IDAHO CLEANUP PROJECT

CITIZENS ADVISORY BOARD

Meeting Minutes

February 22, 2024

List of Acronyms

CAB	Citizens Advisory Board
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CR	Continuing Resolution
D&D	Decontamination and Decommissioning
DDFO	Deputy Designated Federal Officer
DOE	U.S. Department of Energy
DOE-ID	U.S. Department of Energy Idaho Operations Office
EM	DOE Office of Environmental Management
EPA	Environmental Protection Agency
FY	Fiscal Year
ICDF	Idaho CERCLA Disposal Facility
ICP	Idaho Cleanup Project
IDEQ	Idaho Department of Environmental Quality
IEC	Idaho Environmental Coalition
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technical and Engineering Center
NRC	Nuclear Regulatory Commission
NRF	Naval Reactors Facility
OMB	Office of Management and Budget
PCT	Product Consistency Test
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
RWMC	Radioactive Waste Management Complex
SDA	Subsurface Disposal Area
TAN	Test Area North
TCLP	Toxicity Characteristic Leaching Procedure
TRU	Transuranic Waste
US	United States
WIPP	Waste Isolation Pilot Plant
WTP	Waste Treatment Plant

The Idaho Cleanup Project (ICP) Citizens Advisory Board (CAB) held its triannual meeting on Thursday, February 22, 2024. The public was invited to attend in-person at the Residence Inn in Idaho Falls, 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
Dick Meservey
Talia Martin
Mark Permann
Jessica Prather
John Sigler
Bob Skinner

Members Not Present

Roger Hernandez

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

Connie Flohr, Deputy Designated Federal Officer (DDFO), U.S. Department of Energy Idaho Operations Office (DOE-ID)
Mark Brown, Alternate DDFO, Idaho Cleanup Project Deputy Manager (DOE-ID)
Danielle Miller, Federal Coordinator, DOE-ID
Ty Blackford, Program Manager, Idaho Environmental Coalition, LLC (IEC)
Mark Clough, Idaho National Laboratory (INL) Settlement Agreement Coordinator (IDEQ)
Pete Johansen, Idaho Department of Environmental Quality (IDEQ)
Ben Leake, Environmental Protection Agency (EPA)

Others Present

Alan Carvo
Andrea Gumm, Facilitator
Beatrice Brailsford
Carter Harrison, IEC
Catherine Smith, Idaho Falls Mayors Office
Charlene Rosenlund, Congressman Simpson's Office
Daphne Larsen, DOE-ID
Daryl Koch, S&K Federal Services
Doug Pruitt, DOE-ID
Ed Hart
Greg Balsmeier, DOE-ID
Hayley Price, ANDX
Jessica Vasseur, IEC
Justin Marble, DOE
Katherine Hitten, U.S. Senate
Kelly Green, ICP CAB Support Staff
Kelly Snyder, DOE
Kelsey Shank, The EDGE
Kenneth Huston, Office of Energy and Mineral Resources
Kyle Wilson, U.S. Senate
Landry Austin, State of ID
Maria Williams, DOE-ID
Mariah Porter, ICP CAB Support Staff
Mark Jones, DOE-ID
Melanie Snyder
Michell Walker, State of ID
Natalie Walker, DEQ
Nicholas Balsmeier, DOE-ID
Nickey Lawson, INL
Nicole Brooks
Rick Denning, DOE-ID
Schyler Walker, DOE-ID
Shayna Martin
Susan Coleman, Hanford Advisory Board
Tami Thatcher
Tammy Thompson
Thomas Clements
Valerie Kimbro, IEC
Wayne Barber
Wyatt Petersen, Shoshone-Bannock Tribes

Welcome and Opening Remarks

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

Teri Ehresman (ICP CAB Chair) welcomed everyone to the meeting, said she was looking forward to the presentations and encouraged the members to ask a lot of good questions.

Connie Flohr (DDFO) announced that this would be her last meeting as the DDFO, and Mark Brown will be taking over. She said she had a lot of good members of her team in the room with her and they would be able to answer any questions that come up. She said that she and some of her team members, just got back from a meeting in France where they toured with Jeff Avery, EM-2, around the Orano facilities where calcine material similar to the materials at the Idaho Site, is vitrified. She said they made good progress and turned the tide in Jeff Avery's mind about the potential for utilizing the same technology. She said they would continue studies with the available funding, and she was looking forward to seeing how the CAB members react to the information presented in the vitrification technologies presentation.

Mark Clough (IDEQ) introduced himself and welcomed the members of the public to the meeting. He said he was looking forward to a good lively discussion. He said he thought the agenda had some very interesting topics. He said he would miss working with Connie Flohr, who did a great job for DOE during her tenure, but that he knows Mark Brown will do a fine job.

Pete Johansen (IDEQ) introduced himself and said he would be available to answer any questions about the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cleanup process. He thanked staff for putting together the advance information packet and sending it prior to the meeting.

Ben Leake (EPA) introduced himself and said he was glad to be able to attend virtually and that he was looking forward to another great meeting. He said he appreciates the time everyone has spent putting together and participating in the meeting.

Ty Blackford (IEC) said he was happy to attend the meeting and share what they are doing with cleanup at the Idaho Site. He said they would miss Connie but are thrilled to have Mark taking over. He said he thinks they will not miss a beat with the transition.

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-february-2024

ICP Overview

Connie Flohr, Rick Denning, Maria Mitchell-Williams, Doug Pruitt, and Nick Balsmeier (DOE-ID) provided an overview presentation highlighting ICP activities and performance. The presentation is available on the ICP CAB website: https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-february-2024

Teri Ehresman asked if DOE will be able to continue working after March 1st if another continuing resolution (CR) is not issued. Flohr said if there is a lapse of appropriation, they do have funding to continue working but will have to make some reductions in a few things to make sure the money they

have in hand stretches as long as possible. She said she thinks they have enough funding in hand to last 2-3 weeks before going into a shutdown mode. She said they have been receiving substantial amounts of funding for the last five or six years and would receive that same level of funding in a CR. She said the only things in Fiscal Year (FY) 24 that would be hindered are things like the Idaho CERCLA Disposal Facility (ICDF) cell. She said the amount they received for the ICDF cell in FY23 was only about 8 million dollars, but in FY24 it was supposed to increase to almost 50 million. So, with a CR, they won't get the benefit of the 50 million, they would only get the 8 million dollars again. She said for anything that they had planned to take a step up in FY24 they would have a little bit of a perturbation, but ultimately it would just delay those activities. Flohr said she is hoping they will hurry up and pass the budget, and if they passed it sometime in March, then the ICDF project would be unaffected. Ehresman said she doesn't think people realize how impactful CRs are to planning and replanning. Flohr said it does affect everything about the way they plan a fiscal year, because FY24 started in October but she has always told her team they should assume a fiscal year doesn't really start until around February because they are hardly ever out from under a CR that early. She said even if a budget is passed in December it takes time before they get the bill, create a spend plan, pass it through headquarters and get it to the Office of Management and Budget (OMB), it still takes a couple of months before they actually start getting that money in regular allocations. She said they have to plan in a different time window than what a real fiscal year is.

Ehresman asked for some examples of first-aid events. Denning gave some examples including an employee cutting their finger on a piece of glass while wiping a counter, an employee tripping and hitting their shoulder on the stairs, and an employee getting a piece of grit in their eye after donning a respirator. He said in each case the employees received the appropriate medical attention. He said they keep track of all injuries even at the lowest level so they can prevent them from becoming bigger issues.

Ehresman asked if the renegotiation of the contract at the Waste Isolation Pilot Plant (WIPP) will jeopardize any of the Idaho waste. Flohr said the WIPP contract is not being renegotiated but they recently renegotiated their permit with the state of New Mexico, just like DOE-ID has to do with the State of Idaho. She said it will not affect Idaho at all.

Bob Skinner asked what is causing the degradation of the barrels. Doug Pruitt said that low humidity is a relative term. He said many of the facilities that the waste is stored in are not heat controlled and the temperature fluctuates greatly between day and night. He said this causes some condensation to occur on the drum and it can cause a little bit of rust to form on the drum. They have been seeing very small amounts and are making sure the drums still have good integrity, but it is likely that condensation is also occurring on the inside. He said they are taking measures to make sure the drums remain compliant, and those events don't reoccur.

Mark Permann asked if there is a potential to run out of space in the ICDF, since Naval Rectors Facility (NRF) work is progressing faster than expected, if no CR is passed. Pruitt said they have addressed that problem already with NRF because they can contain waste on their own footprint before sending it off for disposal. He said they anticipate the ability to coordinate the waste and contain some at NRF before sending it off for disposal at ICDF.

Vitrification Technologies

Greg Balsmeier (DOE-ID) and Valerie Kimbro (IEC) provided an update on the Calcine 3116 draft determination and vitrification capabilities that are being explored as part of the technology development program. The presentation is available on the ICP CAB website https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-february-2024

Clough asked for clarification on the Toxicity Characteristic Leaching Procedure (TCLP). Kimbro said that it is a Resource Conservation and Recovery Act (RCRA) regulatory requirement or limitation. She said that calcine high-level waste is a mixed hazardous waste and includes metals. She said through TCLP they make sure that none of the constituents, specifically metals, are leaching out of the waste form at concentrations that would be harmful to the public or environment.

Skinner asked if there are any worries about the calcine melting into the glass and some floating to the top or bottom causing the glass to be heterogeneous. Kimbro said she would talk more about it later in the presentation, because it is important that mixing does occur. She said one of the concerns is that, as a dry product, calcine might just dust the top because there is a cold cap. She said that is one of the things they must figure out when they feed it into the melter.

Debi Farber asked how many vendors are working on this. Kimbro said there are currently three.

Monica Hampton asked for the names of the vendors. Kimbro said the vendors are a partnering team consisting of Catholic University and Atkins, a major company in France called Orano, and another company with roots in France and a federal services group in the US called Violia.

Flohr said one of the reasons they are particularly interested in the Orano technology is because Orano has actually been separating fuel. She said they reprocess the fuel in France because they rely on about 70% nuclear power. She said they have been reprocessing fuel, drying it, sending it through a calciner and storing it on site for 30 years. She said they are the only one of the three vendors that have been vitrifying high-level waste from a dry form commercially.

Talia Martin asked for clarification on the meaning and significance of 35% waste loading, and what the ideal percentage is for waste loading. Kimbro said it is the amount of waste that you can load into the system and still have a waste form that passes all the tests. She said it relates back to the product consistency tests (PCT) and the TCLP. She said one of the problems with calcine waste is its cadmium content and binsets with a higher amount of cadmium concentration are likely to have a lower waste loading percentage. She said binsets without high cadmium concentrations can be processed at a higher waste load such as 50%. She said lower waste loading percentages will increase the number of canisters and operational times and costs. She said it will be very important for them to optimize the waste loading in order to reduce the costs while still producing a waste form that will pass all the requirements.

Skinner asked how the regulatory requirements of other countries utilizing vitrification technologies compare to ours. Kimbro said she did not have the answer to that question. Blackford said the regulatory requirements in France and the US are not that different. He said France is also looking at repository disposal for this type of waste form. He said it is very similar, they must follow the leachate processes and the long-term disposal capabilities. Flohr said that a layer of difference is that in the US there are state requirements to meet in addition to EPA and Nuclear Regulatory Commission (NRC) requirements but in France the president just said they were going to do it, so they're doing it. She said the fact that they have state requirements to meet just adds a layer of sensitivity that they need to be aware of.

Farber asked if there are any long-term studies for the stability or long-term monitoring of the final glass product or if there is any long-term testing built into this solution. Kimbro said that the Pacific Northwest National Laboratory near Hanford, has done extensive studies on glass and glass has been studied since ancient times to understand its durability. She said Catholic University also studies many glass samples every year to see how they are retaining their waste form.

Hampton asked how big the canisters are. Kimbro said they are two feet in diameter by 10 feet tall which is a standard canister size for high-level waste. She said they will use the standard canister size unless the rules change. She said that Savanah River has two interim storage facilities which are about 10,000

square feet in doubles stacks, and they currently have about 5,000 containers in storage. Flohr said that the standard size used by Orano at their full-scale pilot plant is 4-foot canisters, so if DOE ends up utilizing their technology they could double-stack two within a DOE standard canister.

Martin asked what the next steps are after the validation studies. Kimbro said that there will likely be further rounds of testing after the current testing is complete. She said the focus will mostly be on developing the off-gas system and optimizing waste-loading. She said eventually it will feed into a value engineering or analysis of alternatives and there would be a selection of a technology and then they would enter the 413 process where they will start the preliminary or conceptual designs on whichever technology is selected. She said there would also likely be a reissue of the Record of Decision (ROD) amendment changing the current decision that's on the books for Hot Isostatic Pressing (HIP).

Flohr added that she doesn't think anyone in the Department right now believes that the decision to go with the HIP capability was the right decision, and the leadership in the Office of Environmental Management (EM) doesn't want to do the same thing again. She said she thinks they all acknowledge that HIP is not the best and its technical readiness level for high-level waste is about a 2 out of 10, whereas the vitrification technologies are a 7-9 out of 10 and are much more mature because vitrification is the best available technology. She agreed with Kimbro that they would have to go through a ROD and a lot of other requirements. She said every factor currently going through the testing process is a question or ambiguity that they do not yet have confidence about how they would work on this particular waste. She said instead of trying to switch over to vitrification all at once and create a treatment capability, they want to use the nominal amount of money that they are getting on an annual basis to find out whether each piece of the process is viable. She said they are going to take it one step at a time and try to spend some amount of money to balance cost and risk and answer a lot of questions before they get to a critical decision. She said this is a terrible time in EM for them to try to get a new project like this going because Hanford needs lots of money to run their waste processing at the Waste Treatment Plant (WTP) and there's a limited amount of money to go around. She said they are trying the best they can with minimal expenditure to answer a lot of questions and give leadership the best advice to make a decision and avoid relitigating decisions in the future.

Martin said that there might be some value in taking another look at a previous CAB recommendation regarding calcine. She also thanked the presenter for the disclaimer at the start of the presentation that clarified the 3116 process and helped her understand that they are only looking to reclassify a very small amount of waste that is not recoverable after the vitrification process.

Flohr said she doesn't think the ROD will be up for modification or amendment anytime soon because they need to study each piece in the process for the next three or four years to make sure they know for sure if this is the right decision.

Budget Update

Schyler Walker (DOE-ID) provided a breakdown of FY 2024 budget appropriation, objectives for FY 2025 and FY 2026 budget priorities. The presentation is available on the ICP CAB website: https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-february-2024

Mark Permann asked if there is a timeframe for spending the money once it has been approved. Walker said they are considered "no-year money" so they can spend money in any subsequent year. He said they do have to answer for it and have a plan for the money but if they have carryover, they can continue to spend it. Flohr said this doesn't apply to program direction which funds federal salaries, travel, and trainings. She said they have two years to obligate those funds and five years to cost them but that is the only timed money in EM.

Martin asked if any NRF activities would be considered under Decontamination and Decommissioning (D&D) funding. Walker said that Navy funding is separate from the EM line-items.

Farber asked if the Test Area North (TAN) groundwater plume fits within one of the budget priorities. Pruitt said it isn't called out specifically on the priority list, but the bulk of the work is not specifically called out in the list. He said all the groundwater monitoring is captured in full for funding in the FY26 budget request. Flohr said there is a portion of the budget called base operations and the CERCLA work would fall into that category. She said everything they do that has to do with milestones, especially related to CERCLA would be included in base operations activity.

Budget Recommendation Discussion

The CAB discussed the proposed budget priorities for Fiscal Year 2026 and reached consensus on their recommendation.

Public Comment Session

Tami Thatcher (Idaho Falls) said she grew up in the area and had family who farmed halfway between the Idaho Nuclear Technical and Engineering Center (INTEC) and TAN in the 50s and 60s. She said along with the aquifer being a concern, airborne also ought to be a concern. She said radioactive stuff going airborne is also a consideration the CAB should keep in mind even if it's rarely discussed. She said she appreciated that the presentations were concise and well organized, and they mentioned the Idaho Settlement Agreement Milestones. She said she thought it should be stated more firmly how the most critical milestones are on track to be completely missed and have no date for when they will ever be accomplished. She said getting the spent fuel packaged, getting it out of the state, getting the calcine treated and getting it out of the state are all critical things with no date and could never happen on the milestone dates. She said she thinks that should be emphasized. She said she thinks people should also recall the efforts for DOE's high-level waste reclassification a few years ago. She said DOE can take high level waste and call it whatever it wants which has real ramifications. She said this means that waste can be disposed of on federal sites like the INL. She said high-level waste laws and regulations don't apply because it's no longer high-level waste and therefore can be disposed of on the INL. She said calcine high-level waste can be reclassified to be disposed of on the INL. She said, when somebody says all options are still on the table including direct disposal of calcine, people should pay attention because that waste may not be going anywhere. She said the studies of the leach out when it's mixed with grout or treated in some other way tend to be biased towards optimism. She said it's a hazard that stays hazardous for a long time, but the performance assessments that look at the leach out tend to be scientifically unsound and too optimistic. She said there was discussion of Radioactive Waste Management Complex (RWMC) waste drum containers that had breakage, leakage, and corrosion. She said if you look at the DOE occurrence reporting for the RWMC you know that it is because there is excess liquid in some of the drums. She said she didn't understand why that wasn't mentioned even though there was an event last year. She said there are RCRA laws that say you cannot have excess liquid in the drums, and she doesn't know why it was not a RCRA violation. She said it caused a lot of problems where shipments went to WIPP and then had to come back to Idaho last year. She said the soil cap for the Subsurface Disposal Area (SDA) has not been designed considering the heat load of radionuclides that are remaining buried or chemical constituents, so it is likely to become a smoldering heap. She wondered why DOE isn't talking about some of the deficiencies of the implementation of DOE standard 5506 for Transuranic (TRU) waste and why they aren't doing things safely.

Federal Advisory Committee Act (FACA) Discussion

Kelly Snyder (DOE) provided a presentation on FACA and how it pertains to the ICP CAB. The presentation is available on the ICP CAB website: https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-february-2024

Andrea Gumm asked if there are any common conflicts of interest that occur regularly. Kelly Snyder said that the most common one is a member of the board providing a workforce perspective as a contractor working on a specific project that's within the EM scope that a board is making a recommendation on. She said conflicts of interest don't occur very often. She said if a board member is running for public office, they can't use their membership on the board to try to gain votes.

EM Corporate Transuranic (TRU) Strategy

Doug Pruitt (DOE-ID) and Justin Marble (DOE) provided a presentation about the decision points that the Department takes into consideration when planning TRU waste operations and how they are integrated with INL site operations. The presentation is available on the ICP CAB website: https://www.energy.gov/em/icpcab/articles/icp-cab-meeting-materials-february-2024

Clough clarified the percentage of WIPP shipments depends on what time frame you look at, and in the last 3-year average they have met or exceeded the 55% requirement.

Conclusion

Andrea Gumm concluded the public portion of the meeting.

Teri Ehresman, Chair
Idaho Cleanup Project Citizens Advisory Board