

**FINAL MEETING SUMMARY**

**HANFORD ADVISORY BOARD**

**June 1-2, 2006**

Lewiston, ID

**Topics in This Meeting Summary**

Executive Summary ..... 1  
Welcome and Introductions ..... 3  
Approval of April Meeting Summary ..... 3  
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)  
Five-Year Review ..... 3  
Tutorial on Groundwater and Vadose Zone Contamination ..... 5  
Groundwater Tutorial – Regulatory Approach ..... 6  
Overview of Modeling ..... 8  
Breakout Groups: Specific Examples of Groundwater Challenges ..... 9  
Groundwater and Vadose Zone – Next Steps ..... 9  
State of the Site Meetings ..... 10  
Environmental Management Site Specific Advisory Board (EM SSAB) Chairs Meeting  
Report ..... 11  
EM SSAB National Charter Update ..... 11  
Tri-Party Agency Updates ..... 12  
Leadership Retreat Report ..... 13  
Waste Treatment Plant Committee Report ..... 14  
Committee Reports ..... 16  
Board Business ..... 16  
Public Comment ..... 16  
Attendees ..... 17

*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 Hanford Advisory Board (HAB or Board) adopted two pieces of advice: one regarding the State of the Site Meetings and another on the draft Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Five-Year Review.

The Environmental Management Site Specific Advisory Board Chairs meeting produced two letters to DOE-HQ and the Board authorized Todd Martin, Citizens for a Clean Eastern Washington (Regional Environmental/Citizen Organizations), Board Chair, to sign both letters.

### **Tutorial on Groundwater and Vadose Zone Contamination**

The Board received tutorials on groundwater and vadose zone contamination, modeling, and regulator perspectives.

### **Waste Treatment Plant**

The Tank Waste Committee reported on the Waste Treatment Plant (WTP), its history, funding status, problems, and the Government Accountability Office (GAO) report on the main causes of WTP problems and ongoing concerns.

### **Board Business**

The Leadership Retreat identified the following priorities for the Board's work in the upcoming year: WTP, the Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS), public education and involvement, leadership and membership development, cleanup priorities, and tank waste management. The Board will consider these priorities for adoption in September.

Todd reported on the Environmental Management Site Specific Advisory Board national charter renewal and language change, which includes term limits for Board members. The Board is concerned but feel they can work with the Department of Energy (DOE) to achieve the intent of both the national and local charters.

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Todd Martin, Citizens for a Clean Eastern Washington (Regional Environmental/Citizen Organizations), 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. Four seats were not represented: Franklin & Grant Counties, University of Washington, Non-Union, Non-Management Employees, and Yakama Nation.

**Welcome and Introductions**

New members include Susan Kreid from the Washington League of Women Voters (Regional Environmental/Citizen). Robert McFarlan is a new alternate from the Oregon Hanford Cleanup Board (State of Oregon), and Tony James is a new alternate from Benton-Franklin Public Health (Local/Regional Public Health).

**Approval of April Meeting Summary**

The April Board meeting summary was approved.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Five-Year Review**

Maynard Plahuta, Benton County (Local Government), introduced the CERCLA Five-Year Review advice drafted by the River and Plateau committee. The advice reflected the Board's disappointment in the review draft, asserting it missed critical parts of the intent of a Five-Year Review, and failed to incorporate new information.

*Regulator Perspective*

Nick Ceto, U.S. Environmental Protection Agency (EPA), said if cleanup were finished, there would not be a five-year review; a review is performed because the site is not cleaned up to protectiveness standards. The Five-Year Review is the process for checking back in and identifying problems and specific action items.

Nick said EPA would have their own independent assessment; it is their responsibility to evaluate the Department of Energy (DOE). He noted that all necessary EPA parties have not yet read the draft Five-Year Review; it still needs more EPA review.

*Board Discussion and Questions*

Vince Panesko, City of Richland (Local Government), thanked the committee for accurately capturing the concern about the 300 Area and the possibility of Richland business expansion into the 300 Area. He asked what the requirements were of the CERCLA Five-Year Review, and if DOE has to provide an improvement plan.

Bob Parazin, Public-at-Large asked for clarification as to why the Board's advice was calling for a breadth of review – doesn't the Record of Decision (ROD) require that already? Nick Ceto said the CERCLA Five-Year Review evaluates the effectiveness of the ROD, both philosophically and practically. If contaminants are left behind or if new information comes to light, then there would be reason to reevaluate the ROD. The Five-Year Review evaluates any new scientific information and anything else that needs to

be addressed, whereas the ROD is fixed in time. Nick said the Five-Year review can also include ensuring ROD enforcement or amendment.

Jerry Peltier, City of West Richland (Local Government), said the Five-Year Review is essentially a review of the ROD validity, and that the ROD needs to be constantly evaluated and modified. Nick said that was true, up to a point.

Greg deBruler, Columbia Riverkeeper (Regional Environmental/Citizen), was glad the Board came together on a position on cleanup in the 300 Area. He said the 300 Area needs to be reevaluated in the CERCLA Five-Year Review. He suggested hiring an independent panel that could analyze the Five-Year Review to see if it is on track and meeting the interim RODs. Greg thought the advice set the framework for the Five-Year Review. He also said direct and obvious actions should be identified and included in the Five Year Review.

Vince Panesko did not think there was a strong action path forward in the Five Year Review for 100 and 300 Area groundwater.

Mike Thompson, DOE-Richland Operations Office (DOE-RL), said the Five-Year Review is not intended to reach problem-fixing decisions; its goal is to identify the efficiencies. He said the CERCLA process decides the path and actions forward.

Dave Brockman, DOE-RL, said it would be helpful for the Board to identify specific data concerns in more detail in the advice.

There was discussion over the future use of the 300 Area. Shirley Olinger, DOE-Office of River Protection (DOE-ORP), said the intent was to release the 300 Area to the City of Richland for industrial use. It would not be unrestricted use; DOE will always have ownership and be responsible. Shirley said the idea was to get the River Corridor clean and shrink the cleanup area to the Central Plateau. DOE will control the land whatever the use, and the current plans are for industrial use. Dave Brockman pointed out that the cleanup standard for the 300 Area was for industrial use: just because nobody currently wants it, does not make the cleanup standard incorrect. He said the advice should be clear if the Board wants the cleanup standard changed.

Todd said DOE needs to analyze other potential uses and clean up to appropriate levels, especially since the business community does not seem interested in the 300 Area. If there is a new intent, DOE needs to be clear about it, and the Board should know what the plan is.

Nick Ceto said the Board and EPA do not have the ability to tell DOE their land use assumptions are wrong. He encouraged the Board to look at the bigger picture of the development of the 300 Area and Richland.

Dirk Dunning, Oregon Department of Energy (State of Oregon), said it doesn't look like there is a realistic intent to use the land for industrial use, and it should be addressed in the Five-Year Review. He said the ROD should be reexamined and cleanup levels should be raised.

Gerry Pollet, Heart of America Northwest (Regional Environmental/Citizen), said the Five-Year Review does not address the state's cleanup and maximum exposure standards. He said the Review fails to address applicable legal standards and whether or not the current plans will achieve those standards. He thought the exposure scenario is the big question.

John Price, Washington State Department of Ecology (Ecology), said the Five-Year Review is required to address any new available information – the 300 Area City of Richland study is new information. The Review should determine what the new information means and what should be done. The state has not commented yet, but he is anticipating it needs to be looked at again.

Wanda Munn, Benton-Franklin Regional Council (Local Government), said the Board's cleanup values should not be based on whether or not an industry would want to be located in the 300 Area.

Todd clarified that the Board wants to ensure that DOE properly evaluates 300 Area land use.

The advice was adopted.

### **Tutorial on Groundwater and Vadose Zone Contamination**

The River and Plateau Committee developed a tutorial on groundwater to help the Board better understand the role and effectiveness of groundwater protective actions. Maynard Plahuta introduced the tutorial and highlighted what the Board should be focused on:

1. Understand where the site is currently.
2. Understand what is needed to fully characterize a site and the difficulty in getting sufficient and reliable data.
3. Learn more about modeling: What it shows and what it doesn't.
4. Learn how some plumes might mix or converge on others and what could be the result.
5. Learn what monitoring and testing is needed to ensure the established cleanup goals are achieved.
6. Learn more about trust responsibilities and what regulatory approach is needed to address real world issues, problems, and expectations (such as reasonable restoration time frames).
7. Prepare for upcoming issues:
  - a. New technologies: Should existing decisions be amended based on new technologies?
  - b. Should funding restrictions influence cleanup goals?
  - c. Critical near-term cleanup decisions, including some that involve interim and final RODs.

Rob Davis, City of Pasco (Local Government), provided a handout and brief overview of general technical issues related to groundwater and the vadose zone.

Mike Thompson presented a detailed Hanford groundwater and vadose zone overview. He explained the nuclear fuel cycle and how the manufacture, irradiation, chemical separations, and plutonium finishing of nuclear fuel cycled through the entire Hanford site, from the 300 Area to the Central Plateau. He discussed past direct discharges during reactor operations, specifically the KE reactor retention basins and crib during operations. In the 1960s, 110 million curies were released into the Columbia River from the 100 K reactors, through radioactive contamination leaking into the soil and running down to the river.

Mike explained a groundwater systems model, and said that purposeful discharges are the main cause of groundwater and vadose zone contamination at Hanford. Methods of planned liquid releases to the ground were through cribs, specific retention trenches, French drains, reverse wells, and ponds. Release from cribs was the primary release mechanism from 1944 through the 1990s. In addition to planned releases, unplanned releases, including spills and tank, pipeline, and diversion box leaks, also contributed to the liquid releases to the ground. Liquid discharges to the ground (approximately 450 billion gallons) began in the 1940s and continued as late as 1997. Since 1997, planned liquid discharges have continued at the State Approved Land Disposal Site.

At Hanford, approximately 80 square miles of groundwater are contaminated above drinking water standards. Contaminants from the 100 and 300 Areas and PUREX reach the Columbia River. Radioactive contaminants include tritium, iodine-129, technetium-99, uranium, and strontium-90. The main tritium plume is diminishing, and uranium is mostly found in the 300 Area plume where fuel was fabricated. Most contaminated water came from the PUREX plant in the 200 Area. Chemical contaminants are also of major concern; they include nitrate, carbon tetrachloride, trichloroethylene, and hexavalent chromium. Carbon tetrachloride is the most vexing cleanup problem at Hanford. Hexavalent chromium is a major problem at the river – it is toxic to fish, and high levels are found in the gravel riverbed and salmon redds. Cleanup success depends on finding chromium sources. Mike said salmon are the main river concern and showed a map of salmon redds and their proximities to contaminated groundwater.

Approximately 16,000 meters of the Columbia River shoreline receive contaminated groundwater. No one is drinking the contaminated groundwater from the site, but there is the potential for exposure in the river.

Mike quoted EPA objectives for groundwater protection: “EPA expects to return usable ground waters to their beneficial uses wherever practicable, within a time frame that is reasonable given the particular circumstances of the site. When restoration of ground water to beneficial uses is not practicable, EPA expects to prevent further migration of the plume, prevent exposure to the contaminated ground water, and evaluate further risk reduction.” [40 CFR 300.430(s)(1)(iii)(F)]. Also, the Hanford Site Groundwater Strategy states: “Once groundwater becomes contaminated it is difficult and costly to remediate. Therefore, prevention of future groundwater contamination is the primary means of protecting groundwater.”

Mike outlined the essential actions for groundwater protection:

1. Control high-risk sources of contamination.
2. Take groundwater protection measures to reduce the artificial recharge.
3. Implement effective groundwater remedies.
4. Shrink the footprint of the contaminated areas.
5. Integrate Hanford monitoring needs.

The following actions have been completed:

1. Stopped unpermitted discharge of liquid waste to the soil (Tri-Party Agreement [TPA] milestone M-17-00).
2. Operated pump-and-treat systems since March 1994.
3. Soil Vapor Extraction – through Fiscal Year (FY) 2004 removed approximately 78,600 kg of carbon tetrachloride.
4. Initiated treatment technologies designed to replace pump-and-treat systems.
5. Decommissioned over 2,000 wells.
6. Lined old pressurized water lines.
7. Completed transfer of liquid waste from single-shell tanks (2004 – except for S102 and S112, which are being retrieved); this is one of the most important protection measures at Hanford.
8. Removed 5 million tons of soil from waste sites along the River Corridor.
9. Removed approximately 65 million curies of radioactive material from along the River Corridor.

Mike discussed in detail each of the areas on the site with groundwater and vadose zone contamination: 100 H, 100 D, 100 K, 100 N and the 300 and 200 Areas.

### **Groundwater Tutorial – Regulatory Approach**

Dennis Faulk, EPA and John Price, Ecology, presented the regulatory requirements for groundwater cleanup. John said the highest beneficial use for groundwater at Hanford is drinking water, as with most sites.

Dennis said EPA supports aquifer restoration. He explained that groundwater is considered potable unless it is not used as a current source of drinking water and is not a potential future source of drinking water. Dennis said if groundwater cannot be returned to its highest beneficial use, EPA would prevent further migration and exposure. The River Corridor needs to be carefully watched, and the River Corridor and plateau work need to be integrated.

The threshold criteria in the National Contingency Plan (NCP) for remedy selection say that the remedy must be protective of human health and the environment and the remedy must comply with “applicable or relevant and appropriate requirements” (ARARs), unless a specific ARAR is waived. Technical impracticability is a type of “ARAR waiver” as defined in CERCLA and the NCP, where “compliance with the requirement is technically impracticable from an engineering perspective.” [NCP 300.430(f)(1)(i)]. Dennis also emphasized an alternative remedial strategy must be protective of human health and the environment; technical impracticability waives ARARs, not protectiveness.

Dennis explained the minimum requirements for cleanup actions, which include protecting human health and the environment, complying with cleanup standards, complying with applicable state and federal laws, and providing for compliance monitoring. Other requirements include using permanent solutions to the maximum extent practicable, providing for a reasonable restoration timeframe, and considering public concerns.

Minimum requirements for state Model Toxics Control Act (MTCA) cleanup actions include defining a cleanup standard. A cleanup standard consists of a protective concentration (cleanup level), and the location within the contaminated medium where the cleanup level must be met (point of compliance). State and federal requirements may also apply.

Cleanup goals for groundwater are:

- Prevent exposure to contaminated groundwater.
- Control sources and minimize further migration of contaminants from source materials.
- Contain plumes and minimize further migration of the contaminant plumes.
- Restore plumes and return aquifer water quality appropriate for expected beneficial uses.

Dennis stressed a few key messages regarding technical impracticability:

- Is not necessarily applied over an entire plume.
- Does not mean “walk away.”
- Can be applied at the ROD or after remedy is implemented through a ROD amendment.
- Should be used to revisit remedies when cleanup goals cannot be met.
- Does not inhibit the use of new technologies.
- Can be used to get achievable remedy goals.

The Natural Resource Damage Assessment (NRDA) comes from the concept that natural resources (air, land, water, and biota) should be restored to their condition prior to a release of pollutants, or their “baseline” condition. NRDA is a part of the CERCLA law that is separate from the requirements to investigate and clean up pollution. There are eight Hanford natural resource trustees: the State of Washington, the State of Oregon, DOE, US Department of the Interior (Bureau of Land Management, US Fish and Wildlife Service), Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, Yakama Nation, and the National Oceanic and Atmospheric Administration.

Dennis explained the coordination between the Tri-Parties and the Hanford Trustees. Trustees assess injury if there is data indicating or supporting apparent injury. If an injury has occurred, trustees may negotiate settlements that replace or restore the injured resource(s). When the Hanford Tri-Parties investigate and assess pollution, they are required to “coordinate necessary assessments” with the Hanford natural resource trustee. The Tri-Parties and trustees want similar but not identical assessments; the trustees quantify injury, while the Tri-Parties do not.

### **Groundwater Tutorial – Trust Responsibility**

Gabe Bohnee, Nez Perce Tribe (Tribal Government), discussed trust responsibilities and how the tribes are figuring out what trust responsibilities mean to DOE. The tribes have been working on an implementation plan with DOE, and Assistant Secretary James Rispoli has worked on trust management through American Indian policy. Gabe said the 1855 treaty ceding land in exchange for rights to utilize the usual customary areas for root gathering, hunting, and fishing is the clause that involves the tribes at the Hanford site. Treaty rights apply even though it is a federal property; the federal government has a trust responsibility to the tribes, and the tribes try to work hand in hand with them to protect resources for future generations. Gabe said the tribes want the site cleaned up for unrestricted use, to pre-Hanford levels (1855 treaty conditions). He said the tribes’ policy is holistic and integrated, and does not separate air from land, or land from water. He said it is important to address specific issues, such as groundwater and the vadose zone, but holistically evaluate them. The tribes want the federal government to take their comments in a meaningful way.

*Board Discussion*

Greg deBruler said there is a disconnect between the federal government, the tribes, and the public. The regulators should understand that there is a difference between what DOE and the state mean about River Corridor cleanup.

Bob Parazin asked about trust responsibilities for injury settlements. Ecology staff familiar with trustee issues were not present, so information will have to be provided at a later meeting.

### **Overview of Modeling**

John Price and Dib Goswami, Ecology, presented “The Value of a Conceptual Model for Adequate Site Characterization.”

John discussed regulatory requirements for models. During scoping of site investigations, the lead agency (DOE) develops a conceptual site model, which is not the same as a numerical model. Numerical models can help develop the conceptual site model. Complicated sites almost always need computer models to simulate site conditions.

A conceptual site model is a verbal or graphic description of an abstract idea or concept that cannot be directly observed and that helps visualize the idea or concept. John provided an illustration of a conceptual model for the Hanford Site.

John stressed that numerical models are *tools*, and results are calculations, not absolute truth. They can help integrate and visualize all valid and appropriate data, and can guide characterization by identifying sensitive parameters or locations. Valid models can predict the success of cleanup; valid models allow for relative comparison of various remedial measures. John said numerical models support decision-making, but are not the basis of decisions; people still must make the decisions.

John discussed to how make sure a conceptual model is complete. The model should include all possible and influential sources, including waste streams and volumes, facility records, processes that generate waste, unplanned releases, and operational problems. The model should also include contaminants and their properties, media and their properties, fate and transport processes, pathways, and receptors.

Questions to determine if a conceptual model is useful:

- Does the model successfully achieve objectives?
- Is it useful to plan sampling?
- Is it useful to make cleanup and long-term care decisions?
- Does the model allow development of a valid and technically credible numerical model?
- Does it need revision with new data and information?

Consequences of an inadequate conceptual model include:

- Flawed characterization
  - Investigation of area, contaminants, and pathways may be too limited.
  - Lateral and vertical limits of contamination are misrepresented.
  - Numerical model may be too limited.
- Flawed decision-making
  - Risk may be understated for certain receptors (e.g., human, biological).
  - Choice of remedy is incorrect.
  - Choice is correct, but design is incorrect (e.g., not enough waste excavated, surface barrier undersized).

John said the use of multiple models might converge on the truth and better represent reality.

Dib explained that modeling is necessary to understand the future of contaminants and the actions to take. The Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) includes a site-wide Waste Transport Model Development, which includes many modeling efforts. He said they are

trying to establish various model parameters, and it is a challenge to figure out which parameters to use. Groundwater and well profiles are missing key items and are uncertain. Another issue is model validation and how close they are to the observed data. A sitewide model can be quite difficult. Dib said the good news is that they have 40 years of groundwater data. They will concentrate on the cumulative impact assessment.

### **Breakout Groups: Specific Examples of Groundwater Challenges**

The Board continued the groundwater tutorial session with breakout groups focused on specific Hanford challenges: 100 N strontium, 300 Area uranium, and 200-ZP-1 carbon tetrachloride.

### **Groundwater and Vadose Zone – Next Steps**

After the breakout session, Board members were asked to comment on the tutorial and on what groundwater issues the River and Plateau Committee should pursue next.

Susan Leckband, Non-Union, Non-Management Employees (Hanford Work Force), found the tutorial very valuable. She asked Dennis what areas the public would be able to influence; Dennis said the public would be able to influence points of compliance. Susan would like the issue managers to develop a table highlighting items where the public will have the opportunity to comment. She said they need to work with the regulators to find where the opportunities regarding groundwater are, and the response timeframes.

Rick Jansons, Non-Union, Non-Management Employees (Hanford Work Force), said he would like to see work on the interaction between carbon tetrachloride and groundwater from a health and safety perspective. He did not think there was a program to track workers exposed to carbon tetrachloride.

Dirk Dunning said he would like to see more work on the vadose zone and how that is interrelated with groundwater, and the evaluation of numerical models.

Rob Davis said he would like presenters to start naming their models and evaluate the uncertainty of the models. Also, he would like to know which models work on which operating system. He also thought the institutional control end date needs to be revisited.

Greg deBruler would like to know more about when plumes mix, and to analyze groundwater on site holistically. He emphasized that everyone wants a clean and useable River Corridor. He also thought 150 years is too long for institutional controls. Jerry Peltier commented that the Board had previously said that institutional controls should be a last resort.

Gerry Pollet discussed CERCLA versus Resource Conservation and Recovery Act (RCRA) regulation for tank waste. Nick Ceto clarified that work being done under the tanks is regulated by RCRA, not CERCLA. Nick also said the groundwater under some tanks is regulated by CERCLA, and said he would be happy to provide information or a primer to the Board to avoid misinformation.

Todd suggested that the Board should ask what models Ecology is developing for the TC&WM EIS, why they are developing particular models, and what particular challenges are presented.

Greg thought contractors should be involved in developing timelines to make sure they are realistic. He would like the committee to review the Washington Closure Group cleanup contract for the River Corridor. Greg also said NRDA should be revisited, especially how the Board can assist the agencies in looking at trust ramifications in decision making. He thought it would be good to learn about situations where initially assessing damages can have consequences down the road. He also would like to know what DOE and the agencies expect to happen when moving from interim to final RODs.

Jerry Peltier suggested the committee look back over past groundwater advice and see if current groundwater decisions reflect previous advice. Jerry would also like to see information about 200 East cribs and ponds.

Susan Leckband thought a groundwater flow chart should be developed to use in discussions about institutional controls and long-term stewardship issues.

Sandra Lilligren, Nez Perce Tribe (Tribal Government), thought it was important to remember that this is the peoples' land and DOE is paid to take care of it. She also thought the committee should look into groundwater in 200 East, as it is going through a data quality objectives process toward ROD development.

### **State of the Site Meetings**

Norma Jean Germond, Public-at-Large, introduced the Public Involvement and Communications (PIC) Committee draft advice and explained the agencies' proposed State of the Site (SOS) meeting strategy. The meeting format includes a "Marketplace of Ideas" from approximately 5:00 pm to 8:00 pm, providing the public with information about Hanford cleanup progress (from the agency perspective), technical briefings on specific topics of interest, and local government, tribal and stakeholder perspectives. Overlapping with the Marketplace of Ideas, from approximately 6:00 pm to 8:30 pm, the public would have the opportunity for face-to-face dialogue with TPA agency leadership. It would be an opportunity for Hanford managers to hear concerns directly from the public. TPA Agency Leadership Feedback would take place approximately 8:45 pm to 9:30 pm, where the leadership would report back on "what they heard" during the face-to-face portion, providing accountability.

The PIC committee did not like portions of the proposed format.

### *Board Discussion and Questions*

Jerry Peltier commented that often a single subject can dominate an entire meeting, and suggested that the agencies meet with the PIC committee ahead of time to address topics and facilitation.

Jim Trombold, Physicians for Social Responsibility (Local/Regional Public Health), agreed that stronger facilitation is necessary at State of the Site meetings, and said the committee hoped the facilitator would work with the agencies to create a flexible yet scheduled agenda ahead of time.

Greg deBruler said the agencies should work with communities to draft an agenda that works for all parties and is not a one-size-fits-all format.

Norma Jean said the committee thought the format did not allow for enough accountability. The committee thought the agency heads should hear all the comments and concerns at the same time. Todd added that there was a synergy and educational function with the all attendees hearing all the questions with the agency heads, and they felt that was lost in the proposed format.

Helen Wheatley, Heart of America Northwest (Regional Environmental/Citizen), said the agencies presented a very similar format in February that the committee did not like. She said they tried to gear the advice to talking about principles and not specific structure, and hoped the appropriate structure would result from the values provided in the advice. She said they heard the agencies were not pleased with how the meetings went last year, but she hoped with stronger facilitation the meetings would go more smoothly.

Shirley Olinger said the agency heads felt they were being attacked last year, rather than participating in a public dialogue; she agreed that maybe stronger facilitation is the solution. She said the meetings also helped identify that an avenue was needed for discussion of issues that kept popping up at the SOS meetings. She asked that the PIC committee work with the DOE public involvement staff to meet both goals. She asked the Board to continue to work on developing the format because there is resistance to going back to the old format.

Jim Trombold said they wanted to make the meetings and process more collaborative, not necessarily to go back to how they were. The committee advocated having topics established beforehand, with flexibility built into the agenda.

Susan Leckband said she is committed to working with DOE and the agencies to develop a process that works. She also suggested that there not be a “cookie cutter” format for all regions, and the PIC committee could be helpful in developing formats, and also in suggestions of how to avoid verbal attacks on the agencies.

The advice was adopted.

### **Environmental Management Site Specific Advisory Board (EM SSAB) Chairs Meeting Report**

Todd reported on the SSAB Chairs meeting in Oak Ridge, Tennessee. Charlie Anderson and James Rispoli from DOE-Headquarters (DOE-HQ) were among those attending, and Todd said they spent a fair amount of time with the chairs and listened to what they had to say in addition to giving presentations. Todd also confirmed that was the last meeting with the Rocky Flats Advisory Board and Fernald Advisory Board chairs because those SSABs are closing down operations.

Todd said the mixed low-level waste plan and disposition maps will be ready for viewing in a few weeks and will be posted on a website when they are complete. The fall chairs meeting will focus on groundwater.

The meeting produced two letters: “Incorporation of Lessons Learned in Future Site Closures” and “Recommendation for EM SSAB Input to Future Site Environmental Budget Requests.”

The Board gave its approval for Todd to sign both letters.

### **EM SSAB National Charter Update**

The HAB’s charter was set up to meet independent and legal state requirements, and it also decided the seats – balance was a prime concern. The Board was chartered under the Federal Advisory Committee Act (FACA) in 1994, and, under pressure to reduce the number of advisory boards, an umbrella charter was created by DOE-HQ for all of EM. The national charter and membership letters are revised every two years. Recently, some of the charter language was changed for the 2006 renewal. The new language directs that members are to serve no more than three two-year terms with a request for exception available. Todd was surprised by the language change; at the SSAB Chairs meeting he was assured that it was not intended to be a “heavy hand” of term limits. However, on the Chairs call the following week, he heard that it would definitely be enforced.

Todd then received a letter from DOE-HQ before the Board meeting saying that DOE expects the Board to be FACA-compliant and compliant with the new national charter. It said DOE is willing to work with the Board to develop a process to work “new blood” into the Board, and that the new language is not a heavy-handed process to eliminate outspoken Board members. Todd said he is much more comfortable with the situation now. He recommended the Board’s leadership group discuss how to meet the charter terms, and see what they can do to maintain the intent of the charter as well as maintain Board membership as they see fit. If necessary, it can be discussed again at the September Board meeting.

#### *Agency Perspective*

Shirley Olinger said that as long as the intent is met, the Board should be okay. She said DOE wants to work with the Board to see how this can be best implemented. Dave Brockman said there is flexibility and a transition period could be implemented if necessary.

#### *Board Discussion and Questions*

Greg deBruler said the whole point of FACA was to work in a collaborative manner. He also said this Board is the longest-lived board in the US and it should be an example to other advisory boards.

Jerry Peltier said they have all kinds of new members coming onto the Board, and the size of the Board makes it essential to maintain a core group to assist new members. Hanford is a very complex site that can take years to understand. He said effectiveness would be lost if the knowledge base is eliminated.

Todd said the Board maintains significant turnover; it turned over 50% of its members last year, 25% of which were primary members.

Gerry Pollet said the Board also operates under Washington State law, which has more prescriptive openness requirements. He said FACA is an important legal requirement, but it doesn't preempt or undermine the more expansive requirements the Board is established under.

Vince Panesko said term limits create other problems, such as when an individual is hired by a seat to represent that seat, such as Pam Larsen for the City of Richland. Todd said the exception language could be utilized.

Rob Davis said they are all volunteers and does not see how this is applicable. Dirk Dunning said he has heard compliments on how well the Board works, and that the Board is part of the institutional memory of Hanford.

### **Tri-Party Agency Updates**

#### **DOE-ORP**

Eric Olds, DOE-ORP, gave a DOE-ORP update. They received a revised Estimate at Completion for the WTP from Bechtel, and hope to release it later in June before the Tank Waste Committee meeting. The EM Advisory Board is coming to the Tri-Cities August 22-24 and will be taking a site tour.

Norma Jean Germond asked if HAB members could meet with the EM Advisory board; Eric said that is a good idea and that he would check. Todd said they discuss that at the next EIC committee call.

Dirk Dunning asked about seismic work funding: is there a delay? Eric was not certain.

#### **DOE-RL**

Dave Brockman gave a DOE-RL update:

- 24 waste sites are complete – good progress and ahead of schedule.
- DOE is working with EPA and Ecology on changes to the Central Plateau M-15 milestones, with more discussions to come.
- They expect to be reaching a ROD for the B Plant waste remediation project this spring.
- 200-W-42 time critical action is progressing; 846 of 990 feet of pipeline feet have been removed—phase two is underway.
- They have completed the last borehole for the Z9 slant borehole and have started vapor extraction.
- K Basins north load sludge will be completed.
- K East is on schedule. They anticipate transferring the first batch from K East to K West in September.
- The House Appropriations Committee approved the spending bill with \$20 million for groundwater technical work.

Jerry Peltier asked if dry storage canisters are monitored; Dave said there is an ongoing hydrogen generation program that has not found any anomalies. They are still determining how well it works, but so far, so good.

Dick Smith, City of Kennewick (Local Government), asked why the sludge was not being moved directly to T Plant instead of being transferred to K West first. Dave said the plan is to consolidate the sludge at K

West and treat it there, so they can start work under the K East basin. He said T Plant would not be able to treat that sludge.

Keith Smith, Public-at-Large, said he hopes the basin success is a permanent lesson in successfully engaging workers to come up with solutions.

## **EPA**

Nick Ceto gave an EPA update. They are planning to hire someone for a performance assessment, which has been a long-standing request. EPA is currently trying to obtain and look at the DOE long-term baseline for the Central Plateau, so they can analyze the baseline to make sure it matches funding. EPA is also getting more technical help to analyze modeling, and is making progress on acquiring assistance for ecological risk assessment. They are also engaging Seattle management: the regional administrator planned a site tour.

Nick said there has been good work in the 300 Area and they are addressing concerns about public uncontrolled access. He said burial ground work is going well, but slower than they had hoped due to contract difficulties and unanticipated issues.

Nick also said funding has been taken from other areas to fund K Basin cleanup, which is why they are concerned about the baselines and a milestone domino effect.

## **Ecology**

Jane Hedges, Ecology, said they just hired a new manager for the Tank Storage and Soils cleanup program. They are reviewing the single shell tank performance and risk assessments, and are pleased EPA is acquiring more personnel. They are getting some technical assistance on modeling for the TC&WM EIS and putting together a scope of work for a contractor.

Ecology is hoping to release the sitewide permit renewal (RCRA) in September for public review. They were at the budget outreach meetings and have been invited to the Spokane meeting on June 5. The WTP 2+2 melter configuration permit will be open for public comment in July.

## **Leadership Retreat Report**

Todd reported on the Leadership Retreat held in May. They planned for next year, discussed priorities, and talked about the nominating committee process for the Chair position, as his term expires in February.

Norma Jean Germond, Maynard Plahuta, Helen Wheatley, and Jeff Luke have put together a nomination process. Next, a nominating committee will gather nominations and check nominee willingness. They are planning to open nominations at the September Board meeting and will continue to accept nominations until October 15.

Todd presented the draft Priorities Memo outlining priorities that will serve as a guide 2007 Board work. He said the number one priority for 2007 is successful construction and operation of WTP. Further educating the Board on WTP is on the September Board meeting's agenda. Other priorities include:

- TC&WM EIS
- Public education and public involvement
- Leadership and membership development
- Cleanup priorities
- Tank waste management

In addition, the memo outlined other issues that will receive Board attention: procurement of major cleanup contracts; River Corridor baseline; cooperation with other sites on national issues; cleanup budget; CERCLA Five Year Review, and; BC cribs.

The memo incorporates DOE's priorities and is a "living" document until it is adopted at the September Board meeting.

Todd said they also discussed the issue manager process at the leadership retreat. There are many issue managers with lots of energy, and he thinks the Board should establish boundaries on what issue managers can and cannot do, how they frame issues for a committee, and make it so the agencies understand why committees and issue managers are investigating certain topics. He said they came up with an issue manager checklist to use as a tool. The Board agreed to utilize the checklist.

Dick Smith suggested a training session for issue managers; Todd agreed and said he would work on codifying procedures and processes. For now, he stressed that issue managers should over-communicate with the agencies and within committees. The topic was flagged for the September meeting.

### **Waste Treatment Plant Committee Report**

Rick Jansons reported for the Tank Waste Committee on WTP and their goal of making WTP a Board priority. The briefing was "Part 1," focused on background and the Governmental Accountability Office (GAO) recommendations.

Rick gave a brief history of the WTP and its history of cost increases. The WTP contract was awarded in 2000 to Bechtel for \$4.3 billion dollars. It was originally due for completion in 2011, and current milestones are associated with that completion date. The cost estimate increased from \$4.3 to \$5.7 billion in March 2003 due to estimating errors and a change in plant capacity. Then, in March 2005 the estimate was again revised from \$5.7 to \$8.3 billion due to technical issues, although the agencies attribute it to different causes. Finally, in December 2005, a more complete estimate (not yet approved by DOE-ORP) was created for up to \$10.5 billion plus the contractor fee. In February 2006, it was about \$10.9 or \$11 billion. Rick said there is one more cost estimate (not publicly released), which he heard could be higher than \$10.9 billion. The Tank Waste Committee is waiting for DOE-ORP to present the new cost estimate. The US Army Corp of Engineers baseline is due mid- to late summer, and the Tank Waste committee plans on discussing it in August.

Rick's second point was about time: the original date of completion was 2011. The latest date now is 2017, but that is assuming the funding level of \$690 million for 2007. Delays cost money, and from a congressional viewpoint, the money is not being utilized effectively and efficiently. The goal of the Tank Waste Committee and the Board is to put energy into positive advice to ensure the plant gets continued funding and continues to move forward. It is a joint Tank Waste and Budgets and Contracts Committee subject.

Rick stressed that: 1) WTP is vital to everything at Hanford; 2) it is in danger because of cost and schedule; and, 3) the Board should lend pressure and support that DOE can use to get funding from Congress.

The GAO talked with the Tank Waste committee, and Rick prepared a summary of their view of the three main causes of WTP problems and three ongoing concerns.

#### Causes:

1. Contractor performance. (Project estimates overly optimistic, not conservative, and did not think about unforeseen problems.)
2. DOE management and oversight problems.
3. Unexpected technical challenges.

#### Ongoing concerns:

1. Historical unreliability of costs and schedule. Overly optimistic again, and there are still budget and baseline problems.
2. Inadequate contractor incentives and management oversight. DOE-ORP is hiring additional procurement staff and managers are being certified. They are trying to meet that concern.
3. The use of a fast track design-build approach to WTP. The GAO recommended having 90% design before proceeding. DOE-ORP said 90% is difficult to achieve; they agreed to widening the

gap between design and construction to at least a year or greater. This is reflected in the DOE-HQ budget request.

Rick said they would have more information on WTP in September, and the end-of-the-year goal is to have advice for how to keep WTP on target.

#### *Board Discussion*

Ken Gasper, Benton County (Local Government), noted technical problems include seismic issues that resulted in the delay of the high-level waste facility construction and the pretreatment facility construction. The GAO and the committee were trying to figure out if the cost overrun was related to work having to be redone as a result of the delay. The GAO gave no response that they had any indication that there was construction work needing to be redone. Ken said Bechtel and DOE stated most of the costs were associated with the review and updates to reflect the seismic criteria. He said they gave no indication of the associated costs of laying workers off, bringing new workers on, and retraining.

Helen Wheatley asked how the Best and Brightest report intersected with the GAO study; Rick did not think they overlapped at all. Todd said, that to his understanding, the Best and Brightest report asked if the plant would actually work when it was completed. The GAO did not address that.

Helen asked if the Nuclear Regulatory Commission (NRC) would be brought into an oversight role. Eric Olds said the House of Representatives said they would require that.

Jerry Peltier said Congress is losing faith in DOE to manage the site, and the Board and DOE have to come together in support of the continuation of WTP. They need to be prepared to give the public some “what if” situations. He also said DOE should look into why there are never cost reductions due to new technology. He thought DOE should better define their oversight role. Vince Panesko said Congress losing confidence ignores the need for the plant in the first place.

Eric Olds encouraged the Board to obtain copies of the reports coming out of the various House and Senate authorization committees.

Dirk Dunning said delays are the biggest source of increased costs.

Keith Smith said DOE needs to look at integrated safety management all the way out to suppliers and material sources.

Mike Keizer, Central Washington Building Trades (Hanford Work Force), said the workforce is the cornerstone, and delays and layoffs affect morale. He said employee retention is difficult when the job appears unstable.

Rob Davis said the nuclear expertise in the Tri-Cities should be better utilized. He also thought bringing in NRC oversight is a political answer, and will take funding away from WTP. He thought a hybrid of NRC and the Best and Brightest would provide the most realistic answer and oversight.

Jane Twaddle, Yakima Valley Community College (University), asked if the GAO quantified the cost overruns; Rick said the GAO did quantify but that was not their main purpose.

Todd said the GAO also said that DOE’s contract management policy essentially forced a contractor to minimize the possibilities of contingencies. Rick said they had funding set aside for the “unknown unknowns,” but now contingencies are increasing with time instead of decreasing.

Dick Smith said early startup of the low activity waste facility should be more seriously considered.

## **Committee Reports**

*River and Plateau Committee:* The committee will work on additional groundwater topics over the summer. Specifically, they will review institutional controls, CERCLA and RCRA, modeling, old advice, flow sheet, reasonable restoration timeframes, 300 Area groundwater, and the M-15 milestones. The committee will not meet in June.

*Tank Waste Committee:* The Tank Waste Committee will have a combined meeting with the Budgets and Contracts Committee on June 22 and will be working on WTP "Part 2" for the September Board meeting. There is a double shell tank review in August with agency and issue manager presentations.

*Health, Safety and Environmental Protection Committee:* The committee is gathering information on beryllium at Hanford. The Washington Closure Group gave a presentation on their beryllium program, and the committee heard a worker perspective, too. DOE also discussed requirements. Keith Smith said preventing worker re-exposure and identifying beryllium sources are a few of the concerns. He said beryllium-affected workers would like a contact in the Tri-Cities who they could bring their issues to. The committee also had a presentation on tank vapors. Keith said the committee would be addressing two topics from this meeting: carbon tetrachloride and hexavalent chromium exposure.

*Budgets and Contracts Committee:* The Budgets and Contracts Committee has three principle areas of interest: 1) contract re-bid for the major contracts and their terms and conditions; 2) the 2007 budget and the formulation of the 2008 budget; and, 3) funding requirements for WTP.

*Public Involvement and Communications Committee:* The Public Involvement and Communications Committee reviewed the public budget meetings and discussed the importance of having representatives present from each agency. They discussed the CERCLA Five-Year Review and the DOE survey and responses. The committee discussed the State of the Site meetings, which resulted in advice. Norma Jean said it is difficult having the PIC meeting the day before the Board meetings because it does not allow enough time to develop quality advice. She would like to see the schedule reconsidered in the coming months.

## **Board Business**

Susan Leckband presented the idea of the Board taking a riverboat cruise to tour the river in September. She thought it would help putting places with names. The Board asked her to further investigate the idea, possibly taking a tour on the Thursday of the next Board meeting.

Helen Wheatley said a letter regarding the TC&WM EIS was sent to Secretary of Energy Samuel Bodman from the Oregon Congressional delegation. It discussed single shell tank waste, called for DOE to challenge state authority on emptying tanks, and expressed concern that tanks have continued to leak. She said the letter could be found on the Heart of America website.

## **June Board Topics**

The Board identified the following as possible topics for the September Board meeting:

- Board review of the past year's work with agency managers
- Adoption of Board priorities for the coming year
- WTP "Part Two"
- Chair nominations
- Committee leadership nominations
- Issue manager training policies and procedures

## **Public Comment**

No public comment was offered during this meeting.

**Attendees**

**HAB MEMBERS AND ALTERNATES**

Gabriel Bohnee, Member	Keith Smith, Member	Rick Jansons, Alternate
Rob Davis, Member	Margery Swint, Member	Tony James, Alternate
Greg deBruler, Member	Jim Trombold, Member	Sandra Lilligren, Alternate
Norma Jean Germond, Member	Jane Twaddle, Member	Jerri Main, Alternate
Harold Heacock, Member	Gene Van Liew, Member	Dave Molnaa, Alternate
Rebecca Holland, Member		Wanda Munn, Alternate
Mike Keizer, Member	Kristie Baptiste, Alternate	Nancy Murray, Alternate
Susan Kreid, Member	Al Boldt, Alternate	Vince Panesko, Alternate
Susan Leckband, Member	Shelley Cimon, Alternate	Dick Smith, Alternate
Todd Martin, Member	Gerry Dagle, Alternate	Charles Weems, Alternate
Bob Parazin, Member	Dirk Dunning, Alternate	Helen Wheatley, Alternate
Jerry Peltier, Member	Ken Gasper, Alternate	
Gerald Pollet, Member	Maxine Hines, Alternate	Debra McBaugh, Ex-Officio
Maynard Plahuta, Member	Steve Hudson, Alternate	Earl Fordham, Ex-Officio

**AGENCY, CONTRACTOR, AND SUPPORT STAFF**

Dave Brockman, DOE-RL	Nolan Cutis, Ecology	Cathy McCague, EnviroIssues
Karen Lutz, DOE-RL	Jane Hedges, Ecology	Barbara Wise, Fluor Hanford
Mike Thompson, DOE-RL	Tim Hill, Ecology	Dick Wilde, Fluor Hanford
Eric Olds DOE-ORP	Dib Goswami, Ecology	Sharon Braswell, Nuvotec-ORP
Shirley Olinger, DOE-ORP	John Price, Ecology	Emily Millikin, Washington Closure
		Joy Shoemake, CH2M Hill
Nick Ceto, EPA	Tammie Holm, EnviroIssues	
Dennis Faulk, EPA	Hillary Johnson, EnviroIssues	
	Lynn Lefkoff, EnviroIssues	

**MEMBERS OF THE PUBLIC**

Annette Cary, Tri-City Herald	Beverly Penney, CTUIR	Stan Sobczyk, NPT - ERWM
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