



INL Site Environmental Management

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

Meeting Minutes

January 21, 2009

The Idaho National Laboratory (INL) Site Environmental Management (EM) Citizens Advisory Board (CAB) held its bi-monthly meeting on Wednesday, January 21, 2009, at the Hilton Garden Inn, Idaho Falls, Idaho. An audio recording of the meeting was made and may be reviewed by phoning Support Services at 208-419-4158.

Members Present

R. D. Maynard, Chair
John Bolliger, Vice Chair
Richard Buxton
Doc DeTonancour
Christine Herres
Nicki Karst
Harrison Gerstlauer

Seth Beal
Fred Sica
Damond Watkins
Willie Preacher
Tami Sherwood
Bruce Wendle
Robert Rodriguez

Deputy Designated Federal Officer, Federal Coordinator, and Liaisons Present

Rick Provencher, Deputy Designated Federal Officer, U.S. Department of Energy Idaho Operations Office (DOE-ID)
Bob Pence, Federal Coordinator, DOE-ID
Dennis Faulk, U.S. Environmental Protection Agency (EPA), Region 10
Susan Burke, State of Idaho Department of Environmental Quality (DEQ)
Daryl Koch, DEQ
Brent Rankin, CH2M-WG, Idaho LLC (CWI)

Others Present

Lisa Aldrich, Project Manager
Ceri Chapple, Support Services
Lori Isenberg, Support Services Facilitator
John Fulton, CWI
Mark Arenaz, DOE-ID
Nicole Hernandez, DOE-ID
Bruce Wicherski, DEQ
Mark Clough, DEQ
Alan Jines, U.S. Department of Energy (DOE)
Joel Case, DOE
Dave Sanderlin, Naval Reactors Facility (NRF)
Jean Holdren, CWI
Joel Hubbell, Public
Kathy Falconer, Areva
Warren Bergholz, Public
Jeff Soudrup, INL
William Watson, DOE
Pat Gibson, CWI
Elamin Almahie Yousif, DOE

Dean Lobdell, CWI
Kliss McNeel, CWI
Pete Johansen, DEQ
John Tanner, Coalition 21
Beatrice Brailsford, Snake River Alliance
Adolfo Sierra, NRF
Frank Webber, CWI
Mary Wollen, Public
Teri Tyler, Public
Scott Reno, CWI
Natalie Packer, CWI
Danielle Miller, DOE
Brandt Meagher, CWI
Mark Hutchison, NRF
Genia Parker, DOE
Mary Waters, CWI
Bruce LaRue, DEQ
Ralph Reeves, Public

Opening Remarks

Chairman R. D. Maynard welcomed everyone to the meeting. Mr. Provencher welcomed everyone, thanked the CAB for their efforts, and provided brief updates. Additionally, the liaisons provided brief updates.

Recent Public Involvement

Mr. Provencher provided an overview of public involvement since the last meeting.

Progress to Cleanup

Mr. Provencher provided a status of the cleanup progress with active discussion among the CAB. The status included safety performance (CWI and Advanced Mixed Waste Treatment Project [AMWTP]), transuranic (TRU) waste disposition, low-level and mixed low-level waste, and the AMWTP. Mr. Provencher discussed the Waste Area Group (WAG) 7 and the Radioactive Waste Management Complex (RWMC). In regard to WAG 7, Mr. Provencher outlined the Subsurface Disposal Area (SDA) record of decision and the Accelerated Retrieval Project interim actions. Mr. Provencher discussed the status of the Idaho Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Disposal Facility and CERCLA Remediation Projects: WAG 1 – Test Area North (TAN), WAG 2 – Idaho Nuclear Technology and Engineering Center (INTEC), and WAG 10 – Site-wide Miscellaneous Sites/Snake River Plain Aquifer. He continued, discussing the status and objectives of Decontamination and Decommissioning (D&D), TAN (completed), Advanced Test Reactor (ATR) Complex, INTEC, and the RWMC. Mr. Provencher outlined the Nuclear Materials Completion Project objectives, the Integrated Waste Treatment Unit (IWTU) (Sodium-Bearing Waste) Project objectives, the INTEC Liquid Waste Facility (Tank Farm) Closure Project, the Spent Nuclear Fuel Disposition Project objectives, and the Calcine Disposition Project. Mr. Provencher summarized to the CAB key activities and completion dates on the aforementioned projects.

Mr. Provencher notified the CAB of upcoming items of potential interest: Revision- General D&D Action memo to include additional facilities, TRA-613A (Pump Vault and Equipment), TRA-713B (Hot Waste Tank), TRA-713C (Hot Waste Tank), TRA-713D (Hot Waste Tank), TRA-730 (Catch Tank Vault), MFC-774 (Zero Power Physics Reactor Control Room), and MFC-776 (Zero Power Physics Reactor Cell).

Decisions/Disposition

The presentation satisfied the information need for the CAB. Beatrice Brailsford had four questions: (1) explain the Seed Module; (2) what unexpected materials were found in Building 603; (3) where in California is the spent nuclear fuel coming from; and (4) what energy technology are they looking into. Rick Provencher replied that the seed module is irradiated fuel, it was not sent to the Nevada Test Site because it would need to be configured and a basket fabricated for shipment. The material in 603 is fuel used in the past. It was supposed to be reprocessed, but was not for some reason. The material in California research reactor fuel is from General Atomics. The Energy Park Initiative is still in the early discussion stages. John Tanner asked which building was the custom processing building. Mr. Provencher answered that it was building CPP-627, which has been decontaminated and decommissioned.

INL CERCLA Caps

Nicole Hernandez briefed the CAB on the existing barriers at the INL. The existing barriers are: evapotranspiration (ET), biointrusion, human intrusion, or any combination of these. Ms. Hernandez gave a definition of each barrier type. Ms. Hernandez explained the INL ET and biobarrier caps-contaminant immobilization at the Central Facility Landfills (Operable Unit [OU] 4-12) and the Chemical Waste Pond-Reactor Test Complex. Ms. Hernandez briefed the CAB on the history, contaminants of concern, and the record of decision of the Central Facilities Area and the Chemical Waste Pond-Reactor Test Complex. Ms. Hernandez briefed the CAB on the record of decision for the INL biobarrier and human intrusion caps-radiation exposure control. She explained the history, contaminants of concern, and the remedial actions of the Stationary Low Power Reactor-1 Burial Ground (OU 5-05), the Borax-1 Burial Ground (OU 6-01), the Warm Waste Pond-Reactor Test Complex (OU 2-10), the

Sewage Leach Ponds-Reactor Test Complex (OU 2-13), and the Tank Farm-INTEC (OU 3-14). To conclude, Ms. Hernandez briefed the CAB on cap performance monitoring.

Evapotranspiration Surface Barrier Concepts and Design

Bruce Wicherski briefed the CAB on the ET Surface Barrier Concepts and Design. He outlined the history of the cover design. Mr. Wicherski explained that it is a traditional Resource Conservation and Recovery Act (RCRA) Low-Permeability “Barrier” Concept. He continued by giving the CAB an overview of the performance criteria and design in regulations, followed by a briefing of the cap design’s performance over time and the evolution towards the ET design (solid waste landfill regulations and the acceptability of alternative designs). Mr. Wicherski explained principles and varieties of ET covers. He continued by briefing the CAB on the design criteria and conceptual design for SDA. Mr. Wicherski detailed the ET cover concept verification studies. He explained that the goals of these studies are to demonstrate equivalence to conventional covers and provide design guidance for specific cover components. Mr. Wicherski outlined the criteria for the SDA: limit moisture infiltration (less than 0.04 inches/year), longevity (1,000 years), conformability to differential subsidence, biointrusion, gas venting (volatile organic compounds and other), erosion (wind and water), and RCRA equivalence. He provided a visual example of the conceptual design for the SDA. In conclusion, Mr. Wicherski explained why the SDA will work: it has a limited number of layers (simplicity), it has sufficient water storage capacity for design conditions, it will sustain long-term performance with low maintenance, it had demonstrated proof of concept, and it has natural analog/recovery from disturbance.

Decisions/Disposition

The presentation satisfied the informational need for the CAB. Beatrice Brailsford asked if any of the studies addressed impact of performance in regards to surface area. Mr. Wicherski responded by saying that performance as a function of surface area was not tested.

Idaho CERCLA Disposal Facility Design, Construction, and Operation

Mark Clough briefed the CAB on the design, construction, and operation of the Idaho CERCLA Disposal Facility (ICDF). Mr. Clough detailed the design of ICDF: the facility location, the waste cell and evaporation pond liners, the cell and pond capacities, the waste acceptance criteria development, and the anticipated cover. He continued by explaining the construction of the ICDF: the excavation, clay liner test pad, the waste cell liner layers, the evaporation pond liner layers, the leachate collection system, and the quality assurance role. Mr. Clough finished by briefing the CAB in great detail on the operations at ICDF: groundwater monitoring; leachate transfer and monitoring; waste concepts, volumes, and tracking; waste placement, compaction, and grouting; and DEQ inspections.

Decisions/Disposition

The presentation satisfied the informational need for the CAB.

Remote-Handled Transuranic Waste Disposition Update – Progress and Plans

Alan Jines briefed the CAB on the Remote-Handled (RH) TRU Waste Disposition Project progress and status, the RH Waste Disposition Project environmental assessment, and the Fiscal Year 2009 RH-TRU Acceleration. Mr. Jines explained that the waste was moved from the RWMC to INTEC in 2005. Five-hundred-and-fifty-two of the 625 drums have been sent to the Waste Isolation Pilot Plant in New Mexico. The remaining waste is in six waste streams. The project is designed to process handled waste stored at the INL and prepare the waste for

disposition. There are approximately 327 cubic meters of RH waste. The RH-TRU waste will be shipped offsite and the low-level waste will be either shipped offsite or will be placed in onsite landfills. The spent nuclear fuel and special nuclear material will be repackaged and retained onsite for future disposition. Mr. Jines explained how the liners will be retrieved, staged, and shipped to INTEC from the Radioactive Scrap and Waste Facility. Mr. Jines provided visual diagrams of the 24- and 16-inch liners located at the Materials and Fuels Complex (MFC). He also provided an image of the four-pack transport trailer.

Mr. Jines briefed the CAB on the environmental assessment highlights. The public comment period was from December 17, 2008, through January 19, 2009. Four alternatives were analyzed. The preferred alternative is INTEC, CPP-666, and the Fluorinel Dissolution Process Hot Cell. Mr. Jines discussed transportation options. He outlined the cultural resources that were identified. Mr. Jines explained that environmental assessment is critical to the cleanup progress. He continued, saying that all the comments will be evaluated, the environmental assessment will be revised, and then DOE will make a decision on the alternatives and the preferred alternative; additionally, they will make a decision on the need for an environmental impact statement.

Mr. Jines went on to discuss the Fiscal Year 2009 RH-TRU Acceleration. He said that the RH-TRU acceleration letter to the DOE was sent on December 16, 2008. The funding for the 2009 fiscal year is \$20 million. CWI was directed proceed on December 16, 2008. The 30 HFEF-5 cans are currently in storage at INTEC. There are approximately 108 additional HFEF-5 cans currently stored below grade at MFC. There are 67 sludge pan containers currently stored at the Naval Reactors Facility. Mr. Jines provided the CAB with images of the HFEF-5 cans, the HFEF-5 cans being removed the sorting table, and the Fluorinel Dissolution Process Hot Cell (top level).

In conclusion, Mr. Jines summarized the RH-TRU Disposition Project. He explained that the RH-TRU Waste Disposition Program is transitioning to smaller waste streams. The environmental assessment supports the 2009 fiscal year RH-TRU Acceleration as well as the larger Radioactive Scrap and Waste Facility remediation. Finally, the 2009 fiscal year RH-TRU Acceleration supports removing transuranic waste from the State of Idaho.

Retraction

Alan Jines made a retraction after the meeting regarding the RCRA compliance of the waste containers stored at the MFC: "I misspoke during my presentation and would like to make a correction for the public record. The comment was that the waste that is stored at MFC was not stored in a RCRA-compliant manner. That is false, we have a RCRA permit and the containers are stored in compliance with that permit. The permit specifies that the containers are labeled as miscellaneous units, which allows us to define how we are going do the inspection. The inspections include surface level and corrosion monitoring. The corrosion monitoring is done by burying containers and pulling them up every four years to monitor any corrosion. The Site Treatment Plan allows us to exceed the one-year limit, but then we must comply with the Plan, and meet the dates to pull the waste."

Decisions/Disposition

The presentation satisfied the informational need for the CAB.

Nuclear Energy Liabilities Project

Joel Case briefed the CAB on the Nuclear Energy (NE) Liabilities Project. The mission of the NE Liabilities Project is to implement an Environmental Liabilities Disposition Project for the offices of NE at the INL to cost-effectively resolve legacy environmental and waste management liabilities. The project scope includes: the retrieval, treatment, and disposition of legacy waste/excess materials (RH-TRU, mixed low-level waste, and excess chemicals/materials). Mr. Case explained that the cost and schedule of the project. The preliminary cost range is \$1.4 billion to \$2.9 billion. The project duration is estimated at 25 years and is set to initiate in 2009. Mr. Jines outlined the NE Liabilities Project: legacy RH-TRU disposition, EBR-II facility closure and D&D, ATR Complex

hot cells, Zero Power Physics Reactor D&D, legacy mixed waste disposition, disposition of legacy RH low-level waste, Voluntary Consent Order hot waste tank closures, excess chemical and materials disposition, and legacy contaminated site-wide excess facilities. Mr. Case provides images of MFC, the ATR Complex, and the Central Facilities Area. Mr. Case explained the benefits associated with project: DOE will benefit from enhanced efficiencies by integrating NE environmental liabilities at the INL under the office EM. Incorporating INL site environmental liabilities in the EM baseline work scope will support EM's post-2012 acquisition planning, and the environmental liabilities disposition project will reduce risks and costs associated with legacy wastes and excess materials. The current status of the project is: the EM team visited in June 2008 and conducted a preliminary assessment and came up with preliminary recommendations for acceptance, the December 15, 2009, briefing with EM-1/NE-2 was to determine a scope of liabilities for transfer, and there is a transfer plan in development (protocol/project execution plan/acquisition strategy/schedule).

Decisions/Disposition

The presentation satisfied the informational need for the CAB.

Public Comment

John Tanner suggested seismic activity and migration of nuclear waste as future presentation topics.

Announcements and Other Board Business

The next meeting will be held April 7, 2009, in Twin Falls, Idaho.

CAB Work Session

The CAB evaluated the new member candidates and chose three candidates to recommend for DOE selection.

The CAB added a chair election process to the procedures. The nominees can be nominated at any time prior to the meeting. The selections must receive a majority vote (more than 51%). A co-chair is optional, depending on the chair. In regards to the chairs meetings, the co-chair will attend if the chair cannot; in addition, two to three CAB members will be allowed to attend.

The CAB discussed the chairs meeting in Augusta, Georgia, March 17-19. R. D. Maynard, Harrison Gerstlauer, Nicki Karst, and Tami Sherwood will attend.

The CAB discussed the annual report. Tami Sherwood provided an outline.

The CAB discussed a group picture. It will be taken at the beginning of the next meeting.

The CAB discussed the top three issues they will present at the March 2009 chairs meeting:

- Support DOE cleanup mission and adequate funding
- Funding issues of the Nuclear Liabilities Project
- Opening a permanent repository for calcine and spent nuclear fuel.

The CAB discussed accomplishments of 2008:

- Established a committee to reformat an annual report to promote communication with the public

- Developed and approved six recommendations that supported DOE's preferred approach in accomplishing EM cleanup at the INL.

The CAB developed an agenda for topics of the April meeting:

- Offsite TRU
- IWTU, sodium-bearing waste overview
- New buried waste approach
- Budget for 2011
- Chairs report
- 2008 annual report.

An executive committee call will be scheduled to work on the April agenda. No other committee work is planned at this time.

Action Items:

1. Support staff will coordinate and distribute travel information to CAB members attending the March chairs meeting in Augusta, Georgia

Members provided written feedback forms to support services at the conclusion of the meeting.

Attachments (8) to these minutes are available on request from the INL Site EM CAB support office.

I certify that these minutes are an accurate account of the January 21, 2009, meeting of the Idaho National Laboratory Site Environmental Management Citizens Advisory Board.



R. D. Maynard, Co-Chair

March 12, 2009

Idaho National Laboratory Site Environmental Management Citizens Advisory Board
RDM/cc