



**HANFORD ADVISORY BOARD  
ENVIRONMENTAL RESTORATION COMMITTEE**

**Summary of Meeting**  
19 December 1994, 9 am - 3:30 p.m.  
Department of Ecology, Kennewick, WA.

Chairperson. Ralph Patt called the meeting to order, and initiated introductions. Those present were: Committee members, Greg deBruler, and Ralph Patt; ex-officio member John Erickson, WA Dept. Of Health, Bob Cook, Yakama Indian Nation, JR Wilkinson, and Tom Gilmore, Confederated Tribes of the Umitilla Indian Reservation; unofficial members, Sonja Anderson, Government Accountability Project; agency representatives, Randy Birch, Amoret Bunn, Greg Eidam, Mike Thompson, Nancy Werdel, and Jon Yerxa, DOE; Dib Goswami, and Phillip States, Ecology; Dennis Faulk, Larry Gadbois, and Kevin Oates, EPA; Paul Eslinger, PNL; William Sanderson, WHC; Allan Danielson, Washington Department of Health; Joy McConaughy, Washington Department of Fish and Wildlife; and facilitator Naseem Rakha, Confluence Northwest.

**TOPIC: TRACKING MECHANISM:**

Nancy Werdel gave copies of four different tracking mechanisms used at the Hanford site to describe and follow clean up.

- a) Basic report briefly describes each project area in one paragraph or less.
- b) Site Management System Report: Monthly status report on sub-projects at the Hanford site. This report comes out the 22nd of each month for the month preceding. The report is listed by milestone schedules, and includes, among other things, information on major accomplishments, change requests, cost/schedule performance, and cost variance.
- c) Status package produced for monthly 100 Area Unit Manager meeting. Report provides more technical detail on 100 Area only.
- d) Milestone and Performance measure put out by Bechtel.

Ralph Patt would like to see this type of information more accessible to the HAB. He would like to see a notebook compiled that would provide brief background descriptions of facilities, activities, and history at Hanford, and be easily updated with current tracking information. A notebook like this was used by the Oregon Waste Advisory Board, and proved to be an important reference tool. Ralph asked the ER Committee for input and suggestions to this idea. Sonja Anderson stressed the need for a complete listing and description of all Hanford facilities, including those which have been decommissioned, decontaminated, or destroyed. Each description should encompass the entire operating history for the respective facility. This information should be streamlined. Additionally, members asked that the notebook reference where more information can be found.

**DECISION:**

Bill Sanderson will put together a mock up of a tracking mechanism for discussion at the January ER Committee meeting. Ralph will ask the HAB for input during the January HAB meeting.

**TOPIC: 100 AREA**

Dennis Faulk introduced the 100 Area discussion by outlining specific differences between Occasional (recreational) Use and Frequent (residential) Use. Those differences are:

<b>Occasional (Recreational)</b>	<b>Frequent (Residential)</b>
7 day 8 hr/day stay time	365 day stay time
70 KG Body Weight	70 KG Body Weight
Water consumption - 2 liter/day/7 days	Water consumption - 2 liter. Day/365 days
Fish intake - 54 grams/day/7 days	Fish Intake - 54/grams/day/365 days
	Consumption of fish, fruit, and vegetables from site

Pathways: ingestion, inhalation, dermal

Nancy Werdel handed out a notebook entitled Overview of the 100 Area Remediation Challenge. The notebook includes descriptions of waste sites, an overview of the 100 Area, Groundwater information and specs on Operable Units BS-1, BC-2, KR-1, KR-2, NR-1, DR-1, DR-2, HR-1, HR-2, FR-1, FR-2.

Mike Thompson gave an overview of the 100 Area. The TPA requires that DOE-RL complies with both RCRA and CERCLA. The TPA also requires the regulators write RODs and all three parties sign off.

Reactor water at 100 Area was treated with sodium dichromate. Disposal practices discharged chromium laden reactor liquid to soils. Chromium is toxic to fish at 11 mg/l (ppm). Because salmon spawn heavily in the Hanford Reach (4500 spawning beds in 1994), chromium contamination in the Columbia River is a big concern. The drinking water standard for chromium is 100 ppm. There are places in the groundwater where it is over 100 ppm.

There are approximately 24 cribs at 100 Area, and approximately 300 waste sites.

Sonja Anderson expressed concerns that major activities are being conducted at the 100 Area which she does not believe the public or the HAB are aware of. More specifically, there is a tremendous soil washing activity in progress and other activities which have not been made public.

DOE explained some of the work being performed in 100 Areas. Contaminated soil will be transferred to the ERDF. Liquid effluents from soil washing will be collected and treated at appropriate facilities and subsequently discharged to the soil column within permit limits and requirements. Ms. Anderson expressed concern with this method because tritium and other contaminants are being discharged back to the groundwater. She feels that transuranic materials such as Plutonium Neptunium-239, and other radioactive materials may qualify the solutions from soil washing as TRU wastes (greater than 10 nanocuries transuranic material per gram of waste). If this is the case, the waste waters cannot be discharged back to the soil column.

Pump and treat technology, currently in use at the 100 and 200 area, makes sense when there is significant radio-nuclide contamination and the technology can help reduce the concentration of groundwater contamination. Decisions still need to be made regarding what to do with contaminated soil. Bob Cook felt the DOE needed to consider episodic flooding in their models.

Bob Cook expressed concern that both RCRA and CERCLA do not adequately address Indian Nations' needs. Bob felt the NEPA process is critical to assuring Native American values are a part of decision making. He asked where in the TPA process NEPA fit. Bob felt the published RODs have not reflected the rights and responsibilities of tribes. He expressed a great deal of concern that comments submitted by the Yakama Nation have not been incorporated into the TPA, and wanted to know how comments can begin to influence decisions. Those comments included using in-situ cleanup processes and concerns about ERDF.

Mike Thompson stated that NEPA values will be incorporated into the CERCLA/HSWA processes and that a separate NEPA process would take too much time and therefore conflict with the publics' value of "get on with it." Mike felt tribal input was critical to effective clean up strategies, and encouraged further input. He acknowledged that there needs to be better follow-up to comments made by the Tribes.

Nancy Werdel outlined certain clean up issues at Hanford. All issues and overheads came from the Overview of the 100 Area Remediation Challenge. Nancy handed out a timeline for the 100 Area discussions and public comment periods.

Questions that came out in the two discussions included:

1. Have all available technologies been adequately considered? (i.e. in-situ clean up using cryogenic barrier)

2. Is it appropriate to remove and clean waste from one site only to contaminate another site?
3. What do we do if we hit high level waste?
4. Have we identified all the contaminated sites?

Greg Ediam gave a brief introduction to Sensitivity Analysis Objectives, parameters, and targeted results. ER Committee will continue to discuss sensitivity analysis at the January 6, ER Committee meeting. Committee members also discussed the possibility of visiting the B Area on January 6. The DOE will send the Sensitivity Analysis Report to ER Committee members no later than December 22.

Preliminary comments and concerns included:

- EPA felt the Modified Cleanup strategy ignores values expressed by the Future Sites Uses Working Group.
- John Erickson felt the 10 MR Level in the Complete Excavation Scenario should be changed. He also felt it should be understood that the HSB RAM still has some major problems and that it is still under revision.
- Bob Cook felt that none of the scenarios were applicable to Indian Use. For example, subsistence use issues and levels.
- Dennis Faulk felt an Indian use scenario needs to be developed.
- Bob Cook expressed concern that in-situ treatment was not looked at in the sensitivity analysis. In-situ, a process that treats soil in place, was dropped out in phase #1 of the 100 Area analysis because of high risk to groundwater. Bob felt this danger could be limited by using a cryogenic barrier screen (as used at Oakridge). Sonja Anderson felt that there needed to be a closer examination of tradeoffs of in-situ versus removal. Dennis felt there could be an opportunity to try in-situ with a cryogenic barrier, if something else was given up.
- Sonja Anderson stated that she did not feel adequate characterization had been conducted in the 100 Area's soils, sediments, and groundwater for heavy metals and radioactive components. It is not cost effective to conduct massive "cleanup efforts" if we don't know what we are supposed to be cleaning up.
- Discussion arose concerning current contamination regarding radioactive particles on D Island in the Columbia River. Site personnel have collected about 100 radioactive particles on D Island. DOE said the particles were contaminated with Cobalt-60, and that they would decay in a few years. Sonja Anderson felt the particles should be formally characterized, and that all contaminated sites with public access should be posted with warning of radiological hazards. Greg deBruler stated that "surface contamination" signs should be placed back on the islands by the DOE. Mike Thompson said the DOE was considering information readerboards at public access points to the river.

#### **DECISIONS:**

The Sensitivity Analysis will be sent to all ER Committee members by December 22, 1994. The ER Committee will meet on January 6. At the meeting we will visit the B Area and discuss the Sensitivity Analysis Report. Everyone participating in the Hanford Site visit should contact Bill Sanderson with your full name, social security number, and citizenship information.

#### **TOPIC: BLUE RIBBON TECHNICAL PANEL**

Mike Thompson gave a brief overview of the purpose of the Columbia River Impact Study and the Blue Ribbon Technical Panel. The steps in the Study included compiling a bibliography, a Contaminant of Concern list, and a Species of Concern list. Mike indicated that Battelle (PNL) was chosen to do the study because of PNL's thirty year history in Columbia River oversight and their access to much of the needed material and documents. PNL has historically been used by DOE for oversight monitoring as the organization is not involved as the management and operating (M&O) contractor. The study was expected to come out September, 1995; however, lack of progress with getting a technical review group on board will impact this goal. Because people have issues with PNL, DOE wants to develop a technical panel to develop consensus and credibility regarding the study and resulting DOE actions.

DOE wants the panel to look at both the human and ecological impacts on the river, address current risk from radio-nuclides and chemical contamination, oversee PNL's work, and bring credibility to the study. Mike stressed that he was open to any meaningful way to get a peer review process on the study. The ER Committee was approached as possible route to expediting the formation of this panel.

Current criteria for the panel include: Ph.D.; extensive experience in a technical field; recently published in peer-reviewed journal; expert in one of the above fields; recognized by peers as critical, objective, and reliable; broad range of interdisciplinary study; NW association; good communication skills; and, knowledge of applicable laws.

Sonja Anderson felt that the DOE was not demonstrating it was truly going in a different, more credible direction with this panel. For example,

1. The credentials required for the panel are not reasonable.
2. If a panel of independent experts were already on board, these people would not be able to understand the magnitude of operations at Hanford required to provide an intelligent technical review of the proposed report.
3. Basic aspects required to prepare the report have not been completed.
4. It is an unreasonable expectation that the report would be completed by September, 1995, while meeting DOE's proposed requirements of "technically correct", "legally defensible", and "credible".

J. R. Wilkinson felt that the peer review groups, as described, did not include Indian needs, and wants the tribes to have a role in this group.

There was strong belief that the September, 1995, deadline was unrealistic meeting such a goal would effect the credibility of the study.

Greg deBruler expressed his concern that to date there has not yet been any stakeholder participation in the Columbia River Impact Study. He expressed his continued dismay with the process adopted by both PNL and DOE. He believes that in order to have a credible study, the DOE should back up and do it right. Ideas for doing this include:

1. Include stakeholders, and stakeholder values in this process.
2. Involve Indian Nations and States in advising PNL in all aspects, with specific emphasis on the design criteria of the study.
3. Contract a special assignment with Sonja Anderson. Ms. Anderson would be allowed, with proper clearance, to research 100 Area and Columbia River classified documents. Ms. Anderson would provide technical information and assistance to the ER Committee for their better understanding of contamination issues and history at the 100 Area.

Randy Brich felt that stakeholders had given the DOE the clear message at earlier public scoping meetings to compile and make the first cut on the documents necessary to create the study. He felt the DOE proceeded in the way Stakeholders indicated. Randy also questioned the value of Greg deBruler's request to have Ms. Anderson research documents which describe fifty years of site operation. To convert operations data to river impacts would require numerical simulations involving many assumptions that would be highly subjective. He sees the current method of looking at actual measurements on site as more valuable, defensible, and pertinent.

Ralph suggested there was value in historical research because measurements simply have not been taken everywhere at the 100 Area.

Dennis Faulk suggested the ER Committee consider creating a task group to focus on the Columbia River Impact Study.

The Contaminate of Concern Report will be released January 27, 1995.

**DECISION:**

Subject tabled for further discussion at the February 8, 1995, ER Committee meeting. ER Committee members will be sent a copy of the Contaminant of Concern List which will be reviewed at the February ER Committee meeting.

**TOPIC: RISK ASSESSMENT**

Ralph spoke about the National Academy of Science Report Building Consensus. The risk assessment process described in the report suggests a practical way to involve public. Ralph felt it was a method the DOE should consider utilizing.

Ralph also spoke about his involvement and concerns regarding the CERE program. He would like the ER Committee to comment on the CERE Report due to come out in June/July. Ralph will attend two more CERE meetings in the following two months. The CERE report will go to Congress in June or July. The group expressed concern that the focus of the CERE Report, a qualitative process for risk assessment, could further cause Congress to rethink their commitment to cleanup activities at Hanford. The ER Committee will comment to the HAB on the CERE Report, and if desired, forward those comments to Congress.

The ER Committee is interested in working with other HAB committees to put together joint programs that will help all HAB members understand risk assessment issues and processes, and to build common ground. The ER Committee will work with the DOE to identify someone to give the HAB a general presentation on Risk Assessment issues and processes at Hanford. This presentation should occur in February as a kick off to future work.

**DECISION:**

The ER Committee will seek to confirm Carol Henry for a HAB presentation for the February HAB meeting.

**TOPIC: GROUNDWATER DOCUMENTS**

Mike Thompson gave a brief overview of the different Groundwater documents created at Hanford and their purpose and relation to one another. He began by giving us an overview of the types of documents historically created at Hanford to monitor groundwater.

Prior to 1988	Rockwell, United Nuclear, and Westinghouse PNL	Operational Monitoring Program Site Wide Surface Environmental Program
Post 1988	WHC, PNL	OMP, SSP, RCRA, CERCLA

In 1993 it was agreed to describe the Hanford approach for groundwater protection in the document the Hanford Groundwater Protection Management Plan, and the remediation approach in the Hanford Groundwater Remediation Strategy.

**DECISION:**

None

**TOPIC: FUTURE MEETINGS**

1. January 6, 9am - 3pm, Clover Island Ramada Inn, Kennewick, WA. Topics: sensitivity analysis, tracking mechanism.
2. January 13, 2 pm - Conference Call Topic: Reivew DOE outline for January 17 Committee meeting
3. January 17, 9 am - 3 pm - Department of Ecology, Kenniwick, WA. Topic: DOE and Tri-Party presentation on 100 Area issues, prepare presentation to HAB..
4. February 8, 9 am - 3 pm - EPA Richland, WA. Topic: 100 Area, Risk Assessment.

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