



IDAHO CLEANUP PROJECT

C I T I Z E N S A D V I S O R Y B O A R D

Meeting Minutes

April 19, 2018

List of Acronyms

AMWTP	Advanced Mixed Waste Treatment Project	ICP	Idaho Cleanup Project
ARP	Accelerated Retrieval Project	INL	Idaho National Laboratory
BEA	Battelle Energy Alliance	INTEC	Idaho Nuclear Technology and Engineering Center
CAB	Citizens Advisory Board	ISA	Idaho Settlement Agreement
CDC	Center for Disease Control	IWTU	Integrated Waste Treatment Unit
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act, also referred to as superfund	NE	Office of Nuclear Energy
CH-TRU	Contact-Handled Transuranic Waste	NRF	Naval Reactors Facility
DDFO	Deputy Designated Federal Officer	NWTRB	Nuclear Waste Technical Review Board
DEQ	Department of Environmental Quality	RCRA	Resource Conservation and Recovery Act
DOE	Department of Energy	RH-TRU	Remote-Handled Transuranic Waste
EIS	Environmental Impact Statement	SDA	Subsurface Disposal Area
EM	Office of Environmental Management	SNF	Spent Nuclear Fuel
EOC	Emergency Operations Center	TRU	Transuranic waste
EPA	Environmental Protection Agency	WIPP	Waste Isolation Pilot Plant

The Idaho Cleanup Project (ICP) Citizens Advisory Board (CAB) held its quarterly meeting on Thursday, April 19, 2018, at the Shoshone-Bannock Hotel & Event Center in Fort Hall, Idaho. An audio recording of the meeting was created and may be reviewed by calling CAB Support Staff at 208-557-7886.

Members Present

Josh Bartlome
Bob Bodell
Keith Branter
Brad Christensen
Marvin Fielding
Jim Huston
Kristen Jensen
Trilby McAfee
Betsy McBride
Cathy Roemer
Larry Schoen

Members Not Present

Talia Martin

Deputy Designated Federal Officer (DDFO), Federal Coordinator, and Liaisons Present

Jack Zimmerman, DDFO, U.S. Department of Energy Idaho Operations Office (DOE-ID)
Connie Flohr, Acting DDFO, DOE-ID
Brad Bugger, Federal Coordinator, DOE-ID
Fred Hughes, Program Manager, Fluor Idaho
Susan Burke, State of Idaho
Daryl Koch, Idaho Department of Environmental Quality (DEQ)
Rod Lobos, Environmental Protection Agency (EPA)

Others Present

Lori Howell, Shoshone-Bannock Tribes
Beatrice Brailsford, Snake River Alliance
Nolan Jensen, DOE-ID
Erik Simpson, Fluor Idaho
Jim Malmo, DOE-ID
Mark Hutchison, Naval Reactors Facility (NRF)
Dave Parmelee, DEQ
Joel Case, DOE-ID
Danielle Miller, DOE-ID
Curtis Roth
Staw Baldwin, Shoshone-Bannock Tribes
Michael Connolly
Theresa Kaufmann, Fluor Idaho
Robert Mildes, Battelle Energy Alliance
Andrea Gumm, ICP CAB Facilitator
Kelly Green, ICP CAB Support Staff

Brennan Summers
Bret Leslie, Nuclear Waste Technical Review Board (NWTRB)
Kerry Martin, DEQ
Karyn Severson, NWTRB
Ann Riedesel, Fluor Idaho
Kevin O'Neill, DOE-ID
Rebecca Casper, Idaho Falls Mayor
Clark Jones
Tami Thatcher
Greg Calder
Nicole Badrov, DOE-ID
Dana Kirkham, Regional Economic Development for Southeast Idaho
Jordan Davies, ICP CAB Support Staff

Opening Remarks

Facilitator Andrea Gumm began the meeting at 8:00 a.m. She reviewed the agenda and noted that the public comment periods would be held at 10:15 a.m. and 1:30 p.m. She reminded attendees of the process for public comments during the meeting, time permitting, or via question cards.

Keith Branter (CAB Chair) welcomed everyone to the meeting and commented that there were many interesting subjects on the day's agenda. He said he expected it would be a good meeting.

Jack Zimmerman (DOE-ID Deputy Manager and CAB DDFO) agreed with Branter that there were many pertinent subjects on the day's agenda. He added that he would cover the recent drum rupture in the Accelerated Retrieval Project (ARP) V structure during his overview presentation.

Susan Burke (State of Idaho) agreed with Branter and Zimmerman that the agenda looked full and interesting, and commented that she was looking forward to listening and learning.

Daryl Koch (DEQ) said he would get into some Resource Conservation and Recovery Act (RCRA) stuff later in the day, provided there was enough time during the Advanced Mixed Waste Treatment Project (AMWTP) discussion.

Rod Lobos (EPA) stated that he would listen and take the CAB's input back to EPA in the hopes of applying it to the decisions they are making at the Idaho National Laboratory (INL).

Fred Hughes (Fluor Idaho) commented that a few weeks previously, his team at Fluor Idaho had the pleasure of showing EM-1 and EM-3 the facilities and work being performed at the ICP.

Hughes referred to the ARP V incident, and noted that there were no injuries or releases of contamination associated with the event. He said the response to the incident was excellent, and that there are several teams investigating what happened and working toward recovery. Later in the day, he said, Fluor Idaho employees would be making their first entry back into the facility.

Hughes reported that he had just signed out the letter stating Fluor Idaho is ready to begin the second demonstration run at the Integrated Waste Treatment Unit (IWTU), thereby kicking off the DOE readiness assessment. Following successful completion of this second run, Fluor Idaho will begin heating up the plant.

Recent Public Outreach Activities

Zimmerman reviewed recent public outreach activities. The document is available on the ICP CAB website: <https://energy.gov/em/icpcab>.

Betsy McBride (CAB Member) said she recalled that INL was required to do an "options look" of AMWTP for a different waste stream and asked if it was still ongoing. Zimmerman responded that DOE Headquarters had commissioned a study to consider options for the future use of AMWTP, that DOE-ID provided data for that study, but that it had not yet been completed or released.

Idaho Cleanup Project Overview

Jack Zimmerman (DOE-ID) provided a presentation on the status of cleanup at the Idaho Site. The presentation is available on the ICP CAB website: <https://energy.gov/em/icpcab>.

Branter asked if any waste similar to that involved in the ARP V drum event had been shipped to the Waste Isolation Pilot Plant (WIPP). Zimmerman responded no. The waste was just going through initial characterization and treatment to remove prohibited articles. It was nowhere near certified to ship.

Branter asked if, following the incident at ARP V, Idaho was still shipping waste to WIPP. Zimmerman responded yes. Idaho immediately stopped shipments following the incident to confirm that the waste type in question had neither been previously certified nor shipped to WIPP. DOE-ID and Fluor Idaho employees worked through the weekend to obtain positive confirmation that no like material had ever been certified or shipped to WIPP. Idaho resumed shipments of certified transuranic (TRU) waste on Tuesday, April 17.

Jim Huston (CAB Member) asked if DOE or Fluor Idaho had performed a characterization to see which radionuclides were involved in the radiation exposure. Zimmerman responded that the complete characterization was not yet finished, but initial isotopic analysis from a sample taken through a small port in the facility indicated Plutonium-239, which points to a waste that likely came from Rocky Flats.

Larry Schoen (CAB Member) asked if there were records associated with the waste when it was sent to Idaho in the 1950s. Zimmerman responded that the majority of the waste was identified when it was shipped to Idaho, but the information must be confirmed in order to certify the waste material. This particular waste stream is problematic because it, along with its records, was retrieved and then repackaged into other containers, so there is not a reliable history of the drums in this waste stream.

Schoen asked if records are more carefully maintained today. Zimmerman responded yes, and added that, for the most part, the records of waste from Rocky Flats have been very good, but this particular waste stream is an exception due to its history.

McBride asked if ARP V was currently closed. Zimmerman responded yes, workers have not entered the facility since the event. As part of the response, radiological control technicians established a boundary of 100 meters so they could collect data. That 100 meter boundary, the fence line, and the facility exhaust outlet were all monitored and no contamination was found. Radiological control and industrial hygiene technicians surveyed their way toward the ARP V facility looking for volatile organics and did not find any contamination outside the facility. Zimmerman added that they are focused on making a safe first entry following the event and then identifying recovery options.

Marvin Fielding (CAB Member) asked if there was more than one drum involved. Zimmerman responded they did not yet know.

McBride referred to Slide 14 of Zimmerman's presentation. She observed that if a "cranky" drum in ARP VIII were to get too hot, that facility would also contain a breach. She asked if it is likely there are more at-risk drums, like this one, and if they would be in the vicinity. Zimmerman responded that the drum in ARP V was unlike anything they had seen before. While it is not necessarily uncommon to see some reactions during exhumation and/or treatment, there are controls in place to deal with them in those scenarios. The ARP V drum event was unusual, and DOE and Fluor Idaho are working to understand what caused that reaction. Zimmerman added that ARP VIII has the same facility controls, such as engineered barriers and filtered exhaust.

Huston asked if the advanced methods and procedures in place at ARP V worked as intended. Zimmerman responded yes. While there was still an ongoing investigation into the event, it appeared everyone closely followed their training and the procedures. Worker response to the event was timely, and despite complications in emergency response (Battelle Energy Alliance [BEA] operates the Emergency Operations Center [EOC] and Fluor Idaho must integrate with them during an event) the event came off almost flawlessly.

McBride asked if BEA could use this fuel for research. Zimmerman responded no.

Schoen commented that it would be helpful to have a paper explaining the different types of spent nuclear fuel (SNF). Zimmerman responded that SNF is not considered waste, in part because there is still some inherent value to the materials. Extracting that value requires reprocessing, which Idaho does not do. At

some point, a determination might be made that the SNF is a waste, and at that time it would go to a repository for disposal. Zimmerman added that such a repository does not yet exist.

Hughes commented that Fluor Idaho is in the final stages of developing fact sheets on each waste type to be shared with the public.

Burke asked if DOE plans to complete waste treatment at ARP IX in 2018 so they can begin excavation. Hughes responded that they will finish treating the roaster oxides in late summer/early fall and then begin exhumation.

Beatrice Brailsford, Snake River Alliance, Pocatello, referred to the ARP V drum event and Zimmerman's assertion that the waste stream is called SD-176. She asked how large that waste stream is. Zimmerman responded that it is more than 2,000 drums. She asked if it was exhumed as part of a larger group. Zimmerman responded it was part of about 20,000 drums.

Brailsford commented that the SD-176 drums had been stored in the Transuranic Storage Area since the mid-1970s and that DOE had looked at them in 2009 and 2011. She asked why DOE did not review them again prior to this initial treatment. Zimmerman responded that SD-176 was known to be a very difficult waste stream to deal with, so those drums were saved in part because the treatment capability and repurposing of ARP V did not exist in 2011, components necessary to dealing with these sludge streams.

Brailsford asked if the whole SD-176 waste stream had been difficult to deal with, and how many drums had been treated so far. Zimmerman responded that the entire waste stream had been difficult due to its unique history, and stated that 1,786 drums had undergone initial treatment. Those drums must still go through the final characterization and certification process prior to shipment to WIPP.

Tami Thatcher, Idaho Falls, referred to Slide 4 of Zimmerman's presentation, which mentioned sleeve failure during UT-33 waste bag out. Thatcher asked where DOE would send the UT-33 as it is a weapons fissile material. Zimmerman responded that UT-33 contaminated items, as opposed to bulk UT-33, is considered low-level waste. Therefore, they will not be sent to WIPP.

Integrated Waste Treatment Unit (IWTU) Update

Kevin O'Neill (DOE-ID) provided an update on the IWTU project. The presentation is available on the ICP CAB website: <https://energy.gov/em/icpcab>.

Bob Bodell (CAB Member) asked if there will be continued maintenance on the valves, or if they will last through treatment of all 900,000 gallons of waste. O'Neill responded that DOE anticipates maintenance outages. All industrial equipment has reliability challenges, but DOE is installing the best possible equipment. They have a set of backup valves, but replacement would require the plant to shut down.

Bodell asked how, logistically, they will replace the valves once the facility has gone hot. O'Neill responded that during the Phase 3 simulant run, they will begin employing the full suite of radioactive procedures in order to demonstrate the effectiveness of those procedures and the workers who follow them.

Hughes added that as part of the contractor readiness assessment, Fluor Idaho had a team look at their radiological procedures and processes, so they have time to implement the team's recommendations and make adjustments.

Schoen asked O'Neill to compare the simulant feed material and final product to the actual feed material and final product. O'Neill responded that the radioactive constituents are missing from the simulant feed, but the waste, reaction, and final product should all be very similar.

Huston asked how long it would take to dispose of the waste in optimum conditions. O'Neill responded they expect to operate at 1.5 to 1.8 gallons per minute. If IWTU were to run nonstop at that rate, it would

take 14 months to process all 900,000 gallons. However, O'Neill said they do not expect the facility to run nonstop.

Zimmerman agreed that one continuous run is not a realistic scenario. Maintenance outages will push the schedule out, so it could be two years or more before all 900,000 gallons have been processed. Safety is, and must remain, the top priority.

Transuranic Waste Characterization and Shipping Update

Jim Malmo provided an update on transuranic waste characterization and shipping. The presentation is available on the ICP CAB website: <https://energy.gov/em/icpcab>.

Branter asked if Idaho has shipped any remote-handled (RH) TRU waste to WIPP since it reopened. Malmo responded no, all RH-TRU is currently on hold at WIPP, as they are attempting to bring contact-handled (CH) TRU shipments to the capacity they had before.

McBride asked if there is a waste stream at INL that is purely mixed low-level waste, completely devoid of TRU waste. Malmo responded that the mixed low-level waste classification means the activity level does not meet transuranic waste qualifications. He added that mixed-low level waste will be treated through the hot cells at the Idaho Nuclear Technology and Engineering Center (INTEC).

Huston referred to the next to the last bullet on Slide 4 of Malmo's presentation and asked if it is a limited use permit for the balance of waste in Idaho or if it is a certification of the facility for potential future use. Malmo responded that WIPP's Central Certification Project, the organization that certifies waste complex-wide, reviews each site's certification program to verify that it meets their requirements. DOE-ID's intent is to maintain that certification. Huston congratulated Malmo on getting to this point.

Branter asked when DOE anticipates Idaho's last shipment to WIPP will be. Malmo responded that completion of waste certification will not necessarily align with WIPP acceptance of shipments; Idaho can only ship waste as fast as WIPP can receive it. Malmo said that given current conditions, he suspects it will be sometime around 2028. That date will change if WIPP is able to increase shipments.

McBride asked if, during their chemical analyses, they are using the same chemicals they used prior to WIPP's closure in 2014. Malmo responded that they used to look at the acceptable knowledge, review all the data associated with the waste, and identify the chemicals in the waste stream. They now understand that other chemicals in the vicinity of waste generation could have found their way into the waste stream. Current chemical analyses include looking at all the chemicals that could have been in the building at the time each waste stream was generated and then considering those chemicals, too.

McBride asked if they have had to reopen and retreat any drums. Malmo responded no.

Schoen asked what would happen if they found some chemical incompatibility or potential volatility in a waste stream. Malmo responded they would have to analyze treatment of that waste. Schoen asked if they are opening the drums. Malmo responded yes, the treatment process includes opening the drums, sorting through the waste, and verifying whether or not liquids are present.

Bartlome asked Malmo to explain the green box on the graphic on Slide 6. Malmo explained that the top number, 42,000, represents the number of drums previously certified to ship to WIPP from Idaho; 3,154 is the number of drums approved to ship; 160 is how many shipments remain; October 2018 is the anticipated completion date of those shipments.

Schoen asked what metals make up the roaster oxides. Malmo responded uranium oxides.

Branter asked how many RH-TRU shipments Idaho has ready to ship. Malmo responded about 170, but said it will be between 400 and 500 once the rest of the waste is certified. DOE believes they can ship it all out of the state by 2022 or 2023 if they make two shipments a week.

Bartlome asked Malmo to clarify the range of RH-TRU shipments ready to ship. Malmo responded there are two different backlogs, one that was previously certified (170 shipments) and one that is waiting to go through the final certification with WIPP.

McBride asked why the RH-TRU waste is on hold. Malmo responded that the National Priorities List requires that DOE sites focus on getting CH-TRU waste streams approved first, primarily because there is significantly more CH- than RH-TRU waste and they do not have the resources to focus on both. He added that once they get through the CH-TRU they can begin focusing on RH-TRU.

Branter referred to Slide 12 and asked Malmo to explain the middle photograph. Malmo responded that the photo shows the contents of a drum.

Fielding asked if the drum in ARP V had been recently processed. Malmo responded that the initial characterization of the drum had been completed and showed there were no liquids present. Additional visual inspections occurred when the waste went to the drum packaging station, where workers write down everything they see, from the color and consistency of the waste, to the various prohibited items present. This information is later used when they review the acceptable knowledge.

Malmo added that these drums, which initially had very good records, came from Rocky Flats in the 1950s and were immediately buried at the Subsurface Disposal Area (SDA). When they were exhumed in the 1970s, many of the drums, and the associated records, had degraded. The visual examination aims to pick out clues that will help identify the waste in each drum.

Schoen asked if it was simple oxidation that caused the combustion at ARP V. Malmo responded they would learn more about what caused the reaction during the investigation.

Schoen asked if they could handle the material in a facility where fires could be extinguished without exposing firefighters to this type of risk. Malmo responded the intent is to see a reaction while the waste is in the trough.

Malmo provided a full explanation of the history of the drum at ARP V: When Idaho workers exhumed these drums in the mid-1970s, much of the data they had arrived with had been lost and the drums were marked unknown. Further investigation is required to identify the waste stream they came from. Upon exhumation, the drums were loaded into cargo containers, which were placed on an asphalt pad and covered with dirt at AMWTP.

When workers retrieved the cargo containers just this past year, they opened them up and pulled the waste back out. Initial characterization is performed to better understand what is in each drum before there are taken to ARP V and opened. Workers peel off the lid, empty the contents into a tray, spread it out, and sort through it in the trough. They identify prohibitive items, absorb any liquids with an inorganic material, and aerate the contents to encourage a reaction. If waste is going to react, the goal is to have it react in the trough. In the case of the drum in question, no liquids were seen and no reaction occurred.

Workers then scrape the waste out through a port and put it in a tray, which is taken to the drum packaging station. There, workers sift through the waste, and observers record what they see. Then the liner is pulled up, moved over, and put into a brand new drum.

Bartlome commented that he knows this issue is very technical and that the CAB members do not always get the back story, but said he thinks the explanation of this incident was superb and really explained the situation. He asked if there will be a follow up presentation at the June CAB meeting. Malmo responded yes, they want to let the investigation play out so they can learn how to better treat these unknowns.

Public Comment Session #1

The Honorable Rebecca Casper, Mayor of Idaho Falls commented that it is her privilege to serve as mayor. She expressed her gratitude to DOE, Idaho, and Fluor Idaho staff for the way they handled and managed the drum breach at ARP V on April 11. The safety protocols the staff had trained for worked as designed. What's more, the communication process worked very well locally. Mayor Casper said that as a community leader, she was initially informed of the event the morning of April 12, and throughout the day was able to get her questions answered. The answers were clear and timely. This kind of communication does a great deal to enhance public safety.

Mayor Casper continued to say that overall the commitment to safety shared by the parties involved gives her great confidence on behalf of the citizens of eastern Idaho. She commented that other communities associated with DOE-EM efforts across the country cannot always say the same thing. Idaho sets a high standard for working together well, between contractor, DOE, and local community leadership.

Mayor Casper encouraged DOE-HQ to evaluate and implement this model complex wide and said she deeply appreciates this kind of professionalism. This enterprise is not risk free, and yet it is gratifying to know that as this difficult work is undertaken, the current leadership and the hundreds of men and women who comprise the staff behave in such a professional manner and that they respond so well under pressure. Everything worked as it should in a situation like this.

Thatcher commented that it would be nice to be able to obtain the facts, to call the public affairs hotline, but that she was unable to get information immediately following the event as a member of the general public.

Thatcher referred to a question a CAB member had asked at the February meeting regarding calcining that occurred from the mid-1960s through 2000. That CAB member asked which chemicals were sent out the stack, and DOE's response was nitrogen oxides. She said she would like to address the stack emissions a little more fully.

Thatcher commented that Idaho DEQ was not involved in air emissions until about 1991, when they identified some issues with the calcining stack emissions. Because the calciner was shut down at the time, however, they did not pursue resolution to those issues. The calciner started back up and the issues had never been resolved. The INEL Historical Dose Evaluation states that calcining released Iodine-129, which has a 16 million year half-life. No one was monitoring stack emissions.

Thatcher went on to say that DOE often implies that calciner-related stack emissions were limited to something like laughing gas, but that is not true. The Center for Disease Control (CDC) has performed reviews of the INEL Historical Dose Evaluation and determined that stack releases have often been underestimated. When attempting to estimate emissions, the CDC was forced to lump fuel processing and calcining together because they are difficult to separate, but they discovered about a million curies every year were released out the stack.

Nuclear Waste Technical Review Board (NWTRB) Study

Bret Leslie (NWTRB) provided a presentation on the NWTRB's study. The presentation is available on the ICP CAB website: <https://energy.gov/em/icpcab>.

McBride commented that the CAB heard presentations several years ago about the Blue Ribbon Commission and there was talk about agreeable sites for interim storage facilities. She asked if that discussion is still ongoing. Leslie responded that the NWTRB's mission is to follow what DOE is doing, and DOE shut down all consent-based activities.

Schoen asked if Leslie, when discussing corroded or degraded fuel, is referring to the fuel itself or the fuel's shell. Leslie responded that a fuel element often has cladding, which is usually of a different material. DOE

spent nuclear fuel (SNF) can have aluminum-based fuel with aluminum-based cladding. If aluminum degrades in water, both the cladding and the fuel degrades. Both the cladding material and the fuel can be capable of erosion.

Schoen asked if a uranium can combine with an aluminum. Leslie responded yes, it is uranium aluminide.

McBride commented that the CAB would be discussing budget priorities for DOE-ID. She asked Leslie if this is something that should go into that conversation. Leslie responded that the NWTRB identifies the issues for the Secretary and Congress that they believe DOE should be addressing. They do not identify solutions, but provide an independent technical evaluation of which things need priority.

Huston commented that the NWTRB's study does not consider the Idaho Settlement Agreement (ISA). He asked if the state is involved in this discussion. Leslie responded that he reached out to the state as he was developing the report to ensure he was capturing things appropriately. The NWTRB will not be driven by the ISA, but its recommendations are aware of it. Huston asked Leslie to confirm that it is not coordinated. Leslie confirmed, the NWTRB is an independent agency. The NWTRB does not have a mandate to evaluate management of the sites, it has a mandate for packaging, transportation, and disposal.

Branter asked Connie Flohr (DOE-ID) if someone at DOE is looking at these recommendations, and if so, what they are doing about them. Flohr responded that an entire office at DOE-EM is dedicated to spent fuel issues and is engaged and evaluating the NWTRB's study. Leslie added that they briefed DOE-HQ and the Savannah River CAB, in addition to conducting outreach on the hill with local delegations.

Schoen said the complexity strikes him as alarming. He commented that the CAB would need to look not only at the onsite issues, but the bigger picture if they were ever to write a recommendation. He stated that the findings in the NWTRB's study come across as a real mess, not because the NWTRB isn't doing its job, but because everything in the report about this critical issue is far from being resolved. Some of the recommendations are so fundamental to the waste management issue, it is surprising the NWTRB had to make them.

Leslie responded that in 2012, DOE-EM said the DOE standardized canister was indeterminate because a repository had not yet been identified. This report asserts that it is not indeterminate. The DOE standardized container would work in a salt, clay, or granite repository. The size of these packages are small enough that getting them underground for any of these repositories would not pose an issue. Schoen said Leslie's answer suggests which comes first, the container or the repository, and commented that it is a lamentable situation if that is where DOE is stuck.

Huston commented that a line had been drawn between the Navy program and the DOE waste management program, but that the two are being recommended as being fairly rigidly interlocked. The Navy is in the process of building a multi-billion dollar facility to handle the new size fuel elements coming out of the ship designs, submarines and aircraft carriers. Huston asked if Leslie has a comment or if this issue comes up as a stumbling block. Leslie responded that the DOE standardized canister is pretty small relative to the Navy canister.

Brailsford asked Leslie to elaborate on sodium-bonded fuel because her understanding is that DOE does not regard SNF as high-level waste. Leslie responded that there is a figure in the Idaho chapter of the NWTRB report. When the electrochemical processing occurs, two waste streams are generated: A salt waste stream that would go into a ceramic waste form, and the cladding that gets put in a metal puck. These streams would be considered high-level waste and go to a repository, unless DOE reclassified them as something else.

Thatcher asked Leslie if he thought Yucca Mountain would be a suitable repository for calcine and sodium-bearing waste. Leslie responded that the NWTRB is following the issue, but its mandate is packaging and

transportation. They do not delve into management of SNF other than how it affects packaging, transportation, and disposal.

EM Budget Update

Connie Flohr (DOE-ID) provided an update on the EM budget. The presentation is available on the ICP CAB website: <https://energy.gov/em/icpcab>.

McBride asked if DOE assumes the EM waste will go with the Navy fuel. Flohr responded that DOE has been considering that approach internally. McBride asked when this item should land on a top priorities list. Flohr responded it should probably be on the list already as 2035 is not that far away. She stated that they may not meet the deadline, even if they started immediately. DOE has been actively engaged with all players to determine the best approach. All things have led back, unfortunately, to a reluctance to package anything, even in a DOE canister, until there is a known end point for that material.

McBride commented that the NWTRB studied the potential environments of a repository and determined that the DOE standardized canister would work, even at Yucca Mountain. She asked what DOE is waiting for. Flohr responded that the administration requested funding for Yucca in 2018 and Congress did not support it.

Schoen commented that Leslie's presentation introduced two variables: 1) the extent and rate of degradation of materials as they are stored, and 2) the changing regulatory environment. He asked how these aspects are to be reconciled.

Joel Case (Assistant Manager for Waste Disposition, DOE-ID) responded that DOE is conducting some near-term activities, such as working with BEA on the aging issues. DOE-ID received funding from Congress this year to continue studies of fuel degradation. However, marrying the regulatory aspects is difficult. Funding is very limited and the priorities have not been focused on the long-term, other than moving fuel from wet to dry storage and safely maintaining that configuration. For the long-term, DOE-ID would like to conduct a packaging demonstration project to try to avoid the large capital cost assessment and to show progress toward getting the fuel road ready by 2035. Case commented that he is encouraged that the NWTRB report is helping to provide some leverage.

Schoen encouraged DOE to provide a follow up presentation regarding their response to the NWTRB study. Case commented that the National Academy of Sciences would be holding a public meeting in Idaho Falls on May 16 and 17. They are conducting a study to evaluate EM technology development and the EM program. He encouraged the CAB members to attend.

Branter asked if Foster Wheeler, a site contractor, was allowed to build a new SNF facility outside INTEC about 15 years ago. Case responded that Foster Wheeler did a design for that facility, DOE submitted it to the NRC and obtained a license, but it was never constructed, likely for similar reasons, such as Yucca Mountain and budget priorities.

Huston referred to Slide 6 of Malmo's presentation on transportation and shipping. He commented that it reinforces DOE's stance on preparation, and said it is clear Idaho is well down the curve in terms of addressing the issues that come up with new licensing. He encouraged DOE to push this as far forward as they possibly can.

Flohr responded that DOE-ID has not yet had the opportunity to engage with the new EM-1 about the NWTRB's recommendations. Huston asserted that the CAB should consider putting together a recommendation on this topic.

Public Comment Session #2

Thatcher commented on DOE's cancellation of consent-based siting, which she said was very unfortunate. She stated that she, along with many other citizens throughout the country, provided public comment on the topic. Not only was the effort dropped, but they removed the websites and made access to the record of public comment virtually impossible, which is counter to promoting a democracy. Taxpayers paid for those meetings and citizens spent their own money on travel in order to participate.

Thatcher went on to say that Idaho houses enough SNF to fill Yucca Mountain and then some, and said DOE uses lack of a repository as an excuse for not making progress on packing and shipping INL SNF out of the state by 2035, per the ISA. It is estimated that it will take 15 years of repackaging to meet the 2035 milestone, and yet DOE has not decided whether a new facility is even necessary.

Thatcher expressed her appreciation for the efforts of the CAB on their AMWTP recommendation. She reminded them that DOE's previous Environmental Impact Statements on a potential future mission maintained that all ISA requirements would be met. She said the changes announced during the February meeting were jaw dropping, and stated that DOE continues to provide an information vacuum to the CAB. Thatcher stated that two weeks notice for the conference call was not sufficient time for some members to be able to participate. She thanked the CAB members who understood both the need to worry about jobs, and the importance of protecting Idaho, its citizens, and the environment.

Board Discussion of Potential Recommendation on FY 20 Budget Proposals

Branter commented that he believes the CAB should develop a recommendation for the Fiscal Year 2020 budget priorities similar to that which they submitted in 2016. The CAB members agreed.

Flohr added that DOE is really looking to see if the CAB agrees or disagrees with the priorities DOE-ID is setting forth in their Fiscal Year 2020 budget request. There is no number or bottom line to consider.

Following a discussion regarding the content of the budget recommendation, Branter offered to prepare a draft and submit it to the CAB members for their consideration at the June meeting.

Procedures and Lessons Learned from AMWTP Future Mission Debate

The CAB discussed lessons learned from the AMWTP future mission debate and recommendation process which occurred between the February and April meetings. Comments included:

1. It was unrealistic for DOE to ask for an informed recommendation on AMWTP without providing the information necessary to be informed. The CAB was doomed to fail.
2. The nature of the CAB membership cycle means some members will always be more informed than others, and in cases such as AMWTP future mission, the newer CAB members did not have enough time to learn about the site. It was unfortunate to have a heavy discussion like this one during a transition of membership.
3. Senior CAB members cannot ignore the opinions of new CAB members just because they are new. Disagreement is not an indicator that the process is not working.
4. There was not enough time to involve local communities, learn, debate, and ultimately come together. The timeframe was too tight. Yet, at the same time, the time gap was too large. The CAB members had been hearing about the possibility of future use for too long, changes in membership occurred, and the Board didn't act soon enough.
5. There still might have been a possibility of consensus.
6. CAB procedures were followed, and they worked. The CAB members simply had differences of opinion, only proving the diversity of the Board.
7. The CAB is not an investigative board, and its role is to bring advice to the table, not expertise. The Board had the ability to be a force on the issue of AMWTP future mission, but gave it up. The

members frequently fall subject to analysis paralysis, and if that continues, the CAB will be ineffectual.

8. Several CAB members were either not present for the discussion at the February meeting, or did not participate in the March conference call.

Brad Bugger (DOE-ID) commented that he was really proud of the CAB. The members' struggle on this topic was validation of the selection process. A diversity of opinions were presented and well represented during this process. It was important for the CAB to say something about AMWTP future mission rather than nothing, and at the very least the CAB got the attention of the Department and let the new Assistant Secretary for Environmental Management know that this issue is important to Idaho citizens. There is value in that.

Bugger went on to say that he had been considering the ways the CAB will be most valuable to DOE moving forward, and one thing that stands out is having the members look at long lead time items, identifying them, and bringing them to the attention of the Department. Given enough time, the CAB can establish subcommittees and request intensive days of presentations on topics such as SNF, high-level waste, and repository searches. He asked the CAB to consider which long lead time items are out there that they would like to explore.

Bugger encouraged the CAB members to reach out to their constituencies. He commented that before he became the Federal Coordinator, there was an effort by the Board to have some sort of informal mechanism to communicate with the community. It must not have been very successful, because it seems to have faded away. He asked the CAB to think about how they would go about reaching and involving their constituencies.

He thanked Bob Bodell, Jim Huston, Kristen Jensen, and Betsy McBride, who were all going off the Board. He commented that four new members would be joining the CAB in June, and said he hoped they would be as enthusiastic and helpful as Bodell, Huston, Jensen, and McBride have been.

Conclusion

Flohr concluded the meeting.

Keith Branter, Chair
Idaho Cleanup Project Citizens Advisory Board