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DOE officials visit Piketon cleanup site, agree to talks

Chillicothe Gazette

August 28, 2014

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WAVERLY - While visiting the former Portsmouth Gaseous Diffusion Plant on Thursday, high-ranking Department of Energy officials made no promises of increased funding, but they did agree to further talks with Ohio's congressional delegation.

The visit from Mark Whitney, the agency's top cleanup official, and David Foster, a senior adviser to energy secretary Ernest Moniz, came three weeks after commissioners from Pike and Scioto counties criticized the federal agency over its lack of communication with regard to a projected \$110 million budget gap that could force cleanup contractor Fluor-B&W Portsmouth to let go of more than 600 employees this fall.

Local leaders weren't the only ones miffed by DOE's silence on the issue.

"I expressed my frustration with them because we are finding the appropriations problem is in part a lack of communication from DOE," Sen. Rob Portman, R-Ohio, told reporters Thursday after he met with Whitney and Foster. "I got commitment from them today that they will be willing to sit down with me as soon as we get back (to Washington) in September and I know the other members of the (congressional) delegation will want to be there as well."

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Upcoming Meetings

The Annual Radwaste Summit

Sept. 2-5, 2014

Summerlin, Nevada

The Annual Decisionmakers' Forum

Oct. 20-23, 2014

Amelia Island, Florida

National Nuclear Science Week 2014

Oct. 20-24, 2014

This is not the first time the Piketon plant has faced a funding shortfall, putting the cleanup workforce at risk of layoffs, Portman said.

"Last year, we kind of pulled the rabbit out of the hat and got \$44 million. That kept employment levels up," he said. "Obviously we're trying to do that again. We're trying to get more funding in, but it's hard when DOE puts in the president's budget a 10 percent reduction in cleanup dollars at a time when they knew the uranium prices were going down.

The sale of the remaining uranium inventory at the Piketon plant generates 70 percent of the cleanup project's funding; the other 30 percent comes from federal appropriations. The price of uranium has plummeted in the three years since Japan's Fukushima Daiichi nuclear disaster. Earlier this year, uranium was priced about 50 percent below pre-Fukushima levels and 75 percent below its all-time high from 2007, the Wall Street Journal reported.

The site is authorized by DOE to sell a predetermined portion of the inventory on the open market for use as fuel in nuclear power reactors. This despite the fact Fluor-B&W officials, local leaders and members of the congressional delegation all have pushed for the cleanup to be funded entirely through appropriations. Portman said DOE officials told him Thursday the uranium in Piketon will last for a few more years.

"We've got to a better job of getting DOE to put forward a plan for the site because that's what we hear from the appropriations committee when we go for more funding," Portman said.

Portman not only wants to see a plan for the site, but specifically one that calls for an accelerated cleanup.

"That's what the commitment was (from DOE)," he said. "If you do that, you're going to save the taxpayers billions of dollars...because every year that goes by you spend more and more money on maintaining the site rather than cleaning it up. It's safer for the community. It needs to be cleaned up."

In addition to its efficiencies and environmental benefits, an accelerated cleanup also allows for the site to be re-industrialized -- sooner -- as a manufacturing facility, research park or power plant, Portman said.

Portman vowed to "look under every rock" for additional funding. That might include convincing DOE to funnel dollars to the cleanup from other projects, its own carryover fund and possibly even the \$35 million that already has been earmarked for the construction of an on-site disposal facility in Piketon.

"If you're a worker at the site right now, you're facing a lot of uncertainty and understandable anxiety about what's going to happen going forward," Portman said. "What I'm committed to do is try every way possible to provide more certainty, to get a commitment on expedited cleanup and to fight hard to keep that commitment."

As of Thursday, 42 employees had accepted voluntary buyouts the contractor offered in hopes of reducing the number of involuntary job cuts.

NRC finalizes spent nuclear fuel rule, lifts licensing suspensions

Power Engineering
August 26, 2014
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The U.S. Nuclear Regulatory Commission (NRC) finalized a used fuel storage rule and will lift the suspension of final licensing actions on nuclear power plant licenses and renewals once the rule becomes effective.

The U.S. Court of Appeals for the District of Columbia Circuit in 2012 struck down NRC's 2010 revision of its so-called waste confidence rule and directed the NRC to consider the possibility that a geologic repository for the storage of spent nuclear fuel might never be built, and to do further analysis of spent fuel pool leaks and fires. NRC suspended final licensing decisions on new reactors, license renewals and spent fuel storage facility renewals in response to the ruling, and directed staff in September 2012 to develop a new rule and supporting Generic Environmental Impact Statement (GEIS) within 24 months.

"Resolving this issue successfully is a Commission priority," said NRC Chairman Allison Macfarlane in September 2012. "Waste confidence plays a core role in many major licensing actions, such as new reactors and license renewals."

The current rule adopts the findings of the GEIS regarding the environmental impacts of storing spent fuel at any reactor site after the reactor's licensed timeframe of operation. The GEIS also analyzes the environmental impact of storing spent fuel beyond the licensed operating life of reactors over 60 years (short-term), 100 years after the short-term scenario and indefinitely. The action approved the final rule and GEIS, renamed it from waste confidence to "continued storage of spent nuclear fuel."

The commission expects the final rule and GEIS to be published in the Federal Register in September with a 30-day public comment period.

In a separate order, NRC approved lifting the suspensions and authorizes the staff to issue final licensing decisions as appropriate once the final rule becomes effective 30 days after publication in the Federal Register.

The Nuclear Energy Institute released a statement saying it supports the NRC's conclusion that spent fuel can be safely stored in dry casks during the short-term, long-term and indefinite time frames.

The U.S. House Energy and Commerce Committee backed the NRC's revamped rule and decision to end the license suspensions.

"This action is a welcome step in getting our nuclear future back on track. The NRC can resume fulfilling its core function of issuing licenses, and the commission's first priority should be completing all pending licenses safely and as soon as possible," commented full committee Chairman Fred Upton (R-MI), Energy and Power Subcommittee Chairman Ed Whitfield (R-KY), and Environment and the Economy Subcommittee Chairman John Shimkus (R-IL).

"This conclusion confirms the safety and security of used nuclear fuel under the multilayered protective strategies used at commercial nuclear energy facilities," said Ellen Ginsburg, vice president, secretary and general counsel for NEI.

Feds Want Nuclear Waste Train, but Nowhere to Go

Associated Press via ABC News
August 31, 2014
[LINK](#)

The U.S. government is looking for trains to haul radioactive waste from nuclear power plants to disposal sites. Too bad those trains have nowhere to go.

Putting the cart before the horse, the U.S. Department of Energy recently asked companies for ideas on how the government should get the rail cars needed to haul 150-ton casks filled with used, radioactive nuclear fuel.

They won't be moving anytime soon. The latest government plans call for having an interim test storage site in 2021 and a long-term geologic depository in 2048.

No one knows where those sites will be, but the Obama administration is already thinking about contracts to develop, test and certify the necessary rail equipment.

U.S. Energy Department officials did not return messages seeking detailed comment. The U.S. Nuclear Regulatory Commission and Department of Transportation share responsibility for regulating shipments.

"We know we're going to have to do it, so you might as well do it," said James Conca, senior scientist at the geoscience and environmental consulting firm UFA Ventures Inc. He has monitored a nuclear waste disposal site, helped design another and worked on cleanup efforts.

In a public solicitation, the Energy Department asked for opinions on whether it should buy or lease the rail cars. It expects the cars could last 30 years, run at standard speeds on regular tracks, accommodate the heavy protective casks and be used up to eight times annually. Besides a car to carry the cask, the trains would have buffer cars to maintain a safe distance between the crew and the radioactive cargo.

The U.S. military already sends fuel by rail from its reactors on Navy ships to federal labs for storage. The civilian power industry hauled more than 2,300 tons by rail from 1979 to 2007, averaging just over nine trips annually, according to NRC data.

Nuclear fuel is extremely hot and radioactive when it is removed from a reactor. Utilities first cool spent fuel in a water-filled pool, then can transfer it to massive casks that sit on land. Neither option is supposed to be final.

One of the biggest rail shippers was Progress Energy, which moved spent fuel from two of its plants to a third plant, Shearon Harris in North Carolina, because it had spare room in its spent fuel pool. The rail shipments prompted protests and appeals from environmental groups and local governments, and the company announced in 2003 it would halt those shipments after building land-based storage facilities at its other plants, eliminating the need for the transfers.

"Their story to us was that it was basically they were tired of fighting," said Jim Warren, executive director of NC WARN, which opposed the transfers on safety grounds.

The tracks were supposed to lead to a depository at Yucca Mountain in Nevada, where Congress intended to send radioactive fuel. Instead, the Obama administration cancelled a project that had been criticized as inadequate and

opposed by many Nevadans.

By law, the federal government is responsible for nuclear fuel disposal and once charged electric customers to fund its work. After a lawsuit, the Energy Department quit collecting that fee this year.

No one is certain what comes next. Federal timelines would put off many big decisions about a permanent resting place for the waste until long after Obama leaves office.

Industry officials are praising even limited signs of forward movement, including federal interest in a train.

"This is a good timing," said Everett Redmond, who works on waste policy for the Nuclear Energy Institute, an industry lobbying group. "You don't want to wait until you're close to opening the facility to try and design a rail car."

DOE responds to advisory board recommendation on groundwater studies

Oak Ridge Today
August 27, 2014

[LINK](#)

The U.S. Department of Energy's Oak Ridge Office of Environmental Management has responded to a recommendation made earlier this year by the Oak Ridge Site Specific Advisory Board.

In May, the federally appointed citizens' panel recommended that DOE conduct additional groundwater studies to address any potential offsite migration of chemicals or radioisotopes from DOE's Oak Ridge Reservation. The recommendation focuses on developing information that fosters a better understanding of potential impacts of groundwater contamination related to risk mitigation, groundwater remediation, and long-term stewardship.

In 2013, DOE, the Environmental Protection Agency, and the Tennessee Department of Environment and Conservation held a series of workshops to prioritize groundwater pathways on the ORR. Together the agencies created a groundwater strategy document that described the potential for releases from waste disposal sites and storage areas. The document also prioritized known groundwater plumes, concentration of contaminants, contaminants of concern, and potential health risks.

In addition to recommending additional groundwater studies, ORSSAB asked DOE to review the existing monitoring well network for proper placement and to abandon any wells that are in the wrong location or lack structural integrity.

ORSSAB also recommended additional baseline funding to perform interpretive analysis to better understand potential plume migration and effects on offsite receptors.

ORSSAB members believed the plume rankings were subjective and suggested the development of process knowledge documents for each plume. The board continued that the ranking methods should be reviewed to confirm or revise the rankings.

In its response, DOE said it has proceeded with the offsite groundwater migration studies working in cooperation with EPA and TDEC. DOE has planned budgets for three years for the project studies, and it has planned budgets for follow-on years for additional activities that may result from the studies.

DOE acknowledged the plume rankings may be subjective, but they were agreed to by DOE, EPA, and TDEC and will remain unless conclusions from the additional studies warrant revision of the rankings.

Nevada lawmakers allocate \$1.4M for next phase in Yucca Mountain nuclear waste dump fight

Associated Press via The Republic
August 27, 2014

[LINK](#)

LAS VEGAS -- Nevada lawmakers approved funds Wednesday for a new phase in the state's 25-year fight to prevent the federal government from burying the nation's nuclear waste beneath an ancient volcanic ridge about 90 miles northwest of Las Vegas.

The legislative Interim Finance Committee allocated almost \$1.4 million to kick-start legal and technical work ahead of expected Nuclear Regulatory Commission hearings on the proposed Yucca Mountain repository.

"Approval of this request will send a message to the pro-Yucca forces that Nevada is not backing down," Nevada Agency for Nuclear Projects chief Robert Halstead told the panel, which included several state senators and assembly members representing nine rural Nevada counties that favor opening the repository.

Not everyone supported such a blunt message.

Assemblyman James Oscarson, R-Pahrump, said he wanted to make it clear his vote was to fund a research into safety concerns about the dump. Oscarson represents Nye County, a vast rural area where the repository would be located and a party in a lawsuit that led an appellate court to rule that federal regulators have to make a decision whether the Yucca Mountain project lives or dies.

Halstead and Marta Adams, a chief deputy state attorney general, told the panel that the state needs to prepare in coming weeks to respond quickly to the publication beginning in November of a five-volume repository safety evaluation report.

A three-judge panel of Atomic Safety and Licensing Board judges could begin hearings early next year, Halstead said.

The full slate of licensing hearings is expected to take at least three years.

Congress approved the site in 2002 as a deep geologic repository, despite opponents' claims that transporting and entombing 77,000 tons of the nation's most radioactive spent nuclear fuel from 100 nuclear reactors in 31 states around the country posed irreversible safety and engineering risks.

Eight years later, the project was mothballed by the federal Energy Department after President Barack Obama was elected and U.S. Sen. Harry Reid, D-Nev., became Senate majority leader. Congress withdrew funding and the Nuclear Regulatory Commission suspended licensing work.

A federal appeals court in Washington, D.C., ruled last year the NRC must complete the process and either approve or reject the Energy Department repository licensing application.

Estimates vary, but the amount of money spent drilling a massive U-shaped test tunnel and studying the geology and suitability of the site since the site was identified in 1982 has been put in the tens of billions of dollars.

Authorities say some \$9.5 billion of that funding came from a fee that electric customers paid for 31 years to local utilities to fund construction of a federal nuclear waste site. Officials say that fund now amounts to about \$37 billion.

Opposition to the repository was once nearly universal among Nevada state elected officials.

Potential Manhattan Project park sites in Hanford

The Oak Ridger

August 26, 2014

[LINK](#)

On July 21, 2014, Fanny (my wife) and I journeyed to Hanford, Wash., to explore the future Manhattan Project National Historical Park potential sites there. I had explored the Los Alamos, N.M., potential sites and the Los Alamos National Laboratory potential sites last year. Hanford was the last of the three sites (Oak Ridge is also one of the sites) and I wanted to understand what the park would consist of there.

We also were able to include a short vacation trip where we explored a few national parks. Included in our list was the one that was on my "bucket list" for several years, Yosemite National Park!

Returning to the subject of the Manhattan Project National Historical Park, the bill for creating the park passed the U.S. House of Representatives on May 22, 2014, when it was included in the National Defense Authorization Act of 2015. U.S. Rep. Richard Norman "Doc" Hastings and his colleagues, Rep. Ben Ray Lujan, a New Mexico Democrat, and Rep. Chuck Fleischmann, our own Tennessee Republican representative, moved the legislation through the House.

It is good to see bipartisan support and it is great to see our own Rep. Chuck Fleischmann taking a lead role. I am forever grateful to him for making it possible for me to testify in the U.S. House of Representatives last year when the bill was being considered in committee there.

It was a wonderful experience. Helen Hardin, Congressman Fleischman's senior policy advisor, arranged for some very exciting tours for me during that trip, which included a behind-the-scenes tour of the Library of Congress and an opportunity to photograph the Capitol from the dome of the Library of Congress!

Oak Ridge Mayor Tom Beehan was in Washington, D.C., when the bill was

being considered this year and he testified in both the House and Senate hearings for Oak Ridge. He also testified at the earlier hearings last year in the Senate.

The bill now must pass the Senate. We hope that will be the case later this year.

Efforts are underway by the staff members of the senators of the three sites (Hanford, Los Alamos and Oak Ridge) to find the best method to pass the bill. U.S. Sen. Lamar Alexander's staff as well as Sen. Maria Cantwell of Washington have both contacted me for assistance as we work through the process. Jennifer Ziegler, of Cantwell's staff contacted me last week regarding the version of the bill being created. She was interested in how we might assure that all three sites could agree on the wording of the bill.

Getting a chance to see exactly what was potentially to be included in the park at the Hanford Site was a good next step for me. Besides, I had wanted to tour the B-Reactor for some time now and it rounded out my understanding of just how the three sites were similar and how we differed.

I was also privileged to be asked to make a presentation on the history of Oak Ridge at the Richland (Wash.) Public Library while I was there to tour the Hanford Site. The auditorium of the library was full -- they had to bring in extra chairs. The presentation was scheduled for 6:30 p.m. Monday. Our flight was turned around about 30 minutes outside of Minneapolis, Minn., and we were delayed for three hours while they changed airplanes. I arrived at the presentation 15 minutes before the start time! Whew! The presentation was covered by the local television station and has been posted online. You can see it at: <http://richlandwa.swagit.com/play/07232014-990>.

It was good to meet several people who attended the presentation there in Richland that had stories to tell of their work at the Hanford Site. Their stories struck me as being so very similar to our own experiences in Oak Ridge.

Our oral histories are online at <http://cdm16107.contentdm.oclc.org/cdm/landingpage/collection/p15388coll1> and the Atomic Heritage Foundation's Voices of the Manhattan Project <http://manhattanprojectvoices.org/>. The tremendous value of these firsthand accounts just cannot be estimated.

The video interviews can be used to create excellent documentary films. Such films will enable our history to live on for the next generations and will be exceptional teaching tools for our schools where the history of the Manhattan Project may not often be included very effectively in the curriculum.

Two others from Oak Ridge also went on the trip to tour the Hanford Site. They were delayed leaving Knoxville and missed a Dallas connection and did not arrive in Richland, Wash., until late Monday night. So, it could have been worse for me, I could have taken the same flights they did.

On Tuesday, we started early at the location where the "B" Reactor public tours start. There was a group taking the public tour already gathering when we arrived. They were assembled in the room where the orientation is given to each tour before they embark on the journey to see the B Reactor. Excellent photographs lined the walls. Wonder who their "Ed Westcott" was who made all their photos?

We were met by Russel J. Fabre, the B Reactor tour manager and Kirk D.

Christensen, B Reactor Preservation Project manager. Colleen French, Department of Energy-Richland, arranged for this visit. She set up the tour of the site to include the B Reactor and also arranged for meetings where we could learn more about the public tours, as well as other historic preservation activities being worked at Hanford.

These arrangements were exceptionally helpful. Colleen also arranged for us to visit the Hanford High School building at old Hanford, the bank building at old White Bluffs, the Bruggemann ranch structure and the historic 1908 Hanford Irrigation Project Pump House on the river's edge where we had lunch.

We also toured the Hanford REACH Interpretive Center while there. Hilferty Museum Planning and Exhibit Design, the company who has the contract with DOE EM (environmental management) in Oak Ridge for the design of the K-25 History Center at the East Tennessee Technology Park's Heritage Center, has just completed the design and installation of a portion of the REACH center.

I wanted to see that to get a better feel for the type work they have done. I was pleased with what I saw. Karen Doughty, DOE EM's person responsible for the historic preservation of K-25, went with us.

She and Colin Colverson, the DOE-Oak Ridge person with lead responsibility for the Manhattan Project National Historical Park here in Oak Ridge, also went with us on the trip to Hanford. They both toured the site with Fanny and me on Tuesday and attending meetings later in the week to better comprehend how the Hanford Site is progressing with historic preservation.

In the next Historically Speaking column we will take you on a tour of the huge 586 square mile Hanford Site. We will see the B Reactor up close, and we will see historic remains of the old towns of Hanford and White Bluffs.

SRS completes dissolution of 'Experiment' fuel

The Times and Democrat

August 31, 2014

[LINK](#)

AIKEN - The Department of Energy's primary contractor at the Savannah River Site, Savannah River Nuclear Solutions, has successfully completed the dissolution of the Sodium Reactor Experiment used nuclear fuel campaign, dissolving 147 bundles of used nuclear fuel from L Area Disassembly Basin.

DOE evaluated the fuel stored in L Area and determined the SRE fuel was not suitable for long-term wet storage and, as a result, authorized the processing of this fuel.

SRE was an experimental nuclear power reactor built by Atomics International at the Santa Susana Field Laboratory near Simi Valley, California. The reactor operated from 1957 to 1964. In 1957, SRE became the first nuclear reactor in the United States to produce electrical power for a commercial power grid. SRE was shut down in 1964. The SRE fuel slugs were prepared for disposition by AI in the late 1970s and then shipped to SRS for storage in L Basin.

"The fuel was made of a thorium-uranium alloy," said George Zachmann, acting environmental management business manager for SRNS. "The high uranium-233 content made the uranium not suitable as feed material in the fabrication of fuel

for nuclear energy power plants like the Tennessee Valley Authority, a disposition path taken with much of the down blended high enriched uranium at the Site. DOE made the decision to dissolve the SRE fuel and directly disposition the resulting solution as waste."

The fuel was dissolved with other high aluminum fuel from L Area and the resulting solution will be transferred directly to the Defense Waste Processing Facility at SRS for disposition through the vitrification process.

H Canyon was originally constructed to produce nuclear materials in support of our nation's defense weapons systems. Today, this facility is the nation's only hardened nuclear chemical separations plant still in operation in the United States. It is playing an important role in the efforts to eliminate or minimize nuclear materials through safe stabilization, treatment and/or disposition of DOE's Environmental Management program's nuclear materials.

Oak Ridge biomass steam plant already closed

The Oak Ridger

August 26, 2014

[LINK](#)

(AP) -- When Oak Ridge National Laboratory's Biomass Steam Plant opened in 2012, it was supposed to save the lab money while also cutting pollution. But the plant had to be shut down after just a year and a half when a systems check found that some parts were already failing.

The Knoxville News Sentinel reports Johnson Controls handled the financing and construction of the \$60 million plant that turned wood chips to a gas used to fuel a boiler. Under a special contract, the company was to be paid from the lab's energy cost savings, originally estimated to reach \$260 million over two decades.

Johnny Moore is the Department of Energy's site manager at the laboratory. He said that after the biomass plant was shut down, Johnson Controls brought in a temporary boiler to replace it. But that boiler and other backup systems at the lab don't use biomass as fuel and don't meet the terms of the Energy Savings Performance Contract.

Moore said DOE is in discussions with Johnson Controls about a long-term solution, but he would not go into details.

Johnson Controls spokeswoman Monica Zimmer declined to comment.

DOE entered into the contract with Johnson Controls in 2007. In addition to the Biomass Steam Plant, Johnson Controls was to conduct a number of other projects that together were designed to cut the lab's fossil fuel consumption by 70 percent.

Moore said Johnson Controls currently is not being paid for savings associated with the steam plant, which was designed by Nexterra, because the company is not meeting the terms of the contract. The company is being paid for other successful projects that are part of the performance contract, though.

A statement from DOE about the biomass plant cites "problems with the materials of construction." Moore said that the wood-burning operations created

weak organic acids that caused thinning in some of the key vessels and transfer lines.

Moore said DOE looked closely at the technologies to be used before approving the biomass plan. He said similar systems have been used successfully, particularly in Canada.

An August 2013 audit by the Energy Department's Office of Inspector General was critical of the plant's "planning and operational costs." The project was supposed to pay for itself within 15 years, but the audit found it might incur as much as \$67 million in unnecessary costs over its lifetime.

Deputy Energy Secretary Dan Poneman, who was in Oak Ridge recently, said of the biomass plant, "When you do things that are innovative, it entails risk. We're going to keep with it. Biomass is a huge priority."

