

# Oregon Hanford Cleanup Board

Umatilla County Sheriff's Office, Pendleton, Oregon

**Monday, July 16, 2018**

## Members In Attendance:

Ted Taylor, Chair  
Dan Solitz, Vice-Chair  
Kristen McNall  
Lori Brogoitti  
Steve March  
John Howieson  
Tom Roberts  
Jürgen Hess  
Erica Elliott  
Woodrow Star, Confederated Tribes of the  
Umatilla Indian Reservation  
Justin Iverson, Oregon Water Resources Dept.  
Representative Tawna Sanchez  
Representative Karin Power  
Senator Bill Hansell  
Ken Niles, Oregon Department of Energy

## Oregon Department of Energy staff:

Mark Reese  
Jeff Burrigh  
Sara Lovtang  
Tom Sicilia

## Tri-Party Agencies:

Joe Franco, U.S. DOE Richland Office  
Rich Buel, U.S. DOE, Richland Office  
Alex Smith, Washington Department of Ecology  
Randy Bradbury, Washington Department of  
Ecology  
Jennifer Copeland, CH2M Hill

## Public

Norma Jean Germond  
Henry Germond  
Marylou Schnoes  
Kirstie Webb  
Sharon Monteiro

## Administrative

Chair Ted Taylor called the meeting to order at 1 p.m.

Minutes from the last Board meeting were accepted without changes.

In May, Mark Reese and Tom Roberts took a tour of the Waste Isolation Pilot Plant (WIPP) in New Mexico. Mark and Tom briefly spoke about their experience.

### **Review of Activities/Events Since March Meeting**

Ken Niles, Oregon Department of Energy (ODOE) staff, provided a review of relevant Hanford and Board related activities since the Board's last meeting in March.

Ken said new leadership at the U.S. Department of Energy (DOE) is taking numerous opportunities to share their vision for the cleanup.

The Waste Management Symposia, which is held annually in Phoenix, is one of those important forums that DOE traditionally uses to share some of its priorities. A big theme is on getting things accomplished, even if it is small victories. That theme was shared by a couple of top DOE officials in Phoenix.

Anne White was confirmed as the head of the DOE cleanup just after the last Board meeting. She was not at the Waste Management Symposia, but used other forums to share her message. One such message was the following: "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. That gets successes rolling a little more quickly in a more defined way. It creates some enthusiasm for the program, for the mission."

She also expressed concern about DOE's growing environmental liability, which has increased in the past six years by nearly \$100 billion, despite expenditures of \$35 billion during that time towards the cleanup. She said she would focus on getting an understanding of what's driving the increasing liability, and getting it under control.

In May, the U.S. House passed legislation to move forward with the licensing of the Yucca Mountain, Nevada repository for spent nuclear fuel and high-level radioactive waste. The vote was 340 to 72. Ken said the U.S. Senate is not even expected to vote on this legislation, which continues the uncertainty about what will eventually happen as far as the nation's spent nuclear fuel and high-level waste.

The bill also authorizes the Department of Energy to contract with a private company to store nuclear fuel. That will likely be important at some point to get Congressional action, as there are two such proposals winding their way through the NRC licensing process.

One of the proposals, in which Eddy and Lea counties in New Mexico are partnering with Holtec to develop a consolidated storage site in eastern New Mexico, was the subject of quite a bit of opposition at a legislative committee meeting in May. The proposed project, under a 40-year license, would allow Holtec to temporarily store about 100,000 metric tons of spent nuclear fuel rods taken from nuclear generators across the country.

Proponents of the proposal say they've got strong local support, though the legislative committee meeting showed there is considerable opposition as well. New Mexico will get a new Governor this November. The current Governor has been supportive of this project. Ken said it apparently hasn't yet been a big election issue, but is almost certainly going to become one.

Barring regulatory hurdles, officials with Holtec predicted the facility could go into operation by 2022.

Ken said that was not the sentiment from a number of speakers – including himself – at the June meeting of the U.S. Nuclear Waste Technical Review Board in Idaho Falls. The meeting focused on transportation planning. A National Laboratory scientist laid out a seven year timetable to develop the transportation program once a site is selected and approved. The Western State experience is that preparing a route and developing the transportation program is indeed a multi-year program that cannot be accomplished by 2022 – especially given that the site is still in the NRC regulatory process and needs Congressional action for the federal government to pay it to take spent fuel.

Possibly bringing some Hanford transuranic waste to the Idaho National Laboratory for treatment and characterization is generating some opposition in Idaho, from Snake River Alliance and others. There was a protest demonstration in Twin Falls on June 8.

The State of Idaho has a nuclear waste settlement agreement with DOE. It does allow for bringing waste in for treatment, but it would need to leave the state within one year. Due to the three year shutdown of WIPP and the reduced number of shipments right now due to ventilation restrictions within WIPP, any Hanford waste sent to Idaho would very possibly be there for more than a year. Ken said that's the primary cause of the concern.

Ken mentioned that Sara Lovtang, ODOE staff, worked with two staff from the Washington Department of Ecology to research and write a paper that challenges other research about the rooting depth of certain plants at Hanford. Ken said it is a big deal because the deeper a plant's roots go, the more likely that plant can bring to the surface contaminants that are left behind. The paper was published in a professional journal called Integrated Environmental Assessment and Management. The journal then did a recorded interview with Sara and turned it into a podcast.

Senior DOE officials and members of Washington State's Congressional delegation joined local community leaders and workers from the Hanford site in May in cutting the ceremonial ribbon to celebrate the grand opening of the Hanford Workforce Engagement Center. Center staff provide assistance to current and former Hanford workers and their families who have questions or concerns about occupational health and compensation programs. The center is a first-of-its kind across the DOE complex.

For the last few years, folks at Hanford have been preparing for the merger of the Richland Field Office and the Office of River Protection. Legislation passed in 2012 would have merged the two offices in September of next year.

There were supporters of the idea – looking at the potential efficiencies of one office and the fact that most of the remaining work is all within the Central Plateau. There were also detractors of the idea, who thought that Hanford funding was more likely to get cut if it was one huge budget line item as opposed to two still pretty huge budgets.

Ken said Congress may resolve that debate for the next several years, as language crafted by Washington Congressman Dan Newhouse would keep the two offices separate at least through 2024. That language was approved in a House Defense spending authorization act. Ken said we expect similar language to be introduced in the Senate.

Ken reviewed letters sent by ODOE to DOE since the last Board meeting, and also summarized the advice from the June Hanford Advisory Board meeting.

### **Public Comment / Question Opportunity**

At this point in the meeting, the Chair gave the members of the public in attendance an opportunity to comment or ask questions.

Sharon Monteiro, public, asked about the proposed nuclear fuel storage facility in New Mexico and if Trojan fuel could be taken there. Ken replied that the site is intended to take commercial spent fuel, but it would be up to the individual nuclear companies to reach agreement with the owners of the site to do so.

Dan Solitz, Board Vice-Chair, reminded the Board that there is a good podcast about spent nuclear fuel transportation that is worth listening to on the ODOE website.

### **Hanford Risks/ Key Project Updates**

Joe Franco, DOE-Richland, provided an update to the Board on a number of cleanup topics.

It's been one year since the partial collapse of PUREX tunnel 1. The eight feet of soil cover on top of the tunnel prevented radiation shine or spread. The day after the collapse was discovered, Hanford workers filled the hole with dirt and sand. The 360 foot long tunnel was tarped as a preventative measure, and then eventually filled with grout. That was completed in November. Joe said it took more than 500 truckloads of grout to do the job.

An analysis of PUREX tunnel 2 quickly identified that tunnel was also at risk of collapse. Corrosion was found on some of the structural beams, adding to the risk.

DOE determined that also filling tunnel 2 with grout was the best short-term solution to deal with the risk of a collapse. DOE is now working with the State of Washington on the permit process. Joe added that DOE would like to start grouting by the end of July or early August. This tunnel will require about ten times the volume of grout as compared to tunnel 1.

Tunnel 2 contains 28 railcars that hold highly contaminated equipment from the PUREX processing facility.

Joe added the final disposition of both tunnels will be determined in the future. He said grout has been used many times at Hanford and large monoliths of grout have been cut into smaller pieces for disposal.

In June, Hanford workers successfully moved highly radioactive sludge from the K-West reactor basin to T Plant. This came after years of false starts and technical challenges in getting the sludge moved from near the Columbia River to interim safe storage on the Central Plateau.

Once all the sludge has been removed, they will drain and treat the basin water; grout the basin for radiation control; dig out the basin and nearby contaminated soil; and then eventually move forward to cocoon both K-East and K-West reactors.

Preparatory work is moving forward to address highly-concentrated contamination beneath a hot-cell in the 324 Building. A mock-up of the hot-cell was constructed and workers are testing out equipment and procedures. Part of the problem they're having to deal with is making sure the building remains stable as they are retrieving the contamination beneath the building.

Planning work is also moving forward to move 1,936 cesium and strontium capsules from pool storage to dry storage. The Tri-Parties recently proposed a milestone of 2025 to complete movement of the capsules. Joe noted Oregon's comment letter which encouraged the project to be completed sooner. DOE has started engineering studies. Joe said they are also measuring the capsules to ensure they will fit in the new dry storage casks as some may have enlarged over time.

Within the next several years, Hanford will again focus more on retrieval and packaging of transuranic waste. Hanford has a large amount of waste to go to WIPP, and Joe said that beginning in the mid-2020s, Hanford will be the major user of WIPP.

Demolition work at the Plutonium Finishing Plant (PFP) is still halted. Joe said the contractor and DOE have conducted extensive analysis to ensure they thoroughly understand the causes of the contamination spreads that occurred last May and December, so that when work does resume, there will be no recurrence. A larger radiation protection boundary has been established and a number of procedural changes will be instituted, including additional radiation sampling.

DOE still needs concurrence from Ecology and the U.S. Environmental Protection Agency before demolition can resume. Some work is being done, such as application of additional fixatives and preparatory work for the resumption of the demolition.

Joe said they expect to be slab-on-grade within the next year, although moving forward it will be process-driven, not schedule-driven. If contamination is detected they will stop, apply more fixative, and evaluate the condition. What's left of the facility can't stay in the state it's in – it would be far too hazardous. They have to resume demolition.

Demolition work is likely to resume within the next few months.

After the partial collapse of PUREX tunnel 1, DOE directed its contractors to compile a list of other risks around the site. Joe said there weren't any surprises – DOE and its contractors were aware of all the different risks, but it helped quantify the level of risk and provided an opportunity to assess whether each of the higher risk issues is planned for resolution and to help prioritize funding. The "Evaluation Matrix" was provided to the Board for their review.

One of the highest risk issues that hasn't necessarily received extensive focus, is the Z-9 Crib. This crib was built in the 1950s and received a liquid waste stream from PFP that contained relatively significant amounts of plutonium. At one point, plutonium was mined from the soil for safety reasons. There is a concern that the roof of the structure may collapse and cause an airborne release of plutonium. One potential interim solution would be to fill the crib with sand or something else to prevent a collapse.

Elsewhere on Site, Joe pointed out that they've had to do some interim maintenance on the REDOX canyon, including installing a new roof, because it was having a problem with water intrusion and contamination being spread within the facility. They have experienced a number of collapsed cribs and tank covers, and there are miscellaneous tanks and other facilities that are also degrading and pose a risk.

#### **Manhattan Project National Park**

Becky Burghart, U.S. National Park Service, is the site manager for the Hanford unit of the Manhattan Project National Historic Park. The park was authorized in December 2014 and established in November 2015. It is the 409<sup>th</sup> National Park Service unit, and is unique in that it includes sites in three states: Washington, Tennessee and New Mexico. The purpose of the park is to preserve and interpret the nationally significant historic sites, stories and legacies associated with the top-secret effort to develop an atomic weapon during World War II, and to provide access to these sites.

Becky said DOE would retain facility ownership and management and be responsible for historic preservation, public access and visitor safety. National Park Service responsibilities include interpretation, education, and community outreach. Becky said the National Park Service is America's storytellers.

Partnerships with local governments, private landowners, and non-profit organizations will be very important in moving forward with development of the park.

With Becky as currently the only National Park Service employee at Hanford, volunteers have been important in attending community events, presenting education programs, supporting part-sponsored special events, and developing interpretive media projects. Park volunteers have so far reached more than 1,700 students.

Becky told the Board that one of the stories they want to tell is the plight of the African American workers that came to Hanford for work during the war years. They faced imported Jim Crow laws. Becky

said this is an important part of the site history and they have received a grant to record oral stories from the workers who experienced it first-hand.

Other interpretive themes that are being discussed include secret cities; displacement and sacrifice of the previous residents, including Native Americans; revolutionary science and engineering; and the choices and consequence of launching humanity into the nuclear age.

Activities at B-Reactor that have proven popular so far include the Mid-Columbia Mastersinger concerts and the “Ride the Reactor” Bike Tour. This year’s bike tour will occur on September 22.

Becky added that all three sites will need to have a Visitor Access Plan that will include how to show restricted parts of the three sites.

Other goals moving forward are to expand public outreach, make a comprehensive interpretive plan, and develop digital content.

Jürgen Hess, Board, asked Becky about the level of tribal involvement that will occur. Becky said the tribes are involved in the park process and they are an important stakeholder that she engages with regularly.

Senator Bill Hansell asked Becky if this park will have the National Park Service passport stamp. Becky said it will.

Bus tours are available now that can take the public to B Reactor or to the old Hanford town site and White Bluffs bank. These have proven very popular.

Ken asked if the public will eventually be able to drive privately-owned vehicles directly to B Reactor. Becky said that will be DOE’s call to make later for direct public access.

Woodrow Star, Confederated Tribes of the Umatilla Indian Reservation (CTUIR), elaborated a bit on the importance of the area to the Native people, particularly the tribes of the Umatilla Reservation.

Becky was asked if there are plans to mention the atomic bomb impacts to the Japanese people. Becky said that is very much in the future planning, but right now the focus is on building relationships. The park will provide facts and context and allow people to make their own interpretations.

Becky said the park will balance recreation activities for the public as well as provide and present a way to connect with the Manhattan project story

## **Management & Disposal of U.S. Department of Energy Spent Nuclear Fuel**

Bret Leslie, part of the Senior Technical Staff of the U.S. Nuclear Waste Technical Review Board (NWTRB), provided a presentation on management and disposal of spent nuclear fuel at the Hanford Site.

The NWTRB is an independent federal agency, established by Congress in 1987, to evaluate the technical and scientific validity of DOE activities undertaken under the Nuclear Waste Policy Act. Much of the NWTRB work has involved site characterization, design and development of the proposed repository at Yucca Mountain, Nevada. Their work has also involved activities related to the packaging or transportation of high-level radioactive waste.

Bret said that the Board did a multi-year review focused on continued storage of DOE spent nuclear fuel at the surface, followed by geologic disposal in a repository. The Board toured DOE spent nuclear fuel storage facilities at Hanford, Savannah River Site, and Idaho National Laboratory.

The NWTRB wants to make sure DOE manages the spent fuel in a manner that will not impede its eventual disposal in a repository. The DOE has over 250 types of spent fuel. NWTRB's report on DOE's spent fuel analyzes DOE's packaging and storage activities.

By mass, Hanford has far more spent fuel than any other site – about 2,130 metric tons of heavy metal, out of a total of 2,500 metric tons. Bret said there are many fuel types at Hanford. Storage occurs in the 200 East Area at two facilities – the Canister Storage Building and an adjacent pad, called the 200 Area Interim Storage Area.

Within the Canister Storage Building, 220 below-grade storage tubes hold 412 packages. Most of the fuel is N Reactor fuel that had been stored for decades in the K Area fuel basins. There are also 18 containers holding spent fuel from the former Shippingport reactor from Pennsylvania.

The 200 Area Interim Storage Area contains a variety of interim storage casks. The majority contain spent fuel from Hanford's Fast Flux Test Facility.

One of the big issues over time is monitoring the level of hydrogen gas within the spent fuel containers, and ensuring that the amount is below the U.S. Nuclear Regulatory Commission's transport package acceptance criteria. Bret said monitoring results indicate hydrogen concentrations are lower than predicted and seem to be decreasing with time.

Bret said because decades will likely pass before spent nuclear fuel currently in dry storage at Hanford will be repackaged or transported and disposed of, retaining records and preserving knowledge from past waste management activities is very important.

The NWTRB made a number of recommendations to DOE about its spent fuel aging management program; monitoring; drying; packaging facilities; waste acceptance; and disposal research.



Board members asked why the spent fuel was not listed as one of the high risk issues at Hanford. Bret said all of Hanford's spent fuel is in a stable configuration, so it is not considered an imminent risk.

**Public Comment/Adjourn**

Sharon Monteiro addressed the Board. She appreciated the opportunity to provide public comment and encouraged the Board to continue to monitor DOE's progress at Hanford.

Final

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Senator Bill Hansell

## Oregon Department of Energy staff:

Mark Reese  
Jeff Burrigh  
Sara Lovtang  
Tom Sicilia

## Tri-Party Agencies:

Brian Harkins, U.S. DOE Office of River  
Protection  
Dieter Bohrmann, North Winds (ORP)  
Alex Smith, Washington Department of Ecology  
Randy Bradbury, Washington Department of Ecology

## Public

Kirstie Webb  
Marylou Schnoes  
Sharon Monteiro

## Administrative

Chair Ted Taylor called the meeting to order at 8:35 a.m.

Jeff Burrigh, staff, gave a short introduction to a topic later on the agenda – the draft C Farm Waste Incidental to Reprocessing (WIR) determination. He highlighted that the decision currently under consideration is whether the C Farm tanks and residual wastes left over after completion of retrieval activities can be reclassified from high-level waste to low-level waste. This is significant because high-level waste must be disposed at a deep geologic repository, which does not yet exist in the United States, whereas low-level waste may be disposed in shallow land burial at Hanford.

To qualify for a reclassification, DOE must prove that the waste can meet three criteria: 1) remove key radionuclides to the maximum extent technically and economically practical; 2) meet the dose-based performance objectives for 10 CFR Part 61, which is the NRC regulation governing low-level waste disposal facilities and which has a compliance period of 1,000 to 10,000 years; and 3) demonstrate that the remaining wastes will be incorporated in a physical form that meets the concentration-based criteria for Class C low-level waste. Jeff also specified that the WIR decision being considered has a limited scope

focused only on the tanks and residuals, while DOE is planning to address the waste that leaked into soils historically under a different cleanup process.

### **First Foods**

Teara Farrow Furman, a program manager in the natural resources program at the CTUIR, provided the Board with a presentation on “First Foods.”

When the CTUIR signed a treaty with the U.S. government in 1855 that ceded 6.4 million acres of land to the government, the tribes retained reserved treaty rights within these ceded lands.

Teara said that traditionally tribal members had a wide geographic range of land uses without restriction. People would range as far as Montana, California and Wyoming for purposes of resource gathering, trade, and tribal relations. Acquisition of the horse increased the tribal range for resource gathering, and Teara shared stories with the Board about how that came about.

The treaty included reservation of rights to take fish in usual and accustomed areas, and the privilege to hunt, gather roots and berries and pasture their stock on unclaimed lands.

Teara shared stories of how the tribe came to take on responsibility for the animals and plants, as they gave up their own voice and offered themselves for humans to survive. Teara said the tribal members take this responsibility very seriously, and it helps explain the passion they have for protecting the environment.

The most plentiful foods for the tribal members were salmon, roots, berries, deer and elk. Each of these foods could be found in different places and each was available in different seasons. This meant that the Indian people had to move from place to place from season to season to their food and prepare it to be eaten and to be saved for the winter. They followed the same course from year to year in a large circle from the lowlands along the Columbia River to the highlands in the Blue Mountains.

In the spring the tribes gathered along the Columbia River at places like Celilo Falls to fish for salmon and trade goods with other tribes. They dried the salmon and stored it for later use. In late spring and early summer they traveled from the Columbia to the foot hills of the Blue Mountains to dig for roots which they also dried. In late summer they traveled to the upper mountains to pick berries and to hunt for deer and elk. In the fall the tribe would return to the lower valleys and along the Columbia River again to catch the fall salmon run. All would stay in winter camps in the low regions until spring when the whole cycle would start all over again.

These “first foods” are always served in a particular order – water, salmon (or other fish), deer (or other game), roots and berries.

The historical focus on 'men's foods' – water, salmon, game – has in recent years expanded to include a focus on 'women's foods' as well – the roots and berries. Ceremonies are held for each of the foods when they become available each year

Teara shared stories of her own children and other family members and the celebrations that occur for each child's "first salmon," "first kill," first root or berry gathering. These ceremonies serve as recognition that the person is a provider of that food.

The CTUIR has developed an extensive atlas that details traditional hunting and gathering areas throughout the ceded lands.

Both Teara and Woodrow said there was a lot of debate about recording locations. There was great concern that these tribal resources could be used up by others if the locations are widely known. The Tribe ultimately decided it was important to document these areas for the tribe.

Tom asked about the tribal perspective with regard to contamination that has occurred at Hanford and how it might impact first foods. Teara said it has already had tremendous impact. Many tribal members wintered on what is now the Hanford Site. There was extensive wildlife, roots, berries and traditional medicines gathered. At Hanford there's a plant on Rattlesnake Mountain that only grows in that area.

Teara said the tribes want regular access to Hanford and the traditional resources, but that it will take a lot to demonstrate that those resources are safe for the tribes to consume and use.

Teara said that the Native American practice is to not over-utilize an area, so the resources will thrive. An example is the Elk Horn Valley Wind Farm. The tribes negotiated to use the wind farm roads to access 40 acres of Bureau of Land Management land. They surveyed and found two root resources that could now be gathered. The tribes gathered there in 2008 – the first time in 70 years. Roots are flourishing now because they went back and recognized and honored them.

Teara said that CTUIR and other tribes are working on some plant restoration work in certain areas of the Hanford site. CTUIR has been cultivating native plants that can be eventually restored on the site.

#### **DOE-ORP Update**

Brian Harkins, Deputy Assistant Manager for Tank Farms for DOE-ORP, provided the Board with an update on tank waste issues.

Brian said there is progress being made on DOE's efforts to begin vitrifying some Hanford tank wastes through the Direct-Feed Low Activity Waste (DF-LAW) process.

Tank waste from four of the AP Farm tanks would be fed to a cesium removal system, to prepare it as feed to the LAW vitrification facility. That initial cesium removal system is now planned as a tank-side system (TSCR) using resin. It will also filter out the solids. The resin columns would be stored on a pad initially, and the design will accommodate several years of use. They've just begun the permit processing

for that storage. A contract was awarded in early July for initial design. Brian added that the vendor's proposal shows an early delivery.

There is a pipeline installed to the edge of the Waste Treatment Plant construction site. It needs to be extended to the LAW facility.

An Effluent Treatment Facility is being constructed to handle liquid waste coming off the LAW process. Evaporator waste that comes off the processing will go to the new facility. Brian described that facility as the critical path.

The process has begun to commission and start-up various facilities and systems that will be necessary for DF-LAW to become operational. Workers have begun start-up of permanent plant power to the LAW facility. Meanwhile, Washington State has approved the operating permit for the analytical laboratory.

Pacific Northwest National Laboratory successfully demonstrated the vitrification technology with two gallons of waste. The process was designed to mimic the LAW system.

In the tank farms, work is underway to prepare the A and AX tank farms for waste retrieval. Unlike C Farm retrievals, where they basically went one tank at a time, virtually all the infrastructure and equipment to support the retrievals will be installed before retrieval begins. Workers are also removing old equipment.

Brian said that the 242-A Evaporator campaign in May created about 166,000 gallons of double-shell tank space capacity. A new spare re-boiler has been delivered to Hanford, meeting a consent decree milestone.

The tank farm contractor is testing additional engineered controls to control tank vapors. They are working with a union-hired consultant to expand the use of air-purifying respirators as an alternative to full air packs. Full-face air purifying respirators have been approved for use in the SY and AP tank farms for non-waste disturbing use. Brian said they are also planning a stack extension in the AW Farm.

With the failure of double-shell tank AY-102, DOE has a strong focus on ensuring the integrity of the remaining 27 double-shell tanks. At a minimum, each double-shell tank will have its primary tank wall and annulus floor inspected every three years by video, and through ultrasonic testing every 10 years. There is also a strong focus on controlling corrosion through adjustments to the waste chemistry.

High-definition examination of the bottom of AY-102 indicates severe pitting occurred. At least seven failure points were identified. Three other double-shell tanks may have held waste with similar chemistry to the waste that damaged AY-102. They are revising chemistry control testing to improve protection against pitting corrosion.

Kristen asked whether the TSCR technology will eliminate the need for the LAW pre-treatment system, which was at least temporarily shelved after cost estimates escalated and the schedule could not be met. Brian said TSCR is the short-term solution, but DOE will need additional capacity to keep DF-LAW running.

#### **Update on Tank Related Negotiations**

Alex Smith, Washington Department of Ecology, provided a brief update on negotiations to set new tank waste retrieval and treatment milestones. The negotiations were informed by System Plan 8 – which looked at a variety of different scenarios to achieve the tank waste mission. With the existing Consent Decree milestone pushing the full start of the Waste Treatment Plant to 2036, other existing milestones are no longer achievable.

Alex said that the System Plan scenarios looked at an unconstrained budget. However, DOE is not willing to base new milestones on funding levels they don't believe are achievable. This has led to the two parties being unable to reach agreement to this point on new milestones. If an agreement cannot be met, Washington has the option of dictating new milestones through a Director's Determination. Those could then be appealed by DOE. The next self-imposed deadline for the negotiations to conclude is August 15.

#### **Draft C-Farm Waste Incidental to Reprocessing (WIR) Determination**

Brian Harkins then provided some additional information about the WIR process. The draft document is currently out for public comment through at least September 7. Brian said the State of Oregon, among others, have asked for an extension of the comment period and these requests are under consideration. Ken said it would be important to get a response to that request sooner rather than later. Brian said that a WIR determination allows DOE to consider high-level waste in the tanks, residuals, and ancillary structures as other than high-level waste.

Brian said DOE has used the WIR process at other DOE sites, using their authority both under DOE Order 435.1 and through the Section 3116 process defined by Congress.

Also underway now is a nine month consultation process with the U.S. Nuclear Regulatory Commission (NRC). DOE will consider input from the public and the NRC before publishing a final WIR Evaluation and Determination. That is expected to occur about May 2019.

Brian added that the WIR does not address leaked tank waste to the soils and groundwater. DOE will address those in a separate process. A similar WIR process is expected for Hanford's other tank farms in the future.

**Continued discussion: What makes the WIR important to Oregon**

Jeff addressed the Board to talk about Oregon's concerns, which he said relate to three basic precedents that may be set if this process goes through.

The first precedent is legal. Jeff explained that DOE over time has been able to come up with their own definition and rules of what high-level waste is or is not. DOE was previously sued on this issue by the Natural Resources Defense Council, the Yakama Nation and the Snake River Alliance. Oregon, Washington, Idaho, and several other states joined the litigation. Oregon's interest was to stay informed and to not be cut out of any information.

Because DOE was not attempting to reclassify waste at the time, an Appeals Court eventually ruled the issues were not "ripe" for active litigation.

In 2005, Congress approved Section 3116 of the 2005 National Defense Authorization Act, which provides a process for DOE to reclassify wastes at the Savannah River Site and the Idaho National Laboratory. Washington, Oregon and New York were not confident of the process at the time, and Hanford and the West Valley Site were exempted from this Section 3116 process.

In 2011, there was an internal DOE effort to rewrite DOE Order 435.1 to take it through formal rulemaking. That stalled. Jeff said for the C Farm reclassification process currently underway, DOE is using the original Order 435.1 again, so the time may finally be ripe to make a final legal determination if a lawsuit is brought again. There is an added, potential precedent-setting complication that over the past six years, DOE has used the 435.1 process to conduct WIR determinations for smaller wastes such as a vitrification melter from the West Valley site in New York and the three gallons of treated tank waste that DOE sent from Hanford to Texas in 2017. These efforts went unopposed legally.

The second precedent of concern relates to the amount of waste that DOE was able to retrieve from the tanks, and whether it meets the definition of "removal of key radionuclides to the maximum extent technically and economically practical." DOE was able to retrieve approximately 96 percent of the wastes, but the goal set by the Tri-Parties and memorialized in a Record of Decision after the 2012 Tank Waste Management and Closure Environmental Impact Statement was that DOE would retrieve at least 99 percent of the waste. If DOE secures a WIR for these tanks with only 96 percent retrieval, it sets a precedent that may allow them to pursue lesser retrieval efficiencies on future tank closures.

The third precedent relates to the long-term contaminant migration models that support the assertion by DOE that the remaining wastes in the tanks will be safe for 10,000 years. Oregon has historically had issues with the way the computer modeling fails to represent some of the complexity in the subsurface environment (such as lateral migration of contamination along fine subsurface layers). This introduces an uncertainty into the model predictions that Oregon is concerned may lead to future unexpected consequences. If the model underpinning the WIR for the C Farm is approved, this would essentially validate the model and allow these uncertainties to be propagated to future tank closure decisions.

## **Board Business**

After some discussion, Tom suggested the Board write a letter endorsing the ODOE letter, which asked for a 60 day extension to the comment period for the WIR. Ken replied that it wouldn't hurt to do so.

Ted asked for a motion on the subject.

Dan moved that the Cleanup Board submit a letter to DOE requesting a 60 day extension of the comment period. All 11 voting members present voted in favor. There were no votes in opposition.

The Board selected November 5 and 6 for its next meeting. Cascade Locks was selected as the meeting location.

## **Public Comment/Adjourn**

Sharon Monteiro thanked the Board for the motion that just passed. She said that will help her to be able to explain some of the actions the Board takes. She hopes the Cleanup Board would officially join the call for more tanks, as she said many of Hanford's double-shell tanks show signs of thinning.

Kristen pointed out that the Board has previously endorsed new tanks.

Ken announced that on August 2, he and Jeff will provide a Hanford presentation at an OMSI Science Pub in Portland.

Mark and Ken will be at the Umatilla County Fair helping to staff the Umatilla County Emergency Management booth on August 9-10.

Ted adjourned the meeting at 12:26 p.m.