



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

January 28, 2021

List of Acronyms

CAB	Citizens Advisory Board	INTEC	Idaho Nuclear Technology and Engineering Center
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	ISA	Idaho Settlement Agreement
D&D	Decontamination & Demolition	IWTU	Integrated Waste Treatment Unit
DDFO	Deputy Designated Federal Officer	NRC	Nuclear Regulatory Commission
DEQ	Department of Environmental Quality	NRF	Naval Reactors Facility
DOE-ID	U.S. Department of Energy Idaho Operations office	NRIC	National Reactor Innovation Center
EM	Environmental Management	POP	Period of Performance
EPA	Environmental Protection Agency	ROD	Record of Decision
ESD	Explanation of Significant Difference	RWMC	Radioactive Waste Management Complex
ESER	Environmental Surveillance, Education, and Research Program	SDA	Subsurface Disposal Area
HLW	High level waste	SNF	Spent nuclear fuel
ICDF	Idaho CERCLA Disposal Facility	TAN	Test Area North
ICP	Idaho Cleanup Project	VOCs	Volatile organic compounds
INL	Idaho National Laboratory	WAG	Waste Area Group

The Idaho Cleanup Project (ICP) Citizens Advisory Board (CAB) held a meeting on Thursday, January 28, 2021 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
Josh Bartlome
Brad Christensen
Teri Ehresman
Monica Hampton
Roger Hernandez
Brandon Leatham
Dick Meservey
Mark Permann
Larry Schoen
Bob Skinner

Member(s) Not Present

Talia Martin

Deputy Designated Federal Officer, Federal Coordinator, and Liaisons Present

Connie Flohr, Deputy Designated Federal Officer (DDFO), U.S. Department of Energy Idaho Operations Office (DOE-ID)
Mark Brown, Acting DDFO, DOE-ID
Danielle Miller, Federal Coordinator, DOE-ID
Fred Hughes, Program Manager, Fluor Idaho
Mark Clough, State of Idaho
Pete Johansen, Idaho Department of Environmental Quality (DEQ)
Lynne Hood, U.S. Environmental Protection Agency (EPA)

Others Present

Kelly Galloway, Moxie Endeavors, Inc.
Susie Barna, Moxie Endeavors, Inc.
Davide Swale, BWXT
Sara Schmieg, Tetra Tech, Inc.
Curtis Roth
Christopher Henvit, Naval Reactors Facility (NRF)
Marissa Warren, Idaho Governor's Office of Energy and Mineral Resources
Gary Younger, DOE, Hanford Advisory Board
Beatrice Brailsford
River Bennett, Stewardship Works
Tami Thatcher
Dana Kirkham, Fluor Idaho
Jim Malmo, DOE-ID
Schyler Walker, DOE-ID
Kelly Green, ICP CAB Support Staff

Jeremy Hampton, Moxie Endeavors, Inc.
Corey Chun, BWXT
Mark Lesinski, BWXT
Jessica Lewis, Bingham County Commissioner
Landry Austin, Idaho DEQ
Kelsey Shank, The EDGE, LLC
John Chatburn, Idaho Governor's Office of Energy and Mineral Resources
Laurie Hernandez, Shoshone-Bannock Tribes
Ted Livieratos, Idaho DEQ
Wendolyn Hollond, National Reactor Innovation Center (NRIC)
Nicole Badrov, DOE-ID
Joel Case, DOE-ID
Jordan Davies, ICP CAB Support Staff
Bryant Kuechle, ICP CAB Facilitator

Opening Remarks

Facilitator Bryant Kuechle began the meeting at 8:00 a.m. He introduced himself, reviewed the day's agenda, and noted that the public comment periods would be held at 10 a.m. and 1:15 p.m. Kuechle also outlined the "Rules of Zoom" for the CAB's all-virtual meeting. He reminded attendees of the process for public comments during the meeting, time permitting, or via questions submitted in writing.

Brad Christensen (CAB Chair) welcomed everyone to the meeting. He jokingly awarded Connie Flohr (DDFO for the CAB, DOE-ID) the best background award and commented that the way we all are connecting these days is interesting and unique, but that we are making it work. Christensen said he missed seeing everyone's real face, but appreciated the chance to see their e-face. He reminded the presenters that the CAB recently welcomed several new members, many of whom have extensive technical backgrounds, but certainly some who still have a lot to learn. Christensen said he looked forward to hearing from everyone and that there should be a lot to catch up on.

Flohr commented that it was nice to be able to participate in the meeting and see everyone with so much interest in the program. She said she would dedicate her opening remarks to a public service announcement: As is the case everywhere, COVID-19 has had an impact on the ICP over the last year. DOE and Fluor Idaho have been working diligently to progress operations while still utilizing proper protocols at the site. Unfortunately, however, they have had to recognize some pretty significant impacts due to COVID-19.

Given that, Flohr continued, DOE has elected to extend the ICP Core contract with Fluor Idaho for four months. This extension is solely attributable to ongoing COVID-19 impacts where schedule and performance milestones have been, and continue to be, impacted. The extension of Fluor Idaho's contract now has their Period of Performance (POP) running through September 30, 2021. In parallel with Fluor Idaho's extension, the Nuclear Regulatory Commission (NRC) licensed facilities contract is also being extended to appropriately align with the ICP Core contract's POP. Flohr reiterated that these extensions are unrelated to the ICP procurement schedule and said DOE would neither offer any information related to the procurement nor take any questions from anyone on the topic. Flohr welcomed everyone to the meeting and said she looked forward to questions on all other topics throughout the day.

Mark Clough (State of Idaho Settlement Agreement [ISA] Coordinator) said good morning and that it was always good to see the CAB and welcome members of the public to the meetings. He commented that he was looking forward to a good discussion and a strong agenda, in particular the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Five-Year Review, Idaho CERCLA Disposal Facility (ICDF) cell, and budget presentations. He referred to Flohr's earlier comments regarding the pandemic and stated that COVID-19 had been hard on everyone involved with the Idaho National Laboratory (INL). Finally, Clough commended Communications as their hard work enabled the Idaho DEQ to maintain its watch of activities at ICP.

Pete Johansen (Federal Facility Agreement/Consent Order Supervisor, DEQ) welcomed the new CAB members. He explained his role at DEQ and mentioned that they have a team of scientists, engineers, hydrogeologists, and PhD toxicologists that review all CERCLA documents and keep track of all activities for the ICP. Due to COVID-19, Johansen said, representatives of DEQ have not been out to the site recently. He added that he was participating in the meeting as a liaison and was there as a resource to answer any technical or regulatory questions. He also added that the DEQ website was recently reorganized, and that there is a lot of good information there.

Lynne Hood (EPA) introduced herself as a remedial project manager for EPA and welcomed the new CAB members. She commented that she is fairly new to the INL project and said she very much looks forward to when they can all meet together in person. Hood stated that DEQ has worked in concert with DOE to finalize the Five-Year Review and is very interested in the ICDF cell presentation. Like Johansen, Hood said

she was participating in the meeting as a resource and encouraged the CAB to ask questions. She thanked the board for having her.

Fred Hughes (Fluor Idaho) commented that his employees have been doing a great job of continuing progress while still abiding by the protocols in place to stay safe and watch out for each other. He said that would become particularly apparent in Flohr's overview presentation. Hughes said it was good to see everyone.

Recent Public Outreach

Danielle Miller (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

Connie Flohr, Jim Malmo, and Joel Case (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) asked why DOE is conducting the rebound test at Waste Area Group (WAG) 7. Jim Malmo (DOE-ID) responded that they have been extracting volatile organic compounds (VOCs) since 1996 and have always monitored how much is being pulled out of the ground. Over time, the VOCs being extracted has dwindled to the point that very little is being pulled from the ground anymore. Now that they have reached the level they wanted to achieve as part of the overall project, they've shut off the vapor extraction vacuum to determine what the stable condition is without the active vacuum extraction. If VOCs remain at the level they are right now, that is the level DOE had hoped to achieve. The vacuum extraction has done exactly what it was intended to do and DOE is very happy with the results.

New Idaho CERCLA Disposal Facility (ICDF) expansion

Nicole Badrov (DOE-ID) provided a presentation on expansion of the ICDF. The presentation is available on the ICP CAB website: <https://energy.gov/em/icpcab>.

Schoen commented that one of the challenges of being on the CAB is keeping track of new and past information. He asked Badrov to explain when and how it was determined that additional capacity would be needed at ICDF. He added that it seems as though some of the items going into the ICDF are from off site. Badrov corrected Schoen and said it is a primary requirement for the ICDF that waste is CERCLA-generated and on site.

In response to Schoen's first question, Badrov explained that DOE determined more space was needed in late 2019 or early 2020. She said that projecting future waste volumes is incredibly difficult, but that DOE requested waste projections from its contractors and performed calculations that ultimately led to the determination that a new cell would be necessary. Badrov added that the original Record of Decision (ROD) specified 390,000 cubic meters of capacity but recognized the difficulty in projecting future waste volumes and therefore allowed for additional capacity in the future.

Schoen asked Badrov to explain the notion of 35 percent expansion of debris. Badrov commented that larger waste items take more space due to grouting, compacting, and filling processes, so they require a larger area in the landfill simply due to the way they are packed.

Schoen commented that the cleanup project has been going for a long time and asked how it was not until 2019 that a determination for additional space was made. Badrov referred to the timeline on Slide 3 of her presentation. She said ICDF was originally used for soils. Due to a 1996 joint EPA and DOE policy, Federal agencies were allowed to perform decontamination and demolition (D&D) actions as what is called CERCLA non-time critical removal actions. This allowed much of the debris waste to be considered CERCLA waste and dispositioned in the landfill. This wasn't anticipated when the first cell was

constructed. However, again the ROD did recognize it is difficult to predict the amount of waste to be generated back when it was signed in 1999. Waste volume projections are difficult to predict decades into the future. Badrov said that is why DOE asked the question in 2019. They had a much better idea of the need in 2019 than in 1999.

Schoen asked if DOE is then attributing the need for additional cell space to the reclassification of debris waste in 1996? Badrov said no.

Malmo added that NRF's mission has evolved over time and they are in the process of wanting to D&D a number of very large facilities. The volume of debris coming from NRF has changed dramatically in recent years. The NRF facilities were not included in the original projections. Malmo commented that it does not make sense to build a separate CERCLA disposal facility for NRF debris when it is just five miles up the road.

Josh Bartlome (CAB member) asked how many active and inactive landfills are on site. Badrov responded that there are several inactive landfills on the site, but that she would have to get back to Bartlome on the exact number.

A member of the public submitted a question via the chat function asking what is going into the evaporation ponds. Badrov responded that most of the volume of water in the evaporation ponds is comprised of leachate from the landfills. Purge water from groundwater monitoring is also dispositioned into the evaporation ponds.

Hood asked Badrov to talk more about the ESD. Badrov explained that ESD stands for Explanation of Significant Difference, a process used to revise a ROD when the change is significant, but not a fundamental departure from the ROD. DOE has had many conversations with other agencies and feels the additional cell at ICDF falls squarely in ESD territory.

Mark Permann (CAB member) thanked Badrov for her presentation and said it was clear, concise, and informative. He asked what the ultimate disposition is for the site once it meets capacity. Badrov responded that it would be capped with an engineered cover. She added, however, that they learned a lot about caps with the Subsurface Disposal Area (SDA) cap design. Right now, the ICDF cap is intended to be an engineered cover, not an evapotranspiration cap. Badrov said she would be interested in going back and looking at potentially doing another evapotranspiration cap on the ICDF because it may be a better option. She said DOE anticipates the landfill will reach capacity in 2023 or 2024 and that they will begin cap construction shortly thereafter.

Schoen asked if the inactive landfills on the site will need to be reconstructed at some point to meet modern day standards. Badrov responded that those landfills were used for construction debris and were capped in accordance with the remedy, which is with a native soil cover. They are not lined, but they are growing native vegetation on top. Part of the Five-Year Review process and the remedy is to continue to monitor those landfills to ensure there is no erosion, subsidences, or leakages. Badrov said the landfills would be monitored for the foreseeable future. Schoen commented that it would be helpful for the CAB to have a presentation on the inactive landfills.

Public Comment Session #1

Tami Thatcher (Idaho Falls) commented on CERCLA and vapor extraction. She stated that there are some tradeoffs between aquifer pollution and air pollution and that it is not clear what chemicals are released during vapor extraction. She recalled that recent EPA monitoring reported that Idaho Falls had very high airborne levels of carbon tetrachloride, but that no explanation was provided. She wondered if vapor extraction occurring at Test Area North (TAN) and the Radioactive Waste Management Complex (RWMC) could have been the source. She encouraged the CAB to take a look at chemical air releases and monitoring due to various CERCLA waste activities.

Thatcher referred to DOE's reclassification of high-level waste (HLW) and asked what that has meant to the INL. For a long time and without an official determination, DOE has not referred to chosen waste streams as HLW that others have deemed to be HLW. Thatcher said a status report from DOE on this topic would be interesting.

Thirdly, Thatcher brought up the ISA and, in particular, the milestones pertaining to spent nuclear fuel (SNF) and HLW. She commented that these milestones are a major component of the ISA and DOE is on track to completely miss them. Treatment processes are still being thought about and the repackaging facilities for SNF are not being built because there is no repository. The CAB had Richard Stallings speak on the subject, but his involvement had been more than 20 years prior. He wasn't very up to date on the status of DOE's repository program.

Thatcher continued on to say that DOE was forced to stop collecting for the nuclear waste fund because the courts found DOE had no repository program and no idea how many trillions of dollars one would cost. The approximately \$30 billion they had collected into the nuclear waste fund from utilities that generate electricity with nuclear power would not be enough to repackage some of the existing waste into disposable containers. Meanwhile, continued storage somewhere else is being talked about a lot as though it is a viable solution. Thatcher encouraged the CAB to ask more questions about the DOE repository program, which has not been funded since 2010. This is more than a stumbling block to the successful completion of these milestones and adherence to the ISA.

CERCLA Five-Year Review

Nicole Badrov (DOE-ID) provided a presentation on the CERCLA Five-Year Review. The presentation is available on the ICP CAB website: <https://energy.gov/em/icpcab>.

Teri Ehresman (CAB Vice-Chair) asked if the CERCLA Five-Year Review is performed solo by DOE or if there are any other agencies involved. Badrov responded that the lead agency is DOE, but that other agencies weigh in too. Badrov commented that she would cover roles and responsibilities in fuller detail later in her presentation.

Schoen asked Badrov to remind him what the tanks at Idaho Nuclear Technology and Engineering Center (INTEC) contain. Badrov responded that the tanks outlined in blue on the WAG 3 slide of her presentation were closed and the waste was calcined and went into the binsets. The remaining tanks contain the sodium-bearing waste destined for treatment at the Integrated Waste Treatment Unit (IWTU).

Fiscal Years (FY) 2021 and 2022 Budget

Schyler Walker (DOE-ID) provided a presentation on the FY 21 and 22 budget. The presentation is available on the ICP CAB website: <https://energy.gov/em/icpcab>.

Permann asked if the future costs for cleanup work at NRF would be funded through DOE's Office of Environmental Management (EM) appropriations or through NRF and the Department of Defense. Walker responded that the work would be funded through NRF and that they are willing to help fund the expansion of the ICDF as they plan to use it for D&D debris as previously discussed.

Schoen asked if there would be any changes to the budget for the CAB itself. Flohr responded that the budget for the CAB will not likely be reduced. She added that it is, of course, cheaper to have virtual meetings than in-person meetings and reminded the CAB that during its Administrative & Preparatory Session in October 2020, it was determined that the first meeting of the year would be solely virtual and all other meetings would be a hybrid, with in-person and virtual participation.

Budget recommendation discussion

Christensen led the discussion on a budget recommendation concerning the FY 23 budget priorities. The resulting consensus recommendation can be viewed on the CAB website, at

<https://www.energy.gov/em/icpcab/downloads/support-proposed-budget-priorities-doe-idaho-operations-fiscal-year-2023>.

Public Comment Session #2

Thatcher commended Fluor Idaho for coming into the ICP and taking on herculean tasks. She said she was not sure another company could have done better, but that she did want to mention, and the CAB should know, that DOE fined Fluor Idaho, withholding \$580 thousand for the four drums that popped their lids off in 2018. DOE found that there were four Severity Level I violations and others. Thatcher said Fluor Idaho ran into issues not characterizing the waste and not being open to what they should have known about what was in that waste. She reported that DEQ chose to keep saying that everything was fine and safe following the event and refused to take, or even entertain, enforcement action against Fluor Idaho, which in Thatcher's opinion, it should have done.

Thatcher noted that she reviews environmental surveillance reports. DOE's Environmental Surveillance, Education and Research Program (ESER) is at idahoeser.com and is separate from CERCLA monitoring. ESER takes air monitoring of gross alpha and gross beta, takes filters and then periodically evaluates what radionuclides are in those filters. The program itself has some interesting monitoring, but the ESER website is not bringing up the reports properly. The trending tool has not been updated with new data since 2014. Thatcher said it is in a shamble as far as transparency and that DOE ought to be forced to do a better job than having someone come in and say, "We monitor x, y, and z and all is good." Thatcher added that the DEQ has taken the approach of deleting all of its INL surveillance data over five years old. She said DEQ is expected to be transparent and thorough and a good steward of monitoring the contamination so it can be trended over time. DEQ is not doing that.

Finally, Thatcher related that presentations are provided that discuss releases of chromium at the test reactor area, but she clarified that it is *hexavalent* chromium, which damages human DNA. She said she can understand why the connection between the contaminants and the health effects are not commonly linked, but that Idaho cancer data for the last 10 of 15 years reported all the counties surrounding the Idaho site have had double the rate of incidence of thyroid cancer compared to the rest of the state of Idaho and the rest of the country.

Announcement of vice-chair election result

Christensen announced that Josh Bartlome was elected the incoming Vice-Chair for the ICP CAB. Bartlome said he looked forward to serving the board and representing the board well. He added that if anyone would like to chat with him offline, to please feel free to reach out. Bartlome said he was sure Schoen, who was also nominated for Vice-Chair, would have done well in the role, too, but that he looked forward to moving into the future with this CAB.

Conclusion

Flohr concluded the meeting.

Brad Christensen, Chair
Idaho Cleanup Project Citizens Advisory Board