



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

October 25, 2023

List of Acronyms

ARP	Accelerated Retrieval Project	ICDF	Idaho CERCLA Disposal Facility
BEA	Battelle Energy Alliance, LLC	ICP	Idaho Cleanup Project
C	Celsius	IDEQ	Idaho Department of Environmental Quality
CAB	Citizens Advisory Board	IEC	Idaho Environmental Coalition
CAIRS	Contractor Accident and Incident Reporting System	INL	Idaho National Laboratory
CBFO	Carlsbad Field Office	IWTU	Integrated Waste Treatment Unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	NE	DOE Office of Nuclear Energy
CPIF	Cost-plus incentive fee	NEPA	National Environmental
CRR	Carbon Reduction Reformer	NO _x	Nitrogen Oxides
D&D	Decontamination and Decommissioning	NR	DOE Office of Naval Reactors
DDFO	Deputy Designated Federal Officer	NRC	Nuclear Regulatory Commission
DEQ	Department of Environmental Quality	NRF	Naval Reactors Facility
DMR	Denitration and Mineralization Reformer	ORPS	Occurrence Reporting and Processing System
DOE	U.S. Department of Energy	PBI	Performance Based Incentives
DOE-ID	U.S. Department of Energy Idaho Operations Office	RAD	Radiological
ECA	Environmental Cost Analysis	RCRA	Resource Conservation and Recovery Act
EM	DOE Office of Environmental Management	ROD	Record of Decision
EPA	Environmental Protection Agency	RWMC	Radioactive Waste Management Complex
FFA/CO	Federal Facility Agreement and Consent Order	SDA	Subsurface Disposal Area
GAC	Granular Activated Carbon	SIMCO	Salado Isolation Mining Contractors
HEPA	High Efficiency Particulate Air	SNF	Spent Nuclear Fuel
		TRU	Transuranic Waste
		WIPP	Waste Isolation Pilot Plant

The Idaho Cleanup Project (ICP) Citizens Advisory Board (CAB) held its triannual meeting on Wednesday, October 25, 2023. The public was invited to attend in-person at the Sun Valley Resort in Sun Valley, Idaho and virtually via Zoom. 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
Teri Ehresman
Ladd Edmo
Debi Farber
Nate Francisco
Monica Hampton
Roger Hernandez

Members Not Present

Dick Meservey
Talia Martin
Mark Permann
Jessica Prather
John Sigler
Bob Skinner

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

Connie Flohr, DDFO, U.S. Department of Energy Idaho Operations Office (DOE-ID)
Danielle Miller, Federal Coordinator, DOE-ID
Ty Blackford, Program Manager, Idaho Environmental Coalition, LLC (IEC)
Pete Johansen, Idaho Department of Environmental Quality (IDEQ)
Ben Leake, Environmental Protection Agency (EPA)

Others Present

Alan Carvo, Materials and Fuels Complex
Andrea Gumm, Facilitator
Beatrice Brailsford
Caroline Moores, IDEQ
Chris Henvit, DOE
Dana Kirkham, IEC
Daniel Ramirez, Post Register
Daryl Koch, DOE (Contractor)
Doug Pruitt, DOE
Feliciana Fullmer, Shoshone-Bannock Tribes
Gene VanPelt, NRF
Greg Balsmeier, DOE
Jessica Vasseur, IEC
Jordan Davies, ICP CAB Support Staff
Kelly Green, ICP CAB Support Staff
Kelsey Shank, The EDGE LLC

Laura Permann
Laurie Hernandez, Shoshone-Bannock Tribes
Maria Mitchell-Williams, DOE
Mariah Porter, ICP CAB Support Staff
Mark Brown, DOE
Mark Hutchison, NRF
Natalie Walker, IDEQ
Nicholas Balsmeier, DOE
Rachel Cohen, Boise State Public Radio
Shayna Martin
Ted Livieratos, IDEQ
Tommy Thompson, DOE
Trent Neville, DOE
Ty Sanders, DOE
Valerie Kimbro, ICP
Wayne Barber, Exchange Monitor

Welcome and Opening Remarks

Facilitator Andrea Gumm began the meeting at 9:00 a.m. She reviewed the agenda and noted the times of the breaks and public comment periods. She reminded attendees of the process for public comments during the meeting, time permitting.

Teri Ehresman (ICP CAB Chair) welcomed everyone to the meeting. She said that it was fabulous to have all CAB members in attendance in person. She thanked all the presenters and expressed appreciation for all the work and effort that is put in to preparing presentations and taking the time to answer CAB member questions.

Mark Brown (Alternate DDFO) said it was nice to see everyone at the meeting. He said they were excited to be here to talk about the Idaho Cleanup Project and the progress they are making. He said the CAB would hear about some great things from the management team. He said they continue to make great strides with the IEC contractor partner. He thanked Ty Blackford for being here today. He said they were looking forward to the discussions, answering any questions and talking about any problematic topics. He said that almost the entire DOE management team is at the meeting and introduced each of them. He thanked everyone for coming and said he was looking forward to a good discussion.

Pete Johansen (DEQ) attending via zoom, said he was looking forward to today's meeting. He said they were able to visit the site in early October and see a lot of the progress being made including some of the Decontamination and Decommissioning (D&D) sites at the Naval Reactors Facility (NRF) and the Radioactive Waste Management Complex (RWMC) Accelerated Retrieval Project (ARP) facilities undergoing D&D, and the Idaho CERCLA Disposal Facility (ICDF) construction site. He said they appreciated the efforts that DOE made to take them around those facilities. He said he was looking forward to today's meeting.

Ben Leake (EPA) attending via zoom, said he wished he could be attending in person. He thanked everyone for coming to the meeting and said a lot of great work has happened at the Idaho National Laboratory (INL) Site this year. He said he was excited for everyone to be able to review the presentations and see all the great progress that is being made.

Ty Blackford (IEC) said he was excited to support the department in the discussions on the progress that they've made and plans for the future. He said he hoped they could have a good discussion and that he looked forward to it. He thanked everyone again for being there and inviting IEC to attend.

Recent Public Outreach

Danielle Miller (DOE-ID) reviewed recent public outreach activities. The document is available on the ICP CAB website: <https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-october-2023>

ICP Overview

Mark Brown (DOE-ID) provided an overview of the ICP. The presentation is available on the ICP CAB website: <https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-october-2023>

Teri Ehresman asked for an explanation of Occurrence Reporting and Processing System (ORPS) reportable events. Brown said some operational or safety events trigger official reporting into a database that the whole department can see. He said the purpose is to share lessons learned, identify causes and corrective actions, and to track those corrective actions. Brown said there are other reporting systems, for example the Contractor Accident and Incident Reporting System (CAIRS) is used to report recordable injuries.

Ehresman asked for a summary of what the six ORPS reportable events were. Brown said there were two reportable events in July, one was related to a warning letter they received from the DEQ concerning some self-identified environmental deficiencies. He said DOE identified the deficiencies, informed DEQ, and took corrective action. He said the other July event involved moving the five-ton maintenance crane hook at the Integrated Waste Treatment Unit (IWTU). He said the crane is operated with a strap hung around the neck attached to a remote belly box and the operator inadvertently pushed the lever to operate the crane hook while walking up the stairs. He said they never want crane operation to occur without the proper notification, so they called it an ORPS reportable event and took corrective action to address the causes and prevent reoccurrence.

Brown said one of the August events involved moving the excavators that were being used in the Subsurface Disposal Area (SDA) into ARP 9 for disposition. He said they monitor oxygen during the transition to maintain worker safety around the diesel equipment, and one of the alarms alerted. He said they took action; the individual was not adversely impacted and was able to exit the equipment and leave the area. Regarding the second ORPS event in August, Brown said they have bang boxes, big extension cords running into a portable panel for electricity distribution, in some remote areas. He said they had an individual who received an electrical shock, while plugging in a hand operated tool.

Regarding the September ORPS events, Brown said the IWTU off-gas system has a filter that adsorbs mercury called a Granular Activated Carbon (GAC) bed. He said they monitor downstream of the GAC beds to ensure they are adequately adsorbing the mercury and some breakthrough was detected, which they reported to the state. He said they did not exceed any permit limits, but it caused them to go into an outage to replace the material in those filter beds. He said the last ORPS event in September involved the shipping of a load of waste to Environmental Solutions in Utah. He said when the truck arrived at the receiving facility, they found that one of the required placards that indicates what is being shipped, was missing. He said it probably fell off in transit.

Monica Hampton said the increase in first aid cases from two to seven seemed significant and asked if this was within the normal range. Brown said he considers it to be within the normal range. He said that IEC has a heightened sensitivity regarding injuries and has done a lot of advertising within the workforce to make sure that all injuries, even injuries as small as a paper cut, are reported to a supervisor. He said something that seems like a small injury to the worker cannot be dealt with if not reported. Ty Blackford agreed and said they try to drive reporting to an extremely low level. He said some workers didn't report when they had tweaked something last winter, which can turn into a real problem if you don't get medical attention. He said he doesn't care if it's just a pinched finger, they want it reported. Brown said that he has been out in the field with a federal employee that got a paper cut and he made the worker leave the area and seek medical attention, because without intervention it could get infected and cause a much more serious injury later. He said the same thing goes with soft tissue injuries, especially something like a sprained ankle, which may turn out to be a broken ankle. He said they try to drive that reporting up so everyone can seek the necessary professional help.

Ehresman said the 469 planned shipments to the Waste Isolation Pilot Plant (WIPP) looks to be a very high goal, judging by previous years shipments which are about 125 short of previous goals, and asked if DOE really thinks they can meet this goal. She also asked what causes the difference between planned and actual shipments. Brown said one of the factors is that Idaho wants to get the waste shipped out of the state as soon as possible because the longer the waste sits, the longer the containers have a chance to degrade. He said they also work closely with Carlsbad who sets the operational tempo based on what they estimate they can receive per week. He said Idaho works with Carlsbad to expend the resources to help certify the waste streams because if Idaho doesn't have the certified waste available, they can't ship it. He said one more factor in the planned vs. actual shipment discrepancy is that the Carlsbad Field

Office (CBFO) makes higher goals in order to encourage their contractor to perform better and receive more shipments.

Bob Skinner asked who is responsible for the maintenance of the containers and if they have to recertify the Transuranic Waste (TRU) containers on a periodic basis. Brown said they do, the containers are Nuclear Regulatory Commission (NRC) licensed containers which must be recertified periodically and are maintained by a vendor from the CBFO prime contractor, Salado Isolation Mining Contractors (SIMCO). He said they have a vendor in Carlsbad that does the maintenance.

Dick Meservey asked if there are restrictions on where the D&D recycled material goes or what it is used for. Brown said because ICP does a very thorough survey of the material to make sure it isn't contaminated radioactively and that there are no hazardous constituents, there are no restrictions. He said the materials go to whatever vendor is interested in purchasing them. He said radioactive material such as materials from the reactor compartment cannot be recycled.

Ehresman stated that she thinks it is awesome that DOE-ID and IEC are working together with the Navy after it had been so divided and territorial for so many years. She said she gives kudos to everybody involved. Brown said he attributes that teamwork to four people, Ty Blackford for his leadership, Connie Flohr for her leadership, Chris Henvit with Naval Reactors (NR) and Ty's manager in the field, Mike Schwartz, who knows what he is doing and does his work very safely. Brown said Schwartz has worked very well with the people at the NRF to make good progress. Ehresman said hats off to all of them for thinking outside the box.

Hampton asked for more information about things that are impeding progress and slowing down characterization. Brown said it is a little more complicated than just characterization. He said they don't know what some of the waste is, they know generally where it came from but don't have a good pedigree of exactly what the constituents in the waste are. He said they are working with CBFO to bound what the constituents are so they can have confidence about what is in the drum and ensure compliance before shipping it to WIPP. To give a perspective, he said one of the main projects was exhuming waste from the SDA, and one of the pictures showed that they had just taken drums from the Rocky Flats Plant and dumped them into the buried waste pits. He said they have the waste mapped quite well in those pits, but some of the drums don't have identifiers and are harder to characterize. He said they can sample the waste, but it is very costly, time consuming, and exposes the workers to additional risk. He said they are trying to bound the problem to identify what the waste is based on what the world of possibility is. He said CBFO is helping to define that.

Ehresman asked how a government shutdown might affect the objectives. Brown said that they will be impacted if a shutdown occurs, but fortunately are able to use carryover funds from last year and have between 4-5 weeks of funds available to continue operations normally. He said they are very careful with how they spend their money to make the existing carryover money last as long as possible.

IWTU Update

Nick Balsmeier (DOE-ID) provided an update on the IWTU. The Presentation is available on the ICP CAB website: <https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-october-2023>

Ehresman asked if the GAC beds had to be changed earlier than expected. Balsmeier said there were various estimates, but it was slightly earlier than planned. He said there was not an accurate way to predict what would happen with the GAC beds and they just had to wait and see how it would turn out. He said they are exploring different actions that could affect the changeout interval. He said they consulted an industry expert to make sure they are loading vessels correctly and avoiding damage to the GAC to hopefully increase the life of the beds. He said they will continue to address this issue as the

IWTU runs. Based on that information, Ehresman asked how many years they expect this operation to take. Balsmeier said the current estimates are 5 to 7 years, but they want to ensure safety. He said they don't want to push to meet the timeline goal and neglect any issues as they come up. He said as soon as they got indication on the GAC beds, they made the decision to come off feed, cool down the plant, and address the issue.

Skinner asked what the source of the mercury is. Balsmeier said it was in the waste from reprocessing. He said all the remaining waste in the tank farms is from decontamination of fuel that was processed in the 90s, and mercury is one of the elements that was in that waste stream. Skinner asked if the chemistry of the three tanks is similar. Balsmeier said they are similar but do have some differences. He said Ty Sanders and his team are constantly looking at the chemicals in the tanks and can determine accurate characterizations of the waste, based on the chemical makeup. He said all the tanks have mercury in them, and they are always trying to process the tanks in the most efficient way.

Debi Farber asked if the on-site nitrogen generator will be used exclusively or only in the case of a supply issue. Balsmeier said it will be the main nitrogen source for the plant and a 50,000-gallon tank will be used as backup.

Nate Francisco asked if the mercury in the spent media is leachable and where it is being disposed of after it is removed. Balsmeier said that it adsorbs, that is, it chemically adheres to the GAC, so it is not leachable. He said they will take it out of the GAC beds, empty them, and they do have a disposal path for it. Francisco asked where it is going. Ty Blackford said it goes through a hazardous waste vendor who treats this material and has licenses with disposal facilities around the United States. Balsmeier said they recently took core samples from the GAC beds and are in process of sending some to labs for analysis to better understand how long the beds will last. He said this will give them some information on what the beds look like and the potential to extend their life. He said the GAC bed samples came out clean which confirms that there is no radiological (RAD) component past the High Efficiency Particulate Air (HEPA) filters, so the system is doing its job. He said once they get more data on the beds, it will help them decide what steps to take next.

Farber asked if there are other constituents in the GAC, besides mercury that are contributing to the loading. Balsmeier said the GAC beds are strictly for mercury which is the last element that is pulled out. He said they monitor the stack very closely to make sure the GAC beds are working.

Meservey said that sodium reacts with moisture including the moisture in the air. He asked how they prevent the sodium from reacting in the final waste form. Balsmeier said the GAC beds are downstream of all the process vessels so there would be no reaction. However, he said some steam does go through the GAC beds upon startup, so they are looking into how that steam reacts and how they can condition the GAC during startup. He said once the material is adsorbed there is no chance that it can leach back out. Meservey asked if the sodium has already reacted when the steam is introduced early on. Blackford said the sodium is reacted in the Denitration and Mineralization Reformer (DMR). Balsmeier said the sodium and all the radiological constituents are processed through the DMR, the main process vessel, and the mercury is volatilized. He said they run at 600 degrees Celsius (C) in the DMR and about 1000 degrees C in the Carbon Reduction Reformer (CRR) in order to keep the mercury volatilized in gaseous form. He said all other constituents are processed in those vessels and mercury is the lone constituent once it comes out of the main process vessels and enters the GAC beds. Meservey asked where the mercury goes. Balsmeier said the mercury adsorbs to the GAC particles.

Talia Martin asked about the temperature differential in the DMR. She asked if they can predict any issues caused by temperature changes and what the possible consequences would be if they don't rectify the issue before the startup of RAD operations. Balsmeier said they just started a Hazen run to address

that exact question. He said they have identified several trace particles or elements in the system which they test one by one. He said it is not ideal, but they could potentially run long-term even with temperature differentials in the DMR. He said they are using the Hazen Research facility and started a test group to solicit help from experts and outside vendors with expertise, to find out what might be causing the differential, because they did not have this issue while running simulant. He said they are looking at the trace elements that are not in the simulant, one by one to try to identify a solution to this issue. Martin asked for more information on the timeline. Balsmeier said the ultimate goal is to try to have a uniform temperature across the DMR. He said the Hazen run will help them figure it out, but it will be an ongoing learning experience, because this is the world's biggest science project. He said they are not precluded from running Hazen while they're running the plant so once the GAC beds are changed out, the maintenance outage is complete, and the facility comes back online, they can continue to see what might be added or changed to neutralize whatever element in the system is causing the problem. He said it will be an iterative process along the way.

Farber asked if the IWTU will start with 100% radiological operations or if they will ease into it once the GAC is replaced. Balsmeier said they will ease in, generally when they start up the plant they will always begin with some simulant and then transition to sodium bearing waste with the goal being to get to 100%. He said the larger goal is to process tank farm waste so if they were to find a mixture where they can operate steadily and consistently, they will not rule out operating with some percentage of simulant in the waste going forward.

Mark Permann asked what is monitored for in the treated off-gas that goes off the stack and if they are seeing anything concerning. Balsmeier said they haven't seen anything concerning yet. He said Nitrogen Oxides (NO_x), the reason the calciner was shut down, is one of the big things they monitor for. He said they have a full suite of environmental monitoring systems and radiation systems that are constantly monitoring for the different environmental permit regulations. He said the monitoring is done on various cycles including daily, weekly, or monthly intervals depending on the permit criteria.

Public Comment Session #1

There were no public comments at this time.

Challenges and successes to the new task-based contract format and revised task order structure updates

Maria Mitchell-Williams (DOE-ID) provided a presentation on the new task-based contract format and revised task order structure. The Presentation is available on the ICP CAB website:
<https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-october-2023>

Ehresman asked about the difference between a cost-plus award fee and a cost-plus incentive fee. Mitchell-Williams said when the contract was awarded, they allowed for a cost-plus incentive fee (CPIF) which allows the contractor to accept more risk in how they execute their management approach. She said it's more risk-sharing but allows the opportunity to go up to 15% fee. She said under a cost-plus award fee, the maximum fee available is 8% and they must execute under a performance evaluation measurement plan where performance-based incentives are identified, and the contractor's performance is evaluated with a subjective scope. She said the key differences are higher fee and more risk sharing.

Skinner asked if money is budgeted to give to the contractor as a task incentive. Mitchell-Williams said it is, for example they negotiated task order 5.1 SIW at 50 million dollars, and that is the budget that they will work within. She said they will take that negotiated value and plug it into their baseline to manage the work. Skinner asked what happens to the money left over if the contractor does not get the maximum

fee. Mitchell-Williams said if there are cost efficiencies, they can execute more work or accelerate the work. She said the money is reallocated within the project. She said NR is different because it has to be cost efficiencies for NR specifically, so it is a different color of money than defense fund money. She said task order 4A is a good example, if they identify efficiencies under that CPIF task order, they can then execute the work faster or use the funding to add additional work. She said under task order 3.2, which was just negotiated, they identified priced work activities that are on the task order but are not yet authorized until they have additional funding through congress or cost-efficiencies. She said if they do receive additional funding, they can easily turn that work on without taxing the contractor by requiring another proposal. She said they try to think ahead and plan for how they can turn work on faster and identify efficiencies.

Skinner asked if they are allowed to renegotiate if the scope of work changes. Mitchell-Williams said they can renegotiate a task order at any time through the changes clause, but they try to avoid it and instead use the risk register as part of what they negotiate with the contractor. She said they try to identify contractor risks, DOE risks, and the assumptions in advance, so they can avoid managing multiple changes. She said the ARP D&D task order is a good example. She said they haven't had any changes for over a year in this contract, which shows out-of-the-box thinking in the structure and gives IEC maximum flexibility to execute their approach. She said if there is a change condition that DOE didn't know about, they must work that in like any other change order through the contract management ability in the changes clause.

Flohr said every time they make a change, they must go back to headquarters, so they can't just talk to Ty Blackford and work it out in a 2:30 meeting on a Tuesday afternoon, it isn't that simple. She said it takes weeks or months to get it pulled together, brief headquarters, get their buy-in, give them time to review etc. so it is a little challenging and they try to avoid it as best as they can. Flohr asked what happens to fee that is missed and not earned by the contractor. Mitchell-Williams said that it stays in the federal pot because fee that is not earned within a fiscal year cannot be rolled over, but DOE keeps the funding and can reallocate it for something else later. Flohr said they ask for a certain pot of money every year and all the different pieces are already planned out within that pot. She said congress doesn't give them money by task orders, instead they get an operating budget that covers most of the work. She said ICDF is a line item that has its own account that is fenced off, they can't move money into or out of it without permission from congress. Flohr said DOE-ID has flexibility that no other site has because the money comes in one big pot and doesn't come with many restrictions. She said congress doesn't direct anything regarding the task orders particularly.

Martin asked if DOE considers, when they are putting these types of contracts together, what the stakeholder's perspective could be in terms of end-state and if so, if it is more at the detailed level of project managers.

Flohr said the general answer is that the majority of the items in end-state are already identified as part of the Record of Decision (ROD). She said it is a predetermined point that they have been told through agreement with the state and whoever else, at the time that it was worked out, and that is the objective they have to meet. She said they try to take those objectives and have a path forward to get there. Flohr said the first cell of the ICDF was identified as something that needed to be done, but they didn't know a second cell would be needed. She said that the potential for a second cell was discussed when the first cell was built. She said they went through consultations with tribes, talked to other stakeholders and engaged with the state and if anything deviates from the planned path forward, remedies, or ROD activities, they would consult separately on those. Martin asked if DOE ever incentivizes the contractor to reflect what the stakeholders may want. She said in terms of long-term stewardship there is a conversation that needs to happen regarding what the end-state looks like when it goes into that phase

and she thinks there is some value in incentivizing the contractors to work with communities and the tribes. Mitchell-Williams said she thinks IEC does a really good job in working with their community. She said in task order 3.2 the performance evaluation measurement plan has roughly 7 million dollars tied to the subjective criteria which includes evaluating what the contractor is doing with their stakeholders and with the communities. She said DOE is very focused on that. She said if they think the contractor is not doing a good job, they can withhold fee under the subjective criteria. She said from a federal perspective she likes the subjective criteria because it gives them more flexibility and subjectivity in how they evaluate the contractor in those “soft” things that don’t have Performance Based Incentives (PBI).

Flohr said when they did SIW and are currently doing with the AIW and S5G prototypes, they have to do Environmental Cost Analyses (ECA) and go through National Environmental Policy Act (NEPA) steps to identify the options for disposition of those things. She said they are now in the process of updating another 10-year plan. She said there are two 10-year plans. She said one is a strategic plan that isn’t necessarily tied to funding, but says what they could do, over a 10-year window, if given the right amount of funding. She said the other plan is a 10-year task order plan, which breaks everything down into the chart that Mitchell-Williams showed and outlines the means to the end. Flohr said one of the things she thinks headquarters has been struggling with is figuring out what kind of funding assumptions to tell the sites they should use when they establish a 10-year plan. She said that IEC could get everything done, except spent fuel and calcine, in 10 years if they got a certain amount of money and it would be completely doable, but she doesn’t necessarily think that is the funding assumption headquarters would tell her to build into her plan. She said they are getting more comfortable, because Ike White is focused on making sure they have alignment with the community and the tribes when they go forward with these things. Flohr said she will talk to individual groups to make sure that the tribes, Mayor Casper, and any other entities that are interested can have discussions about the plan.

Ehresman said it is typically announced yearly what kind of fee the contractors have been awarded for the work, and asked if there is any way DOE is letting the communities know what percentage of the award fee IEC is meeting, under this new system. Mitchell-Williams said the scorecard showing the fee that they earned is on the website and they will continue to show it. She said they don’t have something lined up for the CPIF ones because that is a little different. She thinks they could show what has been completed for the ARPs and the associated fee earned. She said they try very hard to be transparent in the work that is being performed and how the contractor is being evaluated. She said she thinks it is important to look at how they can continue to be transparent as they pull more scope out of task order 3 and she will take that action. Flohr said that the DOE Office of Environmental Management (EM) typically makes all the determinations by a certain date each year and Wayne Barber writes an article for the Exchange Monitor that lays everything out. She said that up until last year DOE-ID didn’t have this type of contract so they were not in the list, but heretofore they should be in the same list. Ehresman asked if there was a way to get a copy of that Weapons Monitor Complex story. Flohr said they would have to look into the copyright, but they may be able to get the CAB a subscription.

Idaho CERCLA Disposal Facility update

Doug Pruitt (DOE-ID) provided an update on the Idaho CERCLA Disposal Facility. The Presentation is available on the ICP CAB website: <https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-october-2023>

Debi Farber asked if the operating parameters that allow for the expansion of the capacity under the current permit is a factor of the ratio of soil to non-soil materials. Pruitt said that is one of the factors. He said when they designed the original cell, the underlayment is like a foundation where you dig a certain amount and then backfill to something you think will support the mass of what will be in the landfill. He

said in the initial construction they were able to demonstrate that they have the capacity to carry slightly more of the dense material so with the debris and soil mix they are still within the permit conditions. He said to think about it like playdough, if you have a playdough lump, the speed that it compresses depends on how much pressure you apply. He said this is much like the material that makes up the liner and if they put a heavier, denser object in the cell it will compress the liner a little bit faster. He said they have done a lot of work building disposal pads when they know they have large, heavy items. He said they pour a concrete area to disperse the weight, so it doesn't become a point source to drive into, and through the liner or into the underlying substrate. He said they are very conscious about distributing the load and making sure they stay within the design parameters of both the liner and the substrate.

Farber said the leachate management is a huge aspect and it seems like it would be easier to manage clean runoff. She asked how they decide between collecting infiltration below ground and preventing infiltration altogether. Pruitt said the leachate collection will occur while they are in operations, so it will be open for a number of years while the waste is being disposed of. He said once operations are complete, they will cap the cell to prevent any infiltration. He said they will also have a sump so if any unexpected infiltration occurs, they will know. He said they also anticipate continued seepage and collection into the leachate, of whatever water currently resides in the landfill for a number of years after the cap is placed. He said they expect the water in the landfill proper to collect and be removed for a period of 5-7 years and then they anticipate the evapotranspiration cover will be able to mitigate whatever water happens to fall on top.

Meservey asked for more information regarding the acceptance and rejection criteria of the debris that gets disposed of in the ICDF. Pruitt said it is only for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) waste and it is all managed under the Federal Facility Agreement and Consent Order (FFA/CO). He said anything that happens to be onsite and is low-level contamination is considered for disposal in the ICDF but must meet the waste acceptance criteria for the facility. He said that it is like any other disposal facility and if it doesn't meet the criteria, they send it off site for possible future treatment and disposal at a compliant site somewhere else. Meservey asked if they can accept all kinds of metals, concrete, plastics, or anything else. Pruitt said yes, but there are very specific parameters including no hazardous material like acids or base disposals. He said anything contaminated with a hazardous material must go through a mitigation process to show that it is at an inert enough state that it is ok for disposal in the ICDF.

Bob Skinner asked what determines how deep they can make the landfill. Pruitt said they try to get to basalt which is at a known depth. He said they typically don't try to blast into the basalt because it is very time consuming and opens additional pathways for water infiltration. He said they build up the substrate level above the basalt layer and then put in the engineered plastic liners.

Skinner asked if the leachate is automatically pumped out as it is collected or if they have to do sampling beforehand. Pruitt said they do continuous sampling of the leachate collection monthly. He said they do an analysis of the samples against the waste they have approved for disposal to see if there are any anomalies. For example, he said if they find mercury in the samples and know they didn't approve mercury for disposal then they know they have something that didn't match, and they develop a corrective action plan. He said they determine what mitigating force they need to do to correct the anomaly, whether that be retrieving something that has been disposed of because it isn't compliant with the acceptance criteria or applying a cap or in-situ bioremediation like pumping grout around the area to make sure there is no water infiltration or something else along those lines.

Nate Francisco said he appreciates the forward thinking in the design for landfill planning and safety. He said you don't see that very often in landfill design. He asked if there are also leak-detection systems for

the liners because if something is picked up in groundwater monitoring it is already a little too late. Pruitt said yes and it is all part of the liner construction. Francisco asked if it is like a double liner with a leak detection layer. Pruitt said yes.

Idaho Spent Fuel Management Plan presentation

Ty Sanders (DOE-ID) provided a presentation on the Idaho Spent Fuel Management Plan. The Presentation is available on the ICP CAB website: <https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-october-2023>

Bob Skinner asked for a brief description of rubbleized fuel. Sanders said he would explain a few of the categories. He said normal fuel is expected to only require drying to get to an acceptable road-ready dry storage configuration. He said sodium-bonded fuel requires treatment prior to final packaging and disposal, and a portion of this fuel may be eligible for management in the TRU program and/or low-level waste rather than spent fuel. He said they have to work through and understand what they can do with each block of that fuel. He said epoxied and rubbleized fuel require additional conditions and repackaging before road-ready status can be achieved and it should be noted that the capabilities to perform the additional steps are not included in the planned new packaging facility as currently envisioned. He said they have an idea of what they need to do with the current fuel in their packaging facility and this is not included, so they had to take a step back and figure out where they want to go with those types of fuels. He said the “other” category includes various miscellaneous small quantity Spent Nuclear Fuel (SNF) inventory, some of which may require additional conditioning.

Subsurface Disposal Area cap design presentation

Doug Pruitt (DOE-ID) provided a presentation on the Subsurface Disposal Area (SDA) cap design. The Presentation is available on the ICP CAB website: <https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-october-2023>

Before he began his presentation Pruitt expounded on some questions that were asked earlier during Mark Browns ICP overview presentation.

Regarding the question of what the impacts are to shipping, Pruitt said they don't pass on risk to anyone. He said if they have a waste stream and their Carlsbad counterparts identify a piece of missing data, have a question about one of the readings, or there is an inconsistency from one piece of paper to the next, DOE-ID is happy to take that pause and make sure to clarify what the information is. He said sometimes that puts the waste stream on hold before they can certify the whole thing and ship it which impacts characterization and shipping. He said depending on the time the trucks arrive; they could have up to 12 driver sets sitting at RWMC waiting for roads to open which causes a delay.

Pruitt expounded on an earlier question regarding the likelihood in achieving the goal of 469 shipments. He said they plan on a 40-week shipping calendar but they typically ship 48 weeks out of the year, so the goal is about 10 or 11 shipments per week. He said they are shipping about seven shipments per week right now and are working with Carlsbad and SIMCO partners to identify a way to get back to 12 shipments. He said when they regain those extra shipments there is a high likelihood of achieving that 469-shipment goal. He said last year's goal was 390 and they made 348, so they are doing well as far as getting the shipments back on the road and making significant progress in getting the legacy waste out of the state.

Martin asked what was in the north toe, why it was in the original design and how DOE-ID justified taking it out of the design. Martin also asked if the facilities in that area that won't be capped will stay within the green boundary on the SDA Cap footprint map. Pruitt said there is a fairly significant basalt

wall about six feet tall that runs for about 250 yards along the north end they would have had to blast some of the basalt back and run the north toe all the way out there. Martin asked if there are any facilities there that have to do with the function. Pruitt said no. He said because the SDA facilities and mission are at end of life, this is the final remedy, and they will demolish any support structures. Flohr said there is no waste out there, there were only support facilities. Pruitt said all waste is contained inside the blue area boundary on the SDA Cap Footprint map. Pruitt said the engineers and environmental team determined that they could shrink the north footprint and still maintain the cap ability to shed water off the waste and prevent infiltration. Flohr said there was basalt at the top and the bottom that they would have had to blast through, so shrinking the cap damages the environment less. She said it would change the slope a bit but will still look natural.

Debi Farber asked what consideration was given to burrowing animal activity in the design of the cap. Pruitt said the ten-foot cap requirement is for any vector entrance whether that be ants or rodents or homesteaders 250 years in the future. He said that even if all the fencing and signage is no longer there in 200 years, they don't think anyone will dig deeper than ten feet for a basement, and they won't be digging on top of a hill for a well.

Farber asked where the soil cover material is sourced. Pruitt said it comes from several borrow locations. He said some of the dirt from the T-12 pit will be moved down to the SDA cap and that contaminated dirt will be covered. He said much of the rock and gravel material to form the base will come from the Adams Pit and some will come from Spreading Area B. He said they will also be taking some of the vegetative top layer from Spreading Area B. He said there will likely be some material they will have to buy and bring in to ensure they get the right mix for rock and soil in order to get the right compaction measure before putting the evapotranspiration part on. Martin asked what the T-12 Pit was contaminated with. Pruitt said it was mostly plutonium because they had materials coming from Rocky Flats in that area. He said most of it was from the Rocky closures. He said soil had fallen into large, degraded boxes and become contaminated. He said the soil was removed under the assumption that it was still clean, but after investigation some plutonium carryover was found. He said it was fairly low-level contamination but still above background radiation levels. He said they knew that some naturally occurring radon would carry in the soils when they took it off, but the readings they were getting were slightly above natural levels which is how they identified the contamination. Martin asked where the soil layer from the T-12 Pit fits within the SDA cap vertical profile. Pruitt said the T-12 would be within the "waste mixed with soil" layer and because the T-12 soils are contaminated it is considered waste so there will be ten feet of cap above it.

Meservey asked when the isotopes will decay to background levels. Pruitt said the isotopes were evaluated as part of the 2008 ROD and they have a high confidence that the isotopes are not likely soluble and don't have a good water travel path. He said since they are mitigating the water infiltration, they have high confidence that the cap will offer the greatest protection. He said leaving them in place and allowing the natural decay to occur is the right thing to do to minimize risk to the public, the environment, and workers.

Skinner asked where they are going to find soil that is only 33% rock. Pruitt said the T-12 pit is an area with very little rock in it which is why they selected it to cover the Transuranic storage area. He said each of the borrow locations have pockets that contain a very low rock mixture, but the Adams Pit has the highest concentration of rock and gravel to soil. He said it is a highly engineered process, they have great evaluations for each of the borrow areas, and Battelle Energy Alliance, LLC (BEA) has done extensive studies, dug test pits, done geotechnical evaluations and ground penetrating radar to identify the content of soil and gravel in the borrow areas. Skinner asked if there was a plan for the borrow areas and how they will look after the material for the cap has been removed. Pruitt said the main reason they

have done a lot of soil grubbing in the Adams Pit over the last 6-8 months is to get to the gravel mix they want. He said they have set aside the vegetative topsoil, which they will bring back and grade out so that it looks much like it did before the removal.

Ehresman asked how big the SDA is. Pruitt said it is 97 acres and it will be about 120 acres covered with the cap.

Public Comment Session #2

There were no public comments at this time.

Idaho Cleanup Project decontamination and decommissioning (D&D) update

Doug Pruitt (DOE-ID) provided a D&D update. The Presentation is available on the ICP CAB website: <https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-october-2023>

Farber asked how much of the demolition plan was built into the design of the ARP buildings. Pruitt said when they ask a vendor to build a facility, they ask how much money it will cost, what the materials are, and what the needed skill trade is to get it up and running. He said they don't usually ask the subcontractor to give them a plan of how to take it apart, so they always knew they would need to use some kind of demolition technology in order to bring those structures down in a safe manner. He said the application of the fixatives and the wash downs were all afterthoughts. He said after they took down ARPs 1 and 6, they gained some insight, and they had an understanding that they would have to take down all the structures eventually, but it wasn't something that was pre-planned before building.

Draft Basis for Section 3116 determination for closure of the calcined solids storage facility

Ty Sanders, Greg Balsmeier (DOE-ID), and Valerie Kimbro (IEC) provided an update on calcine disposition. The Presentation is available on the ICP CAB website: <https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-october-2023>

Skinner asked how the public is notified of public meetings when people don't read the newspaper very much anymore. Danielle Miller said DOE recognizes how things have changed in the last 15 years, but there are requirements such as the federal register and notifications to congress, the state, the tribes, and other regulatory bodies and stakeholders. She said they also plan to post notices on the DOE-ID and IEC websites and social media, and DOE headquarters normally posts on their social media as well to try to expand the audience. She said they still get interest locally from the Post Register, so they continue to post notices in the newspaper. She said they are required to do some of the newspaper ads for CERCLA and the Resource Conservation and Recovery Act (RCRA). She said they have adjusted their approach to getting the message out by utilizing social media and webpages and things of that nature. Miller said they also feel that the CAB meetings are a great avenue for communications and not only notify the CAB members, but also the public who attend the meeting.

Martin asked who the regulatory body is for this document. She asked if the Secretary of Energy is approving DOE work or if there is another regulatory body involved such as the EPA. Kimbro said this document is under DOE authority and has gone through all the chains of authority and headquarters. She said it will be the Secretary of Energy that approves it. She said there will be multiple regulatory authorities involved in the closure of the Bin Sets and this document is one of many. She said it will be a RCRA closure, a CERCLA closure, and NEPA is involved, so there will be multiple authorities. Flohr asked if it was a concurrence, and if multiple authorities weigh in before the final decision. Kimbro said there are multiple authorities that reside in their box of authority, and everyone will have a part in that.

She said this particular document only resides under DOE authority but CERCLA, for example, will have EPA and the state and the public involved. She said that makes this a fun project, and it has taken them about 5 years to work through the regulatory framework. She said this is a cornerstone document for this project that can proceed all the way to the very end. She said this document does not make any presumptions about the end state but has analyzed the end state and laid out the process, and the checks and balances to ensure the assumptions and parameters that are used remain valid. She said it will be an ongoing process and she would consider this to be a foundational document under the authority of the 3116. Miller said there is language that talks about how the Secretary makes the decision and it is based on input received by the NRC obtained through this process. She said there has to be a meeting of the minds between the NRC and the DOE, so the Secretary doesn't just sign the document without any outside input. She said the whole point in having the NRC involved every step of the way is that the NRC will concur that DOE is heading down the right path regarding 3116. She said they will have a conversation prior to the decision being made. Flohr said this is also on top of the layers of EM regulatory review that will occur. Blackford said NRC doesn't just stop there, they will continue their consultation for a long time after and will continue to monitor. Martin asked if NRC is licensing it. Kimbro said no, they have just been authorized to consult.

Farber asked what the purpose is in planning this document so far in advance. Kimbro said the original scope of work was to do the transfer of Bin Set 1 to 6, so it would have been part of that demonstration to remove the waste from Bin Set one and establish that closure method. She said with this new shift to focus more on vitrification, this could stand in wait for a little bit, but she is very optimistic that it will be much sooner than 20 years because there is a lot of opportunity to find room to bring a schedule in. She said it is very exciting to see where DOE is going with this effort and she thinks they can actually get this out on the street, let it be a cornerstone document for the project and also do some other work on other fronts that are needed. Flohr said they want to know that it is feasible, secondly, they want to know that the DOE Office of Nuclear Energy (NE) and other parties agree with them that it is going to work. She said some of the commercial enterprises that are being evaluated might like the idea as part of their implementation of whatever treatment technology DOE might ultimately choose. She said they might want to retrieve out of Bin Set 1 and put everything into Bin Set 6 to use as a feed tank or to make the material more homogenous before bringing it into the facility, or some other action.

Skinner asked if the control of the bin itself, includes the dirt that is around the initial Bin Sets. Kimbro said yes, they assume that there will be a soil cover over the Bin Sets, but it is not required for infiltration because the analysis shows that the doses are so low, they don't need infiltration control. Skinner clarified that he was asking about the dirt that is currently covering Bin Set 1 and asked if that dirt would be managed as far as waste. Kimbro said yes, the finalized design to modify Bin Set 1 in order to access the waste does require them to remove the dirt and dispose of it.

Farber asked what would happen if a new technology or mechanism to remove the waste is developed in the meantime. Kimbro said that would not change the technical analysis because it is based on what remains and not necessarily the technology. She said they have demonstrated with existing engineering that they can retrieve 99.9% of the residual.

Conclusion

Andrea Gumm concluded the public portion of the meeting.

Teri Ehresman, Chair
Idaho Cleanup Project Citizens Advisory Board