you both. I have another question here. I don't know if I have time to go through this but let me try.

Mr. Whitney, in your testimony, you discuss the different classifications of radioactive waste and you mentioned some of the facilities that accept particular classes of it like Energy Solutions Utah, which accepts Class A mixed and low-level waste and the waste control specialist facility in Anderson, Texas, which accepts Class A, B and C waste.

And as we have heard today, greater-than-Class C waste, or GTCC storage, is treated as a separate issue altogether.

Can you explain what it is about the unique storage needs of, say, Class A versus Class C versus GTCC waste that makes them require unique regulatory approaches and how prepared would current low-level waste storage facilities be to accept GTCC waste if that licensing became an option? You have 27 seconds.

Mr. WHITNEY. And if you don't mind, I will turn to my colleague. That is an NRC classification scheme.

Mr. PALLONE. Sure.

Mr. WEBER. The greater-than-Class C waste contains higher concentrations of longer lived radionuclides and thus the disposal of that waste requires higher barriers so that the public is protected over a long period of time and that is the focus of the State of Texas their review and so would also be the focus of the NRC in working with the State of Texas.

Mr. PALLONE. All right. I am going to leave—did you want to add something? OK. Thank you.

Mr. SHIMKUS. Gentleman's time has expired.

The Chair now recognizes the gentleman from Ohio, Mr. Johnson, for 5 minutes.

Mr. JOHNSON. Thank you, Mr. Chairman, and gentlemen, thank you for being with us today.

Mr. Whitney, I want to build upon the conversation that we began last time you testified in September.

As you might remember, we discussed the importance of the decontamination and the decommissioning work at the former Gaseous Diffusion Plant at Piketon, Ohio.

Astonishingly, DOE has recently decided to terminate funding for the American Centrifuge Project also located at Piketon.

If DOE doesn't soon reverse its decision, we are about to add to the price tag of that D&D work because that facility there will have to be dealt with, which DOE already attempts to under fund year after year.

So that D&D work is—it is a battle each and every year, it seems, to get DOE to put the appropriate amount of money towards it.

DOE's own analysis has confirmed that the ACPs— AC100 centrifuge technology will be needed to meet our national security enrichment needs in as little as 10 years.

So allowing the ACP, currently our only domestic enrichment capability to shutter its operations now only require—only to require its inevitable remobilisation shortly thereafter seems to me is a severe mismanagement of Federal resources and an ill-advised decision because rehiring of this uniquely skilled workforce and its overall remobilisation will prove costly.

So the national security optics and consequences of the ACP closure are both very troubling. So, Mr. Whitney, some questions.

Was the D&D costs to dismantle the current Piketon AC100 facility—was that taken into consideration when DOE decided to cease ACP funding? Do you know if they contacted anyone in your department about that?

Mr. WHITNEY. I am not aware that they did. We have a process of transferring excess facilities from one program to the other. So there is a formal process that we would go through once the decision is made.

It is a programmatic decision that didn't necessarily need to involve EM. But there would be a process then for transfer of the facility when it happens and things of that nature.

Mr. JOHNSON. OK. Let us assume for a second that the closure continues and goes forward and that there is a D&D cleanup effort there on the current ACP facility as well.

What impact could that closure have on the current D&D clean-up time line there in Piketon?

Mr. WHITNEY. I don't know. I won't be able to provide specifics just because we would go through that process when the facilities became owned by EM and we would bring into our life cycle baseline and we would sequence out the work and see. But it would certainly add D&D costs and cleanup costs and—

Mr. JOHNSON. Is it safe to say, certainly, given the amount of time that we have already spent on the D&D cleanup for the gaseous diffusion facility, is it safe to say that that cost and time line implications would be significant?

Mr. WHITNEY. I can't say that, sir, because I am just not sure.

Mr. JOHNSON. OK. Do you know if the Office of Environmental Management was consulted before this decision was made? Did anyone talk to you guys about this?

Mr. WHITNEY. We were not involved in the decisionmaking process because it was a different program.

Mr. JOHNSON. All right.

We understand that the American Centrifuge program shares utility and overhead costs to the tune of about \$9 to \$10 million with the Portsmouth Gaseous Diffusion D&D program and that shuttering the ACP will shift all of those costs to the D&D budget.

Did they consult with you and have you folks given any consideration as to how you will pay for this increase in new costs?

Mr. WHITNEY. We have given consideration to that and we have reached out to our colleagues in the other programs formally to start that discussion on how those costs will be covered.

Mr. JOHNSON. OK. But no decisions have been made?

Mr. WHITNEY. No, sir.

Mr. JOHNSON. OK. And finally, do you have any—and I think you have already answered this but just to be sure, if the Department of Energy does press forward with the closure of the American Centrifuge project facility, do you have any idea what its cleanup costs would be?

Mr. WHITNEY. No, sir. At this point, I don't. But that would be part of our process if we take over as owner of the facility.

Mr. JOHNSON. How long will it take you to—how long will it take you to go through that type of analysis to determine what the cleanup costs would be, from start to finish?

Mr. WHITNEY. Generally, once we have ownership of the facility it would not take a long time because we have a lot of precedent at other facilities. It might be similar at other sites.

Mr. JOHNSON. Are we talking weeks, months?

Mr. WHITNEY. Probably months. Not many months.

Mr. JOHNSON. OK. All right.

Well, thank you very much. Mr. Chairman, I yield back.

Mr. SHIMKUS. Chairman yields back his time.

Seeing no other members present, we would like to thank you for being here and answering our questions and your testimony, and with that we will excuse the first panel and seat the second.

So we will begin with the second panel. Thank you for coming. I will do similar as I did at first. I will just introduce you when it is your time and we want to welcome you here.

So first to speak to us is Ms. Jennifer Opila. Is that—Opila. All right.

Ms. Jennifer Opila, director, Organization of Agreement States. Thank you. Your full statement is in the record. You have 5 minutes.

**STATEMENTS OF JENNIFER OPILA, DIRECTOR, COLORADO, ORGANIZATION OF AGREEMENT STATES; LEIGH ING, EXECUTIVE DIRECTOR, TEXAS LOW-LEVEL RADIOACTIVE WASTE DISPOSAL COMPACT COMMISSION; AND CHUCK SMITH, JR., COUNCIL MEMBER, AIKEN COUNTY, SOUTH CAROLINA, AND CHAIRMAN, ENERGY COMMUNITIES ALLIANCE**

**STATEMENT OF JENNIFER OPILA**

Ms. OPILA. Thank you very much, Chairman, and Ranking Member Tonko, and distinguished members of the subcommittee.

I appreciate the opportunity to represent the Organization of Agreement States and discuss the OAS' views on low-level radioactive waste management with you.

The membership of OAS consists of State radiation control directors and staff from the 37 agreement States, who are responsible for the implementation of their respective agreement State programs.

Agreement States are those States that have entered into an effective regulatory discontinuance agreement with the Nuclear Regulatory Commission under subsection 274(b) of the Atomic Energy Act, the AEA.

The role of the agreement States is to regulate most types of radioactive material in accordance with the compatibility requirements, the AEA.

Under its own internal practices, the NRC periodically reviews the performance of each agreement State to assure compatibility with the NRC's regulatory standards.

The purpose of the OAS is to provide a mechanism for these agreement States to work with each other and with the NRC on regulatory issues associated with their respective agreements.

Throughout the years, both agreement States and nonagreement States have had the responsibility for implementing the Low-Level Radioactive Waste Policy Act.

As a result of the Low-Level Radioactive Waste Policy Act, States have formed compacts that have facilitated the safe disposal of radioactive waste.

At times, the compact system has been criticized because it has resulted in many States not having access to disposal facilities.

However, with the recent establishment of the Waste Control Specialist Facility in Texas, the establishment of the Texas Vermont Compact and that compact allowing access to the WCS facility from out of compact facilities, this situation has been largely resolved and that all States now have access to a waste disposal facility.

Additionally, the WCS facility has added much needed capacity to the overall low-level waste disposal inventory. The OAS board believes that the compact system should be maintained so that States can control the import and export of low-level radioactive waste within their jurisdiction.

Agreement States play a vital role in the regulation of low-level radioactive waste disposal in the United States. All four active low-level waste sites operate in the agreement States of Texas, Utah, South Carolina, and Washington.

It is these States, not the NRC, who have decades of experience in regulating low-level waste disposal. These States brought this experience to the recent discussions of changes to 10 CFR Part 61, the Federal rule regarding low-level radioactive waste disposal.

The purpose of this rule change was to consider the impacts resulting from the disposal of unique waste streams such as significant quantities of depleted uranium from the operation of a commercial uranium enrichment facility.

The OAS board has two primary objections to the current proposed amendments to Part 61. First, the board objects to redoing a sites performance assessment unless that site opts to take significant quantities of long-lived alpha emitters such as depleted uranium.

Sites that are not going to be accepting these unique waste streams do not need to conform to a performance assessment process that is designed specifically for those unique waste streams.

Importantly, performance assessments addressing the disposal of significant quantities of depleted uranium for two of the existing low-level waste disposal facilities have either been completed or will soon be completed.

Second, the board proposes compatibility C designation instead of compatibility B designation, as currently proposed by the NRC for the new requirements of Part 61.

Many States that regulate low-level radioactive waste sites currently have State standards that are more stringent than the requirements in the proposed rule.

These States should not be forced to weaken their standards to conform to the new NRC rules. Compatibility C designation would allow these States to implement standards that are acceptable to the State and the communities that host these disposal facilities as long as those standards are at least as stringent as the NRC standards.

Thank you very much.

[The prepared statement of Ms. Opila follows:]



**Sherrie Flaherty, Chair, Minnesota**  
**Matthew McKinley, Chair-Elect, Kentucky**  
**Michael Welling, Past-Chair, Virginia**  
**Debra Shults, Treasurer, Tennessee**  
**Megan Shober, Secretary, Wisconsin**  
**David Crowley, Director, North Carolina**  
**Jennifer Opila, Director, Colorado**

Statement of Jennifer Opila representing the Organization of Agreement States (OAS) Board  
 House Energy and Commerce Subcommittee on Environment and the Economy  
 October 28, 2015

Thank you Chairman Shimkus, Vice Chairman Harper, Ranking Member Tonko and distinguished members of the Subcommittee. My name is Jennifer Opila and I'm the Radiation Program Manager for the State of Colorado. I'm here on behalf of the Organization of Agreement States to discuss the OAS' views on low level radioactive waste management. The membership of OAS consists of state radiation control directors and staff from the 37 Agreement States who are responsible for implementation of their respective Agreement State programs. Agreement States are those states in the United States of America that have entered into an effective regulatory discontinuance agreement with the NRC under subsection 274b. of the Atomic Energy Act (AEA). The role of the Agreement States is to regulate most types of radioactive material in accordance with the compatibility requirements of the AEA. Under its own internal practices, the NRC periodically reviews the performance of each Agreement State to assure compatibility with NRC's regulatory standards. The purpose of the OAS is to provide a mechanism for these Agreement States to work with each other and with the United States Nuclear Regulatory Commission (NRC) on regulatory issues associated with their respective agreements.

Throughout the years, both Agreement States and non-Agreement states have had the responsibility for implementing the Low Level Radioactive Waste Policy Act of 1980. As a result of the low level radioactive waste policy act, States have formed compacts that have facilitated the safe disposal of radioactive waste. At times the compact system has been criticized because it has resulted in many states not having access to disposal facilities. However, with the recent establishment of the Waste Control Specialists (WCS) facility in Texas, the establishment of the Texas-Vermont compact and that compact allowing access to the WCS facility from out of compact facilities, this situation has been largely resolved in that all states now have access to a waste disposal facility. Additionally, the WCS facility has added much needed capacity to the overall low level waste disposal inventory. The OAS Board believes that the compact system should be maintained so that states can control the import and export of low-level radioactive waste into facilities within their jurisdiction.

Agreement States play a vital role in the regulation of low level radioactive waste disposal in the United States. All four active low-level waste sites operate in the Agreement States of Texas, Utah, South Carolina and Washington. It is these states, not the NRC, who have decades of experience in regulating low level waste disposal. These states brought this experience to the recent discussions of changes to 10 CFR Part 61, the federal rule regarding

*Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Virginia, Washington, Wisconsin*

Organization of Agreement States  
Opila testimony  
Page 2 of 2

low level radioactive waste disposal. The purpose of this rule change was to consider the impacts resulting from the disposal of unique waste streams, such as significant quantities of depleted uranium from the operation of a commercial uranium enrichment facility. The OAS Board has two primary objections to the current proposed amendments to Part 61. First, the Board objects to redoing the site's performance assessment unless that site opts to take significant quantities of long-lived alpha emitters (e.g., DU). Sites that are not going to be accepting these unique waste streams do not need to conform to a performance assessment process that is designed specifically for those unique waste streams. Importantly, performance assessments addressing the disposal of significant quantities of depleted uranium for two of the existing low level waste disposal facilities have either been completed or will soon be completed.

Second, the Board proposes Compatibility C designation instead of Compatibility B designation as currently proposed by NRC for the new requirements of Part 61. Many states that regulate low-level radioactive waste sites currently have state standards that are more stringent than the requirements in the proposed rule. These states should not be forced to weaken their standards to conform to the new NRC rules. Compatibility C designation would allow these states to implement standards that are acceptable to the state and the communities that host these disposal facilities as long as those standards are at least as stringent as the NRC standards.

Mr. SHIMKUS. Thank you very much.

Next, I would like to turn to Ms. Leigh Ing, executive director of Texas Low-Level Radioactive Waste Disposal Compact Commission. You are recognized for 5 minutes.

#### STATEMENT OF LEIGH ING

Ms. ING. Thank you very much and thank you for the opportunity to provide testimony, Chairman Shimkus and Ranking Member Tonko. I will be providing testimony today on low-level radioactive waste compacts, in particular my compact, Texas and Vermont.

As you are well aware, low-level compacts are agreements between two or more States in which one of the States becomes the host State by providing a disposal facility.

The remaining States in that compact are guaranteed access to low-level radioactive waste to that disposal facility. Currently, we have 10 compacts that have been established in this country, 3 of which have disposal facilities.

We have the Richland facility in the Northwest Compact that includes the States around Washington as well as Hawaii and Alaska, and that facility can take Class A, B, and C waste.

We also have the Clive facility in Utah, which is open to all States but it can take only Class A. We also have the Barnwell facility in South Carolina that can take waste from South Carolina, New Jersey and Connecticut.

And then we have my compact, the Texas and Vermont compact, which includes only the State of Texas and Vermont, which guarantees access to all low-level waste generated in Texas and in Vermont.

One of the things unique about my compact is that—and there is the map that has all of the compacts and you can see where I have—we have a facility in the corner of Texas and there are stars where there are facilities that can take low-level radioactive waste in our compact.

[The information appears with Ms. Ing's prepared statement.]

One of the things that is unique about my compact is that the State of Texas has passed a statute which allows our compact to accept imports from all the other States, the District of Columbia and territories up to a limit of 275,000 curies per year.

The role—the very important role of my compact which is composed of eight voting members and one alternative, six of those members are put in place by the Governor of Texas. Two, in the alternate, are put in place by the Governor of Vermont.

One of my Texas commissioners by my compact law is required to be a representative of the local community. What that commission does is we take a look at all generators or brokers who may choose to import to our facility and make sure that the applications to import meet all of the criteria for import into our compact.

We also work with the State of Texas to ensure that the waste coming in is acceptable to the owner of the site, the State of Texas. We meet about—approximately every six weeks to approve all of these that we deem are approvable. To date, we have approved almost a hundred import applications that represent imports from 40

States and from Puerto Rico as well as from the District of Columbia.

Overall, we regard what we have been doing has been very successful. It has been a learning process for us. We are the first compact that takes imports this way and learning how generators and brokers work and how our fellow compacts work is that we can work collegiately with our compacts had been a very good process.

But we have been learning and tweaking our process as we learn more.

I would say there are three very important points to make that we have learned through this process. One, because of our facility in the Andrews area, we now have access—in concert with our other facilities we have access to all 50 States, the District of Columbia, and territories in this country for low-level radioactive waste as a result of the compact system as put forth by the Low-Level Waste Policy Act.

Although it may not have been implemented exactly as intended, we do now have waste capacity for everywhere in the United States. The other thing that I think is important to point out is that one of the reasons we have this is because the compacts can exclude waste outside of the compact if it chooses to do so, as was done by the Atlantic compact and was done by the Northwest Compact. That can also be done in ours.

But currently, given how imports assist the country and assist the viability of our facility, and the State of Texas and locals also get fees from that, there is not direction that has been put forward to limit that at this time.

The third and final point I will make is that my commissioners unanimously believe it is important to have a disposal pathway and to do everything in our process and working with generators and brokers to make that pathway available so that as opposed to being stored it is disposed of up to 275,000 curies per year at the facility.

And that concludes my remarks. Thank you very much for allowing me to provide testimony today.

[The prepared statement of Ms. Ing follows:]

Testimony of  
Leigh Ing, Executive Director  
Texas Low-Level Radioactive Waste Disposal Compact Commission

Before the  
Subcommittee on Environment and the Economy  
Committee on Energy and Commerce  
United States House of Representatives

October 28, 2015

Good morning Chairman Shimkus and members of the subcommittee. My name is Leigh Ing and I am the Executive Director of the Texas Low-Level Radioactive Waste Disposal Compact Commission. Thank you for inviting me to talk about low-level radioactive waste interstate compacts today. My testimony is for informational purposes to provide a better understanding of how the low-level radioactive waste compact system was set up, how it is structured today and how compacts work together and with states to support disposal of low-level radioactive waste.

To begin, I will provide a brief overview of interstate compacts and more specifically low-level waste compacts. Speaking generally, a compact finds its origin in federal or state law that authorizes a contract between two or more states to address a particular policy matter, adopt standards and set a basis for cooperation on national or regional matters. Examples of compacts include river compacts which are formed by states which share the river and function generally for the purposes of managing the quality and quantity of the river as it exits one state and enters another. Low-level radioactive waste compacts are authorized by federal law and formed between states in which one state is designated as the host state that will develop and manage a facility for the disposal of low-level radioactive waste. The remaining states in the compact, the party states, have guaranteed access to that site for disposal of the low-level waste generated in their state.

Low-level radioactive waste is generated by a number of activities including medical research, nuclear medicine, industrial gauging, and electricity generation. The Nuclear Regulatory Commission has chosen to classify low-level radioactive waste into three classes based on concentration, half-life and radionuclide type. Class A has the lowest concentrations and shortest half-lives; Class B and Class C

contain greater concentrations and longer half-lives. Low-level radioactive waste does not include spent fuels or transuranic waste.

The Low Level Waste Policy Act of 1980 set up the compact system to provide for safe and efficient disposal of low-level waste on a regional basis. A key component of this legislation is that it allows these compacts to exclude low-level radioactive waste from other regions. To date we have ten low-level waste compacts. Eight states, the District of Columbia and the territories are not affiliated with a compact.

Since the Low-Level Waste Policy Act was established, each of the compacts has gone through an individualized process to decide whether to establish a disposal facility. Each compact has a unique history that has brought us to where we are today. Currently, four compacts have access to their own disposal facility: (1) the Northwest Compact has access to the Richland Facility located in the state of Washington, (2) the Rocky Mountain Compact has access to the Richland Facility by agreement with the Northwest Compact, (3) the Atlantic Compact has access to the Barnwell Facility in South Carolina, and (4) the Texas Compact has access to the Andrews Facility in Texas. All states have access to the Clive Facility in Utah, but only for Class A waste. The remaining six compacts do not have their own host facility, but they currently have access to the Andrews Facility and the Clive Facility as do the unaffiliated states.

Access to disposal among states has been evolving since low-level radioactive waste was first generated after World War II. Beginning in the 1960s, the United States developed six disposal sites that were fully operational by 1969, three of which were closed by 1978 leaving the Beatty Facility in Nevada, the Richland Facility and the Barnwell Facility. By the 1990s, these facilities were pressured to close or to restrict access resulting in the Beatty Facility closing in 1992 and the Richland Facility restricting access in 1993. South Carolina joined the Atlantic Compact in 2000 and began restricting access to non-compact states that ultimately concluded in the compact excluding all out-of-compact imports at Barnwell in 2008. As a result of these closures and restrictions, 37 states were left with no access to dispose of Class B and Class C waste from 2008 until 2012. In 2012, the Andrews Facility opened its doors to allow for the disposal of Class A, Class B and Class C waste. Additionally, in 1991 the Clive Facility opened but is precluded from accepting Class B and Class C waste.

The Texas Compact was formed in 1998 by the Texas Low-Level Radioactive Waste Disposal Compact Consent Act, Public Law 105-236 and is comprised of two states: Texas as the host state and Vermont as the non-host party state. Although Maine was originally a member of the compact, it exited once it determined it could dispose of its waste at the Barnwell Facility in advance of the Andrews Facility opening. The Texas Compact Commission is not a political subdivision of either Texas or Vermont. The compact has eight voting commissioners: (1) six appointed by the Governor of Texas, and (2) two with one alternate appointed by the State of Vermont. The commission meets approximately every six weeks with most meetings held in Austin and at least one meeting each year held in Vermont. The commission also strives to periodically meet in Andrews County, Texas to allow commissioners to view the facility.

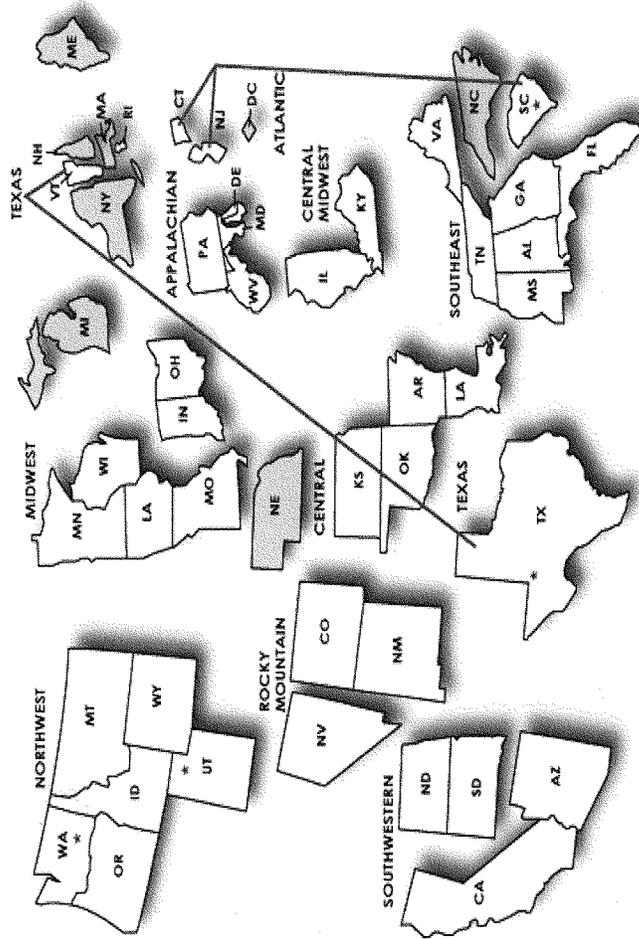
Texas has passed legislation allowing the import of out-of-compact waste up to 275,000 Curies per year (the measure of the radioactivity of the waste); however, the in-compact generators of Texas and Vermont are not subject to that limit. Allowing imports helps to assure the viability of the Andrews Facility for our compact generators; however, this must be balanced with the Texas Compact Commission's main charge of protecting capacity at the Andrews Facility for generators in Texas and Vermont. The Texas Compact must individually review and approve or disapprove each import application for disposal into the Andrews Facility to ensure these imports do not diminish the facility's ability to serve in-compact generators and to ensure they otherwise meet the criteria the commission has set for imports. Further, our compact maintains on its website an up-to-date table of out-of-compact and in-compact disposal at the Andrews Facility by volume and by activity. The Texas Compact must also authorize in-compact generators to export out of the Texas Compact for disposal since the compact law otherwise requires that all low-level waste generated in the two states be disposed of at the Andrews facility. The most common export scenario is for a Texas or Vermont generator to export Class A waste to the Clive Facility.

Since opening of the Andrews Facility in 2012, the Texas Compact has entered into almost 100 agreements for the importation of low-level radioactive waste from 40 states, the District of Columbia and Puerto Rico. Although this activity has been robust, it is still early in the life of the Andrews Facility. The current license expires in 2045 with an opportunity to extend the license after a public comment period and an opportunity for a contested case process. The Texas Compact Commission feels strongly that capacity of the Andrews Facility is fully protected now and into the foreseeable future.

Our compact began its work in earnest with the opening of the Andrews Facility in 2012. As our mission has been put into play and our related functions have grown, we have moved through expected growing pains. We continue to learn more about: (1) the generators who need access to disposal at the Andrews Facility, (2) the policies and processes of our fellow low-level waste compacts, (3) the flexibility needs of the Andrews Facility operator, and most importantly (4) the policies and needs of our party states, Texas and Vermont. As a result, we have been engaged in a continuing process to revise our rules for imports and tweaking our daily operational processes to improve our efficiency and effectiveness. Given that Texas specifically allows imports and the Texas Compact Commission has determined there is currently available capacity, the Andrews Facility is well situated to play a role in addressing low-level radioactive waste disposal needs of our partner states and generators.

On behalf of the Texas Low-Level Radioactive Waste Disposal Compact Commission I thank you for allowing me to provide this testimony. We look forward to continuing to work with this committee and Congress, our fellow compacts, the states, facility operators, and federal partners to ensure safe and timely disposal of low-level radioactive waste.

# Low-Level Waste Compacts



★	Active Disposal Site (4)	Note: Data as of May 2014
□	Approved Compact (10)	Alaska and Hawaii belong to Northwest Compact.
■	Unaffiliated (10)	Puerto Rico is unaffiliated.

Mr. SHIMKUS. You are welcome. We are happy to have you here. Next, I would like to turn to Mr. Chuck Smith, council member of Aiken County—I visited in Aiken County just last spring—South Carolina, chairman of the Energy Community Alliance. So welcome. You are recognized for 5 minutes.

**STATEMENT OF CHUCK SMITH, JR.**

Mr. SMITH. Thank you, Chairman Shimkus, Ranking Member Tonko and members of the subcommittee. Thank you for inviting me to testify today.

Again, I am Chuck Smith, council member from Aiken County, South Carolina. I am a board member of the Savannah River Site community reuse organization and chairman of Energy Communities Alliance, the association of local communities that are adjacent to, impacted by or supporting DOE activities.

Our communities have long played a key role in supporting the country's national security efforts, hosting these facilities with the understanding that the waste would ultimately be disposed of in a safe and timely manner.

ECA understands that nuclear waste disposition presents many challenges, often more political than technical, and as you are well aware the development of a geological repository has not proceeded as planned and which is currently receiving waste.

Therefore, there are waste streams in our communities that still have no clear disposal path and we remain de facto nuclear waste storage sites.

Today, I would like to make three recommendations. First, ECA urges Congress to consider feasible alternatives to move waste out of our community safely, beginning with classifying waste based on its composition, not just by where it originated.

This would allow the country to move forward properly, safely and scientifically to dispose of radioactive waste and save taxpayers millions of dollars, and we think it just makes sense.

ECA believes that changing the way the United States classifies waste can provide additional safe publically acceptable disposable alternatives, leading to lower Federal and taxpayers cost for storage and less risk to human health and the environment.

Our radioactive waste classification system currently relies primarily on point of origin rather than composition, with specific hazards posed by its disposal.

This approach has many deficiencies. It can be misleading. Some waste classified as low-level waste can be more long lived and pose a higher risk than others labelled high-level or transuranic.

It could be inconsistent. Low-level waste is defined by exclusion whereas high-level waste is defined by its source. It can also be vague as is the case with the existing definition for high-level waste, which states the waste must contain fission products in sufficient concentrations.

This does not adequately address the current state of defense high-level waste, some of which could technically qualify as transuranic waste if based on its radioactive material content. Only the U.S. classifies nuclear waste this way.

ECA recommends that NRC and DOE work together to consider this option. Many stakeholders feel that NRC and DOE already have the existing authority to make the change.

ECA is looking to Congress to implement a change immediately through legislation. ECA's multi community task force has drafted proposed language for congressional consideration and we have shared this with your staff.

For greater-than-Class C waste disposal in a geologic repository is the only method currently approved by the NRC. In its absence, greater-than-Class C and greater-than-Class C-like waste which includes waste from DOE cleanup programs, has no disposal path.

As the Savannah River Site community reuse organization specifically noted in a 2011 letter to DOE, this waste is considered orphaned and they do not support Savannah River Site as a potential candidate for its disposal.

As a board member of the SRS CRO, we follow the community's guiding principle which is no waste or excess material shall be brought into South Carolina unless and improved and funded pathway exists for processing a shipment to either a customer or an out-of-State waste disposal facility and clarifying waste definitions would be helpful in identifying those disposal paths.

Number two, ECA recommends that full consideration be given—support be given to communities and States interested in providing alternative storage and disposal options as part of a consent-based process.

Greater-than-Class C and greater-than-Class C-like waste is essentially the same as remote handled transuranic waste from the defense sector, which is already exposed of at WIPP near Carlsbad, New Mexico.

The local communities there are knowledgeable on these issues and supportive of the cleanup efforts. If DOE and NRC determine this alternative is safe, secure and reliable, if legislation is passed to allow WIPP to accept the commercial waste as well as the defense waste it already takes, if the necessary regulatory changes are made and resources are provided for outreach and education to ensure the impacted communities in the State understand the potential risk and benefits and approve, WIPP could take appropriate classified transuranic waste as well as a small amount of commercial greater-than-Class C waste.

This could result in more room for high-level waste and spent nuclear fuel in Yucca Mountain or any other geological repository.

As you are well aware, Yucca Mountain is considered full before it even opens. I should also mention the efforts by the State of Texas to license a disposal cell for greater than Class C and greater-than-Class C-like waste or transuranic waste.

Waste control specialists has a proven track record for safe disposal of low-level waste in Texas. They work closely with the surrounding communities and they too are interested in taking the waste.

Nye County also supports the inclusion of Yucca Mountain as an alternative for disposal of greater-than-Class C waste. However, DOE took it off the table in its draft EIS prior to the resolution of the regulatory and legal issues.

This was due in large part to the administration's determination that Yucca Mountain is not a workable option and suspension of its licensing activities with the NRC.

And lastly, the public must have the opportunity to formally comment on any preferred alternative in pursuit of a consent-based process.

ECA looks forward to reviewing DOE's final greater-than-Class C EIS when it is released. However, as impacted communities we stress that the public must have an opportunity to formally comment on DOE's preferred alternative, especially as we move towards implementing a consent-based process.

This needs to happen even if DOE will have to delay its recommendation to Congress and any record of decision while they take public input into account.

In closing, there are options and the Federal Government needs to give serious consideration to all safe alternatives. Doing so may allow us to overcome stalemates, build momentum and implement a comprehensive strategy that will get waste moving out of our communities as safely and expeditiously as possible.

Again, I want to thank you for the opportunity to present this testimony to you today.

[The prepared statement of Mr. Smith follows:]



**TESTIMONY  
ON BEHALF OF THE ENERGY COMMUNITIES ALLIANCE**

**OF**

**CHUCK SMITH, JR.  
COUNCIL MEMBER  
AIKEN COUNTY, SOUTH CAROLINA  
CHAIRMAN, ENERGY COMMUNITIES ALLIANCE**

**BEFORE THE  
SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY  
HOUSE ENERGY AND COMMERCE COMMITTEE  
UNITED STATES HOUSE OF REPRESENTATIVES**

**REGARDING**

**UPDATE ON LOW-LEVEL RADIOACTIVE WASTE DISPOSAL ISSUES**

**OCTOBER 28, 2015**

Chairman Shimkus, Ranking Member Tonko, and Members of the subcommittee, I thank you for inviting me to testify today and ensuring that the local community perspective is represented in discussions of how best to manage and dispose of the nation's nuclear waste.

I am Chuck Smith, Council Member of Aiken County, South Carolina, board member of the Savannah River Site Community Reuse Organization, and Chairman of the Energy Communities Alliance (ECA), the only national organization of local, elected and appointed officials in communities adjacent to U.S. Department of Energy (DOE) defense facilities. Our communities have long played a key role supporting the country's national security efforts, hosting these facilities with the understanding that the waste would ultimately be disposed of in a safe and timely manner.

As you are well aware, the development of a geologic repository has not proceeded as planned and the Waste Isolation Pilot Plant (WIPP) is currently not receiving waste. Therefore, there are waste streams in our communities that still have no clear disposal path. This means our communities remain *de facto* nuclear waste storage sites. We do not believe this is the kind of policymaking Congress intends.

**ECA urges Congress to consider feasible alternatives to move waste out of our communities safely, beginning with classifying waste based on its composition, not just by where it originated. This**

**will allow the country to move forward, properly, safely, and scientifically to dispose of radioactive waste and save taxpayers millions of dollars. It just makes sense.**

ECA understands that nuclear waste disposition presents many challenges – often more political than technical. So while ECA supports proceeding with the Yucca Mountain licensing application and opening WIPP as soon as possible, we also support pursuing other options in parallel, like changing how waste is classified. Doing so may allow us to overcome stalemates, build momentum, and implement a comprehensive strategy that will get waste moving out of our communities as safely and expeditiously as possible.

ECA believes these alternatives can potentially identify new, feasible disposal paths for low-level waste, Greater-Than-Class C (“GTCC”) waste, defense transuranic waste (TRU) and even high-level waste (HLW) that continues to accumulate. This will be crucial as DOE moves forward with cleanup activities in our communities, as more nuclear reactors are being decommissioned, and in order to build support for new low-carbon nuclear development and new nuclear technologies like small-modular reactors.

**ECA recommends revising how radioactive waste is classified in the U.S.** Our radioactive waste classification system currently relies primarily on “point of origin” rather than “composition” – the specific

hazards posed by its disposal. This approach has many deficiencies. For example, it is inconsistent: low-level waste is defined by exclusion whereas high-level waste is defined by its source. It also can be vague, as is the case in defining high-level waste. The existing definition for HLW states that waste must “contain fission products in sufficient concentrations”, but that does not adequately address the current state of defense-HLW, some of which could technically qualify as TRU waste if based only on its radioactive material content.

Only the U.S. classifies nuclear waste this way. The International Atomic Energy Agency (IAEA) recommends the more risk-based system wherein waste is classified by the “intrinsic qualities of the material.”

ECA believes that changing the way we (the United States) classify waste could provide additional, safe, publicly acceptable disposal paths for waste, leading to lower federal and taxpayer costs for storage and less risk to human health and the environment. ECA recommends that NRC and DOE work together to consider this option, and suggest that this change could be implemented immediately by Congress through legislation that clarifies waste definitions.

In fact, ECA recently established a multi-community task force and we have drafted proposed language for Congressional consideration. (Attachment A).

**ECA recommends that full consideration and support be given to communities and States interested in providing alternative storage and disposal options as part of a consent-based process.**

For GTCC waste, disposal in a geologic repository is the only method currently approved by the NRC. Given the absence of a geologic repository, today GTCC and GTCC-like waste – which includes waste from DOE’s cleanup program – has no disposal path. As the Savannah River Site Community Reuse Organization (SRSCRO), specifically noted in a letter to DOE, that waste is considered “orphaned” and they do not support the selection of Savannah River Site as a potential candidate for its disposal under the scope of the draft Environment Impact Statement. As a Board Member of the SRSCRO, we follow the communities’ guiding principle: no waste or excess materials shall be brought into South Carolina unless an approved and funded pathway exists for processing and shipment to either a “customer” or out of state waste disposal facility. Similarly, at the Hanford site in Washington State, local communities told DOE when the draft EIS was released that acceptance of additional wastes from offsite would greatly increase and compound impacts already identified at the site.

In Nevada mixed-LLW from across the DOE complex is disposed of at Area 5 of the Nevada National Security Site (NNSS). If a GTCC

facility were co-located with or adjacent to existing DOE facilities, there is the potential for conflict between the current disposal activities, which involve only DOE-generated waste subject to State of Nevada review, and disposal of GTCC waste in a facility that must be licensed by the NRC and subject to NRC inspection.

The NNS, itself, is under the control of the National Nuclear Security Agency (NNSA), on land withdrawn from public access under rights of way from the Bureau of Land Management (BLM). Nye County notes there is much uncertainty, and there needs to be further consideration of the operational, land use, and licensing issues if the site is selected for disposal of GTCC waste.

Nye County *does* support the inclusion of Yucca Mountain as an alternative for disposal of GTCC waste. However, this is complicated by the fact in DOE's Draft GTCC EIS, the alternative for disposal of GTCC waste in a geologic repository at Yucca Mountain was taken off the table prior to resolution of the regulatory and legal issues raised since the administration arbitrarily determined that Yucca Mountain was "not a workable option" and suspended its licensing activities with the NRC.

With Congressional action, waste definitions can be clarified and GTCC and GTCC-like waste, including re-classified TRU waste, could also potentially be disposed of in WIPP near Carlsbad, New Mexico, a

community that is knowledgeable on these issues and supportive of cleanup efforts. In fact, GTCC and GTCC-like waste is essentially the same as Remote-Handled Transuranic waste (RH-TRU) from the defense sector, which is presently being disposed of at WIPP. If DOE and NRC determine this alternative is safe, secure and reliable; if legislation is passed to allow WIPP to accept the commercial waste as well as the defense waste it already takes; if the necessary regulatory changes are made and resources are provided for outreach and education in the community and State to ensure they understand the potential risks and benefits and approve; WIPP could take appropriately classified transuranic waste as well as the small amount of commercial GTTC waste. This could even result in more room for HLW and spent nuclear fuel in Yucca Mountain or any other geologic repository, which remains essential to a comprehensive nuclear waste management strategy. As you all are well aware, due to legislatively directed volume restrictions, Yucca Mountain is considered “full” before it even opens.

We should also mention efforts by the State of Texas to license a disposal cell for Greater-Than-Class-C (GTTC), Greater-Than-Class-C-like, or transuranic waste. Waste Control Specialists has a proven track-record for safe disposal of low-level waste in Texas, they work closely with the surrounding communities, and they are interested in taking the waste.

ECA looks forward to reviewing the “Final” GTCC EIS when it is released by DOE. DOE’s failure to previously identify a preferred alternative denied local communities input on the process. As impacted communities, we stress that **DOE must give the public an opportunity to formally comment on its preferred alternative and demonstrate its commitment to a “consent-based process” in regards to the storage and disposal of all waste types**, even if this means that the Department will have to delay the recommendation to Congress and any Record of Decision while they take public input into account.

In closing, ECA greatly appreciates the opportunity to appear before you today. We agree that nuclear waste management is a priority and we strongly encourage Congress, DOE and the NRC to recognize the potential advantages to considering multiple options, pursuing them in parallel, and moving this waste out of our communities. Continued failure is not an option. Not addressing address nuclear waste disposal increases the risks to our communities and limits future economic development opportunities. It also threatens our nation’s energy security, impacts the economics of nuclear power as a viable energy resource under an “all of the above” energy strategy, and prevents the already limited available funds from being utilized as effectively as possible.

There *are* options. The Federal government needs to give serious consideration to all safe alternatives for disposal of these waste forms

from both the federal government and commercial generators. ECA's local government members call upon the Committee to support efforts to clarify ambiguous waste definitions and exercise the legislative powers necessary to set the United States back on a risk and "consent-based" path forward with nuclear waste disposal.

Mr. SHIMKUS. Thank you, Mr. Smith, and I will recognize myself 5 minutes for opening for the round of questioning and just say to start is that the whole idea of having these hearings is to get that input as we try to move on legislation. So we appreciate that.

Let me start with Ms. Ing. Your testimony notes that starting in 2008 States which were not a part of an interstate compact with a host facility were left stranded without a disposal option.

This was the result of the State of South Carolina choosing to exclude non-Atlantic Compact Commission States from having access to the Bardwell site. Is that correct?

Ms. ING. That is correct.

Mr. SHIMKUS. To your knowledge, was that decision the result of any technical or legal issues or was it a policy change as a result of a political process?

Ms. ING. I know that part of the reason was a policy change as a result of a political process. To the extent there were technical issues as well I would not be aware of those.

Mr. SHIMKUS. Due to the nature of low-level waste compacts, will host State governments always have the ability to modify acceptance criteria depending on political and policy preferences?

Ms. ING. I believe that would depend on how that compact is set up and to what extent the State legislature would impact that compact. I know in the State of Texas that would be allowed to happen for its host facility in the Texas/Vermont compact.

Mr. SHIMKUS. The—and again, Mr. Smith, you have already mentioned the definition of waste and dealt with the transuranic. That was going to be one of my questions but you covered that.

So your testimony also notes that the Department of Energy successfully engaged with the State of Nevada to dispose of DOE-owned mixed waste at the Nevada National Security Site.

In your view, what were the key steps that enabled DOE and Nevada to come together in an understanding for how to dispose of the nuclear material.

Mr. SMITH. Well, I can't speak to Nevada's thought process on that. But I believe it is probably coordination with the State and the community and trying to move things forward.

Mr. SHIMKUS. OK. There is a—is there a common thread through the local communities represented by the energy community's association?

Mr. SMITH. Well, there is, and I think the common thread is if we want to help solve these problems and make a positive impact and we think we have got some solutions but you have got to bring those to the community and the leadership in those communities to be able to get our ideas and impacts that we could have on helping you move these processes forward.

Mr. SHIMKUS. And some of them might be evaluation of legislation that is proposed and being engaged and helping us craft that.

Mr. SMITH. Absolutely. We certainly want input into that.

Mr. SHIMKUS. Very good. Thank you.

Ms. Opila, many of the types of radioactive material are disused radioactive sources. Disused sources are sealed sources of radioactive material that is not currently being utilized and will never be utilized again for the intended purposes.

According to the disused sources working group, there are approximately 2 million sealed sources and tens of thousands of disused sources in the United States.

How are agreement States currently managing disused sources?

Ms. OPILA. Thank you, Chairman.

Disused sources are just like any other radioactive source that is licensed at a facility under an agreement State's authority.

And therefore those licenses require those facilities to safely and securely manage those sources just as they would any other sources.

The agreement States under their authority periodically inspect these facilities to ensure that the facilities are managing those sources, both disused and used, in a safe and secure manner.

Mr. SHIMKUS. Is the NRC working with agreement states to track and dispose of disused sources?

Ms. OPILA. Yes.

Mr. SHIMKUS. If so, are there additional actions the NRC could undertake to improve the handling of these sources?

Ms. OPILA. I believe that there are options that are being considered, one of which is for category one and category two sources, perhaps tracking the status of the source, whether or not it is used or disused in the national source tracking system.

Mr. SHIMKUS. Great. That is the end of my questions and I now—I will yield back my time and yield to the ranking member, Mr. Tonko, for 5 minutes.

Mr. TONKO. Thank you, Mr. Chair.

Mr. Smith, in your testimony you urged DOE and NRC to work together to change the way that the United States classifies its waste to a risk-based approach, not just for low-level waste but for other types of nuclear waste.

Is there support among other communities for moving in this direction?

Mr. SMITH. Yes. Most of all our communities in the Energy Communities Alliance are supportive of this effort.

Mr. TONKO. And Ms. Opila, your reaction to that?

Ms. OPILA. I am sorry, sir.

Mr. TONKO. Your reaction to the recommendation by Mr. Smith. Is there support amongst communities to move to this risk-based approach?

Ms. OPILA. The organization doesn't have an opinion on that particular question.

Mr. TONKO. And Ms. Ing, is there any opinion you can share with us for—from your perspective?

Ms. ING. I can say that we—that with the licensing of the facility, the TCEQ, engaged with the facility operator with the risk-based approach. But I can only speak to that facility.

Mr. TONKO. OK. Thank you.

And Mr. Smith, again, are you seeing support from DOE and NRC with regard to reclassification?

Mr. SMITH. Well, we had discussions with DOE but there has been no commitment from the Department of Energy. We think that the easiest solution would have—would be for Congress to change the language to composition as opposed to origin and that would give us the ability to look at a number of waste streams to

be able to move quickly out of our communities and have immediate impact.

Mr. TONKO. Thank you.

Do you believe that those agencies currently have the legal authority you are saying that there would be statutory change that you would recommend we do? But do you believe they have the authority to make this change or do you see that the legislation is absolutely necessary?

Mr. SMITH. Well, I don't think that I am qualified to answer that question. But I do think that legislative assistance with this would get the process moving very quickly.

Mr. TONKO. Thank you.

And Mr. Smith, you also stated in your testimony support for looking at all options for nuclear waste disposal. Regardless of the status of the Yucca Mountain disposal site, it has been very difficult to site even the low-level waste facilities but we do have several operating.

What gives you confidence that a consent-based approach to siting facilities for high-level waste can yield a better outcome?

Mr. SMITH. Well, something has got to be better than where we have been. So I think that anytime we can get together and you involve the communities we can give you ideas and opportunities that you may not see.

For instance, we have identified over 2,300 canister or high-level waste that with this reclassification could possibly be considered transuranic waste and be disposed of in a different route than a geologic repository.

Mr. TONKO. And do communities living near the facilities where cleanups are underway believe they are consulted adequately about the status and plans for ongoing activities at these sites?

Mr. SMITH. I think there is good dialogue although there is probably mixed results for your question. There could always be more. I do think we need to be engaged more, yes.

Mr. TONKO. And could DOE and NRC or the facility operators be doing more to foster good community relationships?

Mr. SMITH. I guess it depends on who you ask that question. They think they are. Sometimes we think there should be, you know, more community involvement and assistance with the communities, you know, with the level of risk that we are having to take on behalf of the Department of Energy.

Mr. TONKO. Can you cite some specifics from your own personal interactions with—

Mr. SMITH. Well, it doesn't involve cleanup but, again, you know, the MOX facility is something that came to South Carolina with the promise that that was going to be completed and that those waste streams had a disposition path out and, again, as you see it has certainly taken on the same characteristics of Yucca Mountain.

You know, that gives us pause for, you know, what we are being told by the Department of Energy and, you know, the administration. So yes, we have serious concerns in all of our communities and we all have issues like that.

Mr. TONKO. Mm-hmm. And are there practices in other countries or recommended practices by the International Atomic Energy

Agency that we should look to for new ideas on how to deal with waste safely and more quickly than we are currently doing?

Mr. SMITH. Well, I am probably not the one to answer that question so I would like to consult with staff and get back with you on an answer—a written answer to that question.

Mr. TONKO. Do any of our other witnesses have recommendations in that regard?

If not, that concludes my questioning, Mr. Chair, and I yield back.

Mr. SHIMKUS. Gentleman yields back his time.

Chair now recognizes the gentleman from Texas, Mr. Flores, for 5 minutes.

Mr. FLORES. Thank you. Thank you, Mr. Chairman.

Ms. Ing, you highlighted in your testimony that compact is still learning from the first 3 years of operation.

Will you tell us the most pressing issues that must be addressed by both the commission as well as the State of Texas when you look forward?

Ms. ING. Yes. What we feel is the most pressing issue is ensuring—the State of Texas has made it clear to our compact that they will allow 275,000 curies per year into the facility.

It is important for us to understand how our generators and brokers work, who would use the facility and how we can engage in a process with them that will allow as much as up to 275,000 curies into that facility as possible.

There are a number of challenges to generators such as predicting curie values, finding transportation for low-level radioactive waste to the facility, et cetera. We do not want our process to be in any way more cumbersome to that.

So ensuring that we understand the needs of the folks who would use the facility and being able to adapt our process to that is the most pressing issue that we have.

Mr. FLORES. OK. And the second question for you is this. The WCS site in Andrews County opened in 2012, and it is the only facility that is opened as a result of the low-level waste policy act.

The facility has had some challenges along the way and I was wondering if you could tell us about some of those challenges that the facility has encountered and also how long did it take for the facility to be licensed by the TCEQ?

Ms. ING. I don't know exactly how long it took the facility to be licensed and I am sorry I don't have that answer. I could get it. A lot of people know it.

It took several years. I do know that. I don't know exactly. With regard—I don't want to go too far. The facility could give you a better answer of some of their specific challenges to getting the facility up and going. I think I can speak from my discussions with them that some of the difficulties have been similar to ours.

We are the first compact and they are the first facility to take imports and ensuring—knowing all the different processes that each State, the unaffiliated States and the compacts, have.

For instance, some compacts—the Southwestern Compact, the Central Compact, and the Rocky Mountain Compact require exportation.

We cannot take it until they export it, and every compact has a different way to export. And so learning the nuances of all the different players is one of the challenges I know we have worked with the facility operator, WCS, on.

Mr. FLORES. OK.

If you don't mind, if you could ask the facility to give us the time line for the licensing that would help.

Ms. ING. I would be very happy to provide you that.

Mr. FLORES. And you can provide that supplementally. Go ahead.

Mr. SHIMKUS. Are you going to yield back?

Mr. FLORES. I will yield to you.

Mr. SHIMKUS. Yes, thank you.

I just want to—Mr. Smith, in part of these discussions I have always tried to figure out what the word local communities mean.

What is your definition of local communities?

Mr. SMITH. Well, I serve on our council. I serve on a CRO.

Mr. SHIMKUS. With respect to your association and—

Mr. SMITH. The leadership of the community that helps focus the ideas and opportunities that are going to

Mr. SHIMKUS. Savannah River is in the county of Aiken, South Carolina so that is kind of a good definition. Is the country next to Aiken part of the association?

Mr. SMITH. Well, we have a five regional area that consists of five different counties that have access or have, you know, input into what takes place on the site.

So we live right on the Savannah River and you cross the Savannah River to Georgia they have a third of work force over in Georgia and, clearly, they are impacted as well so—

Mr. SHIMKUS. So what about the county that is to the east of Aiken County?

Mr. SMITH. OK. So that five-county area all has input into this process.

Mr. SHIMKUS. Are they all bordering Savannah?

Mr. SMITH. They are all bordering Savannah River Site except for the Georgia side of the compact.

Mr. SHIMKUS. Because of the river?

Mr. SMITH. Because of the river.

Mr. SHIMKUS. So they all border the—

Mr. SMITH. That is correct. That is correct.

Mr. SHIMKUS. So a county that is one time removed probably isn't a local community?

Mr. SMITH. No, it is not a local community.

Mr. SHIMKUS. The only point I raise is because especially it kind of pertains to even Mr. Tonko's comment on the European model.

There is a definition of—I would argue that especially at in Nevada, the local community, especially when you are talking about Yucca Mountain, the local community is Federal Government.

BLM land, DOE land, all that, and then some of my friends who are 90 miles away—an hour and a half away—aren't really part of the local community in this debate. So that is kind of why I raised that question.

Mr. SMITH. Well, from Aiken County's standpoint, again, we recognize five counties as players or participants in the process for

Aiken County and Savannah River Site. And so that is the input that we want to have on behalf of what takes place here.

Mr. SHIMKUS. Very good. Thank you.

I want to thank my colleagues for giving me this time and I will now yield to the ranking member of the full committee, Mr. Pallone, for 5 minutes.

Mr. PALLONE. Thank you, Mr. Chairman.

I want to ask Ms. Ing, I want to better understand from your perspective what is happening with the Texas compact and the recent request to NRC to consider allowing Texas to license a facility to handle GTCC waste.

Are you satisfied with the handling of your request by the NRC? Well, I will start with that.

Ms. ING. For clarification, my compact did not make that request. That was made by the Texas commission on environmental quality. Since we deal with low-level radioactive waste and greater-than-Class C as we currently understand that definition does not fall within the purview of our compact.

We haven't developed and haven't seen a need to develop a position on that.

Mr. PALLONE. OK. And I guess there is no one else we could ask about if—all right. Thanks a lot.

Mr. SHIMKUS. The Chair now recognizes the gentleman from Pennsylvania, Mr. Pitts, for 5 minutes.

Mr. PITTS. Thank you. Maybe each of you can respond to this question.

With all of the scientific work that has been done over the last 20 years, to appropriately characterize waste, do you have any recommendations for how Congress can improve the disposal of low-level radioactive waste?

We will start with you, Ms. Opila.

Ms. OPILA. No, the organization does not have any recommendations for how Congress can improve. We believe the compact system is working well. We believe the compact system is working well.

We believe that the States that regulate the facilities do a good job of regulating these facilities and so we do not have any recommendations at this time.

Mr. PITTS. Ms. Ing.

Ms. ING. We do not have any recommendations to improve it either. Our facility has been up and operating just since April of 2012. We are still learning. We still have access and can maintain capacity for all the 50 States and DC and territories.

Mr. PITTS. Mr. Smith.

Mr. SMITH. Again, you know, I am not an expert on this but if we were to change the language in the Nuclear Waste Policy Act to reflect composition of the waste we think that are other alternatives for some of the waste that we currently have at Savannah River Site. So we do see alternatives for that.

Mr. PITTS. Ms. Opila, you—in 2008 the State of South Carolina restricted access to the Barnwell disposal facility to members of the Atlantic Compact Commission, essentially leaving the majority of the country without a Site to dispose of Class B and C waste, and I understand that Colorado is part of the Rocky Mountain Com-

pact, which has an agreement to send low-level waste to Richland, Washington.

But will you describe how other States managed Class B and C waste prior to the opening of the Site in Andrews County, Texas?

Ms. OPILA. Yes, sir.

Most of the facilities that generated low-level waste in States that did not have access to a facility during that time period between when the Atlantic Compact closed to out-of-compact waste and when the WCS facility was open to out of compact waste, those facilities were required to basically store their waste on Site until they could have access to a disposal facility.

Mr. PITTS. And your testimony notes that the organization for agreement States objects to NRC requiring a Site to redo its performance assessment unless the site plans to accept new material.

Will you please describe this issue in greater detail?

Ms. OPILA. Sure.

Essentially, the way we understand the proposed requirements of Part 61 that they would require all facilities, current facilities to redo their performance assessments and for facilities that are not going to be taking these unique waste streams there is no need for that and the cost that would be incurred by the facility to do this very detailed performance assessment as well as the cost incurred to the agreement State to evaluate the performance assessment could be significant.

And those costs would not—or redoing these performance assessments would not enhance the safety of, you know, disposal waste at those facilities if they are not going to be taking these unique waste streams.

Mr. PITTS. What might be some potential implications if NRC's requirement forces existing sites to adjust their performance standards?

Ms. OPILA. Again, our concern is that the costs that would be incurred by the facilities and the States to redo those performance assessments and evaluate them could be significant and we don't, again, feel that that would be necessary and would not enhance any safety of disposal waste at those facilities.

Mr. PITTS. All right.

Ms. Ing, the Federal Government still must address how to dispose of depleted uranium as a result of enrichment. Currently, there is a significant amount of depleted uranium located at the Urenco facility just across the Texas-New Mexico border.

Has the Texas compact considered whether and how it would treat an authorization request to dispose of depleted uranium at the Andrews County facility?

Ms. ING. The compact would defer to the host State, Texas, on that matter. Currently, we will allot 275,000 curies per year as per Texas law into that facility. We do not distinguish if the curies come from depleted uranium or another source material.

And all of the authorizations are looked at and reviewed by the Texas Commission on Environmental Quality. To the extent through that review or statute they change that position, we would defer to that as a compact.

Mr. PITTS. My time has expired.

Mr. SHIMKUS. Gentleman's time has expired.

We want to thank the second panel for testifying and just remind the first and second panel we are glad to see the NRC stayed. We appreciate that.

We will note that the DOE did leave, though. So having said that, the hearing record will be open for 10 legislative days for us maybe to receive questions and then get them to you. If you would respond when you can, I would appreciate that.

And the hearing stands adjourned.

[Whereupon, at 12:03 p.m., the committee was adjourned ]

[Material submitted for inclusion in the record follows:]

FRED UPTON, MICHIGAN  
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY  
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115  
Majority (202) 225-2927  
Minority (202) 225-3641  
November 19, 2015

Mr. Mark Whitney  
Principal Deputy Assistant Secretary  
U.S. Department of Energy  
1000 Independence Avenue, S.W.  
Washington, DC 20585

Dear Mr. Whitney:

Thank you for appearing before the Subcommittee on Environment and the Economy on Wednesday, October 28, 2015, to testify at the hearing entitled "Update on Low-level Radioactive Waste Disposal Issues."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Wednesday, December 3, 2015. Your responses should be mailed to Will Batson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed to [Will.Batson@mail.house.gov](mailto:Will.Batson@mail.house.gov).

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



John Shimkus  
Chairman  
Subcommittee on Environment and the Economy

cc: The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy  
Attachment



**Department of Energy**

Washington, DC 20585

February 2, 2016

The Honorable John Shimkus  
Chairman  
Subcommittee on Environment and the Economy  
Committee on Energy and Commerce  
U. S. House of Representatives  
Washington, DC 20515

Dear Mr. Chairman:

On October 28, 2015, Mark Whitney, Principal Deputy Assistant Secretary for Environmental Management, testified regarding "Update on Low-Level Radioactive Waste Disposal Issues."

Enclosed are answers to two questions that you submitted for the hearing record.

Also enclosed is an Insert for the Record that was requested by Representative Larry Bucshon to complete the hearing record.

If you need any additional information or further assistance, please contact me or Lillian Owen, Office of Congressional and Intergovernmental Affairs at (202) 586-5450.

Sincerely,

A large black rectangular redaction box covering the signature of Janine Benner.

Janine Benner  
Deputy Assistant Secretary for House Affairs  
Congressional and Intergovernmental Affairs

Enclosures

cc: The Honorable Paul Tonko  
Ranking Member



**QUESTIONS FROM CHAIRMAN JOHN SHIMKUS**

- Q1. Does DOE have disposal plan for depleted uranium, as required by the USEC Privatization Act?
- A1. The USEC Privatization Act (Pub. L. No. 104-134, Title III, Chapter 1, Subchapter A, 110 Stat. 1321-355) provides the option for certain private sector generators of depleted uranium, namely the United States Enrichment Corporation (USEC) in connection with its operation of the gaseous diffusion plants, or any person licensed by the Nuclear Regulatory Commission to operate a uranium enrichment facility, to request that DOE accept its depleted uranium for disposal if the depleted uranium is ultimately determined to be low-level radioactive waste. The USEC Privatization Act does not specifically require development of a disposition plan for this depleted uranium, however. If such generators were to request that DOE accept depleted uranium for disposal, DOE would utilize currently available disposal options, subject to the generator's reimbursement of DOE's costs for disposal of the depleted uranium, including a pro rata share of any capital costs associated with disposal.
- Q1a. Will NRC's ongoing actions relating to Part 61 rulemaking affect DOE's disposal plans? If so, how? If not, why not?
- A1a. Currently, there are both DOE-owned and commercial facilities authorized to dispose of depleted uranium. Both options would be evaluated by DOE, if an enrichment facility licensee requested DOE to accept its depleted uranium for disposal. All commercial facilities will have to meet the Part 61 regulatory requirements, and the NRC's ongoing actions will affect these commercial alternatives. Even though the NRC actions are not directly applicable to DOE's disposal facilities operated pursuant to DOE's Atomic Energy Act authorities, DOE fully considers lessons learned from the NRC rulemaking process and uses this as an opportunity to improve the DOE's self-regulated disposal procedures.
- Q2. DOE is proposing two new on-site disposal cells at Portsmouth & Oak Ridge.
- Q2a. Did the Department solicit pricing from commercial entities through a Request for Proposal process for off-site disposal options?

- A2a. No, a Request for Proposal process was not used. At Portsmouth, unit pricing/cost information was obtained from commercial disposal facilities' published data for inclusion in the cost evaluation of alternatives. At Oak Ridge, the cost estimate to dispose of the waste off-site was developed using current pricing under DOE contracts with commercial waste disposal facilities.
- Q2b. Does DOE include off-site commercial disposal costs as part of their evaluation prior to proposing new on-site disposal cells? If so, how are those evaluations included in the project management decision process? If not, why not?
- A2b. The Department evaluates all disposal options in determining the need for new on-site cells, including off-site commercial facilities; this evaluation considers the commercial disposal costs as well as the packaging and transportation costs associated with use of off-site facilities. These evaluations are included in the project management decision process and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process.

For sites such as Portsmouth and Oak Ridge, where cleanup is proceeding under CERCLA, the decision-making process to develop, evaluate, and select among remedial alternatives — including disposal facility options — is designed to be comprehensive and robust; in addition, the cleanup is proceeding with oversight and concurrence by the U.S. Environmental Protection Agency (EPA) and the state where the cleanup is being conducted. One of the benchmarks being used at this site is DOE Order 435.1, which addresses radioactive waste disposal.

Once sufficient data is available, alternatives are evaluated in detail using the National Contingency Plan's nine evaluation criteria, which reflect CERCLA statutory requirements and preferences. The nine criteria are:

- overall protection of human health and the environment;
- compliance with applicable or relevant and appropriate requirements (ARARs);
- long-term effectiveness and permanence;
- reduction of toxicity, mobility, or volume through treatment;
- short-term effectiveness;
- implementability;
- cost;

- State acceptance; and
- community acceptance.

In general, the alternatives are analyzed individually against each criterion and then compared against one another to determine their respective strengths and weaknesses and to identify the key trade-offs that must be balanced for the site. The results of the detailed analysis are compiled, and the best remedy is selected consistent with the CERCLA and NCP criteria. A Remedial Investigation/Feasibility Study (RI/FS) document, which contains the detailed alternatives analysis, is completed under signature of the DOE, EPA, and the relevant state. The RI/FS is followed by a Proposed Plan that is used as the basis for selection of a preferred alternative and to solicit public comments. Public comments are addressed and incorporated into the final Record of Decision (ROD). The ROD identifies the CERCLA remedial action to be implemented.

As part of the CERCLA remedy selection process for Portsmouth and Oak Ridge, DOE also included the cost to dispose of the waste off-site as an option considered in the RI/FS documents which evaluated new on-site disposal cells.

Since the disposal cells are capital asset projects, they will also follow the process outlined in DOE Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets*.

This is a preliminary, unedited transcript. The statements within may be inaccurate, incomplete, or misattributed to the speaker. A link to the final, official transcript will be posted on the Committee's website as soon as it is available.

857 Has the NRC worked with the DOE to develop a disposal pathway  
858 for depleted uranium?

859 Mr. Whitney. Sir, I believe those discussions are ongoing.  
860 We have had discussions and they are ongoing.

861 Mr. Bucshon. Okay. I don't have the date here. When was  
862 the privatization act? When were you first directed to that?

863 Mr. Whitney. And I don't know either. I would have to get  
864 back with you on that.

865 Mr. Bucshon. It is always surprising me in hearings where  
866 Congress has said to do things, like, 10 years before and we are  
867 still talking about it. But this may not be one of those  
868 instances.

869 Will the NRC's current Part 61 rule making affect the DOE's  
870 plans to dispose of depleted uranium at commercial disposal sites?

871 Mr. Whitney. I don't believe it would.

872 Mr. Bucshon. Okay. And what would the effect of the DOE's  
873 disposal plans for depleted uranium -- effect on the DOE's  
874 disposal plans for depleted uranium if the NRC decides to  
875 incorporate greater than Class C and transuranic waste as part  
876 of their Part 61 rule making?

877 Mr. Whitney. It is unclear to me at this point, sir.

878 One, it would depend on the ultimate disposal pathway for  
879 the depleted uranium, of course, and then what the final rule  
880 making is.

75

COMMITTEE: HOUSE ENERGY AND COMMERCE

SUBCOMMITTEE: ENVIRONMENT AND THE ECONOMY

HEARING DATE: OCTOBER 28, 2015

WITNESS: MARK WHITNEY  
PAGE: 40, LINE: 861

INSERT FOR THE RECORD

The USEC Privatization Act was enacted in 1996.

FRED UPTON, MICHIGAN  
CHAIRMAN

FRANK FALLONE, JR., NEW JERSEY  
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115  
Majority (202) 225-2927  
Minority (202) 225-3641  
November 19, 2015

Mr. Michael Weber  
Deputy Executive Director of Operations  
U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852

Dear Mr. Weber:

Thank you for appearing before the Subcommittee on Environment and the Economy on Wednesday, October 28, 2015, to testify at the hearing entitled "Update on Low-level Radioactive Waste Disposal Issues."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Wednesday, December 3, 2015. Your responses should be mailed to Will Batson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed to [Will.Batson@mail.house.gov](mailto:Will.Batson@mail.house.gov).

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



John Shimkus  
Chairman  
Subcommittee on Environment and the Economy

cc: The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Attachment



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

December 18, 2015

The Honorable John Shimkus  
Chairman, Subcommittee on Environment  
and the Economy  
Committee on Energy and Commerce  
United States House of Representatives  
Washington, DC 20515

Dear Mr. Chairman:

The U.S. Nuclear Regulatory Commission appeared before the Subcommittee on Environment and the Economy on October 28, 2015, at the hearing entitled, "Update on Low-level Radioactive Waste Disposal Issues." From that hearing, you forwarded questions for the hearing record to Mr. Michael Weber. The responses to those questions are enclosed. If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

  
James Colgary, Associate Director  
Office of Congressional Affairs

Enclosure:  
As stated

cc: Representative Paul Tonko, Ranking Member

The Honorable John Shimkus

**QUESTION 1.** In the hearing, you indicated that the NRC evaluated in the 1980s whether an integrated or coordinated rulemaking was needed and concluded it wasn't necessary. Given the substantive comments regarding this issue in the Part 61 rulemaking docket, will NRC re-evaluate the prior determination? If not, why not?

ANSWER.

The NRC is not reevaluating whether a more extensive rulemaking is needed at this time. The definitions of radioactive waste are established in a variety of Federal statutes, including the Low-Level Radioactive Waste Policy Amendments Act, the Nuclear Waste Policy Act, and the Uranium Mill Tailings Radiation Control Act. The NRC has developed a regulatory frameworks consistent with the governing statutes that ensures protection of the public. An integrated approach would likely require changes to Federal statutes. In addition, the substantial effort to develop and coordinate such an integrated rulemaking would not be justified by the safety or other potential benefits of such a rulemaking.

With respect to low-level radioactive waste, in Revised SRM-SECY-13-0001, "Staff Recommendations for Improving the Integration of the Ongoing 10 CFR Part 61 Rulemaking Initiatives," the Commission directed the staff in 2013 to avoid any additional changes to Part 61 until the current limited scope rulemaking is complete. The current limited scope rulemaking may obviate the need for more comprehensive revisions to the rule, such as revising the waste classification tables. The Commission directed the staff to, after the limited rulemaking is complete, solicit public comments, consider the comments, and provide a recommendation to

the Commission on whether there is a need for a second rulemaking effort to revise waste classification tables that are contained in Part 61.

**QUESTION 2.**      **Mr. Weber, have you completed an analysis of the technical basis for adding Greater Than Class C (GTCC) and transuranic (TRU) waste to the Part 61 rulemaking?**

- a. If you do not have a technical basis for these wastes, how can you determine the timing for the rulemaking?**
- b. What are the key technical considerations in expanding Part 61 to include these wastes?**

**ANSWER.**

- a. The NRC staff has not completed a technical basis for adding Greater than Class C (GTCC) and transuranic waste to the current Part 61 rulemaking effort. The Commission will decide whether and how to proceed with a proposed rulemaking on GTCC and TRU waste in response to the paper evaluating options currently before the Commission for consideration.
- b. The key technical considerations for such a rulemaking will depend on the Commission's directed approach. Based on the NRC's previous rulemakings in this area, the staff anticipates that key considerations could include:
  - Performance objectives for low-level waste disposal, including protection of the public and workers, as well as the security of certain wastes
  - Durability and effectiveness of engineered barriers in isolating wastes
  - Risks associated with potential inadvertent intrusion into the wastes
  - Durability and effectiveness of institutional controls

- Intergenerational equity
- Consistency with the level of protection accorded to other radioactive wastes

**QUESTION 3.** The NRC is considering significant changes to Part 61 requirements for disposal of depleted uranium. Given the downturn in nuclear fuel markets that continues after the 2011 events at Fukushima, plans for a number of new uranium enrichment projects licensed by the NRC - Areva's Eagle Rock project, Centrus' American Centrifuge plant, GE's Global Laser Isotope facility, as well as International Isotope's proposed depleted uranium deconversion facility - appear to be on-hold.

- a. Are the changes to Part 61 still justified if these projects don't materialize?**
- b. Prior to undertaking a rulemaking process, does NRC Staff consider market outlook for the licensees who are impacted [by] the Commission's undertaking?**

**ANSWER.**

- a. Yes, the proposed rule change is justified because there already is a large volume of depleted uranium being stored until it can be disposed of or otherwise dispositioned safely. This includes depleted uranium resulting from the Louisiana Energy Services (LES, URENCO-USA) enrichment facility's previous and current operations, as well as the past operations of the Department of Energy (DOE) enrichment facilities. Additionally, the DOE is considering using commercial facilities to dispose of its large quantities of depleted

uranium. The current Part 61 rulemaking will address the safety of shallow land disposal of depleted uranium.

- b. Yes, the staff considers market outlook when considering the need for rulemaking. For example, the projected outlook for the generation of waste affects the characteristics of the waste considered by the NRC in assessing the impacts and benefits of regulatory changes. The staff reviewed information from the Agreement States and NRC indicating two of the four existing low-level radioactive waste (LLRW) disposal facilities have expressed an interest in accepting large quantities of LLRW, including depleted uranium. Regarding the other two disposal facilities, one indicated it would not accept additional long-lived LLRW like depleted uranium, and the other has not made its intentions known. In this case, the current large supply of depleted uranium demonstrates a need for this proposed rule change.

FRED UPTON, MICHIGAN  
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY  
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115  
Majority (202) 225-2927  
Minority (202) 225-3641  
November 19, 2015

Ms. Leigh Ing  
Executive Director  
Texas Low Level Radioactive Waste  
1307 Marshall Lane  
Austin, TX 78703

Dear Ms. Ing:

Thank you for appearing before the Subcommittee on Environment and the Economy on Wednesday, October 28, 2015, to testify at the hearing entitled "Update on Low-level Radioactive Waste Disposal Issues."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Wednesday, December 3, 2015. Your responses should be mailed to Will Batson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed to [Will.Batson@mail.house.gov](mailto:Will.Batson@mail.house.gov).

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



John Shimkus  
Chairman  
Subcommittee on Environment and the Economy

cc: The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy  
Attachment

**Texas Low-Level Radioactive Waste Disposal Compact Commission**

**Chair**  
Brandon T. Hurley, TX

**Mailing Address:**  
333 Guadalupe St., 3-240  
Austin, Texas 78701

**Commissioners**  
Peter Bradford, VT  
Hon. Richard H. Dolgener, TX  
Linda Morris, LMP, TX  
Richard Saudek, VT  
Clint J. Weber, TX  
Robert C. Wilson, TX

**Vice-Chair**  
John M. Salsman, CHP, TX

(512) 305-8941

**Executive Director**  
Leigh Ing

Administration@tllrwddc.org

\*\*\*\*\*  
**Alternate**  
Jane O'Meara Sanders, Ph.D., VT

December 1, 2015

Mr. Will Batson,  
Legislative Clerk  
U.S. House of Representatives  
House Committee on Energy and Commerce  
2125 Rayburn House Office Building  
Washington, DC 20515

Dear Mr. Batson,

Thank you for the opportunity to provide testimony before the Subcommittee on Environment and the Economy on October 28, 2015 at the hearing entitled "Update on Low-Level Radioactive Waste Disposal Issues". I am pleased to respond to questions to the Texas Low-Level Waste Disposal Compact Commission (TLLRWDDC) by the Members and provided to me by letter dated November 19, 2015. The TLLRWDDC response is attached.

Thank you for allowing the TLLRWDDC the opportunity to participate and would be pleased to answer any additional questions Members may have.

Sincerely,



Leigh Ing  
Executive Director  
Texas Low-Level Radioactive Waste Disposal Compact Commission

Cc: Brandon T. Hurley, Chairman, Texas Low-Level Radioactive Waste Disposal Compact Commission  
John M. Salsman, Vice-Chairman, Texas Low-Level Radioactive Waste Disposal Compact Commission

Attachment

## Responses to Questions for the Record

### The Honorable John Shimkus

- I. **Your testimony notes that Texas limits out-of-compact waste to less than 275,000 curies per year. Will you please describe the process by which requests are approved or disapproved? For example, does the Compact consider how the 275,000 curies are allocated by different waste classes and quantities?**
  - A. **Of the amount of material that is approved by the Compact, how much actually ends up being imported for that year.**

Response:

- I. The Texas Low-Level Radioactive Waste Compact Commission (Compact) accepts applications for the import of low-level radioactive waste for disposal. All applications are reviewed for sufficiency by the technical committee of the Compact. If the request for import meets all legal and technical requirements and there is available capacity, the low-level radioactive waste will be authorized for import. We continually review our import authorization process to ensure efficiency, timeliness and maximum use of the facility. The Compact does not allocate authorization for disposal by class or quantity.
  - A. In many cases, low-level radioactive waste generators are unable to predict the activity and date of their shipments to the disposal facility because of impediments to accurately predicting Curie amounts, changes in budgetary priorities at the generating facility and uncertainties in availability of shipping containers. The approved activity and the activity imported each year since the Compact Facility opened are as follows:
 

<b>2013: Approved Activity</b> – 223,054.54 Curies	<b>Disposed of Activity</b> – 171,236.95 Curies
<b>2014: Approved Activity</b> – 88,935.17 Curies	<b>Disposed of Activity</b> – 37,750.33 Curies
<b>2015: Approved Activity</b> – 274,021.70 Curies	<b>Disposed of Activity</b> – 35,005.50 Curies

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Minority (202) 225-3641

November 19, 2015

Mr. Chuck Smith  
Councilmember  
Aiken County, South Carolina  
*Care of:*  
Energy Communities Alliance  
1101 Connecticut Avenue, N.W.  
Washington, DC 20036

Dear Mr. Smith:

Thank you for appearing before the Subcommittee on Environment and the Economy on Wednesday, October 28, 2015, to testify at the hearing entitled "Update on Low-level Radioactive Waste Disposal Issues."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

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Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



John Shimkus  
Chairman  
Subcommittee on Environment and the Economy

cc: The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Attachment

ANSWERS FROM THE ENERGY COMMUNITIES ALLIANCE (ECA)  
QUESTIONS FOR THE RECORD (12.3.15)  
Subcommittee Hearing on "Update on Low-Level Radioactive Waste Disposal Issues"



QUESTIONS FROM SUBCOMMITTEE CHAIRMAN JOHN SHIMKUS

**Question 1: Mr. Smith, your testimony noted that Greater Than Class C (GTCC) Material was intended for permanent disposal in Yucca Mountain. While DOE continues to consider waste options for GTCC, would Yucca Mountain be a natural option?**

Under the current radioactive waste classification system used in the United States, Greater-Than-Class C (GGTC) waste can only be disposed of in a geologic repository (this is the only method currently approved by the Nuclear Regulatory Commission (NRC)). Thus, if the NRC receives funding to continue its review of the licensing application for Yucca Mountain, approves the license, and authorizes construction so that it can receive and accept waste, ECA does believe it would be a natural option. In addition, ECA notes that Nye County supports the inclusion of Yucca Mountain as an alternative for disposal of GTCC waste.

Although a decision to use the Yucca Mountain repository for GTCC waste disposal could be made now, DOE must still determine whether such use of the repository would have unacceptable environmental or institutional impacts on the repository's overall operation and performance. DOE could concentrate its efforts on this analysis over the next year or two. If it appears that no such impacts would occur, DOE could decide to use the repository for GTCC waste. In contrast, if it appears that unacceptable impacts would occur or repository disposal would be more expensive than other disposal alternatives, DOE could then evaluate other disposal options for GTCC waste disposal. In weighing the advantages and disadvantages associated with using the Yucca Mountain repository, it is important to consider the institutional and political

**ANSWERS FROM THE ENERGY COMMUNITIES ALLIANCE (ECA)  
QUESTIONS FOR THE RECORD (12.3.15)  
Subcommittee Hearing on “Update on Low-Level Radioactive Waste Disposal Issues”**

difficulties associated with siting a separate GTCC waste disposal facility, regardless of its size or type.

The volume of GTCC waste is probably not large enough to justify the economic or institutional costs associated with developing a separate disposal facility, regardless of the technology used. The projected volume of GTCC waste that will be generated through the year 2020 would probably occupy much less than 1 percent of the proposed repository for commercial spent fuel and defense high-level waste. Preliminary calculations also indicate that the costs associated with using this large repository for GTCC waste would be comparable to, or perhaps even less than, costs associated with developing a small disposal facility only for GTCC waste.

As noted in our testimony before the subcommittee on October 28, 2015, ECA supports proceeding with the Yucca Mountain licensing application and following the law of the land as laid out in the Nuclear Waste Policy Act. However, given the current political stalemate regarding Yucca Mountain, we also support pursuing other options in parallel, like changing how waste is classified to allow for additional disposal paths for waste streams like GTCC.

With Congressional action, waste definitions can be clarified and GTCC and GTCC-like waste could potentially be disposed of in WIPP near Carlsbad, New Mexico. In fact, GTCC and GTCC-like waste is essentially the same as Remote-Handled Transuranic waste (RH-TRU) from the defense sector, which has already been safely disposed of at WIPP. If DOE and NRC determine this alternative is safe, secure and reliable; if legislation is passed to allow WIPP to accept the commercial waste as well as the defense waste it already takes; if the necessary regulatory changes are made and resources are provided for outreach and education in the community and State to ensure they understand the potential risks and benefits and approve, WIPP could provide an additional, safe, publicly acceptable disposal path for GTCC waste. This would result in

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lower federal and taxpayer costs for storage and less risk to human health and the environment.

**Question 1. A.**

**Had DOE continued work on Yucca Mountain, would the advancement of the licensing process been a sufficient plan for your communities to have confidence that DOE will permanently dispose of GTCC waste?**

In general, yes, but the fact that the timeline for opening Yucca Mountain to accept and permanently dispose of waste was so delayed that ECA would still have encouraged a regular review of other options to take into account technical lessons learned as time passed, our knowledge base grew and scientific advancements were made. ECA’s goal has always been to support a comprehensive nuclear waste management strategy that will get waste moving out of our communities as safely and expeditiously as possible.

We also believe it is important that Congress understands the ramifications of not continuing the Yucca Mountain license application review and the challenges that presents to communities interested in potentially hosting a nuclear waste storage or disposal facility. If Congress and the Administration decide to pursue a consent-based siting process, as recommended by the Blue Ribbon Commission on American’s Nuclear Future, any consent-based agreement will have to include strong language and have legally enforceable provisions to ensure that it cannot be changed by any change in administration or state government. We urge Congress to take a lead role and address the future of nuclear waste disposal with the urgency it deserves. ECA recommends that funds be appropriated for education and outreach in these interested communities to rebuild confidence and demonstrate a commitment to addressing nuclear waste issues.