

## ECA Update: February 18, 2015



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...And the normal news updates are back after a very successful Peer Exchange last week in Washington, DC! We'll be seeking your thoughts on what went well and what you think staff can improve so we can plan for our next peer exchanges to be held in May and later this summer. Also, please don't forget to send in your DOE report card surveys with comments so we can collate and share them. And, if you weren't able to pick up a reimbursement form last week, please email either [Sharon.Worley@energyca.org](mailto:Sharon.Worley@energyca.org) or [devon@energyca.org](mailto:devon@energyca.org) to have one emailed to you. Thank you all for attending!

**Alexander announces plans for Oak Ridge**  
The Daily Herald  
February 17, 2015

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### Upcoming Events

[Commission to Review the Effectiveness of the National Energy Laboratories Request for Comments](#)  
February 20th, 24th

[House Energy Appropriations Hearing on FY16 Energy Budget](#)  
February 26

[SSAB Portsmouth Meeting](#)  
March 5

Nuclear Energy Peer Exchange (stay tuned!)

[LINK](#)

May 2015

U.S. Sen. Lamar Alexander, R-Tenn., who heads the powerful Senate Appropriations energy and water subcommittee that controls funding for the Department of Energy, said he has a plan to bring the Uranium Processing Facility to completion on time and within a budget cap of \$6.5 billion.

His plan includes drawing on advice from newly confirmed Defense Secretary-designate Ashton Carter. Tennessee's senior senator supported Carter's nomination and said his experience would be valuable during a "critical time."

In a telephone interview, Alexander said he and Carter spent about 45 minutes last Wednesday in the senator's office talking about nuclear deterrence.

"I asked him for his best advice on our nuclear weapons modernization program," the senator said. "We've embarked on a significant and expensive effort to make sure that our weapons work if we need to use them. And I want to make sure that (a) they work and (b) that we're not wasting any money because we don't have any money to waste.

Alexander has been an advocate for the Uranium Processing Facility, which is to be constructed at Y-12 in his home state, but he's also been strongly critical at times about the project's cost growth. He said it was he and Sen. Dianne Feinstein, D-Calif., who set a cap of \$6.5 billion for the project, which will consolidate and modernize the work with bomb-grade uranium.

The UPF project is currently being revised by Consolidated Nuclear Security, the Bechtel-led contractor at Y-12, to keep costs down and to allow the closure of older production facilities -- notably the World War II-era 9212 complex -- as soon as possible.

"The problem we were having was the cost of UPF was going up a billion dollars every time we turned around," Alexander said. "What we decided was to do a Red Team review (headed by Oak Ridge National Laboratory Director Thom Mason) and say to the managers, complete your design to 90 percent, taking into account all these factors, and you've got no more than \$6.5 billion to spend and then come back to us with a plan and with a budget and we would like to see it built on time and on budget."

Asked if the \$6.5 billion was an absolute cap or if the price tag was adjustable depending on what's encountered during design and construction, the Tennessee Republican said, "It is time that we came to a cap, and Senator Feinstein and I gave the Red Team that number for a reason and they made their recommendations based on that. We can't have a project that goes up a half-billion or a billion dollars every year just because somebody comes up with a new idea ... The new uranium facility should be designed to spend no more than \$6.5 billion. That's the direction we gave to the project manager."

A recent report by Defense Nuclear Facilities Safety Board raised concerns about the planned life extension of a couple of key Y-12 facilities, citing seismic vulnerabilities. Extending the life of some existing facilities at the Oak Ridge plant was one of the Red Team's recommendations.

Alexander didn't address the safety board's report specifically, but he said the safety of Oak Ridge workers is "paramount." He said the board's findings should be addressed during the UPF design effort.

The senator noted that he and Feinstein, the ranking Democrat on the energy and water subcommittee, have emphasized that no construction on UPF should take place until the design has been at least 90 percent completed.

Alexander said there will be sufficient money in the 2016 budget to continue site-preparations and design work, as well as efforts to relocate some equipment from one Y-12 facility to another.

He said there is no plan for his subcommittee to hold a hearing specifically on UPF.

"Senator Feinstein and I will be having regular meetings with the project managers to make sure that the design is proceeding properly and that once the design is complete the project is on time and on budget ... But I don't see the need for a hearing on that," he said.

Alexander said any questions regarding UPF would be addressed as part of other budget hearings.

**Cantwell grills energy secretary on Hanford cleanup progress**

Tri-City Herald

February 12, 2015

[LINK](#)

Sen. Maria Cantwell, D-Wash., pressed Energy Secretary Ernest Moniz on Thursday to provide a timeline for cleaning up two highly contaminated sites at Hanford given a proposed cut to their portion of the Hanford budget.

Moniz defended the proposed fiscal 2016 budget for Hanford at a hearing of the Senate Energy and Natural Resources Committee.

It would include a cut of \$93 million to spending at the Department of Energy Richland Operations Office but an increase in spending of \$202 million for the DOE office overseeing radioactive waste held in underground tanks and the vitrification plant being built to treat the waste.

"While the department is devoting significant resources to cleaning up the Waste Treatment Plant and tank farms, there's concern that we may be giving some of the other cleanup priorities short shrift," Cantwell said. "We need to make sure the resources are there for the DOE to live up to the commitment to clean up this waste."

She is concerned about the timely cleanup of the 324 Building just north of Richland, which sits over a spill of highly radioactive material, and the six-acre 618-10 Burial Ground, one of two high hazard burial grounds left near the Columbia River.

DOE postponed work on the 324 Building after the spill was discovered. The building prevents precipitation from reaching the spill, which could drive it deeper toward the groundwater.

The 618-10 Burial Ground is required by the legally binding Tri-Party Agreement to be cleaned up by 2018.

"The problem with the Hanford budget overall is that everybody always looks at it and thinks that we can do with less," Cantwell said. "We're obviously concerned about this reduction, and again, the priorities are so mammoth, we just want to make sure we're making progress."

The Richland Operations Office, which is responsible for general central Hanford cleanup plus land along the Columbia River, has made progress and under the fiscal 2016 budget proposal will continue "very strong progress," Moniz said.

"I want to emphasize that with this budget, we will get the Plutonium Finishing Plant -- which has been judged to be, at one point, the highest risk project -- down to slab this year," he said. "We will be continuing to remediate groundwater, and we will continue the tremendous progress that's been made in opening up the river corridor."

However, he said he would have to check to answer Cantwell's question on the schedule for the river corridor's 324 Building cleanup, including removal of the contamination in the soil beneath it, and the 618-10 Burial Ground.

Cantwell also asked Moniz about plans to protect workers from chemical vapors from the waste held in underground tanks and plans to preserve B Reactor as part of a new Manhattan Project National Historical Park.

It is unacceptable that Hanford workers have been repeatedly exposed to chemical vapors with uncertain health effects, Cantwell said.

DOE needs a resolution to improve protection now and also to make sure improvements are maintained into the future. Concerns about vapors have been raised in 2004, 2008, 2010 and 2014, she said.

DOE has directed the Hanford tank farm contractor, Washington River Protection Solutions, to implement all 47 recommendations in a recent review of tank vapors conducted by an independent team of experts led by the Savannah River National Laboratory in South Carolina, Moniz said. Some of the recommendations cannot be implemented until more information is gathered this year and next.

The best way to institutionalize better protective measures is to succeed with the current recommendations being implemented, Moniz said.

DOE is required to enter into an agreement with the Department of Interior on their roles to establish a new national park within one year, under the bill passed in 2014 to create the park.

DOE has scheduled the first meeting with the National Park Service, Moniz said. His agency's goal is to have the agreement in one year, but until he learns the outcome of that meeting he's reluctant to say the deadline will be met, he said.

The public already can tour sites such as B Reactor, he said. But Cantwell said more access is needed to B Reactor.

"There is so much public demand that people view this as probably one of the most positive developments," she said. "The science story behind this is pretty incredible."

**Reid spokeswoman tells Ill. lawmaker don't bother trying to revive Yucca**

Las Vegas Review-Journal

February 12, 2015

[LINK](#)

WASHINGTON -- An Illinois congressman says he is planning to revisit Yucca Mountain this year as part of an effort to revive the Nevada site for nuclear waste disposal.

Republican Rep. John Shimkus and two other members of the House Energy and Commerce Committee briefly toured Yucca Mountain in April 2011, shortly after the proposed repository area was shut down by the Department of Energy. Shimkus, chairman of the House environment and the economy subcommittee, told Energy Secretary Ernest Moniz at a budget hearing Wednesday he was planning to go back.

Shimkus spokesman Jordan Haverly said travel dates have not been set and planning has not started for the trip. Nye County Commissioner Dan Schinhofen said the county would be happy to host congressional visitors as it did on the previous trip, which included a tour of the county's "Yucca Mountain Information Center" in Pahrump.

At the hearing, Shimkus asked Moniz for cooperation by the Department of Energy, which still oversees the Yucca site that has been fenced off to visitors and shut down.

"I hope you will give us all opportunity and make it easy for us to get there and get the door open," Shimkus said.

In 2011 the congressional delegation spent less than an hour at the site, which cost \$15,000 to open and prepare for the entourage that also included a dozen staff members and Department of Energy officials. A government contractor checked the site for radon and to ensure the exploratory tunnel into the mountainside was safe even for a short walk.

The lawmakers, who wore hard hats and protective boots, ventured about 30 yards into the tunnel, once the defining feature of the multibillion-dollar program to develop permanent storage for 77,000 tons of highly radioactive waste.

At the time, Sen. Harry Reid and other Nevada lawmakers who oppose Yucca Mountain called the trip a big waste of taxpayer money. That sentiment remains.

"If Mr. Shimkus wants to come spend money in Nevada, then by all means," Reid spokeswoman Kristen Orthman said. "But what he will find at Yucca Mountain is a boarded-up, closed facility. Yucca Mountain is dead and no amount of visits by Mr. Shimkus and the pro-Yucca fanatics will change that."

President Barack Obama terminated the program shortly after taking office, and the Department of Energy now focuses on finding interim sites that can hold nuclear waste while it searches for a new repository. It needs legislation by Congress to shift entirely away from Yucca Mountain.

At the budget hearing Wednesday, Shimkus berated Moniz on the department's move away from Yucca Mountain, as he does at every opportunity. He said nearly \$9 billion the DOE has budgeted for nuclear waste work would be better spent trying to soften Nevada's long official opposition to the project.

"The administration needs to appreciate there is change occurring in the state of Nevada," Shimkus said. He pointed to freshman Republican Rep. Crescent Hardy, who said after his election he would support Yucca Mountain "if everything was safe."

Several weeks later, Hardy told an audience in Pahrump he was "not for or against Yucca Mountain" but "I think we need to be in the game."

Shimkus said recently released Nuclear Regulatory Commission safety reports showed Yucca Mountain could be safe for nuclear waste. Moniz responded the NRC also reported the project lacked land and water permits necessary to be licensed.

**Report: NM considers fining LANL another \$100M**

Albuquerque Journal

February 10, 2015

[LINK](#)

SANTA FE - The New Mexico Environment Department is considering another \$100 million or more in fines against Los Alamos National Laboratory.

And state Environment Secretary Ryan Flynn is demanding that the federal Department of Energy - LANL's parent agency - own up to recent mistakes, including errors leading up to a costly and dangerous accident at the nation's nuclear waste repository last year, said a report Tuesday by The Nuclear Security and Deterrence Monitor.

The Monitor, which follows the nation's nuclear weapons complex, quotes Flynn as saying NMED is working on a new "compliance order" aimed at the lab and there will be new fines if the Department of Energy "does not accept accountability for past violations and work with the state."

The Environment Department recently fined LANL and the DOE's Waste Isolation Pilot Plant \$54 million for failures connected to a radiation release that took place when a drum of waste processed at Los Alamos ruptured a year ago at WIPP. The contamination has shut down the underground waste storage facility near Carlsbad.

According to the Monitor, Flynn said the additional fines under consideration are just for recent violations at LANL and don't even address DOE's concession that it will not meet June deadlines, set years ago in a legally binding consent decree, on goals for broader cleanup of the decades of hazardous waste left at Los Alamos.

"The number is much larger than \$100 million, but currently \$104 million of that compliance order is based solely on violations for which there is no dispute of fact," Flynn told the Monitor. "That has nothing to do with consent order liability. That's another issue."

The DOE is fighting the \$54 million in fines - \$36.6 million against LANL and \$17.7 million against WIPP - that the state levied in December. DOE claims the state "improperly imposed penalties for violations which did not occur" and that the fines are "grossly disproportionate" to those levied against other entities.

Cleaning up and reopening WIPP is expected to cost a half-billion dollars and full operations may not resume until 2018, officials have said.

Flynn couldn't be reached by the Journal on Tuesday for additional comment. His staff said he was in Washington to discuss the December fines with DOE. Flynn has said before that additional fines could be on the way, but the \$100 million figure had not been specified.

A DOE spokeswoman said Tuesday: "We are committed to addressing the underlying causes that led to the compliance orders and to developing a positive path forward for the re-opening of WIPP and resuming transuranic waste operations at LANL."

Where any fine money collected from DOE would go remains unclear - an interesting question as the state Legislature struggles with balancing a tight state budget this year and in the future.

Flynn and others also have said they want assurances that any DOE fine payments won't come from the about \$185 million a year LANL has been receiving for hazardous waste cleanup. Community leaders from cities, counties and pueblos, part of the Regional Coalition of LANL Communities, also are in Washington this week, trying to make the same point. Besides providing environmental remediation, the cleanup money is an economic boost as contract work is doled out.

### *'DOE should step up'*

Flynn told the Monitor the state wants the DOE "to step up and work with us on a constructive path forward in order to resolve all of the issues that caused this release" of radioactivity at WIPP.

In December, Flynn called the \$54 million in fines "very conservative." The NMED cited numerous violations of permits in connection with the radioactive release at WIPP that contaminated nearly two dozen workers with low levels of radiation. The offending waste drum - plutonium and americium escaped after at least one ruptured - had been improperly remediated and packaged at Los Alamos.

The precise cause of the chemical reaction that caused the drum to pop open has not been disclosed, although senior lab officials have said they believe they are close to a solution. The leak's one-year anniversary is Saturday.

A September DOE inspector general's report says a series of errors culminated with "organic" being used to describe the kind of cat litter that should be used to soak up liquids in the waste stream

packaged at LANL - when "inorganic" clay litter or another dirt absorbent was what should have been added to waste drums. A note-taker at a meeting erroneously wrote down "an organic" instead of "inorganic" and the mistake made it into written procedures, senior lab officials say.

As a result, a wheat-based litter was mixed with oxidizing nitrate salts - creating a dangerous and potentially explosive combination in many drums sent to WIPP for storage.

### **DOE Says Video Points to Single Drum Breach at NM Nuke Dump**

New York Times  
February 12, 2015

[LINK](#)

ALBUQUERQUE, N.M. -- New video appears to confirm that the radiation leak at the federal government's underground nuclear waste dump was limited to a single drum of waste, a U.S. Energy Department official said Thursday.

Joe Franco, head of the DOE's Carlsbad field office, said in a conference call with reporters that a final report has yet to be issued on the mishap at the Waste Isolation Pilot Plant in southern New Mexico, but thanks to a special camera boom, investigators were able to get a good look between and across the stacks of waste where the drum ruptured.

"That allowed them to obtain a full view of visual evidence needed to make that determination," Franco said.

Once the investigation into the cause of the leak is complete, the full focus can shift to reopening the facility, he said.

The repository has been closed since February 2014, when the container of waste from Los Alamos National Laboratory ruptured and contaminated 22 workers along with parts of the underground facility. While the DOE is targeting 2016 for some operations to resume, it could take at least another three years and cost more than a half billion dollars to fully reopen the site.

Energy Secretary Ernest Moniz, testifying Thursday before a congressional committee, said the timetable "remains a little bit uncertain." He said the key to full operations will be a new

ventilation system that could cost anywhere from \$100 million to \$300 million.

Crews have made more than 200 trips underground since the leak occurred. Donning protective suits, they have been busy surveying for contamination, checking fire suppression and other equipment and installing long metal bolts into the ceiling and walls of the half-mile-deep salt caverns to ensure stability.

While nearly two-thirds of the underground space is free of radioactive contamination, Franco acknowledged more work needs to be done to survey and analyze the areas that are contaminated.

"We know where the contamination starts, but the extent of contamination, how much contamination is in certain areas, hasn't been quantified," he said.

Don Hancock, of the Southwest Research and Information Center watchdog group in Albuquerque, has been pushing DOE and WIPP officials to release more information about the contamination levels underground.

"They like to talk about the 6 miles of tunnels that are not contaminated and not the almost 2 miles that are contaminated," he said.

Franco said the decontamination process has started and will continue as the rock bolting progresses. That process includes spraying water on the ceiling and walls to trap the contamination inside the salt. In other areas, crews plan to cover the contamination with salt mined from another area of the facility and layers of paint.

### **SRR saves millions with lean program**

The Aiken Standard

February 15, 2015

[LINK](#)

The Savannah River Site's liquid waste contractor saved more than \$21 million in its first year using the Lean Business Management System, according to a press release.

Savannah River Remediation introduced lean management - an approach that uses continuous improvement that seeks to accomplish incremental changes that improve efficiency and quality.

According to the release, the savings were applied to accelerate other liquid waste priorities, allowing the company to do more work for the government.

Specifically, the three core principles of the system are to eliminate waste, design continuous flow and respect workers. So far, the effort has accelerated closure work on Tanks 5 and 6 a little over a year ago. It also allowed SRR to move employees from the completed work on those two tanks to Tanks 16 and 12, the next two tanks in the tank closure process.

In addition, the lean process has also reduced the backlog of corrective maintenance items, and allowed SRR to recover from the hard freeze damage from the winter of 2014.

Contractor president and project manager Stuart MacVean said the lean approach has moved the company to a new level.

"Our employees have embraced the Lean system," MacVean said. "So far, nearly 300 of our 2,200 employees participated in Lean events to determine how to systematically and efficiently maximize the use of taxpayers' money. Their efforts are giving the Department of Energy even more value."

SRR is composed of a team of companies led by AECOM with partners Bechtel National, CH2M HILL and Babcock & Wilcox. Critical subcontractors for the contract are AREVA, EnergySolutions and URS Professional Solutions.

### **Dallas company takes 1st step toward becoming high-level nuclear fuel storage site**

Daily Journal

February 6, 2015

[LINK](#)

LUBBOCK, Texas -- A Dallas-based company that handles low-level radioactive waste is taking the first step toward making a West Texas facility the first interim storage site for high-level nuclear waste from around the country.

Waste Control Specialists on Friday notified the Nuclear Regulatory Commission of the company's plan to seek a license to build a facility in rural Andrews County that would store spent fuel rods from power plants for as long as 100 years. The location is

about 350 miles west of Dallas and 120 miles south of Lubbock, along Texas' border with New Mexico.

NRC spokesman David McIntyre said the agency received the company's letter.

The company will comment on its application effort Monday at a news conference in Washington, D.C., said Waste Control Specialists spokesman Chuck McDonald.

It takes years for the license application process and a review by the federal nuclear agency. The waste would be stored above ground.

In January, Andrews County commissioners unanimously passed a resolution in support of the company's latest efforts, County Judge Richard Dolgener said.

"The community is embracing having the high level interim storage here," he said.

Andrews resident Humberto Acosta said he is one of "very few" in town who are opposed to the plan. Many around town, he said, aren't informed about the dangers of the waste, which remains radioactive for thousands of years.

"People are so busy trying to make a living. They don't see the wolf coming down the road," the 64-year-old carpenter said. "They just wait until the wolf is in the door."

Two other efforts are underway in the region to build a similar storage facility. Officials with the Lea-Eddy Energy Alliance in southeastern New Mexico are interested, as is Austin-based AFCI Texas. The latter is looking at two possible sites in Texas, but AFCI's Monty Humble said it's "premature to discuss them publicly."

There is currently no disposal site in the United States for spent rods from the more than 100 operating commercial nuclear reactors across the country -- including Texas' four reactors at Comanche Peak in Glen Rose and the South Texas Project near Bay City. Congress approved a site at Nevada's Yucca Mountain in 2002, but the project was mothballed in 2010 after Barack Obama was elected president, Harry Reid of Nevada became U.S. Senate Democratic majority leader, and Congress shut off funding.

A presidential commission in 2012 recommended the U.S. look for an alternative to Yucca Mountain, preferably in a community that was interested in hosting a nuclear waste facility. For now, spent fuel is stored next to reactors in pools or in dry casks.

The federal government has collected tens of billions of dollars from utilities over the years to fund disposal at Yucca Mountain. Whichever entity builds the site stands to make billions to store the spent fuel rods.

Waste Control Specialists currently disposes of low-level radioactive waste from more than three dozen states and depleted uranium from the U.S. Department of Energy.

Cyrus Reed, spokesman for the Lone Star chapter of the Sierra Club, said having a high-level site in Texas increases the potential for terrorism in the state.

"I don't think it's what anyone signed up for when we got the original legislation allowing a private company to dispose of our low-level waste," he said.

### **Misguided on MOX**

The Augusta Chronicle

February 6, 2015

[LINK](#)

The damage from some current government policies may linger for years, perhaps even decades.

But there's no reason the misguided attempt to shutter the Savannah River Site's MOX project should harm our region any longer than President Obama's remaining days in the White House.

A Republican chief executive and GOP-controlled Congress surely ought to be able to get the 60-percent completed facility back on track by obliterating the needless and wasteful roadblocks erected in recent months by the president's minions at the Department of Energy.

The attempt to kill the Mixed Oxide Fuel Fabrication Facility last year by placing it in "cold standby" was thwarted by Congress, which successfully fought to keep construction moving ahead - albeit slowly - through a \$345 million appropriation. That same

amount is reflected in the White House's budget plan released last week.

But don't be fooled by the compromise gesture, which is more like a half-inflated life preserver.

Clearly, this Democrat administration remains bent on seeing that the 600,000-square-foot plant - designed to convert weapons-grade plutonium into nuclear reactor fuel - ends up mothballed like the Yucca Mountain nuclear waste repository in Nevada.

You can bet there would be no hemming and hawing over budgets and schedules if the first-of-its-kind project was in a liberal enclave or involved organized labor and corporations headed by crony Democrat donors.

We've never believed the hokum about the project's \$30 billion "life cycle cost" estimates. We see only partisan bureaucrats looking to fabricate an excuse to jettison a program that the radical we-hate-all-things-nuclear wing of the Democratic Party never liked to begin with.

How could anyone be opposed to a facility that will help the United States and Russia fulfill an international treaty to remove 68 metric tons of weapon material and convert it to a carbon-free power plant fuel?

America should be doing everything possible to fast-track this project, not strangle it in bureaucratic red tape and bury it with budgetary mumbo-jumbo.

Currently, the Energy Department is trying to maintain a poker face while awaiting the results of an outside analysis of MOX "alternatives." This is perhaps the biggest joke of all, as it was the MOX solution that the federal government selected from a list of three-dozen alternatives 20 years ago. The preliminary cost estimates for nearly all the recently discussed alternatives exceed MOX's price tag.

That's right: The White House wants to scrap a mostly finished facility to start from scratch on an alternative that could end up taking decades to complete and end up costing more!

Unbelievable. On second thought, with this administration, it's very believable.

Republicans need to put an end to this MOX nonsense once and for all. And finish the job at Yucca Mountain while they're at it.

### **NTI Releases New Interactive, Online Tutorial on Nuclear and Radiological Security**

Nuclear Threat Initiative

Feb. 12, 2015

[LINK](#)

The Nuclear Threat Initiative (NTI), in partnership with the James Martin Center for Nonproliferation Studies (CNS), today released a new online tutorial on nuclear and radiological security. The mobile-friendly resource features fresh, interactive learning tools--from motion graphics to dynamic maps--to bring students, professionals and media up to speed on the risks posed by nuclear and radiological terrorism.

A motion graphic video uses three true incidents to illustrate the threat of nuclear terrorism and the importance of securing all nuclear materials worldwide to prevent it. An interactive "pathways to the bomb" tool drills down to show how a terrorist might buy, build or steal a nuclear weapon. A story map shows the global nature of illicit trafficking in nuclear and radiological materials and uses historical and modern-day cases of smuggling in each corner of the world.

In addition to providing an overview of the threats, the tutorial covers steps governments around the world are taking to strengthen nuclear and radiological security. Visitors can also learn about the most significant gaps in the global nuclear security architecture and the role of the Nuclear Security Summits.

Like the other NTI tutorials, visitors can test their knowledge at the end of each tutorial. Educators can integrate the tutorial into their lesson plans and ask students to present a certificate of completion after taking the quiz.

Those interested in a deeper dive on nuclear and radiological security as well as illicit trafficking will find in-depth resources on NTI's website. In addition to country profiles and resources on nuclear and radiological security-related treaties and regimes, the NTI Nuclear Materials Security Index provides a comprehensive view of nuclear materials security in 176 countries and offers recommendations states can undertake to prevent nuclear terrorism.

A CNS-produced database and annual report catalogs all incidents of illicit trafficking in nuclear and radiological materials.

The Nuclear and Radiological Security tutorial adds to NTI's growing library of online tutorials covering a wide range of nonproliferation topics, including the Nuclear Non-Proliferation Regime and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). Upcoming tutorials will cover the nuclear fuel cycle, the nuclear budget, delivery systems and biological and chemical weapons.

