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Tri-City Herald

Ghost town bank lives again at nuclear reservation. You can visit

BY ANNETTE CARY

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May 20, 2018

RICHLAND, WA

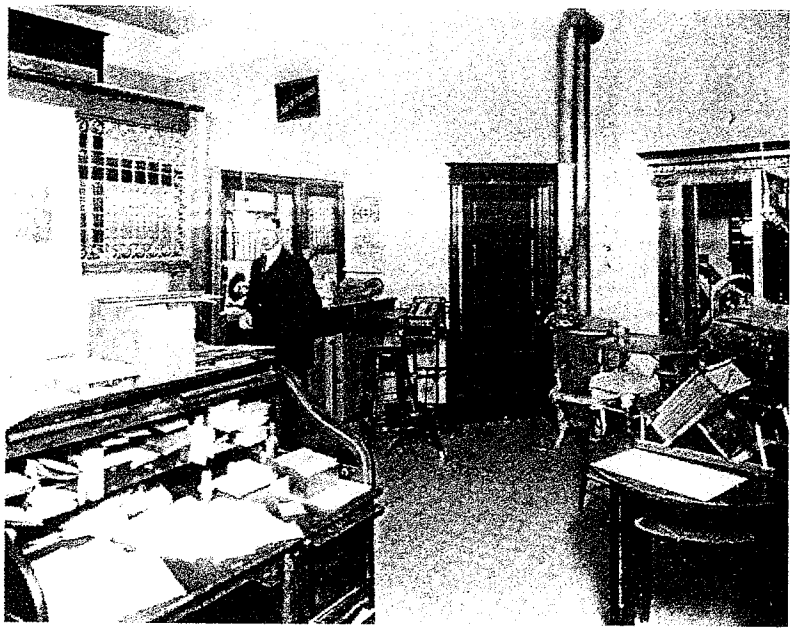
The tiny bank of the White Bluffs ghost town looks as it did when its doors opened circa 1908, welcoming customers into an upscale building that reflected the growing wealth of the region.

It's the only building that remains standing in White Bluffs, once the social and business center for the farming communities of the Hanford area.

For the first time, visitors will be able to step inside the historic structure north of Richland when this year's National Manhattan Project Historical Park tour season starts this week.

The government tore down almost all buildings after it seized 670 square miles of grass and brush of the shrub steppe landscape along the Columbia River, displacing settlers and Native Americans.

A then-secret nuclear reservation would be created to produce plutonium as the Allies raced the Nazis to develop the world's first atomic bombs during World War II.



The interior of the White Bluffs Bank is shown in a photo that likely dates to the early 1920s. A teller stands behind the counter as the door to the banks vault, far right, is left open for the photograph.

Courtesy Department of Energy

"We almost lost her," said Colleen French, the National Park program manager for the Department of Energy at Hanford.

Before an extensive rehabilitation of the 25-by-30-foot bank began, the southeast wall had collapsed.

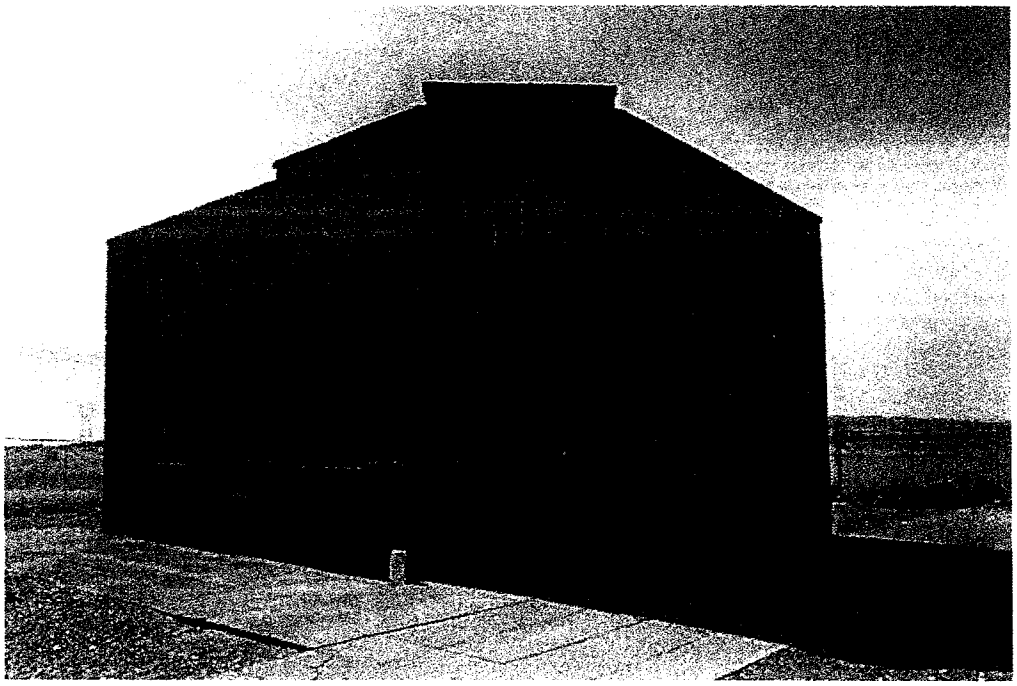
Inside, you could see the sky through the roof where its trusses had fallen. You had to be careful where you walked so as to not fall through to the foundation where pieces of the floor were missing.

"Most people considered it too far gone," French said.

But its supporters persevered on a multi-year rehabilitation project.

It was that important, they believed, to help people understand the sacrifices made during WWII.

By 1943, the people of White Bluffs, which had about 1,500 residents, had sent most of its able-bodied men off to war.



The bank in the ghost town of White Bluffs on the Hanford nuclear reservation has been rehabilitated and can be seen on Manhattan Project National Historical Park tours.

Courtesy Department of Energy

Then the U.S. government told them it needed more from them.

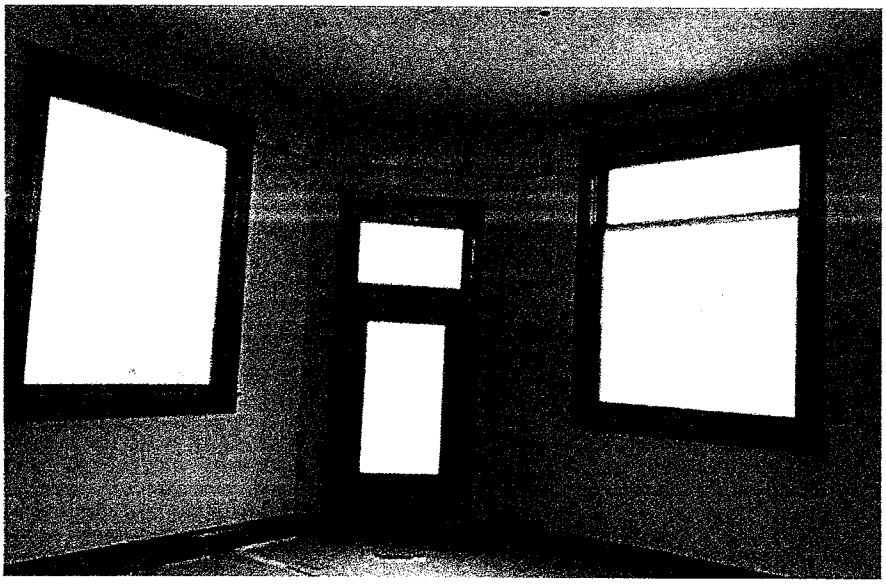
"Their story, their sacrifice, is why our team was focused so much on getting this (bank) rehabilitated," she said. "We wanted to honor the people of the town site.

"They had already given their sons to the war effort and then they were to give their homes, their farms, their life's work for a top secret government project," French said.

Her team wanted a place to take visitors to help them visualize life before the Manhattan Project and help them understand what residents gave up, packing up and leaving just weeks after the government told them their property was being seized.

White Bluffs once had a hotel, newspaper, ice cream parlor, dentist office, law office, real estate office, car dealership and gas station.

But the bank was the only business in town with double-wide sidewalks, which met at the bank's front door, giving people a place to chat.



The interior walls of the White Bluffs Bank have been restored to their original blue with gold-colored trim at the top.

Courtesy Department of Energy

As plans were made to rehabilitate the bank, French's team was warned that it could do more harm than good. The building was in such fragile condition that work on it could cause it to collapse.

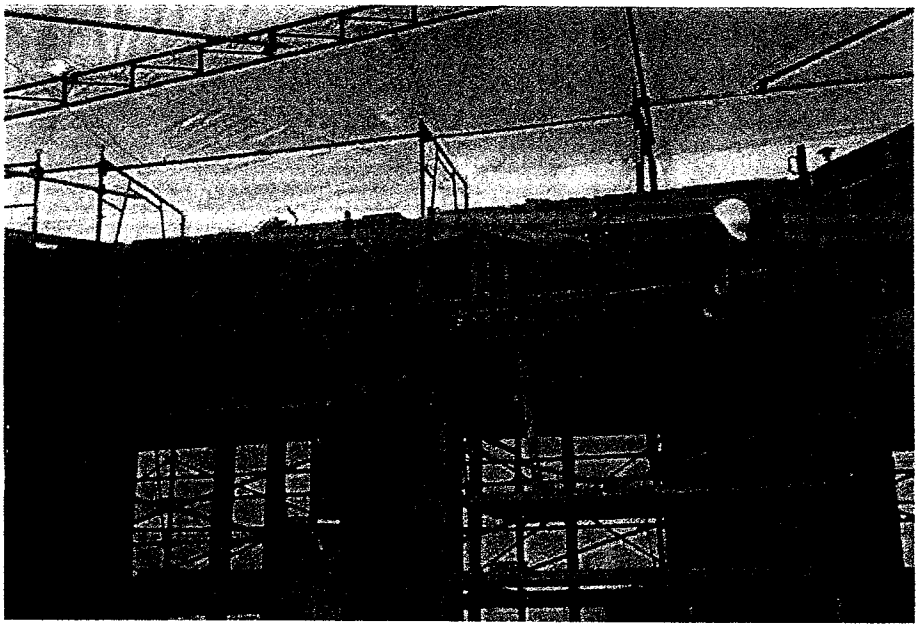
"DOE had never done any maintenance on the building and it had deteriorated significantly over the years," French said.

After each strong wind storm, her team went out to the bank near the Columbia River, hoping to find it still standing.

It was not until Una Gilmartin, a structural engineer and historical preservationist, came up with a plan to deconstruct the most damaged sections of the building and then rebuild that it began to look like the building could be saved.

The failed roof, the parapet that rises at the front of the building, the floor and other collapsing areas were removed, and the walls braced.

As the building was reassembled, rebar and grouting were added inside its walls, which were constructed of an early form of concrete block with two interlocking sides that were fitted together.



The White Bluffs Bank has been rehabilitated, with work that began in 2015 after planning and engineering for the project.

Courtesy Department of Energy

Rebar and beams were added to the roof to tie the building together and keep it from tumbling in an earthquake.

Inside, rain-soaked plaster that had pulled away from the wall was repaired or replaced. Flakes of the robins egg blue interior paint were collected to duplicate the color.

The floor had been covered with remnants of red, white and blue linoleum. Although it could have been replicated, it is not known when the linoleum was added, so the original oak floor was rehabilitated instead.

One of the challenges of the rehabilitation was the bank vault.

The bank is a small building, just large enough for a lobby with a teller's window, a manager's office and the vault.

The vault had been incorporated into the walls of the bank when the building was constructed, and bank managers had bragged that the structure was burglar-proof.

In fact, it was robbed twice. Money from one robbery was never recovered after the suspected robber was killed by law enforcement. Legend has it that he buried the loot somewhere between White Bluffs and Moses Lake.

When the bank was in use, the vault door was surrounded by decorative cast iron. But by the time plans for rehabilitation were being drawn up in 2013, it was long gone.

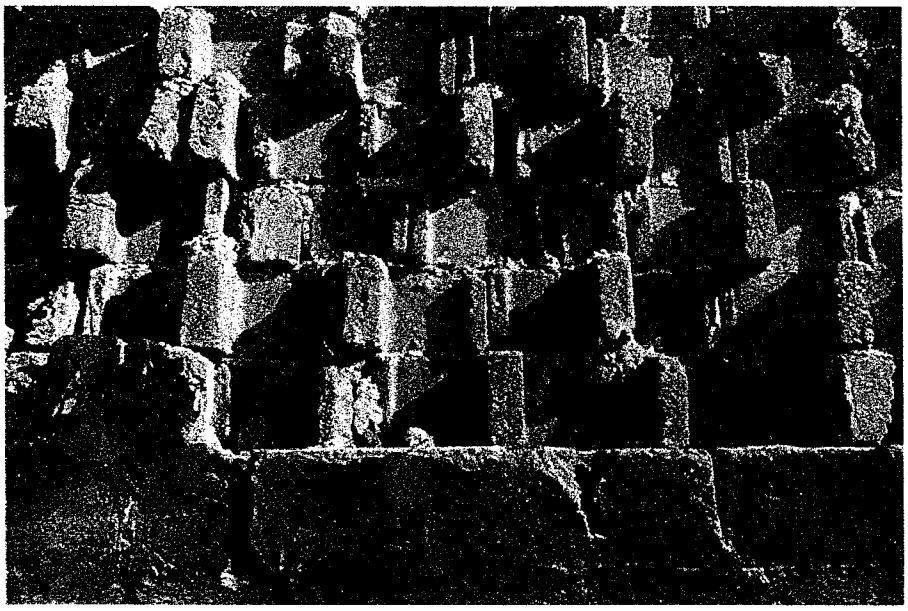
There is one known historical photograph of the interior of the bank. The photo, dating to the early 1920s, was used to search the internet in the hopes of finding a similar decorative surround.

Instead, an exact match was found at a turn-of-the-century bank in Elmira, New York. The design was digitized and an exact replica was cast for the White Bluffs Bank.

Whether the bank will be furnished will be decided by the National Park Service.

"We tried to do the right thing, to have our designs provide for future public access, to make our improvements invisible to visitors and to ensure the building would endure for the next several hundred years," French wrote in an application for a historic preservation award.

Last week the rehabilitation project was given the 2018 Washington State Historic Preservation Office's Valerie Sivinski Award for Outstanding Rehabilitation.



The White Bluffs Bank was constructed from an early form of concrete blocks, with front and back pieces interlocking together.

Courtesy Department of Energy

Visitors to the Manhattan Project National Historical Park at Hanford can sign up for either a bus tour of pre-Manhattan Project facilities or historic B Reactor, the world's first full-scale nuclear reactor.

Tours, which in recent years have been held on selected weekdays and Saturdays, have been expanded to include holidays, including Memorial Day and the Sunday before it, and July 4.

The tour season starts this week and ends mid-November.

Tours leave from an interim visitor center at 2000 Logston Blvd., Richland. Participants on either tour younger than 18 must be accompanied by an adult and a signed release form is required.

To register for the tour telling the story of the lives of settlers and Native Americans before the Manhattan Project, go to tours.hanford.gov/historicTours. Registration for B Reactor tours is at manhattanprojectbreactor.hanford.gov.

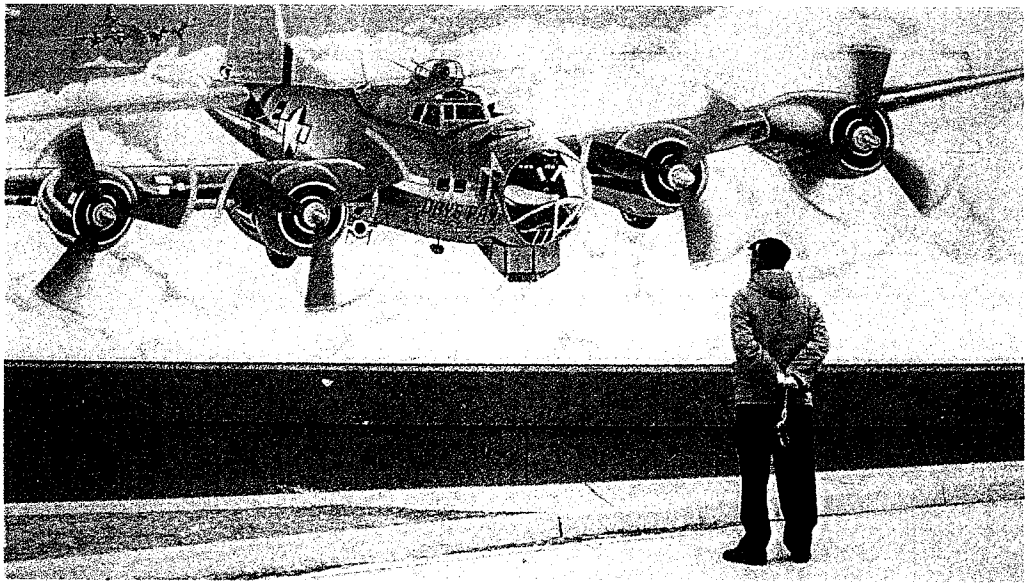
Registration also is available for both tours by phone at 509-376-1647.

Crosscut

A different kind of 'atomic tourist' visits Hanford

by Jenny Cunningham

June 1, 2018



Mitsugi Moriguchi, who survived the atomic bombing of Nagasaki, looks at a mural at Richland High School. (All photos by KCTS 9)

In recent years, a new kind of traveler has arrived in Richland, a town on the Columbia River in Eastern Washington. You could call them atomic tourists. People come from around the nation and the world to see where the plutonium was made that fueled the bomb used at the end of World War II.

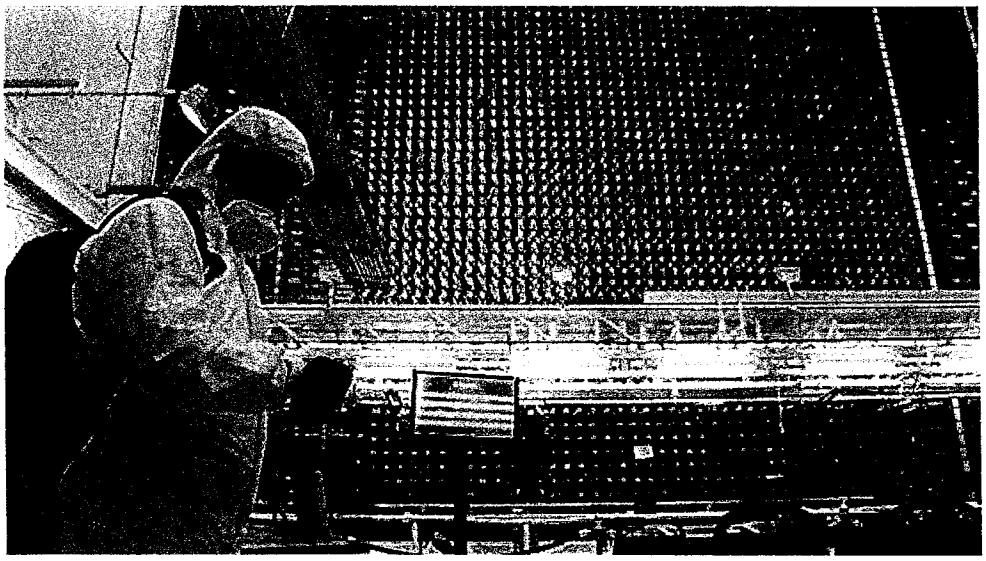
But Richland has never seen an atomic tourist like Mr. Moriguchi.

Of the thousands of people who have toured giant and forbidding B Reactor, the world's first large scale plutonium reactor, Mitsugi Moriguchi is the first person to do so in a white radiation-blocking jumpsuit, hood and mask. It is a startling sight that is perhaps less surprising when you learn why this 81-year-old is so concerned about radiation exposure: He experienced the business end of that Nagasaki bomb. Moriguchi is a hibakusha — Japanese for survivors of the bombings of Nagasaki and Hiroshima. He is

thought to be the first Nagasaki hibakusha who has visited the place that created the plutonium that destroyed his city.

"I came here because I wanted to know what the town that produced plutonium is doing today," Moriguchi said through an interpreter. "And what it plans to go on doing in the future." Moriguchi has long wanted to see B Reactor, the world's first large scale plutonium reactor and he brought the radiation-blocking jumpsuit for that tour. But he also hoped to see Richland, the once-secret city that was built in a hurry to house the scientists and secretaries, engineers and electricians who helped build the Fat Man bomb.

This visit was organized by two Japanese-American professors who are members of the nonprofit group Consequences of Radiation Exposure. It was paid for, in part, by Nagasaki, a city that has advocated for a nuclear weapons ban on the world stage. The travelers from Nagasaki also included a TV crew from NHK, Japan's public broadcasting network.



Mitsugi Moriguchi, thought to be the first survivor of the Nagasaki bombing to visit Hanford, wore a Tyvek suit on a tour of B Reactor, because of concerns about radiation. (KCTS 9)

The timing of this visit is no accident. It comes as America creates content for a new national park dedicated to the development of the world's first atomic bombs at Hanford, Los Alamos and Oak Ridge. Question is, whose story will it tell?

"We learned it was going to become a national park and we in Nagasaki are quite worried. Was it going to become a national park to express pride?" Moriguchi wondered. "Or to promote reflection?"

The Japanese delegation's first taste of Richland didn't offer much in the way of reflection: "Bomber pride" was on full display at Atomic Ale Brewpub. While the NHK crew filmed a mannequin dressed in a gas mask and an "Oppenheimer Oatmeal Stout" sweatshirt, Moriguchi's finger traced down the menu as he tried to sound out some of the eye-popping offerings. "Plutonium Porter? Half-life Hefeweizen?" he asked with equal notes of amusement and amazement.

A Japanese delegation, including Mitsugi Moriguchi, visits Richland High School

His mood became more somber at the next stop, Richland High School, known as the "Home of the Bombers." He learned that the school has two mascots, a B-17 bomber that Hanford workers donated called "Day's Pay" and a mushroom cloud. "Shocked," he muttered as he watched kids play basketball on a gym floor emblazoned with a mushroom cloud under a banner that read "Proud of the Cloud! Go Bombers."

Moriguchi, himself a teacher for 40 years, tried to explain to students why he didn't think a mushroom cloud was a proper mascot for any school, especially on a gym floor. "Under the mushroom cloud people died," he said. "So it is like stepping on graves. I can't forgive that."

"What he doesn't understand is how much the Day's Pay and the mushroom cloud mean to us," said student Ryan Piper. "It means where we were and where we are going. I'm sure it brings back some bad stuff but there you go."

As Shakespeare put it, there's the rub. In Richland and Hanford plutonium is patriotic — it fueled the bomb that, in the general U.S. telling, gave the allies a victory in World War II. The narrative told in Richland can be summed up by a video shown before the B Reactor tour: It ends with the Nagasaki mushroom cloud which the announcer says is, "one of the marvels of the 20th century."

From Moriguchi's perspective, plutonium is death and his visit to Richland triggered memories so strong, he cried as he described walking across Nagasaki with his mother a few days after the bomb. He was 8 years old. "There was nothing there," he said gesturing and looking out as if he still saw the vaporized neighborhoods. "But there was smoke rising here and there. It was the smoke of the cremated bodies of those who died."

A rare photograph taken from the ground of the atomic bomb that America dropped on Nagasaki on August 9, 1945. (Nagasaki Atomic Bomb Museum)

No one in his family was among the estimated 70,000 citizens killed by the Nagasaki bomb. People called them "lucky". But over time, the family's luck ran out. Moriguchi's brother and his bride, who had both been near ground zero when the bomb exploded, tried to have children. "After they were married they had a baby. Only it wasn't a baby. It was a lump of flesh. The first two came out like that."

Moriguchi's oldest sister was the first to get sick. "Breast cancer, colon cancer, uterine cancer, her whole body was ravaged," Moriguchi remembered. "She was in pain, so much pain. And she died in great anguish."

Story Continues Below

Mitsugi Moriguchi, bottom right, and family members

Moriguchi believes radiation caused the cancers that killed five of his six siblings. While that can't be proven, it is certain that Nagasaki's radiation came from plutonium that was made at Hanford and possibly in B Reactor. Which helps explain why Moriguchi and the two professors put on Tyvek suits, masks and booties before they got on the bus that brought them to a private reactor tour. The suits block radiation. Concerns about radiation also prompted the Japanese public broadcasting organization NHK to order its crew not to cover the reactor tour.

As he looked up at the massive front face of the reactor, Moriguchi held up a pen-sized detector that measured radiation. He told tour guide, John Fox, that, if they were to stay in the reactor for a year, the levels are unsafe. "Well, we won't keep you here for a year," Fox replied with a smile. Fox, who worked as an engineer at Hanford for decades, deemed the jumpsuits "totally unnecessary." The Department of Energy says it monitors radiation levels in B Reactor and that they are safe.

Moriguchi eagerly followed Fox through the soaring reactor, asking questions about his work there, which included removing spent fuel rods from the reactor. In the control room, the two men compared

how the bomb had changed their lives. Fox listened as Moriguchi talked about how most of his family died. Fox explained that he had just turned draft age when America dropped the bomb. "It saved me from being drafted and participating in an invasion of Japan and ending up there dead on a beach," Fox said.

At the end of the tour, Moriguchi was impressed with the science and technology on display in B Reactor, but disappointed that no mention was made of the suffering caused by the 21-kiloton bomb that America dropped on Aug. 9, 1945. "I had been nursing a hope that the reactor was open to the public as a site for critical self-reflection," Moriguchi said. "Not just a site of vaunted accomplishment." He expressed hope that the new national park will remedy that.

The B Reactor, under an act of Congress, became part of the Manhattan Project National Historical Park which was established in 2015 to preserve three sites where the United States developed atomic weapons. It is an unusual partnership between the Park Service and the U.S. Department of Energy. The former director of the National Park Service had said the agency wants exhibits to delve into the damage atomic bombs caused in Japan. But at the local level, the Park Service did not take advantage of the opportunity to talk to the first survivor from Nagasaki to visit Hanford. We were with the local administrator in her office just feet away from Moriguchi who was in the lobby — and we asked if she would greet him-and she said she did not plan to do so. She declined our request for an on-camera interview.

"I would have liked to have had a discussion with the Department of Energy and the National Park Service too," Moriguchi said at a press conference that wrapped up his visit.

As one of the only living witnesses who experienced what nuclear weapons can do, he has spent 72 years telling people about the aftermath of the bomb. And he is used to dealing with audiences who don't want to hear everything he has to say. But Moriguchi is not giving up on his big goal: to prevent nuclear weapons from ever being used again. As he returned to Nagasaki, he hoped to return to Richland someday to find a more inclusive viewpoint.

"I have nothing against patriotism! But I want people, in addition to loving their country, to love human beings," he said. "To love humanity."

Tri-City Herald

Old farm warehouse may be saved as part of Hanford history

June 18, 2018 08:26 AM

RICHLAND, WASH.

One of Washington state's most endangered historic places is located on the Hanford Nuclear Reservation near Richland. That's according to the Washington Trust for Historic Preservation.

The long warehouse along the Columbia River was once owned by farmers Paul and Mary Bruggemann.

The Tri-City Herald reports that in 1943 the family was given 30 days to leave because the government needed their land for a secret World War II project.

Hanford made the plutonium for the atomic bomb dropped on Nagasaki, Japan.

Historians say the warehouse represents all people who were evicted from their lands in 1943.

But little has been done to preserve the warehouse.

Historians say the building could be saved and serve as an entry point for visitors to the Manhattan Project National Historical Park.

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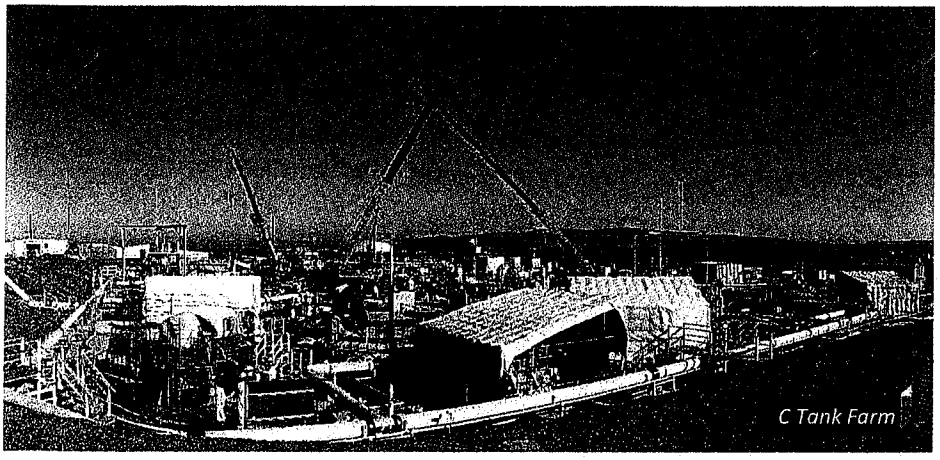
Hanford Fact Sheet

DRAFT WASTE INCIDENTAL TO REPROCESSING EVALUATION FOR CLOSURE OF C TANK FARM


C Tank Farm

Overview

The U.S. Department of Energy (DOE) is seeking public comment on its Draft Waste Incidental to Reprocessing (Draft WIR) Evaluation for Closure of Waste Management Area C (WMA C). WMA C is in the central part of the 560-square-mile Hanford Site, which is located in southeastern Washington state.

The Draft WIR Evaluation is an important step toward closure of the 16 single-shell tanks in Hanford's C Tank Farm. C Farm is one of Hanford's 18 tank farms that have a total of 177 underground tanks. DOE has retrieved more than 1.7 million gallons of waste from the tanks in C Farm (approximately 96 percent of the waste volume and key radionuclides) and transferred it to newer double-shell tanks. Closing the C Farm tanks would be a significant achievement in the Hanford cleanup mission.

The Draft WIR Evaluation would, if finalized, provide the basis for a determination that the retrieved tanks, ancillary structures, and any remaining residual waste in WMA C can be managed as low-level waste. This determination would be the first step in a regulatory process that involves filling the tanks with a concrete-like grout, placing an engineered surface barrier above them and their ancillary structures (e.g., transfer piping), and monitoring C Farm to ensure the integrity of the barrier and the tanks.

DOE announced this approach to closing WMA C in its 2013 Record of Decision for the Final Tank Closure and Waste Management Environmental Impact Statement. This approach to closing WMA C would require a final WIR Determination and a Resource Conservation and Recovery Act permit from the Washington State Department of Ecology (Ecology).

DOE Authority to Make Waste Determinations

DOE's regulatory authority to evaluate and determine whether radioactive waste once managed as high-level wastes may be managed as low-level waste comes from the Atomic Energy Act of 1954. DOE's procedures for exercising this authority is found in DOE Order 435.1, Radioactive Waste Management. This Order establishes the requirements for management of all radioactive waste generated by DOE.

Public comment period: June 4-Sept. 7, 2018

HOW CAN YOU GET INVOLVED?

There are several opportunities to learn more about the purpose, scope, and process for the draft WIR Evaluation, and to provide comment on it:

(1) Review the Draft WIR Evaluation online at: www.hanford.gov/page.cfm/WasteManagementAreaC

(2) Attend a public meeting. Presenters from DOE headquarters, the Office of River Protection, the NRC, and federal contractors will provide detailed briefings and answer questions.

Meeting information:

Monday, June 18, 2018
9:00 a.m. – 5:00 p.m.

Richland Public Library, 955 Northgate Drive

(3) Provide comments on the Draft WIR Evaluation and related performance assessment via email or mail during the 96-day comment period ***(June 4 – September 7, 2018).***

Email: WMACDRAFTWIR@rl.gov

Mail: Mr. Jan Bovier
U.S. Department of Energy,
Office of River Protection
P.O. Box 450, MSIN H6-60
Richland, WA 99354

DRAFT WASTE INCIDENTAL TO REPROCESSING EVALUATION FOR CLOSURE OF C TANK FARM

FREQUENTLY ASKED QUESTIONS

Q: Has DOE conducted a WIR evaluation at Hanford or other sites?

A: At Hanford, a WIR evaluation and determination was made regarding the disposal of three gallons of low-activity tank waste as part of a treatability test in 2017. DOE also made a WIR evaluation and determination at its West Valley site in New York. DOE used an analogous waste determination process at its sites in South Carolina and Idaho. (See Appendix A of the Draft WIR Evaluation on "Consideration of the Criteria in Section 3116 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005.")

Q: What does the draft WIR Evaluation show in terms of worker and public safety?

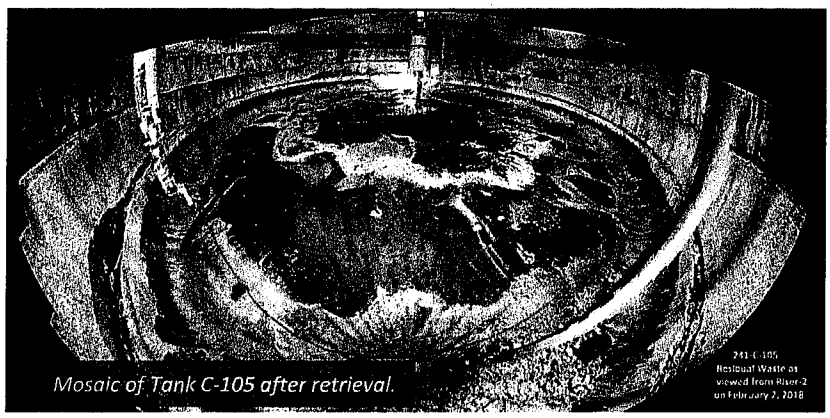
A: It shows that the proposed approach to closing WMA C – stabilizing the tanks and their auxiliary structures with a concrete-like grout and placing an engineered surface barrier above them – would protect workers, the public, and the environment, as the small amount of residual waste in the tanks, once stabilized with grout and covered by a surface barrier, would not pose a significant threat.

Q: What is the Performance Assessment (PA)?

A: The PA is an analysis used to estimate the impacts that stabilized residual waste might have over the next 1,000 years (and beyond). The PA uses detailed analytical models to predict the fate and transport of radionuclides in the stabilized residuals. The analytical results inform DOE about the anticipated risks associated with the closure of WMA C. The PA provides the technical basis for the draft WIR evaluation, as well as a variety of other closure-related documents, corrective measures, and regulatory approvals necessary to close WMA C.

DOE Authority to Make Waste Determinations (continued)

Among the Order's requirements are those which govern the management of reprocessing waste based on its risk and disposal requirements. DOE has successfully closed emptied underground waste tanks that formerly held reprocessing waste at the Savannah River Site in South Carolina and the Idaho National Laboratory.



Mosaic of Tank C-105 after retrieval.

Role of the Nuclear Regulatory Commission (NRC)

DOE has asked the NRC to be a technical peer reviewer for DOE's management of waste incidental to reprocessing. NRC will review the Draft WIR Evaluation and provide a Technical Evaluation Report. DOE will consider NRC's technical review before deciding to issue a final WIR Evaluation. Following consultation with the NRC and consideration of comments from stakeholders, Tribal Nations, and the public, DOE anticipates issuing a final WIR Evaluation in mid-2019.

Additional Regulatory Requirements for Closing WMA C

A WIR Determination addresses only the radionuclides remaining in the residual waste in the tanks and their auxiliary structures in WMA C. Because the residual waste is mixed waste (radioactive and hazardous), WMA C must also meet Washington State's dangerous waste requirements for closure (Washington Administrative Code [WAC] 173-303, "Dangerous Waste Regulations").

Pursuant to the Tri-Party Agreement, closure plans must be approved by Ecology and incorporated into the Hanford Site-Wide Dangerous Waste Permit before DOE can proceed with closing the tanks. Modification of this permit will require a separate public comment process and other proceedings.

For more information on the Draft WIR Evaluation, including how to submit comments, please visit:

www.hanford.gov/pageaction.cfm/calendar?IndEventId=9993

Tri-City Herald

How empty are Hanford's nuclear waste tanks? Not enough, says watchdog

BY ANNETTE CARY

acary@tricityherald.com

June 11, 2018

RICHLAND, WA

A Hanford watchdog group is objecting as the Department of Energy takes the first step toward a plan to fill underground, radioactive waste storage tanks with concrete-like grout and leave them permanently in place.

The C Tank Farm, which would be closed first, has not had enough radioactive waste removed to have tanks filled with grout, said Tom Carpenter, executive director of Seattle-based Hanford Challenge.

"This would be a serious setback for the cleanup at Hanford if the DOE is allowed to turn Hanford into the nation's high-level nuclear waste dump," Carpenter said. "This will be challenged."

Geoffrey Fettus, a senior attorney at the Natural Resources Defense Council, said that "the people of the Pacific Northwest deserve better, and we'll be there with them opposing this unsound and unsafe effort."

DOE has completed a draft evaluation of the waste remaining in the C Tank Farm, concluding that radioactive waste has been removed to the extent possible and that the remaining waste, if grouted in place, would meet requirements for disposing of it as low-level radioactive waste.

The draft evaluation is a step toward classifying the waste as low-level to allow it to be left in place as tanks are filled with grout and then covered with an above-ground cap to prevent precipitation from infiltrating.

An all-day meeting is planned starting at 9 a.m. Monday at the Richland Public Library to explain the draft document and its findings. A public comment period started June 4.

DOE worked steadily to empty most of the waste in the16 tanks of C Tank Farm from 2003 until late 2017.

The federal court-enforced consent decree requires DOE to get as much radioactive waste from the tanks as possible, with an overall goal of getting an average of 99 percent of waste removed from the 149 single-shell tanks at Hanford.

It is roughly the equivalent of a little less than an inch of waste if it were spread evenly across the bottom of a tank.

In the C Tank Farm, about 96 percent of the volume of the waste was removed, according to DOE.

The 16 tanks held 1.8 million gallons of mostly sludge and salt cake when retrieval of solids began. They now hold an estimated 64,000 gallons of waste.

DOE was required to use up to three different technologies at each tank until each technology was no longer able to remove waste under the terms of the federal court-enforced consent decree.

Technologies included various methods to spray high-pressure streams of liquid on the waste within the enclosed tanks and move it toward a pump for removal, different vacuuming systems, and soaking hardened waste in water or a caustic chemical.

Much of the remaining waste is difficult to retrieve safely without exposing workers to radiation or damaging the walls and floor of the tanks, which already are prone to leaking. Some of the remaining waste is clinging to the walls of the tank.

Hanford Challenge is not proposing that workers be put in harm's way, Carpenter said.

In 10 to 20 years, there could be better technology to retrieve remaining waste, provided the tanks have not already been filled with grout to make that impossible, he said.

In the meantime, the solid waste in the tanks could be monitored and DOE could focus on the more pressing issue of removing waste from its other leak-prone, single-shell tanks, Carpenter said. Just one tank in addition to the 16 C Farm tanks has been emptied to regulatory standards.

Grout has not been shown to effectively contain nuclear waste for periods of more than 100 years, according to Hanford Challenge. Water can infiltrate grout, and grout can break down quickly in the presence of caustic materials such as nuclear waste, it said.

Plutonium would reach the groundwater and then the Columbia Point at some point in the future, Carpenter said.

The draft proposal would challenge the consensus that Hanford's tank waste should be vitrified, or immobilized in glass, according to Hanford Challenge.

"Hanford is proposing shortcuts to the cleanup that will save money, but will in the end further damage the environment and impact human health and safety and future generations," Carpenter said.

DOE said in its announcement of the draft report and public meeting that "closing the emptied tanks would be a significant achievement in DOE's Hanford cleanup mission. DOE has a record of safely and successfully closing emptied underground waste tanks at the Savannah River Site in South Carolina and the Idaho National Laboratory."

Public comment will be accepted through Sept. 7 at WMACDRAFTWIR@rl.gov. It also can be mailed to Jan Bovier; DOE Office of River Protection; P.O. Box 450, MSIN H6-60; Richland, WA 99354.

For more information on the report, click on the revolving banner at www.hanford.gov.

Further steps in the regulatory process will be required before the C Tank Farm is closed.

DOE will have to make a decision on whether tanks could be filled with grout or must be dug up. The Washington state Department of Ecology, a Hanford regulator, also would have to agree that tanks could be grouted.

U.S. DEPARTMENT OF ENERGY | OFFICE OF ENVIRONMENTAL MANAGEMENT

Introduction to the Draft Waste Incidental to Reprocessing (WIR) Evaluation for Waste Management Area C (WMA C)

Sherri R. Ross

U.S. Department of Energy

Environmental Management Program

Office of Regulatory Compliance

June 2018

What is a WIR Determination?

A WIR Determination is a decision that waste is appropriate for management as non-high level waste.

The WIR Evaluation is developed to demonstrate that the stabilized waste residuals, the waste tanks, and the ancillary structures (including integral equipment) in WMA C at the time of closure meet the WIR criteria and, therefore, are not high-level waste.

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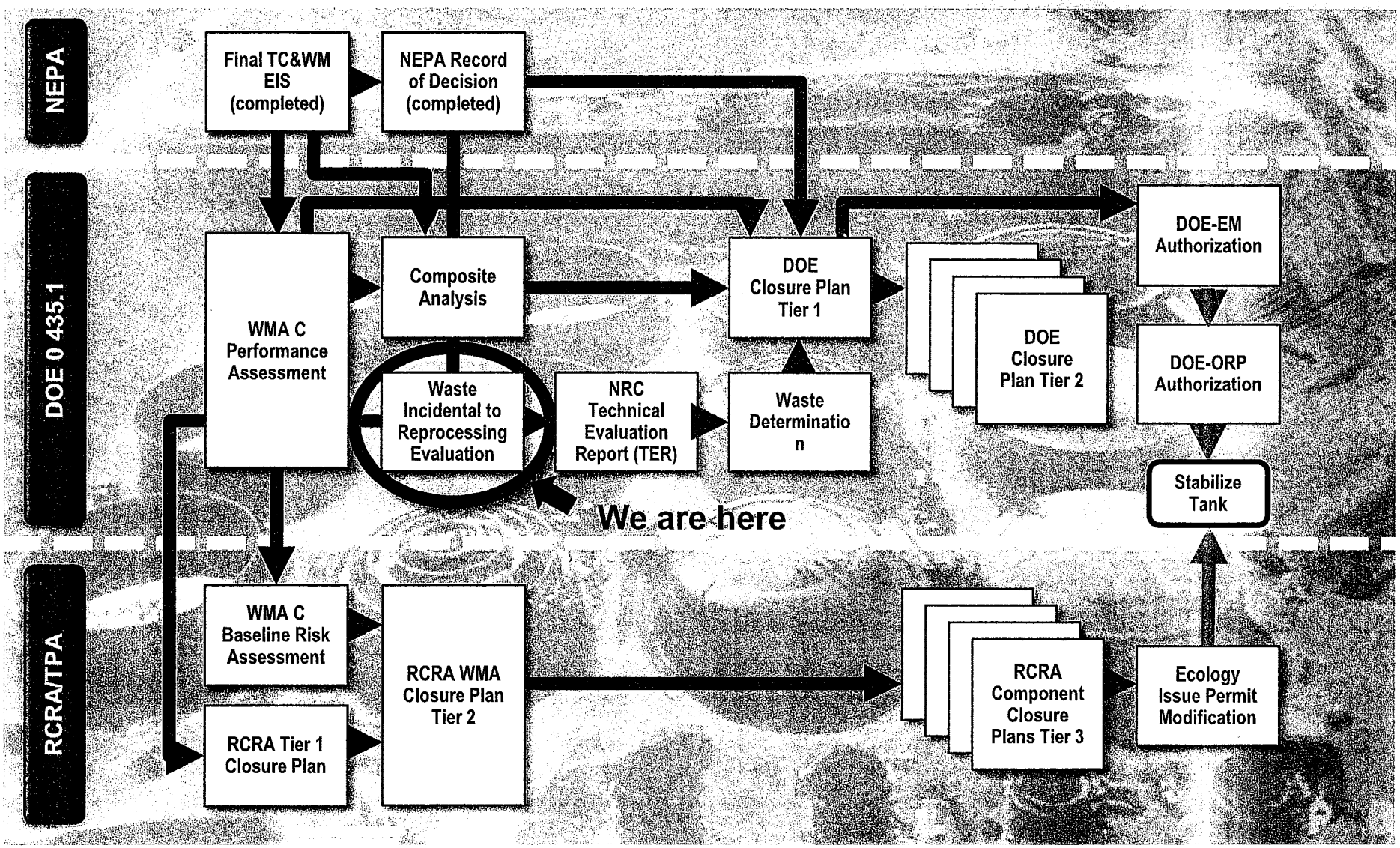

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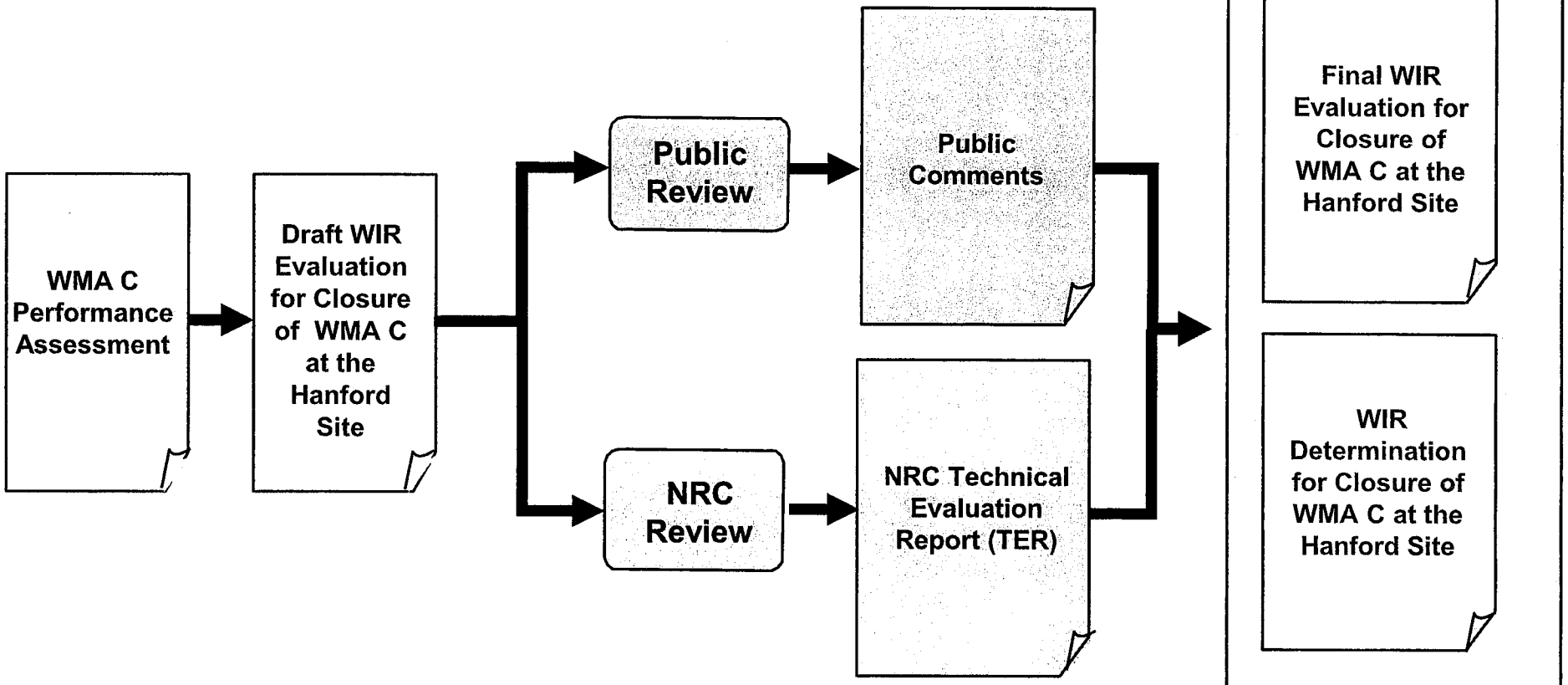

NRC consultation ~ 9 month open public process

DOE Actions Nuclear Regulatory Commission Public

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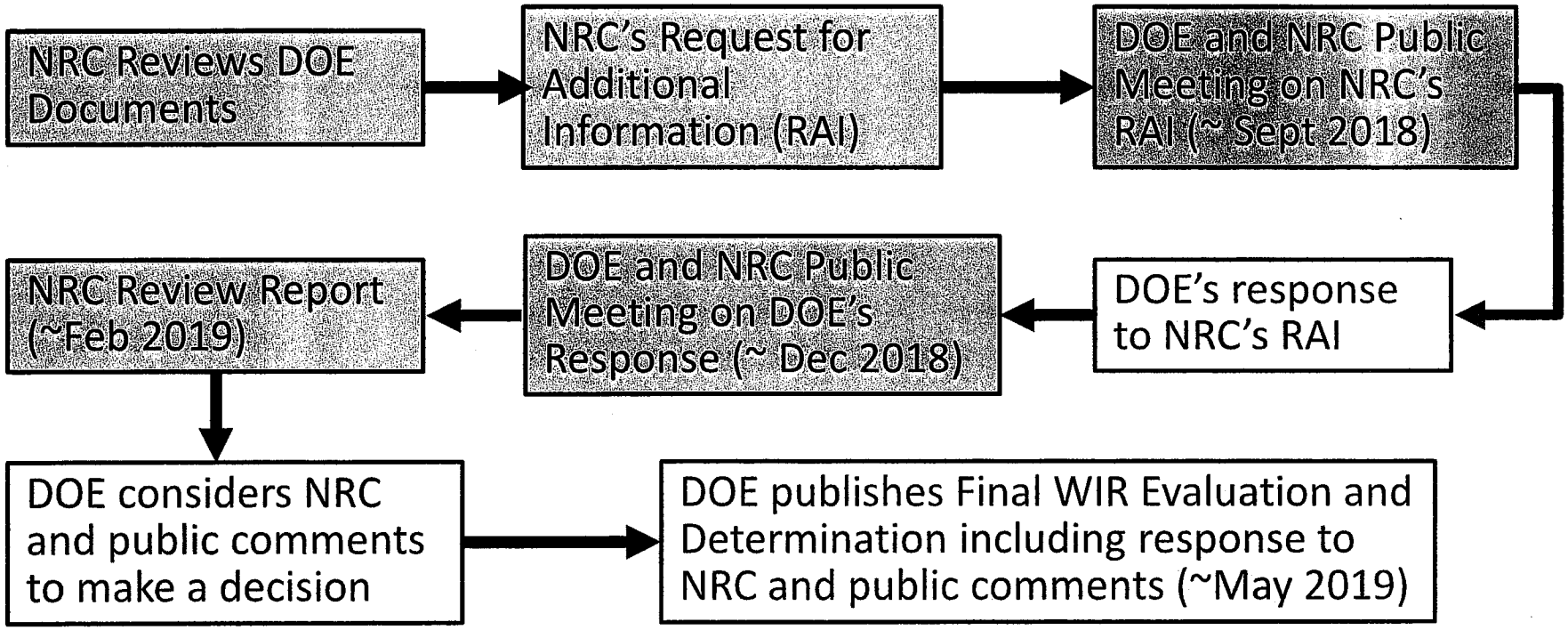

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Protecting People and the Environment

NRC's Review of the Hanford WMA-C Draft Waste Incidental to Reprocessing (WIR) Evaluation

June 18, 2018

David Esh, Maurice Heath, Hans Arlt, Lloyd Desotell
Division of Decommissioning, Uranium Recovery and Waste Programs
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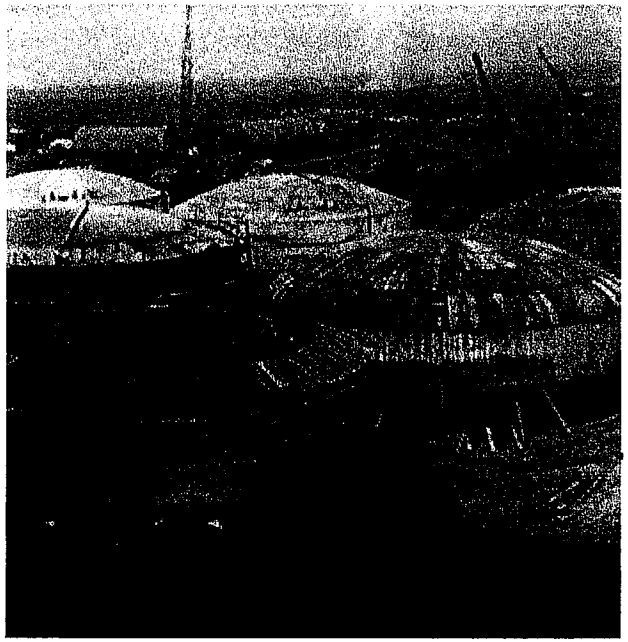

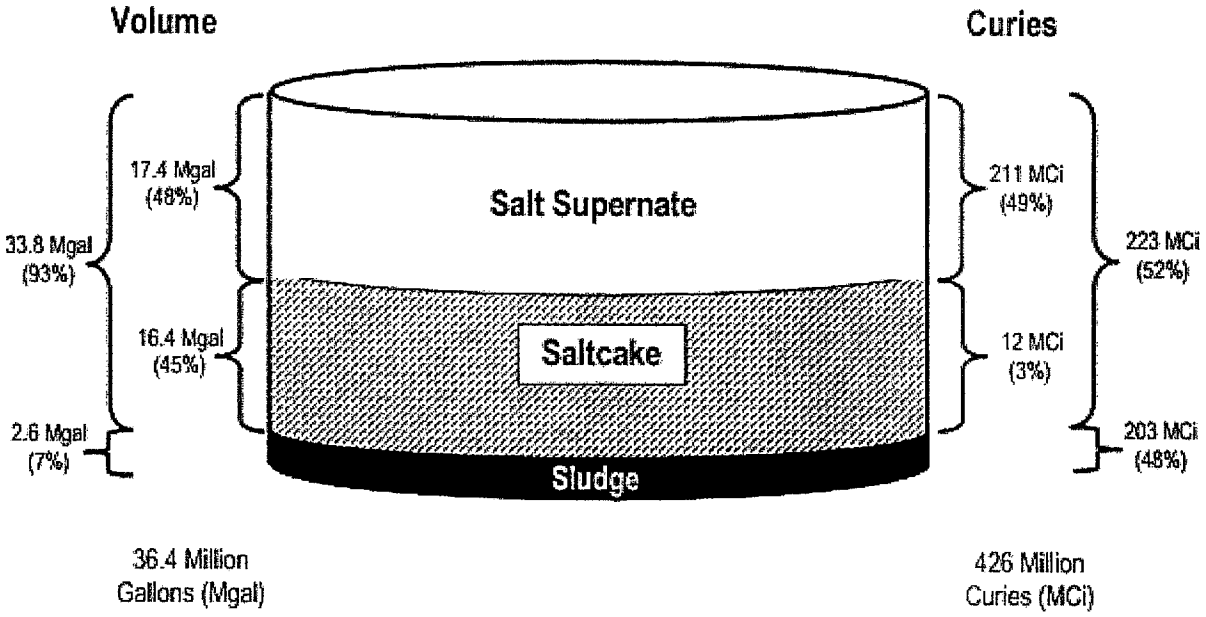

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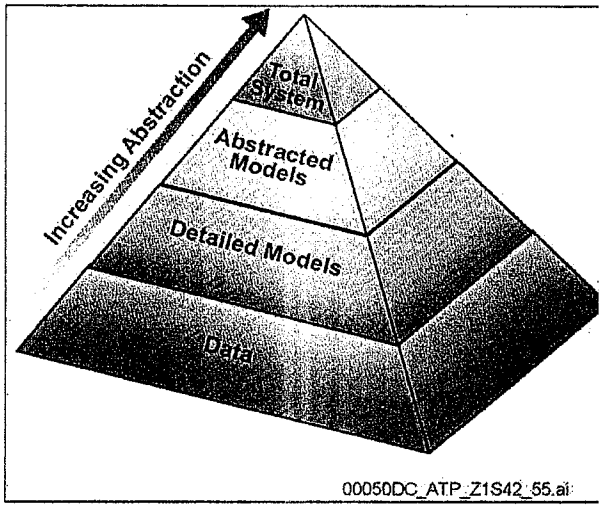

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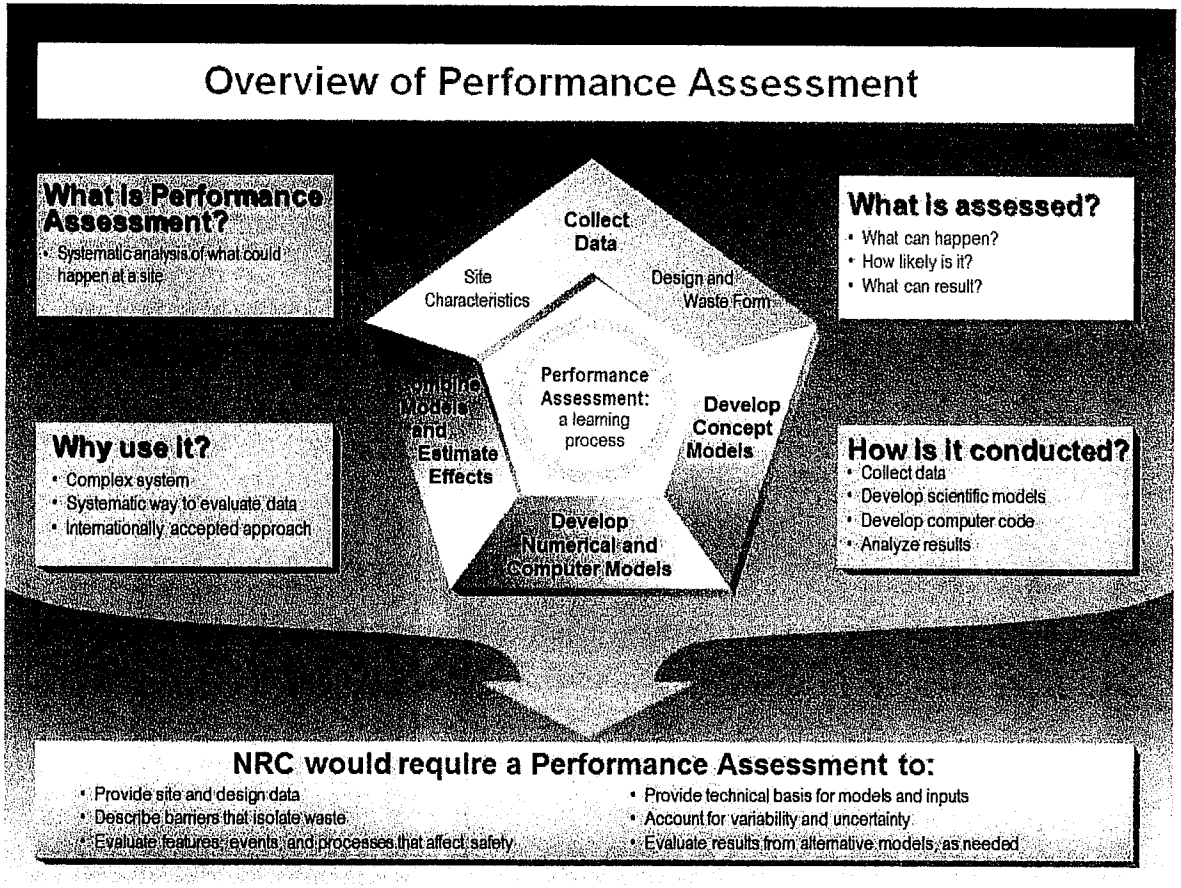

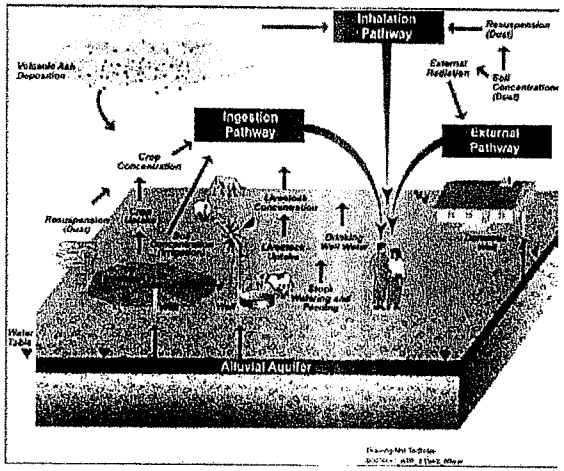

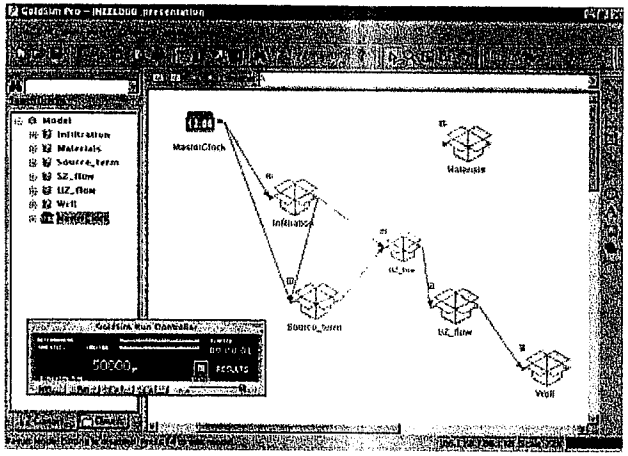

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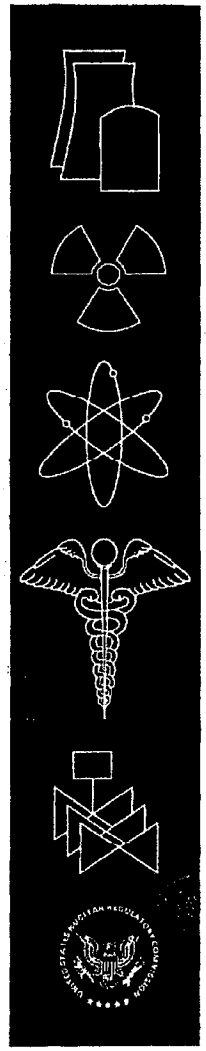

NUREG-1854

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Draft Final Report for Interim Use

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Tri-City Herald

How empty are Hanford's nuclear waste tanks? Not enough, says watchdog

BY ANNETTE CARY

acary@tricityherald.com

June 11, 2018

RICHLAND, WA

A Hanford watchdog group is objecting as the Department of Energy takes the first step toward a plan to fill underground, radioactive waste storage tanks with concrete-like grout and leave them permanently in place.

The C Tank Farm, which would be closed first, has not had enough radioactive waste removed to have tanks filled with grout, said Tom Carpenter, executive director of Seattle-based Hanford Challenge.

"This would be a serious setback for the cleanup at Hanford if the DOE is allowed to turn Hanford into the nation's high-level nuclear waste dump," Carpenter said. "This will be challenged."

Geoffrey Fettus, a senior attorney at the Natural Resources Defense Council, said that "the people of the Pacific Northwest deserve better, and we'll be there with them opposing this unsound and unsafe effort."

DOE has completed a draft evaluation of the waste remaining in the C Tank Farm, concluding that radioactive waste has been removed to the extent possible and that the remaining waste, if grouted in place, would meet requirements for disposing of it as low-level radioactive waste.

The draft evaluation is a step toward classifying the waste as low-level to allow it to be left in place as tanks are filled with grout and then covered with an above-ground cap to prevent precipitation from infiltrating.

An all-day meeting is planned starting at 9 a.m. Monday at the Richland Public Library to explain the draft document and its findings. A public comment period started June 4.

DOE worked steadily to empty most of the waste in the16 tanks of C Tank Farm from 2003 until late 2017.

The federal court-enforced consent decree requires DOE to get as much radioactive waste from the tanks as possible, with an overall goal of getting an average of 99 percent of waste removed from the 149 single-shell tanks at Hanford.

It is roughly the equivalent of a little less than an inch of waste if it were spread evenly across the bottom of a tank.

In the C Tank Farm, about 96 percent of the volume of the waste was removed, according to DOE.

The 16 tanks held 1.8 million gallons of mostly sludge and salt cake when retrieval of solids began. They now hold an estimated 64,000 gallons of waste.

DOE was required to use up to three different technologies at each tank until each technology was no longer able to remove waste under the terms of the federal court-enforced consent decree.

Technologies included various methods to spray high-pressure streams of liquid on the waste within the enclosed tanks and move it toward a pump for removal, different vacuuming systems, and soaking hardened waste in water or a caustic chemical.

Much of the remaining waste is difficult to retrieve safely without exposing workers to radiation or damaging the walls and floor of the tanks, which already are prone to leaking. Some of the remaining waste is clinging to the walls of the tank.

Hanford Challenge is not proposing that workers be put in harm's way, Carpenter said.

In 10 to 20 years, there could be better technology to retrieve remaining waste, provided the tanks have not already been filled with grout to make that impossible, he said.

In the meantime, the solid waste in the tanks could be monitored and DOE could focus on the more pressing issue of removing waste from its other leak-prone, single-shell tanks, Carpenter said. Just one tank in addition to the 16 C Farm tanks has been emptied to regulatory standards.

Grout has not been shown to effectively contain nuclear waste for periods of more than 100 years, according to Hanford Challenge. Water can infiltrate grout, and grout can break down quickly in the presence of caustic materials such as nuclear waste, it said.

Plutonium would reach the groundwater and then the Columbia Point at some point in the future, Carpenter said.

The draft proposal would challenge the consensus that Hanford's tank waste should be vitrified, or immobilized in glass, according to Hanford Challenge.

"Hanford is proposing shortcuts to the cleanup that will save money, but will in the end further damage the environment and impact human health and safety and future generations," Carpenter said.

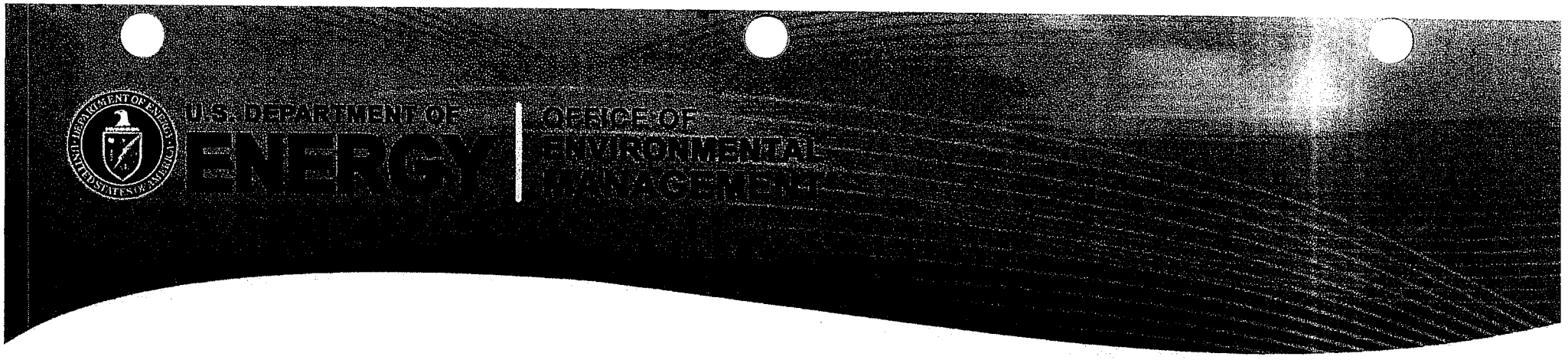
DOE said in its announcement of the draft report and public meeting that "closing the emptied tanks would be a significant achievement in DOE's Hanford cleanup mission. DOE has a record of safely and successfully closing emptied underground waste tanks at the Savannah River Site in South Carolina and the Idaho National Laboratory."

Public comment will be accepted through Sept. 7 at WMACDRAFTWIR@rl.gov. It also can be mailed to Jan Bovier; DOE Office of River Protection; P.O. Box 450, MSIN H6-60; Richland, WA 99354.

For more information on the report, click on the revolving banner at www.hanford.gov.

Further steps in the regulatory process will be required before the C Tank Farm is closed.

DOE will have to make a decision on whether tanks could be filled with grout or must be dug up. The Washington state Department of Ecology, a Hanford regulator, also would have to agree that tanks could be grouted.



Introduction to the Draft Waste Incidental to Reprocessing (WIR) Evaluation for Waste Management Area C (WMA C)

Sherri R. Ross

U.S. Department of Energy

Environmental Management Program

Office of Regulatory Compliance

June 2018

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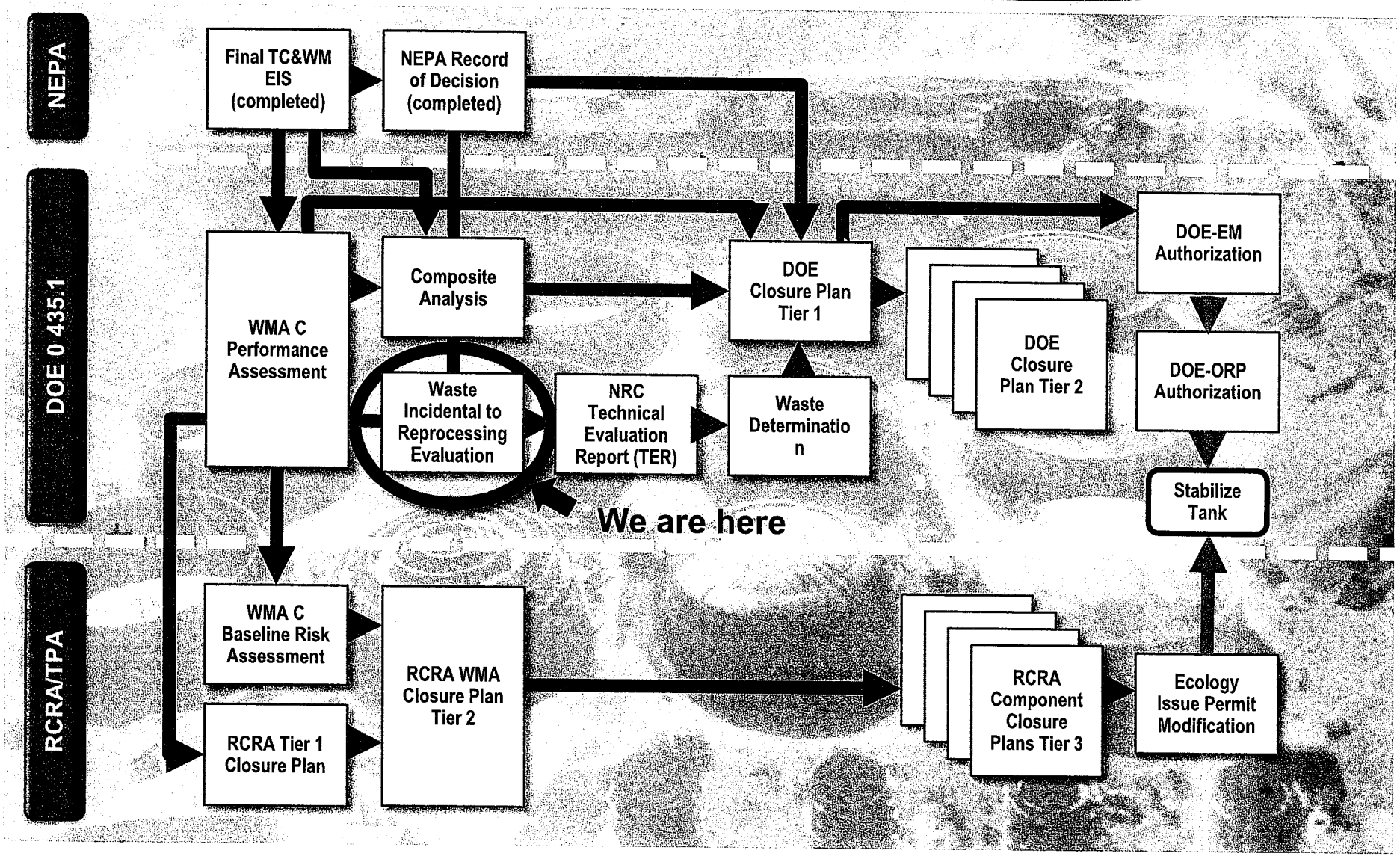

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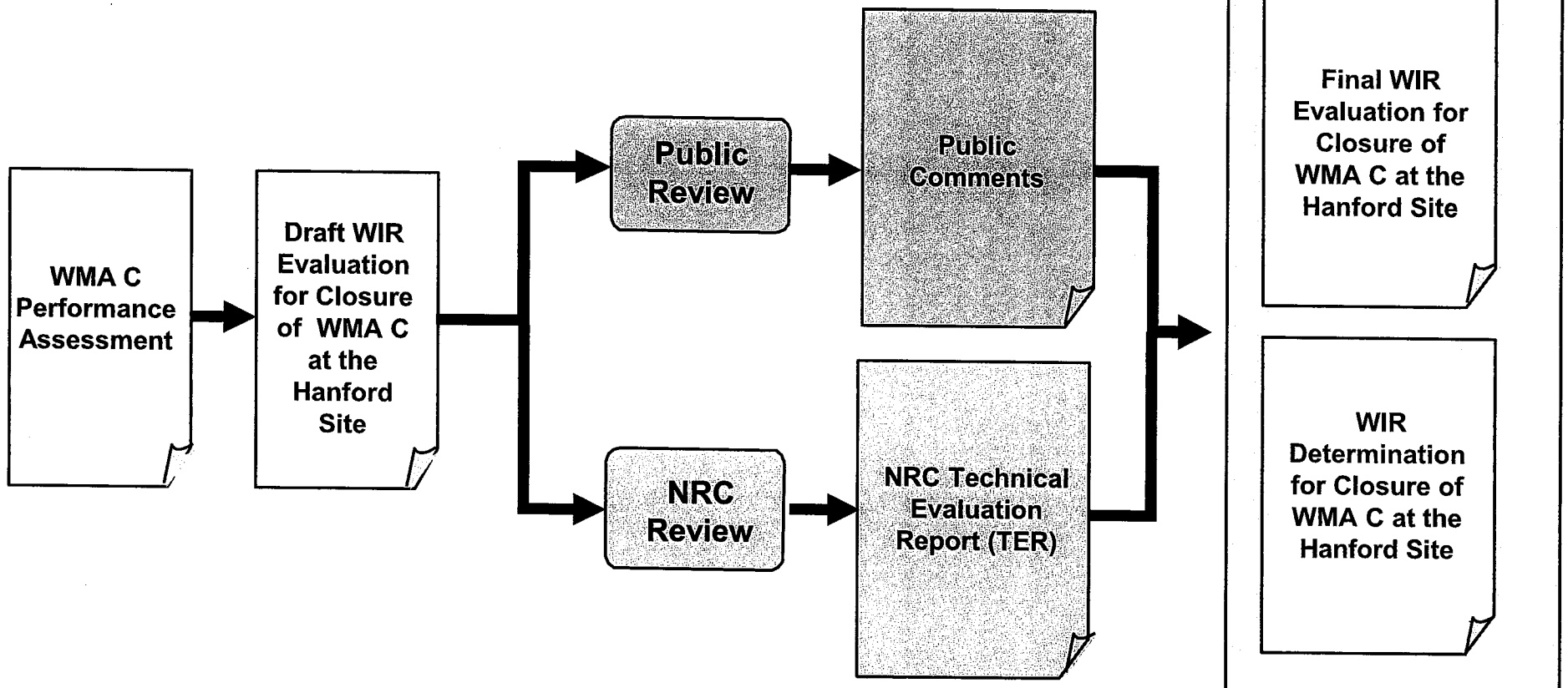

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DOE Actions | Nuclear Regulatory Commission | Public

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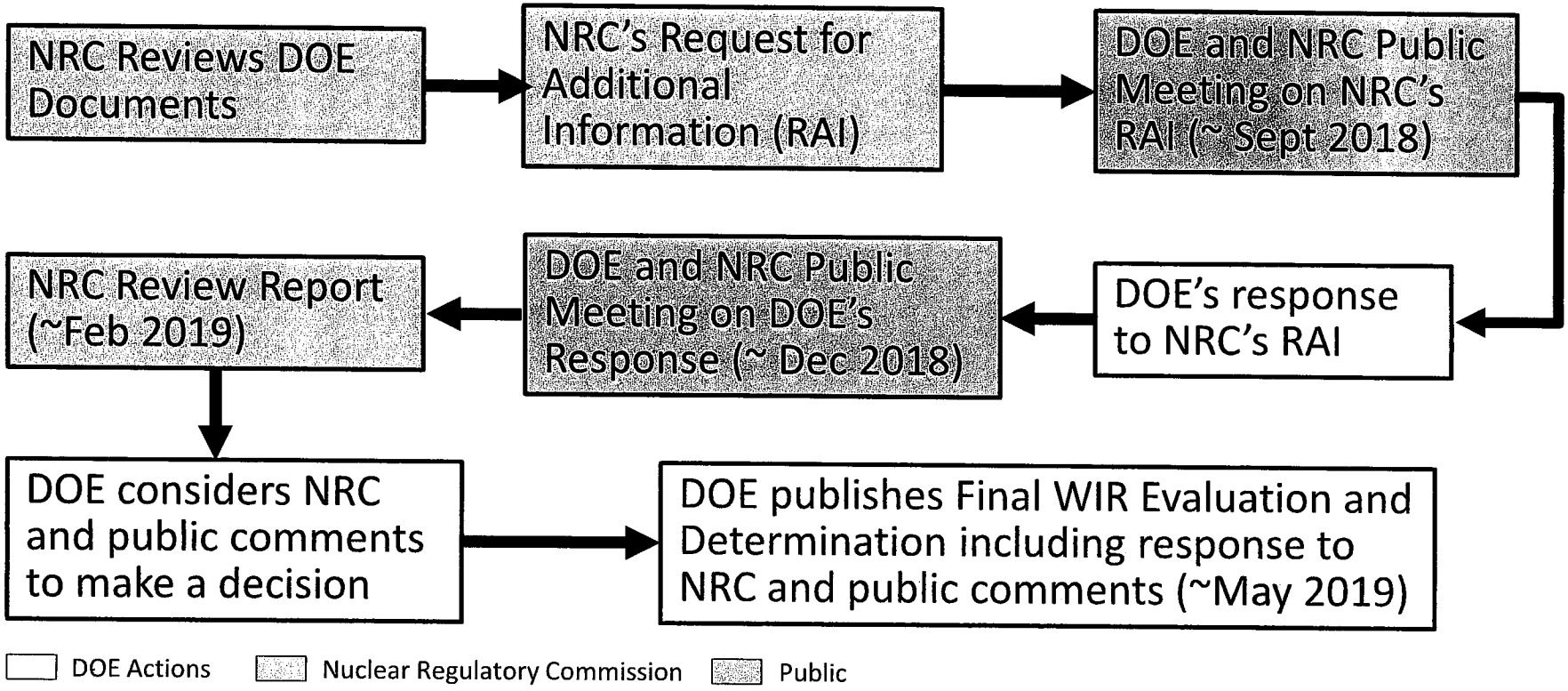

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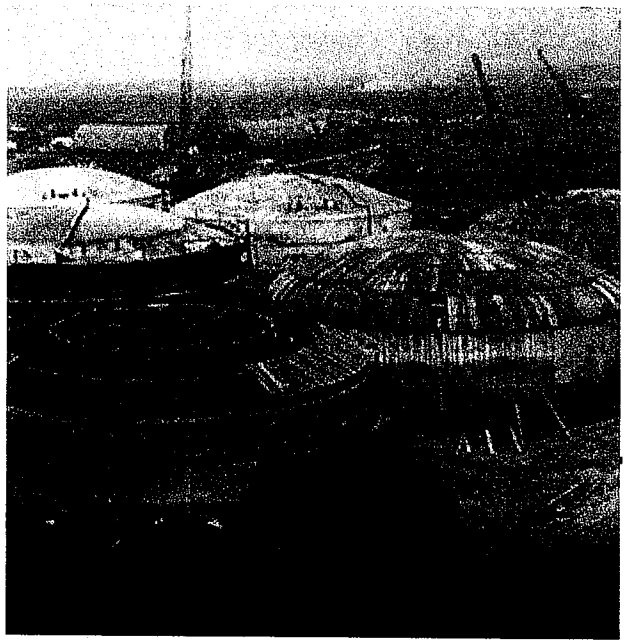

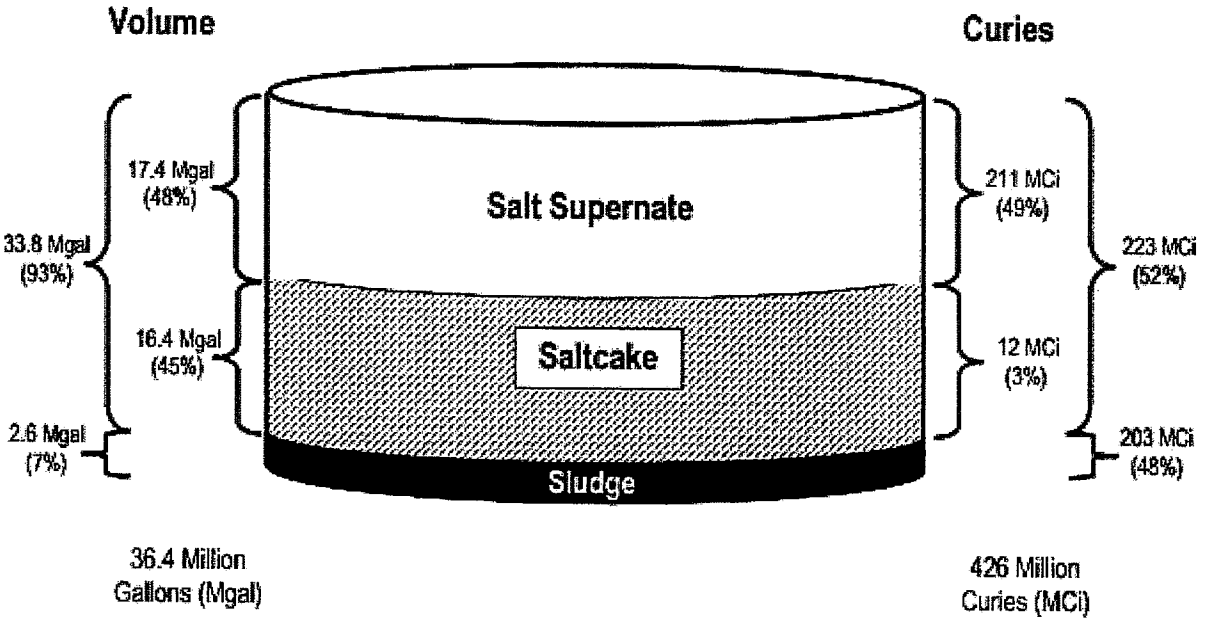

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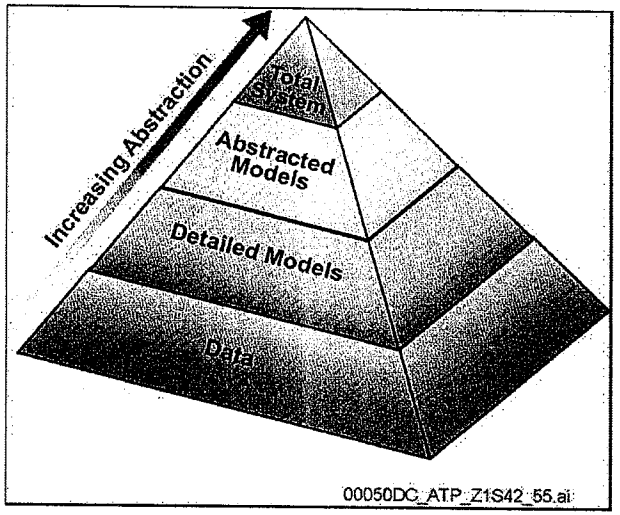
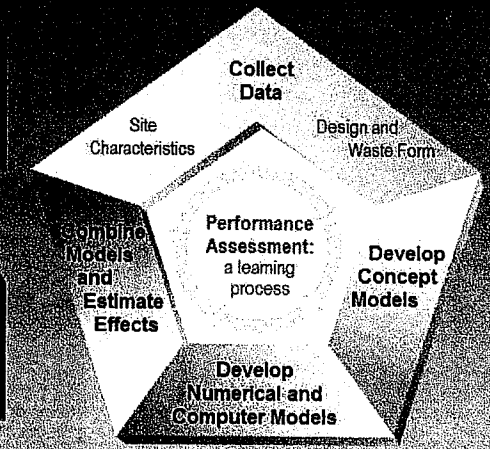


What is Reviewed

Overview of Performance Assessment

What Is Performance Assessment?
- Systematic analysis of what could happen at a site

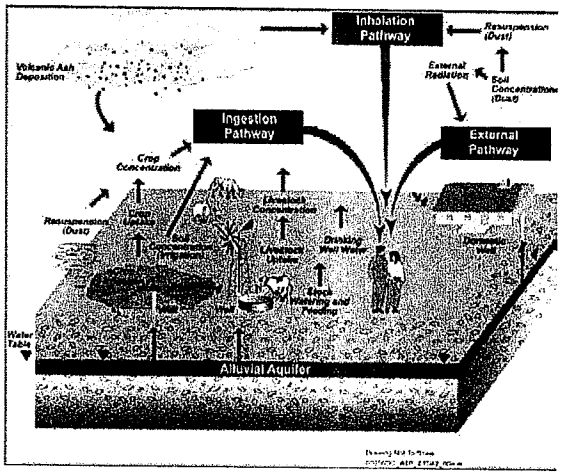
What is assessed?
- What can happen?
- How likely is it?
- What can result?

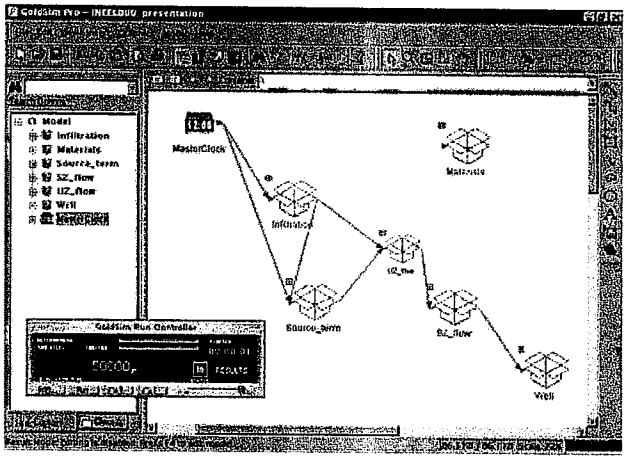


Why use it?
- Complex system
- Systematic way to evaluate data
- Internationally accepted approach

How is it conducted?
- Collect data
- Develop scientific models
- Develop computer code
- Analyze results

NRC would require a Performance Assessment to:
- Provide site and design data
- Describe barriers that isolate waste
- Evaluate features, events, and processes that affect safety
- Provide technical basis for models and inputs
- Account for variability and uncertainty
- Evaluate results from alternative models, as needed





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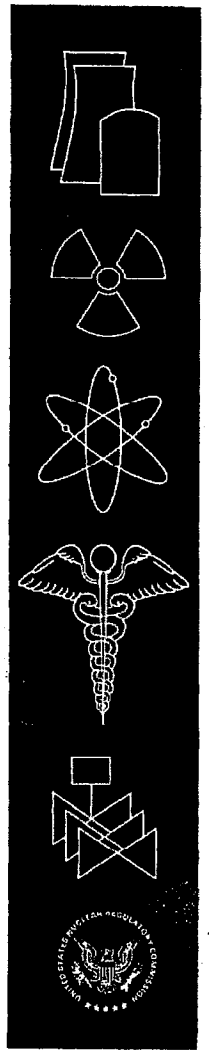

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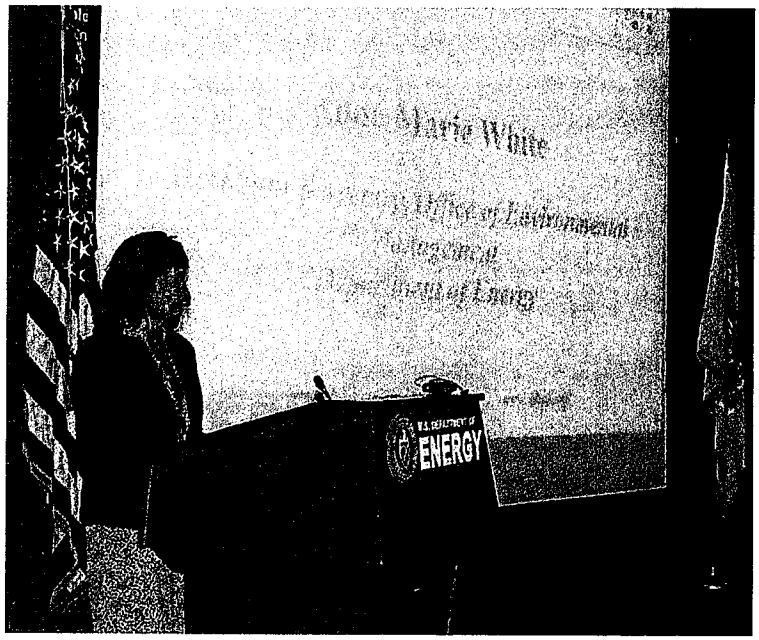
U.S. DEPARTMENT OF ENERGY | OFFICE OF ENVIRONMENTAL MANAGEMENT

EM Update | Vol. 10, Issue 23 | June 12, 2018

EM Assistant Secretary White Lays Out Priorities, Wants to 'Get to Completion'



EM Assistant Secretary Anne White addresses members of the Energy Facility Contractors Group during their annual meeting at DOE headquarters last week.

WASHINGTON, D.C. – Emphasizing that EM is capable of "big things," Assistant Secretary Anne White laid out her vision and priorities for the environmental cleanup program in two public appearances last week.

White pledged to bring more rigor to the EM program, and stated that she aims to reinstill a completion mentality focused on getting complex jobs done through new mindsets in contracting and procurement, and regulatory reform.

"Collectively, we have to think bigger and smarter about how to get to completion," she said, crediting that attitude to successes EM enjoyed in accomplishing cleanup at the Rocky Flats and Fernald sites, and in the successful demolition of the massive K-25 Building at Oak Ridge.

"There is lots of work to do, but this is a program that can be successful," she said.

White made remarks last Wednesday to the annual meeting of the Energy Facility Contractors Group (EFCOG). Several hours later, she delivered the message to an audience of the House Nuclear Cleanup Caucus event that included several members of Congress who represent cleanup sites.

White said EM is reviving the concept of "end state contracting" in major contracts and procurements coming up in upcoming months. These contracts will help shape EM over the next 10 years or so.

"We're going to create a situation where there is a very defined work scope that has specific end states that lead to limiting liabilities to get them off the books," she said. "The concept is that it will deliver real results that are measurable and reduce risk. That gets successes rolling a little more quickly in a more defined way. It creates some enthusiasm for the program, for the mission."

Addressing contractors, White said, "We're absolutely partners. We have to be partners. We have to work together between headquarters, field sites, and the contractors to effectively deliver this program, and that needs to be a well-functioning machine."

White emphasized the importance of holding contractors accountable.

"But when they are performing and doing the work properly and safely, we need to have contracting structures that incent that in a very strong way. We need you guys to bring your 'A-Team,' and your "A-Game.'"

Beyond contracting reform, White said EM was engaged in an administration-wide effort at regulatory reform.

"I know people always say we need to do regulatory reform, but this administration certainly has demonstrated they are working to be fairly aggressive in that area, so EM is very engaged in that process," White said. "The next part of it always is making sure that the implementation is driven down into the field in a way that is meaningful, provides cost savings and effectiveness."

White addressed the EFCOG annual meeting at DOE headquarters. At the caucus event held on Capitol Hill, she took part in a discussion with EFCOG chairman Billy Morrison. She was also welcomed by Rep. Chuck Fleishmann of Tennessee, caucus chairman, and by co-chair Rep. Ben Ray Luján of New Mexico.

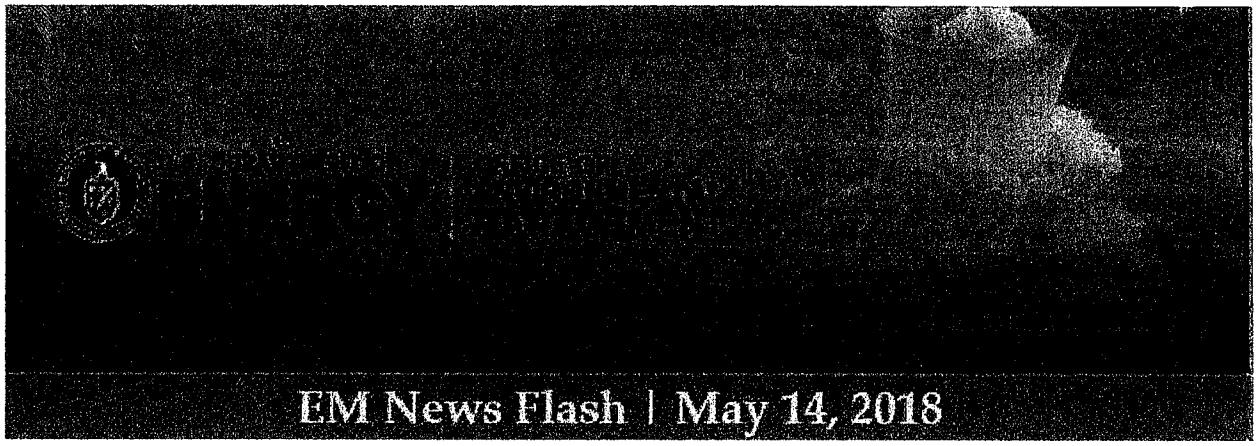
White said her vision of success for EM is one in which many can share credit.

"It has to be not my success. It has to be our success," she said. "It has to be the program's success. For me, I would like to see the program in such a stable mode that we have all worked together to create a path forward."

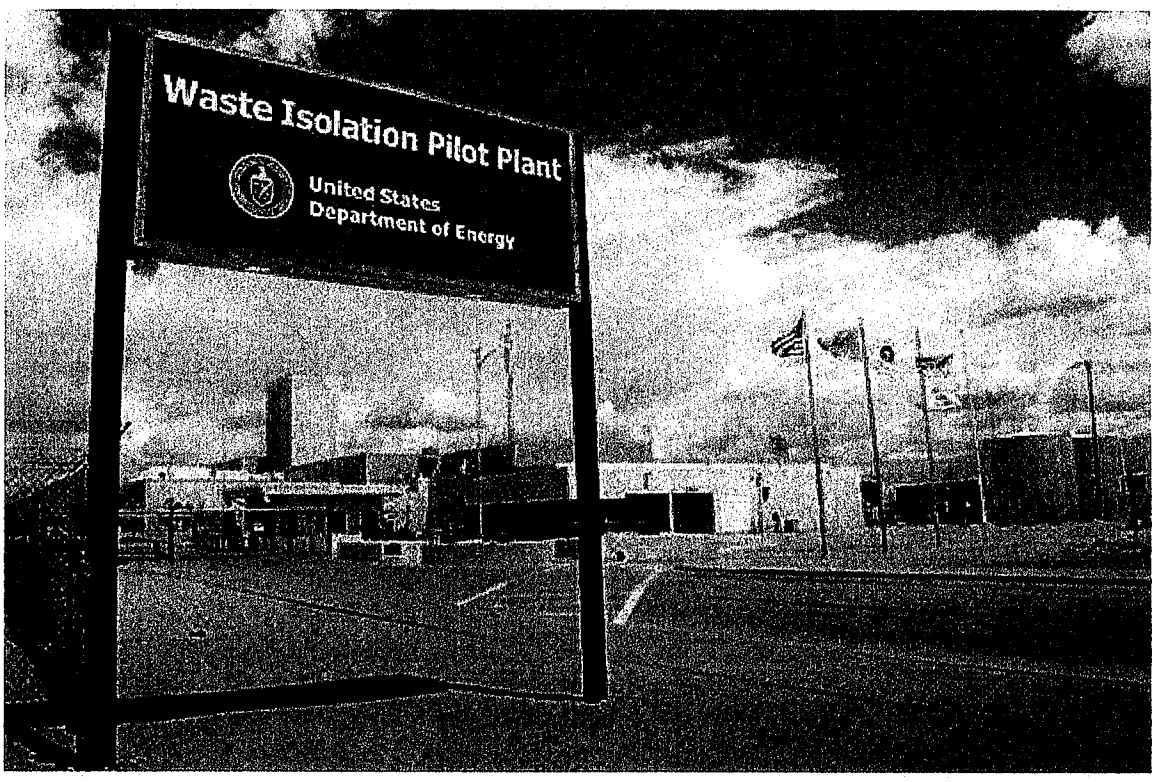
White, who was sworn in to her post on March 29, said she was surprised — and concerned — that the government's environmental liabilities are the third largest behind only the federal debt and entitlement programs such as Medicare and Social Security, and that the environmental liabilities associated with the EM program are a major part of that.

"It's a substantial liability. It's growing, not getting smaller," White said at the caucus event. She said her focus is on "getting an understanding of what's driving that, getting it under control and getting the systems, the contracting and all the things that are needed to really start making some meaningful reduction against that liability."

She added, "We need to capture the moment, move forward, and start to reduce these liabilities."



DOE Moving Forward With Key WIPP Infrastructure Upgrade



WASHINGTON, D.C. – The U.S. Department of Energy (DOE) is moving forward with a key infrastructure upgrade at the Waste Isolation Pilot Plant (WIPP) in New Mexico to enable increased progress in DOE's mission to address the environmental legacy of decades of nuclear weapons production and government-sponsored nuclear energy research.

Assistant Energy Secretary for Environmental Management Anne White approved the start of construction for a $288 million underground ventilation system at WIPP. The Safety Significant Confinement Ventilation System (SSCVS) will be key to DOE's plans to increase shipments of transuranic waste to WIPP from cleanup sites across the DOE complex.

"This will be a significant improvement for WIPP in support of its critical role in our national mission," White said.

The SSCVS will significantly increase the amount of air available to the underground portion of the WIPP facility. As a result, DOE will be able to perform transuranic waste emplacement activities simultaneously with facility mining and maintenance operations. The new ventilation system will also allow for easier filter replacement and preventative maintenance activities. Construction of the new ventilation system is expected to be completed by early 2021.

The new ventilation system is one of a number of infrastructure projects planned for WIPP in the coming years to enable the facility to continue to play an integral role in DOE's cleanup program. To date, more than 90,000 cubic meters of transuranic waste have been disposed of at WIPP.

"I am appreciative of the unwavering support from our local, state, and federal elected officials and stakeholders at WIPP who have helped to ensure we have the proper funding to make infrastructure improvements, like the new ventilation system," White said.

AlbuquerqueJournal

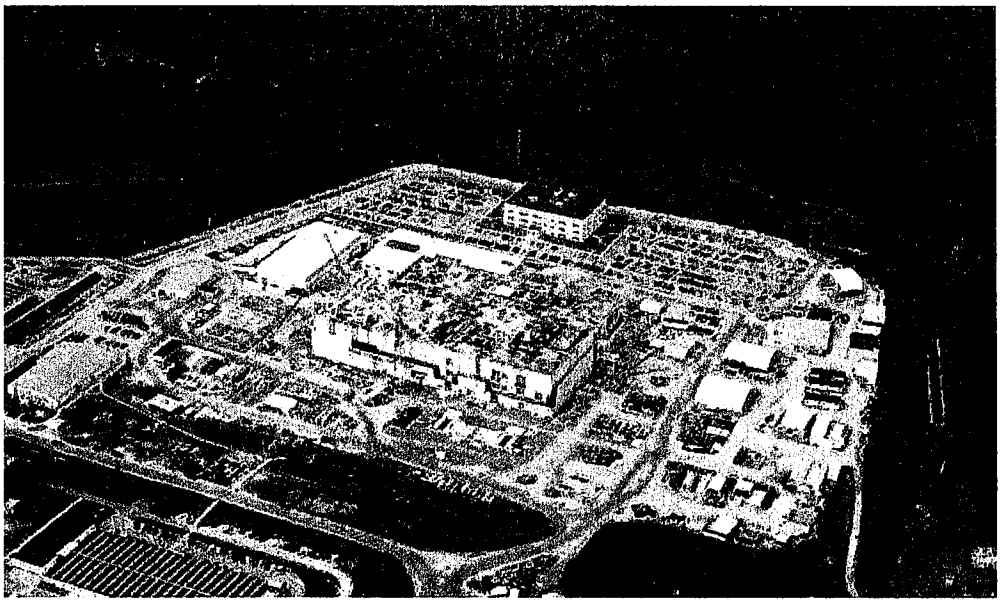
New 'pit' plan may mean more waste at WIPP

By Mark Oswald / Journal Staff Writer

Sunday, May 13th, 2018

SANTA FE – The feds can taketh plutonium away, even as they giveth plutonium back.

On Thursday, agencies in charge of the nation's nuclear weapons complex decided to send most of production of cores for nuclear weapons to South Carolina, leaving New Mexico's Los Alamos National Laboratory – currently the only place set up to make the so-called plutonium "pits" – with a smaller share of the work, much to the chagrin of New Mexico's congressional delegation.



The fate of plutonium work at the Savannah River Site in South Carolina has become connected to the federal government's plans for both Los Alamos National Laboratory and the Waste Isolation Pilot Plant at Carlsbad. (SOURCE: High Flyer 2017)

But the feds also pulled the plug on an operation in South Carolina intended to turn excess weapons-grade plutonium into fuel rods for nuclear power plants, much to the chagrin of that state's congressional delegation.

Now, the 34 metric tons of plutonium that was to be processed at the federal government's Savannah River Site near Aiken, S.C., may be headed west to New Mexico, for storage at the Waste Isolation Pilot Plant in Carlsbad, after it has been diluted and mixed with inert material.

U.S. Department of Energy Secretary Rick Perry confirmed in a letter Thursday that DOE is removing plutonium from South Carolina, adding, "We are currently processing plutonium for shipment to the Waste Isolation Pilot Plant and intend to continue to do so."

The proposal to use WIPP for disposal of the weapons-grade plutonium is connected to a recent DOE application to amend a New Mexico state environmental permit to change how WIPP's capacity for storing waste is measured.

"I certify that the Department will work with the state of New Mexico to address the capacity issues related to receipt of the full 34 metric tons at WIPP," Perry wrote in his letter to U.S. Sen. Deb Fischer, R-Neb., chair of a subcommittee of the Senate Armed Services Committee.

But others say there will not be room for the weapons-grade plutonium at WIPP – which was established to take other kinds of radioactive waste from LANL and other national labs – even if DOE's proposed permit modification is approved.

"The strict legal limits to the amount of waste that can be stored at WIPP were a crucial part of the final agreement between the Department of Energy and the state of New Mexico that is enshrined in the Land Withdrawal Act (which established WIPP) and implemented with regulatory oversight by the State," U.S. Sen. Tom Udall, D-N.M., said in a statement Friday.

"I have serious questions about whether there is enough room at WIPP to store additional waste from Savannah River, given the clear legal limits in the Act, which were negotiated ... following a lawsuit New Mexico won against DOE when I served as Attorney General."

Udall added: "If DOE is asking New Mexico to take on additional waste missions beyond what is authorized by current law, unilateral action (by DOE) is absolutely not an option."

MOX plant on hold

Here's what has happened so far.

On Thursday, the Nuclear Weapons Council accepted a recommendation by the National Nuclear Security Administration (NNSA) – a semi-autonomous wing of the DOE – on where to ramp up production of pits to 80 a year by 2030 as part of major and expensive modernization of the nation's nuclear weapons arsenal.

The adopted plan calls for 50 pits a year to be made at the Savannah River Site, by repurposing a facility there, and production of at least 30 a year at LANL. New Mexico's congressional delegation had fought to keep all the pit work at Los Alamos as NNSA studied the issue over at least the last two years. No pits have been made since LANL completed a set of 29 for submarine missiles in 2011.

New Mexico's U.S. Sens. Udall and Martin Heinrich and U.S. Rep Ben Ray Luján on Thursday called moving pit production away from LANL, where new underground "modules" had been proposed to increase pit production, a waste.

"Instead of wasting billions of dollars exploring the construction of a new facility that will likely never be completed somewhere else, the Department of Energy should immediately move forward with the new, modular plutonium facilities at Los Alamos – as originally endorsed by both Congress and the Nuclear Weapons Council," they said in a statement.

But there was anger among South Carolina's political leaders, too. At issue is the future of the troubled Mixed-Oxide Fuel Fabrication Facility, or MOX, at Savannah River.

The facility was conceived for conversion of weapons-grade plutonium from dismantled warheads into fuel for nuclear reactors as part of an agreement between the U.S. and Russia to dispose of tons of weapons-grade plutonium.

But the giant project, which broke ground more than a decade ago, has faced delays, litigation and costs ballooning from an early estimate of $4 billion to a projected $17 billion now. In conjunction with announcement of the plans for splitting pit production between LANL and Savannah River, Perry executed his waiver authority to call off the MOX mission. The building would instead be converted to pit production.

That consolation prize wasn't well received by South Carolina Sens. Lindsey Graham and Tim Scott and two of the state's U.S. representatives. They issued a statement saying that the plan to "dilute and dispose" of the many tons of warhead plutonium at WIPP "was already considered and rejected" and "has not been fully vetted."

They said the MOX program is part of "one of the most important non-proliferation agreements in the history of the world" and "is being abandoned without any clear path forward" even as the MOX plant is more than halfway complete. "We plan to hold DOE accountable for this haphazard decision and will press for oversight to ensure taxpayers aren't left holding the bag for DOE's mistakes," the statement also said.

The number of jobs and amount of funding at stake for the various plutonium-related operations, from pits to the MOX project to potentially moving the weapons-grade plutonium issue to WIPP, aren't clear, since NNSA hasn't provided numbers. It's generally accepted that pit-making won't mean as many jobs in South Carolina as the MOX work would.

Congress does have a role to play in whether the Trump administration's plans for pit-making and for disposing of the weapons-grade plutonium move forward. While Thursday's decisions stand as the administration's final word on what should be done, Congress can still affect what happens through the power of the purse, in the appropriations process.

Udall made that point in his Friday statement. He said the decision to send most pit-production work to South Carolina is "far from final."

"Congress will have the ultimate say," he said.

Tri-City Herald

Out-of-state home for Hanford waste may get new life

BY ANNETTE CARY

acary@tricityherald.com

May 10, 2018

RICHLAND, WA

The U.S. House passed legislation to move forward with the licensing of the Yucca Mountain, Nev., repository for high level radioactive waste on Tuesday.

The repository would give the Hanford nuclear reservation a place to dispose of high level radioactive waste encased in glass logs at the Hanford vitrification plant, as well as used nuclear fuel left from producing plutonium at Hanford for the nation's nuclear weapons program.

The vote was 340 to 72.

The Energy Communities Alliance said that its fate is less certain there, with Sen. Dean Heller, R-Nev., opposing the bill. His seat is considered to be one of the more vulnerable Republican seats in the mid-term elections this fall, the alliance said.

"The House's approval of this legislation is an important step forward for the federal government to fulfill its promise to clean up defense nuclear waste currently being stored on the Hanford Site," said Rep. Dan Newhouse, R-Wash.

The Obama administration terminated efforts to construct the repository, but the Trump administration has stated its commitment to get the project back on track, Newhouse said in a speech on the floor of the House.

Yucca Mountain was designated by Congress as the site of the nation's repository for the high level radioactive waste and used nuclear fuel from the nation's defense programs, and also used fuel from commercial nuclear power plants.

The federal government is legally required to collect and dispose of used nuclear fuel, including from the Columbia Generating Station near Richland, the Northwest's only nuclear power plant.

"Earlier this year we marked a troubling milestone — 20 years of government failure to meet its legal obligation to take possession of used fuel," said Maria Korsnick, president of the Nuclear Energy Institute.

Electricity customers have contributed more than $40 billion to a fund to finance a fuel disposal program, and U.S. taxpayers have paid more than $6 billion in damages.

"What have they received from the federal government for the paying of these fees?" Newhouse asked. "Absolutely nothing — not one ounce of waste has been collected."

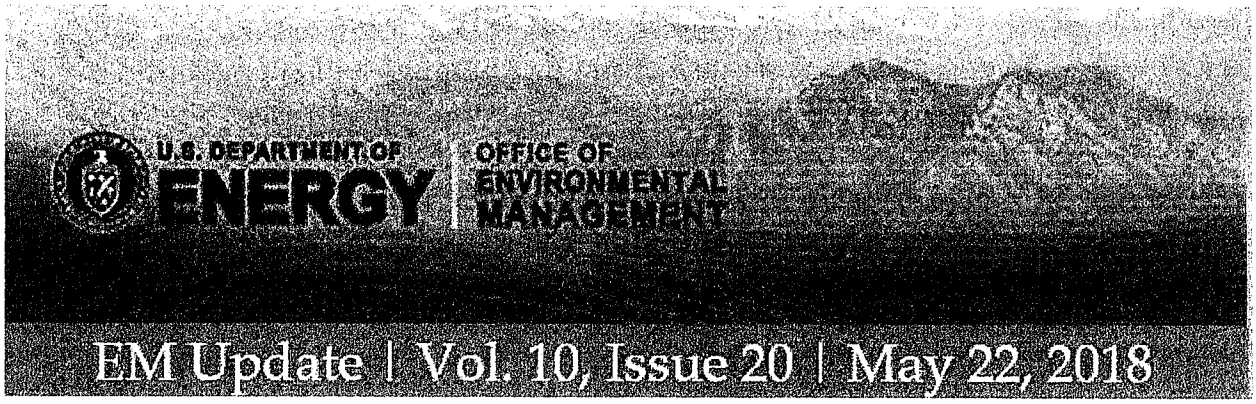
The House legislation includes provisions intended to protect ratepayers' previous investment and assure that long-term funding is available for the repository project.

The bill also would:

- Authorize the Department of Energy to contract with a private company to store nuclear fuel.

- Address financial support associated with a nuclear waste management system for states that are the site of a repository or interim storage facility, including allowing local communities to negotiate directly with the federal government.

- Remove potential impediments to license approval for the Yucca Mountain site by clarifying certain regulatory and permitting requirements.



DOE Officials at EMAB Meeting Outline Goals to Remove Cleanup Barriers

WASHINGTON, D.C. – Senior DOE officials shared their visions for advancing the EM mission and highlighted significant cleanup accomplishments to the Environmental Management Advisory Board (EMAB) last week.

"There are dedicated people who want to get work done. How I view the role of headquarters is to facilitate that, to help them get it done, to eliminate roadblocks, identify barriers, and knock them down," EM Assistant Secretary Anne White told members of the board, which provides the head of the cleanup program with information, advice, and recommendations on issues affecting EM.

White and Paul Dabbar, DOE Under Secretary for Science, laid out their objectives for accomplishing more work more efficiently through contract changes and regulatory reform, emphasized the importance of a "completion mindset" for cleanup, and thanked the board members for their sound advice and other contributions to the program.

"It's important for us to continue to deliver for risk reduction for the communities, for the taxpayer, to do things as efficiently as possible, and once again, I appreciate this group," said Dabbar, who served on EMAB for 12 years before becoming Under Secretary for Science last year.

White pointed to EM's successful track record — the closure of the Rocky Flats, Fernald, and Mound cleanup sites — to show how the program is competent in finishing projects safely and successfully.

"I know EM can do good things," she said. "We're capable of a closure mindset, a completion mindset, bias for action, moving the ball down the field. I still see it when I go out to the sites."

It was White's first address to EMAB since she was sworn in as EM's Assistant Secretary in late March.

"I'm really happy to have the benefit of your collective experiences. It's going to help out the program greatly," she said. "I'm looking forward to really getting the best utilization for this

board to really support some of the things we're going to be doing over the next couple of years."

The Department is focused on improving burdensome regulations that get in the way of efficiently accomplishing DOE's missions, Dabbar noted. Inclusive teams from the Department's Laboratory Operations Board are reviewing regulations involving operations at DOE national laboratories and sites, he said.

Outlining several recent major cleanup successes, Dabbar noted that the board has a long history around those accomplishments. In his remarks, he highlighted those accomplishments, including:

- Completing waste retrieval activities at the last underground waste storage tank in C Tank Farm at the Hanford Site late last year;
- Continued progress with Hanford's Direct Feed Low-Activity Waste (DFLAW) approach to tank waste treatment in advance of the court-ordered milestone date of 2023. "DFLAW is turning over operational system after system every week," Dabbar said;
- Completing the transition at Los Alamos National Laboratory to new cleanup contractor, Newport News Nuclear BWXT-Los Alamos, LLC. Dabbar noted it's EM's first standalone contract at Los Alamos National Laboratory. "That's going very well," he said; and
- Approving the start of construction of a new $288 million underground ventilation system at the Waste Isolation Pilot Plant (WIPP), which is key to increasing shipments of transuranic waste to WIPP from cleanup sites.

"There are a number of things that we have going on that we're really positive about," Dabbar said.

-Contributor: David Sheeley

Tri-City Herald

2018 Best Newspaper Reporter: Annette Cary

June 05, 2018

Annette Cary is a senior staff writer for the Tri-City Herald.

She's been with the paper for 23 years, reporting on a variety of topics.

For 14 years, she's covered the Hanford nuclear site. Her beat also includes the Pacific Northwest National Laboratory, the gravitational wave observatory near Richland and other science and environmental issues.

Recently she was honored with the 2017 Dolly Connelly Award for Excellence in Environmental Journalism for her coverage of a radioactive tunnel collapse at Hanford.

Before joining the Herald, she started her journalism career at the Times-News in Twin Falls, Idaho, after earning her bachelor of science degree from the University of Oregon.

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Citizens board urges taking out-of-state nuclear waste

Blaine County's Schoen pens dissenting view, eyes tighter controls

Mark Dee

June 29, 2018

Last week, a citizens panel recommended that the Department of Energy extend the working life of a plant used to treat nuclear waste at the Idaho National Laboratory, a move likely endorsing the future importation of radioactive material into the state.

The Idaho Cleanup Project Citizens Advisory Board sent a letter Wednesday to the DOE urging it to extend the mission of the Advanced Mixed Waste Treatment Plant, a key cog in the billion-dollar apparatus aimed at mitigating the laboratory's legacy as a radioactive dumping ground.

After a decade and a half, it's almost through with its share of that task. By the end of the year, it will have packed up 65,000 cubic meters of above-ground transuranic waste—enough to fill 26 Olympic-size swimming pools. Then it is slated to close unless the state and the DOE decide to revamp the terms of the 1995 Settlement Agreement, which governs Idaho's interaction with the department.

To stay open—and, keep hundreds of high-paying jobs in southeastern Idaho—it will need more to do. And while the deal doesn't preclude importing waste, it does require that all material spend less than one year in-state. Right now, the DOE says that's too tight a timeline; there's only one place in America to send the processed waste, the Waste Isolation Pilot Plant in New Mexico, and the backlog is significant.

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Upcoming Tri-Party Agreement (TPA) and Consent Decree Milestones for Hanford Cleanup

Note: This is NOT a complete list of upcoming milestones – it focuses on major issues of concern to Oregon. This summary also does not include the exact language from the TPA.

Note: **Reports/assessments/negotiations/decisions are in black text.**

Cleanup/monitoring actions are in red text.

Milestones at risk or that will be missed are in purple text.

2017

Sept 30, 2017 **DOE will complete Plutonium Finishing Plant to "slab on grade" (M-83-00A). MISSED.**

2018

June 30, 2018 **DOE will submit a design and monitoring plan to Ecology for interim tank farm barrier 3. (M-045-92O). TO BE MISSED (from May 2018 ORP TPA Monthly Summary Report).**

July 31, 2018 **DOE will submit a Corrective Measures Study and Feasibility Study for the Central Plateau 200 East Inner Area to Ecology (M-015-92A). ON SCHEDULE (from 200 Area Project Manager's Meeting, May 17, 2018).**

Sept 30, 2018 **DOE will begin sludge removal from the K West Basin (M-016-175). Milestone beat – first shipment occurred June 25, 2018.**

Sept 30, 2018 DOE will complete the remedial design investigation of the southeast chromium plume, including installation of new wells and evaluation of groundwater monitoring data (M-016-193). ON SCHEDULE (from 200 Area Project Manager's Meeting, May 17, 2018).

Sept 30, 2018 DOE will submit an Independent, Qualified, Registered Professional Engineer certification of SST structural integrity for the remainder of the mission or for such time as the IQRPE can reasonably certify (M-045-91I). ON SCHEDULE from May 2018 ORP TPA Monthly Summary Report).

Sept 30, 2018 DOE will submit a milestone change request to replace target dates for capabilities to process transuranic mixed waste (M-091-53). ON SCHEDULE (from TPA River Corridor/Central Plateau Milestone Review Meeting, March 15, 2018).

Sept 30, 2018 DOE will complete all 300 Area remedial actions including the 618-10 burial ground (but not the 618-11 burial ground, the 300-296 waste site, and sites associated with retained 300 Area facilities) (M-016-00B). ON SCHEDULE, except some revegetation will not occur until November-January (from 100/300 Area Unit Manager Meeting, May 17, 2018).

Sept 30, 2018 DOE will initiate characterization work for the 200-SW-2 unlined landfills (M-015-93C). AT RISK, not funded (from 200 Area Project Manager's Meeting, May 17, 2018). DOE submitted a draft TPA Change Control form to move the milestone to February 27, 2019.

Oct 31, 2018 DOE will construct two interim surface barriers in the SX tank farm (M-045-92N). ON SCHEDULE from May 2018 ORP TPA Monthly Summary Report).

Dec 31, 2018 DOE will have an available spare reboiler for the Evaporator (Amended Consent Decree, Milestone D-16E-02). ON SCHEDULE from Consent Decree Monthly Summary Report, May 2018).

2019

Mar 31, 2019 **DOE will submit a Feasibility Study report and Proposed Plan(s) for an interim action to Ecology for the 200-BP-5 and 200-PO-1 groundwater operable units (M-015-21A). ON SCHEDULE (from 200 Area Project Manager's Meeting, May 17, 2018).**

June 30, 2019 **DOE will complete remedial investigation of U Plant related waste sites (M-015-98). AT RISK (from 200 Area Project Managers Meeting, May 17, 2018).**

June 30, 2019 **DOE will submit a design and monitoring plan to Ecology for interim tank farm barrier 4. (M-045-92Q). AT RISK (from May 2018 ORP TPA Monthly Summary Report).**

Sept 30, 2019 **DOE will complete remote excavation of the 300-296 waste site (M-016-85A) ON SCHEDULE (from 100/300 Area Unit Manager Meeting, May 17, 2018).**

Oct 31, 2019 **DOE will complete construction of interim surface barrier number three in a tank farm location to be determined (M-045-92P). AT RISK (from May 2018 ORP TPA Monthly Summary Report).**

Dec 31, 2019 **DOE will complete remedial investigation of Plutonium Finishing Plant related waste sites (M-015-99). AT RISK (from 200 Area Project Managers Meeting, May 17, 2018).**

Dec 31, 2019 **DOE will complete sludge removal from the K West Reactor basin (M-016-176). ON SCHEDULE (from 100/300 Area Unit Manager Meeting, May 17, 2018).**

Dec 31, 2019 **DOE will initiate deactivation of the K-West Fuel Storage basin (M-016-178). ON SCHEDULE (from 100/300 Area Unit Manager Meeting, May 17, 2018).**

Dec 31, 2019 **DOE will resolve all current technical issues for the pre-treatment and high-level waste facilities (from the Amended Consent Decree, March 11, 2016 – listed as an assumption by the court, not a milestone).**

2020

Mar 31, 2020 **DOE will submit to Ecology a disposition pathways evaluation for Hanford cesium and strontium capsules (M-092-20).**

Sept 30, 2020 **DOE will submit a change request to establish a schedule for achieving the offsite shipment of all transuranic mixed waste (M-091-44T).**

Oct 31, 2020 **DOE will construct interim surface barrier number four in a tank farm location to be determined (M-045-92R). AT RISK (from May 2018 ORP TPA Monthly Summary Report).**

Dec 31, 2020 **LAW Facility construction substantially complete *(Amended Consent Decree, Milestone D-00A-07).* ON SCHEDULE (from Consent Decree Monthly Summary Report, May 2018).**

Dec 31, 2020 **DOE will complete retrieval of at least five of the single-shell tanks listed in Milestones B-1 and B-2 *(Amended Consent Decree, Milestone D-16B-03).* AT RISK (from Consent Decree Monthly Summary Report, May 2018). (NOTE: Should DOE fail to complete this milestone, Washington may petition the Court to mandate the beginning of construction of additional double-shell tank storage capacity). DOE notified Oregon and Washington on December 6, 2016 that this milestone is at serious risk of not being met and discussed in person March 16, 2017.**

Dec 31, 2020 **DOE will have a remedy in place to contain existing groundwater plumes (except iodine, nitrate, and tritium) in the 200 Area (M-016-119-T01). This is a TARGET, not an enforceable milestone. ON SCHEDULE (from 200 Area Project Manager's Meeting, May 19, 2016).**

Dec 31, 2020 **DOE will have taken such action as necessary to remediate hexavalent chromium groundwater plumes to meet drinking water standards in each of the 100 Areas (M-016-110-T02). This is a TARGET, not an enforceable milestone.**

Some selected "key" later deadlines

Apr 30, 2021 **DOE will complete construction of supplemental vitrification treatment facility and/or WTP enhancements (M-062-33-T01). This is a TARGET, not an enforceable milestone. IN ABEYANCE (from May 2018 ORP TPA Monthly Summary Report). Will be addressed with negotiations supporting M-062-45 which System Plan 8 will help inform.**

July 31, 2021 **DOE will submit Feasibility Study Reports and Proposed Plans for the 200 West Inner Area to EPA (M-015-91B).**

Sept 30, 2021 **DOE will complete remedial actions for soil contamination beneath the 324 Building plus final disposition of the 324 Building (M-016-85). ON SCHEDULE (from 100/300 Area Unit Manager Meeting, May 17, 2018).**

Sept 30, 2021 **DOE will submit a remedial investigation/feasibility study report for the REDOX canyon and associated waste sites (M-085-90). AT RISK (from 200 Area Project Managers Meeting, March 15, 2018).**

Sept 30, 2021 **DOE will complete remedial actions for the 618-11 burial ground (M-016-86) ON SCHEDULE (from TPA River Corridor/Central Plateau Milestone Review Meeting, March 15, 2018).**

Dec 31, 2021 **DOE will complete remedial investigation of the 200 West Inner Area and the BC cribs and trenches (M-015-84) AT RISK (from 200 Area Project Managers Meeting, May 17, 2018).**

Jan 31, 2022 **DOE will initiate negotiations to establish interim TPA milestones for closure of the remaining SST waste management areas (M-045-85). ON SCHEDULE (from May 2018 ORP TPA Monthly Summary Report).**

Sept 30, 2022 **DOE will select K Basin sludge treatment and packaging technology and propose new interim sludge treatment and packaging milestones (M-016-173). ON SCHEDULE (from 100/300 Area Unit Manager Meeting, May 17, 2018).**

Dec 30, 2022 **DOE will complete hot commissioning of supplemental vitrification treatment facility and/or WTP enhancements (M-062-34-T01). This is a TARGET, not an enforceable milestone. IN ABEYANCE (from May 2018 ORP TPA Monthly Summary Report). Will be addressed with negotiations supporting M-062-45 which System Plan 8 will help inform.**

Dec 31, 2022 **DOE will complete work necessary to provide facilities for management of secondary waste from the WTP (M-047-00). IN ABEYANCE (from May 2018 ORP TPA Monthly Summary Report). Will be addressed with negotiations supporting M-062-45 which System Plan 8 will help inform.**

Dec 31, 2022 **DOE will start LAW Facility cold commissioning. *(Amended Consent Decree, Milestone D-00A-08).* ON SCHEDULE (from Consent Decree Monthly Summary Report, May 2018).**

Jan 31, 2023 **DOE will submit remedial investigation/feasibility study report and proposed plan for the 200 Area solid waste burial grounds (M-015-93B).**

July 31, 2023 **DOE will submit a feasibility study/proposed plan for the 200 West Inner Area and the BC cribs and trenches (M-015-91B) AT RISK (from 200 Area Project Managers Meeting, May 17, 2018).**

Sept 30, 2023 **DOE will submit a Corrective Measures Study and Feasibility Study for the Deep Vadose Zone Operable Unit to Ecology (M-015-110B).**

Sept 30, 2023 **DOE shall complete deactivation, demolition and removal of the K-West fuel storage basin (M-016-181). ON SCHEDULE (from 100/300 Area Unit Manager Meeting, May 17, 2018).**

Dec 31, 2023 **DOE shall complete low-activity waste facility hot commissioning *(Amended Consent Decree, Milestone D-00A-09).* ON SCHEDULE (from Consent Decree Monthly Summary Report, May 2018).**

Dec 31, 2023 **DOE shall initiate soil remediation under the 105 KW fuel basin (M-016-186). ON SCHEDULE (from 100/300 Area Unit Manager Meeting, May 17, 2018).**

Mar 31, 2024 **DOE will complete retrieval of tank wastes from C-102, C-105 and C-111. *(Amended Consent Decree, Milestone D-16B-01).* ON SCHEDULE (from Consent Decree Monthly Summary Report, May 2018).**

Mar 31, 2024 **DOE will complete retrieval of tank wastes from the A and AX tank farms (excepting A-103). *(Amended Consent Decree, Milestone D-16B-02).* AT RISK (from Consent Decree Monthly Summary Report, May 2018). DOE notified Oregon and Washington on December 6, 2016 that this milestone is at serious risk of not being met and discussed in person March 16, 2017.**

Sept 30, 2024 **DOE will complete K East Reactor and K West Reactor Interim Safe Storage (M-093-27). ON SCHEDULE (from 100/300 Area Unit Manager Meeting, May 17, 2018).**

Sept 30, 2024 **DOE will complete closure of B Pond and S Pond and Ditch (M-037-11).**

Sept 30, 2024 **DOE will complete U Plant demolition (M-016-200A).**

Sept 30, 2024 **DOE will complete all response actions in the 100 K Area (M-016-00C). ON SCHEDULE (from 100/300 Area Unit Manager Meeting, May 17, 2018).**

June 30, 2026 **DOE will complete the remedial investigation/feasibility study process for all non-tank farm operable unit (excluding canyons as well). (M-015-00).**

Sept 30, 2026 **DOE will remove all mixed waste containers from Outside Storage Areas A & B at the Central Waste Complex (M-091-52-T04).**

Sept 30, 2027 **DOE will complete U Canyon barrier construction (M-016-200B).**

Sept 30, 2028 **DOE will complete the retrieval and designation of remote-handled retrievably stored waste (including from the 200 Area caissons), and contact-handled retrievably stored waste from three designated burial grounds. (M-091-49).**

Sept 30, 2030 **DOE will complete offsite shipment of all mixed transuranic waste (in above-ground storage as of June 30, 2009 and in retrievable storage) (M-91-48).**

Dec 31, 2030 **HLW facility construction substantially complete *(Amended Consent Decree, Milestone D-00A-02).* UNDER ANAYLSIS (from Consent Decree Monthly Summary Report, May 2018). DOE is considering an option to continue preservation and maintenance of the PT and HLW facilities for a period of 3-5 years while focusing on bringing direct-feed LAW into operation.**

Dec 31, 2033 **DOE shall complete high-level waste facility hot commissioning *(Amended Consent Decree, Milestone D-00A-4).* UNDER ANAYLSIS (from Consent Decree Monthly Summary Report, May 2018). DOE is considering an option to continue preservation and maintenance of the PT and HLW facilities for a period of 3-5 years while focusing on bringing direct-feed LAW into operation.**

Dec 31, 2033 **DOE shall complete pre-treatment facility hot commissioning *(Amended Consent Decree, Milestone D-00A-16).* UNDER ANALYSIS (from Consent Decree Monthly Summary Report, May 2018). DOE is considering an option to continue preservation and maintenance of the PT and HLW facilities for a period of 3-5 years while focusing on bringing direct-feed LAW into operation.**

Dec 31, 2033 **DOE shall begin hot start of Waste Treatment Plant *(Amended Consent Decree, Milestone D-00A-17).* UNDER ANALYSIS (from Consent Decree Monthly Summary Report, May 2018). DOE is considering an option to continue preservation and maintenance of the PT and HLW facilities for a period of 3-5 years while focusing on bringing direct-feed LAW into operation.**

Dec 31, 2036 **DOE shall achieve initial plant operations of the waste treatment plant *(Amended Consent Decree, Milestone D-00A-1).* UNDER ANALYSIS (from Consent Decree Monthly Summary Report, May 2018). DOE is considering an option to continue preservation and maintenance of the PT and HLW facilities for a period of 3-5 years while focusing on bringing direct-feed LAW into operation.**

Dec 31, 2036 **DOE will acquire/modify facilities for storage of immobilized high-level waste (M-090-00). IN ABEYANCE (from May 2018 ORP TPA Monthly Summary Report). Will be addressed with negotiations supporting M-062-45 which System Plan 8 will help inform.**

Dec 31, 2040 **DOE will complete waste retrieval from all remaining single-shell tanks (M-045-70). AT RISK (from May 2018 ORP TPA Monthly Summary Report). Will be addressed with negotiations supporting M-062-45.**

Sept 30, 2042 **DOE shall complete remedial actions for all non-tank farms and non-canyon Operable Units (M-16-00).**

Jan 31, 2043 **DOE will complete closure of all single-shell tank farms (M-045-00). AT RISK (from May 2018 ORP TPA Monthly Summary Report). Will be addressed with negotiations supporting M-062-45.**

Dec 31, 2047** **DOE will complete pretreatment, processing, and vitrification of all high-level and low-activity tank wastes (M-062-00). AT RISK (from May 2018 ORP TPA Monthly Summary Report).**

Sept 30, 2052 DOE will complete closure of all double-shell tank farms (M-042-00A).**

****no later than**