

FINAL MEETING SUMMARY

HANFORD ADVISORY BOARD

June 6-7, 2013

Richland, WA

Topics in this Meeting Summary

Executive Summary	1
Welcome, Introductions, and Announcements	3
Tri-Party Agreement Agencies—Program Updates.....	3
Committee Reports	7
Draft Advice: 2014-2015 Budget Priorities	9
Draft Advice: 2013-2014 Lifecycle Report	10
Draft Advice: 300 Area RIFS and Proposed Plan (Rev. 0).....	11
Draft Advice: 100-F Area RIFS and Proposed Plan (Draft A)	12
Draft Advice: Hanford Long-Term Stewardship	13
Draft Advice: Double-Shell Tank AY-102	15
Draft Letter for Board Diversity, and Other Board Effectiveness Issues.....	16
Draft 2014 HAB Work Plan Calendar	18
Board Business.....	19
Public Comment.....	21
Closing Remarks	22
Attachments	22
Attendees	22

This is only a summary of issues and actions presented at this meeting. It may not represent the fullness of ideas discussed or opinions given, and should not be used as a substitute for actual public involvement or public comment on any particular topic unless specifically identified as such.

Executive Summary

Hanford Advisory Board (HAB or Board) action

The Board adopted five pieces of advice concerning:

- 2014-2015 Budget Priorities
- 2013-2014 Lifecycle Report
- 300 Area RIFS and Proposed Plan (Rev. 0)
- 100-F Area RIFS and Proposed Plan (Draft A)
- Hanford Long-Term Stewardship

The Board also affirmed by consensus a letter to the Tri-Party agencies regarding Board Diversity and Other Effectiveness Issues.

Board business

The Board will hold one committee meeting (River and Plateau) and four committee calls (Health, Safety, and Environmental Protection; Budgets and Contracts; Public Involvement and Communications; and Executive Issue Committee) in June. The Board also:

- Discussed the draft Guidelines for Public Comment at Hanford Advisory Board Meetings
- Identified preliminary September Board meeting topics

Presentations and updates:

The Board heard and discussed presentation and updates on the following topic areas:

- Tri-Party Agreement Agencies – Program Updates
- HAB committee reports
- Draft 2014 HAB work plan and calendar

Public Comment

Public comment was provided.

HANFORD ADVISORY BOARD
June 6-7, Richland, WA

Steve Hudson, Hanford Watch 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 periodic opportunities for public comment.

Steve noted a new Board member in attendance, Shannon Cram. The Board welcomed her. Board members in attendance are listed at the end of this summary, as are agency and contractor representatives and members of the public.

Three seats were not represented at this meeting: Heart of America NW (Regional Environmental/Citizen), Oregon Hanford Cleanup Board (State of Oregon), and University of Washington (University).

The Board meeting was audio-recorded.

Welcome, Introductions, and Announcements

Jeff Frey, U.S. Department of Energy-Richland Operations Office (DOE-RL) and Deputy Designated Federal Official for the Board (DDFO), reminded Board members that the Board operates in accordance with the Federal Advisory Committee Act (FACA).

Steve Hudson welcomed everyone. Susan Hayman, EnviroIssues, reviewed the meeting objectives and agenda. She reminded those on the phone that GoToMeeting was up and running and reviewed Board ground rules. She reported that the February meeting summary was certified within 45 days and posted on the Hanford website. Susan reminded the Board that Steve is the only person who speaks to media on behalf of the Board, and Board members are welcome to speak to media as representatives of their own or their individual organizations perspectives.

Pam Larsen reported that Washington State Department of Ecology (Ecology) asked Hanford Communities to develop a publically-available program, "Hanford from the Highway," for local television to convey what people see from the perimeter of Hanford Site while driving. A video, podcast, map, and driving instructions are included and are available on the Richland City View 13 website.

Gene Van Liew announced that as the Chairman for the Hanford Retirees Association (HRA), he asked Susan Leckband to step in on short notice and provide an educational program lecture to seventy-two participants. Gene reported that Susan provided an excellent update, and HRA members were pleased that she was able to attend and present.

Tri-Party Agreement Agencies—Program Updates

U.S. Department of Energy-Richland Operations Office (DOE-RL)

J.D. Dowell, DOE-RL, provided an update on recent activities and accomplishments for DOE-RL; his presentation is provided as Attachment 1. In addition to the information contained in his presentation slides, J.D. emphasized the following in his remarks:

- As part of the 2015 Vision, DOE is focused on completing the River Corridor Closure Project, Central Plateau Plutonium Finishing Plant (PFP), and K Basins Sludge Treatment Project despite budget effects from sequestration.
- The cleanup priorities for 2015-2016 are shown in the presentation in order of priority.
- DOE-RL is working to complete cleanup of the Central Plateau Plutonium Finishing Plant (PFP) to meet the milestone. It takes approximately six to nine months to develop intact teams, and due to sequestration the number of teams decreased from twelve to eight. There are ten gloveboxes to be removed in June, and two were removed in May. The Plutonium Reclamation Facility (PRF) crane is the single-point source for conducting the lift of pencil tanks. The PRF crane is sixty-five years old, and DOE-RL is looking into alternative engineering options to carry out its task. The crane is the single point failure issue and represents a challenge to the cleanup process.
- DOE-RL is monitoring contaminated material beneath 324 Building to detect movement. Thus far, no movement has been detected.
- For 618 burial ground retrieval, five drums at the Environmental Restoration Disposal Facility (ERDF) need to be dug out. Use of geopositioning and GPS has been an efficient way for DOE-RL to locate the drums, one of which is expected to contain Transuranic (TRU) waste. If TRU waste is discovered, the facility will be classified as Category 3, and DOE will perform a contractor readiness assessment.
- High levels of radioactivity were detected in a soil sample at 340 Vault when boring out large pipes in the structural framework. The activity is extremely localized to a three to four foot area. It is safe for workers to remove the large vault, grout and bury it at ERDF in fall 2013.
- Until additional funding is available for infrastructure, DOE-RL is conducting work on a failure basis. There are serious conditions for complex fires, and this could be a challenge moving forward.
- *Hanford Forward* is a new DOE product published as an e-magazine and provides updates about progress across the site.

U.S. Department of Energy, Office of River Protection (DOE-ORP)

Tom Fletcher, DOE-ORP, provided an update on recent activities and accomplishments for DOE-ORP; his presentation is provided as Attachment 2. In addition to the information contained in his presentation slides, Tom emphasized the following in his remarks:

- The \$46 million approved by U.S. Congress for Tank Farm cleanup has allowed for continuation of retrieval work. Two work crews that disbanded due to sequestration are being re-hired, and workscope related to the structural integrity of the tanks has been reinitiated. DOE-ORP recognizes that the work force is critical to how work is planned, and continued budget resolutions in 2014 will be important.
- DOE-ORP is continuing calendar year (CY) retrieval activities and will work to meet the 2014 milestone. Needed infrastructure reviews will also continue, including looking for opportunities to minimize downstream cost and best achieve technical solutions for the Waste Treatment and Immobilization Plant (WTP).
- DOE-ORP provided a letter to Ecology in early May noting a plan for how to proceed with AY-102 on June 14. DOE-ORP is continuing to work on this plan and is conducting video inspections of the tanks. Those tanks that were confirmed as leakers will undergo a report detailing what is or

is not leaking. The two tanks that were not leaking will also undergo a full assessment, which is expected to be completed by the end of January 2014.

- Work was stopped at WTP on June 3, 2013 because a swallow's nest was found with contaminated soil. Each worker involved was surveyed and back at work on the following day performing tasks in other areas of the facility. Buildout of the analytical laboratory was slowed, but a significant amount of work can continue while technical issue resolution takes place for the high-level waste facility in 2014.
- A fifty-five inch laser-guided diamond core bit was deployed on June 3, 2013 to cut a hole for tank monitoring in an hour and forty-five minutes with a negligible worker dose of 3.7 rad./hr. This technology was chosen by the workers to perform the task. The bit was removed successfully, and DOE-ORP is going forward with C-105 coring.

Washington State Department of Ecology (Ecology)

Jane Hedges, Ecology, provided an update on recent activities and accomplishments for Ecology; her presentation is provided as Attachment 3. In addition to the information contained in her presentation slides, Jane emphasized the following in her remarks:

- Ecology received and is in the process of reviewing a letter from DOE-ORP regarding C-109 completion of retrieval. Ecology is concerned about groundwater funding and is determining if work can continue in critical areas, such as the Deep Vadose Zone.
- Ecology is working towards consistency across the state and region for a number of issues raised during public comment on the Hanford Facility Dangerous Waste Permit. Public comments have generated discussion and serious regulatory, legal, and practical considerations for the Hazardous Waste and Toxics Reduction Program draft permit.
- Maia Bellon, the new Director of Ecology, has been very engaged with Hanford Site, and the six leaking tanks were announced four days after she took her position. Maia will be a great advocate for Hanford, along with Governor Inslee.

U.S. Environmental Protection Agency (EPA)

Dennis Faulk, Environmental Protection Agency (EPA), provided an update on recent activities and accomplishments for EPA. Dennis noted the following key points:

- The public involvement plan (PIP) for Region 10 will be nominated for a national competition.
- There is resolution on River Corridor decision documents, and EPA predicts that the 300 Proposed Plan will be a public document by July 15, 2013.
- EPA is working on an amendment to the Record of Decision (ROD) for the disposal facility at ERDF to allow for in-trench treatment. It is anticipated that the proposed plan for this will be ready by early fall 2013.
- EPA does not yet have a new administrator, but this will hopefully happen in June or July 2013.
- EPA is taking fifty-five furloughed, non-paid hours nationwide due to the tight budget situation.
- DOE-RL is submitting \$1.5 billion for work in 2015. EPA's priority is getting groundwater protection measures in place. EPA has drilled wells and has yet to inject the chemicals to prevent

Strontium-90 from getting into the river. EPA has completely shut down work on the Central Plateau soil sites, and it is unrealistic that this work will be completed between now and 2015.

Board questions and response

Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments.

Q. What is the difference between category 2 and 3 facilities?

R. [DOE-RL] In accordance with DOE regulations, Hanford Site facilities are categorized by the hazards they pose. Categories help ensure facilities are operated safely and guide project requirements accordingly. Category 2 indicates a significant amount of material is at risk, Category 3 is a graded approach and has less risk, and Category 4 would be for a facility with even less risk, such as a radiological facility or lab. Most operationally hazardous categories are Category 2. Facilities such as PFP, the canyons, and facilities that are being constructed are also Category 2 facilities.

Q. It is concerning for the Board that DOE-RL has not prioritized Deep Vadose Zone cleanup. How is coordination between DOE-ORP and DOE-RL progressing in this area?

R. [DOE-RL] J.D. Dowell and Tom Fletcher lead a group specifically focused on Deep Vadose Zone and groundwater. The group meets bi-monthly and focuses on funding efforts for technology evaluation. This group leads much of the work that Pacific Northwest National Laboratory (PNNL) does supporting evaluation status. Given the budget situation, DOE has to prioritize this work in terms of best results. DOE will continue to coordinate with the Board on advice for the Deep Vadose Zone to make sure this area is getting a healthy amount of DOE attention on priorities.

Q. Nine months back, Secretary Chu froze communication regarding technical issues on the WTP, rendering information about WTP inaccessible. Is there any indication that information will be made available and more transparent now that there is a new secretary of energy?

R. [DOE-ORP] Secretary Moniz has been briefed in person, but it is unclear whether or not there will be a change in his approach to this issue at this time.

Q. Can you discuss what is at Hanford Site in terms of TRU waste and if the Waste Isolation Pilot Plant (WIPP) has capacity for that waste?

R. [DOE-RL] There are plans for addressing the issue of WIPP durability in terms of capacity to process TRU waste past 2030. DOE has a year's worth of material, and other material is close to being characterized for retrieval. There is an eight to twelve-month waiting period for WIPP right at the time Hanford will deliver. Hanford is on tap to deliver in 2016, and this date could be flexible at this point. Idaho National Laboratory Disposal Facility for Waste Incidental to Reprocessing (Idaho) is going to use super compaction.

R. [DOE-ORP] DOE is evaluating the possibility of using a direct feed for TRU waste from the tanks.

C. One Board member noted that it is upsetting that some members of the Board made accusations about DOE's credibility to Seattle media in response to information about leaking tanks.

Q. What will happen to the concentrated contaminated chromium at the 200 W Pump-and-Treat facility, and what will be done with the water?

R. [DOE-RL] 200 W Pump-and-Treat is treating organics, technetium and nitrates. Technetium goes through an iron exchange process. The organic part is turned into an inert material and a line-based form. As chromates are removed, they are processed at ERDF, where Chromate 6 is processed into Chromate 3, an inert form of Chromate that is buried at ERDF.

Q. How is DOE addressing the public fear of a Fukushima-like event?

R. [DOE-RL] Even if there were to be a drainage event at the Waste Encapsulation and Storage Facility (WESF), it would be months to respond before Fukushima-type event would occur. By contrast, there were only hours to respond at Fukushima due to the heat generation rate.

Q. It seems like an overreaction to shut down work at WTP due to a contamination discovery in a swallow's nest. Is this an indication that fear of exposure is dominating the system, and is there a health concern here?

R. [DOE-RL] DOE-RL has tracked swallows in Trench 94 for years. The maintenance process at WESF is to make sure the pool covers are not leaking. Radioactive liquid pooled on top of the covers, and when naturally-occurring vegetation and mud build up on the covers from dust blowing, material was removed. Tanks 42 and 44 have returned to a clean state. DOE-RL also tracks swallow migration to the site. There is constant opportunity for swallows to mobilize the material, but none of it has been seen to go offsite.

Q. Will the low-activity waste (LAW) be the first to come online at the WTP and, from a schedule perspective, how will the lab be staffed? What is the tentative date schedule?

R. [DOE-ORP] The exact timing is unknown at this point, but workers will come online with the need to balance facility components to run LAW. Workers will need to be trained and qualified for the Laboratory, Balance of Facilities, and Low Activity Waste Facility (LBL). There will be a three-year window between the time DOE hires workers and the time when the facility begins producing glass. Decisions are ongoing as part of DOE briefings.

Steve Hudson closed the Q & A session and thanked the agencies for their presentations.

Committee Reports

Public Involvement & Communications (PIC)

Liz Mattson reviewed what the committee discussed at the June meeting:

- Preliminary results from the TPA agencies' and Hanford Challenge public involvement surveys. Heart of America Northwest also shared results from a 2011 survey. Development of a 3-5 specific survey questions to be included on public involvement surveys from all three groups to pool answers from a larger audience.

- October 2013 State of the Site (SOS) meetings planned for:
 - October 10, Richland, WA
 - October 15, Seattle, WA
 - October 16, Portland, OR
 - October 17, Hood River, OR
- FAQ document for cleanup topics
- Public involvement strategic planning
- Sentiment regarding current public involvement at Hanford Site
- Public involvement activities. Liz noted that if anyone has been involved in any activities over the last month, they should send them to her with the name of the event, the number of people involved, and photos of the event, if any. The PIC plans to discuss these events as an on-going agenda topic.
- The 300-Area Proposed Plan is expected to be made public in July, and it is estimated that public meetings will be held at the end of July or early August. If anyone would like to have a meeting in their area, please let the TPA agencies know.

Budget and Contracts (BCC)

Jerry Peltier reported that the BCC has been working on the advice for review at this Board meeting, and it is possible that there could be an additional piece of advice for review at the September Board meeting. Given the sequestration, the path forward is unclear. DOE has signed a consent decree and made an agreement with the TPA agencies for the foundation of the Lifecycle Cost Report. BCC will have a committee call in June but not July. It is possible that the BCC will need to meet in August.

River and Plateau (RAP)

Pam Larsen said that at the May RAP Committee meeting they looked at advice development on a number of topics, including the 300-Area Remedial Investigation/Feasibility Study (RI/FS), 100-F Area RI/FS Proposed Plan, Long-Term Stewardship, the impacts of the Tank Closure & Waste Management Environmental Impact Statement (TC & WM EIS), and modeling future cleanup.

Pam reviewed topics for the June RAP meeting:

- Update on Orchard Lands Operable Unit work plan
- Update on 100-K West Sludge
- Advanced Simulation Capability for Environmental Management (ASCEM) Capability Demonstration
- Briefing on 340 Vault

Tank Waste (TWC)

Dirk Dunning said that in May the TWC discussed AY-102 advice and noted that the DOE was unable to support the June TWC meeting due to training conflicts. The committee is working on prep work for the August committee meeting and is drafting advice on the Systems plan. TWC will hold a call in July.

Health, Safety and Environmental Protection (HSEP)

Becky Holland said that HSEP is looking into site risks, safety culture progress, and advice response to advice written in the last year. In conjunction with the TWC, HSEP has been looking into flammable gas in the DSTs and concrete degradation from radiation exposure. HSEP is tracking the overall status of issues on the site and plans to meet again in August. A committee call will be held on June 18 at 9:00 a.m. to discuss the August agenda items, HAB Advice 265, independent evaluation of I/H equipment and integrated safety management. Becky thanked DOE for their responsiveness over the last few months in responding to advice and working with the committee.

EM-SSAB

Steve Hudson explained that Hanford was originally supposed to host the EM-SSAB Chairs meeting, but because of the budget sequester, it was noted that travel expenses would not be provided. A webinar was held in lieu of the meeting. Steve said that some of the factors of the meeting related to the face-to-face debating over issues could not take place over a webinar. Steve reported that he requested that the meeting be brought back for consideration at Hanford in 2014. Presentations from the webinar are available on the EM-SSAB website. The presentations show a relationship between Hanford and the other EM-SSAB sites in terms of the challenges and how funds are distributed, dealt with, and allocated.

Susan Leckband noted that webinars can be useful for sequestration or trying times. However, the webinar format was not satisfactory for the purposes of EM-SSAB because the group meets only twice per year. Webinars could be useful for sub committees that have one or two focused subjects and do not have enough material to cover for a full-day meeting.

Executive Issues Committee (EIC)

Steve Hudson reported on the June EIC discussion and noted that while the HAB budget is strained, there appears to be enough funding to get through committee meetings in September. At the June meeting the EIC also discussed the HAB calendar and workplan for 2014. The EIC had a successful 2-day Leadership Workshop in May to discuss the strengths of the HAB, opportunities for making changes, and how the Board might go about making changes. The workshop summary shows a detailed list of leadership thoughts on meeting expectations and how the committee can work more efficiently to achieve a broader base of participation.

Draft Advice: 2014-2015 Budget Priorities

Introduction of Advice

Jerry Peltier explained that the budget sequestration impacted cleanup at Hanford. Due to the late release of budget information for the 2014-2015 fiscal year, the process of how projects were prioritized for funding is unclear. The Board is concerned with the way projects are prioritized. In order to meet the TPA milestones established to ensure cleanup efforts would not be further delayed, DOE must request funding for projects in order to meet those established milestones. The Board is concerned that further delays have resulted in increased risk. The HAB Values white paper, which reflects the HAB's perspectives on

priorities, should be taken into consideration when allocating what funding is available. Furthermore, in this piece of advice, the Board puts forth that future funding cuts should not be negotiable for Hanford cleanup.

Agency perspectives

Dennis Faulk, EPA, said that the HAB's first value is to protect the Columbia River, and that is not what is stated in the advice as-is. Dennis recommended beginning the advice with a request to receive full funding to meet compliance obligations and be able to address emergent threats.

Jeff Frey, DOE-RL, said that DOE can respond to this advice as written and discuss priorities and criteria for prioritization. Jeff noted that the criteria can change depending on funding levels, and any changes to criteria are processed by DOE Headquarters.

Dieter Bohrmann, Ecology, said that under the direction of Governor Inslee, Ecology is not prioritizing projects under the budget. Ecology believes all projects are essential and required by law, and should not be ranked. Ecology produces an annual budget letter, and this is in line with the projects highlighted in this advice.

Board discussion

The following key points were noted during Board discussion:

- Board members agreed to specify that the Board request full funding for cleanup in order to meet TPA milestones. DOE will need to prioritize what funding is available for cleanup projects and should do so according to the white paper for HAB values. Board members recognized that cleanup can only be completed if it is funded, and it is important that funding be allocated in a way that considers public concern, risk from delay, and TPA cleanup milestones.
- The Board heard late in the budget process that DOE does have a system for prioritization of which projects will be funded, but the Board has not yet heard what that prioritization process is. The Board agreed to edit out statements from the advice that indicate DOE does not have a system for prioritization.
- Board members agreed to introduce the advice bullets in the background section to show how the advice meets the background intent.

After minor edits to language, the Board adopted the advice.

Draft Advice: 2013-2014 Lifecycle Report

Introduction of advice

Jerry Peltier explained that the Lifecycle Report (Attachment 4) is the document that provides the most complete picture of Hanford cleanup and discusses cleanup scope, schedule, budget, and cost for the complete cleanup mission. Given limited funding availability due to budget sequestration, the budget cannot cover the costs of cleanup necessary to achieve the TPA milestones. The Board is concerned that with funding levels as-is, cleanup at Hanford could be extended twenty to forty years. With discovery of new cleanup tasks, the Board is also concerned about the number of actions that have been identified as necessary for cleanup but do not yet have funding baselines or work schedules. Work on WTP

construction and pretreatment design construction, for example, are not incorporated into the most recent Lifecycle Report. This piece of advice addresses these issues.

Agency perspectives

Dennis Faulk, EPA, said that the TPA drives funding requests. The Lifecycle Report indicates clearly that unfulfilled funding requests affect the overall cleanup effort. Denis said it would be helpful to show this document to Congress when requesting funding.

Jeff Frey, DOE-RL, said that this advice is very detailed commentary on the Lifecycle Report document, and the HAB might consider a different avenue to provide response in this detail other than formal advice. When compiling the report, DOE has to pick a time to freeze information in order to put the report together, and it can take months to put the report together. Occasionally the budget situation changes after the report compilation has begun.

Board discussion

The following key points were noted during Board discussion:

- There was a question about the public availability of level 3 budget information. DOE responded that Appendix 3 of the Lifecycle Report provides level 3 information for the next five years.
- DOE has identified specific requirements for what goes into the Lifecycle Report—are there any restrictions preventing other information from being included in the report? DOE responded that all of the impacts and decisions that have been made go into the Lifecycle Report. If something has not yet been decided on, the baseline has to be configuration controlled, and what goes into the report is what is already planned.
- It is possible that issues will arise that have not yet been identified and are not in the baseline. It will be important to have an understanding of the cost needs associated with these issue. Are any alternative possibilities for evaluation included in the Lifecycle Report? DOE responded that cleanup is planned based on environmental conditions specific to a facility or site and that this is a configuration control requirement. DOE conducts a risk analysis and incorporates potential impacts, and unless the specific alternative is changed, DOE will continue cleanup work according to that baseline.

The Board adopted the advice without edits to language or content.

Draft Advice: 300 Area RIFS and Proposed Plan (Rev. 0)

Introduction of advice

Dale Engstrom said that the surface of the 300 Area has been cleaned up, and in this proposed plan DOE put forward a plan to apply polyphosphate to sequester uranium in the groundwater. In HAB Advice #257, the Board recommended using a treatability test rather than polyphosphate with monitored natural attenuation (MNA). The Board does not support MNA as a solution because it has not worked in the past and would likely not work well in the future. This advice proposes an additional proposed alternative of applying a polyphosphate injection in the 300 Area only on the hot spot of the most concentrated amount of uranium contamination in the Deep Vadose Zone. The idea behind this is that the application would

lessen the amount of contamination in the wetted zone that continues to send contaminants back into the river and contaminate the groundwater.

Agency perspectives

Jim Hansen, DOE-RL, said that when the river rises and falls each day, it scours out a portion of uranium, and there is a continual bleed in relatively low concentrations. 1% of the uranium is actually dissolved in the groundwater. If DOE were to do a remove, treat, and dispose (RTD) remedy, a large amount of soil would need to be removed, equivalent in size to two ERDF super cells. The process of undertaking the RTD remedy would push more uranium into the river, very quickly, than would be pushed into the river via the periodic rewetted zone without the RTD remedy.

Dennis Faulk, EPA, said that the agencies are considering remedial action rather than a treatability test. It is likely that EPA will provide the same response back to this advice as to Advice #257. It is through remedial design and remedial action that a cleanup method is deemed successful. The superfund law does not specify the appropriate process; the appropriate process is up to the agencies and the public to decide. From EPA's perspective, moving forward with a treatability test and remedial action can only improve cleanup.

Deiter Bohrmann, Ecology, said that Ecology defers to EPA on this topic, as it is an EPA lead.

Board discussion

The following key points were noted during Board discussion:

- Members noted that the advice is generally clear and well written, and the agencies have indicated that they understand it.
- One part of the draft advice that is unclear is whether treatability tests are the same thing as polyphosphate treatment. Board members agreed to specify that if the polyphosphate treatment is determined to be effective in one area, it would be a good technology to apply in other places.
- The RAP committee was asked if they discussed the hot spot-only treatment. Dale Engstrom responded that there had been much discussion for how the treatment could be applied. The original RI/FS Proposed Plan indicated that if the treatment were applied to the hot spot and hot spot levels were improved, it would remove uranium from the groundwater to low-enough levels acceptable for cleanup.

After minor edits to language and content, the Board adopted the advice.

Draft Advice: 100-F Area RIFS and Proposed Plan (Draft A)

Introduction of advice

Dale Engstrom explained that the Board has the opportunity to comment on this plan as revision 0 as a way of identifying how the Board can improve the cleanup process. Dale said that the purpose of this advice is to recommend that the groundwater alternative, Alternative 4, be chosen as the preferred alternative because it would provide the highest level of protection to public health. The Board would prefer not to use the MNA approach, as there is no way to ensure that institutional controls will be

protective of human health. Furthermore, the Board puts forth this advice to remind the agencies that if possible, cleanup for unrestricted use would be preferred.

Agency perspectives

Greg Stinton, DOE-RL, said that DOE received comments back from EPA in March and plans to have an RI/FS draft in August, looking for public comment in the winter with a record of decision (ROD) in mid-2014. Greg said that using one strontium barrier and MNA seems to be a reasonable approach.

Dennis Faulk, EPA, noted that the Board is viewing the proposal early in the process before having had the opportunity to review agency comments. Dennis said that it is good for the Board to provide advice and continue to remind the agencies of Board expectations. Dennis said that at Hanford, many of the engineered structures begin lower than 15 ft. down beneath ground-level. After removing the engineered structure during cleanup, there is still contamination beneath that 15 ft. depth. The agencies are not going to re-dig all of the deep sites past 15 ft. In addition, Dennis clarified that 1×10^{-3} is the EPA guidance for principal threatways. The expectation is that if contamination is higher than this, it will be treated. There are no EPA threatways in this situation. EPA is cleaning up to 1×10^{-4} and 1×10^{-6} levels in compliance with federal and state law.

John Price, Ecology, said that Ecology does not have a comment on this, as it is an EPA lead.

Board discussion

The following key points were noted during Board discussion:

- There was a question about the cost difference between what DOE is suggesting (MNA) and what the Board advice puts forth (aggressive pump-and-treat). DOE responded that the difference between the two alternatives is about \$170 million. EPA responded that there are no observed impacts to the river at this point, and risk must be addressed first given the budget situation.
- The Board is concerned with institutional control for MNA in 175 years. DOE responded that 175 years is a calculated number of the total amount of time it will take to get down to the risk level of 1×10^{-4} . This timeframe is based on the contamination of the soil and does not relate to groundwater remediation. The contamination will be in the soil for 175 years but not go anywhere it has a 15 ft. layer of clean material on top of it, leaving no exposure pathway. The 15 ft. layer is in place to avoid groundwater contamination for 175 years.

After minor edits to language and content, the Board adopted the advice.

Draft Advice: Hanford Long-Term Stewardship

Introduction of advice

Bob Suyama explained that the purpose of this advice is to provide DOE the Board's perspective on when it is appropriate to move areas into long-term stewardship status. The 100 F Area was only cleaned up to interim ROD requirements. Under DOE's current approach, if new waste sites are discovered in the future, and if the new RODs determine that the area was not cleaned up to the necessary extent, these areas will need to be transferred back from a Long-Term Stewardship (LTS) contractor. In addition, the F reactor will need to stay in its current location for 75 more years before it can be removed or cleaned up. The Board questions the definition of LTS and does not feel it is a good idea to transition 100 F Area to

LTS until all of the requirements of the final ROD are met and the reactor and cleanup of contaminants in the groundwater are complete.

Agency perspectives

Boyd Hathaway, DOE-RL, said that he appreciates coming in and working with the Board and the RAP committee to share perspectives, and he did not have anything to add to the advice.

John Price, Ecology, said that the 100 F area is an EPA-lead area. Ecology is not concerned about internal transfers of administration of sites within DOE.

Dennis Faulk, EPA, said that like Ecology, EPA is not concerned with the land transfer to LTS because it is an internal DOE administrative transfer within departments.

Board discussion

The following key points were noted during Board discussion:

- Transitioning land to LTS means transitioning contractors and all of the data associated with the land. The Board might consider including an advice point about testing data accessibility so that ultimately the data transitioned is publicly accessible. Ecology responded that information management is a challenge for LTS. All of the data is online, and one can go onto the LTS webpage to view the information collected on the sites being transferred over to LTS. DOE-RL responded that part of the LTS plan as envisioned from the beginning of the program is to get the contractor to set up a program and administer the areas. Currently there is no contracted cleanup work there. DOE is putting an MSA contract in place for a longer term and a different role on this site. Transitioning lands into one contractor as opposed to many helps improve the institutionalization and helps DOE manage lands for the interim. There are still action items needed to make sure cleanup is complete. With the current contract structure, it will be beneficial to move parts and parcels into a centrally well-managed program under a single entity. Board members agreed that adding an additional advice point about data accessibility is not necessary.
- The RAP committee expressed concern for the cost of transferring land to Mission Control Alliance (MSA) when it is not in MSA's budget or mission to cleanup the land. There was a question of what would happen if additional cleanup is needed but it is not in MSA's budget. DOE responded that DOE would determine what type of remediation and actions are necessary and then determine the most efficient way to complete that work. DOE would get a contractor mobilized on the site to perform the work and add that back into the contract if they were on site and available to do the work. By transitioning the land to MSA, the land is still DOE property; the transition to LTS is essentially just assigning MSA landlord responsibility.
- There is a misconception that the surface cleanup has been completed; LTS is not appropriate because of 100 F reactor and the unknown contaminants beneath it. Additionally, there could be other issues that may come up and have not yet been addressed. Under a remediation contract, modeling, remediation, and sampling will be conducted on a regular basis. Once the land is in LTS, it will be in a five-year review program, which means that every five years there will be monitoring to see if there are any problems. Monitoring would consist of a walkover to discover obvious surface problems. LTS is a smaller-budget program, and it is not run in the same way as remediation. The process under LTS would be much less conservative. DOE responded that DOE aims to build an LTS program that has high confidence and in which sites are monitored per the frequency of inspections called out in the RODs and regulations.

- The Board is not confident in the local DOE to monitor the site appropriately after land is moved into LTS. DOE clarified that moving land to LTS is not the same as turning the land over to the Office of Legacy Management. Rather, moving land into LTS is a way for DOE to manage the land using a single contractor.
- MSA has the ability to hire whomever they want, and given that it is unknown if further remediation will be needed in the future, the land may not be managed by anyone who has the skills or expertise to perform the remediation appropriately.
- There was a suggestion to include more frequent monitoring than five years with reports back to the Board on monitoring progress. The Board decided not to add this additional point, as DOE has been very generous about coming to committees with updates on an ongoing basis.
- Board members noted that there has been some confusion between the LTS program and legacy management. The names get confused with each other, and it was suggested that the LTS program name be changed to the Hanford Site Maintenance and Surveillance program. DOE responded that the program is not only maintenance, but is rather a long-term program that ultimately leads the lands to legacy management. The LTS program includes records management, licenses, easements, and permits on the site. There was discussion about adding back an earlier advice bullet discussed by the RAP Committee regarding this point; Board members decided the advice was stronger without this additional advice bullet.
- Board members noted agreement for the advice and said that the decision to move the land to LTS presupposes cleanup has been completed when that is not the case.

The Board adopted the advice without edits to language or content.

Draft Advice: Double-Shell Tank AY-102

Introduction of advice

Dirk Dunning explained that the purpose of this advice is to address the leaking double-shell Tank AY-102. The TWC has received a number of presentations from DOE on the issues at AY-102. The solids in the tank cannot be allowed to dry out, as they are at risk of overheating when the liquid is pumped out and may lead to gas release events and catastrophe. This advice first focuses on pumping and draining the waste from the known leaking single-shell tanks to prevent further leaking directly into the environment as a priority, and to then make space in the other double-shell tanks in which to pump the waste from the leaking AY-102. This tank is of concern because the waste that has leaked out of the internal shell has begun to collect in the annulus. The outer shell was not built with the intent to hold waste for long periods. It is unknown how long it will last as a protective barrier between the annulus and the environment.

Agency perspectives

Tom Fletcher, DOE-ORP, elaborated on the explanation of the double-shell tank's failure and noted that it was not just due to corrosive material, but also due to issues with the welding in the tank and defects during the tank's construction.

John Price, Ecology, said that this advice would be stronger with some rearranging of the advice points and noted that Ecology does not tend to provide comment on safety culture.

Board discussion

The following key points were noted during Board discussion:

- One Board member noted discontent for the advice as written and said that there are people who are eager to pump the double-shell tank, but the double-shell tank has a viable outer shell that is not leaking. This is shortsighted because of the significant shortage of double-shell tanks. Also, the risk of contaminants getting into the environment is way worse for the single-shell tanks whose bottom is buckled.
- One Board member agreed that there are single-shell tanks that pose a greater risk to the environment than the leaking double-shell tank AY-102.
- One Board member noted that the leaking AY-102 tank is an indicator that the rest of the tanks will eventually leak if left in the same condition. This Board member suggested conducting a probabilistic risk assessment of the second, outer shell of AY-102. One Board member noted agreement with the need for a risk assessment to determine the integrity of the outer tank.
- One Board member noted that it took forty-one years for the internal tank of AY-102 to leak and for waste to collect in the annulus. This individual believes that the timing of this makes the double-shell tank leak non-consequential and said it does not need to be addressed immediately, and suggested that the outer tank will last for 40 years.
- Two Board members indicated that there is a sense of urgency in pumping out the waste from AY-102. The Board member noted that the waste in the primary tank is out of compliance and jeopardizes the integrity of the outer shell. The secondary tank was built with a design life of seven days upon contact with waste that leaked out of the primary tank and was planned to be pumped immediately in the case of a leak. This is not when it is expected to fail. It is how long it can be reasonably assured not to fail once a primary tank leak occurs. One Board member responded to this with disagreement and noted that these are assumptions but that it is known that there were weld issues with the building process of the secondary liner. They noted that to date AY-102 has not leaked into the surrounding environment while there are single-shell tanks that have.
- One Board member noted strong support for moving the advice forward. This individual said that the advice is well-written and is effective in noting the problem and presenting steps to address it. Even though there are more immediate problems (leaking single-shell tanks) on site, this problem should still be raised and noted as important to address.
- One Board member noted that it is questionable if it is a good idea to pump one of the highest volume tanks because there may not be enough capacity to pump the waste into other tanks. For emergency purposes, there is a requirement to maintain an amount of empty tank space equivalent to the capacity of the largest tank.
- Board members did not agree on whether or not to move forward with this advice. While some felt that this is an issue that needs to be addressed immediately, nine Board members did not support moving forward with this draft advice. Several Board members supported the idea of sending the advice back to committee to resolve disparate views among committee members. Board members agreed that this advice would be sent back to the TWC for further discussion and refinement, and that individuals with objections to the advice would make an effort to attend the committee to discuss its further development.
- It was noted that the HAB issued similar advice in February 2013 (HAB Advice #263), and this advice should be brought to committee discussion to determine how best to proceed.

Draft Letter for Board Diversity, and Other Board Effectiveness Issues

Issue Manager Presentation

Susan Leckband explained that the Board has been working with the local DOE and agencies on the draft letter for board diversity (Attachment 5) as a proposal to increase diversity on the Board. The Keystone Center, contracted by DOE, convened the original Board based on DOE-specified criteria that the Board would be created with diversity in mind. The Board currently meets FACA requirements and is both a TPA Board and a Regional Board but does not meet age and gender requirements. The Board has been working with DOE and the TPA agencies to develop achievable goals. Each seat controls its own representation and who is put forward to represent the seat.

This letter is important because the Board wanted to be involved in whatever changes would be made in how the Board operates. Furthermore, this letter is an opportunity for the Board to identify what is expected of Board members to participate on the Board and reiterate the work involved for Board members. Susan noted that some of the actions referenced in the letter are being proposed through changes to the HAB calendar, such as working an evening-scheduled meeting into the Board calendar. The background portion of the letter also includes what is currently required of Board members and notes that the Board strives to represent the interests of members of the public through individual Board member representation and participation.

Agency perspectives

Jeff Frey, DOE-RL, said that this is an opportunity for the Board to define some of the approaches to issues that have been raised in the past regarding diversity of Board membership. This letter would be something the DOE can refer back to in the future. It is notable that because this is a regional board, the stakeholder base/affected area is different than at other sites, where there might be a more standard fifty mile radius for stakeholder participation.

Board discussion and action

The following key points were noted during Board discussion:

- This letter relates to a separate process from decisions made for public at large and workforce seats. For those, DOE would implement mandatory rotation.
- One Board member asked if it would be appropriate for EPA and Ecology to sign the letter as well as the Board before it is sent to DOE in order to have greater influence. Susan Leckband responded that the letter will be directed to local DOE, EPA, and Ecology at their request. The agencies will have a copy but will not sign the letter before it is sent to DOE. Board members agreed that sending the letter to DOE and copying Ecology and EPA gives the other agencies the opportunity to review it and respond with their own written letter to DOE, copying the Board.
- One Board member noted that this is a Board of regional interest and the Board members represent the interests of the members of the organizations or groups they represent. By changing the ethnic background of the member elected to serve on the Board, DOE is not going to change the interest or the group represented by each seat.
- One Board member noted that it is difficult to get people engaged in something they are not interested in. As the mission of cleanup shifts towards future end-states, the Board might consider making a more political and strategic representation and focus less on technical details of tank waste. This way, the expertise required of Board members might decrease, topics may become more approachable to members of the public, and more people may feel more qualified to serve on the Board.

- Board members agreed to individually distribute copies of the letter to the respective groups they represent. It was noted that Board members are to send all board products to their constituencies regularly to keep them informed of cleanup and what the Board is working on.

With minor changes to language, the Board agreed to send the letter to local TPA agencies, understanding that they would likely send this letter up the line to headquarters.

Draft 2014 HAB Work Plan Calendar

Work plan

Susan Leckband noted that the draft work plan is very preliminary – more so than in previous years. The Board expects more input and feedback on the work plan from the TPA agencies, including more information about priorities they wish the Board to attend to in the coming year. The work plan applies to the full Board, and is then divided into subcommittees to identify the work and meetings needed and justifies the money spent on committee meetings. The work plan is used to identify the funds the agencies would like to provide to the Board. The work plans will be subcommittee discussion topics.

Agency perspectives

There were no agency comments.

Board discussion

One Board member said that it was brought up during the EIC leadership workshop that Ecology will not provide the Board with priorities this year, consistent with the Governor's position. Ecology clarified that they will not provide budget priorities, but they will provide priorities for the HAB's work.

Calendar

Susan Hayman presented the draft HAB 2013-2014 calendar (Attachment 6) for discussion and noted that the September version will be brought forward for approval and final adoption. The calendar is a product of the EIC leadership workshop. Susan noted the following changes from past HAB calendars:

- Board meetings will be held in different months than previous years: December, March, May, June, and September. In the past, Board meetings have been held in November, February, April, June, and September. These changes were considered for several reasons. February meetings tend to be difficult because of the winter holidays. In addition, the extended timelines for receiving budget information makes the May Board meeting timelier than the April meeting to develop HAB budget advice. June would be earmarked for an evening meeting. Board members have expressed interest in conducting an evening meeting, starting at noon and ending at 8:00 p.m. in order to provide a more accessible time for people who work during the day to attend. The December and June meetings are proposed as Wednesday and Thursday meetings, as Friday meetings can sometimes be inconvenient. Furthermore, having an early December meeting creates a better interval for meetings in September and March.
- PIC meeting placeholders will be added on Wednesdays preceding Board meetings consistent with previous years.
- Committee calls will be changed for Tuesday and Wednesdays for all placeholders.

- When the calendar goes through final approval, religious holidays will be taken off of the calendar. These are shown for planning purposes only. Federal holidays will be shown.
- Committee-of-the-whole (COTW) placeholders will be removed from the calendar. If there is need for a COTW, they can be added as needed and will be scheduled appropriately.

Board discussion

The following key points were noted during Board discussion:

- One Board member noted that agency presentations attract members of the public. This should be factored into agenda planning, especially for proposed evening meetings. It is also important to make sure the agencies are committed to presenting and attending meetings that are scheduled for evenings. Given the limited budget situation, agency commitment will be important in order to make these meetings successful.
- One Board member said the Board might consider holding breakout workshops for dynamic evening meeting topics. This could be something to discuss in the individual committees. Topics like System Plan 7 or the EIS process might be a good fit for that format to encourage public interest and meeting attendance.
- Board members agreed that the HAB website should provide a clear and easy-to-find link to the TPA public involvement calendar. While the HAB calendar is modified once and goes unchanged once approved, the TPA calendar is updated regularly and shows upcoming events. The HAB SharePoint calendar is also a resource updated regularly that shows upcoming meetings, including all HAB meetings, and other events such as State of the Site meetings. The weekly HAB Events-at-a-Glance also provides a section of upcoming non-HAB events that may be of interest to Board members.

Board Business

EIC proposal for public comment at Board meetings

Steve Hudson explained that the EIC refined the current public comment guidelines into the draft Guidelines for Public Comment at Hanford Advisory Board Meetings (Attachment 7). He noted that the purpose of these guidelines is to provide members of the public who wish to provide comment at Board meetings with expectations for how to proceed. Steve noted that the top portion of the card would include a welcome statement encouraging comments and Board contact information. The back of the card would list the guidelines.

Steve said that after considerable discussion, the EIC decided that the Board would not respond to public comment at the time received. Because the commenter would provide their contact information prior to making comment, the Board would know who to follow up with and how to get in touch with that person following the meeting. This does not preclude Board members from speaking with members of the public individually as a representative of their own organizations, but Board members should not respond to comments on behalf of the Board. Furthermore, in the summary of the Board meeting notes, there would be a section where public comments are highlighted to make the information easy to find for follow-up.

Board discussion

The following key points were noted during Board discussion:

- One Board member noted that the general public is not aware that they can make comments at Board meetings. It would be good to put a notice in the local paper indicating that Board meetings are taking place and that members of the public are welcome to provide comment. Another Board member indicated that Board meetings do tend to be advertised in the local paper, but they were not this week. DOE noted that a notice in the Federal Register is published fourteen days prior to Board meetings and explains Board process. It is expensive to publish notices in the paper, but community calendar postings tend to be free of charge and might be something to consider.
- Board members and agency representatives discussed specifying timing of when members of the public will be able to provide public comment. DOE noted that if a meeting is advertised and it is noted that individuals are able to provide public comment at a certain time, someone will need to ensure someone is available (if the meeting ends early, for instance) to receive the public comment. While moving the public comment period to earlier in the agenda might accommodate an early meeting-end time, it is often beneficial to listen in on the topics and learn about what the board is discussing before providing comment. Board members also suggested the alternative option of providing opportunity for public comment after each discussion topic. It may be difficult to build in time appropriately on the agenda using this structure, but it would allow members of the public to provide comment related to specific topics that were just discussed. DOE responded that getting public input related to activities the Board is currently working on would be helpful, but it would be important that members of the public understand that Board meetings are not a forum for members of the public to talk to the agencies. Rather, direct communications with the agencies would need to be handled through the respective agencies' public involvement processes.
- Board members agreed that it is not important to list a specific time to provide public comment on a newspaper ad, but rather indicate that there will be an opportunity to provide comment at the meeting; the agenda can specify a designated time.
- Board members agreed that in order to be transparent and manage expectations, it would be important to include a statement noting that the Board values public comment but will not respond to comments at the meeting. One Board member said that it would be difficult to encourage future public comment from someone who receives a room of silence after providing a comment. The Board agreed that the chair would thank the member of the public for providing public comment and would indicate that the information they shared is helpful. The Board agreed that it would be at the Chair's discretion whether or not to respond to simple questions posed during public comment.

The EIC will discuss the Board's comments and recommendations and bring a revised version back to the Board meeting in September.

June committee meetings and calls

Susan Hayman reviewed June committee meetings and calls:

- June 11: RAP Committee meeting from 9:00 a.m. to 4:00 p.m.
- June 18: HSEP Call 9:00 a.m.
- June 18: BCC Call 10:30 a.m.
- June 19: PIC Call 1:00 p.m.
- June 19: EIC Call 3:00 p.m.

Preliminary September Board Meeting Topics

Susan Hayman reviewed the list of potential meeting topics for the September Board meeting, including:

- AY-102 advice
- Budget advice on the budget planning process for next year
- 300 Area advice
- HSEP/TWC advice on flammable gas
- System 7 advice (placeholder)
- Annual updates
- 2014 work plan confirmation
- Agenda confirmation
- State of the Site meeting locations
- 2013-2014 calendar
- Annual September Board group photo

Liz Mattson noted the importance of participating in committee calls. She said that committee calls are a great opportunity to weigh in on advice development early on in the process so that advice is not brought before the board before all perspectives have been heard. Discussion of disagreement on advice from members of the committee bringing advice before the Board could be mitigated with committee member participation in committee calls. Liz Mattson noted that she would be happy to send out reminders (text message and email) to committee members to participate in the calls.

Pam Larsen reminded Board members of Board policy that if a member does not show up to Board meetings for over three months, they are at risk of losing their membership. Pam said a letter from the Chair is needed to remind Board members of this policy.

Susan Leckband complemented the Board on their commitment, participation, and interest in the issues discussed. Susan noted that the Board will be twenty years old next January.

Liz Mattson awarded Shannon Cram a HAB Superstar award and noted that it took Shannon eighteen months to become a member of the Board, which shows patience and interest in the issues.

Public Comment

Michael Geffry, Hanford worker, provided comment on several topics discussed by the Board during the June meeting. Michael said that he would suggest against holding a single designated time for public comment at Board meetings before the meeting begins. People would likely make their argument and then leave rather than listening before they speak. Michael suggested reaching out and inviting members of the public to come and speak. If the Board is having difficulty getting people to talk, then inviting an expert to speak on a topic might garner interest among members of the public to come listen.

Michael noted that any time someone speaks publicly or in front of other people, it is important to know one's audience. Michael said that in this particular instance, he is not familiar with the Board members and does not intend his comment on the following topic to be taken personally. Having worked at the tank farms for twenty-six years, Michael has a lot of information about DST Tank AY-102 and experiential knowledge of the site. Michael said that due to his expertise, he was able to discover and fix a problem with environmental compliance on a piece of equipment that monitors the stack on AY-102.

Michael said that he was the worker that discovered the leak at AY-102 in October, 2011. Michael said that he tried to convince management that there was a problem with the tank, but he did not receive an answer. Michael explained that he wanted to quit his job because he was upset that management was not acknowledging that there was a problem with the tank. He went to the media and told them what happened. He worked closely with King 5 News to make sure the technical information captured was accurate. He felt that the Board was questioning his integrity.

Steve Hudson thanked Michael and noted that the Board appreciates his comment.

Closing Remarks

Steve Hudson thanked everyone for attending and for the Board's effort. Steve said that committee chairs have done a great job and their diligent attention to advice was appreciated. The meeting was adjourned.

Attachments

- Attachment 1: HAB DOE-RL Program Update
- Attachment 2: HAB DOE-ORP Program Update
- Attachment 3: HAB Ecology Program Update
- Attachment 4: 2013 Hanford Lifecycle Scope, Schedule and Cost Report
- Attachment 5: HAB Board Draft Letter on Diversity
- Attachment 6: Draft 2014 HAB work plan calendar
- Attachment 7: Draft Guidelines for Public Comment at Hanford Advisory Board Meetings

Attendees

HAB MEMBERS AND ALTERNATES

Antone Brooks, Member	Dan Serres, Member	John Howieson, Alternate
Tom Carpenter, Member	John Stanfill, Member	Mike Korenko, Alternate
Robert Davis, Member	Richard Stout, Member	Bob Legard, Alternate
Sam Dechter, Member	Bob Suyama, Member	Larry Lockrem, Alternate (phone)
Earl Fordham, Member	Eugene Van Liew, Member	Liz Mattson, Alternate
Gary Garnant, Member		John Martell, Alternate
Harold Heacock, Member	Richard Bloom, Alternate	Emmett Moore, Alternate
Rebecca Holland, Member	Al Boldt, Alternate	Ed Revell, Alternate
Steve Hudson, Member	Shannon Cram, Alternate	Wade Riggsbee, Alternate (phone)
Pam Larsen, Member	Lynn Davison, Alternate	Rebecca Rubenstrunk, Alternate (phone)

Susan Leckband, Member	Dirk Dunning, Alternate (phone)	Richard Smith, Alternate
Jeff Luke, Member	Dale Engstrom, Alternate	Margery Swint, Alternate
Jerry Peltier, Member	Laura Hanses, Alternate	Art Tackett, Alternate
Maynard Plahuta, Member	Barbara Harper, Alternate	Steve White, Alternate
Howard Putter, Member		

AGENCY, CONTRACTOR, AND SUPPORT STAFF

Kim Ballinger, DOE-RL	Dennis Faulk, EPA	Sharon Braswell, MSA
Jeff Frey – DOE-RL	Emy Laija, EPA	Dru Butler, MSA
James Hansen, DOE-RL	Dieter Bohrmann, Ecology	Reed Kaldor, MSA
Boyd Hathaway, DOE-RL	Madeleine Brown, Ecology	Michael Turner, MSA
James Lynch, DOE-RL	Larry Gadbois, EPA	Sonya Johnson, CHPRC
Greg Stinton, DOE-RL	Jane Hedges, Ecology	Mark McKenna, WCH
Janet Diediker, DOE-ORP	John Price, Ecology	Tammie Gilley, EnviroIssues
J.D. Dowell, DOE-ORP		Susan Hayman, EnviroIssues
Tom Fletcher, DOE-ORP		Abby Chazanow, EnviroIssues
Lori Gamache, DOE-ORP		

MEMBERS OF THE PUBLIC

Dave Brockman, Kurion Inc.	Susanna Frame, King TV	Ryan Strong, HOANW
Annette Cary, Tri-City Herald	Michael Geffry	Pedro de la Torrets
Steve Douglas, King TV		