



Hanford Advisory Board Progress Report Fiscal Year 2000

**Providing Advice on Site Cleanup and Waste
Management to the U.S. Department of Energy,
U.S. Environmental Protection Agency, and
the State of Washington Department of Ecology**

Evaluating the Progress of Cleanup

The Hanford Advisory Board is an independent, non-partisan, and broadly representative body consisting of a balanced mix of the diverse interests that are affected by Hanford cleanup issues. The primary mission of the HAB is to provide informed recommendations and advice to the U.S. Department of Energy, the U.S. Environmental Protection Agency, and the Washington Department of Ecology on major policy issues related to the cleanup of the Hanford Site.

***Mission Statement
Hanford Advisory Board***

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Additional Written Information

Additional information about the Hanford Advisory Board is available. If you would like to receive a copy of any of the following or additional copies of this report, you can contact Tammie Holm, EnviroIssues, (509) 943-1906. You can also find information on the Board on its Internet Web page:

<http://www.hanford.gov/boards/hab/index.htm>

- *Hanford in Context: Public Principles Guide New Mission*
- *Advice Adopted by the Hanford Advisory Board*
- *Hanford Advisory Board Charter and Operating Ground Rules*
- *Site Specific Advisory Board Charter*
- *Hanford Advisory Board Strategic Planning Workshop Report, May 1996*
- *Future Site Uses Working Group Report, December 1992*
- *Tank Waste Task Force Report, July 1993*

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Where to Find More Information About the Hanford Advisory Board

HANFORD PUBLIC INFORMATION REPOSITORIES

Portland

Portland State University
Branford Price Millar Library
Science and Engineering Floor
934 SW Harrison and Park
Portland, OR 97202-1151
(503) 725-3690

Seattle

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

Richland

DOE Public Reading Room
2700 University Drive
CIC, Room 101 L
Richland, WA 99352
(509) 372-7443
Attn: Terri Traub

Spokane

Gonzaga University
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E. 502 Boone
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Washington Department of Ecology

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Michael Gearheard
Mike Wilson



Marilyn Reeves, Chair
Hanford Advisory Board

For the past five years, the Hanford Advisory Board has published a Progress Report documenting the activities and advice of the 31 member Board, and reviewing progress of site cleanup.

It has been ten years since Hanford ceased producing nuclear weapons and focused on cleanup. It has been eight years since the Future Site Uses Working Group was convened and regional stakeholders agreed on a set of common values to guide cleanup. It has been seven years since the Tank Waste Task Force reinforced and added to those values. During the past six years, the HAB has provided 110 pieces of advice consistent with those values. (See page 3 for a listing of the Key Principles Guiding Cleanup).

Has there been substantial cleanup progress during these years and how should it be measured? Hanford workers, managers, and regulators can document progress for individual projects. If the work is completed on time, within budget in accord with Tri-Party Agreement (TPA) milestones, it can be judged a success. Using this measurement, cleanup of land along the Columbia River has been a success. In spite of past cost overruns and schedule delays, finally there is solid progress on removal of K Basins spent fuel rods.

Even without TPA milestones, there has been progress in decontamination and decommissioning at the Plutonium Finishing Plant, and work is proceeding on stabilizing of plutonium-bearing wastes and materials.

Progress can be documented for many other individual projects. For example, some transuranic wastes have been shipped to Waste Isolation Pilot Plant.

Progress may be in the eye of the beholder. I judge cleanup progress on status of tank waste removal and treatment. The creation of the DOE Office of River Protection and reliance on privatization failed to expedite construction of a vitrification plant. Once again, construction of a tank waste treatment facility has been delayed, and there is no long-term enforcement strategy to remove and treat all of the tank wastes.

Achieving tank waste treatment is a little like saving an endangered species. Both have been subjected to countless studies and plans. Solutions for both are expensive and fraught with risk. Delay is not the answer. Neither the aging tanks nor endangered species can survive continual delay and inaction.

Whatever progress may have been achieved in individual Hanford projects is overshadowed by further delays in completing design, construction and operation of a vitrification plant. The message from stakeholders has been clear. Again we say, "Get on with it."

MEMBERS AND ALTERNATES WHO RESIGNED IN FY00

MEMBERS

Jim Watts
Madeleine Brown
Don Worden

ALTERNATES

Ben Floyd
Bill Wilcoxsin
Bev Weisbrodt
Laura Zybas
Cyndy deBruler
Kristie Baptiste
Rico Cruz
Barbara Harper
Cindy Veneziano
Patty Yraguen
Dr. Emmett Moore
Pat Kenny
Nanci Peters

The Hanford Advisory Board (HAB) was formed in 1994 to provide recommendations and advice to the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), and the Washington Department of Ecology (Ecology) on major policy issues related to the cleanup of the Hanford Site. The HAB members include interests from state, local and tribal governments, business, workers, environmental and public interest organizations, public health, academia, and the public at large. The HAB operates by consensus to develop advice and letters to the agencies and promotes open discussion of issues and opportunities for the public to influence decisions on Hanford cleanup.

The HAB completed its sixth year of work during Fiscal Year 2000 (FY2000). The key priorities for cleanup at Hanford formed the focus for the HAB's efforts in FY2000. These included:

- Compliance with milestones for stabilization and cleanup of wastes and contamination at Hanford under the Tri-Party Agreement (TPA) between DOE, EPA, and Ecology.** This legally enforceable document provides the roadmap for Hanford's cleanup. In FY2000, the HAB focused greater attention on TPA implementation and milestone status, urged the regulators to hold DOE to its TPA commitments, and reiterated the need for adequate DOE budget requests for TPA compliance.
- Design, construction and operation of a facility to treat and immobilize the 54 million gallons of highly radioactive waste stored in tanks on Hanford's Central Plateau.** At least 67 of the tanks have leaked an estimated 1 million gallons of waste into the ground. During FY2000, the HAB issued a statement on the high priority need for a plant to treat the tank wastes. Advice was developed on the need to complete a financing alternatives study for the tank waste treatment program. Following DOE's termination of the existing contract to build and operate the tank waste treatment facility, the HAB recommended development of a contract structure to reward a new contractor for meeting a 2007 date to begin treatment of tank wastes, increasing waste treatment capacity, and expediting tank waste treatment.
- Removal of spent nuclear fuels from the K Basins, which are only 1,200 feet from the Columbia River and have leaked more than 15 million gallons of contaminated water into the ground.** As construction of facilities and equipment for removal, treatment and storage of the spent fuel neared completion in FY2000, the HAB focus shifted to preparations for operations and the start of spent fuel removal in early FY2001.
- Stabilization and repackaging of plutonium-bearing materials and eventual decommissioning of the Plutonium Finishing Plant.** Two HAB committees tracked resumption of this work after a two-year halt to improve Plant safety procedures. Restart of TPA negotiations to include milestones for the Plutonium Finishing Plant was also urged.
- Cleanup along the Columbia River.** Extensive contamination exists in some areas of soil and groundwater at Hanford along the Columbia River; it reaches the River through groundwater seeps and springs. The HAB had considerable discussion on plans and cleanup levels for the River Corridor, including giving support to plans to remove, treat, and dispose of the contents of waste burial grounds in these areas. The HAB also began to define HAB values, issues and recommendations on a DOE proposal to accelerate cleanup along the River Corridor.
- Treatment, storage, and disposal of transuranic waste, low-level waste, hazardous waste, and mixed low-level waste.** The HAB expressed concern in FY2000 about adding wastes from other sites to Hanford's existing inventory, especially without accurate characterization of what already exists in the waste burial grounds.
- Effective and efficient management to ensure that tax dollars are spent wisely to achieve cleanup in a timely fashion.** The HAB met with the top managers of the TPA agencies to discuss their visions for Hanford cleanup. Advice was also provided on how DOE develops performance measures for its contractors. National decision-making actions, including plans for disposal of low-level and mixed low-level wastes, treatment of high-level wastes at the DOE-Idaho site, and production of tritium for the nuclear weapons stockpile, received continued attention from the HAB.
- Adequate funding to move cleanup forward in a timely and cost-effective manner.** A major activity each year for the HAB is to review the annual DOE budget request. In FY2000, the HAB provided advice early in the budget development process on cleanup strategic choices and budget priorities. HAB concerns with the FY2002 budget request included the adequacy of budget requests to achieve timely and effective Hanford cleanup and to meet all safety and legally required work. Revision of budget priorities to protect the Columbia River and comply with TPA milestones was urged.

CURRENT HAB MEMBERS AND ALTERNATES

SEAT	MEMBER	ALTERNATE
LOCAL GOVERNMENT INTERESTS		
<i>Benton County</i>	Ken Bracken	
<i>Benton-Franklin Council of Governments</i>	Robert Larson	Wanda Munn
<i>City of Kennewick</i>	Gary Miller	Abe Greenberg
		George Kyriazis
<i>City of Pasco</i>	Charles Kilbury	Joe Jackson
<i>City of Richland</i>	Pam Brown	
<i>City of West Richland</i>	Jerry Peltier	Stan Stave
<i>Grant and Franklin Counties</i>	Jack Yorgeson	Art Tackett
LOCAL BUSINESS INTERESTS		
<i>Tri-Cities Industrial Development Council</i>	Harold Heacock	David Watrous
HANFORD WORK FORCE		
<i>Central Washington Building Trades Council</i>	Richard Berglund	Dave Smith
<i>Hanford Atomic Metal Trades Council</i>	Thomas Schaffer	Keith Smith
<i>Non-Union, Non-Management Employees</i>	Susan Leckband	Frederick Roeck
	Jeffrey Luke	
<i>Government Accountability Project</i>	Tom Carpenter	Norm Buske
LOCAL ENVIRONMENTAL INTERESTS		
<i>Lower Columbia Basin Audubon Society and Columbia River Conservation League</i>	Victor Moore	Rick Leaumont
REGIONAL CITIZEN, ENVIRONMENTAL AND PUBLIC INTEREST ORGANIZATIONS		
<i>Columbia River United</i>	Greg deBruler	Robert King
		Steve Roney
<i>Hanford Watch of Oregon</i>	Paige Knight	Robin Klein
		William Kinsella
<i>Heart of America Northwest</i>	Gerald Pollet	David Johnson
		Amber Waldref
<i>Washington League of Women Voters</i>	Betty Tabbutt	Jack Sonnichsen
		Dr. Susan Babilon
<i>Citizens for a Clean Eastern Washington</i>	Dr. Mark Beck	Cindy Meyer
LOCAL AND REGIONAL PUBLIC HEALTH		
<i>Benton-Franklin Public Health</i>	Dr. Margery Swint	Dr. Ross Ronish
<i>Physicians for Social Responsibility</i>	Dr. Jim Trombold	Dr. Richard Belsey
		Todd Martin
TRIBAL GOVERNMENTS		
<i>Nez Perce Tribe</i>	Patrick Sobotta	Carla High Eagle
		John Stanfill
		Rebecca Williams
<i>Yakama Nation</i>	Russell Jim	Wade Riggsbee

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 10

Hanford cleanup in 2000 has been somewhat of a mixed bag. On the bright side, this year we completed all of the remedial investigation/feasibility study work in the 100 and 300 Areas. The Tri-Parties issued the 100 Area Burial Grounds Record of Decision in September, completing the interim decision-making for all soil sites in the 100 Area. In the 300 Area, we had planned to issue the 300 Area Record of Decision by the end of September, but during public comment several issues were identified which pushed the completion date out to the end of the calendar year.

We appreciate the support the Board has shown as we conduct the first Five-Year Review of the Hanford Superfund cleanup. This review has been difficult for EPA, but has provided us a good opportunity to step back and look at the cleanup to assure it is achieving the objectives we established in our RODs. EPA plans to issue the Five-Year review for public comment by January 2001. In general, the Five-Year Review shows we are on track, but does point to the need for more work on the groundwater problems.

Good news came back regarding the characterization of the plutonium tank 241-Z-361, with the data indicating that the tank did not pose an immediate risk to human health and the environment.

The K-Basins has also been a good news story for us this year. We are optimistic that fuel removal will begin shortly, and we will be able to achieve significant risk reduction along the River. EPA appreciates the Board's supportive discussions to transfer the K Basins sludge to the T Plant.

Without a doubt, the most disappointing aspect of the Hanford cleanup was the inability to get the construction of the vitrification plant on track. We hope that 2001 will result in success in obtaining treatment capabilities.

The Board has spent considerable effort on the Hanford 2012 Vision. I encourage the Board to continue to work with DOE on the vision, and I am hopeful it will lead to a more expeditious Hanford cleanup.

The EPA Hanford Project Office staff and I look forward to continuing our relationship with the Board in the coming year. Keep up the good work!

Michael Gearheard
Director, Office of Environmental Cleanup

WASHINGTON DEPARTMENT OF ECOLOGY

This has been a difficult year for everyone involved in Hanford cleanup, including the Hanford Advisory Board. There were significant changes in the management of cleanup work at Hanford, both in the Richland Operations Office and the Office of River Protection. The privatized approach to achieving treatment for Hanford's tank wastes—the biggest cleanup challenge at Hanford—flattered.

However, the Board "hung in there," keeping focus on the need for tank waste treatment. The Board also focused on proposals to accelerate cleanup in the 100 and 300 areas, and on the potential trade-offs with cleanup in the central portion of Hanford. We believe the Board can help both the Department of Energy and the regulatory agencies understand these trade-offs and come to decisions that improve public health and the environment.

We appreciate the Board's effort to assure that the Tri-Party agencies report in meaningful terms on progress under the Tri-Party Agreement. The Board is both a key source of institutional memory for cleanup and a forum for public accountability. Semi-annual reviews of Tri-Party Agreement performance will help keep us all focused and responsible.

In the coming year, as the Board deals with tank waste treatment, accelerated cleanup and 200-area issues, we expect increased attention to "end states" and long-term stewardship. We welcome the opportunity to work with the Board and other agencies in helping define what these terms mean for Hanford.

Mike Wilson
Nuclear Waste Program Manager
Washington Department of Ecology

- **Effective and meaningful involvement of the public in decisions on Hanford cleanup.** The HAB continued in 2000 to participate in quarterly meetings to assist in identifying upcoming needs for Hanford cleanup public participation. The HAB commended the TPA agencies on improvements in openness with the public. HAB public outreach activities included co-sponsoring an annual Health of the Site Conference, an information booth at Earth Day 2000 in Richland, an evening informational session on the major programs and issues related to Hanford cleanup at its June meeting, and three articles for the Hanford Update, which is sent quarterly to interested members of the public.

The full Board held 6 two-day meetings in FY2000, producing 9 pieces of consensus advice, for a total of 110, as well as the statement on the high priority need for a plant to treat and immobilize tank wastes. The HAB continued to work with advisory boards at other DOE sites. This included participation in semi-annual meetings of the advisory board chairs, endorsement of a statement of common interest sent

to the Secretary of Energy, and participation in two workshops on long-term stewardship. Much of the work of the HAB was conducted through its committees:

- The **Dollars and Sense Committee** conducted 10 meetings to ensure that Hanford budget strategies and priorities reflect the region's values and DOE contracts accomplish cleanup cost-efficiently.
- The **Environmental Restoration Committee** met 11 times to monitor actual cleanup work for contaminated groundwater, soils, and waste disposal areas.
- The **Health, Safety and Waste Management Committee** held 10 meetings to track the cleanup of the numerous wastes on the site and efforts to protect workers and public health.
- The **Public Involvement Committee** met quarterly to discuss ways to provide the public to be more informed and meaningfully involved in Hanford cleanup decisions.
- The **Tank Waste Treatment Ad Hoc Committee** held 4 meetings to push for design, construction, and operation of a facility to treat and immobilize the tank wastes.

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 respect tribal rights in development of the goals, scope, pace and over-sight 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 become a shield against enforcement of other laws.

History of Hanford

Four decades of plutonium production at the Hanford Site helped win World War II and the post-war nuclear arms race with the Soviet Union. Over the years, production provided jobs for tens of thousands of Hanford workers and spurred economic development and growth in Richland, Pasco, and Kennewick - the Tri-Cities. But it left a legacy of hazardous and radioactive waste.

Most of Hanford's waste volume was generated by the chemical processing of irradiated nuclear fuels. The resulting high-level waste slurry was piped into underground storage tanks. Other contaminated waste streams also were discharged to the ground near reactors and processing facilities. Large and concentrated volumes of waste were created by nuclear fuel fabrication and irradiation work.

Between 1944 and 1980, a witch's brew of nearly 55 million gallons of radioactive and hazardous waste was pumped into 149 buried single-shell tanks and 28 buried double-shell tanks. Nearly 70 tanks have leaked over a million gallons of waste and contaminated groundwater, which is moving towards the Columbia River, leaving 54 million gallons of waste to retrieve and treat.

Monitoring wells have detected leaks from tanks into the groundwater. Also, monitors in some tanks have detected worrisome accumulations of gases that pose explosive potential and serious risk to workers, the public, and the environment. Radioactivity's capacity to impact human health and safety and the environment for tens, hundreds, or thousands of years makes cleanup and stabilization an extremely complex and costly job.

During production years, Hanford handled enormous volumes of contaminated process water. More than 450 billion gallons of low-level wastewater were piped to drain fields called cribs. Cribs were engineered to allow soil layers to filter contaminated wastewater, and trap radionuclides before the wastewater reached groundwater. But the natural filters did not work. Large amounts of contamination reached the groundwater or remained in the soil.

Highly radioactive spent nuclear fuel from production reactors is stored near the River and some of the fuel is damaged and corroding. DOE continues to store plutonium at the Plutonium Finishing Plant. Huge volumes of low-level waste and transuranic waste remain elsewhere on the site. In some cases, wastes are not well quantified, inventoried, or mapped.

The Columbia River has been tainted by Hanford's contaminated groundwater. Contamination in the reactor and waste disposal areas still holds the River at risk. Damaged spent fuel stored in the aging K Basins is one of Hanford's most dangerous risks to people and the environment. Old production facilities, although quieted by the mission change, must be made ready for decommissioning, demolition, and disposal. Even shut down, the facilities are costly to maintain in a safe status and still pose risks for workers.

Hanford's contaminated soil and groundwater areas were placed on the Superfund National Priority List in 1989. That same year, the Tri-Party Agreement (TPA) was signed by the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), and the State of Washington Department of Ecology (Ecology). DOE manages the site and is responsible for the cleanup; EPA regulates under federal statutory requirements; and Ecology regulates under state statutory requirements where Congress and EPA have delegated the authority. The TPA established milestones and a schedule for cleanup and restoration of the Hanford Site over a 30-year period. There have been a number of revisions to those milestones and schedules based on new technical understanding, schedule delays, additional workscope, and funding constraints.

The Hanford Advisory Board

Based on experiences with two previous advisory groups, DOE, Ecology, and EPA agreed to form a standing site advisory board. The Board provides comments and values to guide the agencies in shaping the direction of Hanford cleanup. The Hanford Advisory Board (HAB) was convened in January 1994. It provides a forum for seeking a regional consensus on Hanford cleanup activities and works with the TPA agencies to establish and maintain partnerships, build bridges, increase trust and credibility, and most of all, to solve problems and move the cleanup forward.

The HAB studies and defines issues that require public input and are most significant. The agencies participate in an open dialogue with members concerning emerging issues. The HAB operates by consensus on all but rare occasions. The HAB has developed a collaborative way of working that makes use of a committee structure to consider more detailed information and then define and focus issues for HAB consideration. Products of the HAB include advice or letters to the agencies, open discussion of issues, opportunities for stakeholders to comment, and forums for all interested groups to hear the same thing at the same time.

U.S. DEPARTMENT OF ENERGY-RICHLAND

The primary objective of the DOE Richland Operations Office during FY2000 was to significantly advance Hanford Site cleanup through a more focused approach on site outcomes. The Hanford Advisory Board (HAB) has provided important advice during the year as we developed the plans and concepts necessary to execute this focused approach. In fact, the HAB Key Principles Guiding Cleanup contained in this report are in direct alignment with our new vision.

Beginning with early discussions on the FY2002 budget priorities and continuing with committee meetings on key technical and contracting options throughout the year, the HAB has provided advice which led to adjustments to our approach. We especially appreciate the recent feedback we have received on the "Hanford 2012: Accelerating Cleanup and Shrinking the Site" proposal. The HAB comments continue to be of value to us because they represent a broad range of interested stakeholders from our community and others surrounding us.

As we move into FY2001, we look forward to finding even better ways to utilize the unique resources of the HAB and the views it represents. We at the DOE Richland Operations Office are committed to working with the Board in ensuring that HAB values and perspectives are engrained in our strategies and plans for Hanford cleanup.

Keith Klein, Manager
Richland Operations Office

U.S. DEPARTMENT OF ENERGY - OFFICE OF RIVER PROTECTION

The Hanford Advisory Board has provided valuable advice, and valuable insight, over the years to the Department of Energy's tank waste treatment project. The Office of River Protection shares the public values of getting on with the treatment of Hanford's 54 million gallons of highly radioactive tank wastes and protecting the Columbia River.

The termination of the privatization contract this past year created another hurdle for our efforts to build a tank waste treatment complex at Hanford. The Office of River Protection is aggressively replacing the privatization approach with a traditional contract that completes the initial 15 percent BNFL design, constructs and begins operation of the treatment complex in 2007. An expedited procurement will award the DOE managed contract by January 15, 2001.

I appreciate the regional perspective that the Hanford Advisory Board provides. The Board has challenged us to be more open and creative in sharing information and public participation. To sustain our mission of building and operating a tank waste treatment complex requires regional awareness and support for this national cleanup project. My team and I at the Office of River Protection look forward to working with the Hanford Advisory Board to achieve cleanup of Hanford's legacy of waste.

Harry Boston
Acting Manager
Office of River Protection

PUBLIC INVOLVEMENT COMMITTEE

Forty years ago, a decision was made to continue storing Hanford's high-level waste in underground storage tanks and to build new tanks, rather than spend the money to construct treatment facilities. That decision was made without the public's input and without consideration for the public's values. Today, that decision seems shortsighted. More than a third of Hanford's 177 underground waste storage tanks have leaked and the waste poses a significant long-term threat to the Columbia River. Under current schedules, when some tanks will be nearly 100 years old or more, the last of the tank waste will not likely be treated for 40 years, and this at enormous expense.

These are different times. The public has opportunities to influence major decisions on Hanford cleanup. And decisions made today can have a significant impact for generations to come.

The Public Involvement Committee provides advice to the Tri-Parties on how to interest, inform and meaningfully involve the public in important cleanup decisions. The Committee meets quarterly and also participates in public involvement planning meetings conducted by the Tri-Parties.

Activities undertaken by the Committee in FY 2000 included:

- Drafted HAB advice asking DOE to make contractor information on the tank waste treatment program available to the public. DOE agreed to require bidders to submit 10-page summaries of their bids. The summary for the winning bid will be made publicly available upon award of the contract.
- Provided recommendations to the Washington Department of Ecology on plans to increase public involvement on tank waste treatment.
- Worked with HAB members to improve outreach to their constituencies.

TANK WASTE TREATMENT AD HOC COMMITTEE

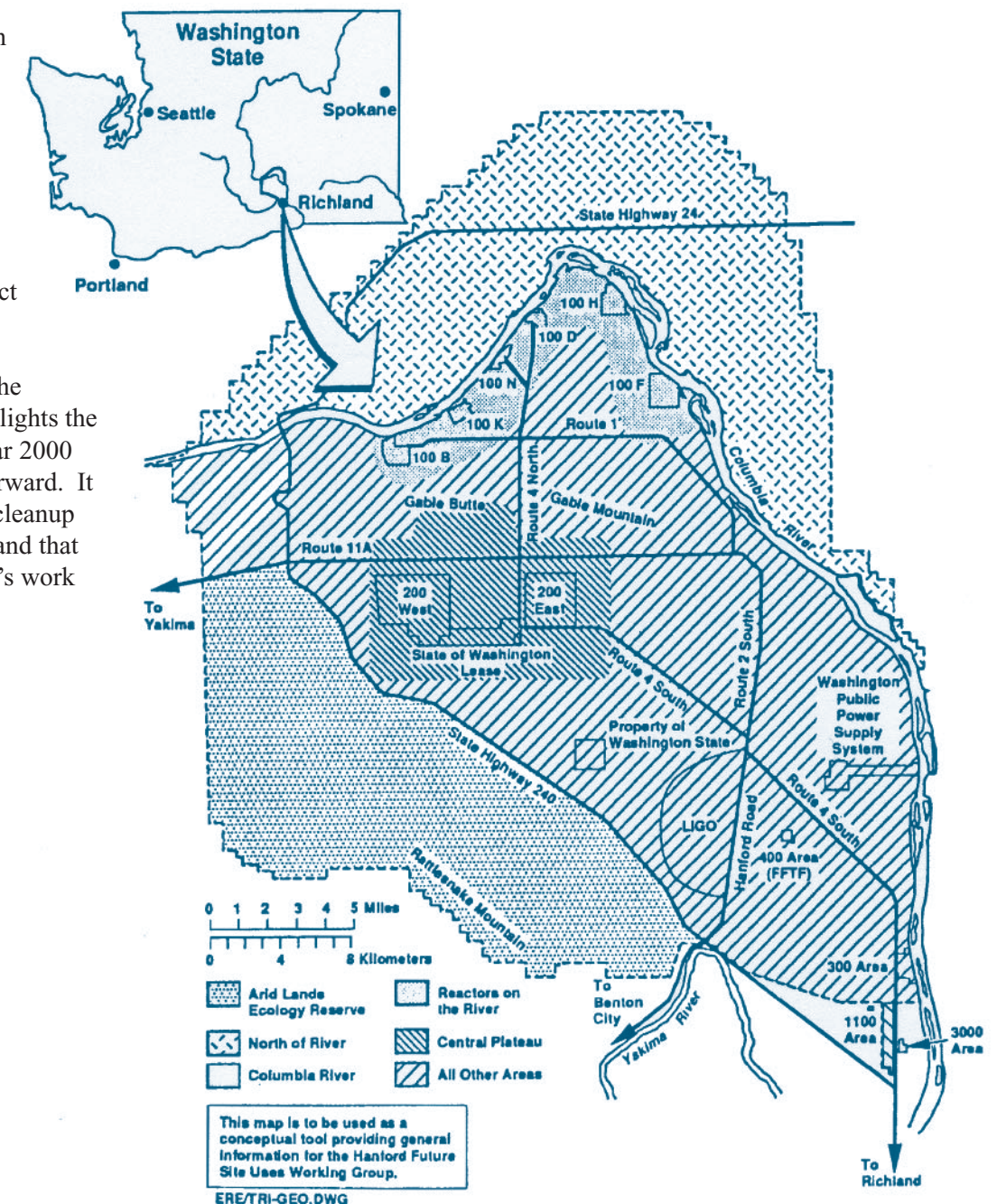
The Tank Waste Treatment Ad Hoc Committee provides input to efforts to ensure that Hanford obtains a viable, effective, and timely tank waste treatment facility. Maintaining the HAB's historical position on tank waste treatment is a key emphasis of the committee. The Committee's work scope is focused solely on pushing for successful design, construction, and operation of a vitrification facility, including those items critical to success: strong external regulation through enforceable TPA milestones, a sound and realistic technical baseline, and financially responsible contracting mechanisms that ensure performance.

Activities undertaken by the Committee in FY2000 have included:

- Organized HAB discussions on DOE Office of River Protection initiatives and TPA negotiations on tank waste treatment.
- Structured and led a HAB exploration of management, technical, financial, regulatory, and public involvement issues and options for tank waste treatment.
- Drafted a HAB statement supporting implementation of tank waste treatment at Hanford.
- Drafted HAB advice on the plan forward for obtaining tank waste treatment capability at Hanford.
- Provided representatives to participate in a national meeting on tank closure activities.
- Tracked progress on the tank waste treatment program to identify early potential "show-stoppers" that could lead to failure to obtain a treatment facility.

The 31 members of the HAB include interests from the economic, environmental, tribal, public interest, government, and health and safety sectors. Board members represent only some of the interests of the site and of the region, so the HAB has made an effort to include broader public input into its and the site's activities. Opportunities for public input have included public comment periods at each of the Board meetings; articles in the Hanford Update, which is mailed on a quarterly basis to Hanford stakeholders; articles in the Tri-City Herald; and co-sponsorship of public meetings, including the Health of the Site meeting. In addition, the HAB has a Public Involvement Committee, which works with the TPA agencies to structure public involvement activities in a manner that allows for all the public to be involved and affect the way decisions are made.

This sixth progress report of the Hanford Advisory Board highlights the work undertaken in Fiscal Year 2000 (FY2000) to move cleanup forward. It also outlines the most urgent cleanup issues that remain on the site and that will be the focus of the Board's work in FY2001.



What is the Issue?

Eleven years ago, the Tri-Party Agreement (TPA) was signed by DOE, EPA, and Ecology to provide the roadmap for stabilization and cleanup of wastes and contamination at Hanford. The TPA is a legally enforceable document. Its main goals are to bring Hanford into compliance with environmental laws, including the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), the Resource Conservation and Recovery Act (RCRA), and Washington State hazardous waste laws, safely dispose of and treat waste, and clean up contamination that has or could reach the environment. The TPA establishes milestones for cleanup and restoration of the Hanford Site by identifying deadlines for completion of major activities.

HAB Expectations

- Maintenance of the integrity and enforceability of the TPA and its milestones.
- Limiting TPA revisions to those based on new information that will allow cleanup to be achieved faster and better or address technical issues.
- Effective implementation of the TPA regulatory framework, including enforcement actions, to ensure timely stabilization and cleanup of all waste streams.
- Establishment of TPA milestones for the removal and treatment of tank wastes.
- Compliance with existing milestones for the tank waste program.
- Establishment of TPA milestones for the Plutonium Finishing Plant.
- An annual Hanford cleanup budget adequate for TPA compliance.

DOE and Regulatory Agency Actions in FY 2000

Negotiations to establish TPA milestones for the tank waste treatment program continued. The negotiations specifically focused on a schedule for designing and constructing a vitrification facility to treat and immobilize tank wastes. DOE and Ecology agreed to a milestone schedule in 1998 that included August 2000 as the authorization to proceed, July 2001 for the start of construction, 2007 for start of operations, and 2018 for completed treatment of at least 10 percent of Hanford tank wastes. Negotiations in 1999 and 2000 failed to establish interim milestones, Ecology issued a Director's Final Determination establishing an enforceable milestone schedule, and DOE appealed the determination to the Pollution Control Hearing Board for consideration in February 2001. Subsequently, the TPA agencies agreed to an enforceable schedule for the award of a new

contract by January 2001 under a consent decree amendment.

Other agency actions included (1) an Ecology administrative order and \$200,000 penalty to DOE for missing a September 1999 milestone for integrity assessments of double-shell tanks, (2) negotiations completed on changes to milestones for spent nuclear fuel to remove sludge earlier and provide for a phased start-up of the project, and (3) EPA completion of its 5-year remedy review of Hanford's Superfund sites.

HAB Actions and Advice

In November 1999, the HAB sent a letter to senior managers expressing the HAB's intent to focus greater attention on TPA implementation and milestone status. The April HAB meeting was primarily devoted to the TPA and its impact on cleanup along the Columbia River, the Central Plateau, and the tank waste program. Discussion also focused on compliance issues. The HAB continues to monitor how the TPA works to achieve needed cleanup progress.

The HAB expressed strong concerns about the regulators' apparent inability to hold DOE to its TPA commitments.

The HAB urged completion of negotiations on TPA milestones for tank waste treatment and the Plutonium Finishing Plant. Proposed changes to milestones for the spent nuclear fuel program to remove sludge earlier and conduct a phased start-up were found encouraging.

The HAB continued to express its concerns that target budgets levels for FY2002 are inadequate to fund compliance with all relevant and applicable environmental, public protection, and worker protection laws, agreements, and commitments.

ENVIRONMENTAL RESTORATION COMMITTEE

The Environmental Restoration Committee monitors actual cleanup activities, with particular attention to contaminated areas along the Columbia River and issues related to groundwater contamination and remediation. It reviews the activities of DOE's Environmental Restoration and Facilities Transition programs.

Activities undertaken by the Committee in FY2000 have included:

- Organized HAB workshops and discussions on stakeholder values for cleanup levels, risk assessments, and priorities for the contaminated soils and groundwater, burial grounds, and reactors in the 100, 200, and 300 Areas and the relationships with long-term stewardship planning.
- Reviewed new initiatives presented by DOE for accelerating cleanup of the River Corridor and transitioning the Central Plateau to a permitted waste management area.
- Drafted HAB advice to support the selected remedial action measure to remove, treat and dispose of the contents of the 618-10 and 618-11 burial grounds, while encouraging DOE to actively involve stakeholders.
- Drafted HAB advice opposing the DOE-Headquarters decision to rescind decision-making authority from local DOE offices and require concurrence by DOE-Headquarters on site cleanup records of decision and RCRA permits.
- Followed the progress of the Groundwater/Vadose Zone Integration Project and examinations of the project by the Expert Panel and the National Academy of Sciences.
- Obtained information on inactive miscellaneous underground storage tanks and integration of the three programs responsible for management and remediation of these tanks.
- Examined investigations of the 241-Z-361 tank and plans to accelerate stabilization of materials in the Plutonium Finishing Plant.

HEALTH, SAFETY, AND WASTE MANAGEMENT COMMITTEE

The Health, Safety and Waste Management Committee tracks the cleanup of the numerous waste streams on the site, including quantity, toxicity, risks, and special characteristics. The Committee also pays particular attention to improving worker safety and removing threats to public health. It reviews the activities of ongoing tank waste operations, the Spent Nuclear Fuel Project, the Waste Management program, and the Environment, Safety and Health program.

Activities undertaken by the Committee in FY2000 have included:

- Drafted HAB advice raising concerns about the accuracy of Hanford burial ground characterization information and importation of waste from other DOE sites.
- Drafted HAB advice to request that DOE hold a national or regional dialogue to be held to discuss the movement of wastes across the DOE complex for disposal.
- Followed progress on the Spent Nuclear Fuel project to prepare for removal of spent nuclear fuel from the K Basins to meet a November 2000 Tri-Party Agreement (TPA) milestone.
- Examined the Hanford Site's Integrated Safety Management System, which intertwines protection of the environment, workers, and the public. Specific to worker protection, the Hanford Occupational Health Process was discussed by the Committee and presented to the HAB.
- Tracked progress on health and safety aspects of the tank waste treatment program.
- Kept updated on activities relating to the Plutonium Finishing Plant and disposition of plutonium materials.
- Examined the lessons learned from the emergency response to the grass fire that burned over 165,000 acres of the Hanford Site.

HAB LEADERSHIP

Hanford Advisory Board

Chair: Marilyn Reeve
 Vice-Chairs: Ken Bracken
 Shelley Cimon

Dollars & Sense Committee

Chair: Gerald Pollet
 Vice-Chair: Harold Heacock

Environmental Restoration Committee

Chair: Shelley Cimon
 Vice-Chair: Gordon Rogers

Health, Safety & Waste Management Committee

Chair: Pam Brown
 Vice-Chair: Doug Huston

Public Involvement Committee

Chair: Ken Niles
 Vice-Chair: Norma Jean Germond

Tank Waste Treatment Ad Hoc Committee

Chair: Todd Martin
 Vice-Chair: Doug Huston

DOLLARS AND SENSE COMMITTEE

The goal of the Dollars and Sense Committee is to ensure that the strategies and priorities in the Hanford budget reflect our region's values. The Committee provides draft advice, recommendations, and insights to ensure that more cleanup is accomplished efficiently with the more than \$1 billion in cleanup funding appropriated annually for Hanford. The Committee focuses on budget priorities, review of contract mechanisms to increase efficiencies, ensuring that cost savings are realized, and promoting contract incentives for accomplishing cleanup milestones.

Activities undertaken by the Committee in FY2000 have included:

- Urged full consideration of lower cost alternatives to DOE's privatization contract with BNFL for treatment of tank wastes. Offered proposed advice on how those contracts can be structured to ensure maximum treatment at the lowest cost in the shortest timeframe.
- Began a major, continuing effort to ensure that the public is adequately informed and involved in decisions on the type of contract to design and construct the tank waste treatment plant.
- Reviewed and drafted Board advice on the tank waste treatment privatization contract and the need for analyzing program costs. Examined reviews of contracting and financing alternatives for tank waste treatment.
- Drafted Board advice on key criteria and stakeholder values for DOE budget priorities for FY2002.
- Organized Board discussions and drafted Board advice on the DOE FY2002 budget priorities, urging DOE to close the compliance gap.
- Reviewed DOE proposals for contractor performance measures.
- Discussed DOE contract strategies and structures to accomplish cleanup objectives cost-efficiently.
- Continued to track budget issues pertaining to management reforms in the Spent Nuclear Fuel program.
- Examined funding for emergency response requirements and for disposal of offsite wastes at Hanford.

What is the Issue?

The DOE Office of River Protection was created by Congress in 1998 to manage the tank waste treatment program at Hanford. Its primary goals are to store, treat, immobilize, and dispose of highly radioactive tank waste in an environmentally sound, safe, and cost effective manner. There are about 54 million gallons of radioactive wastes in 177 single and double shell tanks in the 200-West and 200-East Areas, whose contents will eventually be turned into glass through a process known as vitrification. Most of the single shell tanks have exceeded their design lifespan and at least 67 of these are known or suspected to have leaked an estimated one million gallons of waste into the ground. Designing, constructing, and operating a vitrification facility has been a high priority for the Hanford Site for years, but treatment capability for these tank wastes is still many years away.

HAB Expectations

- A signed contract to complete the design, construction, and operation of a tank waste treatment vitrification facility.
- Compliance with the consent decree for pumping liquid wastes from the single shell tanks (interim stabilization).
- Establishment of enforceable TPA milestones to ensure timely removal and treatment of tank wastes.
- A technically sound approach to successfully achieve vitrification of the tank wastes.
- A fiscally and financially responsible approach to obtaining a vitrification facility.

DOE and Regulatory Agency Actions in FY2000

In April 2000, the DOE contractor hired to build and operate the vitrification plant submitted a cost proposal for \$15.2 billion, greatly exceeding the \$6.9 billion expected from previous estimates. As a result, DOE terminated the contract, implemented a bridge contract to continue technical design work, and began the search for a new contractor. DOE spent the latter months of FY2000 reconfiguring the contract type to a government-owned, contractor-con-

structed and operated type to minimize delay in securing vitrification for the Hanford Site. At the close of FY2000, DOE was in the process of identifying a new contractor to assume responsibility for continuing design, beginning construction, and initiating operation of a vitrification facility by 2007.

HAB Actions and Advice

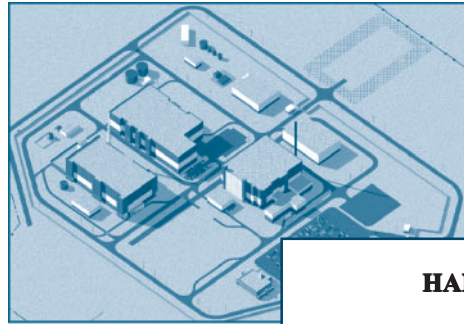
In February 2000, the HAB dedicated a full meeting to focus on the tank waste treatment program. This led to a HAB statement on the high priority for getting tank waste treatment capability for the site. This statement was sent to the Northwest Congressional delegation, the TPA agencies, and the governors of Washington and Oregon. This statement included 41 signatures from members and alternates representing 29 out of 31 HAB seats. Early in FY2000, the HAB issued advice on the need to complete a finance alternatives study for the tank waste treatment program, with a focus on cost effectiveness and recognition of government budget limitations.

Later, advice was issued on the pending contract and finance decisions faced by the DOE due to the failure of the privatization contract for the vitrification plant. The HAB also identified key challenges for the next steps, including the need to:

- Identify and apply lessons learned from the current situation.
- Achieve meaningful public involvement within the tight time frames of DOE's plan.
- Balance the need for competition with the desire to avoid delays in achieving the 2007 milestone.
- Manage contractor transitions from design to construction to operations.
- Ensure adequate consideration of the past performance of potential contractors.
- Maintain budgetary and programmatic momentum.
- Identify and evaluate the costs and benefits of retaining the current design versus pursuing a new design.

"...the HAB wishes to focus on the future by reaffirming its support for obtaining tank waste treatment capability at Hanford as soon as technically possible. We recommend a contract structure that financially rewards contractors for exceeding, and penalizes contractors for failing to meet, the 2007 hot start milestone [for tank waste treatment]. We also recommend a contract structure that provides incentives for increased waste treatment throughput capacity and for expediting tank waste treatment."

HAB Consensus Advice #109



HANFORD TANK WASTE TREATMENT CAPABILITY

HANFORD ADVISORY BOARD MEMBERS DEMAND FULFILLMENT OF NATION'S CLEANUP COMMITMENT

February 4, 2000

The Hanford tanks are one of the most urgent environmental threats to the country. Yet past efforts to retrieve, treat and dispose of Hanford tank waste have been characterized by false starts, missed commitments, and technical concerns, ultimately leaving Hanford with no treatment capability. Meanwhile, the aging tank infrastructure continues to deteriorate. In the last month alone, two tank waste transfer efforts resulted in leaking radioactive waste into the environment. The only way to reduce risks posed by the tanks is to begin retrieval and treatment as soon as possible. The Office of River Protection (ORP) is now on a path to retrieval and treatment of these dangerous wastes.

For six years, the Hanford Advisory Board (HAB) has focused on tank waste retrieval and treatment as a foremost priority. Over this time, the HAB has often expressed its serious concerns about implementation of the privatization program. Regulatory, technical and financial concerns made the HAB doubtful the program could be successful. The HAB has scrutinized the evolution of the privatization contracting mechanism, regulatory framework and technical basis of the program. This evolution has been based on the project continually identifying, considering and resolving potential pitfalls.

The HAB now believes that an important milestone has been reached by DOE. The tank waste treatment program now proposed is technically feasible. Development of agreed upon TPA milestones and approval/commitment by the Administration and Congress of a financial/funding path forward are remaining critical issues. In addition, detailed, credible alternatives analysis should be completed to ensure that ORP has optimized its financial and technical approach to tank waste treatment. The analysis should examine whether more waste can be processed sooner at lower cost.

The Congress and the Administration must now respond to the public and demonstrate the will to fund the treatment and disposal of Hanford's tank waste. It is imperative that the nation fund this project and meet its commitment to the citizens of the Northwest. The Columbia River; worker and public health; the environment; and the region's economy must be protected.

"The [HAB] is keenly interested in the successful design, construction, and operation of tank waste treatment plants at Hanford. A viable contracting and financing approach is critical for success."
HAB Consensus Advice #101

During FY2001, the HAB will continue to focus on the highest cleanup priorities, especially tank waste treatment, cleanup of groundwater and protection of the Columbia River, removal of spent fuel from K Basins, and stabilization and cleanup of plutonium-bearing materials and wastes at the Plutonium Finishing Plant. Recommendations will be provided on DOE plans to accelerate cleanup along the Columbia River Corridor and transitioning the Central Plateau to permitted waste management. The HAB will evaluate cleanup progress in FY2001, considering the following questions:

Tank Wastes

- Has a contract been signed for final design and construction of a tank waste vitrification plant? Is work proceeding on schedule?
- Are TPA milestones in place for removal of tank wastes? Were TPA milestones met? Were consent decree requirements for pumping of single-shell tanks met?
- Have plans been developed for dealing with the aging tanks, piping, etc., for interim management of tank wastes until these wastes are treated and immobilized?

Protection of the River

- Was progress made on fully cleaning up groundwater threats to the River?
- Did cleanup of liquid waste disposal sites and burial grounds along the River proceed on schedule? Was technology development for cleanup of high-risk waste disposal sites expedited? Were milestones for cleanup of these sites negotiated?
- Was significant progress made to learn more about the extent of soil and groundwater contamination?

Urgent Risks

- Did removal of spent fuel from K Basins begin and continue on schedule and within budget?
- Have TPA milestones for cleanup of the Plutonium Finishing Plant been established? Are plutonium-bearing materials continuing to be stabilized on schedule?

TPA Compliance

- Is the TPA regulatory framework in place to ensure timely cleanup and stabilization of all wastes?
- Were cleanup schedules met? Were regulatory enforcement actions taken to ensure TPA compliance?
- Did DOE request adequate budgets for TPA compliance?

Accelerating Cleanup

- Did DOE succeed in obtaining funding to accelerate cleanup at Hanford?
- Did efforts to accelerate cleanup at Hanford support and not adversely impact the highest priorities, including tank waste stabilization and treatment, protection of the River and resolving urgent risks?
- Have end states for cleanup of the 100, 200, 300, and 600 Areas been established? Has the vision for the Central Plateau been developed?

Waste Management

- Did shipments of transuranic waste to the Waste Isolation Pilot Plant continue on schedule?
- Was the Solid Waste EIS completed? Were decisions on disposal of transuranic, low-level and mixed low-level wastes at Hanford made?

Other Issues

- Have long-term stewardship needs been identified and activities initiated to fulfill these?
- Were appropriate funding priorities, contract structures, and efficiencies put in place to make the most of the funds that were provided?
- Were workers protected and were safety procedures in place and being followed?
- Was a strong and effective public involvement program conducted by the TPA agencies? Was full consideration given to public comments?

What is the Issue?

One of the key responsibilities of the HAB is to advise on strategies for effectively and meaningfully involving the public in decisions regarding cleanup of the Hanford Site. The HAB works with the TPA agencies to improve public understanding of the issues and options for action on cleanup and waste management at Hanford.

HAB Expectations

- Strong, effective public involvement efforts carried out by the Tri-Party agencies.
- Access to timely information.
- Proactive public involvement.
- Full consideration of public input in decision-making and explanation of the disposition of this input.
- Opportunities for the public to hear from independent experts.
- Efforts to seek out and solicit input from the broader public.
- Meeting formats that maximize dialogue.
- Flexible decision processes that are responsive to project changes and the needs of the public.

"The Board commends DOE for the progress it has made in fostering openness. The Board encourages DOE... to continue progress towards openness."
HAB Consensus Advice #104

HAB Actions and Advice

The HAB continued in 2000 to place emphasis on providing adequate and meaningful opportunities for public involvement in decision-making by the TPA agencies on Hanford cleanup. Members of the HAB participated in quarterly meetings on TPA public involvement to give feedback and assist in identifying upcoming needs for Hanford cleanup public participation.

Openness has been a theme for the HAB regarding public involvement in the last year. The HAB issued advice to the Tri-Party agencies in February 2000 to commend previous and encourage continued improvements to openness between DOE-RL, DOE-ORP, DOE-Headquarters, and the general public.

In June 2000, advice was issued to DOE Office of River Protection to request that procurement information on the new tank waste treatment contract be made available for public review.

For the third year, the HAB co-sponsored the Health of the Site conference in November 1999. Further public outreach included an informational booth on the HAB that was displayed at the Earth Day 2000 Celebration in Richland, where numerous local residents learned about the HAB and its role in Hanford cleanup. The HAB also organized and conducted an evening informational session at the June meeting to give the general public an overview of the major programs and issues related to Hanford cleanup. HAB members also contributed three articles on the HAB's activities to the Hanford Update, a quarterly newsletter sent to interested stakeholders.

"As DOE begins the process of selecting a new contractor to continue with the design and eventual construction of these [tank waste treatment] facilities, we believe DOE needs to change its process to allow the public better access to contract and other information of interest... This is also an important step to increase public confidence in DOE's ability to successfully manage the treatment of Hanford's tank waste."
HAB Consensus Advice #108

What is the Issue?

Almost 80 percent of the DOE national inventory of spent nuclear fuel is housed in the K Basins in the 100-K Area at Hanford. The K Basins are located only 1,200 feet from the Columbia River and have leaked more than 15 million gallons of contaminated water into the ground. The facilities were constructed in the early 1950s and designed to operate for 20 years. The fuel rods contained in the basins are highly radioactive and many have corroded, creating a dangerous uranium-contaminated sludge in the basins and making removal difficult.

The long-term goal calls for beginning removal of spent fuel from the K Basins in November 2000, all spent fuel to be placed in dry storage by 2003, all sludge to be removed by 2005, and all other Hanford spent fuel in dry storage by 2005. The project has been plagued with schedule delays, escalating costs, management problems, and complex technical issues. However, this past year, work has proceeded and the start of fuel removal is expected to begin on schedule. The status of this project and its progress continue to receive close scrutiny from the regulators, the HAB, DOE-Headquarters, and Congress.

HAB Expectations

- Successful construction, safety documentation, and preparations to begin removal of spent nuclear fuel from the K Basins in November 2000.
- Execution of spent nuclear fuel program activities within budget.
- Protection of workers, with safety procedures in place that are followed.
- Technically sound and fiscally responsible approach for management of sludges from the basins.

"The proposed changes in the Spent Nuclear Fuel program are encouraging; progress will continue to be monitored and TPA milestones should be established for... decommissioning of the basins and the storage, processing and disposal of the basin sludges."
HAB Consensus Advice #107



Canister Storage Building

DOE and Regulatory Agency Actions in FY2000

In April 2000, plans and TPA changes for removal of spent fuel were approved. This pushed sludge removal 13 months ahead of schedule. Still pending are final decisions on storage, treatment, and disposal of the sludge.

HAB Actions and Advice

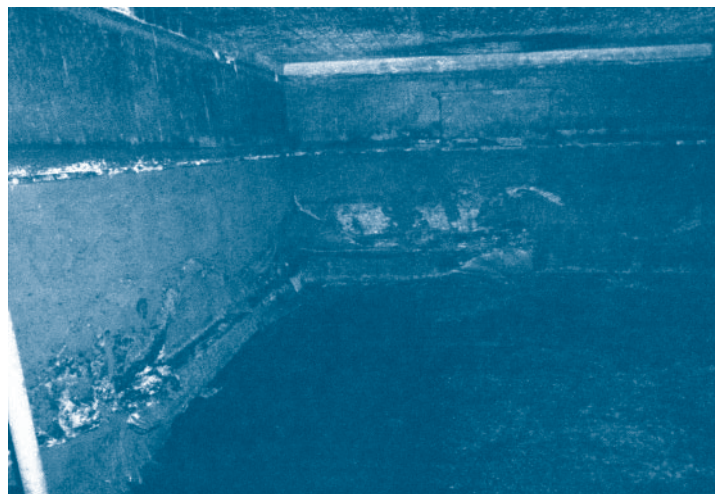
Removal of spent fuel from the K Basins on schedule and within budget remained a very high priority for the Board in FY2000. The Board's focus shifted to preparation for operations, as construction of facilities and equipment for removal, treatment and storage of spent fuel neared completion. The revised plan for removal of sludge and storage at T Plant was reviewed and corresponding changes in TPA milestones were discussed by the Board. Other issues included plans and costs for treating the sludge at T Plant and plans for decommissioning of the basins.

What is the Issue?

The Plutonium Finishing Plant (PFP) in the 200-West Area was used for 4 decades to produce the plutonium metal for nuclear weapons. The plant consists of 45 facilities, many contaminated with plutonium. The PFP contains 17.8 metric tons of plutonium-bearing materials in various forms and locations, pending treatment, repackaging, and shipment to South Carolina for storage until a long-term disposal facility becomes available. Some of this inventory is housed in an aging facility that was originally scheduled for decommissioning in the 1970s. The highly toxic, mobile material represents one of the greatest risks to Hanford workers, the public, and the environment.

HAB Expectations

- Establishment of TPA milestones for cleanup of the PFP.
- Stabilization of plutonium-bearing materials.
- Development and implementation of an integrated plan for deliberate and careful progress towards removal of plutonium from the plant and decontamination and decommissioning of the facility.
- Continued worker training that incorporates lessons learned to avoid future accidents such as the explosion at the Plutonium Reclamation Facility in May 1997.
- Open lines of communication with the tribes, states, local communities, and other stakeholders on the risks associated with the PFP and its cleanup.



Picture of Tank 241-Z-361

DOE and Regulatory Agency Actions in FY2000

Successful activities during FY2000 for the PFP included the start up of three new furnaces to stabilize plutonium-bearing materials; implementation of a precipitation process to stabilize plutonium solutions; and continued cementation of plutonium materials.

Earlier negotiations between DOE and Ecology in 1997 failed to bring the PFP activities under the TPA. Re-start of these negotiations was scheduled during FY2000, but was delayed due to other site issues demanding more immediate attention.

DOE successfully conducted visual inspections and removal of sludge samples from Tank 361-Z-241, an underground storage tank. The results of this led to a determination that the tank does not present imminent hazards associated with criticality, flammable gases, or leakage of contaminants that would require an early remediation but work to characterize and remove the tank contents and disposition the tank will proceed carefully.

HAB Actions and Advice

Stabilization and repackaging of plutonium-bearing materials and eventual decommissioning of the PFP remained as one of the HAB's top three priorities for cleanup at Hanford. The HAB's Environmental Restoration and Health, Safety and Waste Management Committees continued to work together on tracking efforts to resume stabilization of plutonium-bearing materials at PFP and to negotiate TPA milestones for PFP in FY2000. The committees also met with staff from the Defense Nuclear Facilities Safety Board on the status of compliance with Recommendation 94-1 and 2000-1 on processing of plutonium materials. The new contractor team for PFP also discussed new initiatives to accelerate schedules for materials stabilization with the committees.

What is the Issue?

Funding must be provided to move cleanup forward in a timely and cost-effective manner. In FY 2000, funding for the Hanford Site was separated into three cleanup programs: DOE-Richland, DOE-Office of River Protection, and the privatization fund for the tank waste treatment project.

HAB Expectations

- DOE budget requests that are adequate for compliance with the TPA and other legal and regulatory requirements.
- Appropriate funding priorities, contract structure, and efficiencies in place to make the most of the funds that were provided.
- Improved DOE management and contractor efficiencies to lower costs.
- Achieving more cleanup for the dollars.
- Cleanup funds not to be used for non-cleanup work.

DOE Actions in FY2000

DOE-Richland received \$719 million in FY2000 for cleanup at Hanford, which was expected to be adequate to fund all TPA commitments. DOE-Richland also requested an FY2001 budget of \$690 million for FY2001; funding shifts to the Office of River Protection left a \$168 million shortfall. The DOE-Richland target request for FY2002 funding was \$690 million, leaving a compliance gap of \$236 million.

FY2000 funding for DOE-Office of River Protection was \$444 million; requested funding for FY2001 and 2002 was \$832 million and \$1.4 billion, respectively.

HAB Actions and Advice

The HAB's focus on the adequacy of DOE budgets shifted to include advice early in the budget development process on cleanup strategic choices and budget priorities. The HAB advised that an integrated regional public involvement process to provide input on Hanford budget priorities should be followed and this should consider the strategic decisions. Better definition of what qualifies as essential services or minimum safe activities was requested. The HAB also recommended inclusion of understandable and defensible risk analyses in the budget prioritization, outcome or performance-based budget prioritization rather than level-of-effort funding, higher priority for projects with independently validated baselines, and a high priority for cleanup along the Columbia River.

The HAB's advice on the FY2002 budget expressed con-

cern that the creation of the Office of River Protection created a more complex budget and made it more difficult for the public to understand the interrelationships between the three budgets for Hanford and to identify potential shortfalls and their impacts. Concern was raised that the Office of River Protection budget request was not adequate to support activities to prepare for transfer of tank wastes to the treatment facility, assess the integrity of double-shell tanks, or retrieve wastes from the single-shell tanks.

Other issues raised in the HAB advice on the FY2002 budget included the inadequacy of level funding to achieve timely and effective Hanford cleanup and the inadequacy of target budgets to meet all safety and legally required cleanup work. The HAB reiterated previous concerns that Hanford cleanup funds should not be used to clean up others' messes, including defense of Hanford contractors in litigation and subsidizing the disposal of offsite low-level and mixed waste, or for the National Nuclear Security Agency. Validation of contractor costs to identify cost savings was recommended.

The HAB also urged revision of budget priorities to protect the Columbia River and comply with TPA milestones and other applicable regulations. Increased efforts to effectively involve regulators, tribes, the HAB, and the public in developing outyear budget priorities were suggested. The HAB's budget advice also noted that proposed changes in the Spent Fuel program are encouraging and recommended that TPA milestones for decommissioning of the basins and the storage, processing and disposal of basin sludges should be developed.

"Flat budgets over the last several fiscal years have forced the Hanford site to postpone critical cleanup activities, infrastructure upgrades, and facility construction... These delays have built ever-increasing budgetary requirements, resulting in greatly increased needs for FY2002. Lack of adequate funding in FY2002 will once again delay important cleanup activities, greatly increasing future financial obligations and risks to the public, environment and workers."

HAB Consensus Advice #107

National Decision Making

National decision-making activities received continued attention from the HAB in FY2000. These included the DOE record of decision for the Programmatic Environmental Impact Statement for Disposal of Low-Level and Mixed Low-Level Waste. Prior to issuance of this decision, the HAB issued advice urging the need for a national public dialogue on issues pertaining to nuclear materials disposition or at least a regional dialogue on the implications of the decision.

"While the Board endorses the need to look at cleanup from a national perspective, it also remains committed to ensuring that Hanford cleanup is done in an expeditious, safe, technically sound and equitable manner."
HAB Consensus Advice #102

Concern was raised about a DOE-Headquarters change in the delegation of approval authority for Environmental Restoration documents that transferred some of these authorities from the field back to Headquarters. The HAB expressed alarm that this change would add additional review and approval layers, reduce accountability, and impede public participation.

"We are alarmed that this change [transferring signature authority for CERCLA records of decision and RCRA permits to DOE-Headquarters] will delay critical decisions and hamper cleanup, thereby compromising binding TPA milestones and undermining the TPA process."
HAB Consensus Advice #110

An Environmental Impact Statement on high-level wastes at the DOE-Idaho site, in which waste vitrification at Hanford was considered as one of the potential alternatives, was reviewed by the HAB. This resulted in a letter from the HAB that

noted that Hanford does not currently have a vitrification plant that could treat Idaho's high-level waste.

Scoping meetings on a Programmatic Environmental Impact Statement of Nuclear Research Infrastructure in the Fall of 1999 were discussed at the HAB's November 1999 meeting. A sounding board in which each of the HAB members presented perspectives of the organizations they represent on the key issues and questions that should be addressed in the environmental impact statement, including the role of the Fast Flux Test Facility, was conducted and the results were transmitted to DOE-Headquarters.

During FY2000, the HAB continued to work with advisory boards at other DOE sites. This included participation in semi-annual meetings of the site-specific advisory board chairs that were held in Idaho Falls, Idaho, and Amarillo, Texas. A Statement of Common Interest developed by the advisory board chairs was reviewed and endorsed by the HAB for transmittal to the Secretary of Energy. HAB members also participated in a workshop on long-term stewardship held at Oak Ridge, Tennessee, and made plans for another workshop to be held at Rocky Flats, Colorado, in October 2000.

What is the Issue?

The 100 and 300 Areas comprise the "River Corridor" with the Columbia River as a shared boundary. The 100 Area of the Hanford Site includes nine reactor sites, associated facilities and structures, low-level waste burial grounds, irradiated fuel storage in the K Area basins, and the land between these sites. Extensive contamination exists in some areas of the soil, vadose zone, and groundwater, and reaches the river through groundwater seeps and springs. The 300 Area includes laboratories for energy research and development as well as facilities for reactor fuel fabrication and various technical and service support functions. There are 190 buildings in the 300 Area, as well as 14 ponds, trenches, and landfills that have been used for disposal of liquid waste in the past. Cleanup efforts are focused on these facilities and disposal sites.

"Activities in the Environmental Restoration program that directly support cleanup along the Columbia River should be given a high priority."
HAB Consensus Advice #105

HAB Expectations

- Compliance with TPA milestones and completion of cleanup along the River.
- Reduction of future stewardship needs through cleanup and waste stabilization.
- Cleanup of soils in the 100 and 300 Areas.
- Containment and cleanup of groundwater in the 100 and 300 Areas.
- Containment and elimination of sources of further contamination.
- Interim stabilization and eventual removal of reactor cores
- Protection of the River from contamination from the Hanford Site.
- No restrictions on future public access because of residual contamination.
- Definition of institutional controls.

DOE and Regulatory Agency Actions in FY 2000

The 100 Area cleanup continued to move forward in FY2000, and serves as a model for cleanup progress at

Hanford. While work on remediation of contaminated soils in the 100 and 300 Areas continued, cleanup emphasis along the River Corridor shifted in FY2000 to proposed plans for burial grounds in these areas. These proposed plans, which called for removal, treatment, and disposal of the burial ground contents, were released for public review; the record of decision for the 100 Area was issued in 2000 and that for the 300 Area should be out in early FY2001. DOE also unveiled a plan to consolidate activities to accelerate the cleanup of the 100, 600 and 300 Areas with the goal of completing most of this work in the next decade.

HAB Actions and Advice

The HAB engaged in considerable discussion in FY2000 on plans and cleanup levels for the River Corridor. This included devoting most of the December 1999 meeting to a tutorial on 100 Area cleanup, review of past values and recommendations, perspectives of trustees and affected tribes, and a discussion of HAB members' perspective to guide the HAB's work on this topic. Common themes included the need to better understand the risk assessment process, concern with groundwater contamination and remediation, the unacceptability of a one-shot cleanup approach, and clarification of cleanup standards. The HAB also discussed ongoing concerns regarding an Inspector General report on cleanup along the Columbia River that suggested the potential for cleaning up to recreational versus residential uses. HAB support for the proposed plan to remove, treat, and dispose of the contents of the 100 Area burial grounds was provided, noting that this option is consistent with previous HAB advice supporting unrestricted use of the 100 Area.

Plans for remediating the 618-10 and 618-11 burial grounds, which are located north of the 300 Area and contain large amounts of remote-handled transuranic wastes, were addressed in HAB advice that strongly endorsed the preferred alternative to remove, treat, and dispose of these materials because of their proximity to public access and the Columbia River and the finding of high levels of tritium in groundwater near 618-11. The HAB also began work to advise on cleanup plans for the 300 Areas and identified the need for further discussion of the acceptability of an industrial use cleanup standard for this area.

In September 2000, the HAB heard DOE's proposal for accelerating cleanup along the River Corridor and began a process to define HAB values, issues, and recommendations on this proposal.

What is the Issue?

DOE-Richland is preparing a Solid (Radioactive and Hazardous) Waste Environmental Impact Statement (EIS) to address site-specific implementation of the Records of Decision for the Complex-Wide Waste Management Programmatic EIS. DOE-Richland's EIS will address alternatives for treatment, storage, and disposal of transuranic waste, low-level radioactive waste, hazardous waste, mixed low-level waste, and non-hazardous solid waste at Hanford.

HAB Expectations

- Completion of the Solid Waste EIS and disposal decisions made regarding Hanford wastes, including transuranic, low-level, and mixed low-level wastes, and potential intersite transfers of wastes and materials.
- Initiation of transuranic waste shipments to the Waste Isolation Pilot Plant.

DOE Actions in FY 2000

Work continued on the Solid Waste EIS but its issuance was delayed until late 2001. DOE began shipping transuranic waste to the Waste Isolation Pilot Plant in New Mexico in July 2000. DOE-HQ also issued a record of decision for low-level and mixed wastes that identified Hanford and the Nevada Test Site as the preferred location for disposal of low-level waste from DOE sites except for the Savannah River, Oak Ridge, Idaho, and Los Alamos sites, which will continue to dispose of their low-level wastes onsite to the extent practical. The record-of-decision also identified Hanford and the Nevada Test Site as the preferred locations for disposal of mixed low-level waste from DOE sites.



Low-Level Waste Burial Ground

"The [HAB] urges... Ecology and EPA to require a determination if Hanford's low-level waste burial grounds contain mixed low-level hazardous or dangerous wastes... The Board urges no offsite wastes be disposed into the low-level waste burial grounds being investigated until the determination is made and they are appropriately regulated."
HAB Consensus Advice #103

HAB Actions and Advice

The HAB issued advice to the Tri-Party agencies urging that a national or regional dialogue be held with stakeholders, tribes and regulators to discuss the implications of adding wastes to Hanford's existing inventory. Advice was also issued communicating the Board's concern about adding off-site waste to Hanford burial grounds, without accurate characterization of what currently exists in these burial grounds.

What is the Issue?

Effective and efficient management requires a focused, streamlined decision-making process that is linked to a defined schedule, adequate funding, and a clear plan for achieving cleanup goals. It is imperative that tax dollars are spent in an efficient and cost effective way, taking into account cleanup goals and the increased costs caused by unnecessary delay. Efficiencies must be implemented and programs held accountable so that there is budget oversight of contractors and accountability for program management. Steps must also be taken to ensure that DOE has the most capable and responsive contractors to carry out the cleanup.

HAB Expectations

- Integration of management procedures between DOE-Richland (DOE-RL) and DOE-Office of River Protection (DOE-ORP).
- Results-oriented management.
- Clear, streamlined decision-making.
- Clear plans, schedules, and accountability for DOE, its contractors, and regulators.
- Improved safety performance.
- Protection of workers, including timely training.
- Improvement and enhancement of worker morale and productivity.

DOE Actions in FY2000

- Keith Klein, DOE-Richland Manager, proposed initiatives to accelerate cleanup along the River Corridor, transition activities on the Central Plateau, and look to the future for use of the site.
- The BNFL contract for tank waste treatment was terminated following submission of a \$15 billion cost estimate for the facility and DOE began the process of identifying a new contractor.
- CH2M Hanford Group purchased Lockheed and took over as the prime contractor for tank farm operations.
- Westinghouse replaced B&W Hanford Company as the subcontractor for management of the Facility Stabilization Project.

HAB Actions and Advice

FY2000 continued the pattern of major changes and transitions with respect to management of the Hanford cleanup program that began in FY99. The HAB focused on the following key areas:

Maintaining Commitments to Cleanup

The HAB sent a letter to DOE Assistant Secretary Huntoon supporting her six principles for Environmental Management. Greater openness, stakeholder involvement, tribal consultation, and community outreach were recommended as ways to bolster public confidence in the DOE cleanup program.

The HAB met with Keith Klein, DOE-Richland Manager, Harry Boston, DOE-Office of River Protection Manager, Tom Fitzsimmons, Director of Ecology, Chuck Findley, EPA Regional Administrator, and Maxine Hayes, Manager of the Washington Department of Health, in September 2000 to discuss their visions for Hanford cleanup. Board discussions focused on the future of the site, spanning from issues pertaining to the tank waste treatment contract to the DOE accelerated cleanup plan, budgets, and site contracting strategies.

Several HAB committee meetings and workshops were conducted in late FY2000 on the proposal developed by DOE to accelerate cleanup along the River Corridor and transition the Central Plateau to a permitted waste management area in the next 10 years. These were structured to begin a process of providing stakeholder values and recommendations on this proposal in FY2001.

Site Contracting

At its September 2000 meeting, the HAB considered advice addressing how DOE-Richland develops performance measures for contracts. This advice was adopted at the November HAB meeting. Discussions and input on DOE contracting strategies for the Fluor Hanford Company and Bechtel Hanford Company contracts that expire in 2001 and 2002, respectively, as well as replacing BNFL as the tank waste treatment contractor were conducted during the latter part of the year.