

FINAL MEETING SUMMARY

HANFORD ADVISORY BOARD

November 1 – 2, 2007

Richland, WA

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This is only a summary of issues and actions in this meeting. It may not fully represent the ideas discussed or opinions given. Examination of this document cannot equal or replace attendance and public participation.

Executive Summary

Board Action

The Board adopted two pieces of advice, one on the clarity and readability of Department of Energy (DOE) documents and the other on the ongoing Tri-Party Agreement (TPA) negotiations.

The Board signed onto two letters from the Site Specific Advisory Board (SSAB) Chairs, one regarding a recommendation for DOE-Environmental Management (EM) SSAB participation in the EM budget process and the other regarding a recommendation for the incorporation of long-term stewardship into new EM projects and legacy waste decisions.

The Board adopted a letter to Inez Triay, (DOE-EM), affirming the recent DOE-RL budget process and reaffirming her commitment to the same level of budget information in 2008.

TPA Negotiations Update

The Board received an update on the ongoing TPA negotiations and will continue to track the negotiation process.

Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS)

The Board received an update on the TC&WM EIS development process. The Model Technical Review Group (MTRG) will issue its report in November. DOE will have a workshop on December 11 to answer MTRG questions and complete model development. DOE plans to have a draft EIS prepared in the spring or summer of 2008.

Waste Treatment Plant (WTP) Update

The Board received an update on the progress of WTP construction and information on how TPA negotiations address WTP.

Hanford Groundwater Update

The Board received an update on the status of groundwater protection technologies.

National Liaison Update

Shelley Cimon, Public-at-Large, shared information from the September SSAB Chairs meeting held in Paducah, Kentucky.

Board Business

The Board will have committee meetings and calls in November and January, and possibly December. The Board will meet in February.

HANFORD ADVISORY BOARD

November 1-2, 2007 Richland, WA

Susan Leckband, Hanford Work Force (Non-Union, Non-Management Employees) and Board Chair, called the meeting of the Hanford Advisory Board (HAB or Board) to order. The meeting was open to the public and offered ongoing opportunities for public comment.

Board members in attendance are listed at the end of this summary, as are members of the public. One seat was not represented: University of Washington (University).

Welcome, Introductions and Announcements

Susan welcomed the Board to Richland. Washington State University (WSU) (University) appointed a new member for the Board, Gene Schreckhise. His alternate is Emmett Moore.

Doug Shoop is the Department of Energy – Richland Operations Office (DOE-RL) new interim deputy designated federal officer (DDFO). Dave Brockman, the new DOE-RL manager, will permanently appoint someone for the position in the next month.

The Oregon Department of Energy has a new Natural Resource Specialist, John Gear.

Meeting goals included:

- Considering draft advice from the River and Plateau Committee (RAP) on the clarity and readability of DOE reports;
- Hearing updates on the Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS), the Waste Treatment Plant (WTP) and groundwater technologies;
- Hearing an update on the Tri-Party Agreement (TPA) negotiations and considering draft advice from the Budget and Contracts Committee (BCC) on the TPA negotiations;
- Considering signing two Site Specific Advisory Board (SSAB) letters, hearing a debrief on the recent SSAB Chairs' meeting, and learning about other national meetings with possible implications for Hanford; and,
- Reviewing and adopting the draft Board process manual.

The Board meeting was audio-recorded.

September Meeting Summary

Greg deBruler, Columbia River Keeper (Regional Environmental/Citizen), did not think the TPA discussion was accurately captured in the September meeting summary. He submitted proposed changes to the summary, which will be reviewed and compared to the audio-recording. The September meeting summary was not adopted and will be reviewed at the February Board meeting.

Clarity and Readability of DOE Documents

Dick Smith, City of Kennewick (Local Government), introduced the advice on the clarity and readability of DOE documents. He said the committee decided advice was needed after reading the 100 Area and 300 Area Component of the River Corridor Baseline Risk Assessment (RCBRA). The committee believed problems with the document include sections that were poorly written and parts that did not share useful information with the reader. Dick said he received an information bulletin from Fluor Hanford identifying the importance of document readability and he was glad that they recognize the issue. Dick also noted that the committee thought it would be helpful for documents to provide online addresses for referenced resources.

Agency perspective

Doug thought the advice seemed reasonable and appropriate. He thought readable documents are especially important given the complexity of Hanford cleanup.

Steve Wiegman, Department of Energy – Office of River Protection (DOE-ORP), agreed that an executive summary should be a thoughtful synopsis of a document, rather than a compilation of paragraphs pulled from the main body of the text. He described an executive summary as a picture of what the reader should expect.

Board discussion

Nancy Murray, Public-at-Large, thought the Board should take extra care to make the advice clear and readable. She helped revise the advice to ensure its clarity and readability.

The advice was adopted.

National Liaison Update

Shelley Cimon, Public-at-Large and Board National Liaison, attended the Site Specific Advisory Board (SSAB) Chairs meeting in Paducah, Kentucky, which included a tour of the Paducah site. She described the Paducah Gaseous Diffusion Plant, a privately-owned uranium enrichment facility located on federal land. It has been operational for 50 years, and while it was originally used to support weapons production, it now supplies enriched uranium to the commercial nuclear industry.

The site covers 3,420 acres (including a 750 acre industrial site) and is three miles south of the Ohio River and 12 miles west of Paducah. The site is also bordered by the West Kentucky Wildlife Management Area. Shelley noted it is interesting that most of the DOE land is leased to the Commonwealth of Kentucky as part of the Wildlife Management Area (WMA).

Shelley noted four or five contaminants of concern: polychlorinated biphenyls (PCBs); technetium (Tc-99); trichloroethylene (TCE) with dense, non-aqueous phase liquid (DNAPL); and legacy waste, including mixed, low-level, and transuranic (TRU) waste. She said there are ten burial grounds covering 60 acres and 36,000 cylinders of depleted uranium, each weighing 14 tons. Shelley said the material storage area is massive and needs decontamination and decommissioning (D&D). Paducah is using the following cleanup processes:

- Pump and treat (groundwater)
- Excavation and removal of contaminated soil
- Surface water protection
- D&D
- Depleted uranium hexafluoride cleanup pending a new facility to convert it into hydrogen fluoride for resale and uranium oxide for disposal and reuse

Shelley said she was surprised to see RAD signs and fenced off creeks that were two miles from the site.

The SSAB Chairs meeting focused on the *Politics of Cleanup*, a document produced by the Energy Communities Alliance. Shelley shared the Board's concerns about the document with the SSAB chairs; she thought it had a narrow perspective on who should make decisions for the public.

Shelley noted a few items from the "round robin" update on each site:

- Savannah River: The Salt Waste Processing Facility is scheduled to start up in 2012. There is concern about the ultimate disposition of waste off-site. Shelley noted that Paducah has a nickel source that is worth \$300 – \$500 million. The advisory board for Paducah recommended that the Paducah Site nickel be uncoupled from Oak Ridge's equally huge (but contaminated) nickel and for DOE to proceed with a solicitation for disposition. They did not ask for money from nickel sales to stay in DOE-EM. Shelley suggested it is a programmatic issue to consider using profits from nickel sales for cleanup through DOE-EM.

- Paducah: There is a microbial degradation study in process to determine aerobic or anaerobic biodegradation in the groundwater. Shelley thought the study could help inform decisions at Hanford.
- Oak Ridge: There are issues with the ongoing mission at the site, which includes East Tennessee Technology Park and the balance of the reservation cleanup. The advisory board is focusing on long-term stewardship needs.
- Northern New Mexico (Los Alamos): There is a 50 percent shortfall in DOE-EM funding and the site lacks a validated baseline. The site also needs a monitoring well system across the entire site.
- Nevada Test Site: 132 million curies of radioactivity were released, resulting in groundwater contamination. There is not yet any off-site contamination, but monitoring wells are being used down-gradient from the release and up-gradient from ranchers and residents. There is aquifer draw-down and there is concern about contamination leaching into the Rio Grande River.
- Idaho National Laboratory (INL): There is concern over the Snake River aquifer and about the need to resume reprocessing soon to ready waste for acceptance into Yucca Mountain.

Shelley said that Jim Rispoli, DOE-EM assistant secretary, attended the meeting. He said there is not an “endless pot of money.” He said that FY 2009 will be the low point for the budget, which should then start increasing back up to the \$6 billion range. Shelley said that at Hanford, 57 percent of DOE-EM employees are over the age of 50, a trend consistent across the complex. She said 700 employees will retire from Hanford in the next ten years. DOE has skill gaps across the complex in all disciplines and is contracting with the Army Corps of Engineers to obtain short-term help. Shelley said Jim noted that all the groundwater plumes are in a data set and renewable energy is being discussed, such as wind turbines for on site pumping.

Shelley said they also discussed the need for a transparent budget process. Cindy Rheaume, DOE-EM Director of Budget, said DOE is not comfortable with the amount of data recently released at some sites, such as from DOE-RL at Hanford. Shelley noted that she heard something different from Inez Triay, DOE-EM. DOE is developing a validated baseline forecasting out for five years. Shelley said that the SSAB Chairs developed a letter responding to DOE’s request for budget guidance. The letter also addresses the need for compliant budgets for regulatory agreements and commitments.

Shelley said there was a briefing on the history of pre-1970s TRU and there are now remedy selection criteria to deal with TRU. She heard that the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) would run the process, but she thought it should be site-specific.

Shelley spoke about the 2007 Intergovernmental Meeting held in October with US-DOE in Snowbird, Utah. Six intergovernmental groups participated in the conference:

- Energy Communities Alliance
- Environmental Council of the States
- National Association of Attorneys General
- National Conference of State Legislatures
- National Governors Association
- State and Tribal Government Working Group

Approximately 125 people attended the conference. Shelley said it was designed differently than in past years, to focus on a collaborative process culminating in an outcome. DOE promoted stakeholder involvement by inviting the SSABs to send representatives. Board members Pam Larson, City of Richland (Local Government) and Ken Niles, Oregon Department of Energy (State of Oregon) attended as well as Steve Wiegman, DOE-ORP, Jane Hedges, Ecology, and Mike Wilson, Ecology (HQ), from local agencies. The meeting was intended to foster increased communication between the states, tribes and local communities with US-DOE. It also provided an opportunity for senior DOE officials to speak with intergovernmental groups collectively and for these groups to provide a clearer perspective of how their priorities relate to DOE initiatives. DOE asked for a collective agreement or list of issues that all the groups agreed on; Shelley said that product is currently under development.

Shelley said the intergovernmental groups met separately on the first day. The plenary session was held on the second day. Inez Triay described the four areas of pursuit – safety, acquisition, human capital, and

project management. Less than two percent of the human capital within DOE is under the age of 30, and 57 percent of EM employees at Hanford are over the age of 50. Shelley said that the National Academy of Public Administration will come out with findings of DOE communication with the public. There has also been an effort to create a Tribal Policy Framework; it is about to be signed and will affect DOE and other agencies.

Shelley said that Inez identified the following 2008 priorities:

- Disposition capabilities of radioactive liquid tank waste
- Special nuclear materials
- Spent nuclear fuel
- Dispose of contact handled and remote handled TRU
- Continue to remediate higher risk contaminated soil and groundwater
- Facility D&D
- Support post-closure benefit and liability requirements
- Conduct safe operations

Frank Marcinowski, deputy assistant secretary for the Office of Regulatory Compliance (DOE-EM), provided an update from his office:

- There are pending organizational changes in his office to improve integration of waste and excess nuclear material disposition efforts. They will move some of EM's nuclear materials program activities to the Office of Regulatory Compliance.
- Sixty-five shipments of remote-handled TRU have been sent to the Waste Isolation Pilot Plant (WIPP) from INL.
- Remote-handled TRU shipments from Oak Ridge are scheduled next, followed by Argon in FY 2008.
- Currently, six remote-handled TRU shipments per week are being shipped with 25 contact-handled TRU shipments.
- Hanford shipments to WIPP are scheduled for 2016.

Shelley noted that Hanford does not have a facility to deal with its remote-handled TRU. She said Hanford is losing its ability to ship remote-handled TRU as WIPP is filled with contact-handled TRU.

Shelley said there were breakout sessions focused on budget and waste disposition. Although these groups have met for years, this was the first time they had collaborative discussions with the goal of delivering a consensus message to DOE.

Susan Leckband noted that Shelley's presentation was intended to show how the Board fits in on a national level. The information Shelley provided will be analyzed by the committees and tied into their work plans.

Hanford will host the April SSAB Chairs meeting. Susan Leckband noted that the Board will look for volunteers to help organize the meeting. She said it is a good opportunity to share information and problems with other sites and to directly speak with DOE-EM.

Discussion

Maynard Plahuta, Benton County (Local Government), asked if the meeting included discussion of retaining profits from nickel sales. Shelley said it is being reviewed and she did not think it was time-sensitive. However, she thought a letter from the Board regarding retaining nickel sale profits in the cleanup fund would be helpful. Maynard said he was involved in a similar situation before and he thought it took an act of Congress to sell precious metal.

Susan Leckband thought the nickel issue was an important policy question – if there are resources on a site that could be recycled to earn a profit, should the money stay in DOE-EM and be used for cleanup?

Norma Jean Germond, Public-at-Large, asked if the sites discussed how much money they would need to “do the type of cleanup they would really like to do.” Shelley said the draft SSAB letter reflects that concern. All sites want to see lifecycle costs, how much it would cost to defer work, and other costs like

long-term monitoring. Norma Jean asked if there was a sense of how long it would take to get a really good cleanup at each site; Shelley said no, the dates seemed like moving targets. Norma Jean thought the SSABs should continue to focus on this issue; Shelley agreed and said they will continue to discuss “cradle to grave” costs instead of designing cleanups to meet limited budgets.

Rob Davis, City of Pasco (Local Government), asked what site has the greatest proportion of pre-1970s TRU. Nick Ceto, Environmental Protection Agency (EPA), said it depends on the definition of TRU. He called pre-1970s TRU material contamination with long-lived constituents, and said that Hanford has a large proportion of it as well as Idaho. Shelley said that Idaho is cleaning up some of its pre-1970s TRU. Susan Leckband said RAP will continue to track the issue.

Pam said there is an impetus to define lifecycle costs around the DOE complex. She thought costs go up when cleanup activities are “pushed to the right,” or to the future. Pam said all the sites have been developing baselines; the Board has not seen them but there is rumor that they are not compliant. Pam said that at the Intergovernmental Conference, Inez Triay committed to making the baseline documents transparent. Pam suggested a follow-up letter to Inez to validate her promise and its usefulness to the HAB.

Ken Niles provided a few comments on the Intergovernmental Meeting. He thought Inez was very engaged and there was a lot of discussion of budget information and what DOE-RL provided to the Board last year. He said he and Pam heard about DOE being uncomfortable with the level of detail provided, even though it was the level of information the Board needed. He said that Inez agreed and committed to getting the same level of detail provided by DOE-RL in the future. He said they drafted a letter describing the focus on the budget and greater stakeholder involvement and communication, improving transparency, better integration of ongoing cleanup and new missions, and full integration of natural resource injury assessment and long term stewardship. Ken said he was disappointed when Cynthia Rheaume commented on the \$8 billion deficit, saying the only way to get through it is for the regulators to renegotiate and delay the work.

Pam said she found the different perspectives interesting, such as broader implications presented by governors and attorneys general. She said DOE is required to have written agreements with the state for accelerated cleanups. Meeting participants encouraged DOE to recognize that there are consequences if the states do not agree with DOE cleanup schedules.

Keith Smith, Public-at-Large, commented on the Hanford age demographic statistics that Shelley presented. He found it to be a commentary on the toughness of the workforce to “stick it out” all those years. Keith thought DOE has an opportunity to attract young workers through apprenticeship programs and internships; he suspected that the abandonment of those programs in the last few years may have something to do with the age disparity. Keith heard that young craftsman, more than older workers, tend to embrace a sound safety culture. Keith also believes it critical for DOE to address workforce age given the extension of work.

Doug agreed with Keith, noting that DOE-EM started an internship program. There are five interns with DOE-RL and four with DOE-ORP. He introduced three of the interns to the Board.

Shelley had a book from Paducah and a handout from the Las Vegas conference for the Board to review. She noted that there was a speaker from the International Atomic Energy Agency (IAEA) that said all countries need to have an inventory of their nuclear waste. Shelley said the United States does not have an inventory of its waste.

Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) Update

Mary Beth Burandt, DOE-ORP, provided an update on the TC&WM EIS. She said DOE has embarked on a public involvement strategy, hosting 19 workshops, 13 focus meetings on groundwater, 7 briefings to TWC, one workshop with a focus on cultural issues, 59 tribal interactions and 3 workshops on issues other than groundwater.

She said the Model Technical Review Group (MTRG) will issue its report in November. DOE will have a workshop on December 11 to answer MTRG questions and to wrap up model development. Mary Beth said

DOE plans to have a draft EIS prepared in the spring or summer of 2008. DOE has not run groundwater models yet.

Mary Beth said she was glad DOE took the public involvement approach it did; she thought it was a positive experience. She said the downside of educating and involving the public during development is that DOE does not have all the answers at certain times and it can frustrate people.

Regulator perspective

Ron Skinnerland, Ecology, is working with Mary Beth on the draft TC&WM EIS. He said they want to make sure all questions are answered at some point in the process and they plan to have a workshop at the Ecology office for some key stakeholders. In addition to the workshop Mary Beth mentioned, Ron said they will have a number of workshops when the draft EIS is released.

Nick said EPA is a reviewing agency for the EIS, not a cooperating agency. EPA has discussed internally how they will review the EIS and decided that the Seattle office will do the bulk of the review. Nick said they would find Board input helpful. He also said they may have some contractors to do specific reviews if necessary.

Discussion

Susan Leckband asked how the EIS fits into the TPA negotiations. Ron said the EIS is supposed to help DOE make decisions on tank cleanup activities, cleanup impacts, risk, and impacts to the Columbia River. Ron said DOE still has to make individual decisions on tanks regardless of the negotiations. He believes people should be concerned about cumulative impacts.

Greg said the Portland State of the Site meeting is being held in Portland on December 11 and asked that the EIS workshop not be held on the same day.

Ken Niles requested a lengthy and significant comment review period on the TC&WM EIS given its importance and assumed lengthiness. He suggested more than just the minimum review period is necessary. He asked how things like the Global Nuclear Energy Partnership (GNEP), Greater than Class C (GTCC) waste disposal at Hanford, and the Black Rock Reservoir will be incorporated into the EIS or how DOE will respond to those things whose outcome is currently unknown. Mary Beth thought that was a good question; all those things and more are being monitored to see how they would play into cumulative impacts or how they may influence decision-making. DOE will address those issues as much as possible, but the level of analysis will depend on the maturity of data available at the time. She will continue to evaluate those issues as the draft EIS evolves.

Susan Kreid, Washington League of Women Voters (Regional Environmental/Citizen), thanked Mary Beth for putting a greater emphasis on public involvement. She also hoped for a long review period. Susan requested a robust executive summary that is readable and easy for the public to understand. The executive summary should be sufficient to allow the public to provide appropriate comments.

Greg said he understood that the GTCC EIS will come out in January. Mary Beth clarified that the GNEP EIS will be available in January.

Paige Knight, Hanford Watch of Oregon (Regional Environmental/Citizen), commented that she is willing to wait longer for a draft of the TC&WM EIS if that means it will be a higher quality document.

SSAB Chairs letters

Susan introduced the letters from the SSAB chairs regarding a recommendation for EM SSAB participation in the EM budget process and a recommendation for long term stewardship incorporation into new EM projects and legacy waste decisions. Susan noted that the Board does not wordsmith SSAB Chairs letters; it can only authorize the Board chair to sign or not sign it.

Discussion

Keith thought both letters were well written and said he supported them.

Maynard also recommended that Susan sign the letters. He asked if the SSAB Chairs discussed the need to clean up sites more effectively rather than wait and hope that some future government or activities will do it. Maynard said he was worried about societal and governmental changes and relying on future governments to clean up contaminated sites. He said governments can make a commitment, but governments change and assurances can change. *Is there a push to clean up Hanford and other sites now rather than later?*

Susan Leckband did not attend the meeting but thought the issue was discussed. Long-term stewardship has always been an issue. Susan said there is a tendency to say that the Department of Legacy Management will take care of it, and she shared Maynard's concern.

Harold Heacock, TRIDEC (Local Business), said there is a lot of cleanup work that is not in the baselines yet. He thought that needed to be addressed. Susan said the letter requests a full budget picture and "additional markup." She said the whole idea of this letter (and other advice) is to have "cradle to grave" costs; there is the understanding that the validated baselines do not contain all the work.

Dick supported the idea of a complete lifecycle analysis, including all projects not currently in the baselines.

The Board adopted the letters.

Waste Treatment Plant (WTP) Update

John Eschenberg, DOE-ORP, provided an update on the progress of WTP construction and how WTP fits into the TPA negotiations.

John said safety is the most important part of the WTP project. He said completing WTP is not worth sacrificing safety. The project has four million safe working hours, which means they have worked for four million hours without having a lost time accident. The project has struggled with "soft tissue" injuries, such as strains, pulls and bruises. John said they have tried to focus on ergonomics, good lifting techniques, and other things that are sometimes overlooked as people age. In December, John said, they will have two million safe hours for construction alone.

John said quality is the second greatest concern. The project continues to struggle with getting quality component parts from vendors. He said the country's nuclear industry has been dormant for a dozen years or so, and it has lost its manufacturing infrastructure and ability for large forging. Standards have to be re-established, and continue to be a struggle. He said a lot of time is spent catching defects. He compared it to a block of sliced Swiss cheese – there are holes but the more layers you have, the fewer holes.

John said DOE brought in industry experts to perform an external quality review, the "Best and the Brightest," for the process flow sheet and cost and schedule basis. John considered that one of the most valuable things produced for the WTP project. He noted DOE will do the same thing to review quality.

John described the construction progress and showed several photographs. The WTP project aerial photo showed about 65 acres and the four main processing facilities. Currently, the cost of the project is \$12.2 billion and is planned for completion in 2019. John said the pre-treatment facility, the largest facility, is built to about 60 feet above grade. Construction on the high level waste facility and the pre-treatment facility halted for about 20 months due to the seismic design issue. John said the secretary of energy certified the seismic design criteria on August 10. On August 13, DOE informed the contractor they could resume construction on the pre-treatment and high-level waste facilities. John noted DOE is concerned about the workforce having to expand quickly – they want to be slow and methodical during the ramp up to reduce the risk of mistakes. John said they have 2,800 people on staff, not including DOE staff, of which 850 are engineers.

John said the low-activity waste facility (LAW) is completely roofed and is the furthest along; there is a minor amount of exterior work remaining. John showed slides of the analytical laboratory facility (LAB) and pointed out the life support system buildings, like the building that houses air compressors and chillers. John said construction on the infrastructure facilities are moving along.

John showed the percentage complete for each facility:

- High-level waste facility: Design 82% complete; construction 22% complete
- Low-activity waste facility: Design 94% complete; construction 55% complete
- Pre-treatment facility: Design 68% complete; construction 25% complete
- Analytical laboratory: Design 88% complete; construction 45% complete

Showing pictures of LAW, John said construction continues to make strong progress. It has low technological risk, whereas the pre-treatment facility has a higher technological risk. John said the siding on the analytical lab building is finished and workers are building the roof. There is also a 120-acre marshalling yard, or the “lay down” yard, where all the commodities, like structural steel, are brokered to the site. John said there will be a warehouse soon.

John described five project issues he is “keeping on his radar:”

1. *Design freeze*: John said at some point, they have to freeze the design. He gave an example of a computer – if you keep waiting for Dell to manufacture a better computer, you could end up waiting forever. At some point, John said, they have to build the plant. He said it would not be perfect, but it will work and it will turn waste into glass and operations will be refined over time. John thought chemical plants never behave as expected, but they will minimize the surprises. John said the Best and Brightest report in March identified 28 total issues, 11 of which are potential issues. He said the issues are significant and DOE is working to resolve them; they have already resolved 18 of the 23 issues. An example is the pre-treatment facility experimental platform. John said it is a \$75 million investment built to ensure the pre-treatment facility will operate the way intended. Testing is broken into process skids that are designed to resolve three of the Best and Brightest issues. John said the experimental platform will ultimately give DOE a sense of how it can optimize the pre-treatment facility’s operation to minimize the amount of sodium. John described the scale of the experimental platform as being about 1/5 the scale of the full plant.
2. *Evaluating the efficacy of starting LAW early*: John said WTP is scheduled for operation in 2019, but the analytical lab, facilities and LAW will be ready in 2012, giving DOE an opportunity to start those plants first. He said they could potentially vitrify up to five million gallons of double-shell tank waste. John said he is a proponent of this concept because it will give them insight into how the plant will work and provide lessons learned early and with time to apply them to the overall startup.
3. *Assurance of out-year project funding*: John said the success of the project is contingent on having \$690 million a year. He said Hanford has to restore confidence to the public and Congress; DOE has worked hard to establish a credible cost and baseline schedule, being honest with themselves about technical issues and their resolution. John said they are resolving technical issues and keeping communication open.
4. *Staffing*: John said they are continually pressed for staffing; Bechtel struggles to keep quality engineers. John said there is a resurgence of activity in the nuclear, oil and gas industries, creating opportunities for people at Hanford to make money elsewhere, both engineers and tradesmen. John said he worries about having enough pipe-fitters and nuclear-qualified welders.
5. *Global market conditions*: John said he tracks and is concerned about fuel costs, shipping costs, and things like worker strikes.

John said DOE and its contractors have worked hard in the past year to regain confidence and credibility. He said they have to keep morale high and build momentum to keep people energized and motivated to perform their best work.

Regulator perspective

Nick said he was struck by John’s presentation and the common perception that DOE work is always behind schedule and more costly than anticipated. He thought that everyone should remember its

complexity. Nick thought DOE needs to think of a good way to share how complicated the “whole story” is in order to get the cleanup funding Hanford needs and to be successful in TPA negotiations.

Susanne Dahl, Ecology, said Ecology has more people dedicated specifically to WTP than to any other effort. They have two full-time engineers overseeing construction to ensure permit compliance. She said there are five permit-writers and four design facility engineers that make sure the design meets regulatory requirements. She said they have to provide quality reviews to ensure human health and the environment are protected while not delaying construction. She was glad that the high-level and pre-treatment facility construction is underway, and while 2019 is a hard date to swallow, it is realistic. She said the 2019 start-up date is part of the current TPA negotiations.

Discussion

Jerry Peltier, City of West Richland (Local Government), asked if additional materials or re-design are needed because of the seismic stop-work. John said the seismic study proved that the 2004 seismic criteria were a “bounding seismic criteria,” meaning it proved that things were not as bad as they thought. There has not been any re-work and none is required outside the building. Inside the building, John said, DOE will likely have to reinforce the inside of the tanks. In general, there is no other substantive impact. John noted there were issues other than seismic concerns driving the decision to suspend construction, including technical issues with the process flow sheet and the Congressional funding cut of effectively \$490 million. When design slowed, construction caught up, which is undesirable. DOE prefers about a year between the design and the start of construction, which is what they have today. John said that while the 20-month suspension was difficult, it was the right decision.

Jim Trombold, Physicians for Social Responsibility (Local/Regional Public Health), believes the WTP safety record is quite impressive. Jim noted that Hanford work is different from most jobs where workers can see the fruits of their labor, because at Hanford you have to believe in the next generation to finish the work.

Keith reiterated that safety is essential, and believes DOE has supported training and has set an impressive safety culture that is having a beneficial impact on offsite work. Keith asked where a second LAW would go if it is selected for supplemental treatment; John said the site for a supplemental treatment facility would be constructed just east of the first LAW.

Keith asked if the movement of waste in WTP will be affected by the discontinuation of positive displacement pumps. John did not know, but he did not think it will change the philosophy of WTP or what has already been constructed.

Ken Gasper, Benton County (Local Government), asked how a 20-month construction suspension led to an eight year startup delay. John said it had to do with the anatomy of a funding curve for a project – the biggest cost driver on the WTP project is time. John said every day that is delayed costs about \$2 million. He said that while a funding cut from \$690 million to \$490 million may only look like a \$200 million cut, those dollars have to be bought back at about \$2.25 for every dollar cut. John thought that no one ever appreciated the cost of building WTP. John said the cost should not be surprising if the project had been honestly compared to similar projects at Savannah River. John said they could shorten the construction timeframe if they had \$890 million a year, for example.

Ken Gasper asked how accelerating LAW startup might help accelerate cleanup. John said starting LAW early would cost money, money that is already set aside in the WTP baseline. The real cost, John said, comes from pre-treating waste to make it possible to go through LAW. He said there would have to be a tank farms based pre-treatment system. He did not know how much that would cost or how DOE would get the money. John noted that starting LAW early would not shorten the overall lifecycle because high-level waste drives the critical path and early LAW would not treat high-level waste. However, starting LAW early would help Hanford get started in turning waste into glass. John thought that was advantageous because they could empty single-shell tanks and take five million gallons of waste from double-shell tanks. More importantly, John said, they would be able to hire, train and qualify plant operators, maintenance technicians, and supervisors earlier and allow them to build momentum and become a functional unit. Those workers would be more experienced to operate the pre-treatment plant, a more complex system.

Norma Jean asked if there is a push to collaborate with colleges that have welding and other training programs. She also asked how waste would move from a tank farm based pre-treatment plant to a second LAW. John said waste would move underground from the tank farms to the WTP complex, and it would move underground within the complex in a pipe-in-pipe system. John said DOE is aware of the issue with developing young operators, and the co-op training programs are attractive options. Mike Keizer, Central Washington Building Trades (Hanford Work Force), noted that work is not slow across the country now so it may be difficult to acquire workers. He said apprenticeship and college programs are being utilized, but they are always looking for skilled craftsmen and safety-oriented individuals. He noted that having a slower ramp-up will be helpful.

Dick asked if there will be a point where high-level waste treatment will have to shut down due to a lack of feed material. John said DOE is running models to find the optimum sequence with retrievals and feeds so high-level waste treatment is as close to the main frame as possible. John said they are contracting with a laboratory to see how much more waste can go into each individual glass log.

Dick asked if the experimental platform will have pulse jet mixers and at what scale. John said yes and thought the pulse jet mixers are still 1/5 the scale of the full plant.

Paige asked how DOE would handle contractual issues with Bechtel if they are still constructing the high-level waste next to the second LAW (if a second LAW is selected for supplemental treatment). John said Bechtel would have to run a split jobsite, which is not unprecedented and not impossible. He said DOE has not thought about that in great detail, but it would be a challenge to manage. Operations and construction staff would both have to use the balance of facilities. Paige asked if Bechtel could run a LAW facility; John did not know, but he thought that operations are Washington Group's strength. He speculated that Bechtel would lean heavily on the Washington Group.

Paige asked if John was serious about building a second LAW. John said they are putting a lot of effort into pursuing it as a supplemental treatment option. He suspected supplemental treatment technology selection will boil down to funding for tank farm based pre-treatment.

Hanford Groundwater Update

Mike Thompson, DOE-RL, updated the Board on the status of groundwater protection technologies. In 2006, DOE received direct funding for nine groundwater projects. In 2007, another \$20 million was allocated by DOE-RL and DOE-HQ to supplement groundwater work. EM-20 is also pursuing Advanced Remediation Technologies (ART) Projects and a DOE-HQ EM Roadmap.

Mike said half of the funding was spent on chromium sites. He said chromium is found in the accessible environment where biota is exposed. Mike said chromium is treatable – finding the chromium sources is the hard part.

100 Area chromium

Mike described five things necessary to clean up the chromium plume (100-HR-3) in the 100 Area:

1. Test and mend the in-situ redox manipulation (ISRM) barrier
 - The technology DOE uses as part of the ISRM barrier converts chromium-6 to chromium-3, which is not toxic and less mobile. He said the barrier worked for a while, but there is some breakthrough. There is not enough iron in the system or there is a difference in preferential flow. DOE has to fix the barrier and enhance the iron in the system. They tested micron-size iron in the laboratory but it was not as reactive as they had hoped. DOE will perform those tests again and will not inject iron in the field this year.
2. Find chromium sources
 - A drilling campaign is underway to look for chromium sources.
3. Eliminate recharge
 - Redundancy is necessary. The leak at the basin is now minimal, but Mike said the two chromium plumes will now coagulate.
4. Remediate through biostimulation

- If microbes in the subsurface are stimulated and then cut off from their food source, they will die and remove oxygen from the water, creating a reducing environment that converts chromium-6 to chromium-3. Mike said that will be a reasonable remediation technology if it works. This year DOE is using molasses as a food source; next year they will try soybean oil.
5. Test and deploy electrocoagulation treatment system
- DOE is currently using an ion exchange technology, but may use an electrocoagulation technology if they need large scale treatment.

300 Area

Groundwater technology funding was also applied to uranium contamination in the 300 Area. In the mid-1990s, DOE wrote a Record of Decision (ROD) that uranium would deplete if the source term was eliminated. However, DOE discovered that the real source term is in the deep soil that is periodically rewetted by groundwater. Mike said something more aggressive was needed. DOE is using treatments that combine uranium with phosphate to become autunite. DOE also wants to employ a treatment that combines calcium with phosphate to become apatite, which sequesters uranium in the soil. Mike said they are trying to get a solution and injection technology to get phosphate in the ground to mix with soil and drop out what is in solution in the aquifer, and also build the apatite in the soil so they can capture secondary stream uranium. The early data shows the formation of autunite was successful and uranium crashed to low and successful levels. However, apatite was not created as intended and will require further research.

100 N Area strontium 90 (Sr-90)

DOE is trying to sequester Sr-90 along the Columbia River riparian zone. Only the Sr-90 in the near-river sediments will reach the river. Sr-90 concentrations are currently as much as 1,000 times the drinking water standard. Mike said two low concentration apatite injections were made to minimize the amount of Sr-90. DOE will add higher concentrations later to increase the apatite barrier and make it more robust. Mike noted that the additional groundwater funding will help them look at percolating solutions down into the groundwater and the contents of the soil above it. Mike said those tests are going well and he believed they will have good results at the end of FY 2008. Mike said coyote willow will be analyzed for uptake analysis, to determine how much biomass is needed to remove enough Sr-90, and the knowledge of how Sr-90 is taken up into insects or animals via vegetation and food chain.

Carbon tetrachloride plume

Mike said DOE is in long-term testing to find the abiotic degradation rate of carbon tetrachloride.

DOE-EM Roadmap and ART project

Mike said that at the request of Congress, DOE-EM developed a roadmap to solve site priority needs. The large sites, including Hanford, participated in meetings from which they developed the roadmap and four strategic initiatives. The roadmap identified 80 site needs in six categories for Hanford, Idaho National Laboratory, Oak Ridge, Savannah River, Paducah, and Portsmouth. The multi-year program plan for technology development and deployment and technical assistance identified 16 work breakdown structure elements. Mike said that through the roadmap, three projects were selected at Hanford.

Mike briefly discussed work breakdown structure element integration and the ART Project. ART Project objectives include:

- Demonstrate effective distribution of reagents to the Ringgold formation gravels
- Demonstrate that reducing biogeochemical conditions can be induced and sustained for a treatment period
- Demonstrate that the concentration of key contaminants of concern in the groundwater can achieve treatment goals in two years or less in the reactive zone
- Demonstrate that the precipitated technetium and chromium remain in insoluble forms
- Show that secondary water quality impacts are limited spatially downgradient of the reactive zone

Mike said they are seeing technetium-99 at 200-UP-01 (ART Project, Arcadis). It does not bind well with soil and is a major contaminant of concern. DOE plans to use reductive chemistry to see if it can be put into an immobile form, which requires maintaining conditions that will keep it immobile. Dib Goswami, Ecology, noted that at one time, it was the highest technetium-99 plume on the site.

Discussion

Dennis Faulk, EPA, thought DOE could move forward with good sound remediation plans for carbon tetrachloride. Mike said DOE is using a pump and treat system for carbon tetrachloride in shallow and high concentration areas. DOE is also performing vapor extractions to reduce the source in the vadose zone. Mike said there is also a feasibility study in place that will upgrade the system since they know the carbon tetrachloride is much deeper and wider. He also noted a employing a new pump and treat system will remove at least three times what they are able to pump now, and will pump as much as possible to restore the aquifer.

Dib said from 1998 to 2006 there was not a lot of groundwater technology development at Hanford. Thanks to the Board and others, DOE was able to successfully develop and obtain technologies in 1994. He said DOE can see how some technologies have progressed, like the ISRM barrier. Dib said some technologies take a very long time to develop, such as technology to address chromium contamination. Dib stressed that they need to look at multiple technologies at multiple sites, as well as deep vadose zone technologies. He did not think they have the luxury to test technology for long periods of time and requested that funding be a baseline item that is analyzed every year for vadose zone needs.

Dennis thought the groundwater program is like a rollercoaster; he thought the site is in an “up period,” as far as DOE focus and funding. He noted that DOE's proposal to clean up groundwater to its highest beneficial use, even in the Central Plateau, is a big change from five years ago. He encouraged the Board to review the 200-ZP-1 proposed plan and engage in planning for deep vadose zone cleanup.

Shelley said DOE should focus on removing and treating waste rather than on long-term monitoring as a way to cut costs in the out years. She asked if there will be a deep vadose zone treatability test in December; Dib said yes and they will be talking with the Board, tribes and other interested parties. Dennis said the proposal is due to the regulators at the end of December so it should be ripe for Board discussion in January or February.

Shelley asked for more information on the roadmap issues for Hanford; Mike will get that information. Those issues are being worked on and DOE will be in touch with the committees as it progresses.

Dick asked if chromium-3 could revert back to chromium-6. Mike said it is stable as chromium-3 and large amounts of energy would be required to revert back to chromium-6.

Greg asked what would happen to the uranium plume in the 300 Area if there was a flood. He asked what would happen if the proposed Black Rock Reservoir backs up and floods and how DOE would make sure uranium is not scoured away. Mike said he did not think the Black Rock reservoir would affect the uranium plume. Mike said the Black Rock EIS will show that there is a significant amount of water that could come through the valley that has the potential to raise the water table at Hanford. Greg said that would slough the White Bluffs; Mike had not heard that before. Mike said DOE would be successful if uranium is stabilized in the soil. He said more freshwater in the system could make the uranium more stable; it could actually be beneficial for the retardation of uranium if the Black Rock reservoir adds freshwater to the system.

Greg asked if Mike meant that bank storage will enhance the stabilization of uranium; Mike said DOE will not use bank storage and plans to drop uranium currently dissolved in groundwater into the soil in the form of autunite.

Greg asked how, if uranium is deeper in the vadose zone and has a half life of 4.3 billion years, the proposed technology would prevent the scouring of uranium in the vadose zone. Mike said the current configuration of the river bank through the 300 Area and 100 N Area have been in place for hundreds of thousands of years. He said the banks should continue to be stable in the 100 and 300 Areas where they are trying to stabilize uranium. He did not think that a flood in the 300 Area would affect the sequestration of uranium; uranium will be stable in its autunite and apatite form.

Rob commented that a \$10 million allocation to groundwater technology development is a “drop in the bucket.” He asked Mike if he thinks there will be a stable budget for groundwater technology development. Mike said groundwater work used to have a \$5 million allocation per year from the science and technology budget at DOE-RL. The other source for groundwater funding is EM-20. Given Congress's interest and

their request for a roadmap, Mike thought that they may be willing to provide a sustained budget over time. He said there was diminishing interest from DOE in past years because they thought implementation time was too long. Mike thought the development of the roadmap was DOE's best strategy to obtain sustained funding; people will see results are imminent if efforts are focused on applicable, ripe technologies rather than just base science, which Mike noted has to be done and is funded out of the Office of Science and Technology. Mike welcomed advice demonstrating the impact of money on groundwater work.

Shelley noted that she, Ken Gasper and Susan Leckband submitted their individual comments on the June draft of the roadmap.

TPA Negotiations Update

Jane Hedges, Ecology, provided an update on the TPA negotiations. She said Ecology and the other TPA agencies encourage the Board to complete the draft advice because it is still very timely. She said the leadership considered the comments they received at the workshops from tribes and other stakeholders and incorporated what they heard into their discussions. Jane said she and the other agencies were unable to share a lot of information, but she was willing to answer the questions as best as she and the other agencies could.

Nick added that the agencies welcomed Board comments and advice. Matt McCormick, DOE-RL, agreed.

The Board considered draft advice regarding the TPA negotiations. Gerry Pollet, Heart of America Northwest (Regional Environmental/Citizen), provided background on the development of the draft advice. After the TPA negotiations workshop, Gerry said BCC developed a list of principles for the advice. Gerry said a central concept emerged – why are the agencies discussing delays? He said the list of principles was taken to RAP, TWC, and PIC. The advice was reviewed by those four committees and many individuals. Gerry said the committees reached strong agreement on the principles and points of the advice, and BCC reached consensus.

Jerry Peltier offered a perspective from RAP. RAP suggested maintaining the typical format of advice by providing background and descriptions of the issues followed by specific advice bullet points. Secondly, RAP decided that the detail and reiterations in the advice were necessary to make sure the TPA agencies understand the Board's position. Jerry said he would rather be redundant than have the agencies accidentally miss a point. Jerry said RAP did not have strong objections to BCC's draft. Ken Gasper said TWC felt the same.

Gerry described the TPA workshop, the issues raised, and how the advice addresses them. Gerry said the proposed changes to the TPA are a complete revamping of the agreement including decades of changes that are not just limited to WTP. He said negotiations were prompted by the cost overruns and eight year delay at WTP, but the public needs to know that the new Hanford cleanup agreement deadline would be 2052. Gerry said the proposed startup deadline for WTP is now 2019, and WTP will only treat half the volume of tank waste.

Gerry reminded the Board that it issued advice in the spring after learning that the approved target budgets for DOE-RL and DOE-ORP and out year funding projects would fall \$5 billion short of meeting current TPA milestones. The Board's advice stated that baselines and schedules should not be based on an inadequate schedule. He provided the example of DOE's plan to empty one single-shell tank per year, which does not add up with the milestone of emptying all single-shell tanks by 2018. He said the agencies now propose to empty single-shell tanks by 2040. *Does an eight year delay justify a 22 year delay in emptying single-shell tanks?*

Gerry said there was no analysis available to determine what the risks are from delays, or if delays are technically justifiable. The agencies propose a new report called the "Hanford Lifecycle Scope, Schedule and Cost Report" that would be due in September 2008. Gerry said that report would, for the first time, answer how fast each element of cleanup work could proceed if fully funded.

Gerry said the TC&WM EIS is due next year and will answer some of the questions as well as show alternatives and risks from delays. It should also include alternatives that could result in processing tank

waste more quickly. Gerry said it should also show what wastes DOE would leave in the soil, what wastes would go to landfills, and what wastes DOE would bring in from offsite.

Gerry said past HAB advice asked DOE to consider adding a third melter to LAW, starting LAW early, and independently analyzing changing melters or adding a second LAW. Gerry said none of these are being considered, but they should be included in the proposed Hanford Lifecycle Report and the TC&WM EIS.

Gerry cited HAB-supported proposals not raised in the TPA negotiations and the removal of all TRU waste (including pre-1970s TRU), early LAW startup, third melter or alternative glass matrix. Gerry also said the negotiations are not considering not adding offsite waste while the impacts of existing waste are unknown. He said the negotiations do not consider cleaning up the River Corridor by 2018 or removing and treating waste from the soil rather than capping it.

Gerry said TWC extensively discussed bulk vitrification; currently, bulk vitrification technology is part of the TPA. Gerry said that low-activity waste vitrification is the approved and available technology for treating 50 percent of low-activity wastes that WTP will not treat. Gerry said that demonstration bulk vitrification (DBVS) will cost another \$130 million or more while delaying moving ahead with building, operating and treating low-activity wastes. The draft advice said bulk vitrification provisions should be removed from the TPA. Gerry said the committee thought it unrealistic to have the supplemental technology operational in 2020 or 2022 if the decision to pick the technology does not happen until 2015.

Gerry noted the draft advice recommends:

- Delays to the TPA milestones should be based on whether work is technically capable of being achieved on schedule, not based on constrained budgets
- Delays to TPA milestones should be agreed to only if technically necessary and after appropriate analysis of lifecycle costs and impacts to human health and the environment
- Negotiations of delays to TPA milestones should be postponed until after the Hanford Lifecycle Report is developed; that information should be shared with the public through an iterative public process before negotiating delays
- Delaying emptying single-shell tanks from 2018 to 2040 is not technically justified
- Delaying WTP operations by eight years technically justify delaying the completion of tank wastes until 2047

Gerry said if the regulators think WTP should not start before 2019, then it is a good date. He said it was important to share information with the public. Gerry thought Board advice may be the only consensus document the public reads, so redundancy is not a bad thing.

Discussion

Keith thought the Board's most successful advice is usually succinct and to the point; he agreed with the content of the advice but thought the redundancy may pose a problem.

Paige said that while the advice was long, it was a substantive and important statement. She thought it was a good piece of advice and could be the beginning of changing how things are done in Washington DC.

Susan Kreid asked that the introductory paragraph be clear about what the negotiations are and how they are referred to.

Bob Suyama noted that the Board should use common language in its advice.

Maynard said advice statements should not be made in the introduction portion of the advice in order to be consistent with general Board advice structure.

Gene Schreckhise, Washington State University (University), said the agencies need to be clearly identified; references to Ecology should be "Washington State Department of Ecology" instead of "Washington State." Gene also noted that numbering advice points sometimes implies importance. Barry Beyeler, Oregon Hanford Cleanup Board (State of Oregon), thought numbering makes for easier reading.

Dick thought that statements of fact should not be in the bulleted advice section. Dennis said the agencies primarily review the advice bullets. Gerry Pollet thought every statement in the bulleted section does not need to be advice; the background can be reiterated.

Ken Gasper said TWC discussed a third melter at LAW and whether it would work. The committee learned that the plant could not handle the thermal load of a third melter; however, the committee does not propose to run three melters simultaneously, but use the third melter as a backup. Ken thought that would increase the reliability of the system and sustain full capacity processing.

Jeff Luke, Non-Union, Non-Management Employees (Hanford Work Force), said the TPA does not require the construction of new double-shell tanks in order to put waste into compliant storage. Jane said the law requires the compliant storage of waste. She said DOE declared the single-shell tanks unfit for use and the regulators agreed, forming the whole basis of retrieving tank waste and the proposed interim stabilization lawsuit. Jane said the waste needs to be in compliant storage but the TPA does not say it needs to be moved to a double-shell tank tomorrow, for example.

Jeff asked if the milestone required waste to be treated or compliantly stored by 2018; Jane said yes.

Jeff recused himself from the bulk vitrification discussion, but asked the Board to carefully review its request to remove provisions for bulk vitrification from the TPA.

Gerry said the advice did not ask to stop bulk vitrification work; he thought it should be funded by research and development monies, not by the TPA.

Maynard asked for consistency in the advice; one advice point says that an independent evaluation of bulk vitrification should be funded through DOE-EM and another point says it should not be funded by DOE-EM. Gerry said one of the bullets was intended to evaluate the viability of bulk vitrification.

Rob said that it was too late to add a third melter to the LAW facility and the advice should reflect that. He thought they should advise an early LAW startup with increased capacity. He also said that the budget should not drive the schedule. Quality work and safety is sacrificed when work is driven by a schedule. He said the same goes for the TC&WM EIS – there has to be enough time to put together a quality product.

Keith noted that John Eschenberg said starting LAW early would not shorten the critical path; such statements should be removed from the advice.

Hanford lifecycle report

Ken Gasper said TWC thought supporting the lifecycle report was consistent with advice #192. He said he fully supported a report that analyzed alternatives, was updated annually, and informed the public. He thought it would be a very valuable tool. Ken said TWC focused its discussion on what would be possible in a world not constrained by the budget. He noted the advice supports the deferral of milestone delays until the lifecycle report is available. Ken said the negotiations also identified reports that will help describe the impacts or risks associated with delays. He said the TC&WM EIS will provide some of that information as well as a proposed single-shell integrity report. Ken thought the combination of those reports would provide negotiators with an understanding of the technical and environmental risks of delays. He stressed that the negotiations should include this information before new milestones are set. Ken noted that while TWC and RAP do not want to move ahead with adopting delays without new information, they fully endorse moving ahead with accelerated milestones, such as groundwater milestones.

Betty Tabbot, Washington League of Women Voters (Regional Environmental/Citizen) asked if the committee proposed that DOE perform lifecycle analyses only on the points in the advice that are not technically justifiable. She asked if it was known how many proposed changes to the TPA are based on inadequate funding and how many are based on technical impracticability. Gerry said that he understood the proposed Hanford Lifecycle Report would cover every major cleanup project, not just those for which there are questions about technical justifiability. He said they want the lifecycle report to include things that are not in the current baseline. It should cover how fast tanks could be emptied and how fast waste could be treated. Gerry said DOE indicated it would not be based on DOE's baseline; it will evaluate how fast each project could go if there was funding.

Nick said the principle was that the cleanup should drive the budget; the budget should not drive the cleanup. He said EPA also wants to have a schedule for projects unconstrained by the budget, as well as to see the scope DOE projected to see how the cost and schedule were based.

Gerry said the committees were enthusiastic about the lifecycle report. He noted that at the workshop they discussed that if the deadlines are stretched to 2052, for example, Congress will think that Hanford “cried wolf,” saying that Hanford does not need money until the milestones are closer. Gerry also questioned if WTP’s funding could be jeopardized if they have to meet the funding obligations of other projects. Gerry said Congress has given more money to the cleanup of Hanford than DOE requested because it wants DOE to meet its cleanup obligations.

Ken Niles asked the TPA agencies how they felt about not moving forward with negotiations or implementing new, delayed milestones before producing a lifecycle report. Jane said she understood what the draft advice asked and would take it forward to the negotiating team. Steve Wiegman also said he understood.

Harold said the advice asked for the termination of the bulk vitrification program. He also noted that all the materials available today are based on a constrained budget, and negotiations have moved ahead on that basis; the lifecycle report will analyze unconstrained possibilities. Harold said if they move forward with changing milestones, the agencies will need to review them and resulting delays again when the report comes out. Harold thought stretching the cleanup out until 2052 was politically risky, and reminded him of the Works Progress Administration in the 1930s. He said the Board should look at these same issues again when the lifecycle report comes out next year.

Nick noted that the lifecycle report is part of the negotiations; it will not be created unless the agencies come to an agreement.

Jim was concerned that the advice said that no milestones should be changed until the lifecycle report is prepared. However, he said the agencies should not plan cleanup based on the budget.

Dick supported the idea of the lifecycle report, but he was concerned it may become a “mirage” like the M62-08 report.

Bob Suyama, Public-at-Large, asked what the impacts would be if the existing TPA milestones were kept until the lifecycle report is prepared. Are interim milestones an option? Nick said the agencies considered that, but are moving forward on a different path. He said the negotiations were started for specific reasons and only address parts of the TPA. For example, the K Basin milestones that are due or past due are not subject to negotiation.

Jerry Peltier asked why the regulators presented the lifecycle report as a foundation [in the TPA negotiation workshop] but are not delaying negotiations. He did not think that made sense.

Nick said milestones such as the WTP schedule are part of the negotiations. He said the agencies agree that WTP is currently delayed due to technical problems, not the budget. Therefore, Nick said, they were able to create a sound schedule. He said many things will be covered in the lifecycle report, including things that are not part of the negotiations.

Jerry thought the Board could request the suspension of negotiations affected by the lifecycle report until the report is issued. Jane said milestones were missed for retrievals and are clearly going to be missed for WTP, which is why the agencies entered negotiations. The TPA agencies agreed that technically WTP could not be built by 2011. Jane noted that the lifecycle report is not a cleanup agreement – it will provide good information, but Ecology cannot enforce milestones based on it because it is only a tool. She said the lifecycle report will not be enforceable and Hanford cleanup should not rest on a report. Jerry agreed, but he thought the report would provide solid benchmarks upon which to make milestone judgments.

Nick said EPA thinks the report will provide the opportunity to reach an understanding of the scope and cost of cleanup. It will also be a single document, which the public and Congress can review. It will be a tool to help make policy decisions and a tool to get the budget Hanford needs for a timely cleanup.

Maynard suggested that the regulators advocate for contingency plans for tank waste retrievals on a yearly basis as part of the lifecycle report.

Susan Kreid said the advice is unclear about the underlying assumptions behind future milestone dates; money is not the only assumption on which to base milestones. She said there is no way to judge if a date is realistic if you do not know all the assumptions.

Ken Niles asked if DOE thinks that the lifecycle report will be a helpful tool or if it is part of a necessary “trade” for delayed milestones. Matt thought it will be a good tool; it will provide the public with an unconstrained view of cleanup while showing technical constraints and remedies. He said the report will require assumptions.

Ken Niles said the Board would like to see the lifecycle report produced regardless of the results of TPA negotiations. Matt said the Board should make that clear in the advice. Steve said if agreed upon, DOE will have to carefully scope the lifecycle report and figure out what they want to achieve with it. He said the logic behind it must stay intact to account for the variations in schedule and budget.

Dick said his principle concern is that the lifecycle report would be based on the DOE baseline without seriously looking at alternatives.

Maynard said that while he recognizes schedules should not be too aggressive, he is supportive of interim milestones. He said it is difficult to analyze a project’s status and schedule when milestones are too far out.

Rob thought that TPA milestones are meant to be “big picture.” He cautioned against “nitty gritty” milestones that give false pressures or “beat up on” a contractor. Jane said WTP only had about five milestones and did not have interim milestones. She said Ecology tries to avoid micromanaging, but they feel large annual milestones could be helpful. She said groundwater work only had one milestone, which was in 2024. She did not think Ecology will advocate for too many milestones. Lastly, she said that the TPA has been changed over 400 times and despite what people think, DOE has never documented funding as a reason. She thought funding could have been the motivation, but not the reason. She said Ecology wanted measurable steps to avoid another similar negotiation; they want to know about problems before it is too late.

Jim asked DOE if they have ever moved a milestone because of funding. Matt said in the three or four years he has been at Hanford, DOE has never changed a milestone because of funding on his projects.

Nick said the regulators agreed with DOE to change the M-15 milestone because of sound cleanup and technical decisions, not a lack of funding.

Margery Swint, Benton-Franklin Public Health (Local/Regional Public Health), questioned if delays to the TPA milestones should be based only on consideration of whether the work is technically capable of being achieved on schedule. Gerry was concerned that by not saying “only,” the agencies could base changes on budget limitations. Margery thought that safety and risk should be considerations.

Maynard asked for clarification – *does the Board want to suspend negotiations?* Gerry said the advice asked to suspend negotiations only for milestones that are under discussion for delay because they will not know if work is technically viable until the lifecycle report is prepared. Maynard thought the agencies could legitimately delay some milestones without the lifecycle report; he did not think they should wait until the report is prepared to continue negotiations. He thought technical justification could be provided without the report.

Susan Leckband noted that the lifecycle report would likely just be a tool. She cautioned that the Board may create problems for itself if it bases its advice completely on the lifecycle report.

Dennis thought the lifecycle report will speak more to cost rather than technical assumptions. Dennis said EPA’s view is that most work is achievable if the money is there.

Dick thought it would not matter if negotiations are delayed a year, since many milestones are far down the road.

Gerry said that negotiations without technical data and public vetting are unacceptable.

Harold said the lifecycle report may not provide all the information needed, but it is better than what is available today. Right now, he said, there is no credible path forward.

WTP and new double-shell tanks

Ken Niles said there is no indication Congress would not fund WTP construction and the construction of new double-shell tanks if new tanks are deemed necessary prior to WTP startup. Gerry said his concern was that WTP would not be funded if DOE asks for funding to empty double-shell tanks.

Ken Gasper agreed with Gerry that broader options are needed for putting retrieved waste into compliant storage or treatment.

Board members generally agreed that it should advise there is no indication that Congress would not fund both WTP construction and emptying tanks (including the construction of new double-shell tanks if it is deemed necessary) prior to the startup of WTP.

Susan Leckband asked if the advice suggests technical reasons are insufficient to cause a delay. Jerry Peltier said it meant technical justification has not been provided. The language in the advice was clarified.

Dennis wondered why the PUREX plant stood alone in a bullet point – he thought it was too specific whereas the rest of the advice was more programmatic.

Al Boldt, Government Accountability Project (Hanford Work Force), thought the TPA agencies should include milestones for addressing the final disposition of the reactors along the river. He proposed stating that the earliest milestones for cocooning reactors are 75 years away.

Ken Niles asked if there are milestones for the Plutonium Finishing Plant (PFP). Dennis said the final milestone is 2016.

Steve Hudson said that the agencies should implement an iterative public involvement process for this extensive proposed revision to Hanford cleanup priorities and timelines. Susan Kreid added that it should start with public meetings around the region, initially with the State of the Site meetings, to obtain input on what should be in the TPA (not just the currently proposed milestone delays). Gerry Pollet said PIC wanted the State of the Site meetings to include issues the public actually wants to talk about. He did not think meetings should be held solely on what DOE and the regulators want to talk about.

Al asked why the advice recommended keeping old, missed milestones in the TPA. Gerry said it is important to keep a record of missed or changed milestones. He said new milestones should be identified as such and the same for revised milestones. Susan Leckband thought milestones were enforceable through the TPA without going to court. Dennis said EPA solely enforces through the TPA. The advice was revised to recommend that revised milestones should be identified in the TPA.

Rob thought nothing was added by including end-notes. Gerry said important points were moved from the body of the advice to the end-notes section because of lengthiness, which provides important explanations (like the description of target budgets). Norma Jean thought the end-notes were helpful. Rob agreed with keeping the end-notes, but thought they cluttered and lessened the impact of the advice. Bob Suyama suggested turning the end-notes into footnotes within the advice so the reader could see the information as they read along. Penny Mabie, EnviroIssues, said the Board had discussed that before but decided footnotes tend to clutter advice even more.

The title of the advice was changed to be clearer about the implications of TPA negotiations and to make it easier to read and more interesting to the public.

The Board asked Susan Leckband to draft a short cover letter for the copy of the advice sent to the governor.

The advice was adopted.

Letter to Inez Triay

Ken Niles introduced the letter to Inez Triay. He said Pam drafted it in response to what they heard at the Intergovernmental Meeting in Snowbird, Utah. He said Inez verbally affirmed that the level of budget information provided by DOE-RL this year was good and a positive example of public involvement and the budget development process. Ken said Inez confirmed that there would be the same level of budget information available next year and in future years. The letter was drafted to reaffirm that commitment.

Discussion

Maynard asked if some people at DOE were unhappy with the DOE-RL budget process. Ken said there were differing points of view. Shelley said Cynthia Rheames was concerned about the amount of information and thought it was too much for the public to understand. Maynard asked why Cynthia thought that; Shelley suspected that other sites differ in how much information they want and can understand.

Gerry said the Board needs to say that it wants the same amount of information next year as DOE-RL provided this year.

The letter was adopted.

HAB Process Manual

Susan Leckband said the Board has talked about creating a process manual for sometime. Penny provided a perspective from the facilitation team. She said EnviroIssues considers itself the keepers of the process. With help from Board members, EnviroIssues drafted the process manual as a reference and guidance document that captures Board process and will be used to maintain structure and order. Susan said the document “captures the way the Board does business.” It will also be helpful as a resource for new members.

Discussion

Harold provided language clarifying that the Board is an advisory board on DOE-EM issues. Penny said they will use language from the revision to the Board’s charter to ensure accuracy; Harold’s comments will be captured by using the charter language.

Bob Suyama said that as a new member, he found the manual development process and the manual itself very helpful. Nancy thought that every member should get a copy as part of the new member packet. Nancy will talk with EnviroIssues about other things to include in the new member packet.

Susan Kreid thought something should be added to the manual about how the Board operates on a consensus level. She also thought they should include a copy of the operating ground rules.

Susan Leckband noted that the process manual is only a tool and will continue to be a living document.

Harold asked if the Board would adopt the manual. Penny said it will never be a “final” document, but will always be a living reference tool. The Board was asked to adopt the process manual in its current form. Harold wanted to see an updated version with the most recent changes made before adopting it. Penny thought that if any changes are in conflict, it could be discussed at the next Board meeting.

Rob thought that the title should include the revision number. He suggested adopting the manual as Revision 0 and then re-adopting it at future meetings as Revision 1 and so on. Penny thought that the Board might not want to spend the time re-adopting every revision that is made. Susan Kreid asked that the footer include the date.

Keith asked why the Board needed to initially adopt the manual if it will not formally adopt revisions. Penny said the Board has to adopt the *notion* of having a process manual to keep a living record of agreed

upon Board processes. It is a history of decisions made to keep Board operations smooth and consistent over time. Penny said the Board needs to adopt it initially because the facilitators need approval to use it as a tool.

Susan Leckband thought Keith was right, the Board should agree on changes to the manual. Nancy said she did not want to see it at every Board meeting for every small change. She said she trusts the Board chair or EnviroIssues to bring it forward if there are substantive changes that the Board needs to review. Susan clarified that she would not want a printed copy every time; she would just want the Board aware that changes were made.

Maynard proposed accepting the document as it is and use the judgment of the Executive Issues Committee for when the Board needs to review changes. He did think that there needs to be a formal adoption of the manual.

Keith said that if there are changes already, they might as well put them in and approve the manual with those changes.

Penny said there have been several revisions already and she was concerned that it would become an endless loop.

Dick said that the comments he submitted were trivial; he suggested adopting it and moving on.

Jerry asked if the process manual reflects the Board's new charter. Susan said DOE-HQ is still reviewing the revised charter. She said that the charter should have no effect on the process manual. Penny said the process manual was made using the November 1997 charter and the revised version that the Board submitted to DOE-HQ. She said nothing in the manual conflicts with either version of the charter.

John Stanfill, Nez Perce Tribe (Tribal Government), recommended adopting the manual and revisiting it once a year if necessary.

Keith wanted a copy of the process manual on the website.

The process manual was adopted. The Board will be made aware of any substantive changes and approve them if necessary.

Agency Updates

DOE-ORP

Zack Smith, DOE-ORP, said that resuming construction on WTP is a big achievement, as well as moving forward on the pre-treatment platform and the test platform to verify pre-treatment assumptions and ensure that the design is right. From his experience at Savannah River, Zack said a test platform is extremely valuable in modifying process flows when the system is online. He said it is a \$300 million effort, one that demonstrates the level of commitment to the project.

Zack said that everyone has had full briefings of the S-102 tank spill event. In light of that event, there are ongoing discussions for parallel activities that were started about two and half years ago. Zack said they tried to make sure there were parallel activities underway to ensure cleanup progress would continue even if one project slowed or stopped. He said there were multiple retrieval efforts underway and C-108 and C-109 are both ready to resume operations. Zack said they want to evaluate the extent of the S-102 tank spill to make sure it will not have an impact on other activities. He said that C-109 will resume retrieval operations in the May timeframe, followed by C-108 and S-102. Zack said that construction on C-110 and C-104 will begin in parallel.

Zack said the root cause of the S-102 spill was an engineering design failure. There should have been a backflow prevention device in the water line, which would have the waste material from flowing up the water line. He said the corrective action plan deals extensively with DOE and contractor engineering changes. The corrective action plan is being reviewed by DOE-HQ and he expects approval in December.

DOE is already beginning to implement many of the actions in the plan. He said they are exploring a structure that may utilize a chief nuclear engineer.

Zack said that WTP in its current configuration will be able to process fifty percent of the waste. DOE is still on a path forward to select a method for processing the other fifty percent. He said they originally had problems with molten ionic salt. The integrated dryer test (38D) was just completed in August. Zack said it has proven successful so far, showing that the molten ionic salt was kept internal to the glass. They are still quantitatively analyzing to ensure there was no salt migration into the refractory. He said the dryer worked extremely well. DOE had concerns about integrating the dryer with the melt box, and there was about a three week delay when they integrated the dryer with the melt box.

Zack said they are looking at seven different scenarios on how to process low-activity waste. Some variations look at using bulk vitrification; one looks at another LAW facility and putting a supplemental pre-treatment facility at the tank farms. The report is complete and is being reviewed by an expert outside body; he expects it to be issued in about a month.

Discussion

Bob Parazin, Public-at-Large, asked if there were any corrective actions taken with the engineering personnel involved with the design failure. Zack thought that was a private personnel issue. The design error took place in 2002 – it was a problem waiting to happen. Bob asked if Zack felt that the corrective actions would preclude this event from happening again. Zack said yes, and that the corrective actions are still in progress.

Rick Jansons, Benton-Franklin Regional Council (Local Government), said he was told that positive displacement pumps would not be used in tanks anymore, because of the S-102 problem. He asked if they will be able to get the same feed to the tanks using a different pump. Zack confirmed that they will never use positive displacement pumps again in that way, but they will continue to use them in different situations. He said that there are numerous technologies to get material out of tanks and DOE will work to come up with the best technology to use. Rick agreed with him and thought it seemed like overkill to get rid of a whole class of pumps because of a bad valve.

Keith said that the committees were told that it is impossible for DOE to review every engineering design. How then are bad designs caught? How can these situations be prevented in the future? Zack said that was an excellent question, one that oversight organizations have pondered for years. He said DOE focuses on authorization basis design questions and contractors' license to operate. Zack said they should have had more oversight of the contractor's engineering organization to review designs. Although DOE may not have caught this specific pump design error, they would have seen the increase of outsourced engineering designs and a degradation of contractor management structure.

Keith thought that not looking at subcontracting issues is part of the problem. Zack thought it was about technical authority. The prime contractor has to be the ultimate authoritative body; he thought the authority of the prime contractor was watered down. He said the prime contractor has to oversee and be responsible for the integrity of the design.

Jerry said that according to quality nuclear standards, the contractor is required to undergo design verification. He thought it could not be assumed that it is DOE's responsibility to review; the contractor should have its own system to catch the error. Zack thought that was a valid comment. He said there was a specific lesson learned about definitions, specifically the term "physically connected." He thought that definition needs to be clearer, especially when it deals with components in contact with waste in tank farms and the ability of that waste to migrate to another system. Zack said the design flaw was overlooked by multiple engineers who approved the definition.

Jerry said engineers should have caught the problem since it was about basic backflow prevention. Zack agreed, but it also revealed a review process problem.

DOE-RL

Doug Shoop said River Corridor cleanup continues to progress. He said the landscape has changed dramatically in the 300 Area – 100 out of 510 facilities have been demolished. Doug said those facilities

were contaminated with radionuclides, asbestos and lead, and were very close to Richland so demolition continues to be performed carefully. He said the work was done with very few worker injuries. The transfer of material has not experienced any problems. Doug noted that workers traveled over one million miles without a significant incident.

Doug said Washington Closure Hanford has had a number of non-compliance incidents and DOE took significant action. DOE is in a Phase 2 Integrated Safety Management System (ISMS) verification to review their entire environmental management and safety management system. Doug said that Tom Carpenter, Government Accountability Project (Hanford Work Force), was invited to the out-briefing. DOE is confident they have a more robust safety management system in place and are headed in the right direction.

Doug commented on the need to plan for the unexpected at Hanford. Yuma myotis bats were found in a clearwell – yet another example of having to manage environmental concerns. He said such situations can create additional hazards for workers.

North site remediation continues on the Central Plateau. Doug said that after 212-N was shut down, which was used to cool reactor fuel, DOE used the area to store highly contaminated equipment in wooden crates. Doug said DOE provided incentives for Fluor to remove the contaminated equipment. During the work, they were confronted with everything from water-degraded crates to shoring problems and rattlesnakes. Doug said all the material was removed from the building and will be packaged for shipment to ERDF or WIPP.

Doug said the waste stabilization and disposition project efforts continue to go well. DOE has retrieved 6,886 cubic meters of waste. Drums containing waste are stored at a 45 degree angle with dirt mounded over the tops. They do not see a lot of external contamination and will be able to remove the drums in the near future. Doug said they are also transferring sodium-bonded fuel from FFTF to Idaho for reprocessing. He said they are also making good progress with well decommissioning and are using different technologies to increase their groundwater efficiencies.

Doug said one third of the glove boxes at PFP have been cleaned out. They are now focused on the consolidation of materials at the Savannah River site. Doug could not speak specifically about consolidation because it is a national security issue, but DOE is moving forward aggressively. Doug thought it was a great thing for the Hanford site and larger community to get waste to a consolidated location. He said shipping containers have to be rigorously constructed and DOE and its contractors are required to have a plan in case of a leak.

Doug said that K Basins have been a challenge for a long time, but they are making good progress in K East Basin. K East Basin grouting is complete; about a foot of grout is in the bottom of the basin to fix the contamination in the floor. They are now removing the ion exchange and sand columns. Next steps for K Basins include more grouting, dewatering, fixing contamination to the basin sides, filling the basins with sand, and removing the super- and sub- structures. He said they are doing the final pass of sludge cleanup in K West and should be finished with that at the beginning of next year.

Emerging activities include:

- Contract implementation: DOE is proactively looking at how they will organize themselves to best manage the new contracts. They are developing comprehensive transition plans. Doug said DOE also needs to provide training or familiarity briefings on the new contracts with EPA, Ecology, the Board, tribes, and the workforce. Doug said DOE wants everyone to understand the new contracts.
- Workforce and intern program: Doug introduced to the Board two of DOE-HQ's interns that are currently assigned to DOE-RL. Doug said DOE plans to have more interns.
- Hanford is still under continuing resolution; Doug did not know how long it will last, but DOE continues to manage accordingly.
- Draft Hanford Comprehensive Land Use Plan (CLUP) EIS Supplemental Analysis (SA)
- Waste site remediation and Central Plateau cleanup, including 200 West Area and 200 East Area work.
- 100 Area and 300 Area Component of the River Corridor Baseline Risk Assessment (RCBRA): DOE received about 800 or 900 comments that they are now comprehensively addressing.

- Regional State of the Site meetings: Doug hoped to get good feedback at the State of the Site meetings.
- Validated baselines: Doug said DOE recently had a large assessment team validate Central Plateau baselines. The review went well, Doug said, and they did not see any problems with eventually validating the baselines. They have to finish the assessment and will send DOE the deficiencies for correction. They hope to correct and finalize the baseline at the end of this year or at the beginning of 2008.

Discussion

Jerry asked when the new cleanup contracts begin. Doug said that is procurement-sensitive information; all proposals are in and are being reviewed. Doug said that Fluor and CH2M Hill contracts end in September 2008 and are followed by a ninety day transition period. Jerry asked if the announcement will be made in the next few months; Doug did not disagree. He said contracts are almost always protested and DOE is trying to be rigorous to limit the opportunity for protest.

Maynard asked if B Reactor roof repair is being deferred. Doug did not know but he would find out. Doug said he would like to see a decision made about whether to maintain B Reactor as a historical site or decommissioned. DOE-RL is working with DOE-HQ on a decision. Pam said the RFP came out late and the roofing material supplier will not guarantee its work because it is too late in the building season. She said that the money is not lost, but work will not be done until the spring.

Rob asked about the status of contractors becoming Voluntary Protection Program (VPP) certified. Doug said that VPP is an Occupational Safety and Health Administration (OSHA) derived program. Contractors have to meet certain criteria and pass an OSHA inspection. Doug said DOE adopted OSHA's VPP program as its safety standard. Contractors are putting together their safety program and will be VPP assessed when they feel they are ready. "Star Status" is one of the VPP recognitions, and Doug believed that Hanford has the most VPP Star flags of any other DOE site. Doug said DOE requires contractors to have ISMS in place first; after that, contractors are encouraged to go after VPP status.

Pam said she observed the Fluor Federal Services VPP Evaluation. She said she learned a lot about the detailed and complicated VPP evaluation. She thought it would help the Board better understand and appreciate the commitment to a sound safety culture if DOE has the opportunity to allow observers in the future.

Keith said the Board asked that contractor safety records be given major consideration during the selection process – are contractor safety records a selection criterion? Doug said that is absolutely a criterion; he reviewed the proposals and placed a big emphasis on safety. He said that contractors can propose anything, but performance is the key.

Pam asked if Doug referred to the new DOE-RL baseline for out year budget development. Doug said he meant the new near-term baseline that covers the next five years. Pam said baselines were discussed extensively in at the Intergovernmental Meeting in Utah. Pam will follow up with Inez, who said the baseline process has to be transparent. Pam thought there was concern across the country that the baselines may not be compliant.

Keith said the site will be operated much longer than originally expected. He asked if infrastructure upgrades will be necessary. Doug said they have to look at what systems can be run to failure, but facilities like PFP cannot be run to failure. He said criticality systems need to continue to operate and DOE is assessing what needs to be done to maintain those systems.

Harold asked what portion of the 375 shipments of waste going to WIPP is TRU waste. Doug did not know, but noted that Hanford is not the priority site for shipments to WIPP.

Jerry said asked if there would be a resurgence of the landlord program, which was charged with maintaining existing facilities on site, for the life of the work at the site. Doug said that work, which includes maintaining roads, heat, steam, electrical, internet systems and much more, is the primary focus of the MSC contract.

Ecology

Jane said Ecology and stakeholders are meeting on Monday, November 5 at Ecology's office to discuss the TC&WM EIS. Ecology wants to understand and address stakeholder expectations, questions and concerns. She said everyone is invited.

Jane provided other Ecology updates:

- The public comment period on the proposed air permit for the diesel and propane heaters at WTP is open until November 7. Heaters will allow construction to continue through the winter; air permitting is necessary because heaters generate air pollutants.
- Ecology completed their field investigation work on the S-102 tank spill and continue internal discussions.
- Arguments on the appeal of Initiative 297 are set for December 3 with the three-member 9th Circuit court of Seattle. Ecology initially had arguments on the last piece of initial litigation from the original Solid Waste EIS with the 9th Circuit court panel on October 16. Jane said usually it takes longer to get another court date, and was surprised by the December date.
- Ecology issued the permit for the 2+2 Modification to DOE-ORP and Bechtel.
- Ecology air inspectors will implement 20 air permits across the state next week.
- The section manager position is open; the job description is available online and applications are due by November 19.

Discussion

Pam asked if people could call in for the November 5 meeting; Jane said call-in resources would be provided.

EPA

Nick said EPA recently hired Laura Buelow through the federal internship program. Nick said EPA committed to having its own sampling program at Hanford. Their office will staff the program with support from the Department of Health. Laura will lead the program. Nick said they may have to narrow the scope due to insufficient funding.

Nick provided other EPA updates:

- The EPA Seattle office assessed a penalty to Fluor for a PCB issue. Doug noted that Fluor is paying that out of its corporate funds, not out of Hanford cleanup or taxpayer money.
- EPA completed its investigation of the S-102 tank spill event.
- Supplemental environmental projects are being established to mitigate an ERDF penalty. DOE put together the projects and DOE-HQ is reviewing them. Projects include native plant development and planting and the acquisition of spill response vessels. EPA is optimistic about the projects.
- A big topic next year will be the issue of TRU constituents buried in the 200 Area. Nick encouraged the Board to track the issue; there will be tough and expensive decisions and EPA wants a sound public dialogue.
- K East Basin work is going well, but EPA is frustrated with the K West Basin schedule slips; they are in dispute with DOE.
- EPA is deeply concerned about the budget; Nick said many milestones will slip because of the budget. EPA is working hard to understand what those are and is having specific discussions.
- Emerging issues include 2009 budget projections. Good work continues in the River Corridor but EPA is concerned about work slowing in the Central Plateau.

Discussion

Doug noted that over the past few months, DOE has worked with the tribes to create a Tribal Nations Policy. It is a DOE-EM initiative and the policy is almost approved.

Shelley said that no amount of investigation or fining can bring back a worker's life. She said the S-102 tank spill represents a large oversight failure. She said DOE is ultimately responsible and there needs to be a fundamental change in contractor oversight. She said the spill was a sobering event and hoped for a much larger dialogue.

Zack agreed and said that DOE recognizes its responsibility in the event. He said there was no investigation required, but DOE-ORP elected to perform a Type-A Investigation, the most stringent investigation. He said they did seven or more investigations in addition to the Type-A investigation. DOE is committed to “getting it right,” which is why DOE promotes VPP and puts money into investigations, corrective actions, and independent verification. Zack assured the Board that the event has cost the contractor greatly; he said they will lose more than 25 percent of their fee because of the spill. Shelley said fining is reactive; she is more concerned about being proactive.

Rob said he was disturbed that the S-102 tank spill investigation was not required. He thought that seemed inconsistent with VPP ideals. Zack said in any industry, thresholds are set to trigger an investigation. Those thresholds typically deal with consequences to individuals or property; the thresholds for a Type-A investigation for this incident were not tripped. Zack said dose levels and equipment damage did not exceed the Type-A threshold. Zack said it was DOE’s commitment to safety that led them to conduct the investigation anyway.

Doug noted that even though DOE has adopted OSHA’s VPP program, it does not mean that DOE will reduce its oversight. They will maintain the same level of oversight.

Pam announced that the Hanford Communities will film a panel discussion on Hanford and the upcoming State of the Site meetings. She said Nick and Jane will be on the panel and she hoped that DOE representatives will be involved, too. It will be filmed on November 20 and aired on television a week later.

Jerry thought that DOE could use their media resources to get State of the Site messages to the general public. Susan Leckband said PIC has been working with DOE on the State of the Site meeting advertisement, format and content. She encouraged Jerry to talk with PIC.

Committee Reports

RAP

Jerry said that in Advice #197, the committee recommended a groundwater plume registry. He said EPA did not want a registry; the committee will continue to discuss it at their next meeting. Jerry said RAP will review Central Plateau cleanup as part of their work plan, as well as the supplemental analysis of the CLUP EIS.

Jerry said document readability is critical and is glad the Board adopted the document readability and clarity advice.

Penny added that RAP will probably discuss the CERCLA process for pre-1970s TRU as well as the capacity at WIPP for remote-handled TRU.

TWC

Ken Gasper said TWC issue managers are following the DBVS. He said there are concerns about the delays and escalated costs associated with DBVS. The committee recognized that the integrated dryer test has shown success, but they are waiting on a detailed chemical analysis to support the preliminary results. TWC expects to see that at the end of December. Ken also said there is a need for supplemental pre-treatment, which could be located in either the 200 East or 200 West Areas. He said there have been some technical readiness assessments; the committee has heard about the process and some results and has issue managers getting into the details.

Ken said that TWC was briefed on the Alternatives Business Case study. The committee learned that the details would not be available to the public. DOE-HQ found the report too detailed so a higher level summary was crafted; Ken said it would probably be approved in the December timeframe. He said the committee will not see the more detailed analysis.

TWC received detailed briefings on the S-102 tank spill. Ken said DOE-ORP and its contractors did an outstanding job of keeping the committee apprised of the situation as they progressed through their analysis and investigation.

Ken said TWC was shocked by the delays discussed at the TPA negotiations workshop and the committee fully supports the TPA negotiation advice that was adopted.

Ken noted that the TPA negotiations will have a definite impact on single-shell tank retrievals. The committee will look to the TC&WM EIS and the single-shell tank integrity report as their basis of understanding of the impacts and risks from the proposed TPA negotiation cleanup schedule delays. He said TWC representatives will attend the TC&WM EIS meeting at Ecology's office on November 5.

Ken said the WTP delays and the interactions with the tank farms continue to be a difficult process to understand and for which to develop a path forward; the technical and cost analyses have not been made available to the committee.

Harold commented that there did not seem to be a sound technical basis for bulk vitrification, and the committee is not getting enough information.

HSEP

Keith said HSEP met jointly with TWC on the S-102 tank spill event. They received a very detailed report and good explanation from Mark Brown (DOE). Keith said they also learned about the investigation team and DOE's oversight.

Keith said he would like to see better attendance at HSEP meetings; they only had three people attend the regular meeting held the day after the joint TWC meeting. Keith said there was good support from DOE and DOH. The committee discussed site safety, and learned about the MSC. Keith said the MSC contractor will be required to help the other two contractors standardize safety and safety training. Keith noted that there was a lack of communication within DOE about how that should work.

The committee heard from a Fluor safety representative about their respirator program. Keith said some workers have been required to wear different respiratory protective gear for the same kind of work on different areas of the site. Keith thought that was partially due to contractor changes and subcontractor involvement. He said that workers are good at keeping themselves safe, but safety needs to be standardized. The committee is contemplating advice on the topic.

Keith said the committee heard from a construction worker that there is vast improvement in stop-work actions. Keith reminded the Board that it issued stop-work advice before because of problems in the past. He said stop-work is working very well now.

BCC

Gerry said BCC is waiting on contract advice responses and will continue to follow the contracting process. He noted that BCC is on a repetitive cycle with Hanford budgets. In January they will work with the agencies on better budget information; BCC would like comprehensive budget information for FY 2009 and FY 2010. He said it is a significant portion of their work plan and will take a lot of work. Gerry said he found Shelley's report interesting about how FY 2009 will be the low point for the budget; he said he interpreted that as meaning that the budget will improve with a new administration.

Karen Lutz, DOE-RL, said DOE-RL sent its contract advice response last week. There is also a commitment from DOE-EM that they will have a follow-up conference call with the SSAB Chairs as the budget guidance is revised.

PIC

Steve Hudson said PIC will have a conference call to discuss the best format and use of time for the State of the Site meetings. He said DOE and the Board has to remember that the general audience does not have

the same experience and background knowledge. He was glad the Board adopted the document clarity and readability advice. He said the public tends to use executive summaries as their main source of information.

The committee will revisit and update DOE's public involvement plan from 2002; Steve asked all Board members to review it and provide PIC with comments.

EIC

Susan said the SSAB Chairs will meet at Hanford during the last week in April and she would like some Board members to help develop the agenda. She invited the Board to attend the meeting and said they plan on taking the Chairs on a site tour.

Susan said the continuing resolution could slow cleanup and it also affects the HAB budget. EIC will be more involved with the Board's budget. The Board had a flat budget for four years, and still has the same budget as four years ago and will not be able to operate at the same level as in the past. Susan thought they have become more efficient over the years, but that is not enough. She noted that Congress "holds the purse strings," not the local field offices. Susan asked for two or three volunteers to manage the HAB budget on a monthly basis; EIC will discuss the budget further and keep the Board informed.

Pam encouraged people to carpool to HAB meetings. She also noted that the SSAB Chairs meeting coincides with spring wine barrel tasting; she thought that would be a fun event to share with the Chairs.

Jerry suggested not having committee meetings in the months when there are Board meetings in order to save money. He thought committees would have more time to prepare for a meeting if it did not immediately follow a Board meeting. Susan said EIC will look at that and other possibilities; she asked Board members to forward her their suggestions.

Public Comment

No public comment was offered.

Board Business

February Board meeting topics:

- DBVS integrated dryer test results
- Alternative Business Case study
- 2008 Completion Report
- Technology roadmap
- Annual Board self-evaluation

Other potential February Board meeting topics will be identified in the upcoming committee meetings.

Committee calls and meeting dates:

- November 7: RAP will meet in the morning, followed by a joint BCC and RAP meeting. A short BCC meeting will follow.
- November 15: PIC call placeholder
- November 18 (9:30): TWC issue manager meeting on supplemental pre-treatment (DOE-ORP office). DOE-ORP may have an update on the response to Advice #192.

Attendees

HAB MEMBERS AND ALTERNATES

Rob Davis, Member	Gerald Pollet, Member	Gwen Luper, Alternate
Greg deBruler, Member	Gene Schreckhise, Member	Emmett Moore, Alternate
Norma Jean Germond, Member	Keith Smith, Member	Laura Mueller, Alternate
Harold Heacock, Member	Bob Suyama, Member	Nancy Murray, Alternate
Becky Holland, Member	Margery Swint, Member	Wade Riggsbee, Alternate
Rick Jansons, Member	Jim Trombold, Member	Shelley Cimon, Alternate
Mike Keizer, Member	Gene Van Liew, Member	Dick Smith, Alternate
Paige Knight, Member		John Stanfill, Alternate
Susan Kreid, Member	Kristie Baptiste-Eke, Alternate	Betty Tabbutt, Alternate
Pam Larsen, Member	Al Boldt, Alternate	Art Tackett, Alternate
Susan Leckband, Member	Barry Beyeler, Alternate	Helen Wheatley, Alternate
Jeff Luke, Member	Gerry Dagle, Alternate	
Ken Niles, Member	Ken Gasper, Alternate	Earl Fordham, Ex-Officio
Bob Parazin, Member	Floyd Hodges, Alternate	
Jerry Peltier, Member	Steve Hudson, Alternate	
Maynard Plahuta, Member	Larry Lockrem, Alternate	

AGENCY, CONTRACTOR, AND SUPPORT STAFF

Karen Lutz, DOE-RL	Madeleine Brown, Ecology	Tammie Holm, EnviroIssues
Matt McCormick, DOE-RL	Sharon Braswell, Ecology	Hillary Johnson, EnviroIssues
Doug Shoop, DOE-RL	Rick Bund, Ecology	Penny Mable, EnviroIssues
	Nolan Curtis, Ecology	Jason Mulvihill-Kuntz, EnviroIssues
Mary Beth Burandt, DOE-ORP	Suzanne Dahl, Ecology	
Lori Gamache, DOE-ORP	Dib Goswami, Ecology	Karen Caddey, CH2M Hill
Erik Olds, DOE-ORP	Jane Hedges, Ecology	
Zack Smith, DOE-ORP	Jeff Lyon, Ecology	Julie Reddick, Energy Solutions
Steve Wiegman, DOE-ORP	Ron Skinnerland, Ecology	Steven Turner, Energy Solutions
	Mike Wilson, Ecology	
John Gear, Oregon DOE		Dale Black, Fluor Hanford
	Laura Bueler, EPA	Andrea Hopkins, Fluor Hanford
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