



**HANFORD ADVISORY BOARD
ENVIRONMENTAL RESTORATION COMMITTEE**

Summary of Meeting

6 January 1995, 9 am - 3:00 p.m.
Clover Island, Ramada Inn, Kennewick, WA

Chairperson. Ralph Patt called the meeting to order, and initiated introductions. Those present were: Committee members, Denny Condotta, Ray Isaacson, Reid Miller, and Ralph Patt; ex-officio member John Erickson, Department of Health; unofficial members, Sonja Anderson, Government Accountability Project; agency representatives, Greg Eidam, Mike Thompson, Nancy Werdel, DOE; Chuck Cline, Jack Donnelly, Phillip Staats, Ecology; Kevin Oates, EPA; Paul Eslinger, PNL; William Sanderson, WHC; guest, Morton Hildreth, Richland, WA; and facilitator Naseem Rakha, Confluence Northwest.

TOPIC: 100 AREA

The Sensitivity Analysis was not received by ER Committee members until January 5, 1995. The group, therefore, postponed detailed discussion on the report until the following ER Committee meeting.

Nancy Werdel, DOE, review the material incorporated in the Overview of the 100 Area Remediation Challenge, distributed at the December 19, 1994 ER Committee meeting. A copy of this notebook will be sent to all ER Committee members unable to attend the December 19, meeting. Nancy also reviewed the Sensitivity Analysis Overview distributed by Greg Eidam at the December 19 meeting. The review included a brief description of use scenarios, cost evaluation, and estimates. EPA and Ecology stressed that they are not comfortable that the DOE cost estimates represent true costs.

Public Comment on Cleanup at three operable units in the 100 Area will begin in mid to late February. The three operable units under review are: BC-1, DR-1, HR-1. There are approximately 24-26 sites within these three units. At this stage, only high priority contaminated liquid waste sites will be addressed. Regulators have had input into the process, trustees have submitted comments. The DOE has been attending weekly Trustee meetings. The ER Committee will need to submit its comments on 100 Area cleanup no later than April.

Sub-topic 1: ERDF

There was general discussion about the ERDF site. Ray Isaacson expressed his continued concern about the location of the ERDF site. Due to soil type, leaching potentials, and possible future use scenarios, Ray believes the proposed site invites more trouble than does keeping the waste at its current location. Ray questions the validity and baselines used in the assumptions directing ERDF decisions. Ray also suggested that to put a small amount of waste into a larger waste site creates a larger problem. Kevin Oates noted that the approach to ERDF is incremental. The initial plan for ERDF is for two cells.

Ralph Patt related additional concerns from the Natural Resource Trustees regarding the location of the ERDF site. The Trustees, are not satisfied with the proposed location because it will disturb uncontaminated native range land.

Sub-topic 2: Ecology EPA DRAFT White Paper

Washington State Department of Ecology and the U.S. Environmental Protection Agency handed out a two page draft white paper which informed of current considerations and discussions regarding remediation of the 100 Area Operable Units. (Appendix item a). The paper listed the volume and cost of several cleanup scenarios based upon levels of risk. In all scenarios the cleanup would be completed by 2018. The Departments' reiterated their commitment to achieving unrestricted use of the 100 Area, but felt that because reactor cores are not currently scheduled for removal until 2055,

taking radioactive decay into account for adjacent waste sites may be a valid technical evaluation. The white paper described a cleanup scenario which assumed the 2055 reactor core removal date, and modified clean up level to account for decay within the 100 Area operable units to coincide with the cleanup of the reactor cores. The result was an occasional use scenario accomplished by 2018, with total unrestricted use achieved by 2118. A delay in reactor removal would allow the Cobalt 60 to decay, thereby reducing worker exposure and increasing safety. Reactor removal dates will be negotiated by 1996.

The Departments' were specifically were interested in knowing from the HAB:

- What exactly does unrestricted mean? And,
- When do we want to achieve unrestricted use?

The Committee first discussed the term "unrestricted use". Phil Stats felt the term was somewhat difficult to pinpoint, and thought HAB could help the Tri-Parties better define this in the 100 Area.

Ralph asked the Committee to refer to the Future Site Uses Working Group's definition of "unrestricted use". This definition states that: "contamination does not preclude any human uses. There may be other reasons to control or limit certain uses or activities, such as to preserve cultural features and wildlife/natural values." (Appendix item B).

The committee acknowledged that opening certain uncontaminated areas of the 100 Area Operable Unit to unrestricted use may prove inconsistent with certain values as long as highly contaminated sites, such as the reactor cores, remain in the area. The committee also acknowledged the inherent danger in releasing uncontaminated surface areas to unrestricted use while the subsurface remained contaminated. Additionally, the committee felt that unrestricted use could only be designated if drawing water does not move plumes and contaminate increasing amounts of groundwater.

Sonja Anderson reiterated her concern that any use scenario is thus far based upon incomplete characterization data of the contaminants. She felt it is difficult to determine levels of cleanup when it is not fully known what contaminants are out there. She understands that TRU nuclides have been discharged and that the plumes have likely shifted over time. The DOE responded that they are aware that they do not have all the information about the site, but that characterization is ongoing. Sonja would like both Greg Eidem and Nancy Werdel to go over some of the data she has on 100 Area contaminants in preparation for the presentations to the HAB.

The white paper brings up new and potentially controversial issues for the Board to consider regarding timing of cleanup in the 100 Area. Committee members, particularly those on the Future Sites Working Group, are committed to the 2018 date, and may see this as a step backwards. However, because remedial actions will be complete by 2018, and because 95 - 98% of the land could still be released (to the occasional use scenario) by 2018, the recommendations would not require any re-negotiation of the TPA.

Phil Stats listed the trade off of considering alternative A - removal of reactors by 2018, to alternative B - removal of reactors once Cobalt 60 has decayed (approximately 2055). Removal at the earlier date would mean increased cost, increased worker exposure, a larger ERDF footprint, increased habitat disturbance, and possible release of land to unrestricted use at an earlier date. Phil Stats suggested he could put together a focus sheet which would list the pros and cons of the recommendation.

All members of the Committee felt this issue should be brought before the Board. The Board and public's comments will be critical to further cleanup scenarios and decisions at the 100 Area. The Committee felt it was important for the Board to have an overview of 100 Area issues and history, and the impact of decay on costs and priorities. Led by Linda McClain, the DOE will give the bulk of the presentation, with a response by the Regulators. The ER Committee will meet prior to the HAB

meeting to learn more about the 100 Area cleanup issues and help the DOE and regulators prepare for the HAB presentation. Mike Thompson stressed that the DOE would like to see a confirmation of policy decision memorialized in the record. The ER Committee feels it is necessary to have a clear and concise presentations, with slides and aerial photos of the topics under discussion. Bill Sanderson will work with the DOE to prepare the HAB presentation.

Questions which emerged included:

1. Is it possible and/or useful to allow for unrestricted surface use, while restricting use of the subsurface, including groundwater. The Site Uses Working Group acknowledged the possibility of this double standard (surface unrestricted while sub-surface restricted) in several of their future use options (Appendix item B). Examples of this exist in areas throughout the United States where the surface of an area has unrestricted use, but groundwater is not available for use due to unacceptable levels of nitrates.
2. Is unrestricted a valuable term? Given zoning laws, is the term "unrestricted use" a misnomer? Would unrestricted *access* better describe the interim use level achieved between 2018 and 2118? Is the CERCLA use of *institutional controls* appropriate in this situation?
3. Do we have adequate data about the types, sources, levels and locations of contaminants? If not, how do we get this information?
4. How does reactor removal fit into the picture? What are the advantages and disadvantages of delaying removal? What are the advantages/disadvantages of leaving the reactors in place?
5. How do we institute control on land use and cleanup for the next 100 years?

DECISIONS:

The ER Committee will host a presentation on 100 Area Issues and the impact of decay on costs and priorities at the February 3rd HAB meeting. The presentation will be led by Linda McClain from DOE with a response from the regulators. The ER Committee will decide at its meetings whether it will bring a recommendation before the Board. In preparation for the Board meeting, the DOE will fax its proposed outline to the Committee on or before January 13. On January 13, 2 p.m. the ER Committee will host a conference call to review the outline prior to its next meeting. On Tuesday, January 17, the ER Committee will meet at the Department of Ecology, Kennewick, to learn more about the 100 Area cleanup issues and help the DOE and regulators prepare for the HAB presentation. Bill Sanderson will work with the DOE to prepare the presentation. He will contact Linda McClain to confirm both the January 17 and February 3 dates. Phil Stats will put together a focus steet on the pros and cons of the Ecology/EPA recommendation.

TOPIC: BARRIER WALL

Mike Thompson reviewed the current status of the barrier wall at N-Springs. The purpose of the wall was to reduce flow of contaminated water to the Columbia River and to enhance the pump and treat program. Strontium 90 enters the river at 750X the Drinking Water Standard. An outside contractor has come on board, and has been testing sheet pile using four different drive heads. The goal was to drive the 2 foot pilings into the Ringold Upper Mud Unit. Unfortunately, the mud-unit above the Ringold is denser than anticipated. The sheet pile is unable to penetrate, and is instead curling up like a sardine can. This is happening at approximately 37 feet. This event will not effect the pump and treat milestone.

Prior to driving the pilings the DOE found a 1700 hundred foot window in top of Ringold formation which is the top of the Hanford Formation. This is likely a drain, as Strontium 90 levels are higher in this area. The DOE does not know if the window goes to C-1325/C-1301. C-1325/C1301 is built in the Hanford Formation.

The actions that have been taken thus far include:

- a) demobilized the contractor;
- b) discontinued order of sheetpile;
- c) scheduled a meeting on January 24, to discuss options with the EPA and Ecology; and,

- d) put the milestone for completion of barrier wall on hold.

Possible options for future action include:

- a) no action;
- b) drive down in places where there is no mud;
- c) shorten wall;
- d) pre-drill then put in piling;
- e) cryogenic freeze wall;
- f) trenching; or, if relieved of the requirement to put a permanent structure in
- g) inject grout (a slurry wall - grout - would depend on using in-situ soils as part of the slurry source.)

DECISION:

Mike Thompson will organize a poster session on the Barrier Wall situation at the February HAB meeting. Part of this session will include the decisions and discussion from the January 24 meeting.

TOPIC: SITE SPECIFIC ADVISORY BOARD MEETING

Both Greg deBruler and Ralph were nominated to represent the ER Committee at the Site Specific Advisory Board. Both names were seconded. The group decided to send Ralph to the February SSAB meeting as primary representative, and have Greg as an alternate. The committee chose to follow the other committee's decision in making the chair the lead representative on this group.

DECISION:

Ralph Patt will be the ER Representative to Site Specific Advisory Board with Greg deBruler the alternative representative.

TOPIC: RISK ASSESSMENT

Naseem Rakha reviewed the discussion which occurred Thursday evening between Committee Chairs Marilyn Reeves, Dick Belsey and Ralph Patt. The three chairs gathered to discuss a process for informing the HAB about risk assessment. At this meeting the chairs agreed it was important the HAB be able to understand and utilize risk assessment in their discussions and advise giving to the Tri-parties. The three also agreed that the process should be somewhat incremental and educational. Belsey and Reeves felt the ER Committee should take the lead on Risk Assessment. The Dollars and Sense Committee suggested the ER Committee consider bringing in Jim Ruttener and Dr. Mukhijani to do an afternoon or evening workshop on Risk Assessment

Ralph felt that the education process should help people identify what risk assessment is, techniques of risk assessment and controversy around risk assessment. The group discussed possible ways of presenting risk assessment. Ralph felt it was important for the regulators to let the HAB know what they were using as a risk assessment process. Mike Thompson felt the first step in understanding this topic was to understand the difference between risk assessment and risk management. Risk Management deals with the broader sociological, and environmental values.

Nancy Werdel felt it was important to bring in outside people to discuss risk assessment.

Ralph Patt explained the current status of the CERE process. CERE is a partnership of universities and corporations funded by the U.S. Department of Energy (DOE), Office of Environmental Management (EM), through the Office of Integrated Risk Assessment (ER-6). CERE was established to conduct a review and evaluation of risks, costs and public concerns for remediation, waste management, and decontamination and decommissioning (D&D) associated with compliance agreements linked to cleanup of the DOE weapons complex. Information developed will be used to prepare a June 1995 report to Congress describing the risks and costs associated with cleaning up the weapons complex. CERE is developing a qualitative risk evaluation (QRE) methodology. QRE is a process for interpreting available information concerning risks to public health, workers, or the environment, and drawing qualitative conclusions regarding the nature, severity, extent and urgency of these risks.

Reid Miller felt that it would be important that the program to the HAB help everyone understand how Risk Assessment is used at Hanford, and then broaden the topic to what it is and how it is done.

Ray Isaacson stressed that congress is evaluating risk assessment methodologies to determine how and what to fund with regards to environmental cleanup. Ray felt a primer should be created.

Kevin Oates offered to bring information on CERCLA risk assessment. He felt it was important to understand how different tools are used.

Bill Sanderson provided a brochure on an Introductory Risk Assessment workshop sponsored by the USDOE Office of Environmental Restoration. The ER Committee will ask Jon Yerxa to look into our bringing this workshop to the committee on March 3.

DECISION:

The ER Committee will host an educational presentation on risk assessment at several meetings throughout the year. The process will be begin at the February HAB meeting with presentations by Washington Department of Health on human health risk assessment, review of the CERE program and ER Risk Assessment focus by Ralph Patt, and an additional presentation by possibly the University of Washington, or the DOE. This last presentation will be finalized by Jon Yerxa. Jon will also be asked to determine if the DOE Introductory Risk Assessment Workshop can be held for the ER Committee (and other interested HAB members), on March 3, 1995. The ER Committee will contact both Jim Rutenber and Dr. Arjun Makhijami about the cost and timing of a presentation to the HAB.

TOPIC: BLUE RIBBON TECHNICAL PANEL

The ER Committee reviewed Greg deBruler's request that the DOE provide full itemization of expenditures for the Columbia River Impact Evaluation Plan, Fiscal Year 1993-1994. Greg asked that this information be provided by the February ER Committee meeting.

The ER Committee asked that the DOE fulfill this request.

Mike Thompson provided the ER Committee with a one page summary on the Columbia River Comprehensive Impact Assessment Project (appendix item C). Thompson stated more detailed information can be provided.

Mike Thompson said the Contaminant of Concern Summary is still due out by the end of the month. This report will be sent to the ER Committee. The document can be reviewed prior to distribution at PNL.

The DOE's current thinking on the technical panel is that nominations will be received from Tribes, and University Deans.

Sonja Anderson, expressed her willingness to expand or accelerate work she has done to review sensitive documents that may give the ER Committee important insight into past practices at the Hanford site. This work could be done for the committee through a special assignment extended through Kaiser, her current employer.

Mike Thompson sees no problem having someone research documents. The policy of is to declassify documents. He understands that trust needs to be built.

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