

# OREGON HANFORD WASTE BOARD

## Minutes

Regular Meeting

October 23-24, 2000  
Hood River Inn  
Hood River, Oregon

### Attendees

Voting Board Members: Casey Beard, Shelley Cimon, Larry Clucas, Norm Dyer, Jill Eiland (10/23), Norma Jean Germond (10/24), Paige Knight, Fred Lissner, Armand Minthorn (Confederated Tribes of the Umatilla Indian Reservation), Eric Nisley, Michael Grainey\* (Oregon Office of Energy).

Legislative Members: Sen. Ted Ferrioli (10/24), Rep. Jeff Merkley.

Oregon Office of Energy Staff: Mary Lou Blazek, Dirk Dunning, Susan Coburn Hughs, Doug Huston, Ken Niles, Susan Safford.

U.S. Department of Energy: Peter Bengtson,\* Dr. Harry Boston,\* Beth Bilson,\* Joe Cruz,\* Mike Thompson.\*

Washington Department of Ecology: Jane Hedges,\* John Price,\* Ron Skinnarland.\*

U.S. Fish and Wildlife Service: Paula Call.\*

Bechtel Hanford Inc.: Michael Hughes.\*

CH2M Hill Hanford Group, Inc.: Fran DeLozier,\* Carolyn Haass.\*

Oregon Health Division: Laura Leonard.

Public: Mark Henry, Doug Riggs, Robin Klein.\*

### Administrative Business

#### A. June Meeting Minutes

The Board approved the minutes of the June 2000 meeting with the corrections marked on the draft and inclusion of a brief description of the letter to Assistant Secretary Huntoon described at the top of page 8 of the draft minutes.

#### B. 2001 Meeting Dates and Locations

The Board set dates and locations for its 2001 meetings: March 27-28, 2001 in Mission, Oregon; June 19-20, 2001 in Sisters,\*\* Oregon; and October 23-24, 2001 in Portland, Oregon.

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\* Individuals with an asterik after their name attended only on October 24, 2000.

\*\* The June 2001 meeting dates and location were subsequently changed to June 26-27, 2001 in Baker City.

### C. June Meeting Actions Report

Ms. Safford reported on the action items from the June meeting:

- A Board letter was sent on 8/18/00 to Dr. Inéz Triay of the Department of Energy (DOE) regarding funding and support of the Confederated Tribes of the Umatilla Indian Reservation's emergency preparedness program along the Waste Isolation Pilot Plant route through their reservation.
- A Board letter was sent on 8/18/00 to the Oregon Congressional delegation supporting the legislative proposal to give the State of Oregon a more formal role in Hanford cleanup decisions. Senator Ron Wyden sent a letter back, which was handed out at the meeting, noting his previous support for the Hanford Environmental Cleanup Act of 1999.
- A Board letter was sent on 8/3/00 to Dana Ward (DOE) and Susan Giannettino (Interior Columbia Basin Ecosystem Management Project) urging them to share and coordinate Hanford Site environmental data with other federal environmental agencies. There has been no written response from either agency.
- A Board letter was sent on 10/20/00 to Assistant Secretary Huntoon urging her to reverse her decision to withdraw interim record of decision approval authority from site operations offices. Copies of this letter were distributed at the meeting.
- A Board subcommittee drafted a letter to Secretary Richardson urging him to take steps to protect additional lands with similar values as those included in the Hanford Reach National Monument. This letter was provided to the Chair on 9/11/00 with a recommendation to hold it until after a presentation on the Hanford Reach National Monument at the October meeting. Copies of the draft letter were distributed at the meeting.
- At the June meeting, the Board requested a presentation on the Hanford Reach National Monument at the October meeting. It is on the October meeting agenda as Item 5.
- At the June meeting, the Board voted to send a letter to DOE regarding inadequate public involvement in surplus uranium disposition decisions. Staff held this letter for discussion and further direction from the Board because DOE decided, after the June meeting, to consider burying more material at Hanford.

Mr. Dunning explained during the Waste Cleanup and Site Restoration Committee meeting that DOE completed an environmental assessment and found that there was no significant impact from disposing surplus uranium by burial in unlined trenches at the 200 Area. After the June Board meeting, DOE decided to ship approximately 900 metric tons to Portsmouth, Ohio. Mr. Dunning said that all but 140 metric tons has now been shipped to Portsmouth. DOE is considering burying the remaining uranium in some form of grout. Most material is unirradiated uranium fuel clad in zirconium from N Reactor. Its surface is contaminated with radioactive material.

DOE is considering storing another 825 metric tons in the 200 Area pending a future decision about what to do with it. The Washington Department of Ecology expressed concerns about burying the uranium. Following discussions with DOE, Ecology has reportedly withdrawn those concerns. DOE considers the risk from disposal of this uranium by burial insignificant in comparison to risks of the large amount of uranium already in 200 Area burial grounds.

During the main Board meeting, the Board discussed requesting that DOE prepare an environmental impact statement (EIS) on how it will dispose of the remaining uranium. Ms. Germond said it is critical to first determine the end state. Ms. Cimon said an EIS would bring the issue before the public. Mr. Dyer questioned whether an EIS is necessary, because the radioactive content is so low compared to the waste already in the 200 Area. He also noted that it could be cheaper to pay for industrial disposal of the uranium as opposed to burying it. Ms. Knight said discussions of accelerating cleanup along the river need to include 200 Area cleanup, because contamination flows down from the 200 Area.

Ms. Bilson said a draft solid waste EIS for the entire Hanford Site will be released in January 2001. She said she believes it will address disposal of the unirradiated uranium fuel.

Ms. Germond moved that the Board send a letter to DOE urging it to revise the draft solid waste EIS to include the disposition of the 825 tons of unirradiated uranium. Mr. Dyer seconded the motion, but requested the letter also address the possibility of using the uranium rather than burying it. The Board voted unanimously to send the letter.

#### D. Committee Meeting Minutes and Business

The committee chairs or their representatives reported on the meetings held on October 23, 2000.

##### Transport

The Transport Committee met on Monday afternoon, October 23, 2000. Staff updated the Committee on transuranic waste shipments from Hanford to the Waste Isolation Pilot Plant (WIPP) in New Mexico. After nearly 12 years of repeated delays, Hanford shipped its first transuranic waste in July to WIPP. Subsequent shipments occurred August 24 and September 20. All three shipments were uneventful. Two additional shipments are scheduled in November.

WIPP is designed for the permanent disposal of transuranic waste generated during the research and production of nuclear weapons. Shipments from Hanford travel through about 204 miles of northeast Oregon en route to WIPP, which is located near Carlsbad, New Mexico.

Staff explained that DOE's National Transportation Program issued a report in November 1999 which identifies barriers "affecting timely and successful transportation of waste and materials with DOE's Environmental Management Program...Many have the potential for significantly affecting scheduled site closure and/or timely waste and material disposition." DOE and its contractors produced and prioritized a list of 17 transportation-related problems. Some of these problems relate to the planned transport of radioactive materials to or from Hanford (and through Oregon).

DOE has not yet widely engaged its stakeholders in this process. Staff said many of the proposed solutions are logical but others are troubling. For example, "suggested" solutions to increase shipments to the WIPP include using shipping containers that are not as robust as those which are currently required.

The Committee approved a staff request to draft a letter to DOE on behalf of the Board, encouraging DOE to increase stakeholder involvement in reviewing these proposed "solutions." During the main session on October 24, 2000, Mr. Beard moved that the Board send this letter. The Board unanimously approved the motion.

In early September, the U.S. Navy conducted its third spent fuel transportation training exercise with state and local emergency responders. This exercise was conducted at the Idaho National Engineering and Environmental Laboratory. Staff observed the exercise. The first such exercise occurred at the Puget Sound Naval Shipyard in December 1996, after numerous requests from the State of Oregon.

The Committee viewed a video tape showing demonstrations in Germany in 1997. The protests were in opposition to the transport of high-level radioactive waste to an interim storage facility in Northern Germany.

### Public Involvement

The Public Involvement Committee met on Monday afternoon, October 23, 2000. The public involvement committee discussed the Oregon Office of Energy's Fast Flux Test Facility (FFTF) focus group project. Ms. Blazek said she considers the project a success. The Oregon Office of Energy obtained input from a broad cross-section of Oregonians. More Oregonians are better informed about Hanford. Ms. Knight said some activists are disturbed by the choice of participants. They are also angry that the project undercut their message that Oregon unanimously opposes restart of FFTF. She warned that the Oregon Office of Energy will face repercussions if the U.S. Department of Energy (DOE) decides to restart FFTF. Ms. Safford noted the project was designed to gain substantive comment rather than measure public sentiment.

Ms. Blazek said in response to a question from Mr. Lissner that the Oregon Office of Energy learned of many other groups with whom it can meet to inform the public about Hanford.

Ms. Knight commended the effort. She criticized the most recent Oregon Office of Energy meetings with Oregon interest groups and said the meetings should have goals. She said people are frustrated with the lack of progress at Hanford. Ms. Knight criticized DOE's Portland public meeting on the FFTF programmatic environmental impact statement. She criticized the lottery system for selecting the order for public comment. She said more Oregonians need to be involved in Hanford issues and need to understand how deeply our economy and lifestyle can be impacted from an incident at Hanford.

Ms. Knight raised the issue of US Ecology's low level waste disposal site. Ms. Blazek referred her to David Stewart-Smith of the Oregon Office of Energy. Mr. Stewart-Smith is Oregon's representative to the Northwest Compact, which governs low level waste disposal in the Northwest.

The committee also evaluated DOE's "Done in a Decade" materials from a public information perspective. The format and use of graphics and photographs are good. However, the photographs need to be updated. There needs to be a contact name and phone number as well as a web site reference for more information. The materials need to better explain how they relate to the Tri-Party

Agreement, tradeoffs/effects on existing cleanup activity and a report card on how well the work proposed is performed and how effective the work is as a public information tool.

During the full Board meeting on October 24, 2000, Ms. Germond moved to draft a letter to DOE (Marla Marvin) regarding its evaluation of the "Done in a Decade" materials as a public information tool. The Board voted unanimously to send the letter.

Ms. Henry also discussed the Tri-Parties' review of the Tri-Party Agreement Community Relations Plan. She asked committee members to review it and provide their comments to her by November 15, 2000. She will include them in a letter to the Tri-Parties regarding the plan. Ms. Henry will forward a copy of the draft letter to members of the Public Involvement Committee.

The Committee also suggested inviting Gail McClure (DOE) to its next meeting to discuss how DOE designs its public information materials and how it evaluates the materials' effectiveness. Ms. Knight mentioned the annual Oregon Science Teachers Association meeting as a means for involving students in Hanford issues. The 2001 Teachers meeting will be held in Portland. Hanford lesson plans will be obtained from participants in a previous Oregon State University program funded by the Oregon Office of Energy. Ms. Eiland said Larry Sears of PGE could provide information from the Trojan Visitors Information Center.

#### Waste Cleanup and Site Restoration Committee

The Waste Cleanup and Site Restoration Committee met on Monday afternoon, October 23, 2000.

##### 1. Tank Waste Issues

Mr. Huston discussed the issues addressed in his briefing book memorandum on this topic: the vitrification project, tank capacity/new milestones consent decree and double shell tank integrity assessments/Washington Department of Ecology final determination. Ms. Cimon asked about the size of new double shell tanks that may be constructed. Mr. Huston and Mr. Dunning said there will be some configuration totaling a capacity of 89 million gallons. Ms. Knight said construction of new double shell tanks would mean harming a new chunk of the 200 Area and would not address the fact that the existing double shell tanks are nearing the end of their design life.

The Board requested that the Oregon Office of Energy send Board members copies of the Oregon Office of Energy's comments on DOE and Ecology's single shell tank proposals.

With regard to Ecology's Final Determination and fine to DOE, Mr. Lissner commented that DOE bought itself another five years for \$200,000. Mr. Nisley asked from where the money to pay the fine comes. Ms Blazek responded that it would come from DOE's existing budget.

##### 2. Accelerated River Cleanup

Mr. Huston summarized his memorandum in the briefing notebook on this topic. In essence, DOE proposes to accelerate cleanup in parts of the 100 and 300 Areas. DOE needs a ten percent budget

increase to do this. Some work in the 200 Area would be delayed. Work on the 618-10 and 618-11 burial grounds would be deferred another 10 years. Mr. Huston said DOE appears to be moving away from substantive cleanup goals to cleanup for political reasons. Other questions about the proposal include what cleanup standards will be used and why the proposal does not address groundwater cleanup.

Ms. Cimon noted that the proposal also does not address remote handled transuranic waste or how partial Superfund “delisting” of certain areas would proceed. Mr. Dunning noted that the U.S. Environmental Protection Agency (EPA) Hanford project manager, Doug Sherwood, has expressed concern about whether Congress will fund construction of a remote handled waste processing facility simultaneously with construction of the tank waste vitrification plant.

The Committee developed a list of questions to present to the DOE speaker, Beth Bilson, on this topic. Those questions were: What is the proposal’s impact on the Tri-Party Agreement? How does the proposal affect 200 Area cleanup? What about increased risk for remote-handled and handling of transuranic waste? How does the proposal apply risk/hazard-based cleanup criteria? Does this piecemeal approach represent moving away from a risk-based approach? Where is the funding for the proposal? Will DOE proceed with the proposal if it cannot obtain a ten percent budget increase?

During the Board meeting on October 24, 2000, Mr. Dyer moved to send a letter to DOE expressing the above questions. The Board unanimously approved the motion.

### 3. U.S. EPA Five-Year Review.

Mr. Dunning briefly described EPA’s review of cleanup work completed, which is required under Superfund. The review identified only a few problems. One problem EPA identified was that DOE’s method of counting operational time of pump and treat systems may overstate success in capturing groundwater contaminants. Another problem was water applied to excavation areas to suppress dust is moving contaminants through the soil. The contaminants are being detected in monitoring wells.

### 4. National Academy of Sciences Visit.

Mr. Dunning reported that the National Academy of Sciences Subcommittee on Hanford Science and Technology visited Hanford. Their most recent visit to Hanford included a tour of soil remediation areas. Some significant discoveries are being made at the Sisson and Lu Test Site, which was one of the areas visited by the Subcommittee.

A color handout depicting the data from the Sisson and Lu Test Site was distributed during the Waste Cleanup and Site Restoration Committee meeting. The handout depicts sampling results that show that water moves from the surface through the ground in a step-like fashion, horizontally and then downward, as it encounters impermeable subsurface soil layers.

These test results are significant, because they call into question the groundwater models that DOE is using to make cleanup decisions. Those models presume that water flows directly downward through the soil and that it does not travel horizontally.

## 5. Other Business

Ms. Safford reported that a committee drafted a letter regarding protection of additional land at Hanford that possess similar values to the lands that were included in the Hanford Reach National Monument. Drafting the letter was an action item from the June meeting. The letter was not sent because the Board may wish to modify it after hearing the presentation by Paula Call of the U.S. Fish and Wildlife Service on the Hanford Reach National Monument, Agenda Item 5.

Ms. Safford also reported that the EPA announced a large reduction in a penalty issued to DOE for hazardous waste handling and other violations discovered during a joint multi-media inspection by EPA and the Department of Ecology. She said the Oregon Office of Energy is reviewing the consent agreement and two proposed supplement environmental projects. Oregon Office of Energy staff may recommend some action by the Executive Committee before the next meeting.

Mr. Minthorn announced that the Confederated Tribes of the Umatilla Indian Reservation and the Affiliated Tribes of the Northwest Indians (49 western tribes) passed a resolution opposing restart of the FFTF.

Mr. Dyer encouraged Board members to contact him about committee agenda items for the 2001 meetings.

### Agenda Item 1: September 2000 Energy Northwest Ingestion Drill

Ms. Henry briefed the Board on this emergency preparedness exercise.

She said the Oregon Office of Energy participated in three evaluated events this year: a county exercise in December 1999, a lab exercise at Oregon State University in July and then an ingestion exercise in September. Ms. Henry's presentation focused on the September exercise.

Thirty organizations participated in the exercise, including 10 from Oregon, the Federal Emergency Management Agency (FEMA) and Nuclear Regulatory Commission (NRC). Counties also participated. FEMA and the NRC both participated in the exercise and evaluated participants' performances.

The exercise scenario involved a 5.2 magnitude earthquake that caused damage to the Columbia Generating Station (formerly WNP-2) and a release to the environment. For the purposes of the exercise, two weeks of time and work were compressed into two days. The participants performed some of the actions and simulated others.

Day one was the emergency response phase of the exercise. During this phase, the participants tracked the release and performed a damage assessment that included assessing how many people had been impacted. The second day was the ingestion phase when sampling occurred and the participants prevented the spread and ingestion of radioactive materials. In an actual event, monitoring would continue for months.

During day one, the plant focused on stopping the release and getting the plant into safe shutdown. The State of Washington focused on setting protective action recommendations and monitoring.

In Oregon, within 15 minutes of the event notification, response began with various agencies sending personnel to the Emergency Coordination Center in Salem. Mary Lou Blazek was the Duty Officer. The Emergency Coordination Center was staffed and operational within 45 minutes of the event notification. The staff included representatives from the Oregon Office of Energy, Oregon Health Division and Oregon Department of Agriculture. Ms. Knight asked what the response time would be during a holiday weekend. Ms. Henry said there are unannounced exercises during such times and it would take about 15 minutes more to respond. The Oregon Office of Energy has five staff that carry pagers at all times. Staff have preassigned roles. Some go to Richland. Others stay in Salem.

The Duty Officer decides based on the event notification information and any subsequent information whether to dispatch Eastern Oregon monitoring teams. Also, emergency response centers in Heppner and Pendleton are notified from the Emergency Coordination Center. The tribal fire chief of the Confederated Tribes of the Umatilla Indian Reservation is notified.

Mr. Beard explained how a call down system is used to notify local emergency responders. There are different call down systems for a radiation emergency versus nerve gas. Courtesy calls are also made to local elected officials in case they receive calls from constituents. The response action for a radioactive emergency is fairly limited. Mr. Beard said the main action is preparing to embargo crops if necessary.

During this exercise, the information provided indicated that the plume released from the plant was traveling due east and would not impact Eastern Oregon. However, Ms. Blazek and her advisers decided to take precautionary actions and make sure no radioactive material reached Oregon. Field teams were sent to Morrow and Umatilla Counties to obtain samples. There are 25 predetermined sampling points. Those points have been sampled to establish baseline information. Responders sample all media, soil, air and water.

Oregon joined the State of Washington in requesting sampling assistance from the Federal Radiological Monitoring and Assessment Center (FRMAC). FRMAC performs aerial flyovers and sends out field teams.

Oregon and Washington also issued travel advisories. The Emergency Operations Center worked with the Oregon State Police to restrict travel into Washington in the plume area. Also, travel on the Columbia River north of the McNary Dam was stopped.

Ms. Henry outlined the public information actions. A phone bank was established. During this exercise, the phone team answered a high volume of calls and impressed the evaluators. Because the counties have fewer staff, they refer calls to this phone bank. Also, there are preprinted informational brochures that are distributed in high traffic areas, like grocery stores, within a 50 mile radius of the plant. All these actions are part of the state's emergency response plan.

A Board member asked whether the Coast Guard was involved and Ms. Henry said it was.

Once the release is terminated, i.e. Energy Northwest successfully gets the plant into safe shutdown, the Washington Department of Health is responsible for assessing the scope of the plume and responding accordingly.

For example, Mr. Huston explained his role as Dose Assessment Coordinator. He goes to the Emergency Operations Facility (EOF) at the plant and works with representatives of the Washington Department of Health, such as Mark Henry, to determine where the plume went and what the impacts might be. They use both computer models and sampling information to come up with two isopleths - lines on a map that depict 500 microrad/hour and 20 microrad/hour radiation boundaries.

A Board member asked how big those numbers are. Mr. Huston responded that a fatal radiation dose is about 450 rem. Background is about 10 microrad/hour. Twenty microrad/hour is about twice normal background.

The Food and Drug Administration has what are called derived intervention limits - levels above which intervention is necessary. The isopleths are used to find where crops might be contaminated at or above those levels. Those levels are so low that they cannot be detected with field instruments. Instead, the staff at the Emergency Operations Facility calculate where the 2 microrad/hour line is and then set control boundaries around it. The 2 microrad/hour line is also sent to the counties for their input.

The counties use the 2 microrad/hour line to draw food control boundaries to restrict the movement of potentially contaminated agricultural products in and out of the area. During this drill, the food control boundary started at the Columbia River, traveled south on I-82, east on Highway 11 and then north on State Route 204 to the Washington border and town of Kooskooskie, WA. The food control area does not exactly match the 2 microrad/hour line, because the food control boundary uses roads or other easily identifiable boundaries. Food control points are designated along the food control boundary where the Department of Agriculture directs food shipments for inspection. Nonperishable products like potatoes are sampled and then held while the samples are analyzed. Perishable products like strawberries are turned back to their point of origin or sent to a designated dump site. Food processors within the food control area are told to suspend processing.

The Department of Agriculture also orders all product harvesting to stop. Farmers and residents are told not to consume cow or goat milk. Animals are fed stored feed. In general, residents are instructed to suspend any action that would resuspend contaminants such as discing or plowing.

A Board member asked how farmers are notified. Ms. Henry explained that the Oregon Office of Energy works with the Department of Agriculture which works with local extension agents. Mr. Beard said emergency responders have contacts with local processors as well as a system of reader boards at certain road junctions and tone alert radios for notification. Responders also work closely with local media.

Ms. Henry handed out a brochure on Hanford Emergency Preparedness in Oregon that explains various measures to be taken if an event occurs. She said the 2 microrad/hour line is used, because it can be developed fast and the State cannot wait for laboratory analysis of samples to protect crops. The assumptions used to calculate the boundary are conservative. The line is found and then teams go out to collect soil, air and water samples to verify it.

It takes about 2 hours to obtain a sample. The samples are sent to the laboratory at Oregon State University for analysis.

Mr. Minthorn asked about assessment of impacts on the Columbia River. Ms. Blazek noted the large releases to the river in the 1940s. She said a release from the Columbia Generating Station would be very small by comparison. She said something might be detected in the river near the plant, but not likely downstream. Mr. Beard noted that samples are taken routinely from intakes from the river to avoid any impact on crops.

Ms. Blazek said she believed Energy Northwest would be required to mitigate damage from the release to fish and wildlife. She said the Price Anderson Act covers this. She said speakers from Energy Northwest would be invited to the March 2001 meeting to address this issue as well as a representative from American Nuclear Insurers.

In response to a question from another Board member, Ms. Henry explained that the Oregon Office of Energy does not have authority to embargo crops. However, the Department of Agriculture does have that authority.

Ms. Henry said the Oregon Office of Energy successfully demonstrated all 12 of its objectives. A Board member asked whether the Oregon Office of Energy received the same grade from all the evaluators. Ms. Henry explained that FEMA evaluates the Oregon Office of Energy; the NRC evaluates the Energy Northwest. Grades are either successful or needing work. The grade is based on performance according to the emergency plan. FEMA cannot designate an item as needing work if it is performed in accordance with the plan, which FEMA can comment on apart of the exercise process. The state is not required to accept or follow FEMA recommendations.

Mr. Beard noted that there is a lot more interest in radiation and Hanford than the Umatilla weapons depot. He noted that the agricultural industry stands to lose billions of dollars in business if buyers feel the crops could be contaminated. Consequently, he said, the agencies must move quickly to embargo. And if crops are not contaminated, the agencies must be able to move quickly to show that the crops are not contaminated. He said 90 percent of the potatoes for McDonald's French fries come from within the 50 mile zone. Tillamook Creamery will soon have 45,000 dairy cows inside the zone and milk is one of the most sensitive products.

Ms. Cimon noted the high costs to the apple industry from fears of Alar contamination.

Item 2: Accelerated Cleanup, Panel Discussion

Beth Bilson reported difficulties within DOE on the vision of what the path forward would be. DOE recognizes that it has not used lessons learned from the 100 Area cleanup successfully. DOE also failed to listen to stakeholders as they prepared for 200 Area cleanup. Now DOE is trying to take a more holistic view to cleaning up the Site. This includes mortgage reduction, Congress, funding, and waste management.

Ms. Bilson said DOE's new vision proposes cleaning up all but about 70 acres of the Site in 10 years. DOE believes shrinking the Site is visible cleanup that would command continued funding for Hanford cleanup. Ms. Bilson said this increase could be as much as a 10 percent. Ms. Bilson said this strategy is attractive because if all the other areas get cleaned up, the entire DOE cleanup effort can then focus on the remaining 800 waste sites in the 200 Area, which includes the tank waste.

Ms. Bilson showed overheads and handed out an outline of DOE's accelerated cleanup strategy. She said DOE believes this strategy will command the attention of Congress, which funds Hanford cleanup. She also said this new strategy does not compromise the risk-based approach.

Jane Hedges, Washington Department of Ecology (Ecology), reported that Ecology values protecting the Columbia River and accelerating cleanup where possible. She distributed a handout that provided an overview of Ecology's position. Ecology believes setting a finish date for a specific area makes sense and makes it easier to monitor progress. However, Ecology recognizes that in order for DOE's new strategy to work, additional funding is required. Ecology will be watching DOE's budget submittal as an indicator of commitment by DOE.

Ecology said it would need more details before it can provide regulatory approval. It needs information on:

- What changes will be needed in the Tri-Party Agreement
- What cleanup will be accelerated
- What will not get done (tradeoffs)

Ecology also will be working on contracting issues like the use of a closure contract. Ecology wants to see a public participation process for this new strategy.

Ecology's priority as a regulator is not to get cleanup done in 10 years. Ecology's priority is to get the cleanup done right. Ecology said the cleanup standards will not be sacrificed to make acceleration happen, and that long-term stewardship is not a cleanup substitute.

Ecology also wants DOE's new vision to include work on the 618-10 and 618-11 burial grounds. Ecology wants groundwater to remain a priority and recognizes this work will not be complete in a decade. Ecology said that the tank farms will continue to be a priority. In short, Ecology does not want the 200 Area to be ignored. Some remedial work must continue. The operable units near the tank farms should move out to dovetail the two schedules.

Ecology's concerns include the fact that accelerated cleanup means accelerated waste production and waste management must gear up to handle the increased waste. Some mixed low level waste will also

result from this work. Most of the 100/300 Area waste will go to the Environmental Restoration Disposal Facility. The remote handled waste will come from the 618 areas.

In addition, Ecology is concerned that the proposed vision delays waste management activities on the Central Plateau. Waste treatment for many wastes is undecided or unavailable. Delayed treatment means increased storage needs. Waste management must integrate waste treatment and disposal. This must also consider the closure of the Waste Isolation Pilot Plant.

Mike Goldstein, EPA Region X, said EPA shares many of Ecology's concerns about DOE's new vision. He said what EPA has seen to date is a high level general vision for a Site cleanup strategy. He said while that is needed, as a regulator, EPA cannot make any substantive comments or provide approval on the vision until information involving the Tri-party Agreement milestones is provided. EPA supports acceleration and integration of Hanford cleanup. EPA will be looking very closely at the tradeoffs when DOE does provide more details about the vision. There are a series of issues that must be resolved prior to commencement of this work. The work will not be done in a decade. EPA will continue to drive the work past this vision. Regardless of how DOE reprioritizes its cleanup activities, EPA will not sacrifice cleanup done right for speeding up cleanup.

Ms. Cimon said she was comforted by the regulators wanting the 618-10 and 618-11 burial grounds included in the accelerated cleanup vision. Ms. Bilson said DOE will be taking a closer look at how to incorporate the two burial grounds in the vision, but the work on them will not be completed by 2012. She said waste from these burial grounds will not need treatment prior to being shipped to WIPP. The waste will need characterization. Mr. Goldstein said EPA does not expect DOE to have these burial grounds cleaned up by 2012, but the engineering issues, storage, and disposition issues need to be addressed and resolved during this period.

Ms. Knight asked about the status of DOE meetings with Ecology and EPA on this vision. Ms. Bilson said since DOE's August announcement of the new vision, the three parties have conducted weekly work sessions to iron out the details. Mr. Goldstein said EPA has been working with DOE. However, much of the detailed information on the vision is still missing. Ms. Hedges and Mr. Price said Ecology agrees with EPA and has provided DOE with additional direction so they can provide the regulators with more information to resolve some of the issues.

Ms. Knight said the public is concerned that this vision will do away with Tri-Party Agreement milestones. She also said a detailed list of tradeoffs is still missing and her greatest fear involves high turnover rate at DOE Headquarters and the Richland Operations Office. She asked what happens to this vision if Keith Klein leaves with a new administration. Ms. Bilson said she could not foresee the future, but that hopefully this vision will remain unless something fails and consequently change is needed. Mr. Goldstein said the Tri-Parties were already headed toward Tri-Party Agreement milestone renegotiations anyway. If this vision generates additional funding for Hanford cleanup, EPA will support it.

Mr. Dyer expressed his concern that this vision is more cosmetic than substantive. Ms. Bilson said that certainly the decontamination and decommissioning work and the interim safe stabilization work can be viewed as cosmetic. However, this work saves money. Other work in the vision like cleaning up

the 100 Area burial grounds is substantive. Leaks in 100 Area burial grounds would contaminate the groundwater.

Mr. Lissner expressed concern about DOE plans to reduce pump and treat work. Ms. Bilson said DOE does not plan to eliminate pump and treat. Rather, it will consider alternate approaches where pump and treat is not the most effective.

Ms. Blazek noted that simply addressing the Hanford Advisory Board on these issues is not public involvement.

### Item 3: Tank Waste Treatment Status Report

Dr. Boston began by presenting information on the current status and path forward. He had one handout summarizing his presentation. He appealed to the Board for its support. He assured the Board that the creation of the Office of River Protection (ORP) is working – ORP is a focused office with most of the resources needed. He said the current budget request is close to being approved (about \$800 million) and that DOE Headquarters supports the budget request.

He described the work ORP is doing to make sure the tank waste vitrification project succeeds. ORP developed a mission statement – get the waste out of the tanks, make it into glass, and close the tanks. It is thinking about materials, processes, and products. It knows how to build and run a chemical processing plant. ORP is actively trying to find the best contractor and actively focusing on achieving the outcomes. ORP and DOE are establishing the specifications and business environment to achieve these outcomes.

Dr. Boston then discussed the required budget for this work. ORP started with the BNFL, Inc. estimate and removed the financing costs - about \$1.3. to \$1.5 billion. That was trimmed to \$1.2 billion. He said ORP is also working to insure that it has skilled people to deliver material to the waste treatment complex.

Mr. Minthorn asked about how ORP will assure that it is focused on accountability and success. Dr. Boston said people are accountable for resolving issues, reviews, getting obstacles out of the way. Mr. Minthorn said it would be helpful for the Board to have some sort of report card on this accountability and focus.

Dr. Boston said ORP has the foundation for progress. It did not lose all BNFL Inc.'s work. BNFL Inc.'s work was technically sound. ORP is being careful about what it pays for.

Ms. Blazek asked how ORP is sure the design is technically solid when it is only about 15 percent complete. Dr. Boston said the expert review says the design so far is solid.

Mr. Dyer asked if design work is continuing while ORP proceeds with selection of a new contractor. Dr. Boston said design work is not moving forward. He said CH2M Hill Hanford Group, Inc. (CH2M Hill) has collected all the design material and is preparing it for the next contractor. CH2M Hill started

evaluating it against the design requirements. Dr. Boston said that rather than push design forward, ORP wants to be sure of a clean hand off to the next contractor.

He introduced Fran DeLozier, President of CH2M Hill Hanford Group, Inc., and asked her to elaborate on CH2M Hill's work. She discussed changing the operating philosophy from the privatization philosophy to a more integrated philosophy – i.e. using existing facilities to optimize and reduce costs.

Ms. Knight asked what is the time frame for gathering the existing design work. Dr. Boston said this aspect will be complete by the end of November. Ms. DeLozier said that work on permitting and design has actually recommenced. Dr. Boston said that many of the people who worked for BNFL, Inc. on the design will be transferred to the new contractor. The new contractor will be encouraged to pick up existing people.

Mr. Minthorn asked what demonstrated technology means. Dr. Boston said it means proven technology. Surrogate waste has been moved through the low activity waste side. Surrogate waste has been put through the high activity waste melter. He said we know we can make this glass. The challenge is to make it efficiently.

Ms. Germond asked Dr. Boston to suppose the vitrification plant has a problem and is shutdown for a time. She asked whether more radioactivity could be put into the same amount of glass. Dr. Boston said there are other technologies available to address that and the request for proposal includes the option to do more work at the pilot scale. ORP is striving to create a business environment for good engineering.

Mr. Minthorn asked what principles will guide the creation of the environmental plan to make it acceptable. Dr. Boston answered that these plans are being negotiated with the state agencies.

Dr. Boston said the challenges are that the milestones have not changed. ORP needs to get feed into the facilities by 2007 and process 10 percent of the tank waste by 2018. Money is needed now, not set asides for later.

Mr. Minthorn asked whether there will be one contractor for design and construction and one contractor for operations. Dr. Boston answered yes. ORP is selecting the contractor to design, construct and commission the facility. Commissioning is a demonstration that the plant will do what the contractor claims. After that demonstration is made, the contractor begins collecting its fee and there will be a transition to the operating contractor.

Ms. Knight asked what is the schedule for bringing on an operating contractor. Dr. Boston said the operating contractor will be a subcontractor of the design contractor. The operations contract will be let probably about 2006.

Ms. Germond asked what the advantage is to separating all these facets. Dr. Boston said it is a matter of how long a contract you want to let. Long contracts are unwieldy. He expects that the design contractor will bid on the operations contract.

Dr. Boston discussed the various fees and fee reductions that could take place. The majority of the fee is not earned until the contract is complete, but incremental fees will be paid along the way. If at the end of the contract the plant does not operate, the contractor must return all but 2 percent of the fee to DOE. DOE will share the cost saving 80/20.

Dr. Boston said his main message to the Board was that the Governors of Oregon and Washington need to communicate to the new administration that the federal government must keep its promise and move this project forward by putting the contract in place.

Ms. Germond expressed her concern about a perceived lack of public involvement. She asked Dr. Boston if ORP has figured out where in this process there can be significant public involvement. Dr. Boston answered that ORP has changed the contractual approach, not the overall plan. Continued public involvement is important. He said he would like to hear from the Board as to how to improve public involvement.

Ms. Cimon asked for any information on the bids submitted. Dr. Boston said he could only say that ORP is encouraged by the proposals it has received.

Mr. Grainey asked for Dr. Boston's thoughts on re-baselining the tank waste vitrification project. Dr. Boston responded there is room for improvement in this plan, but small facilities do not get you there. Current proposed facilities are sized appropriately. Smaller facilities will require building new facilities later. The door is open now to get the funding and ORP needs to take advantage of it. These are the right sized facilities. Building smaller facilities does not save much money and will not accomplish the necessary treatment.

Mr. Ron Skinnerland said Ecology agreed with ORP that the proposal is technically viable. He said Ecology does have some concerns about the schedule. He encouraged the Board to help get the contract signed in January 2001. He discussed the differences between the original schedule and the current schedule. The first step is getting the contract signed. The next item to be thinking about is what are the enforceable milestones needed for the new schedule. Ecology hopes this new schedule will be translated into an enforceable schedule. He also noted that this schedule is easily translated into milestones.

Ms. Blazek asked what assurances there are that the contract will be signed. Mr. Skinnerland said the way to be sure is to get constituencies involved and have the Governors put pressure on the Administration.

Ms. Knight asked how many contractors submitted bids. Dr. Boston said he could not say. Ms. Knight said she heard that BNFL, Inc. was part of one of the bidding consortiums. Dr. Boston said he would be able to provide more about the bidders by the end of the next week.

Ms. Knight noted that the one thing the public does rely on is the Tri-Party Agreement Milestones and not one milestone a year or one every other year. She asked Dr. Boston to help push for an adequate number of milestones to gauge progress. Dr. Boston said ORP wants to be able to provide its schedule and that the milestones should be part of a consistent plan.

Mr. Minthorn noted the need for a partnership and a regular dialog with regulators and stakeholders. He asked Dr. Boston how he would insure that this happens. Dr. Boston responded that one way is to have regular interactions with the Board. He said he would be delighted to meet regularly with the Board as well as the tribes.

Ms. Cimon asked for public comment. There was none.

#### Agenda Item 4: Hanford Environmental Restoration Contract Report

Michael Hughes, President of Bechtel Hanford, Inc. (BHI) described the Hanford Environmental Restoration Contract. He distributed one handout, "Environmental Restoration at Hanford: Restoring the River Corridor." The red x's on the cover of the handout show places where cleanup work is complete, such as buildings torn down or a site has been excavated.

Mr. Hughes said BHI is the prime contractor and has two significant partners: Thermal and CH2M Hill. The scope of the contract ranges from remedial actions and waste disposal to surplus facilities, canyons, groundwater vadose zone, surveillance and maintenance, and preparation for decommissioning. The sites not being actively cleaned up need maintenance such as: maintaining covers, keeping down weeds etc.

Mr. Hughes said BHI is currently working on contaminated soil removal at six sites. Some of the work involves backfilling and verifying with regulators that what was proposed was done. Other work includes breaking up concrete covers and exhuming the N-Reactor cribs. Those cribs received water off the reactor itself. Exhuming the cribs can involve very significant radiation doses to workers. Mr. Hughes said his main message was that there is a lot of activity going on at each of the reactor sites. Over two and one half million tons have been moved away from the river. The cost is very favorable - about \$63 per ton. That is all inclusive.

Mr. Minthorn asked how the contaminated soil is removed and how and where it is disposed. Mr. Hughes replied that big equipment is used to remove the soil, which is hauled in big trucks. The waste is sealed in plastic. The contaminated soil is taken to the waste disposal site on the Central Plateau near the tank farms, the Environmental Restoration Disposal Facility (ERDF). EPA permits ERDF. He said waste is placed in ERDF in an engineered way; it is compacted and covered to prevent subsidence. According to Mr. Hughes, 300,000 tons of soil has been disposed of at ERDF.

Mr. Minthorn asked how many tons or how much soil will be disposed and what are the lives of the cells. Mr. Hughes said the tonnage so far represents about 40 percent of the total. The cells are meant to last for the life span of 500-1000 years or more. The actual life span will depend on the type of barrier put on top. The liner is designed to collect liquid and treat it while the cells are open (to rain). He said the other reason for moving material away from the river corridor is that it is 70 feet to groundwater there. On the Central Plateau, it is 250-300 feet to groundwater.

BHI is also working on the first plutonium facility – 233S. Mr. Hughes said there are facilities on the plateau that are +/- 50 years old. They cannot be maintained in safe condition. They must be cleaned.

There is lots of left over contaminated piping. To date, he said BHI has made tremendous progress separating piping from the canyons and demolishing the piping.

He talked about decisions on how to address the reactors. They are contaminated with short lived isotopes – like cobalt-60 - that could expose workers to high doses. Most of the isotopes will be gone in 75 years. The decision was made to cocoon the reactors until it is safer to do final work. For example at C Reactor, the contamination area footprint was reduced by about 80 percent. All that is left is a vault like structure for 50-75 years. Workers only have to go in to inspect once every five years. No animals can get in there. The public accepts this approach. It saves significant cost.

This approach attracted Congress' attention. Because it was successful, they added some funding to complete the rest of the reactors. DR Reactor is about 70 percent complete. F is about 55 percent complete. Mr. Hughes said there is language in current bill - \$10 million- to keep up the work. At the current pace, he said BHI can do about 4 reactors for the price of 3 by continuing work.

Ms. Knight asked if any soil contamination around reactors and is being cleaned up. Mr. Hughes said yes. He said contaminated soil is being removed where spent fuel was along with buildings being demolished and piping removed. Pipes are removed right up to building walls - below grade as well as above grade.

Ms. Knight asked if these sites are Superfund sites. Mr. Hughes replied that because the basins leaked to the soil column they are on the National Priority List. He said there is a schedule in the Tri-Party Agreement for completion of this interim safe storage work. There is also a Tri-Party Agreement milestone that requires a determination what to do with the graphite cores. There are also milestones on core removal. Mr. Hughes said some of those will be renegotiated. He added that N-Reactor does not yet have a milestone. It was still operating when the milestones were being negotiated. Mr. Hughes further noted that it cost \$27 million to cocoon C Reactor. DR will be about \$17 million. There is a cost reduction due to size, some efficiency and some improvements learned from C Reactor.

Mr. Hughes talked about the groundwater vadose zone project. He said it is more than integration. BHI works with PNNL to help with Resource Conservation and Recovery Act monitoring wells. BHI operates five pump and treat systems in active remediation. BHI is also decommissioning old monitoring wells.

He said BHI is experimenting with new technologies such as Insitu Redox manipulation. It is an in-place system below grade that helps capture the hexavalent chromium and convert it into a non-toxic chromium-3. Hexavalent chromium harms the nearby salmon redds. If the Insitu Redox manipulation is successful, BHI will move away from pump and treat for chromium and go to a full-scale in-place treatment and intercept the chromium plume.

Mr. Minthorn asked what indications there are that this technology is successful. Mr. Hughes said that after it is applied, samples are obtained to assess whether treatment is effective. Mr. Thompson said there has been a drastic reduction in contamination. All the indicators are that this technology is every bit as effective as pump and treat systems. There will be continued testing on an interim basis. Three locations are sampled along the river near D Reactor.

Ms. Blazek asked Mr. Thompson to give the Board information about the cost of the pump and treat system. He replied about \$20 million for six years; it costs about \$800,000 per year to keep the system running. DOE figures it costs about \$1 million per system for operational costs.

Mr. Minthorn asked how long the pump and treat would continue. Mr. Thompson said some have run five years. There have been some successes. He said EPA just conducted its Five-Year Review and concluded that treatment is not entirely successful. Mr. Thompson said DOE is not meeting the criteria in some Records of Decision. DOE will continue running the systems for at least the next five years. In response to a question from Mr. Minthorn, Mr. Thompson said he believed that new technologies would be available by then. He said the Insitu Redox is one.

Mr. Minthorn said an earlier speaker indicated that the river is a priority, but it does not appear that stopping groundwater contamination from entering the river is a priority. Mr. Thompson replied that DOE identified its highest priority sites, especially strontium-90 and chromium and put in pump and treat systems with regulator approval. He said there have been some successes. Forty percent of the source is gone. DOE hopes there will not be an ongoing driver of contamination. DOE does not know for certain how much contamination is still in the groundwater.

He said the Columbia River Comprehensive Impact Analysis brought to light what DOE is doing about a comprehensive groundwater risk assessment. He suggested the Board request a future presentation on end state conditions and how DOE accomplishes those end states.

Senator Ferrioli asked whether the comprehensive assessment applies only to Hanford or connects to surrounding communities and other state and federal entities. Mr. Hughes said the work focuses on the Hanford Site. However, he said entities such as the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service are looking at the entire system. Senator Ferrioli said actually those agencies are not. Mr. Hughes said representatives of those agencies participate in meetings. Senator Ferrioli said there is no interface at all, no coordination. He said there is no coordination between the Interior Columbia Basin Ecosystem Management Project and the Hanford Site. He said there needs to be a close interface. He said simply saying your doing an internal study without tying it to the basin is just preposterous. He said DOE should save its money. It cannot have an integrated assessment on a small part carved out of the whole.

Mr. Hughes said BHI's charter is not to examine the whole system. Senator Ferrioli said it is the federal agencies' responsibilities to do that but they are not.

Mr. Minthorn asked whether the assessment includes effects on the tribes' traditional subsistence lifestyle. He also asked what have been the effects on salmon redds or salmon in general.

Mr. Thompson said it is DOE's fervent desire to include a tribal scenario. He said DOE would not be presumptuous enough to know what that is. DOE wants to work with the tribes. He asked for Mr. Minthorn's help. The other part is the salmon. They come up the river to spawn in the Hanford Reach. Of utmost concern to DOE is doing ecosystems assessment all the way from the large scale down to project scale.

Mr. Minthorn asked how long the assessment would take. Mr. Thompson said he believed it would take as long as there is cleanup occurring at Hanford. Every time a new well is drilled, or new information is obtained, models have to be updated. He said this is a capability DOE intends to maintain throughout the life of Hanford.

Ms. Knight said it is time to ratchet up to the next level. Senator Ferrioli said ranchers, farmers, etc. are facing fines of as much as \$50,000 and lawsuits by third parties for violations of the 4(d) Rule issued by the National Marine Fisheries Service under the Endangered Species Act. An unscreened intake on an irrigation well is a prima facie violation of the Endangered Species Act. Yet DOE is allowing radioactive materials to leach into the river and the National Marine Fisheries Service takes no action. He said Hanford is the most polluted site in the Western Hemisphere and the federal agencies are ignoring each other. Senator Ferrioli said generations of politicians have called it a national security issue and locked it away.

Ms. Cimon noted that there is fear from farmers and ranchers that the public will think crops are contaminated.

Mr. Grainey noted that the Board sent a letter earlier in the summer and queried whether it should send another letter. Ms. Knight moved that the Board send another letter. Ms. Germond seconded the motion. Senator Ferrioli said the appropriate agency to address is the National Marine Fisheries Service. The Board approved the motion unanimously. Ms. Safford clarified that there would be one letter sent to the National Marine Fisheries Service inquiring about how it would monitor DOE compliance with the Endangered Species Act and 4(d) Rule. A second letter would be sent to the U.S. Army Corps of Engineers asking it how it would monitor DOE Endangered Species Act compliance.

Mr. Dyer commented that there is no immediate danger of endangered species being affected by Hanford.

Mr. Thompson said Hanford needs to be looked at from a macro scale. Mr. Thompson mentioned the draft of the DOE Complex-Wide Vadose Zone Science & Technology Roadmap. Ms. Cimon said she was dismayed that people at Hanford were unaware of this project. She said attention needs to be paid to what is occurring at the programmatic level.

Mr. Hughes concluded by saying that decisions are needed to move forward. A decision is still needed for N Reactor. DOE has a good place to put waste. Resources need to be managed carefully to produce demonstrable progress.

Mr. Minthorn asked why uranium is mentioned as the greatest threat to the groundwater. Mr. Thompson said the problem is that there is tons of uranium in the soil and it will stay there for a very long time. It is constantly leaching into the groundwater. Even though DOE has been successful at removing some uranium from the groundwater more leaches into it from the soil.

Agenda Item 5: Hanford Reach National Monument and 24 Command Fire Rehab

Paula Call filled in for Greg Hughes.

Ms. Call said the U.S. Fish and Wildlife Service's (Fish and Wildlife) primary mandate is to protect wildlife, fish and plant resources. In 1971, DOE transferred 31,000 acres to Fish and Wildlife to manage as a wildlife preserve (Saddle Mountain Refuge). DOE transferred an area east of there (the Wahluke Slope) to the State of Washington for the same purposes.

Fish and Wildlife also manages the 77,000-acre Arid Lands Ecology Reserve, a research area.

She said some areas within the new Hanford Reach National Monument (Monument) are excluded from Fish and Wildlife control, because they are not yet cleaned up appropriately. The final map of the Monument is still being drafted. The Monument comprises approximately 200,000 acres, including the Arid Lands Ecology Reserve, the Hanford Reach stretch of the Columbia River, the river islands and the Wahluke Slope. DOE and Fish and Wildlife are joint stewards of the land.

The June 2000 fire burned almost all of the Arid Lands Ecology Reserve. An interagency team helped assess how best to rehab the burned area. They determined that, in most places, the land should regenerate on its own because it burned so quickly. There is some concern about invasion of noxious weeds and wind erosion. Fish and Wildlife is working to seed sagebrush now. A lot of native seed had been collected in this area before the fire. Fish and Wildlife expects grasses to recover naturally.

Fish and Wildlife came under a lot of criticism because of its "light hand on the land" policies. Review after the fire found the policy did not hamper fire fighting.

There are still many management issues about the new Monument that need to be addressed. For example, Fish and Wildlife is uncertain whether it has authority to regulate use of the river – including fisheries and recreation. If Fish and Wildlife has authority over the river, it would have to put fish and wildlife first, but would seek to find a balance to allow some public use. Inland irrigation is causing the White Bluffs, which contain valuable paleontological resources, to slump. The slumping is causing sedimentation in the river. Weed infestation is a big problem as is road maintenance. There are impacts from off-road vehicles and livestock use. There is cultural resource looting.

Another issue is cleanup standards. For example, there is cobalt-60 on the Columbia River islands. The levels do not exceed human health standards, but it is uncertain whether the levels meet standards for wildlife protection. DOE is allowing decay to occur and believes it would create more problems to attempt to clean up the cobalt-60.

Fish and Wildlife has a small staff and cannot handle all the requests to do research on the Arid Lands Ecology Reserve. The Arid Lands Ecology Reserve has a large elk herd that concerns adjacent landowners. Two hundred animals were moved last spring and there was a hunt to reduce the herd.

The Secretary of Interior directed Fish and Wildlife to develop a management plan. Fish and Wildlife has written a draft charter for a Federal Advisory Committee Act (FACA) committee to oversee development of a management plan. Senator Ferrioli said he would be interested in being involved with the FACA group. Fish and Wildlife has not received any additional funding to develop the plan.

Fish and Wildlife staff have had conversations with staff elsewhere that oversee similar areas near or at DOE sites. Fish and Wildlife meets weekly with DOE.

Ms. Knight asked how the public would be involved in shaping the management plan. Ms. Call said Fish and Wildlife is forming the FACA committee, which will develop the plan.

A Board member asked what happens if Congress overturns the Monument creation. Ms. Call said there would still be the National Wildlife Refuge, which is good protection.

Ms. Call said there has been some discussion of President Clinton's memorandum regarding additional lands, but it is too early in the process to move forward on that.

Lastly, Ms. Call said money for management of the new Monument will not come from the Hanford cleanup process.

#### Item 6: 618-10 and 618-11 Burial Ground Status Report

Mr. Thompson provided some background on the location and contents of the 618-11 burial ground. He said some of the wastes that went into this area had lethal doses of radiation associated with it. The very hot radiological waste is near monitoring well 699-13-3A. The burial ground and well are located close to the Energy Northwest's Columbia Generating Station and the Columbia River. Travel time for radioactive contaminants to reach the river could be as short as 3 years.

Mr. Thompson said the most recent sample from that well contained 7 million picocuries per liter of tritium. The maximum contaminant level for tritium in drinking water is 20,000 picocuries per liter.

DOE drilled a series of soil sample ports around part of the perimeter of the well. The ports were used to obtain soil samples, which were analyzed for helium-3, decay product of tritium. According to Mr. Thompson, DOE can use the helium-3 to track tritium in the soil. DOE had hoped to use the ports to obtain soil samples all the way to groundwater but soil was too hard and the ports did not reach that far. The ports go down 47 feet.

The sampling results showed higher levels of helium-3 than would be expected if the helium-3 source was the site wide tritium plume. DOE drilled another sampling well down gradient from well 699-13-3A and obtained samples, which are in the lab being analyzed. Mr. Thompson said the results should be back from the lab during the week of October 30, 2000.

Ms. Germond asked Mr. Thompson whether the caissons in burial ground 618-11 are disintegrating. Mr. Thompson replied that they have significantly degraded and have very little structural integrity left. He noted that DOE has not found any other contaminants, besides the tritium, in the groundwater that could be coming from the burial ground. Ms. Germond noted that the decision was initially made to defer cleanup of the 618-11 burial ground because of its proximity to the Energy Northwest plant. The decision to defer cleanup was made to minimize personnel exposure and to allow time for more research and development of technologies to clean up the burial ground.

Ms. Germond said chances are that at 8 million picocuries, some of the tritium will get to the Columbia River. Mr. Dyer expressed a lack of confidence in the people doing the monitoring. In response to a question from Mr. Dyer, Mr. Thompson said that DOE does not do tritium analyses for all samples on site. Mr. Thompson acknowledged the error of the scientists who discovered the 8 million picocurie sample and did not report it. Individual scientists now provide periodic data summaries of their projects. Mr. Thompson said procedures are in place to prevent this from happening again.

Ms. Cimon asked whether the high helium levels indicate there may be more tritium than indicated on the data sheets. She also asked whether a thermal process is occurring. Mr. Thompson said his professional judgement is that the source is tritium production materials, not spent nuclear fuel. If it was spent fuel, he said there would be technetium.

Mr. Thompson said that there is a draft performance incentive for Bechtel Hanford, Inc. to define the three dimensional nature of this plume by September 2001.

#### Item 7: 2001-2002 Board Goals Discussion

Ms. Cimon mentioned Board members committing to giving presentations on Hanford issues as a Board goal for 2001-2002.

Mr. Nisley said he is now becoming more comfortable with Hanford issues and would likely contact staff to support him in upcoming presentations in his community.

Ms. Blazek asked the Board to provide staff with contacts for established audiences. Staff can support Board members or provide presentations to these groups on Hanford issues.

Ms. Knight said Portland Cable Access is always looking for panel discussions.

Ms. Safford noted that Senator Ferrioli said he wants to elevate the Hanford issue. One way to do that might be to get the issue on the Portland City Club agenda or the agenda of one of its committees.

Ms. Blazek suggested that Board members each provide staff with one or more contacts at groups that staff can arrange to address. She said it is a good goal for the Board to be able to say at the end of next year that it reached more Oregonians than ever before.

Mr. Niles mentioned that other resources are the Oregon Office of Energy's video and the DOE video, "River Protection Project." Ms. Cimon said these videos are perfect for providing to cable access.

Ms. Knight said it would be valuable to have a workshop or focus group with the Oregon Office of Energy on the tank waste issue. Ms. Blazek said she would coordinate such a program outside of the Board meeting.

Ms. Cimon said there should be another presentation on the Hanford Reach National Monument at the next meeting. She said that agricultural interests as well as ecological, salmon, water and business/industry representatives should be invited. Ms. Germond cautioned that a fair assessment of

the threats to the river from radioactive contaminants needs to be provided. There are many chemical threats as well. Ms. Knight said she does not want to promote fear, but if an accident involving the tanks occurred, no one will be selling potatoes or other crops from the area. She said perception alone would kill our economy. Consequently, she said it is not fear mongering to raise the awareness on this issue with the agricultural community.

Ms. Blazek announced that the Association of Community College Trustees recognized Ms. Germond for her lifetime contributions.

The meeting was adjourned at approximately 4:15 p.m.