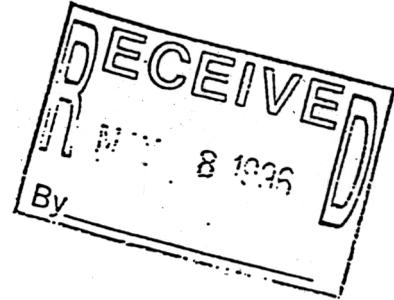


# HANFORD ADVISORY BOARD

*A Site Specific Advisory Board, Chartered under the Federal Advisory Committee Act*



May 7, 1996

John Wagoner, Manager  
US Department of Energy  
Richland Field Office

Randy Smith, Director, Hazardous Waste Division  
Environmental Protection Agency

Dan Silver, Assistant Director, Waste Management Division  
Washington State Department of Ecology

**SUBJECT:** Strategic Planning Workshop Report and Agreed Upon Preliminary  
Recommendations for USDOE's Draft Strategic Plan

It is with a sense of pride and accomplishment that I present you with the Report of the  
HAB's Strategic Planning Workshop held in Richland on May 2 and 3.

After several months of planning and preparation, the Board undertook this Strategic  
Planning Workshop in a serious and constructive manner. Through the Workshop process,  
the HAB has developed a set of "Agreed Upon Preliminary Recommendations" which the  
Board believes should be highly useful for USDOE's draft Strategic Thinking and other  
planning documents, the budgetary planning process, and contractor scopes of work.

The Board will continue working on many of the issues identified in the Workshop over the  
coming months and will forward consensus values and advice as they are prepared.

As noted in the groundrules for the Workshop, the HAB expects to receive a report from  
each of your agencies on how these recommendations have been used in the decision-making  
for the Hanford cleanup. I look forward to scheduling these reports in the near future.

Very truly yours,

MerilynB. Reeves, Chair  
The Hanford Advisory Board

Thomas Grumbly, US Department of Energy  
Chuck Clarke, EPA Regional Administrator  
Mary Riveland and Mike Wilson, Washington State Dept. of Ecology

*Advising:*  
US Dept of Energy  
US Environmental  
Protection Agency  
Washington Dept of  
Ecology

**CHAIR**  
Merilyn Reeves

**BOARD MEMBERS:**

*Local Business*  
Harold Heacock  
Frank Ochoe

*Labor/Work Force*  
Richard Berglund  
Thomas Carpenter  
Mark Hermanson  
Gerald Sommersen  
Jim Wahn

*Local Environment*  
Rick Isaacson

*Local Government*  
Pam Brown  
Ben Floyd  
Charles Kibury  
George Kyriazis  
Robert Larson  
Jerry Peitler  
Bill Raley

*Tribal Government*  
Darin Pavewaka

*Public Health*  
Richard Belsey

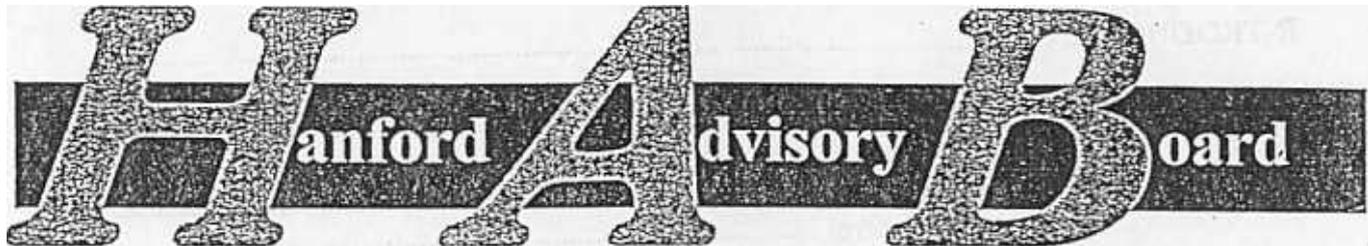
*Public-At-Large*  
James A. Cochran  
Viviana Engel  
Kathy Hackley  
Merilyn Reeves  
Gordon Rogers

*Regional Environ-  
ment/Citizen*  
Greg DeRuter  
Patty Knight  
Todd Martin  
Gerald Pelet  
Elizabeth Tabbutt

*State of Oregon*  
Shelley Cimon  
Michael Gralney

*Ex-Officio*  
Confederated Tribes of  
the Umatilla  
Washington Health  
Department

F:\habstrat:memrept



# *Strategic Planning Workshop Report*

*May 2 & 3, 1996  
Richland, Washington*

---

*Prepared By:  
Triangle Associates, Inc.  
811 First Avenue, Suite 255  
Seattle, WA 98104*

*In Association with:  
Confluence Northwest  
800 N.W. Sixth Ave., Suite 342  
Portland, OR 97209*

TABLE OF CONTENTS

---

INTRODUCTION .....

AGREED UPON PRELIMINARY RECOMMENDATIONS .....

    Site-Wide Recommendations.....

        Institutional Control.....

        Tri-Party Agreement.....

        Groundwater .....

        Vadose Zone .....

    Geographic Area Recommendations .....

        Reactors on the River (100 Area).....

        Columbia River.....

        Central Plateau (200 Area).....

        All Other Areas .....

    Process Recommendations.....

        Consistency .....

        Common Terminology.....

        Institutional Control.....

FUTURE HAB AGENDA ITEMS.....

    Reactors on the River.....

    Groundwater .....

    Central Plateau .....

BACKGROUND .....

MAY 2 WORKSHOP FORMAT .....

    Geographic Area "Station" Small Group Work.....

MAY 3 ADOPTION OF RECOMMENDATIONS .....

LIST OF THE APPENDICES .....

    A Small Group Recommendations not approved in plenary

    B Informational Matrix

    C Groundrules

    D "Hanford in context: public principles guide new mission" by Max Power  
    of the Washington State Dept. of Ecology

---

## INTRODUCTION

---

In a Strategic Planning Workshop conducted as part of the Hanford Advisory Board's regular meeting in Richland on May 2 and 3, the Board developed the following agreed upon preliminary recommendations for the US Department of Energy's use in its draft Strategic Plan. These recommendations are offered as timely input into the Strategic Planning process that the US Dept. of Energy (USDOE) has undertaken for cleanup decision-making at the site.

The Hanford Advisory Board (HAB) expects that USDOE will take these recommendations into consideration in finalizing current draft planning documents, in the budgetary planning process, and in developing scopes of work for site contractors. The Board further expects to receive a report from USDOE, from the US Environmental Protection Agency (EPA), and from the Washington State Department of Ecology on how these recommendations are being used in decision-making for the Hanford cleanup.

## AGREED UPON PRELIMINARY RECOMMENDATIONS

---

The HAB developed and agreed to preliminary recommendations for the site as a whole as well as for three geographic areas:

Reactors on the River,  
Columbia River, and  
Central Plateau.

The starting point for the discussion was the set of cleanup scenarios that were developed through the Future Site Uses Working Group process of 1992.

(There were no consensus recommendations for the All Other Areas portion of the site, although a number of issues were identified that the Board may consider over the summer. Appendix A includes the small group recommendations that were developed for this area as well as a description of how these recommendations should be understood.)

In several cases, a brief introduction, in *italics*, precedes and sets the context for the recommendations.

---

*DRAFT 5/7/96*

Recommendations that were proposed by small groups but were not approved by consensus in plenary session are included in Appendix A. The HAB will consider which of these recommendations it will take up over the summer, to work toward consensus recommendations by September.

## Site-Wide Recommendations

### Institutional Control

*Recommendation:* The HAB is opposed to the way the Strategic Planning documentation assumes institutional controls are the preferable long-term cleanup option for the majority of areas of the site. Those Strategic Planning documents need to be changed. The HAB should work with USDOE, EPA, and Ecology on a better description of the circumstances and time period in which some form of controls or restrictions might be necessary.

### Tri-Party Agreement

*Recommendation:* The TPA is the blueprint and schedule for Hanford cleanup. USDOE's planning documents must acknowledge and support the schedules in the TPA.

### Groundwater

*There was general agreement that the groundwater strategy that the agencies are in the process of implementing is in line with the Future Site Uses Working Group's cleanup scenarios.*

*Recommendation:* With the emphasis placed on tanks and groundwater, it is essential not to lose sight of removal or isolation of contaminants in the vadose zone to ensure there is no further contamination of groundwater. The strategy should identify the future risk from the potential contamination of groundwater from sources like leaking tanks and existing vadose zone contamination in the 200 Area.

*Recommendation:* Groundwater movement can redistribute contaminants currently above as well as already below the water table throughout the site as well as off the site. Strategic planning must emphasize source reduction and when that is not practical, surface and subsurface barriers should be used to prevent further groundwater contamination.

### Vadose Zone

*Recommendation:* The HAB is concerned by the uncertainties in current vadose zone [the area between the surface and the groundwater] contamination and migration. The Agencies must work to resolve these uncertainties in order to have a credible strategic plan.

*Recommendation:* An integrated vadose zone/groundwater management plan is needed site-wide.

## Geographic Area Recommendations

### Reactors on the River (100 Area)

The cleanup strategy in this area has been one of building blocks which include (1) cleanup of the groundwater (pump and treat of contaminated groundwater flowing toward the river, strontium at N Springs, and chromium from the reactors), (2) soil remediation (cribs, trenches, ponds where liquid effluent was discharged), (3) cleanup of burial grounds, (4) disposition of the reactors. Decisions should be carried forward consistent with past building blocks.

*Recommendation:* In this geographic area, there are cleanup goals for the soils, the reactors, and the groundwater. For soils, the cleanup goal is unrestricted surface use except for the reactor blocks. The Strategic Plan should ensure the cleanup proceeds so institutional controls can be minimized. For reactors, reaffirm the Future Site Uses Working Group's cleanup scenario which did not make a priority of moving the reactor cores. For groundwater reaffirm the Future Site Uses Working Group's groundwater scenario of unrestricted use in this area with the recognition that "in some cases, due to existing conditions and lack of current capabilities, it may be a low priority until aggressive research develops new capabilities."

*Recommendation:* Use a definition for this area that describes the geographic band --"River Corridor/100 Area" that includes the reactors, outfalls and pipes, spent nuclear fuel, soil and burial grounds, liquid discharge sites, and groundwater.

*Recommendation:* Continue addressing the most urgent risks first.

*Recommendation:* "Do no harm" to the environment during cleanup.

*Recommendation:* Ensure there are safety controls for workers and the public in this area, into the future, despite changing contractors and administrations (local, state, and federal).

### Columbia River

*Recommendation:* Strategic planning should ensure that access, and duration of access, to the Columbia River and its corridor (nominally 1/4 mile wide on either side of the River) are not limited because of surface contamination. Because the 1301 crib is within a 1/4 mile, it must be remediated to unrestricted surface access.

*Recommendation:* "Do no harm" still applies.

### Central Plateau (200 Area)

*With the possible exception of concerns about entombment and capping in place, there were no major disconnects identified between the Future Site Uses Working Group's cleanup scenario and USDOE's current planning documents. The cleanup scenario assumed that the waste, including contaminated groundwater, would be confined within the 200 Area. A significant question is whether the waste can, in fact, be contained within the area.*

*Recommendation:* Waste in the 200 area must not migrate from the Central Plateau. The USDOE's strategic plan must ensure that near term activities minimize exposure. This may include suitable long term engineered controls and barriers.

### All Other Areas

*Many Workshop participants believed that they did not have a good grasp of the contamination and cleanup issues in the "all other areas." This prevented them from being able to articulate fully whether or not they felt USDOE was proceeding "on the right track" for this area in the time frame represented by this strategic plan (the next 10-15 years). They did identify potential problems and disconnects between the strategic planning and long-term cleanup goals as identified by the Future Site Uses Working Group.*

## Process Recommendations

### Consistency

*Recommendation:* Data and assumptions consistency are critical to a defensible strategic plan. USDOE must develop consistency in assumptions, data and modeling.

### Common Terminology

*Recommendation:* Common terminology must be developed and defined for discussions of cleanup and technology development.

### Institutional Control

*Recommendation:* The HAB should work with USDOE, EPA, and Ecology on a better description of the circumstances and time period in which some form of controls or restrictions might be necessary.

---

## **FUTURE HAB AGENDA ITEMS**

---

As small group recommendations were being considered in plenary, the HAB agreed it wanted to study the following issues in the coming months.

### **Reactors on the River**

Given the fact that the TPA identifies December 1996 as the deadline for setting a schedule for removal of the reactors, the HAB has put disposition of the reactors on its agenda for consideration and advice to the agencies. Education is needed concerning the risk of removing reactors versus time, understanding schedule and cost benefits analysis. The HAB will offer both advice and values on schedule and scope.

### **Groundwater**

Groundwater under the Tanks

### **Central Plateau**

- Entombment
- Capping in place

## BACKGROUND

---

In October of 1995, senior USDOE management contacted the Chair and selected members of the Hanford Advisory Board (HAB) to discuss the possible involvement of the HAB and other stakeholders in the development of a strategic plan for the Hanford site cleanup. In response, the HAB created first an ad hoc committee in November and then a Task Group in December to plan the Board's participation in this effort. Between January and April 10, through conference calls, consultation with Committee Chairs and members of the HAB, and the active involvement of the regulators, the Task Group held a series of meetings during which the Group identified and framed a set of issues that the HAB would address relative to the Strategic Plan and Strategic Planning process.

With the assistance of a facilitator from Triangle Associates, the Task Group developed a set of groundrules that identified the purpose, scope and objectives of a 2-day workshop to be conducted as part of the agenda for the May 2-3 HAB meeting. The Task Group's groundrules stated that:

"The HAB wants to work in partnership with the agencies to review of strategic planning and major cleanup assumptions at Hanford to provide advice to USDOE and the regulators in the following three areas:

- The Strategic Planning process;
- Public participation in the Strategic Planning process;
- Certain key planning assumptions related to Hanford's cleanup.

"It is the intent of this process to search for and articulate the common ground, to clarify differences, and where needed, to propose processes for reaching resolution.

"The results are intended to establish a tool for strengthening accountability to broad stakeholder principles and agency commitments. This includes being able to track the budgetary process, to set performance measures and monitor progress, and to ensure timely public participation in decision-making, recognizing the cyclical nature of planning and budgeting."

The issues that were identified for discussion in the Strategic Planning Workshop were as follows:

- (a) Interim safe storage and cocooning of reactors
- (b) Groundwater strategy
- (c) Major facilities entombed
- (d) Buried waste capped and left in place
- (e) Restricted land use
- (f) Timeline issue of end use achievement
- (g) New missions for Hanford

(h) Continued Disposal and/or storage of offsite wastes (special nuclear materials)

With respect to timeline issues, the Workshop was first to revisit the long-term vision that was articulated for the Hanford cleanup through the Hanford Future Site Uses Working Group process and then to focus on priorities and actions that should be taken in the near-term -- over the next 10-15 years -- to make progress toward the long-term vision.

As background information for the Workshop, a matrix was prepared that identified key points relative to the cleanup for four geographic areas: the Reactors on the River (100 Area); the Columbia River/Groundwater; the Central Plateau (200 Area); and All Other Areas. The points were taken from the following documents:

Hanford Future Site Uses Working Group Report,  
Tri-Party Agreement,  
Draft Strategic Thinking,  
Draft Mission Direction Document,  
Pre-Decisional Draft Comprehensive Land Use Plan, and  
Pre-Decisional Draft Hanford Remedial Action EIS

In addition, a document entitled, "Hanford in context: public principles guide new mission," prepared by the Washington State Dept. of Ecology, was sent in advance of the Workshop to members of the HAB. It described key events in the Hanford cleanup as well as the principles and cleanup advice that Hanford stakeholders and the public have provided to USDOE and the regulators through several pre-1994 working group processes, the HAB (since 1994) and other public outreach activities over the last decade. Information in this document was presented as part of the introduction to the Workshop.

## MAY 2 WORKSHOP FORMAT

---

On May 2, the opening plenary session of the Workshop began with a brief history and chronology, purpose and objectives of the Workshop offered by George Kyriazis, Chair of HAB's the Strategic Planning Task Group. Max Power of Ecology then described the role of public participation in Hanford decision-making over the last decade. He was followed by Mark Drummond, president of Eastern Washington University, who had chaired the Hanford Future Site Uses Working Group in 1992 and the Hanford Tank Waste Task Force in 1993. Mr. Drummond highlighted several major achievements of the two groups he chaired: the significant level of trust and collaboration among the agencies and stakeholders these processes had engendered, and the creation of a map of the site that has proved to be a durable tool for planning. He then described the cleanup scenarios for the four geographic areas that were developed through the Future Site Uses Working Group process.

Senior managers from USDOE and the regulators then spoke to the Workshop: John Wagoner, USDOE Manager of the Hanford Site; Randy Smith, Environmental Protection

Agency; and Mike Wilson, Washington Dept. of Ecology. They pointed out that many of the key cleanup decisions have been made and are embodied in the Tri-Party Agreement and a series of Records of Decisions. However, over the next 10-15 years, they said that a number of specific decisions remain to be made. It was to receive stakeholder input to those decisions that the Strategic Planning Workshop was being held.

Todd Martin, Hanford Advisory Board member, then briefly reviewed an informational matrix he had drafted that compared the Future Site Uses Working Group's cleanup scenarios, agreements in the Tri-Party Agreement, and planning assumptions in a series of USDOE documents: Draft Strategic Thinking, Draft Mission Direction Document, and two pre-decisional drafts (Comprehensive Land Use Plan and Hanford Remedial Action EIS).

Alice Shorett of Triangle Associates, lead facilitator of the Workshop, described how the two-day Workshop would be conducted and the expectations for each part of the Workshop. Members of the HAB and other participants, including members of the Future Site Uses Working Group who attended, then divided into four groups to visit geographic area "stations" to develop a common base of information about specific areas of the Hanford site and the cleanup in each area.

### *Geographic Area "Station" Small Group Work*

Workshop participants visited, in small groups, 4 geographic area "stations" representing the Central Plateau (200 Area), Columbia River/groundwater, Reactors on the River, and All Other Areas. The "tours" through the geographic areas included resource people from the agencies at each station as well as a Future Site Uses Working Group participant who provided information and answered questions. Before leaving each "station," participants filled in a brief written questionnaire about that geographic area. The results were consolidated by the facilitation team overnight.

### MAY 3 ADOPTION OF RECOMMENDATIONS

---

On the second day of the workshop the facilitation team reported back to the plenary session the themes from the questionnaires. HAB members then returned to work in four groups to develop draft recommendations for consideration by the HAB as a whole. When the HAB reconvened in plenary session after lunch, each small group facilitator presented the results of the small group work for consideration by the HAB as a whole. These results included both "immediate" recommendations to the agencies, as well as a list of issues the HAB might want to consider over the summer months, to see if the Board could reach agreement on recommendations by September.

It was agreed that the HAB would forward to the agencies immediately those recommendations that all members could agree with; if even one person objected to a recommendation, it was not included in the "immediate" advice. It was also agreed that the

HAB would determine which of the recommendations that were not forwarded immediately would be developed over the summer.

**LIST OF THE APPENDICES**

---

- A Small Group Recommendations not approved in plenary
- B Informational Matrix
- C Groundrules
- D "Hanford in context: public principles guide new mission" by Max Power of the Washington State Dept. of Ecology

## APPENDIX A

### SMALL GROUP RECOMMENDATIONS NOT APPROVED IN PLENARY

---

#### SITE WIDE

##### Institutional Controls

Strategic Plan documents should not assume institutional control beyond completion of remediation in all areas outside the Central Plateau.

#### GROUNDWATER/VADOSE ZONE

A high priority must be given to reduce the size of existing contaminated plumes to minimize the migration of contamination through the site and into the River.

Funding levels for all migrating contaminants (vadose zone and groundwater) are inadequate.

#### CENTRAL PLATEAU

##### Entombment and Capping

The prudence of capping waste in place and entombment is directly dependent on the technical ability to prevent migration.

Other important issues for entombment include the types and origins of wastes disposed/stored in the facilities.

#### ALL OTHER AREAS

*The facilitator noted that this small group did not include the full range of opinion represented on the HAB. The recommendations out of the small group do touch on many of the key issues for All Other Areas; however, the way the small group framed the issues will need to be revisited if the HAB wants to probe for consensus.*

*The facilitator ordered the recommendations according to her sense of the likelihood that each would be carried forward by the HAB as a whole. In fact, there was not consensus on any of these recommendations when they were presented in plenary.*

##### Overall Findings

The direction of the "Strategic Thinking" document, as characterized in the matrix, is appropriate for the "All Other Areas" with the exception of D&D of the 400 areas. D&D of the 400 area may need to be postponed until other key decisions/RODs are complete.

Additional statements

Near term action in the northern and western portion of "All other Areas" is not an important element of the Strategic Plan. "Do no harm" in these areas over the next 10-15 years.

This area (SE portion of the site) will continue and increase its current research and industrial uses. Presently developed areas (1100, 300 and 400 Areas) shall be remediated for unrestricted surface access, assuming the industrial use cleanup standard.

There should be no *new* uses of groundwater. (Current groundwater use in 400 Area may continue). New water uses should be served by extension of treated river water systems. Disposal of liquids to the soil should be avoided in general, but they may be permissible in a case by case evaluation by regulators.

Recognize that institutional controls exist everywhere (federal, state, and local level).

For Hanford, institutional controls will exist; the question becomes how do they integrate, how are they implemented? Controlled use is needed to protect public health and safety now and into the future. USDOE's strategic plan needs to address this issue. For most of the contaminants/cleanup issues in the 600 Areas, institutional controls are appropriate to rely on in certain areas: NRDWL, Central Landfill, and Firing Range, 316-4 crib.

The cost of clean up to "unrestricted use" status must be balanced against the probability of sustained institutional controls.

*Assumption: rational institutional controls may be necessary even if the area is cleaned to "unrestricted use" standard because of other factors; that is, water pull from adjacent contaminated sites, zoning/deed restrictions, other federal requirements. The costs of clean-up may not yield a near term access or use benefit.*

HAB Strategic Planning Workshop Informational Matrix \*

	What did FSU Working Group Say?	Tri-Party Agreement	Strategic Thinking DRAFT	Mission Direction Document DRAFT	Comprehensive Land Use Plan Predecisional Initial Draft	Hanford Remedial Action EIS Predecisional Initial Draft
What it is		<i>A compliance/cleanup agreement that serves as the blueprint for bringing the Hanford Site into compliance; it identifies a schedule for the cleanup.</i>	<i>Defines where the cleanup is now, where it will be in 50 years, and how it will get there.</i>	<i>The next step below Strategic Thinking, the MDD provides greater detail to aid programs in implementing the strategic thinking.</i>	<i>Describes how lands will be used over the next 50 years.</i>	<i>HRA EIS proposes to establish future land use objectives which will be used to guide the process of Hanford site remediation. If the HRA EIS ROD differs from the Strategic Plan, the Strategic Plan would be changed to comply with the ROD.</i>
Reactors on The River	<ul style="list-style-type: none"> <li>• Three cleanup scenarios: All Unrestricted, Clean Enough for Recreation, Commercial Uses and Wildlife, and B Reactor Remains in Place.</li> <li>• Reactors may be removed or left in place depending on the scenario.</li> <li>• All three scenarios would clean up groundwater to unrestricted use.</li> </ul>	<ul style="list-style-type: none"> <li>• Remove reactors from the River (NEPA decision); reactor removal schedule to be negotiated by 12/96.</li> <li>• Groundwater: high pay-off pump and treat and source removal. Intent is to eliminate the need for institutional control.</li> <li>• Soil cleanup: Cleanup to support residential land use scenario. Intent is to eliminate the need for institutional control.</li> </ul>	<ul style="list-style-type: none"> <li>• Remediate site to allow recreational use.</li> <li>• Remove spent fuel.</li> <li>• Interim safe storage of reactors (cocooning).</li> <li>• Treat groundwater "as necessary" to protect the river.</li> </ul>	<ul style="list-style-type: none"> <li>• Remediate soil to allow future land use.</li> <li>• Remove spent fuel.</li> <li>• Interim safe storage of reactors (cocooning).</li> <li>• Natural attenuation of groundwater and treatment of "hot spots" if necessary.</li> </ul>	<ul style="list-style-type: none"> <li>• Land use designated currently as "Environmental Restoration." After cleanup will be designated as "wildlife and habitat management."</li> </ul>	<ul style="list-style-type: none"> <li>• Land use designated as "Restricted Use."</li> <li>• Contamination left in place "Where exposures do not pose unacceptable risk."</li> <li>• No groundwater use for an "indefinite period."</li> <li>• Maintain institutional control until groundwater sampling indicates it is no longer necessary.</li> </ul>

	What did FSU Working Group Say?	Tri-Party Agreement	Strategic Thinking DRAFT	Mission Direction Document DRAFT	Comprehensive Land Use Plan Predecisional Initial Draft	Hanford Remedial Action EIS Predecisional Initial Draft
Columbia River	<ul style="list-style-type: none"> <li>Unrestricted Land Use: Use of the Columbia River, including riparian zone and islands in the River, would be unrestricted due to contamination.</li> </ul>	<ul style="list-style-type: none"> <li>Report entitled, "The Columbia River Comprehensive Impact Assessment," currently being drafted. TPA actions will be based on recommendations in this Report.</li> </ul>	<ul style="list-style-type: none"> <li>Restricted use pending action on Wild and Scenic River designation.</li> </ul>	<ul style="list-style-type: none"> <li>Restricted use pending action on Wild and Scenic River designation.</li> </ul>	<ul style="list-style-type: none"> <li>Land use designated as "Wildlife and Habitat management" for corridor 1/4 mile off of river.</li> </ul>	<ul style="list-style-type: none"> <li>Land use designated as restricted (allowable exposure scenarios could include residential, industrial, or recreational)</li> <li>Restrictions on shoreline access, island access and disturbance of sediments.</li> <li>River pipelines would be disposed in place.</li> </ul>

	What did FSU Working Group Say?	Tri-Party Agreement	Strategic Thinking DRAFT	Mission Direction Document DRAFT	Comprehensive Land Use Plan Predecisional Initial Draft	Hanford Remedial Action EIS Predecisional Initial Draft
Central Plateau (200 Areas)	<ul style="list-style-type: none"> <li>Land use designated as Exclusive with Buffer. Assumes that future uses of the surface, subsurface and groundwater in, and immediately surrounding, the 200 Areas would be "exclusive". Assumes that waste will be treated and isolated to prevent migration from 200 Areas.</li> <li>Buffer zone surrounding the 200 Areas remediated for unrestricted use.</li> </ul>	<p><b>Tanks</b></p> <ul style="list-style-type: none"> <li>Remove and vitrify 99% of the tank waste.</li> <li>Ultimate closure of tanks to be determined in negotiations between USDOE and the State; tank closure to be completed by 2028.</li> </ul> <p><b>Soil</b></p> <ul style="list-style-type: none"> <li>Currently much remains undecided. The 200 Area Strategy is currently under development. It will establish the process for remedy selection.</li> <li>Testing the Hanford Barrier as a waste-site cap.</li> <li>Institutional control for the foreseeable future.</li> </ul> <p><b>Groundwater</b></p> <ul style="list-style-type: none"> <li>Goal is to contain contaminants within 200 Area plateau.</li> <li>Carbon tetrachloride pump and treat in 200 West.</li> <li>Uranium and technetium pump and treat in 200 West.</li> <li>Groundwater contamination is being and will be evaluated in the future.</li> </ul>	<ul style="list-style-type: none"> <li>Land used for waste management and "related and compatible" uses.</li> <li>Federal control maintained.</li> <li>Buried waste capped and left in place.</li> <li>Soil contamination left in place.</li> <li>Major facilities entombed.</li> <li>Groundwater "intercepted or contained as necessary" to protect river.</li> </ul>	<ul style="list-style-type: none"> <li>Federal control maintained.</li> <li>Buried waste capped and left in place.</li> <li>Soil contamination capped in place.</li> <li>Entomb major facilities in place.</li> <li>Groundwater "intercepted or contained as necessary" to protect river.</li> <li>Tank waste retrieved and vitrified.</li> <li>Low level waste from off site will continue to be disposed of.</li> </ul>	<ul style="list-style-type: none"> <li>Land use designated as "Waste Management."</li> </ul>	<ul style="list-style-type: none"> <li>Land use designated as Exclusive Use (assumes industrial exposure scenario). Continued use for waste management and similar compatible uses</li> <li>Buried waste capped and left in place.</li> <li>Groundwater remediation. Maintain institutional controls until groundwater sampling indicates it is no longer necessary.</li> <li>Engineering and institutional controls.</li> </ul>

	What did FSU Working Group Say?	Tri-Party Agreement	Strategic Thinking DRAFT	Mission Direction Document DRAFT	Comprehensive Land Use Plan Predecisional Initial Draft	Hanford Remedial Action EIS Predecisional Initial Draft
All Other Areas	<ul style="list-style-type: none"> <li>Unrestricted use of the Arid Lands Ecology Reserve.</li> <li>Unrestricted use of the area North of the River.</li> <li>Two cleanup scenarios for 300 Area and areas outside 300 Area:               <ol style="list-style-type: none"> <li>Cleanup for Economic Development, Wildlife                   <ul style="list-style-type: none"> <li>300 Area cleaned up to industrial standard.</li> <li>1100 Area cleaned up to unrestricted standard.</li> <li>Remaining operable units cleaned up to industrial standard.</li> <li>Remaining areas unrestricted.</li> </ul> </li> <li>Cleanup for Agriculture and Native American Uses Outside the 300 Area.                   <ul style="list-style-type: none"> <li>300 area surface and groundwater cleaned up to industrial standard.</li> <li>All land outside 300 Area cleaned up to unrestricted status.</li> </ul> </li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>Cleanup of ALE and North of the River is completed for unrestricted use.</li> <li>300 Area cleaned up for industrial land use (decision not finalized yet).</li> <li>Groundwater use will be restricted for approximately the next 5-10 years.</li> </ul>	<ul style="list-style-type: none"> <li>Remediation to allow economic transition (industrial).</li> <li>1100 and 3000 Areas transferred to non-Federal ownership; 600 Area for other Federal use or lease.</li> <li>D&amp;D 400 Area facilities.</li> <li>ALE and North Slope preserved.</li> <li>Groundwater intercepted or contained "as necessary" to protect river.</li> </ul>	<ul style="list-style-type: none"> <li>Remediation to meet "industrial" standard.</li> <li>Groundwater intercepted or contained "as necessary" to protect river.</li> <li>Monitor contaminated water until it meets drinking water standards.</li> </ul>	<ul style="list-style-type: none"> <li>Land use designated as Open Space Restricted and Potential Economic Development.</li> <li>After remediation land use will be designated as Open Space Restricted or Industrial that lies within the identified zone of potential economic development activity.</li> </ul>	<ul style="list-style-type: none"> <li>Land use designated as restricted (allowable exposure scenarios could include residential, industrial, or recreational).</li> <li>Groundwater remediation. Maintain institutional controls until groundwater sampling indicates it is no longer necessary.</li> </ul>

# APPENDIX C

## GROUND RULES FOR STRATEGIC PLANNING PROCESS

---

### PURPOSE

The Hanford Site is in transition to an environmental restoration and waste management mission and other future new missions. The ultimate goal of the restoration mission is to protect public health and safety, and to mitigate and remediate environmental damage. The steps required to achieve this mission are set out in the Tri-Party Agreement. Since the completion of the Hanford Future Site Uses (HFSU) project in 1992, the Hanford Remedial Action EIS has been prepared in preliminary draft. The 1992 effort was a "critical first step for the Pacific Northwest to articulate its visions for Hanford as the cleanup process commences." Another public involvement process, the Tank Waste Task Force in 1993, identified public values and principles to guide the US Department of Energy (USDOE), the US Environmental Protection Agency (EPA), and the Washington State Department of Ecology (Ecology) in planning tank waste and other cleanup at Hanford. The Hanford Advisory Board (HAB) was formed in 1994.

The HAB wants to work in partnership with the agencies to review strategic planning and major cleanup assumptions at Hanford to provide advice to USDOE and the regulators in the following three areas:

- The Strategic Planning process;
- Public participation in the Strategic Planning process;
- Certain key planning assumptions related to Hanford's cleanup.

It is the intent of this process to search for and articulate the common ground, to clarify differences, and where needed, to propose processes for reaching resolution.

The results are intended to establish a tool for strengthening accountability to broad stakeholder principles and agency commitments. This includes being able to track the budgetary process, to set performance measures and monitor progress, and to ensure timely public participation in decision-making, recognizing the cyclical nature of planning and budgeting.

### SCOPE AND OBJECTIVES

As part of the process for developing its advice, the HAB intends to review documents, including but not limited to, the HFSU Working Group Report, the Draft Mission Direction Document and Strategic Thinking for 1996, the preliminary draft Hanford Remedial Action Environmental Impact Statement (HRA EIS), recent advice from the HAB, comprehensive land use plans, and other documents as appropriate. Assumptions regarding cleanup in these

### *Role of the Agencies*

- USDOE, EPA, and Ecology will freely provide information that will promote informed discussion.
- The agencies will participate in the discussions, asking clarifying questions and probing for areas of agreement and disagreement in participants' visions of the cleanup.
- The agencies will respond to the final report, both verbally and in written form, indicating what they heard during the process and how they will use stakeholder principles articulated through this process in making cleanup decisions.

### *Role of HAB Chair*

- The HAB Chair will participate in the workshop as a member of the HAB.
- She will chair discussions by the HAB leading to the group's recommendations, probing for and seeking areas of agreement and where there are areas of disagreement, making sure the reasons are clearly articulated.

### *Role of the Task Group Chair*

- The Task Group Chair runs pre-workshop Task Group meetings.
- The Task Group Chair will participate in the workshop as a member of the HAB.
- The Task Group Chair will run any post-workshop Task Group sessions that may be held.

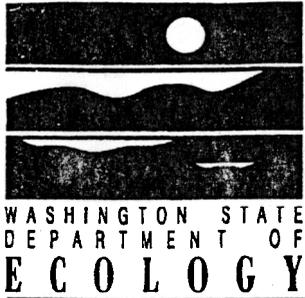
## COMMUNICATIONS DURING PROCESS

All of the individuals participating accept the responsibility to keep their associates and constituency groups informed of the progress of the discussions and to seek advice and comment.

The HAB Chair shall be the designated spokesperson for the process and its progress. Participation in this process does not replace any HAB members' participation in other formal processes as representatives of their respective governments and groups.

Participants will enter into a dialogue that includes listening carefully, asking questions, and educating others regarding interests. The atmosphere will be problem solving.

When responding to the press, participants will not characterize the motivations or values of other participants or groups, but will speak for themselves or the groups they represent.



# Hanford in context: public principles guide new mission

## Introduction

Over the past 10 years, the Washington Department of Ecology, the U.S. Environmental Protection Agency and Pacific Northwest stakeholders have based their pursuit of Hanford cleanup on a number of broad principles. Hopefully, policy makers and stakeholders can discuss these principles in light of new developments and potential changes in strategic direction.

## The Roots of Hanford Cleanup

The year 1986 was a watershed for Hanford cleanup. The following major events set the framework within which most people have come to view Hanford cleanup.

- The Department of Energy made public thousands of documents showing there had been off-site releases of radiation as well as considerable contamination of the site.
- The Chernobyl disaster heightened public concern about all things nuclear, and led to the shutdown of Hanford's last "production" reactor for weapons material, the N Reactor.
- Selection of Hanford as a "finalist" site for a high level nuclear waste repository (known as the Basalt Waste Isolation Project, or BWIP) further raised public awareness of – and concern about – all aspects of Hanford's nuclear operations.
- Washington voters through a referendum reject by 84 percent using Hanford as a high-level nuclear waste disposal site.
- The Department of Energy published its draft Hanford Defense Waste Environmental Impact Statement, making clear to the public the extent and variety of wastes requiring management. Its framework for dealing with major categories of wastes remains, with modifications, the basis for the Tri-Party Agreement.
- Congress, the courts, and the Washington Legislature clarified the State's authority to regulate hazardous wastes at Hanford.

## The Basic Elements of Cleanup

In the 10 years since, the basic elements of a Hanford cleanup strategy have jelled. There have been some significant changes and elaborations, but the main elements are these:

- **Cleanup mission.** Hanford's mission to produce nuclear weapons material has ended. Hanford's main mission now is environmental cleanup and waste management.

- **Tank wastes.** The highest hazard and largest concentration of radioactive waste on site is the approximately 55 million gallons of liquid, sludge and salt cake in 177 underground tanks. The “high level fraction” of the materials left from nuclear fission will be vitrified (made into glass) and disposed of in the nation’s deep geologic repository. The balance will be retrieved, solidified (originally as grout, now also vitrified) and disposed of by near-surface burial at Hanford.
- **Other solid wastes.** Disposal strategies for other nuclear and mixed radioactive and chemically hazardous wastes include: Spent nuclear fuel and encapsulated high-level radioactive wastes will go to the deep geologic repository developed for commercial and government-owned spent fuel. Stored transuranic (plutonium-contaminated) wastes will be repackaged and go to the Waste Isolation Pilot Plant, expected to open in New Mexico. Low-level radioactive wastes will be buried at Hanford. Hazardous non-radioactive wastes will be sent off site for disposal.
- **Liquid wastes.** The discharge of contaminated liquids to the ground will be stopped. Liquid streams will be stopped or treated to meet stringent standards.
- **Contaminated areas.** Old contaminated sites – usually where contaminated liquids were discharged to the soil or groundwater, where storage tanks and process lines leaked, or where solid hazardous materials were buried – will be cleaned up under the Superfund law. Current efforts address cases where contamination is in, or moving toward, ground water and will find its way into the Columbia River or domestic water supplies. Soils excavated from these old sites will be disposed of in the Environmental Restoration Disposal Facility (ERDF) adjacent to the 200 areas.
- **Old facilities.** Old reactors and processing plants will be “transitioned” – contaminated materials and systems requiring expensive maintenance will be removed, and the buildings will be “safe-stored” until torn down and removed. This “reduces the mortgage” incurred by maintaining the facilities and their contents.
- **Waste management facilities.** Both existing and new waste management facilities on the site will eventually be closed in accordance with state and federal laws that protect people and the environment.

## Key Events

**Tri-Party Agreement.** Signed in 1989, the Tri-Party Agreement (TPA) set out milestones for bringing Hanford into compliance with federal and state hazardous waste laws, and defined roles for state and federal regulatory agencies (Ecology and EPA). The TPA provided for revisions based on new information gathered as cleanup proceeded and as new technologies became available. It has been amended six times with public input since 1989.

**Superfund designation.** In 1989, Hanford’s contaminated soil and groundwater areas were placed on the Superfund National Priority List.

**Hanford’s Mission.** In 1990, the Secretary of Energy declared Hanford’s mission would be cleanup and the Department’s goal was to release the site for other purposes once cleanup was complete.

**Investigation and cleanup of contaminated sites.** In 1991, Amendment 2 to the TPA put in place the Past Practice Strategy to streamline the “Superfund” approach to cleanup. The schedule for investigation and development of alternatives for old waste sites was reduced from 7 to 9 years to 3 to 4 years.

**Future Site Uses Working Group.** In 1992, the Future Site Uses Working Group – a broadly representative group of stakeholders – provided a “vision” for potential future uses of the Hanford site and recommended cleanup strategies. The group, convened jointly by USDOE, EPA and Ecology, recommended near-term action to direct cleanup toward protection of the Columbia River and toward making the river corridor available for other uses. The Future Site Uses Working Group also encouraged acceleration of relatively low-cost clean ups of large areas such as the Wahluke Slope and the Fitzner-Eberhardt Arid Lands Ecology Reserve, both cleaned up by 1995. The Working Group called for concentration of waste management and disposal in the “Central Plateau” (200 areas), but cautioned against expanding the land area contaminated.

**Tank Waste Task Force.** A similar stakeholder group was intimately involved with renegotiating the program for retrieving and vitrifying tank wastes in 1993. Significant changes included an agreement to treat older, single-shell tanks and newer (and “hotter”) double-shell tank wastes in an integrated process, and to change the form of on-site disposal of low-level tank wastes from permanent underground concrete monoliths (grout) to retrievable storage of glassified waste. The Tank Waste Task Force also reinforced and expanded upon the principles of the Future Site Uses Working Group relating to overall cleanup of Hanford.

**Hanford Advisory Board.** Based on the experience with the two previous task forces, the Department of Energy, Ecology and EPA agreed to form a standing site advisory board to continue to shape overall direction of Hanford cleanup. The Hanford Advisory Board was convened in January 1994.

**ER Refocusing.** The Tri-Parties amended the TPA to give greater priority to cleanup along the Columbia River and to address the most serious groundwater plumes. These. “Environmental Restoration (ER) Refocusing” amendments, adopted in 1995, redirected resources to these priorities.

## **Key Principles Guiding Cleanup**

- **Protect public and worker health and safety.**
- **Protect the Columbia River.** Stop actual and potential contamination of the Columbia River and prevent migration of contamination off-site.
- **Avoid further harm.** Minimize use of land for waste management, avoid contaminating uncontaminated land, and avoid further damage to critical resources, especially cultural resources, habitat and groundwater.
- **Dilution is not the solution.** All liquid wastes need to be treated according to applicable regulations prior to discharge or disposal.

- **Treaty rights.** Preserve natural resource rights embodied in treaties, and enforce laws protecting natural and cultural resources.
- **Regional importance.** Hanford has ecological, economic and human resources of regional importance.
- **Vision.** An understanding of possible future uses of Hanford can focus decisions about what manner of cleanup is needed and what is most important to accomplish over time. The public, the agencies and the workers should be able to see the end of the cleanup, if not predict its exact date.
- **“Get on with it.”** Demonstrate substantive progress on cleanup to assure continued public support and funding.
- **Public involvement and accountability.** Involve the public and the tribes as partners in the goals, scope, pace and oversight of cleanup, and establish management practices that ensure accountability, efficiency and allocation of funds to high priority items.
- **Compliance culture.** There should be a cooperative commitment to comply with environmental laws. The Tri-Party Agreement should not be a shield against enforcement of other laws.