



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 25, 2019

List of Acronyms

AMWTP	Advanced Mixed Waste Treatment Project	INL	Idaho National Laboratory
CAB	Citizens Advisory Board	ISA	Idaho Settlement Agreement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	ISOCS	In-Situ Object Counting System
CWI	CH2M-Washington Group Idaho, LLC	IWTU	Integrated Waste Treatment Unit
DNFSB	Defense Nuclear Facilities Safety Board	kVA	Kilovolt-ampere
DDFO	Deputy Designated Federal Officer	LLW	Low Level Waste
D&D	Decontamination and demolition	MRS	Monitored Retrievable Storage
DEQ	Department of Environmental Quality	NE	Office of Nuclear Energy
DMR	Denitration Mineralization Reformer	NRF	Naval Reactors Facility
DOE	Department of Energy	RCRA	Resource Conservation and Recovery Act
EM	Office of Environmental Management	RWMC	Radioactive Waste Management Complex
EPA	Environmental Protection Agency	SBW	Sodium-bearing waste
FFA/CO	Federal Facility Agreement and Consent Order	SDA	Subsurface Disposal Area
FY	Fiscal year	SNF	Spent Nuclear Fuel
HLW	High-level waste	SSAB	Site-Specific Advisory Board
HVAC	Heating, ventilation, and air conditioning	TAN	Test Area North
ICDF	Idaho CERCLA Disposal Facility	TRU	Transuranic waste
ICP	Idaho Cleanup Project	USGS	United States Geological Survey
		WIPP	Waste Isolation Pilot Plant

The Idaho Cleanup Project (ICP) Citizens Advisory Board (CAB) held its quarterly meeting on Thursday, April 25, 2019 at the Hilton Garden Inn in Twin Falls, Idaho. An audio recording of the meeting was created and may be reviewed by calling CAB Support Staff at 208-557-7886.

Members Present

Jackie Agenbroad
Josh Bartlome
Keith Branter
Brad Christensen
Teri Ehresman
Marvin Fielding
Talia Martin
Trilby McAfee
Cathy Roemer
Larry Schoen
John Sigler

Members Not Present

Brandon Leatham

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

Jack Zimmerman, Deputy Designated Federal Officer (DDFO), U.S. Department of Energy Idaho Operations Office (DOE-ID)
Connie Flohr, Deputy DDFO, DOE-ID
Brad Bugger, Federal Coordinator, DOE-ID
Fred Hughes, Program Manager, Fluor Idaho
Mark Clough, State of Idaho
Daryl Koch, Idaho Department of Environmental Quality (DEQ)

Others Present

Lauri Hernandez, Shoshone-Bannock Tribes
Chris Henvit, Naval Reactors Facility (NRF)
Richard Stallings
Mike Mathews, U.S. Senator Risch
Shannon Brennan, DOE-ID
Kevin O'Neill, DOE-ID
Dave Parmelee, DEQ
Trevor Atkinson, DEQ
Mark Hutchison, NRF
Debra Brook
Jordan Davies, ICP CAB Support Staff

Robert Wallace
Amy Taylor, U.S. Senator Risch
Becca Stallings
Tami Thatcher
Beatrice Brailsford, Snake River Alliance
Erik Simpson, Fluor Idaho
Jae Smith
Jim Malmo, DOE-ID
Roy Bartholomay, U.S. Geological Survey (USGS)
Andrea Gumm, ICP CAB Facilitator
Kelly Green, 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 10:45 a.m. and 3:00 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. He commented that this would be his last meeting as chair and thanked the members of the CAB for the many good things they had accomplished during his leadership term. He also recognized DOE and CAB support staff for the support they had given him over the years. Branter said he greatly enjoying being CAB Chair and commented that together the CAB members had learned a lot and looked at many issues. He thanked everyone again and said it had been a good experience.

Jack Zimmerman (DDFO, DOE-ID) expressed DOE's appreciation for Branter's service as chair of the board and said his would be a difficult void to fill. He commented that Branter has a breadth of knowledge about the Idaho National Laboratory (INL) site and the issues it faces. Zimmerman noted that the day's agenda was full of good presentations and said it had been some time since the last CAB meeting in Twin Falls. USGS's presentation on the aquifer should be an interesting session and discussion.

Mark Clough (State of Idaho) commented that the day's agenda was good. He thanked Branter for his service.

Daryl Koch (DEQ) commented that he would be retiring from DEQ in May, so this would be his last CAB meeting. He said he became the Federal Facilities Agreement and Consent Order (FFA/CO) Comprehensive Environmental Response, Liability, and Compensation Act (CERLCA) Program Manager in 2000, and since that time he has been participating in CAB meetings, making him the longest reining CAB participant. He noted that there have been many Jack Zimmermans, many contractors, and many CAB members, but said he has always enjoyed his time with the board and the opportunity to see the growth of technology at the site. He recognized that there have been some glitches along the way, but stated that there have been positives, too. In particular, the workers have always been incredible problem solvers. He reiterated that he appreciates having been on the CAB and said Clough will continue representing the State of Idaho and that DEQ will identify Koch's replacement on the board in the next several months.

Fred Hughes (Fluor Idaho) commented that a lot of great progress had been made since the last CAB meeting. He said it had been an honor working with Branter on and off since 1995 and thanked him for the opportunity.

Recent Public Outreach Activities

Brad Bugger (DOE-ID) reviewed recent public outreach activities. The document is available on the ICP CAB website: <https://energy.gov/em/icpcab>.

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>.

Larry Schoen (CAB member) complimented the new format of Zimmerman's presentation. He referred to an article regarding new methodology for analyzing barrel contents using radiation detection equipment and other metrics. He asked Zimmerman to describe what part of the process that is. Zimmerman responded that In-Situ Object Counting Systems (ISOCS) is an automated process for characterizing drums that has greater sensitivity and capabilities in measuring detection than what is currently installed in the Advanced Mixed Waste Treatment Project (AMWTP) facility. Drums suspected of containing transuranic (TRU) waste, must be treated before being shipped to the Waste Isolation Pilot Plant (WIPP). Although ISOCS is not a new technology, it will help Fluor Idaho identify some drums that are on the margin.

Hughes added that ISOCS allows workers to determine where the material is in a given box of waste and to get a much finer determination on the assay content for the material in that box. If the material is TRU waste, it will go into AMWTP for treatment. The determination is far better defined with ISOCS, allowing some of the waste to avoid treatment and be disposed of as low-level waste (LLW) instead.

Branter commented that like Schoen, he likes the new format of the overview presentation, and said it is easier to follow. Zimmerman responded that much of the new format is due to comments from Idaho Falls Mayor Rebecca Casper. DOE put together the initial table, which had been provided during the meeting, to show the various waste types, and then broke that table apart slide by slide for this presentation. Zimmerman said that DOE is open to comments, changes, suggestions, and improvements on the presentation format.

Integrated Waste Treatment Unit (IWTU) Update

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

Talia Martin (CAB member) referred to Slide 3 of O'Neill's presentation and to his comments that during the simulant run shutdown, they allowed the Denitration Mineralization Reformer (DMR) to cool, which could potentially affect the material in some way during hot operations. Martin asked if there is a way to determine if the composition, size, etc. of the material is affected in that scenario. O'Neill responded that he is more concerned about the impact to the DMR itself, rather than the particulate material. During a rapid system shut down, one of the concerns is that the material could agglomerate, creating a large chunk in the vessel that would not flow out naturally. He said he would soon cover some of the things DOE and Fluor Idaho are doing to improve their ability to recover from such a situation.

Josh Bartlome (CAB member) asked if the issues O'Neill discussed in his presentation were predetermined or unexpected. O'Neill responded that it was a little of both. Because there is a lot of ancillary equipment (e.g., pumps, valves, and filters) with limited service lives, there will be more maintenance required than initially believed. DOE and Fluor Idaho are improving upon that with the expectation that they will minimize exposure to the workers who perform that maintenance.

Branter asked if connecting the plant to an emergency backup generator would mitigate issues in a future power outage. O'Neill responded that emergency generators are very difficult to put in place with just a 10 to 15 second window once the power goes off. However, DOE and Fluor Idaho are looking at changing the way the software looks for power to ensure loads are shed in the most beneficial way possible. Fundamentally this was a maintenance activity that was occurring while IWTU was operating. Moving forward, that type of maintenance will be restricted so it does not occur while the facility is running.

Clough asked if a diesel generator would be capable of powering IWTU sustainably. O'Neill responded no, but said that a generator could keep the heating, ventilation, and air conditioning (HVAC) system running.

Schoen asked if DOE and Fluor Idaho typically have good communication and relations with the power supply entities. O'Neill responded yes, and reiterated that the power supply entities were not working independently.

Bartlome asked what the load of IWTU is. Hughes responded that power demands on IWTU are 620 kilovolt-ampere (kVA), with a peak load as high as 2900 kVA.

Bartlome asked who performs the readiness assessment. O'Neill responded that this particular assessment is called a contractor readiness assessment, which means Fluor Idaho staffs it, typically with a number of outside experts.

Zimmerman added that when IWTU begins treating radioactive waste, it will have a highly capable workforce as far as the workers' ability to understand and operate the plant and respond to upset conditions. The workers at IWTU have amassed significant experience through the various simulant runs,

probably greater than any new facility deploying new technologies. Zimmerman continued to say that the Department has a well-defined process for start-up of the facility. The original operation readiness reviews were completed in the 2012 timeframe, and since that time DOE and its contractors have adhered to a very formal and methodic approach to maintaining a state of readiness. While the current simulant run is called Simulant Run 3, it is actually the seventh or eighth since 2012. Zimmerman said he is confident in the workforce's readiness to move forward.

Teri Ehresman (CAB member) asked DOE to provide a timeline for each step. Zimmerman commented that DOE and Fluor Idaho are not releasing firm dates. Before they are able to do so, they must get through the current simulant run, inspect the plant, and define the scope of the outage. Once beyond those steps, they will be more able to commit to a timeline as they will have a better understanding of the scope.

Cathy Roemer (CAB member) asked about the process for establishing final permit conditions at the facility. O'Neill responded that IWTU's permit was drafted many years ago, and has been regularly updated ever since. Although the permit is up to date, it is due to change. That said, the State of Idaho works well with DOE, and there are never surprises. The level of modification and its impact to the permit is what determines whether it needs to go out for public comment. The permit will be updated prior to treatment of radioactive waste, but not finalized until operations have begun as off-gas emissions must be tested during radiological operations.

Roemer commented that she recalled a time when there were teams of experts who were being brought from around the country to look at IWTU. She asked O'Neill to elaborate on the genesis of bringing on those teams and what their function, role, and effectiveness is today. O'Neill responded that the previous contract was constructed differently, and the type of contract the Department uses can really make a difference. The prior contract was in a fixed price environment so the contractor, CH2M-Washington Group Idaho, LLC (CWI) was forced to control its costs. The current contract with Fluor Idaho is different and allows for a more developmental approach.

Hughes added that Fluor Idaho initially brought chemists and other experts in fluidized beds in from southern California because the questions in 2016 were based on chemistry and fluidized processes. Depending on the issue DOE and Fluor Idaho are trying to resolve, Fluor has been able to reach out within and outside the corporation to obtain the needed expertise. For example, a mining expert from Austria was brought in to work on the auger grinder issue, and welding experts from Houston were consulted when they were working on the DMR modifications.

Bartlome asked what percentage of the simulant is a perfect match for the real, radioactive waste. Zimmerman responded that one of the special teams Hughes talked about was a wholly independent group of chemists from the Savannah River Site, collectively referred to as the Technical Review Group. They looked at IWTU's process and the waste and recommended a formulation for the simulant that is believed to reflect worst-case conditions. Zimmerman said they believe they are using worst-case simulant in each of these runs. O'Neill added that one of the things the Technical Review Group suggested adding to the simulant was phosphoric acid, which turned out to be serendipitous because that constituent improves the wall scale (what used to be called bark) issue. The system now allows for the addition of phosphoric acid to the waste in order to improve its performance.

Bartlome referred to one of O'Neill's earlier comments that they expect to have a mixture of radioactive waste and simulant when they take the plant to radioactive operations. He asked what the ratio is expected to be. O'Neill responded that they will have the plant running on simulant, and then will slowly introduce radioactive waste. The concentration of radioactive waste will be increased, maybe over the course of a week, until the waste makes up one hundred percent of the material being fed into the plant.

Schoen noted that the system performance test will not occur until about a month after IWTU begins operating under radiological conditions. He asked about the role of the regulatory authorities. Zimmerman responded that a permit that addresses the facility's design and expected performance is already in place. The system performance test is an operational and functional check. For example, they will closely monitor

IWTU's stack, and if there were to be something in the stack that might exceed a potential limit, DEQ could direct DOE to change flow rates or other parameters in order to keep the facility within emissions limits.

Koch confirmed that Zimmerman's summation of the system performance test is accurate and added that DEQ employs a full-time permit specialist for IWTU. That permit specialist is in constant contact with Fluor Idaho and DOE regarding the status of the facility. The permit does allow DOE and its contractor to make changes. IWTU is a one-of-a-kind facility employing a one-of-a-kind process, so issues are expected.

Koch added that what does or does not come out IWTU's stack is indeed one of the most important things. While it would be best if nothing but steam came out the stack, there are thresholds for emissions. It would behoove the CAB to review those thresholds at some point with Resource Conservation and Recovery Act (RCRA) specialists.

Koch asked if when DOE recruits operators for IWTU they seek out former nuclear reactor operators. O'Neill responded that DOE has tried to recruit both former nuclear facility operators and sailors who had just come off submarines and aircraft carriers in the past.

History of Repository Search

Bugger introduced former U.S. Nuclear Waste Negotiator, Richard Stallings. He commented that he first met Stallings in 1984, while he was working as a newspaper reporter editing the weekly television magazine supplement at the *Idaho State Journal* in Pocatello. At the time, Stallings was in the middle of an exciting Congressional race against incumbent George Hansen. The *Idaho State Journal's* political reporter had left, and Bugger's editor approached him about covering politics. He was told to interview Stallings, which is how they met. Stallings managed to win the race by 112 votes and was in office for eight years, four terms representing the 2nd District in eastern Idaho. He did an excellent job and was a vigorous supporter of the INL. In 1992 Stallings ran for the Senate but lost against Dirk Kempthorne.

President Bill Clinton appointed Stallings to serve as the Nuclear Waste Negotiator for the United States. Bugger commented that during its February meeting, the CAB had an enthusiastic discussion about the need for the United States to move forward with finding a nuclear waste repository. Stallings's job in the 1990s was to engage states, tribes, and other interests about whether they were interested in hosting a repository, and if so, under what conditions. Bugger added that he had invited Stallings to today's meeting to talk about his experiences as the Nuclear Waste Negotiator and to bring the CAB up to speed on his history of looking for a repository and the kinds of interactions he had with those interests. Bugger asked the CAB and the public to please welcome Stallings.

Martin commended Stallings for working with Native Americans. She said the Scull Valley Band was very interested in hosting a Monitored Retrieval Storage (MRS) site on its land and even pursued the opportunity by working with private fuel storage and industry. Martin said she understands the states were very much a part of why the Scull Valley Band became a stalemate. She asked Stallings what, if anything, he could have done differently to ensure tribal lands were a viable option. She added that she is not advocating it, but that the tribes still ask what the Federal government could have done to help the economy of the Scull Valley Band. Stallings responded that he is not sure he could have done anything differently. He said he perhaps could have mellowed the response of the Utah governor by going to him first, however that was not his responsibility. Stallings's charter was to deal with the tribes, states, and other interested entities. When the Scull Valley Tribe called, he met with them.

Schoen thanked Stallings for his many years of service to Idaho and said he had truly enjoyed working with him. He asked Stallings to elaborate on the genesis of MRS. He also said he was interested in the process of speaking with these various groups of people around the country, and asked Stallings what kind of feedback he received. Stallings clarified that MRS would not have helped the INL, or any other DOE site, as his work focused on commercial reactor waste, rather than defense wastes. When President Jimmy Carter ended recycling, each of the reactors had to figure out how to deal with its waste stream. One of the problems with

the industry is that there is indeed a waste stream, which is often very, very hot. MRS involves pulling the waste from the water, drying it out, and storing it in steel and concrete.

Branter asked Stallings if, from his experience, he believes there is a path forward anywhere. Stallings responded that he believes DOE has too much invested in Yucca Mountain to seriously consider other alternatives. If ever there was an opportunity to bring the sites together, it is now. With the green revolution and the attitude toward coal and carbon based fuels shifting, there is a product that addresses all concerns of those wanting a greener world. Reactors are by far superior, with the waste stream being the only issue. Amidst fear of nuclear power and another Hiroshima, the government is reluctant to talk about these things. Stallings added that it is demonstrated to be safe.

Clough asked if Stallings negotiated with other countries, and if so what their preferred alternative for permanent storage of spent nuclear fuel (SNF) was. Stallings responded that their first response was to recycle and that they were not responsive to public sentiment. He said he did not negotiate with other countries as that was beyond his scope, but that Mexico had showed some interest.

Martin commented that the Blue Ribbon Commission, which was established after the U.S. Nuclear Waste Negotiator position was eliminated, recommended a consent-based siting process. She asked what Stallings thought about using that process to find MRS or geological repositories. Stallings responded that identifying MRS through consent-based siting is the only solution because the United States government cannot make a determination without weighing the input of the people. He added that with on-site storage being the only option for reactors, they will continue down that path. Identifying a solution is not a high priority because things are going well.

Tami Thatcher, Idaho Falls, commented that it is very difficult to monitor the status of fuel degradation or canister erosion inside a cask, and noted that none of the MRS facilities have a pool or a hot cell to repackage damaged canisters. She added that the steel canisters, which are not very thick and are vulnerable to corrosion, have a design life and were created to be put in Yucca Mountain within a few decades. She asked Stallings to elaborate on why he feels MRS without an eventual repository is the best solution.

Stallings responded that MRS was established as a temporary solution to a problem: It gave the country somewhere to put the waste while a national repository was being chosen and constructed. That said, modifications to the MRS would allow it to be monitored, which would certainly be preferable to what is happening now. Stallings added that he does not agree with Thatcher that MRS is merely a way to store waste until Yucca Mountain opens as he does not believe Yucca Mountain will ever open. There are too many valuable uses for SNF, and MRS provides easy access to the fuel, making it retrievable. While it is true that MRS was an expediently designed, short-term solution, it has become more acceptable as a long-term solution in recent years.

Public Comment Session #1

Thatcher commented that she does not understand why IWTU is not required to meet Maximum Achievable Control Technology (MACT) air emissions standards for incinerators. One of the reasons the old calciner was shut down was because it did not meet air emissions standards. DOE then builds this new facility, and because it does not have a flame, it is not required to meet MACT. She asked why the state is not requiring that it does. Thatcher also said she does not understand which aspects of IWTU emissions will not meet MACT.

Thatcher went on to say that she does not know the degree to which the 900,000 gallons of liquid sodium-bearing waste (SBW) stored in three underground tanks, is stratified. It appears that the plan is to perform initial emissions testing on the top levels of liquid waste, to emphasize, monitor, and evaluate those emissions, which may not be an adequate representation of the waste stored lower down in the tanks, and possibly contain more transuranics. She reiterated that some of the estimating they do in the initial monitoring may not be adequate to base all the estimates on in the future.

Thatcher concluded by asking if DOE is really planning on this waste never having a repository.

Budget Update

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

Martin referred to Slide 4 of Flohr's presentation and asked if DOE-EM actually includes verbiage in its budget request stating that they will begin hot operations of IWTU pending x, y, and z. Flohr responded yes, DOE-EM must codify their plans and expectations for Congress. Martin commented that she hopes this is more of a reality if all goes well with Simulant Run 3. Flohr clarified that if DOE-EM does not include hot operations of IWTU in the Fiscal Year (FY) 2020 budget, and DOE-ID is ready to begin feeding radioactive waste, they would not be able to do so. That action requires authority, so it is better to include it in budget requests early and let the timeline slide, than to have a facility idling for a year awaiting funding for hot operations.

Ehresman asked what DOE-ID would do given additional funding. Flohr responded that there are some fairly hefty infrastructure activities which must be tackled. DOE-ID would also accelerate closure of the Radioactive Waste Management Complex (RWMC) and begin cap activities. Ehresman asked if the Idaho site is suffering without those plus ups. Flohr said no, although additional funding would give them more latitude.

Schoen commented that he always finds these budget discussions frustrating. Federal budgeting is complicated, and these presentations do not show DOE-ID's budget, but rather what they requested from Congress. He asked why Flohr's presentation does not show what DOE-ID spent in FY 2018. He reiterated that it would be helpful to show the CAB the revenue DOE-ID does receive and explain how they are spending it. This information is meaningless without the context.

Flohr responded that sharing specifics about the funding DOE-ID receives and exactly how it is spent is not the intent of these briefings. Historically, DOE had provided a presentation specific to the budget, as Zimmerman delivered at the February meeting, looking forward to the year they are formulating. The aim is to obtain the CAB's recommendations regarding priorities. There is then an expectation to come back after that budget request is submitted to share with the board what exactly it was. Flohr added that she would argue that the information DOE-ID provides at every CAB meeting demonstrates how they are allocating the funding they do receive.

Zimmerman commented that the overall point of Flohr's presentation is that while the request is less than DOE-ID's planning number, and significantly less than what Congress enacted last year, they have sufficient funding to support high-priority items. The CAB should really be focused on the priorities, as DOE is not seeking the board's approval on the budget but alignment with priorities. Today's presentation showed that DOE aligned with the CAB last year on FY 2020 priorities and that this budget offers enough funding to cover those priorities.

Accelerated Closure of RWMC

Jim Malmo (DOE-ID) provided a presentation regarding the accelerated closure of RWMC. The presentation is available on the ICP CAB website: <https://energy.gov/em/icpcab>.

Marvin Fielding (CAB member) asked where the buildings will go once they are torn down. Malmo responded that RCRA procedure will be closely followed. They will ensure anything that needs to be removed from each facility is removed before the building itself is torn down. The debris from the facilities could be put in containers and shipped to the Idaho CERCLA Disposal Facility (ICDF) or, if it is clean enough, it could be put in a disposal cell around RWMC, where it would be buried like the debris from Hot Cell 607 at Test Area North (TAN).

Koch asked if DOE has considered repurposing the Type II storage modules, once RCRA declares them clean enough, for other parts of the INL. Malmo responded that due to the buildings' foundations, they cannot be

moved. He added that the Subsurface Disposal Area (SDA) will be returned to the landlord, which is DOE's Office of Nuclear Energy (NE). They may want to retain those modules for storage.

Schoen said he had heard the SDA will be cleaned and capped by 2028, and asked for confirmation of that timeline. Malmo responded that the finish date is indeed 2028, but said it may be 2027 if shipping continues at the same rate.

Ehresman asked about workforce reduction at AMWTP. Malmo responded that Fluor Idaho is working on both voluntary and involuntary separation processes, which will take place by the end of the fiscal year.

Hughes elaborated that Fluor Idaho announced a voluntary separation process, which closed on April 22. They were targeting 38 positions, and plan to accept 22 of the individuals who applied. Those 22 positions, plus additional attrition, means they will not need to proceed with involuntary separations in this initial phase. There will be a second phase in the August/September timeframe. The two phases will need to account for 190 people, and it is too early to say how many of those will be voluntary. Hughes added that approximately 70 workers have left AMWTP for other jobs within or outside the company since DOE announced its plans to close the facility.

Ehresman asked about safety, and what, specifically, Fluor Idaho is doing to keep its workers focused. Hughes responded that when the decision was made in the November timeframe, he held seven or eight meetings with employees. He, along with the director of that operation, explained the decision and what was going to happen, and promised to keep them informed. Hughes said that in the late January/February timeframe, he held another round of meetings to talk about the numbers. He added that in the coming week, he would meet with the unions and management to explain the plan for RCRA closure and to provide a detailed breakdown of numbers by classification.

Hughes commented that the workers are obviously disappointed the decision has been made, but by keeping them informed, they understand DOE and Fluor Idaho are doing everything they can for them. For that reason, they are continuing to produce at high levels and work safely.

Hughes noted that Fluor also operates NRF, and on March 2 recruiters from that facility held a two-day job fair. There are now eight employees going through the clearance and job offer process to join them. The NRF recruiters were so impressed with the quality of the AMWTP workforce, that they plan to host another job fair sometime in July. The cities of Idaho Falls and Arco, as well as Butte County are planning a job fair for the June timeframe. Hughes said that everyone in the region is doing their best to provide additional jobs for the AMWTP employees as they work their way out of their current positions.

Ehresman asked Hughes if other labs have indicated an interest in recruiting AMWTP employees. Hughes responded yes, and said he receives almost weekly calls. He acknowledged, however, that many employees at the site are rooted in Idaho and do not want to move to South Carolina, New Mexico, or Arizona.

Malmo pointed out that if DOE had completed AMWTP operations at the end of December, per the Idaho Settlement Agreement (ISA), the facility would have been going into RCRA closure all at once, and then into decontamination and demolition (D&D) all at once. The impact to the workforce in that scenario would have been dramatic. This phased approach to RCRA closure and D&D will stretch over an eight-year period, allowing DOE and its contractors to shift the workforce in a more reasonable fashion.

Ehresman commended Fluor Idaho for doing an excellent job in a difficult situation.

Zimmerman recognized Koch's many years of dedicated service to the CAB, and noted that this would be his last board meeting before he moves into retirement. He added that Koch started with the CAB in 2000 and has served continuously in that position ever since. Zimmerman expressed his and the board's thanks with a plaque honoring his many years of service protecting the environment and serving the ICP CAB.

Snake River Plain Aquifer Update

Roy Bartholomay (USGS) provided an update on the Snake River Plain Aquifer. The presentation is available on the ICP CAB website: <https://energy.gov/em/icpcab>.

Martin referred to the spike of carbon tetrachloride in a well by the spreading areas as shown on Slide 19 of Bartholomay's presentation and asked if it could endanger releasing a higher concentration of carbon tetrachloride into the aquifer. Bartholomay responded that as water moves through the unsaturated zone, it picks up, mobilizes, and pushes further down into the aquifer some gaseous organics that were spread throughout the area decades ago.

Zimmerman commented that the USGS INL project office marks two significant milestones this year, so today he said he would like to recognize the USGS INL project office and their dedication to the long-term study of the site and protection of the Snake River Plain Aquifer in support of the DOE missions. Seventy years ago, on January 16, 1949, a USGS scientist took its first water quality sample from a well located near Central Facilities, and then a decade later, in 1959, they formally established the project office at the site. USGS has a long history of service to the site and the residents of Idaho. Zimmerman gave Bartholomay a plaque and thanked him for his service.

Calcine Subcommittee Report

Schoen summarized the activities of the Calcine Subcommittee following the CAB's February meeting. He said the subcommittee members agree that the next step would be to develop a more specific recommendation regarding public engagement, investigation of Yucca Mountain as the permanent deep geological repository, and engagement with the State of Idaho about the ISA.

Following board discussion, the CAB agreed the Calcine Subcommittee should continue its work, and recommended that it also look into the option of leaving calcine in place for now, as opposed to forcing treatment without a repository.

Public Comment Session #2

Thatcher commented that the Defense Nuclear Facilities Safety Board (DNFSB) investigated the four drums that exploded in April 2018 and concluded that there were warning signs in 2005, 2014, and 2017. The DNFSB report also holds that the additional actions Fluor Idaho put in place following the event, such as raking, are not enough. Thatcher added that the criteria for shipping non-excessive methane gas in a drum to WIPP does not kick in until DOE is ready to ship it. Therefore, Thatcher continued, these drums are not being stored safely. She added that there will be a meeting in Washington, D.C. about this in May.

Thatcher touched on DOE's reinterpretation of high-level waste (HLW) proposal and stated that DOE has not, to her knowledge, ever publically posted the public comments that were submitted. She said DOE's public interface and outreach has been deliberately atrocious.

Thatcher then turned to the Snake River Plain Aquifer. She commented that the two graphs in Bartholomay's presentation for RWMC production well carbon tetrachloride levels seemingly contradict each other, with one trending upward and the other trending downward. She commented that somehow this carbon tetrachloride has made it through the inner beds. Thatcher said that while strontium-90 is decreasing in the wells, folks should remember that once a contaminant is measurable in a well, it continues moving down to Thousand Springs and beyond. Iodine-129 has a half-life of 12 million years. There are some extremely deep wells on the site, and some multi-level deep wells, some of which have never had sampling data taken. Thatcher said she would like to talk to Bartholomay about that, as he has been overseeing and controlling USGS data regarding the Magic Valley for at least 20 years, and is the only point of contact.

Other Subcommittee Reports

Brad Christensen (CAB member) commented that the Public Outreach Subcommittee would be meeting the following week, and asked the board members to submit any potential ideas for the June edition of the newsletter.

Christensen referred to the possibility of using social media to reach specific demographics, political or not, to share what is being done. He said the subcommittee hopes to have more information on that by the June meeting as well.

John Sigler (CAB member) asked what the next step is for the HLW Subcommittee. Zimmerman responded that DOE must follow through on its commitment to provide a response. He added that with each board member representing their respective communities, DOE views the CAB as a method of public outreach.

Bugger commented that the Calcine Subcommittee members determined that there is value in shining a light on the HLW repository issue. He added that these recommendations are valuable in that they allow the board members a chance to better understand the issues and share them in a public way. Bugger said that there are likely not many people in Idaho who are concerned about the need for a repository because everything is going well right now.

Schoen noted that Idaho will host the Environmental Management (EM) Site-Specific Advisory Board (SSAB) meeting in Sun Valley in October and said it seems a public engagement effort should be timed accordingly.

Schoen also commented that the more recommendations the CAB can issue, the more meaningful engagement it will have with the Department. He therefore suggested combining the HLW Subcommittee and the Calcine Subcommittee into one group.

Bugger commented that there is nothing preventing the ICP CAB members from reaching out to other CAB chairs about the possibility of a repository recommendation. Savannah River, Idaho, and Hanford are the sites most concerned with HLW and SNF, but these three sites have a very significant portion of the EM budget. Getting a repository recommendation on the October EM SSAB agenda would be an accomplishment.

Zimmerman recognized Branter with a plaque for his years of service as CAB chair. Under Branter's leadership, Zimmerman said he saw the board energized. He told Branter that the subcommittees would greatly benefit from his knowledge before his term expires in April 2020. Branter commented that he greatly appreciates the people and has learned a lot as chair. He said it was particularly interesting to visit other facilities across the complex and seeing what they are dealing with. Idaho is ahead of the curve on cleanup and the CAB and the public owes their appreciation to DOE and the state for making it so far.

Bugger commented that McAfee will take over as chair and Christensen will assume the role of vice-chair. He encouraged the other members to welcome McAfee and Christensen to their new roles.

Conclusion

Zimmerman concluded the meeting.

Keith Branter, Chair
Idaho Cleanup Project Citizens Advisory Board