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USDOE, EPA and Washington State Dept. of Ecology

Summary of Public Meetings

on

**Environmental Restoration Refocusing Tentative Agreement and
Environmental Restoration Disposal Facility**

November 14-30, 1994

The signatories to the Tri-Party Agreement sponsored four public meetings between November 14 and November 30, 1994 to receive public comment on the Environmental Restoration (ER) Refocusing Tentative Agreement and on a proposed Environmental Restoration Disposal Facility (ERDF). Two meetings were held in Washington State (Seattle and Richland) and two in Oregon (Hood River and Portland); they began at 7:00 pm and concluded by 10:30 pm.

Meeting Purpose

The November series of open houses/public meetings had two purposes:

- To provide opportunities for citizens to gather information and ask questions about the tentative ER Refocusing Agreement and about the proposed ERDF and
- To provide the public with an opportunity to make comments about the tentative Agreement and the proposed facility.

Meeting Format

The format for all four meetings was similar. They began with a welcome, an agenda review, and a brief overview of the key features of the tentative ER Refocusing Agreement and the proposed ERDF. The overview of the ER Refocusing Agreement was provided by Doug Sherwood, US EPA. Pam Innis, (US EPA and Project Manager for ERDF) and Norm Hepner (Washington State Dept. of Ecology) described the planning process and features of the ERDF. Roger Stanley (Hanford Project Manager for Washington State's Dept. of Ecology), Mike Thompson (USDOE's lead negotiator for ER Refocusing), and Owen Robertson (ERDF Project Manager for USDOE) were also available to provide information and respond to questions.

Following this overview (described briefly below), representatives of public interest groups were given an opportunity to present a brief commentary on the tentative Agreement and the proposed ERDF. In several cases, this spokesperson or other resource people joined the six agency representatives to comprise a panel to respond to questions and comments from meeting participants. These question/answer and comment sessions alternated with opportunities for formal public comment. (For



purposes of this summary, the formal comments and questions/answers/comments at each meeting have been consolidated.)

During the formal comment period, those representing organizations were given up to 10 minutes to comment; individuals, up to 5 minutes. After all who wanted to comment had been heard and there were no additional questions or comments, the meetings adjourned.

Key Points from the Agency Presentation on the tentative ER Refocusing Agreement

Mr. Sherwood said that the ER Refocusing negotiations grew out of feedback about cleanup priorities the agencies received from tribes and other stakeholders during the tank waste remediation system negotiations of 1993. He said the agencies wanted to scope the cleanup program to match stakeholder values and to put the focus on priorities identified by the public. The ER Refocusing negotiations began in the summer of 1994 and were conducted with input from local tribes, the Hanford Advisory Board, the State of Oregon, and other stakeholders.

He then reviewed the regulatory processes that govern cleanup -- Resource Conservation and Recovery Act or RCRA and Comprehensive Environmental Response, Compensation, and Liability Act or CERCLA. Steps in the process include investigating a site, determining alternatives for cleaning up the site, choosing a preferred cleanup alternative, seeking public comment on the alternative, selecting a final alternative (in a Record of Decision), then setting a schedule for the cleanup work. The agencies were conducting these two processes concurrently, to streamline the regulatory processes.

Areas that would be affected by the tentative Agreement are the 100 Area (along the Columbia River where the reactors and their ancillary buildings are located) and the 200 Area or Central Plateau (where the tank farms and many former processing facilities are located). The intent of the changes in the 100 Area, according to Mr. Sherwood, is to speed up investigations along the River which should, in turn, result in an accelerated cleanup schedule for the area. The tentative Agreement includes destruction and removal of ancillary buildings around the Reactors, which were not included in earlier Agreements with the understanding that provision for exceptions can be made such as the exception of some uncontaminated fresh water ponds that are currently being used to rear fish. He said that no date has been set for removing the Reactors themselves. The tentative Agreement calls for groundwater around the N Reactor to be pumped and treated; it also includes construction of a hydraulic barrier at N Springs to prevent pollutants in the groundwater from reaching the River.

Given budget constraints, Mr. Sherwood said that the decision to accelerate investigative and cleanup work along the River would result in some delays in cleanup of the 200 Area. From the agencies' perspective, this shift in priority makes sense because 1) technologies do not yet exist for some of the cleanup that is needed in the 200 Area and 2) treatment facilities, such as a vitrification plant, will not be available until 2005.

Key Points from the Agency Presentation on the Proposed Environmental Restoration Disposal Facility

Pam Innis, EPA, said that the ERDF is needed to dispose of contaminated soils that are to be dug up in the cleanup of the 100 Area. From the agencies' perspective the ERDF, which would be a CERCLA facility, would

- protect human health and the environment,
- provide for timely cleanup,
- move wastes away from the Columbia River,
- dispose of only Hanford cleanup waste and
- be sized for initial cleanup activities.

The ERDF would be located in the 200 Area, between 200 East and 200 West, on land formerly leased by the State of Washington.

Of four designs considered, the preferred alternative is a double-lined trench which would be a RCRA-compliant landfill. Fully built out, the landfill would occupy 1.6 square miles; the size planned for the first five years is about 165 acres.

Norm Hepner, Ecology, said that soil is expected to be 75% of what would go to the landfill; the remaining 25% would be garbage (bags, clothing, pipes, etc.). Non-retrievable and outside (non-Hanford) waste would be excluded as would TRU and high-activity waste. He said that final acceptance criteria have not yet been determined but that they would be developed in consultation with stakeholders.

Summaries of Each Meeting

The summary for each of the four meetings indicates the date and location of the meeting, the negotiators who attended, the names of those offering commentary on the tentative Agreement and the proposed ERDF, and the names of those who participated in the question and answer panel. The two meetings in Oregon also indicate who from the Oregon Hanford Waste Board welcomed participants. This information is followed by summaries of

- Commentaries by representatives of public interest groups that were offered on the tentative ER Refocusing Agreement and the proposed ERDF,
- Formal comments, and
- Questions, responses, and comments from the question and answer period.

Where individuals offered their names, they have been included. Names have been checked against the sign-in sheets for each meeting; in a few cases, the spelling could not be verified because the names did not appear on the sign-in sheets.

Official Meeting Transcripts

The purpose of these summaries is to provide highlights of the public meetings. Because they are summaries, not everything that was said is included. In addition to these meeting summaries, there will be official transcripts of each meeting. Copies of transcripts can be reviewed at any one of the four following public informational repositories:

State of Washington

University of Washington
Suzzallo Library
Government Publications Room
Seattle, WA 98195
(206) 543-4664
Attention: Eleanor Chase

Gonzaga University
Foley Center
E. 502 Boone
Spokane, WA 99258
(509) 328-4220 Ext. 3844
Attention: Tim Fuhrman

USDOE Public Reading Room
Washington State University, Tri-Cities
100 Sprout Road, Room 130 West
Richland, WA 99352
(509) 376-8583
Attention: Terri Traub

State of Oregon

Portland State University
Branford Price Millar Library
Science and Engineering Floor
SW Harrison and Park
Portland, OR 97207
(509) 725-3690
Attention: Michael Bowman/Susan Thomas

Copies may also be requested by calling (800) 321-2008.

WASHINGTON STATE

SEATTLE

Date and Location: Tuesday, November 13, 1994, Seattle Center Conference Center, Room A, 7:00 pm - 10:30 pm

Agency Representatives/Lead Negotiators: Mike Thompson (USDOE), Roger Stanley (Ecology), and Doug Sherwood (EPA)

Commentary: Gerald Pollet (Heart of America Northwest)

Panelists for the Question and Answer Session: Mike Thompson, Roger Stanley, Doug Sherwood; Pam Innis (US EPA), Owen Robertson, (USDOE), and Norm Hepner (Washington St. Dept. of Ecology) and Gerald Pollet

Meeting Facilitator: Alinda Page

Approximate attendance: 79

Commentary

Gerald Pollet (for Heart of America Northwest) focused his remarks about the tentative ER Refocusing Agreement on the following key points from a "Citizen's Guide," produced by public interest groups:

- o Columbia River: The tentative Agreement does not accelerate the cleanup and therefore does not reduce the risk of exposure to contaminants along the River and on the islands; the Milestone remains 2018. He said there should be a new Milestone for the year 2000 which would mean that no one using the Columbia River would be exposed to chemicals and radiation above regulatory standards.
- o Reactors along the River: The tentative Agreement actually weakens cleanup because the 9 reactors are no longer within the 2018 deadline. An integrated cleanup is needed, not one that will have the area around the reactors cleaned up by 2018 and then torn up again, after 2018, to remove the reactor cores.
- o 200 Area: TPA Milestones for investigating in the 200 Area have been delayed because of the supposed speedup along the River but there is no real acceleration.
- o A Columbia River Impact Evaluation is slated to be conducted by Battelle's Pacific Northwest Laboratories (PNL). However, PNL has been saying there is no problem for 30 years. PNL is a polluter and there is therefore a conflict of interest. An independent contractor is needed.
- o N Reactor: Trenches near N Reactor are highly radioactive and those using the River could be exposed. A Milestone is needed, he said, that provides for real risk reduction and real progress.
- o Budgets: Budgets do not reflect accelerated cleanup; studies are being paid for, not real cleanup. Only 13% of the budget is allocated to ER and an internal cap has been imposed on that amount so that it will stay flat. He noted that the Hanford Advisory Board had expressed outrage that the Milestones are again underfunded and won't be met because of the underfunding.

Formal Comments

Comment: Given the results of the last election and the resulting Congress, Hanford's cleanup should be called the "cleanup of the most poisoned, toxic substance known to man." It is scary; this stuff can kill for 100s of years.

Isaac Standen: Only 10-12% of Hanford's cleanup budget is spent on actual restoration. All the money should be spent on the real cleanup.

Patricia Herbert, Coho Coalition: Something unfair has happened. USDOE is not talking about cleanup but rather about a more effective way to dispose of wastes. He expressed concern about reports of how money is wasted at Hanford. Money is going to monitoring and reports, not to actual cleanup. While he considered decommissioning buildings generally a positive step, he opposed tearing down the buildings that could be used to store drums. He said the River had been used as a dump for years. He urged that nothing dangerous be put near underground streams. He also said he felt restoration of the area was probably a waste of time and money because it would never be available for unrestricted use. Finally, he expressed concern that no environmental impact statement (EIS) was to be prepared for an environmental bacteriological laboratory that the public knows little about.

Chloe Harris: She said that animals, streams and wildlife are being hurt. She urged that the agencies get going on the cleanup.

Barbara Zapeta: She said the Washington Democratic Council was requesting an independent audit of Hanford's budgets. She said the Department of Defense and Hanford have been on "corporate welfare," without independent audits and that an accounting system with objective books is needed.

Kara Ceriello: The Hanford Reach of the Columbia River is beautiful and a natural spawning ground for salmon. It is used by the public for recreational purposes. She said that a friend had had a clump of hair fall out after windsurfing on the River and she had heard a child found a piece of an old reactor. She had also heard that a deer killed near INEL had suffered numerous mutations. She asked why there have been no comprehensive animal studies. She wondered what is happening to children. She urged that actual cleanup occur soon.

David Anderson: Please state risk reductions in understandable units. What is the cost per life saved?

Comment: ER is listed as last priority. Of USDOE's \$1.6 billion budget, only 12% goes to ER. Citizens are saying they want actual cleanup of soil and groundwater, not new buildings, chauffeurs, etc. The public has also said it wants radiation exposure reduced by the year 2000. No proposal is acceptable that does not include this.

Edgar Ulbricht (on behalf of the River Hermit project): The new human vocation is to heal the earth. He recommended that dollars could be saved if contractor "suit types" got out and did the clean up, which would give them a real sense of what needs to be done.

Phyllis Fiege: Having assumed cleanup dollars were for cleaning up Hanford and the environment, she said she was frustrated when she read recent *Spokesman Review* articles about how dollars were actually being wasted. She felt it was unforgivable that the contamination was still a threat. She urged that signs be put up on islands in the Columbia warning against the danger of exposure.

Fred Miller: He felt that the way D island was being treated was symptomatic of the lackadaisical attitude that exists toward Hanford's cleanup. He urged that fences be put up until the islands are all cleaned up and that they be removed only after the islands are clean. Signs should be put up at boat launch areas, with maps indicating areas of contamination -- obvious symbols that the agencies have not done their job yet. He also complained that a lot of data that are needed have not yet been made available to the public. For example, he said, it is very hard to get budget data; when they are made available, it is almost too late to impact Congress. The emphatic "not open to non-Hanford waste" is welcome as an acceptance criterion for the ERDF.

Kerry Canfield: Quoting Betty Tabbutt of the Washington Environmental Council, the commenter urged that Ecology use the provisions of the Model Toxics Control Act (MTCA) which requires cleanup to occur if it is technically feasible, not if it is affordable. Phased cleanup is needed. It makes no sense to bog down in a definition of "how clean is clean?" before the cleanup even begins. She complimented the agencies' presentation for its clarity. However, she said, the agency written materials were very difficult to follow. She noted that the milestones appear to consist mainly of reports and plans, with few relating to real physical actions of cleanup. She expressed concern that the agencies might be biding time, waiting to put Hanford back into production. She asked why Hanford was not moving forward with real cleanup.

Cindy Sarthou, staff attorney for Heart of America: Agreeing with the previous speaker, she said the agency written information was not in a readable form, that this was an area the agencies needed to work on. She expressed concern about the lack of integration of the decontamination and decommissioning (D & D) program with the overall cleanup, so that all of it would be completed by 2018. She agreed with comments attributed to Betty Tabbutt about getting bogged down in defining "clean." She expressed concern about compromising cleanup standards at the outset, before cleanup work had seriously begun. In contrast to an earlier speaker, she felt the focus should not be on the cost of saving a life, but rather on getting cleanup work accomplished. She said Heart of America is not opposed to the ERDF, provided it is limited to Hanford waste, but she expressed concern about a potential scenario which might allow non-Hanford waste into ERDF in

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the future. She urged that strict acceptance criteria should be adopted, and that ample monitoring be in place around the facility itself.

Felice Davis: She expressed the hope that the agencies would take corrective action about warning signs on the islands, to protect small children who otherwise might be exposed.

Katherine Crandall: She agreed with the comments of the two preceding speakers. She said she was very disappointed because accelerated cleanup was promised but it appeared that what was coming was less cleanup at a slower pace. She felt the regulating agencies were accepting a lower cleanup. She asked that limits be set that make it safe to use the River. She said she approved of the commitment to no non-Hanford waste in the ERDF and asked for the commitment in writing. She urged air monitoring around the facility.

Hilary Harding: She said she found the agency's informational materials hard to decipher. She said the so-called "acceleration" appeared to be a "relaxation," which in her mind equates to failure. She said the tentative Agreement is not acceptable and that the parties should go back and create an Agreement that responds to what the public says it wants.

Loretta Ahouse: She agreed that the agency written materials were hard to read and said that the lack of warning signs on the islands was unconscionable, given the fact there is public access.

Gerald Pollet, Heart of America: He requested that not only these formal comments but also the panel discussion and informal comments should be considered "on the record." He said that Heart of America urged that the waste acceptance criteria for ERDF accept Washington State waste management priorities: that is, only those materials would go to the landfill that proved to be untreatable. In addition, he said, ERDF should not accept extremely hazardous waste or TRU waste. He expressed concern that there was an attempt to accept Hanford *and* non-Hanford low-level waste. He understood that Westinghouse Hanford Company (WHC) was lobbying to change standards which would let low-level waste go to a landfill.

Scott Stumbaugh: He said he was sad to hear WHC was lobbying for such a change and said he hoped it would not happen. In his opinion MTCA standards are the ones that ought to be used for ER overall. He said that reductions in strontium in groundwater are needed because they pose a health and safety threat. He said it is important that accelerated groundwater cleanup (pump and treat) and preventative steps (an underground wall) for N Springs are needed immediately. He said that because of sky shine (reflection of radiation back to the earth) N Springs should be capped. He agreed that fences should be placed along the islands and shorelines if there were high levels of gamma radiation there. He said that exposure along the islands from heavy metals and chemicals from outfall pipes

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are also a concern because they are potentially lethal, especially to those under 18 years of age. He felt that USDOE's total budget of \$1.6 billion should go to cleanup work, not to paperwork. He said he expected a commitment from USDOE to respond to citizen comments before finalizing an agreement.

Tim Takaro: In light of interest by the agricultural community to develop the area for agricultural use, he said that estimates by the Dept. of Health concerning sky shine should be kept in mind.

Edgar Ulbricht: He said meetings like this one are important. He appreciated the format which cut the agency presentations short and did not wear the audience out. He said he appreciated the agency representatives efforts and interest; his frustration, he said, is primarily with the "system." He said that some anger at the old military production has been redirected at current staff and again expressed appreciation for staff willingness to serve as a lightning rod. He said that in the future the USA could fall apart as the USSR had done if it does not deal with nuclear waste. More birth defects are being seen. It is hard to compile accurate statistics because the population is so mobile. He said he felt that environmental cleanup was a sham. He said the public was counting on the agencies to get it right.

Question , Answer, and Comment Session

Question to G.. Pollet: Where are your data (about radiation exposure on islands) from?

Response (Mr. Pollet): They came from the TPA Response to Comments to 1993 renegotiated TPA.

Response (M. Thompson): The most recent data indicates that if a person stayed on the islands for 24 hours per day for a year, they would receive 200 millirems, 100 of which is background.

Question: What about the limits in the Clean Air Act?

Response (D. Sherwood): The issue is whether or not we are planning to do anything about it. While a schedule has not yet been set, the agencies are going to address this. The N area is the worst -- it is a significant problem. There are not yet data on the other areas but they are starting to be gathered. Cleanup plans are to be made in the next 6 - 9 months: the plan for D island will be out for review in January; the plan for K area will be out about 3 months after that.

Question: What has been done about pipe removal and cleanup of D island? Have other islands been sampled? What system is being used to warn people to stay off the islands?

Response (M Thompson): Vent pipes have been removed. Half of D island was surveyed and 147 particles of radioactive material (pieces of metal, not fuel) were found. [Correction: 103 particles were found and removed, and 47 were analyzed in the laboratory.] Discussions are underway with the regulators about next steps. Because these radionuclides are short-lived, in 10 years it will be safe. No warning signs have been placed on the islands.

Comment: Right now it's open and it is not safe. A sign is needed to alert potential users. What sampling is underway on other islands and on the far shores?

Response (M. Thompson): Surveys are continuing up and down the River. This is a prime consideration of the agencies.

Comment: The TPA Response to Comments indicates that people should stay off the islands because they are environmentally fragile; they don't talk about the contamination. Signs are too far back from the shores. They do not warn against drinking the water or digging. It seems criminal not to warn people about the hazards.

Question: Is ERDF at the same site or near the site for the incinerator proposed by Waste Management, Inc.?

Response (D. Sherwood): It was proposed for a site about 1/4 mile from the ERDF facility.

Comment (G. Pollet): There is a line item for a thermal treatment facility for non-Hanford waste. The incinerator may not be dead. It is clear there are some who want to bring non-Hanford waste to Hanford.

Comment (R. Stanley): Waste Management Inc.'s proposal is dead from Ecology's point of view.

Question: A number of milestones were to be have been completed recently, including those that are due this month. Have they been met?

Response (D. Sherwood): Deadlines are considered to be the end of the month so it is clear there is a lot of work to be done this month to meet the October deadlines. The other milestones have been met.

Question: At what point in the ER Refocusing negotiations did it become clear that USDOE's budget was underfunded and did this show good faith by USDOE?

Response (R. Stanley): The ER program is in a state of flux. Keep in mind ER relates to cleanup of past practices -- about 10-12% of the budget; it is not the same as cleaning up Hanford. We knew USDOE's budget was under lots of pressure. It does not seem to be a question of good faith as much as trying to focus cleanup dollars where they will do the most good.

Response (D. Sherwood): USDOE told us they had serious budget concerns. As regulators, we told USDOE it would have to prove that Hanford could not afford the best programs. Recently we have heard Hanford is \$69 million shy of the amount needed for good cleanup. We examined assumptions and have found ones that appear to be overestimates. The regulators are requiring USDOE to justify costs.

Response (M. Thompson): During the recent negotiations the regulators and USDOE did not look at costs until a tentative package was negotiated. Rather, the negotiators talked about what would meet the objectives. The first quick estimate was for \$300 million. USDOE balked. After reviewing the scope and cost estimates, we expect the cost is closer to \$230 million, but funding is \$201. This has created a productivity challenge and the contractors and USDOE know it must be met. The milestones have not changed.

Question: When did the budget drop from \$203 to \$201?

Response (M. Thompson): \$2 million went to Idaho (INEL) to fund a cleanup action in progress. The decision was made by Headquarters.

Comment (G. Pollet): The news about greater productivity is good news, but the problem is that 1995 work is mostly in studies. ER needs to be a higher priority than new highways, etc. He reiterated his request that TPA agencies respond to comments made during the question/comment period as well as to formal comments.

Question (David Wilson): What is the real exposure on D island? Heart of America and USDOE tell different stories.

Response (M. Thompson): The half-life of the radionuclides is about 5 years. The probability of encounter is low. Therefore, USDOE believes the risk of exposure is low. "High" exposure is a relative term. Some accept no exposure and want it cleaned up. Sky shine is the issue at N Reactor.

Comment (D. Sherwood): The data have just come in and have not yet been reviewed. From EPA's perspective, he said, it was still an open question.

Comment (G. Pollet): He said the commenter might have been confusing the N and D areas where the exposures are quite different, with N a significant public exposure hazard. Given the work that has been undertaken on D island, he said an immediate effort may not be needed. However, a survey should be done on D as on the other islands.

Question: Since no one has refuted the claims about cleanup dollars going to paper studies, can you say that the cleanup budget will go for cleanup?

Response (M. Thompson): The written materials are difficult to read and understand but, since ours is a litigious society, it has to be clear in a court of law. He gave his perspective that over the past 2 years of negotiations, there had been some accomplishments. However, until ERDF is developed (due Sept. 1996), he pointed out that there is no place to put debris from cleanup actions. The ERDF, he said, will get the agencies past study. Once there is a record of decision, engineering will follow and real cleanup can get underway.

Question: How much of the \$201 million is for cleanup?

Response (D. Sherwood): He estimated that about 65% went to paperwork, investigations, plan preparation and permit applications; 15% was spent tearing down buildings (D & D), with the rest going to North Slope, 1100 Area and expedited response actions. So about 25-30% went to cleanup. He said the balance is changing. He estimated 50% in 1995 would go to groundwater remediation and other actions. He expected the percentage going to cleanup to continue to rise.

Question: Can someone respond to the charge that WHC's overhead exceeds the cleanup budget?

Response (G. Pollet): Financial data just released show that 22% of every \$ for ER or waste management went into WHC's overhead. He estimated that this comes to

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\$170+ million or more than was spent on ER, which he found shocking. He cautioned that cleanup will be more expensive than studies, so without priority changes, there will not be enough money. He disagreed with Mr. Sherwood about the changing balance, saying the tentative Agreement had not accelerated the movement toward cleanup.

Question: What can concerned citizens do?

Response (G. Pollet): He urged concerned citizens to write Washington's Governor Lowry and the Director of the Dept. of Ecology and oppose the artificial cap on the ER budget. Citizens could also write to Senator Mark Hatfield on the Senate Appropriations Committee.

Comment (R. Stanley): He indicated that the regulators are getting more timely information on budget development which lets pressure be exerted.

Question: When the reactor cores are removed, won't this recontaminate the soils?

Response (D. Sherwood): It is a timing issue. Dates were not set for removing the reactor cores. We would like to do the cleanup at the same time so soil won't be recontaminated. Right now, it would take a huge amount of money to design a reactor block system and the agencies would prefer to spend that money on cleanup. He said the regulators have not given up on 2018.

Question: Will ERDF be addressed in a full EIS?

Response (N. Hepner): The agencies have tried to incorporate the values from the National Environmental Policy Act (NEPA) into the Remedial Investigation/Feasibility Study to avoid duplicative processes. Washington's Nuclear Waste Advisory Council and the Oregon Hanford Waste Board encouraged integration of NEPA/CERCLA.

Question: What will be the amount of money for the ERDF and where will the money come from?

Response (N. Hepner): It will cost \$65 million for the first five years. It is continues, it will cost \$750 million through 2018. The money would come from the ER budget.

Question: Is N Springs an actual spring?

Response (M. Thompson): When the reactor was in operation, it was a spring. Now, it is mainly a seep. However, there is an aquifer below, with a number of plumes. It flows back and forth to the Columbia. He said he was not sure what quantity of water was involved.

Question: Has there been any estimate of the cost of appropriate signage?

Response (M. Thompson): He said he knew of no estimate.

Comment: Twenty years ago a leader of the River Hermit project was looking for arrowheads on one of the islands and got a little wound on his arm. That wound has never healed. Is there any place to report such occurrences?

Question: How many of you are familiar with the picu effect? The commenter said he understood that when there is low-level radiation exposure, it can cause cell mutation and genetic changes. He speculated that people at Hanford may be more liable to true genetic effects.

Comment: The cleanup budget has money for a highway. How much is this amount?

Response (G. Pollet): Because of public pressure, the highway funding has been deferred. \$18-20 million had been planned; construction was scheduled to begin in 1996; funds were to have come from the ER budget in overhead or waste management landlord money.

Comment: This seems to be illustrative of priorities. There is a mess out there. If 65% goes to paperwork, improvement is needed.

Response (G. Pollet): A new highway would not be needed if there were not also a brand new office building out there.

TRI-CITIES

Date and Location: Wednesday, November 16, 1993, Hanford House, Richland, WA,
7:00 pm - 8:30 pm

Agency Representatives/Lead Negotiators: Mike Thompson (USDOE), Doug Sherwood, (USEPA), Roger Stanley (Washington Dept. of Ecology)

Commentary: None

Panelists for the Question and Answer Session: Doug Sherwood, Roger Stanley, Mike Thompson, Pam Innis, Norm Hepner, Owen Robertson

Meeting Facilitator: Alinda Page

Approximate Attendance: 96

Formal Comments

Patrice Kent (Yakama Indian Nation): The Yakama have been involved in on-going consultations since January 1994. They recognize the difficulty of finding a site for the ERDF and appreciate the reduction in the proposed size from 6 square miles to 1.6. However, the Yakama remain concerned about the potential for intrusion in the distant future and urge that a solution be found. The Yakama are not convinced the proposed ERDF is sufficiently protective of human and environmental health. They think it would be preferable not to bury dangerous waste. In addition, it will result in disturbance of 2 square miles of mature shrub steppe habitat; that habitat should not be disturbed.

Former site worker: There are 2 big tunnels between 200 East and 200 West and there are also holes in Gable Mountain. Perhaps dry waste could be placed in these. He indicated there is a record of which of 352 wells are dry and which are not, and this could indicate which dry wells might also be appropriate for burying waste.

Rick Leaumont (Lower Columbia Basin Audubon Society): He began by noting his participation on both the Hanford Future Site Uses Working Group and on the Hanford Advisory Board. He said his group was fearful that the cleanup process will destroy splendid habitat and that this destruction will not be mitigated. He said 48 rare, threatened, and endangered species live on the Hanford site. They are there as an accidental by-product of the tight security during military production years. With security measures going away, he said he was afraid that the habitat would also be at risk. He said that USDOE was off to a bad start. During the North Slope expedited response action there had been needless destruction of habitat. The US Fish and Wildlife Service and the Washington St. Dept. of Fish and Wildlife were not used as they should have been. He said he was assured at the October HAB meeting that the cleanup of the North Slope would not be considered complete until restoration occurred. But restoration did not take place. Reseeding should have occurred this fall. Since it did not, noxious weeds will seed themselves in the spring and there will be a cost to

removing them. He spoke of two candidate species which make their home on land very similar to the 1.6 square miles proposed for the ERDF: the loggerhead shrike and sage sparrow. He urged that the ERDF be kept to a minimum size and that restoration occur as quickly as possible. He further urged that mitigation begin now for its fully-built size, so the birds and other wildlife have a place to move to. It takes time for shrub steppe habitat to mature.

Question , Answer, and Comment Session

Question (Bernice Mitchell): Who has read all of this paperwork? Why have we not learned to condense all of this? Was the feasibility study done before or after the models were developed? After hearing that non-Hanford waste might come in, she asked if Hanford were the nation's nuclear waste graveyard.

Response (N. Hepner): ERDF would accept Hanford waste and only Hanford waste.

Response (M. Thompson): Hanford does accept some waste from other parts of the country. It is to take up to 100 submarine reactor cores. If additional waste comes, it would have to meet Washington State and US laws.

Response (R. Stanley): Noting that he himself has not read all of the paper, he said he has seen efforts to shrink the flood of paperwork over the last couple of years.

Response (P. Innis): A copy of the RI/FS describes the ERDF planning process. She said it was a milestone from the TPA signed in 1989.

Question: Have you evaluated the RI/FS?

Response (D. Sherwood): The Feasibility Study has technical details for the 4 alternatives investigated. The agencies tried to condense this information into a short document.

Question (Rick Leumont): Were other locations considered, and, if so, why were they not chosen over this one?

Response (N. Hepner): Four sites were considered. ERDF is proposed to be in Washington State's former leased site. Some planning considerations were that it is difficult to construct in a contaminated area; sites needed to be protective of groundwater, and there is less infrastructure to be moved in an area not formerly built up.

Question: Is there priority habitat in the other sites?

Response (N. Hepner): Yes, in several cases it is fractionated. One had less priority habitat but a lot of existing infrastructure. The agencies made an effort to abide by the work of the Future Site Uses Working Group, keeping waste management between 200 East and 200 West.

Questions (Jim Neighbor): What is the predicted life of the double liner? Is there any monitoring to catch a break in its integrity? What would prevent radioactively contaminated materials from being placed in the landfill? Where does soil being dug for the hole go? What would prevent higher radioactive contamination from being accepted in the future?

Response (N. Hepner): Within the time frame proposed, no buildings are anticipated to be torn down. Low-level rubble and garbage will be accepted. The predicted life of the facility is 30 years. If the first liner leaks, leachate can be collected from the second which will enable us to see if groundwater is being protected.

Response (M. Thompson): The real long-term protection does not come from the liner. Instead it comes from the cap over the waste which prevents water from getting in. The liner's primary use is for the time when it is being filled.

Response (N. Hepner): There is a leachate monitoring system as well as a groundwater and air monitoring systems. The design would be cut and fill; that is, what is moved would be used to build the rest and serve as a daily cover.

Question: What prevents mixing higher-level waste with clean material so it can be accepted in future?

Response: It would not meet acceptance criteria.

Comment (Alan Carlson): He asked if a treatment facility would be needed and if there had been an assessment of the amount of waste that would need to be treated.

Response: It is beyond the scope of the ERDF.

Response (N. Hepner): He said the agencies do not anticipate a lot of waste in the near term that will not meet the landfill requirements.

Response (D. Sherwood): Treatment analysis is done for each operable unit. He said he expected reports on 3 operable units in the 100 Area in January and on the 300 Area soon after that.

Comment (Van Bill): Earlier workers made dry wells. Hot waste from the 300 Area went into a dry well near REDOX.

Question (Gene Weisskof): He asked what percentage of undocumented sites did the agencies anticipate were on site?

Response (D. Sherwood): He indicated that the site referred to in the 300 Area was documented. He also said that they continue to find more waste sites all the time and that they use many tools to look for them. He said he did not think there were many major sites the agencies were unaware of.

Comment (R. Stanley): Experience in some of the early cleanup has been that the cleanup has been simpler than projected.

Comment (Bernice Mitchell): Information from former workers should be used rather than instruments for finding contaminants.

Question (Lisa Fitzner): How is habitat mitigation done and what is the projected cost? It could cost in the \$millions.

Response (P. Innis): She said she did not know the costs. Mitigation measures could include transplanting, collecting seeds and starting a nursery for the finished ERDF.

Response (N. Hepner): The initial area is small -- 165 acres.

Response (D. Sherwood): He said that the agencies did not know how well some of this would work and would not have a good idea until they get information from a project that the tribes have underway along the River. He said the agencies would work with the Natural Resource Trustees to develop plans.

Question (Gene Weisskof): How can someone get more information? Is anything available in digital format?

Response (M. Thompson): One can go to the Administrative Record. All documentation used for decisions is kept there.

Question (Bernice Mitchell): Will informal comments not be in the official record of the meeting?

Response: There will be a "response to comments" for formal comments.

Comment (Bernice Mitchell): She said she would not like for agriculture to be considered for any of this land. Agricultural land is currently being sold for housing development so there is no shortage of agricultural land.

Question (Charlie Snyder): How high is ERDF relative to the flood plain?

Response (N. Hepner): It is above. (He volunteered to point out the relevant section in the study.)

OREGON

HOOD RIVER

Date and Location: Monday, November 14, 1994, Hood River Inn, 7:00 pm - 9:10 pm

Welcome: Ralph Patt, Oregon Dept. of Water Resources on behalf of the Oregon Dept. of Energy and the Oregon Hanford Waste Board

Agency Representatives/Lead Negotiators: Mike Thompson (USDOE), Doug Sherwood (EPA), Roger Stanley (Washington Dept. of Ecology)

Commentary: Greg de Bruler (Columbia River United)

Panelists for the Question and Answer Session: Doug Sherwood, Roger Stanley, Mike Thompson, Pam Innis (EPA), Owen Robertson (USDOE), Norm Hepner (Ecology), and Dirk Dunning (Oregon Dept. of Energy)

Meeting Facilitator: Alinda Page

Approximate Attendance: 15

Commentary

Greg de Bruler, commenting on ER Refocusing, said the tentative Agreement appeared to accelerate feasibility studies but questioned whether it accelerated actual cleanup work. He worried that interim actions and Expedited Response Actions might not be just first steps but would, in fact, constitute the cleanup. He expressed concern that, because of a funding shortage, ER Refocusing would mean the tanks would close in 2024, not 2018 as earlier scheduled. He urged USDOE not to delay work related to tank characterization and safety, but to allocate more money for cleanup work. Public pressure on Congress is needed, he said, to keep cleanup money flowing. He suggested that the agencies provide the public with a list of dates for actual cleanup work that the public can track, so that they will see that the Environmental Refocusing effort is only a first step.

Concerning the ERDF, he spoke of the importance of waste selection criteria which will determine what goes into the facility. He asked if the intent was to dig and remove the waste or to reduce it, using best available technology, and clean the site up. He expressed concern about dust that the removal action might generate and was concerned that the landfill might grow in size. He urged that the footprint of the ERDF be kept as small as possible.

Formal Comments

Chief John Jackson, a Columbia River Chief and member of the National Indigenous Environmental Council, expressed concern about rearing fish in the fresh-water cooling ponds at Hanford and about the health of the Columbia River which has provided a livelihood and food for Native Americans for generations. He said he has caught fish that have suffered serious mutations and damage. He suggested that many other areas were preferable to the Hanford's cooling ponds for raising fish. He also said he has seen many on Reservations around the country,

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including children, develop cancers and other problems because of exposure to dangerous waste -- exposures they were unaware of.

Greg de Bruler, on behalf of Columbia River United, said that the USDOE budget for ER is too small for effective cleanup and too small to meet TPA milestones. He suggested that pressure should be exerted to require the US Dept. of Defense (DOD) to earmark 10% of its budget (\$33 billion) for cleanup at USDOE sites that produced materials for the use of DOD. He said he had heard that DOD resistance was also one of the reasons it was difficult to get documents declassified and requested that the agencies explain why it was hard to get documents released. He said he doubted Congress would be impressed by the tentative Agreement and suggested instead that the agencies create specific agreements with dates locked in that show cleanup remains a priority. Concerning ERDF, he spoke of the importance of public involvement in establishing waste selection criteria and of the need to use all available technologies to ensure that the volume of waste that goes to the ERDF is as low as possible. He pointed out the need for dust mitigation in high winds and the use of continuous air monitors (CAMs) at waste sites generally, not just at the ERDF, to provide adequate worker and public protection. Mr. de Bruler concluded by noting that Hanford, in many respects, is far ahead of some other USDOE sites in terms of public involvement and he urged that progress at Hanford continue.

Question , Answer, and Comment Session

Question (Greg de Bruler): What other locations were looked at besides the site proposed and was the northwest corner of the 200 Area considered? Is Hanford still being considered for a national low-level-mixed waste facility? What is planned for dust mitigation?

Response (N. Hepner): The proposed site appears to be the most protective of groundwater. If the agencies redo the site selection process, it could result in 1-2 year delay in cleanup. He indicated that an operational restriction would come into effect with winds greater than 10 mph. He also said that they were experimenting with new surfactants that also might help.

Response (Al Conklin, Wash. St. Dept. of Health): Because of a concern about the spread of contaminated dust, he said that the Dept. of Health wanted continuous air monitors or CAMs to be installed rather than air samplers. CAMs give instant feedback, whereas it can take a week to get results from air samplers.

Comment (Greg de Bruler): He expressed opposition to having Battelle's Pacific Northwest Laboratories conduct a proposed Columbia River Impact Assessment. He said he considered Battelle a polluter and therefore its participation would constitute a conflict of interest. He urged that an independent contractor conduct the study. He expressed frustration that all the relevant studies on releases have not yet been made available. He also suggested that the agencies take a look at the law concerning Natural Resource Damage Assessments because it could impact the study. In any case, he said, relevant documents need to be declassified if a credible study is to be done.

Response (Mike Thompson): He indicated that a similar study had been initiated several years earlier that was an accumulation of individual studies from operable units along the River. However, the three agencies decided in 1993 that an eco-system based approach would be better and a new study -- Columbia River Comprehensive Impact Evaluation -- has been initiated. He said USDOE had put out a bibliography of studies on the River and is in the process of declassifying the studies. He said the Department hoped Hood River and the tribes would work with USDOE to produce a study that meets all needs.

Comment (Dirk Dunning): He pointed out that the Natural Resources Damage Assessment provisions of Superfund assess costs for damages done to date but that they also allow for future costs if damage is done. This would relate to damage done to the high quality shrub-steppe habitat in the area where ERDF is proposed. He felt the RI/FS process was not a good substitute for an EIS in terms of assessing the damage the proposed facility would cause to this habitat, which is some of the last remaining in Washington. Concerning the fresh water ponds in the K area for fish rearing, he noted that the project is based on a cooperative agreement between the Yakama and USDOE. The water in the ponds comes directly from the River and has never been contaminated. He said that the first batch of fish reared in the ponds had been released at Priest Rapids. He recommended contacting the Yakama Indian Nation directly for more information.

Comment (Chief John Jackson): He said he believed that the whole area had been subject to releases. He asked if there were anyone who could assure him that none of the water had been contaminated. He felt there were better places than the Hanford area for fish rearing. He favored downriver, in particular, where the fish would have to pass only one dam. He then noted members within his family who had died from cancers and spoke of the damage he had seen because something had been overlooked or people had not been told of the risks. He urged that studies be conducted behind every dam to make sure the water is clean. This care is needed, he said, to protect future generations.

Comment (Roger Stanley, responding to Mr. de Bruler's concerns): He noted that Hanford's budgets get tighter and tighter as time passes and there is a strong focus on performance. He agreed with Mr. de Bruler's concern that it will not be clear for a time whether the tentative Agreement will result in accelerated cleanup. His recent work with Bechtel, he said, gave him hope for the future.

Response (Bob Holt, USDOE): When Congress passed the Federal Facility Compliance Act, it required sites to assess waste and to create a national inventory of high-level waste, low-level waste and mixed water. This inventory is still being created. USDOE was instructed to identify possible sites for disposal; Hanford is one of the sites under consideration. He said that States, including Washington and Idaho, have been participants in reviewing documents. He indicated that the low-level and mixed-waste repository had been authorized by Congress in 1992

and that no conclusions had been reached yet. Hanford is being looked at as one of the options.

Comment (Roger Stanley): Neither Washington State nor EPA has received a proposal for this facility.

Comment (Dirk Dunning): When the Nuclear Facilities Safety Board met at Hanford recently, he said he heard that only two sites are under active consideration, Hanford and Nevada.

Comment (Mike Thompson): He said he wanted to clarify a point about the schedule for tank waste remediation. Milestones for the tanks were set during the 1993 negotiations; they have not changed. During the present negotiations, an administrative decision was made to move the soil around the tanks out of the ER program into the tank waste remediation system. That was the only change made this year concerning the tanks.

Comment (Dirk Dunning): He said a recent issue of Nature magazine quoted Thomas Grumbly, USDOE Headquarters, as saying he did not believe any of USDOE's sites could be cleaned up within the timeframes agreed to because of the state of technological development. Therefore, it made sense to him to slow down until the technologies were in place. In Mr. Dunning's mind, this indicates there should be a focus on the technology development in the areas that are needed.

Comment (Mike Thompson): There is a separate, nationwide program for technology development. At Hanford there is a choice: the focus can be on emerging technologies or on showing progress, "getting on with it." With Congress saying it will quit funding Hanford if it does not see progress, USDOE RL is trying to get on with the cleanup. This means getting the records of decision in place, going through the remedial design, setting milestones for cleanup, and then carrying out the work. We believe that is the path we must take to retain credibility with Congress and Hanford's stakeholders.

Comment (Dirk Dunning): He said he agreed with Mr. Thompson completely about Hanford and that his remarks about technology development related to the Headquarters technology development program.

PORTLAND

Date and Location: Wednesday, November 30, Red Lion at Lloyd Center; 7:00 pm - 9:30 pm

Welcome: Dick Belsey, M.D., Oregon Hanford Waste Board

Agency Representatives/Lead Negotiators: Mike Thompson (USDOE), Roger Stanley (Ecology), and Doug Sherwood (EPA)

Commentary: Paige Knight (Hanford Watch)

Panelists for the Question and Answer Session: Mike Thompson, Roger Stanley, Doug Sherwood; Pam Innis (US EPA), Owen Robertson, (USDOE), Norm Hepner (Washington St. Dept. of Ecology), Paige Knight (Hanford Watch), Gerald Pollet (Heart of America Northwest), and Dirk Dunning (Oregon Dept. of Energy)

Meeting Facilitator: Alinda Page

Approximate attendance: 28

Commentary

Paige Knight, Chair of Hanford Watch, spoke from a Citizens' Guide that was jointly prepared by the Washington Environmental Council, Heart of America Northwest, Hanford Watch, Hanford Education Action League, Hanford Action, Physicians for Social Responsibility, the Sierra Club and Columbia River United. She highlighted 5 key points from the Citizens' Guide about the tentative Agreement:

- The completion of the cleanup is not accelerated from existing milestones so it is not really speeding up the cleanup along the Columbia River.
- The Agreement will not reduce exposure to contaminants along the Columbia River. She indicated that 23 billion gallons of waste were disposed in the N area, including strontium 90 which is a bone seeker. Since people boat, fish and have access there and since workers could be exposed, serious cleanup is needed to reduce the threat of exposure and to meet regulatory standards.
- The commitment to cleanup by 2018 is weakened because there is no commitment to move the reactors by that date.
- There are fewer TPA milestones requiring that investigations be completed, which feels like milestones are slipping.
- The Columbia River Comprehensive Impact Analysis of the sediments, shorelines and islands is left up to Battelle which, as a polluter, should be ineligible to conduct such a study because of a conflict of interest.

Formal Comments

Lynn Sanderson: Since these problems are so complex and expensive, she said she hoped there is a forward vision guiding the overall effort. She felt there should be a blue-ribbon panel to study and clarify US nuclear policy. It should request and value input from independent scientists, not just input from federal agencies and contractors. She said she is a little skeptical when she hears that ERDF is for "Hanford only" waste and expects there will be pressure to try to change this provision. She said that the public must be vigilant in this regard.

Dirk Dunning, Oregon Dept. of Energy: Mr. Dunning said that the State of Oregon had examined the ERDF proposal for some time, along with others on the Natural Resource Trustee Council, and was submitting formal comments on the environmental and public health threat that are of concern to them. These concerns relate to both the siting and the engineering processes. The siting process did not give adequate consideration to tribal rights, transportation concerns, the importance of priority habitat. The Natural Resource Trustees were not formally informed about this plan as is required by law. The Trustees have suggested that the siting process may need to be reopened. The agencies say reopening siting could delay the project by about 2 years. As Trustees, he said, they could not support the ERDF but they also did not oppose it because such a facility is needed. He said that the Natural Resource Trustee Council should be consulted about all such projects. He remarked that a recent tour of the Hanford site had demonstrated that the habitat across the site is not of equal value. He pointed out that there is a road that goes right through the heart of the best shrub-steppe habitat which, at a minimum, opens up the area to noxious weeds. Since ERDF is slated to go into this area of prime habitat, a comprehensive plan needs to be in place to protect it as much as possible.

Dick Belsey, Chair of Cleanup and Site Restoration Committee of the Oregon Hanford Waste Board on behalf of the Board: The Oregon Hanford Waste Board agrees with the general refocusing of the ER program. The negotiators followed the recommendations of the Future Site Uses Working Group and Tank Waste Task Force. The Board commends the TPA agencies for this. However, the Board has serious concerns about the budget and will continue to monitor the budget. The Board insists that USDOE meet the requirements of the TPA and ask for adequate funding from Congress.

Dick Belsey, Hanford Advisory Board: He expressed concern that deadlines for addressing sky shine, which could seriously impact Hanford workers, were going to be missed. He said that doses to workers must be minimized. From his perspective the real issue is the bottom line. He referenced an exit interview that John Tuck gave as he left USDOE (at the end of the Bush Administration) in which Mr. Tuck said that USDOE knew it did not have enough money to meet environmental compliance agreements but that the Department had agreed to them to preserve its production capability. Mr. Tuck's statement, he said, strikes at the heart of USDOE's credibility. He said there is constant worry that USDOE won't be able to meet the milestones. He pointed out that it is critically important to the health of the Pacific Northwest that there be no taint to the Columbia River. He said he was worried that if support for the cleanup were reduced, it would hurt the region, its health and its economy.

Lynn Porter: It seems like studies on groundwater have been done but that there are not decisions yet. What is needed are definite milestones for cleanup. Since there is not a high level of trust, the public needs something definite.

Paige Knight, Chair of Hanford Watch: She said her group has a lot of faith in the Oregon Dept. of Energy with Dirk Dunning and Ralph Patt (Oregon Dept. of Water Resources) and she supported Mr. Dunning's remarks. She said her group understands the crucial need for the ERDF but it feels the siting was not done as conscientiously and carefully as it could have been. She said the group wants Hanford waste to have a home at the ERDF, but not imported waste. She said Hanford Watch agrees that the Natural Resource Trustee Council must be part of the planning, engineering and construction. She said that ER Refocusing seemed like a shell game. It felt like Washington, D.C. was pressing down by threatening to take away the money because there has been no real cleanup since 1989. She said it did not appear that pump and treat was occurring on a serious level. She said they feared there was not enough money in the cleanup budget and what would occur would be a "harder, meaner" cleanup that would not protect health and safety. The money has to be spent well; to keep the money flowing, work will have to be done expeditiously. While her group agrees with some of the ER Refocusing effort, it was worried about budgets and wanted to see a real commitment to change.

Jim Lockhart began by referencing news reports about experimental testing on individuals, radiation releases, unsafe storage, and other abuses -- examples that typify what he sees as a trail of deceit that has accompanied the nuclear era in the US. He said he was concerned that nothing has changed in the 50 years since the nuclear age began. He felt that nothing was being done to deal with the horrible mess that has been created. He spoke, in particular, of people throughout Indian country who are dying from cancers at rates far higher than elsewhere. He felt that the nuclear industry as well as USDOE were responsible for many of the problems but that they had not lived up to their responsibilities. He said he believes that Nature is in danger of being poisoned and was ashamed we had created this poison.

Ross Tewksbury: He urged that publicity for future meetings be placed in alternative media like KBOO (radio) and the *Willamette Week*, not just in the *Oregonian*. The ads should identify key issues; they should not be expressed just in technical language. He complimented the agencies for the mailings he received prior to this meeting and said he felt they were doing a better job. He said the main goal at Hanford should be to protect human health and the environment from radioactive waste, not to clean up the place for other uses. He said he was skeptical any of these areas could be declared completely safe at the end of the cleanup. He said this idea is not only ludicrous but also dangerous because it might result in people growing agricultural products, like potatoes, that would cause consumers to get cancers. As far as limiting the ERDF to Hanford waste only, he said that there is so much nuclear material being generated, whether from nuclear power plants, medical waste, etc. that some of it will probably go to Hanford and he feels it is prudent to plan for it.

Gerald Pollet, Heart of American Northwest, requested that the record reflect the question and answer portion of the meeting. He said that Heart of America requested the following:

- signs to be posted on the shorelines and islands in the Columbia River within one month;
- within 6 months, surveys should be done and fences be put up where contamination was found;
- milestones are needed to reduce contamination to regulatory standards by the year 2000 along the Columbia River and install continuous air monitors or cams to determine if exposure goes above 10 millirems/year;
- deal with sky shine and other direct radioactive sources and with chemical contaminants on the islands.

He said an independent survey of risks and efforts to prevent exposure is needed. D island should not be an isolated example, but rather the first to be remediated. He said Heart of America did not find it acceptable to have Battelle conduct the Columbia River Comprehensive Impact Study because, as a polluter, it would have a conflict of interest. Such a study should suffice for NRDA, but if Battelle conducts the study, he said yet another such study would be needed. In addition, all relevant documents must be declassified and made accessible to the public. He said his group respects the efforts that the agencies have made to restrict the ERDF to Hanford waste only. However, upon reflection, they have realized that by combining the regulatory processes (CERCLA, NEPA and SEPA), the agencies committed to incorporating and meeting NEPA values. NEPA requires that cumulative impacts be identified and considered. He has heard that USDOE plans to bring waste to Hanford from other defense and FFCA (Federal Facility and Compliance Act) sites to Hanford. Thus, whether or not these wastes would go to ERDF, USDOE must identify where it is going so the public can see what USDOE plans to bring into Hanford.

Dirk Dunning, Oregon Dept. of Energy: On a recent tour of the site, he saw large piles of tumbleweeds, which pose a fire hazard for the ERDF. Planning must take into account this potential fire hazard.

Question , Answer, and Comment Session

Comment (Paul Richard): He indicated he had not seen any advance publicity for this meeting and said he found it very disturbing, given the toxicity of the chemicals involved. Since this meeting was one the public did not know about, he said there should be additional opportunities for the public to be informed.

Response (R. Stanley, M. Thompson, and Annette Carlson of Westinghouse-Hanford Company): We thought we had done what we could to get announcements out. There were advertisements on radio (National Public Radio and KXL) and in print (the *Oregonian*) and a mailing to a list of about 5000. Written comments will be accepted until December 8.

Question: Were these reports available to the public before today?

Response (Annette Carlson): They were sent to 1500 people who have been identified as "highly interested."

Response (Gerald Pollet): It is another question if those who received the reports understood them. Usually the public interest groups get people to the meetings. Here in Portland we did not make the effort we did in Seattle where we had over 100 people.

Question: Were the calendar sections of the newspapers notified?

Response: No. That is a good idea. They will be included next time.

Comment (Ross Tewksbury): The agencies did do a better job of publicizing these meetings than they have in the past. He said he received multiple reminders of the meeting which were helpful. He said that a lot of people who might be interested read alternative publications. He recommended that the *Willamette Week* and KBOO radio station be vehicles for publicity in the future.

Question (Lynn Porter): He wanted to know how ER Refocusing would reduce groundwater contamination and how the other plumes would be addressed.

Response (M. Thompson, D. Sherwood): Last year 5 groundwater pump and treat operations were initiated. Mr. Thompson said they would continue. The only new active groundwater remediation would be for the strontium plume at N Springs where a hydraulic barrier or wall is to be constructed to keep the strontium from getting to the River. If successful, because there would not be the flux back and forth to the River, the concentration of strontium in the groundwater would increase, which would make the pump and treat operation more effective. He said one workplan is scheduled for the next year; the others have been deferred to focus resources on the cleanup. Mr. Sherwood noted that two exceptions are a workplan for a major groundwater plume in the 200 Area and a plan to address a carbon tetrachloride plume (operable unit ZP1).

Question: What reduction of strontium 90 getting into the River do you expect?

Response (M. Thompson): There is a wide range of opinion about the impact. The actual reduction right now will likely be small because there is not a lot flowing now. Earlier, when N Reactor was in operation, there was. The strontium in the groundwater is 300 times the standard. We want to clean up the groundwater. If the wall is successful, it will slow the flow and should create a pool behind the wall that will be more susceptible to cleanup via a pump and treat operation.

Response (R. Stanley): He agreed with Mr. Thompson that there was a wide range of opinion as to the efficacy of the wall that is to be built. He said there is also a wide range of opinion about the adequacy of information available problem. Modeling results suggest there could be 93-94% improvement.

Comment (Paige Knight): Todd Martin of HEAL has found that more recent data show strontium is 1500 times the drinking water standard.

Response (M. Thompson): Concentrations in groundwater are going up because the flow is being reduced.

Comment (Gerald Pollet): He said he thought the question asked was what are you doing other than this to accelerate cleanup of groundwater all along the River. In reviewing the tentative Agreement with the current TPA, he said he and Heart of

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America staff attorney, Cindy Sarthou, had found no acceleration of cleanup along the River from what was already expected. There is a deferral of work in the 200 Area. The public was promised the agencies would renegotiate to accomplish remediation along the River by 2018. He said they dispute the agencies' September statement that the tentative Agreement will "hasten" cleanup. He said he and Ms. Sarthou found there are fewer workplans due on average over the next 5 years (reduced from 6/year to just over 4). That would be acceptable if there were to be more remediation. However, USDOE has capped ER at current levels which only funds studies, not remediation, which will cost more. In addition, they have not negotiated accelerated cleanup along the River.

Response (M. Thompson): These agreements will let us get to records of decision (RODs) for cleanup along the River in the next 3 years. Once RODs are in place, then the engineering can occur and milestones will be set. Right now, there is no decision for what the cleanup will be so there is no milestone for cleanup.

Response (D. Sherwood): Groundwater study in the 100 Area is effectively done. With the RODs that will be out in the next few months, all of the operable unit studies will be out. On the question of overall acceleration, while there has been no commitment from USDOE to clean up the reactors, for the first time the other contaminated structures near the reactors are included. The agencies feel this is an acceleration.

Comment (G. Pollet): These workplans were already due. By law, 15 months after a ROD, active remediation must begin. The budget will not permit this because of the internally-imposed cap on the ER budget. Experience indicates that if deadlines for action are not set, things do not get done. Setting deadlines for remedial action and unrestricted use of the land along the Columbia River is essential if active work is to get done. Can USDOE do remedial action at 15 operable units with the current budget?

Response (M. Thompson): USDOE feels the actions are do-able with the funding available. The agencies have taken a hard look at costs and have reviewed assumptions for cleanup. Based on those reviews, we feel there is a good chance the work can be done. Confidence was high enough to get the Assistant Secretary at USDOE Headquarters to sign off on the Agreement. For USDOE to meet expectations, we will have to do business much more efficiently -- the burden is on our shoulders.

Comment (Sue Gould): She said she wanted to hear more about the issues Paige Knight raised.

Comment (G. Pollet): Conservative estimates of radiation levels along the publicly accessible shores are 240 millirems. What is the risk? EPA's standard (10 millirems/year) is based on 1 fatal cancer for every 10,000 people. He said he had just heard there is a major gamma radiation source right along the shoreline that generates 75 millirems per second. In addition, he said he understands mercury is leaching into the groundwater. The public interest groups want a firm deadline to meet legal standards for radioactive and chemical contaminants. In the meantime EPA should put up signs at launch points and on the islands, within a month. Then, within 6 months, put up fences until the areas are cleaned. Sky

shine from N area cribs is a major risk: the cribs are so hot they give off radiation not only on the near shoreline but also on the far shore. Action is needed. It would be cheap to cap it with soil.

Response (M. Thompson): USDOE wants to shut down the N reactor and over a 3-year period make it "cheap to keep." Actions that will accompany this are to address sky shine, to put the hydraulic wall in at N Springs, and to characterize the cribs which are the sources of sky shine and groundwater contamination. 10% of the ER budget is allocated for these actions. There is no milestone for the cleanup but there is one for characterization so we can get going. For the past 5 years, because of an administrative division, we could not make headway; this has been changed and the way is paved for action. He said he agreed that sky shine posed unacceptable risks. He noted that the shoreline is currently posted and people should have no reason to spend extended periods of time on the River there. He said if a person were to fish every weekend for a year s/he would receive 8 millirems/year -- which is below the regulatory standard.

Comment (G. Pollet): The report I have seen indicates that USDOE will not address sky shine in the near future. Moreover, the characterization plan includes only 2 bore holes; that is not adequate. Current signs face away from the direction that people would come from; you must land and come ashore before you can read the signs.

Response (M. Thompson): \$700,000 is allocated for addressing sky shine. Our expectation is that if we characterize in the hottest part of the crib, it will give a vertical distribution of the contaminants.

Question (P. Knight): What is the projected life of the double-shell liner?

Response (P. Innis): The operational life is 30 years.

Question: What is the cost of the preferred alternative?

Response: It is \$65 million for five years, including associated buildings.

Comment (P. Knight): We hear that high-level waste and TRU will not be allowed in but some low-level waste is more toxic than high-level waste. She said she was concerned there could be some leakage.

Comment (G. Pollet): Heart of America was approached a year ago about the road (that cuts through the center of the proposed ERDF area). He said they never received any SEPA or NEPA documentation and questioned why no EIS had been prepared.

Response (D. Sherwood): EPA was not asked about it at all and heard about it first from the Yakama.

Response (R. Stanley): He was not aware of the State's having been consulted.

Response (M. Thompson and Owen Robertson): They said they did not have information about this but committed to finding out and getting a response to Mr. Pollet.

Comment (Dirk Dunning): On his recent tour of the site he said being in the midst of 7-foot high sagebrush made a stunning impression and he found it painful to see it destroyed by the straight line the road cut through the area. He said that it will be important to block side roads to keep people out and to preserve as much of the remaining habitat as possible.

Comment (Jim Lockhart): We hear that strontium 90 is leaking into the River, but we are told not to worry because it is diluted by the volume of water in the River.

Response (M. Thompson): He said that although the proposed hydraulic wall is controversial, from USDOE's perspective, the groundwater contamination justifies its construction.

Question: How long has strontium been leaking into the River?

Response: It is known to have been leaking since 1963.

Question: Do the agencies care enough to try to get the word about these meetings out? Who is responsible for publicity? What is the cost of publicity relative to the cost of renting the meeting space, providing the sound system, etc.?

Response (R. Stanley and Mark Wallace, WA St. Dept. of Ecology): The three agencies work together now and try to be effective. \$21,000 was spent on newspaper ads alone for this series of meetings.