# Hanford Advisory Board

Progress Report



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



#### Hanford terms and acronyms used in this report

**Central** The location of the 200 East and 200 West Areas and waste management facilities located in

**Plateau** those areas.

**CERCLA** Comprehensive Environmental Response, Compensation and Liability Act of 1980,

also known as Superfund, providing statutory authority for cleanup of hazardous

substances.

**change** Changes to the TPA (see below) negotiated and agreed to by the agencies involved in Hanford

package cleanup.

**DOE** U.S. Department of Energy.

**DOE-ORP** U.S. Department of Energy - Office of River Protection.

**DOE-RL** U.S. Department of Energy - Richland Operations Office.

**Ecology** Washington State Department of Ecology.

Environmental Impact Statement, a document prepared to comply with the National

Environmental Policy Act.

**EPA** U.S. Environmental Protection Agency.

**HPMP** Performance Management Plan for the Accelerated Cleanup of the Hanford Site

(DOE-RL-2002-47, Rev. D, August 2002).

**HSW-EIS** Draft Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact

Statement (DOE/EIS-0286D).

**NEPA** National Environmental Policy Act of 1969 requiring federal agencies to use an interdisciplin-

ary approach in planning and decision making for actions that impact the environment. NEPA also requires the preparation of an Environmental Impact Statement (EIS) on all major Federal

actions significantly affecting the human environment.

**River** Term used to describe Hanford facilities and waste sites along the Columbia River. **Corridor** 

**ROD** Record of Decision, the CERCLA (see above) document used to select the method of remedial

action to be implemented at a cleanup site.

**TPA** Tri-Party Agreement, the informal name for the Hanford Federal Facility Agreement and

Consent Order signed by the U.S. Department of Energy, the U.S. Environmental Protection

Agency, and the Washington State Department of Ecology in 1989.

**vitrification** A process that mixes radioactive waste with other materials to form glass. The glass reduces the

potential for radioactive and hazardous contamination leaching into the environment.

**WTP** Waste Treatment Plant where tank waste will be vitrified.

**100 Area** 26 square miles of land along the Columbia River where the nine nuclear reactors are located.

**200 Area** The location on the Central Plateau of the 177 underground tanks, principal nuclear chemical

processing facilities, and defense waste management activities.

An area three miles north of the city of Richland, location of former research and development

laboratories and reactor fuel manufacturing facilities.

# Mission Statement

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 Board is to provide informed recommendations and advice to the U.S. Department of Energy, the U.S. Environmental Protection Agency, and the Washington State Department of Ecology on selected major policy issues related to the cleanup of the Hanford site.

Through its open public meetings, advice on agency public involvement activities, and the responsibilities of Board members to communicate with their constituencies, the Board is chartered to assist the broader public in becoming more informed and meaningfully involved in Hanford cleanup decisions.

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#### Value and the Hanford Advisory Board

Pick up any Sunday newspaper and the importance of "value" in our culture is obvious - every advertisement is trying to convince us that it offers the best product at the best price. Whether it's oil changes or bottled water or stereos, we all want value.

For most, this desire for value includes government services. Taxpayers expect their garbage to be picked up on time and the street to be pothole-free. Many are not comfortable, however, applying traditional value measures to stakeholder involvement in government decisions. And for good reason: it is difficult to quantify the many intangible benefits stakeholders bring to governmental agencies. Further, such participation is seen by many as the bedrock of our democracy and is, therefore, the "right thing to do." However, being the "right thing to do" should not exempt stakeholder involvement from the fiscal scrutiny other government activities receive.

Toward the goal of maximizing value to agencies and stakeholders alike, the Hanford Advisory Board in 2002 instituted (1) a disciplined planning and priority-setting process and (2) periodic Board leadership meetings focused on the Board's effectiveness and efficiency.

#### Improved Board Processes

The Board's yearly planning process involves three steps. First, through its committees, the Board identifies its projected work. Second, the agencies submit their requests of the Board for the upcoming year. Lastly, the two lists are aligned through discussions between the Board and the agencies to produce an agreed-upon Board work plan.

In addition to developing its disciplined planning process, the Board's leadership gathered in 2002 to focus on improving the Board's effectiveness and efficiency. This meeting led to several actions, including streamlining the Board's cumbersome "word smithing" process; improved outreach to Hanford employees and the media; and a mechanism by which to prioritize Board work in 2003 (see page 26).



#### The Board's Cleanup Products

The cornerstone of the Hanford Advisory Board has always been the substantive work it produces. The Tri-Party Agreement (TPA) was significantly modified in 2002. The Board supported two major TPA alterations in the River Corridor and Central Plateau (the location of the 200 East and 200 West Areas and waste management facilities). The Board applauded the agencies for reaching agreement while emphasizing the need for more focus on groundwater remediation, alignment of contracts with TPA requirements, and remote-handled transuranic waste capability. For the Central Plateau, the Board endorsed the TPA change package, noting deficiencies in integration (particularly concerning groundwater and tanks), as well as the need for a comprehensive risk assessment and better definition of the role of long-term waste management activities.

Acceleration of cleanup activities was a Department of Energy focus at Hanford in 2002. On one hand, the Board was supportive of efforts aimed at better-faster-cheaper cleanup. Further, the Board is committed not only to analyzing agency proposals for acceleration, but also to offering its own proposals to get more cleanup for less money. This commitment led the Board to its 2003 focus: acceleration (see page 26).

On the other hand, the Board was cautious, seeing the potential for acceleration leading to a less rigorous, lower quality cleanup and/or "cutting corners" in important areas such as public involvement and regulatory compliance. The lack of sufficient funding for acceleration initiatives in DOE's Fiscal Year 2003 budget request only heightened Board concerns.

The Board also tackled one of Hanford's most difficult closure issues: exposure scenarios. In making decisions about "how clean is clean," the agencies must agree upon a framework for analyzing and evaluating potential future exposures to contamination. Recognizing the importance of this topic, the Board recommended, and the agencies created, the Hanford Advisory Board Exposure Scenario's Task Force. In addition to Board members, the Task Force invited the participation of



other parties interested in the protection of Hanford related resources (e.g., Columbia Intertribal Fish Commission and Trout Unlimited).

The Task Force's work led to valuable Board advice concerning exposure scenarios in the River Corridor and a risk analysis framework in the Central Plateau. Further, portions of this advice were incorporated into Hanford's Performance Management Plan.

Lastly, the Board tackled the long-awaited draft
Hanford Solid Waste Environmental Impact Statement.
The document fell short of the Board's expectations of
a comprehensive analysis of impacts and mitigating
measures of Hanford's solid waste streams. As a result,
the Board advised DOE to revise and reissue the document. DOE has since announced that it plans to
complete a revision.

2002 was a year in which the Hanford Advisory Board made strides toward better Hanford cleanup. In addition, the Board continued to mature as an organization capable of providing value on Hanford's important cleanup challenges. Todd Martin, Board Chair

# History of Hanford

The 586-square mile Hanford Nuclear Site was the first and primary plutonium production facility for the United States' nuclear weapons program. The site, which began operations in 1944, includes nine reactors, four chemical separations plants, plutonium processing facilities, and 177 underground high-level nuclear waste tanks containing 53 million gallons of highly radioactive waste and 190 million curies of radioactivity. Between the start of operations in 1944 and the shutdown of the last reactor in the late 1980's, Hanford produced over two thirds of the nation's estimated 111 metric tons of plutonium.

The production of plutonium generated large amounts of radioactive and chemically hazardous wastes. Hanford has 60 percent of the volume of the nation's military high-level radioactive wastes and over 1,400 waste sites containing liquid and solid waste.

Currently, Hanford is engaged in the world's largest environmental cleanup project. The shift in mission from operations to cleanup became complete in 1989 when the U.S. Department of Energy, the U.S. Environmental Protection Agency, and the Washington State Department of Ecology signed the landmark Hanford Federal Facility Agreement and Consent Order, commonly known as the Tri-Party Agreement or TPA. The TPA outlines legally enforceable milestones for Hanford cleanup over the next several decades.

DOE's Richland Operations Office is responsible for environmental restoration and waste management activities at Hanford. DOE's Office of River Protection was established by Congress in 1998 to manage the complex project of retrieval, treatment, and disposal of Hanford tank wastes

### The Hanford Advisory Board

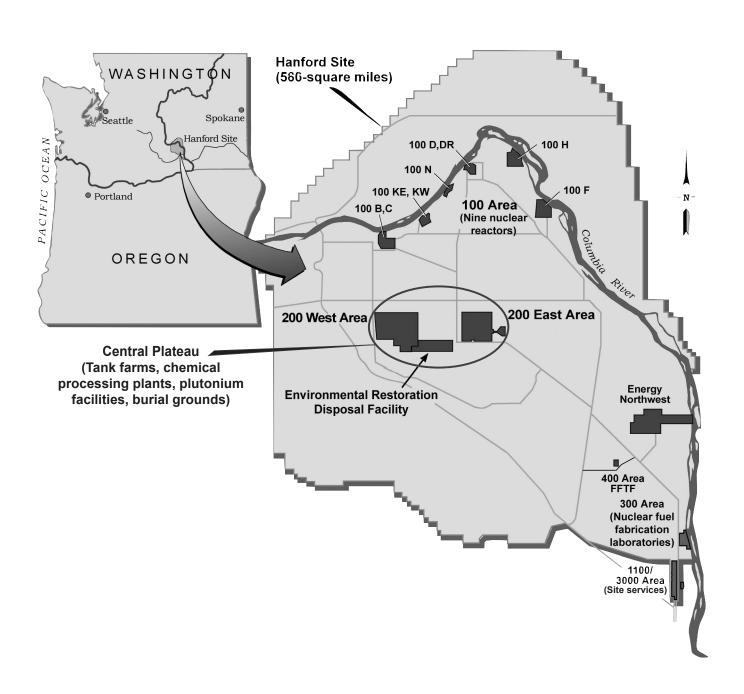
In addition to the cleanup milestones, the TPA also contains a public involvement plan designed to ensure the agencies include the public as partners in Hanford cleanup decisions.

Under the Federal Advisory Committee Act of 1972, DOE chartered the Hanford Advisory Board in 1994 to provide a forum for bringing together diverse local and regional interests to tackle the difficult issues associated with cleaning up the legacy of radioactive and chemical wastes left from 50 years of weapons production. The 31 seats on the Board include interests from

the economic, environmental, tribal, public interest, local government, and health and safety communities. Through its five committees, the Board works to define significant issues meriting public input and provide meaningful advice to the agencies on Hanford cleanup. Operating by consensus, the Board has produced nearly 150 individual pieces of advice over its 8-year history.

This eighth progress report of the Hanford Advisory Board highlights the work done in calendar year 2002 and outlines the issues the Board will focus on in 2003.

## Map of the Hanford Site



# **Board Work in 2002**

By far, the major theme for the Board this year was acceleration. DOE's Top-to-Bottom Review, the creation of the \$800 million accelerated cleanup fund, and the Performance Management Plan for the Accelerated Cleanup of the Hanford Site have all been scrutinized by the Board. Working through established committees and ad-hoc processes such as a Committee of the Whole and Exposure Scenarios Task Force, Board members have concentrated their efforts this year on ensuring that DOE's short- and long-term plans are consistent with TPA milestones and stakeholder values.

Board work in 2002 has also been driven by the initiation of activities many years in the planning, such as the transfer of spent nuclear fuel out of the K Basins near the Columbia River and the start of construction on the Tank Waste Treatment Plant. In addition, the release of the long-awaited draft Hanford Solid Waste Environmental Impact Statement merited a great deal of Board attention, with three pieces of Board advice between July and September focused on the EIS's public process. As a result of comments from the Board, the public, and the regulators, DOE-Richland Operations Office has agreed to issue a new draft EIS addressing the specific areas of concern that were raised.



As DOE transitions from planning for cleanup to actually cleaning up, the Board continues to emphasize integration of site activities, risk-based decision-making, and compliance with the TPA as the keys to a successful cleanup.

#### **Committee Meetings**

Through its five committees, the Board delves into the technical and policy issues that matter to Hanford stakeholders. Issue managers on each committee are assigned the task of working with DOE liaisons and project managers to frame topics for committee discussions and possible consideration by the full Board. The committees are responsible for reaching consensus prior to presenting advice to the Board. This process ensures Board member participation in advice development and maximizes Board efficiency.

#### **Budgets and Contracts Committee**

The Budgets and Contracts Committee had an especially challenging year, given the ever-changing picture of DOE's Fiscal Year 2003 budget. Still, in five meetings, the committee continued to monitor the state of Hanford funding, provide input to DOE on budget planning for outyears beyond 2003, and examine the budgetary implications of the acceleration proposals.

#### River and Plateau Committee

The River and Plateau Committee took on a wide range of issues, including: the draft Hanford Solid Waste

Environmental Impact Statement; groundwater activities; plans for long-term stewardship of the Hanford site when the cleanup mission is completed; drafting of the Institutional Controls Plan; Tri-Party agency agreement on the Plutonium Finishing Plant and 200 Area change packages; and on-going waste disposal and waste management actions throughout the site. In April, the committee participated in a site tour to observe cleanup activities in progress first-hand. In October and November, the committee prepared information for the groundwater-focused December Board meeting.

#### Tank Waste Committee

In six meetings, the Tank Waste Committee kept track of plans and progress on a variety of tank waste issues including: design, permitting, and construction of the vitrification plant; DOE's proposals to find technologies to serve as alternatives to vitrification; and DOE's acceleration proposals for early tank closures. In addition, the committee prepared presentations and discussion for the November Board meeting focusing on tank waste issues.



#### Public Involvement and Communication Committee

In its five meetings, the Public Involvement and Communication Committee continued its focus on the public's access to and participation in Hanford cleanup plans. The committee tracked DOE's public involvement activities closely, requested extensions on public comment periods for key documents; drafted advice on



creating effective announcements to bring stakeholders into decision-making; and made recommendations on public participation in the design for the 100 B/C Area Risk Assessment Pilot. The committee also presented the Board with a process for releasing newsworthy Board information to interested media.

#### Health, Safety, and Environmental Protection Committee

The Integrated Safety Management System and its consistent use across the Hanford site were the primary focus of the Health, Safety, and Environmental Protection Committee at its three meetings this year.



The committee prepared advice in July and closely monitored agency responses to the Board's recommendations on acceleration. In addition, as vitrification plant construction began, the committee met jointly with the Tank Waste Committee to ensure the Board's concerns about worker health and safety were addressed.

#### Exposure Scenarios Task Force

TPA agency requests for stakeholder input into building a vision for the post-cleanup future at Hanford led the Board to charter the Exposure Scenarios Task Force in February 2002. An exposure scenario is a calculation of an individual's exposure to contamination in certain set situations or under certain conditions. To the extent possible, exposure scenarios capture likely behaviors in order to provide a realistic picture of future exposures. From the exposure levels, risks can be assessed and long-term decisions made about the level of cleanup needed for an area to be deemed safe. The Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and Washington State regulations also directly or indirectly require the development of exposure scenarios.

During the seven months the task force met, a broad spectrum of Hanford stakeholders, including both Board and non-Board members, discovered they share many common ideas and visions for the post-cleanup future of Hanford. Early, frequent, and continuing public involvement in the risk assessment and exposure scenario development process was a common theme throughout the meetings. The need for exposure scenarios to be dynamic over time, to be conservative, and to consider all reasonably foreseeable uses of the areas in question were also commonly expressed values. The task force also discussed long-term stewardship and emphasized to the agencies the belief that stewardship should begin now and involve a long-term, continuing human presence as a way to maintain knowledge and perpetuate understanding of the continuous risks posed by Hanford wastes.



#### Committee of the Whole

May 1 brought the release of the initial draft of the Hanford Performance Management Plan (HPMP) and a request from the agencies for advice on acceleration proposals. The overarching scope of the issues addressed in the HPMP cut across work assigned to all five of the Board's committees. Because no single

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committee could tackle all of the document's details in the time between the May draft and the July Board meeting, the Board convened a Committee of the Whole to examine the issues raised by the HPMP. Twice in May, Board members representing all committees met to review and formulate advice on the HPMP. Led by Board co-vice-chair Ken Bracken, the group accomplished an extraordinary amount of work in a minimal amount of time to produce comprehensive and carefully considered advice on DOE's plans.

The August draft of the HPMP incorporated much of the Board's advice, including the addition of a groundwater protection initiative; identification of key assumptions made by DOE in preparing the plan; and a reiteration of DOE's commitment to compliance with the TPA.



#### **Board Leadership**

Leadership continuity contributed greatly to the Board's success. At the time of committee leadership selection in May, three committee chairs remained in their positions for another term and two vice chairs took over committee chairmanships.

In June, a Board leadership retreat was held to discuss how to maximize the Board's effectiveness in the coming months. The retreat led to several actions, including a leadership commitment to the committee processes for drafting advice and synthesizing key issues in order to alleviate the Board's difficult "word smithing" process. The retreat also produced plans for improving outreach to Hanford employees and the public by keeping the media engaged in Board activities. Lastly, the retreat resulted in a proposal for the Board to focus on the theme of acceleration in 2003.

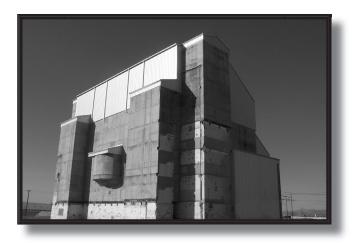
#### **Board Advice**

In seven meetings in 2002, the Board issued 16 pieces of advice on topics that included TPA change packages, exposure scenarios for the Hanford site, DOE's plans to accelerate cleanup, the draft Hanford Solid Waste Environmental Impact Statement, long-term stewardship, worker safety, public involvement processes, and a proposed new configuration of the Waste Treatment Plant

#### TPA Change Packages

The Board issued its first advice of the year (#125) on the TPA change package for the River Corridor (100 and 300 Areas). The Board expressed support for a well thought-out plan that streamlines the number of milestones necessary for cleanup regulation, but urged more aggressive technology development and treatment activities for groundwater. Noting the omission of some buildings in the 300 Area from the change package, the advice also included suggestions of ways for DOE to

ensure that all 300 Area activities are conducted safely and efficiently. The Board reiterated previous advice calling for an alignment of the TPA with the River Corridor Contract and emphasized the need to secure adequate funding for remote handled transuranic waste capability to help remediate burial grounds 618-10 and 618-11.



In response to the 200 Area change package, the Board issued advice (#128) in April endorsing the package, but suggesting that it include all operable units, develop a comprehensive risk assessment, incorporate and integrate the groundwater program, and integrate the long-term role of waste management and the closure of sites and facilities.

#### Exposure Scenarios Task Force

Two pieces of advice were created as a result of Board member participation in the Exposure Scenarios Task Force. Advice #132 outlined Board expectations for the risk framework in the Central Plateau. For the first time, the Board acknowledged that the core zone will contain some waste at the completion of the cleanup.

However, the advice suggested that the core zone size be minimized and that a continued human presence be encouraged to provide "ongoing, active institutional interest vested in future management of the risks posed by Hanford waste." To achieve this, the Board advocated maximizing beneficial use of the accessible areas of the core zone.

The Board also emphasized the importance of ground-water remediation, as groundwater should have beneficial future uses that "must not be restricted outside of the individual waste management unit points of compliance within the core zone." Another key point was that the TPA agencies address long-term stewardship immediately, through creation of a coalition of affected groups.

"The Board acknowledges that some waste will remain in the core zone when this cleanup effort is complete. However, the core zone should be as small as possible and should not include contaminated areas outside the 200 Area fences." (Advice #132)

After tackling the Central Plateau, the Exposure Scenarios Task Force turned its attention to the River Corridor, which in turn led to Board advice (#135) on risk assessment and exposure scenarios for the River Corridor. This advice represented an abbreviated version of the task force's final report, which the Board suggested the TPA agencies review and reference when making decisions. Within a quarter-mile of the river, the Board advised calculating risk for Tribal and recreational utilization of the River Corridor; in upland

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"The Board believes that sound management, stewardship, and cleanup decisions must begin now to build equity over generations. The Tri-Parties need to engage immediately in developing robust, flexible, and creative management systems to address long-term stewardship. The Board recommends that a coalition of groups, to include the Tribes, local government, and other affected entities as appropriate be created to administer the long-term stewardship responsibilities for this site. Stewardship should be an active process involving the entire spectrum of management, education, and protection activities." (Advice #132)

areas those scenarios should be supplemented with a rural residential scenario. The Board emphasized that the public should be involved "early and often throughout the risk assessment and exposure scenario process." The advice also addressed groundwater, stating that it should be remediated to meet drinking water and ambient water quality standards and that actions should be taken to ensure that upgradient contaminants would not contaminate the River Corridor groundwater in the future. The Board also reminded DOE of the importance of fully funding the strategic initiative for groundwater. Regarding end states, the Board advised the TPA agencies "to use a holistic approach and look at the effects of site activities and conditions on a given waste site or project" and to take into consideration Tribal input, public values, regulatory requirements, and ecological parameters.

#### Accelerated Cleanup Proposals

The year 2002 was marked by the commitment of DOE to accelerate nuclear waste cleanup across the nation. This began with an internal Top-to-Bottom Review of the DOE-Environmental Management program. Preliminary review results proposed the establishment of a DOE complex-wide \$800 million set-aside cleanup fund. In Advice #126, the Board disagreed with the concept of a cleanup fund, fearing it would force premature decisions, rather than basing decisions on the best available science and technology. The Board also commented that the DOE Fiscal Year 2003 budget request was not adequate to meet the risk-based TPA cleanup requirements, especially since the needed funding was tied to the set-aside cleanup fund.

When the Top-to-Bottom Review was completed and made public, the Board expressed concern that the review was not risk-based.

"Linking a significant fraction of the required funding to the recommendations of the Top-to-Bottom Review is premature, as the review has not yet received broad and careful examination." (Advice #126)

The Board stated that decisions to accelerate cleanup and reduce cost need to be supported by credible risk assessments; a public dialogue is necessary; all radiological and hazardous waste should be considered; and all relevant regulations, including those of Washington State, should be upheld.

"The Board has a long tradition of supporting the concept of a more economical and expeditious cleanup, provided that applicable environmental standards are maintained. Human health, worker safety, and environmental and native habitat quality must not be sacrificed by relaxed standards or accelerated cleanup."

(Advice #129)

Following the Top-to-Bottom Review, DOE asked each of its sites to develop Performance Management Plans detailing how cleanup would be accelerated and other recommendations of the review would be implemented. In Advice #131, the Board offered comprehensive and substantive comments on the May draft HPMP to be incorporated into the August draft. While the Board supported better-faster-cheaper cleanup, several significant concerns were outlined in the advice:

- The highest risks should be reduced first;
- The assumptions in the plan need clarification;
- Funding for the HPMP may be problematic;
- Public involvement is critical.

#### Draft Hanford Solid Waste Environmental Impact Statement

In 2002, the Board produced three pieces of advice on the draft Hanford Solid Waste Environmental Impact Statement (HSW-EIS), which evaluates the impacts on Hanford of receiving low level and mixed waste from other DOE sites for disposal. In April, the Board requested an extension of the public comment period to accommodate September 2002 public meetings (Advice #127). After reviewing the HSW-EIS, the Board issued advice (#133) in July expressing disappointment with the document, which it characterized as "incomplete and inadequate to support proposed decisions." The Board urged DOE to withdraw the draft and reissue it in draft form for public comment, arguing that the document was not prepared in compliance with National Environmental Policy Act processes. Most disturbing to the Board was that DOE's Waste Management Programmatic EIS led to a Record of Decision that Hanford would be a suitable disposal site before the HSW-EIS had been completed. Asserting that the Programmatic EIS should not have preceded Hanford's Solid Waste EIS, the advice included a detailed list of what the Board expected the HSW-EIS to include when reissued.

In response, DOE announced its intention to include supplemental information in the HSW-EIS. Subsequently in September, the Board added to its July advice by emphasizing that DOE should revise and reissue the draft HSW-EIS to integrate fully the information originally proposed as supplemental. This advice (#136) reiterated the need for the next draft to include missing analyses and DOE responses to all comments made, and included the Board's new expectations of information to be included. The Board also voiced its strong objection to DOE Headquarters' plan to ship transuranic waste to Hanford prior to completion of the full analyses in the draft HSW-EIS.

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#### Long-Term Stewardship

In June and December, the Board issued advice on the draft Hanford Long-Term Stewardship Plan. The June advice (#130) requested that the plan be issued in draft, taking into consideration several planning efforts that were underway at the time. The December advice (#141) offered substantive points after Board members had an opportunity to review a working draft of the plan. The Board felt the draft was a good start but needed a more holistic approach to Hanford cleanup decisions. Additional emphasis was placed on how a cleaner site now will mean less stewardship and reduced costs later. The Board also offered suggestions on steps that must precede completion of a valuesbased Long-Term Stewardship Plan, including land transfer requirements, and a collaborative effort to identify end states.

#### Worker Safety

The Board issued advice (#134) on maintaining and improving Hanford's Integrated Safety Management

System, the process in place to ensure worker safety at Hanford. After learning that worker participation in a portion of the Integrated Safety Management System had been waived in the Bechtel National, Inc. contract, the Board emphasized that the Integrated Safety Management System must be universally applied to all contracts and "have clear, measurable outcomes and routine follow-up." In the advice, the Board also asked DOE to continue to require contractors to utilize the sitewide emergency services to optimize communication. The Board requested to be informed when the Waste Treatment Plant construction transitions to the point where the workers must participate in the same health monitoring program as other site workers.

"The long-term vision for Hanford is a site that has been cleaned up in a manner and to a point sufficient to protect and preserve human, biological, natural, and cultural resources in a sustained manner for future generations and where current and past activities do not impose a burden on future generations." (Advice #141)

#### Public Involvement Issues

The Board issued advice on effective public notice (#137) in November. It urged following the guidelines of the TPA Community Relations Plan for all Hanford public participation notices and activities. It also recommended following the principles of the Public Involvement and Communication Committee's White Paper, which emphasizes the importance of substantive,

timely, and regular public notices. Finally, the advice called for including notices of NEPA actions in regular TPA publications.

In December, additional advice (#138) related to public involvement was issued, offering suggestions on how to conduct public involvement activities for the 100 B/C Area Pilot Risk Assessment, which will serve as a model for subsequent risk assessments. The Board emphasized the importance of involving a large, diverse group and outlined specific recommendations. Advice #140 requested an extension on the scoping period for the Retrieval, Treatment and Disposal of Tank Waste and Closure of Single-Shell Tanks EIS. The Board was concerned with the quality of DOE's Notice of Intent and requested that DOE extend the scoping period and redraft the Notice of Intent. Of prime concern to the Board was justification for proposing alternatives that would replace the decision to retrieve and vitrify all high-level nuclear waste in Hanford's tanks.

#### Waste Treatment Plant Configuration

As part of the effort to accelerate cleanup, in late 2002 DOE-ORP proposed adding a second high-level waste melter to the Waste Treatment Plant and delaying installation of the third low-activity waste melter. The Board issued advice (#139) asking for additional information to understand DOE's rationale, and recommending DOE maximize the capability of the Waste Treatment Plant. The Board noted that adding vitrification capacity after the plant has been constructed would probably involve a lengthy permitting process, thereby delaying and increasing the cost of total vitrification. In the

advice, the Board also cautioned that contracts not be based on assumptions that the majority of low-activity waste will not be vitrified, and that adequate engineering and environmental analyses and public input be utilized when making decisions to use alternative technologies.

"The Hanford Advisory Board has always supported efforts to expedite and accelerate tank waste treatment in order to reduce risk. The Board believes the greatest risk reduction is achieved by vitrifying the most tank waste possible. Thus, 'acceleration' efforts should not come at the expense of the overall vitrification capacity..." (Advice #139)

#### Other Board Products

In addition to providing advice on how to improve cleanup strategies, the Board also acknowledged achievements by the TPA agencies. In a letter sent in July, the Board applauded DOE-ORP for its progress in construction of the Waste Treatment Plant.

A notable Board product in 2002 was the Public Involvement and Communication Committee's White Paper on effective public involvement. The White Paper outlines a set of general principles for evaluating public involvement, summarizes existing Hanford public involvement activities, and comments on some of the relationships between the goals and existing activities. The Board adopted the White Paper as a document of

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record to help guide discussions, development, and implementation of existing and new public involvement activities. In addition, the White Paper is cited as an example of public involvement in the implementation manual for DOE Order 413.3.

"The Hanford Advisory Board extends heartfelt congratulations to the Department of Energy, Office of River Protection on pouring concrete for the Hanford Waste Treatment Plant. The Board has long looked forward to the day when this milestone would be achieved, and it is truly exciting to mark the occasion at last."

(Board Letter, July 11, 2002 to Roy Schepens)



## Summary of Advice

Advice #	Date Adopted	Subject	Committee(s) of Origin	
125	Feb. 8, 2002	100/300 Area Change Package	Ad Hoc Task Force*	
126	Feb. 8, 2002	FY 2003 Budget	Budgets and Contracts Committee	
127	Apr. 5, 2002	Draft Hanford Solid Waste Environmental Impact Statement	River and Plateau Committee	
128	Apr. 5, 2002	200 Area Change Package	River and Plateau Committee	
129	Apr. 5, 2002	Top-to-Bottom Review	Budgets and Contracts Committee	
130	June 7, 2002	Long-Term Stewardship	River and Plateau Committee	
131	June 7, 2002	Performance Management Plan	Committee of the Whole	
132	June 7, 2002	Exposure Scenarios Task Force on the 200 Area	Exposure Scenarios Task Force	
133	July 11, 2002	Draft Hanford Solid Waste Environmental Impact Statement	River and Plateau Committee	
134	July 11, 2002	Maintaining and Improving Hanford's Integrated Safety Management System	Health, Safety, and Environmental Protection Committee	

<sup>\*</sup> This task force became the Exposure Scenarios Task Force after the February Board meeting.

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Advice #	Date Adopted	Subject	Committee(s) of Origin	
135	Sept. 6, 2002	Exposure Scenarios Task Force on the River Corridor	Exposure Scenarios Task Force	
136	Sept. 6, 2002	Draft Hanford Solid Waste Environmental Impact Statement	River and Plateau Committee	
137	Nov. 8, 2002	Public Notice	Public Involvement and Communication Committee	
138	Dec. 6, 2002	100 B/C Area Risk Assessment Pilot	Public Involvement and Communication Committee	
139	Dec. 6, 2002	Waste Treatment Plant and Supplemental Technologies	Budgets and Contracts Committee/ Tank Waste Committee	
140	Dec. 6, 2002	Accelerated Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks Environmental Impact Statement Scoping Period	Public Involvement and Communication Committee	
141	Dec. 6, 2002	Long-Term Stewardship Program Plan	River and Plateau Committee	

# Messages from the Tri-Party Agencies

### U.S. Department of Energy - Richland Operations Office

It's been a busy year. We've made significant progress in key cleanup areas, such as moving spent nuclear fuel, stabilizing plutonium, cocooning reactors, moving contaminated soil, digging up waste sites, and, in collaboration with the regulators, developing a groundwater protection strategy. We're definitely on a roll. As in other years, the Board played an important part in providing advice in many of these areas.

The Board does best when it provides us policy-level advice on issues on which we are making decisions. In 2002, the Board did a good job of focusing on the nine specific areas the Tri-Parties highlighted as being critical. The Board's input on exposure scenarios, long-term stewardship activities, groundwater strategies, and acceleration plans for cleanup of the River Corridor was particularly helpful. While we are still waiting for the task force's report to be distributed for use across the Hanford Site, it promises to be quite helpful in ongoing risk scenarios. Similarly, we appreciated - and adopted - the advice the Board gave us on the need for a specific strategic initiative in the Hanford Performance Management Plan aimed at groundwater.

I am hopeful that the Board will continue to provide us with helpful, timely advice on the issues we outlined for 2003. We recognize that with our accelerated cleanup plans, we're moving sometimes more quickly than the Board's processes were designed to accommodate. We hope that the Board will - as it has sometimes done - continue to modify its processes in order to provide us timely advice because we're committed to getting a quality cleanup done as quickly and safely as possible. I will also articulate my belief that timely and constructive Board advice can help the agencies make better decisions and lead to a program that is more broadly understood, supported, and appreciated by the public.

Let me end on a high note. The Board's history and experience with this cleanup provides us cumulatively decades of expertise. While DOE officials come and go, the Board remains committed to providing us insight and vision for a quality cleanup. We need the Board and, while sometimes we frustrate one another, I know the value the Board provides in giving all three agencies the perspectives of the full range of public opinion and helping us make better decisions. We thank the Board for its continued interest and energy.

Keith A. Klein Manager U.S. DOE Richland Operations Office

### U.S. Department of Energy - Office of River Protection

The U.S. Department of Energy's Office of River Protection, through its management of the River Protection Project, is working to meet the challenges of cleaning up Hanford's waste tanks. Plans call for safely removing the waste from the tanks, treating the waste, safely storing or disposing of the treated waste, and ultimately closing the tanks.

A year ago we said for this project to be successful, we must establish public confidence by meeting our commitments to the region's stakeholders and the affected tribes by starting construction of the Waste Treatment Plant and dealing with the waste in our underground single-shell tanks. We have met those commitments.

Construction started on the Waste Treatment Plant - the largest radiochemical processing facility in the world - to vitrify Hanford's tank waste. Concrete and rebar now form the visible skeletons of the Waste Treatment Plant's major processing facilities.

Real reduction of environmental risk was made by removing liquid waste from Hanford's single-shell tanks. In Fiscal Year 2002 alone, more than 2.7 million gallons of waste were pumped and transferred to double-shell tanks to help ensure this liquid won't leak into the Columbia River.

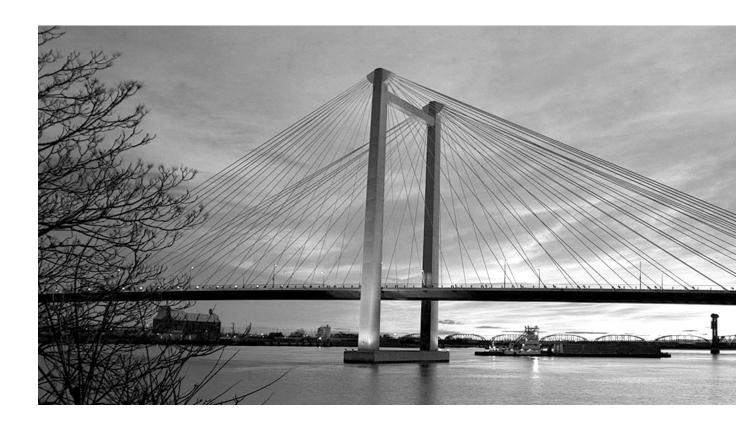
It has also been a year of significant change for the River Protection Project. The Office of River Protection announced new and aggressive performance incentives with its prime tank-farm contractor, CH2M Hill. The performance incentives will accelerate cleanup of the tanks and focus on removing liquids, completing the waste-feed delivery system, retrieving and closing tanks, and using supplemental technologies to augment the capacity of the Waste Treatment Plant to treat low-activity waste. One of the greatest challenges is to avoid the "one-size-fits-all" approach towards treating the tank waste, and to instead question whether we are using the right combination of technologies to safely retrieve, treat, and dispose of the waste. Discussions have begun with the regulatory agencies - the U.S. Environmental Protection Agency, the Washington State Department of Ecology, and the Washington State Department of Health - and Hanford stakeholders on how the Office of River Protection and CH2M Hill will meet the cleanup goals and regulatory commitments, and continue to protect human health and the environment.

To ensure that waste will be treated quickly and efficiently, Bechtel National, Inc., the prime contractor for designing and constructing the Waste Treatment Plant, is looking at ways to optimize

### U.S. Department of Energy - Office of River Protection

the melter configuration for vitrifying high-level waste and low-activity waste while initial construction proceeds. One major adjustment is to install two high-level waste melters as part of the initial plant. This is an important change from the original configuration of a single melter for the high-level waste and three low-activity melters. This means that all of Hanford's high-level waste can be vitrified by the 2028 Tri-Party Agreement deadline. That's 20 years sooner than previously planned. Some of the low-activity waste chemicals are difficult to mix with glass so we need to be working with our regulators to evaluate alternate waste treatment methods such as steam reforming, specialized grout, and bulk vitrification.

Each of these technologies is successfully used to treat radioactive and chemical waste, but have not been tested with Hanford's tank waste. That work is underway. Any alternate technology or combination of technologies considered must ultimately be proven safe, compliant with regulations, protective of the environment, and cost effective.



## Messages from the Tri-Party Agencies

While changes in plans for a project as large and complex as tank cleanup at Hanford are inevitable, the commitment of the Office of River Protection to completing tank cleanup - and doing it in a way that protects workers, the public and the environment - will not change. Delivering on safety commitments through safe practices in all its operations is the top priority for the project.

The Hanford Advisory Board also has an important role with the River Protection Project. We rely on the Board's abilities to communicate cleanup issues to their respective constituencies and to bring back their messages about our cleanup activities. We also look to the Board to help us identify when a cleanup activity needs to be communicated more extensively to the general public. This helps us to prepare our information to ensure that we cover the topics important to the public.

In the coming months there will be several opportunities for the public to be involved with decisions supporting the River Protection Project. We are presently in the early stages of developing a draft

Environmental Impact Statement on Retrieval, Treatment and Disposal of Tank Waste and Closure of Single-Shell Tanks. Public Scoping Meetings are scheduled for February 2003 in Seattle and Richland Washington as well as in Portland and Hood River Oregon. The draft EIS will be out for public comment and another round of meetings by September 2003.

Roy Schepens Manager U.S. DOE Office of River Protection



### U.S. Environmental Protection Agency

I would describe Hanford cleanup and the work of the Hanford Advisory Board in 2002 as focused. The Board brought new focus to its work in 2002 and has provided valuable advice on the Hanford Performance Management Plan and the draft Hanford Solid Waste Environmental Impact Statement. EPA believes the Board's shift to in-depth coverage of topics in a workshop format is an effective way to do business. For example, the Board sponsored the Exposure Scenarios Task Force and gave the agencies useful insight on how to approach final risk assessments.

The three agencies focused the Hanford cleanup through development of the Hanford Performance Management Plan. The plan identifies six key initiatives to further the cleanup effort. EPA believes the work that has occurred to refocus our efforts on cleanup of Hanford's contaminated groundwater is a good step toward addressing this difficult issue. We are also pleased with the progress that has been made on the spent fuel project.



## Messages from the Tri-Party Agencies

The new groundwater strategy has three key components: stopping infiltration, integrated monitoring, and enhanced remediation. Upgrades to pump-and treat systems to protect the aquatic community in the Columbia River were identified in EPA's 5-Year Review in 2001. In 2002, these upgrades went on line and reflect EPA's commitment to the Columbia River.

Spent fuel removal from K Basins is progressing well. Transfer of fuel from the East Basin began in November 2002, and the half-way point for removing all fuel was nearly reached in December. Startup of sludge removal is not going well and is at least several months behind.

We need to maintain our focus and build on the momentum as we head into 2003. One of the areas EPA will be concentrating on in the coming year is integrating Hanford's waste management system. We believe there is the potential to expand the use of the Environmental Restoration Disposal Facility to take additional Hanford wastes. In addition, we are working closely with DOE and the State to develop the draft Hanford Solid Waste Environmental Impact Statement in a manner that will be responsive to the public's comments. In the next several years we are facing some tough decisions on groundwater in the River Corridor, including N-Springs and the uranium contamination in the 300 Area. EPA will be asking the Board to weigh in on these difficult decisions.

We experienced transition at our Hanford Project Office with the departure of Doug Sherwood and Nick Ceto taking the helm. I want to thank everyone for making this a smooth transition. The Hanford Project Office will continue to look for innovative ways of achieving environmental results.

Mike Gearheard Director Office of Environmental Cleanup U.S. Environmental Protection Agency

### Washington State Department of Ecology

The Washington State Department of Ecology's primary purpose is to protect the state's air, land and water. The Nuclear Waste Program works to bring the Hanford site into compliance with state and federal hazardous waste, cleanup, and air and water quality laws. Our program works with EPA and U.S. DOE to accomplish these goals through the Tri-Party Agreement. The Hanford Advisory Board's input and advice are key to the success of our efforts. I want to congratulate the Board on its clear focus on acceleration.

I would also like to commend the Board for its dedication this past year in giving solid advice on accelerated cleanup milestones for the River Corridor, risk scenarios to be used in cleanup decision-making, and the draft Hanford Solid Waste Environmental Impact Statement. Further, I believe the Board is focusing on the right questions as it examines key initiatives for acceleration of Hanford cleanup based on the Cleanup Constraints and Challenges Team (C3T) initiatives.

This past year, the agencies have made great strides toward working within a collaborative environment, due in large part to the C3T team work. Our staff and management participated in many discussions and working groups to address some of the most complex issues and decisions facing Hanford cleanup since the inception of the Tri-Party Agreement.

One such challenge is that of addressing groundwater site-wide. While agency management and staff have identified a strategy and are implementing methods to reduce further contamination of groundwater, these issues are far from being solved. We need the Board's continued energy and input on these challenging issues.

The Tri-Party agencies continue to face complex tank issues of retrieval, treatment and ultimate vitrification of the 53 million gallons of mixed radioactive and hazardous waste stored in the failing tanks on the Hanford site. Over this past year, we, along with the U.S. DOE Office of River Protection, have agreed to milestones that begin the retrieval and treatment process for seven of the most volatile tanks. In addition, our staffs have worked long hours to ensure that the needed permits were in place, so that construction could be started on the Waste Treatment Plant. We are pleased that the plant is on schedule and treatment paths for these wastes are underway. Many challenges still exist, such as the Waste Treatment Plant capacity, closure criteria for tanks and tank farms, and review of potential alternative treatment technologies to treat a fraction of the waste in tanks. We do, and will continue to, value the Board's input on these issues.

## Messages from the Tri-Party Agencies

We are very supportive of U.S. DOE's new commitments and focus on achieving cleanup of the site at an accelerated pace. We have, however, reiterated our commitment to maintaining high-standards in achieving a quality cleanup effort. The citizens of the state deserve a quality cleanup of the Hanford site and we will accept no less.

We also expect the Board to play a key role in determining the way in which Hanford will dispose of its legacy of wastes and the role it may play in supporting cleanup of the country's dispersed nuclear weapons and research sites. A revised Hanford Solid Waste EIS will be unveiled in the spring, as well as proposed milestones for retrieval, treatment and disposal of a variety of Hanford's legacy of suspect transuranic wastes. Clearly, the Board's involvement will be critical to finding the best options and opportunities for assuring accelerated and protective waste management.

The Hanford Advisory Board has continued to provide quality input to the Tri-Party agencies to ensure that the interests and needs of the Northwest are met. The Board's continued involvement, input and questions help the agencies do their best.

Mike Wilson Nuclear Waste Program Manager Washington State Department of Ecology



# Board Work 2003

#### The Hanford Advisory Board's 2003 Priority Focus: Acceleration

Prior to its September meeting, the Leadership Group proposed a theme for the Board's 2003 work: acceleration. The questions outlined below are focused on ensuring that, overall, acceleration initiatives will maintain the integrity of the Tri-Party Agreement, meet the requirements of applicable laws, and reflect the values and principles of Northwest stakeholders.

The acceleration-focused priorities were accepted by the Tri-Party agencies at the Board's September meeting. Throughout the winter of 2002 and into 2003, the Board is aligning the focus of its meetings with the strategic initiatives outlined in the HPMP.

#### Following are key questions the Board will use to evaluate acceleration proposals:

- 1. What is proposed for acceleration?
- 2. How will the acceleration be accomplished? For example, what assumptions (e.g., trade offs, programmatic risk, source of funding, etc.) are the agencies making about the acceleration? Are the assumptions valid? How will success or failure of the acceleration be measured, and when will it be measured?
- **3.** What are the environmental, health and safety impacts of acceleration proposals?
- **4.** What are the impacts (e.g., priorities, budgets, integration) of the acceleration proposal on both the Hanford system and the DOE-wide system?
- **5.** What are the public involvement impacts/needs associated with the acceleration proposal?
- **6.** What are the impacts of the acceleration proposal on the TPA?
- 7. How does the acceleration support 'end-state' decisions?

The Board plans to apply these questions to several major categories of acceleration initiatives including tanks, an integrated groundwater protection program, waste disposal, and long-term stewardship.

Many of the acceleration initiatives could result in dramatic changes to existing program plans. Further, many challenge long-held programmatic assumptions and past decisions. These characteristics place the Board in a critical role in the implementation of acceleration initiatives.

The Board will serve as an educational mechanism for developing stakeholder understanding of acceleration initiatives. This educational base can then be utilized to develop informed input on the initiatives as well as further public input where necessary.

Lastly, the Board's focus on acceleration will not be limited to agency proposals. Rather, the Board will offer its own proposals for a better-faster-cheaper Hanford cleanup. Through proactively acknowledging acceleration as its focus, the Board hopes to provide valuable input toward Hanford cleanup.



## Meet the Hanford Advisory Board

### **Current HAB Members & Alternates**

Seat	Member	Alternate
Local Government Interests		
Benton County Benton-Franklin Council of Governments City of Kennewick City of Pasco City of Richland City of West Richland Grant & Franklin Counties	Kenneth Bracken Robert Larson Bob Parks vacant Pam Brown Dennis Rhodes Jim Curdy	Adam Fyall Wanda Munn Jim Hagar Joe Jackson Maynard Plahuta Art Tackett
Local Business Interests		
Tri-Cities Industrial Development Council	Harold Heacock	David Watrous
Hanford Work Force		
Central Washington Building Trades Council Hanford Atomic Metal Trades Council Non-Union, Non-Management Employees (2)	Richard Berglund Thomas Schaffer Jeffrey Luke Susan Leckband	Dave Smith Becky Holland Gariann Gelston
Government Accountability Project	Tom Carpenter	Clare Gilbert Allyn Boldt
Local Environmental Interests		
Lower Columbia Basin Audubon Society & Columbia River Conservation League	Rick Leaumont	Sky Bradley
Regional Citizen, Environmental and Pul	olic Interest Organizations	
Columbia Riverkeeper	Greg deBruler	Steve Roney Steve White
Hanford Watch	Paige Knight	Robin Klein William Kinsella
Heart of America Northwest	Gerald Pollet	David Johnson Amber Waldref
Washington League of Women Voters Citizens for a Clean Eastern Washington	Betty Tabbutt Todd Martin	Madeleine Brown Dr. Mark Beck Dr. Susan Babilon Cindy Meyer
Local and Regional Public Health		
Benton-Franklin Public Health	Dr. Margery Swint	Dr. Ross Ronish Dr. Larry Jecha
Physicians for Social Responsibility	Dr. Jim Trombold	Dr. Richard Belsey

Seat		Member	Alternate	
Tribal Governments				
Nez Perce Tribe		Patrick Sobotta	John Stanfill Kriste Baptiste-Eke Sandra Lilligren	
Yakama Nation		Russell Jim	Wade Riggsbee David Rowland	
State of Oregon				
Oregon Hanford Waste E Oregon Office of Energy	Board	Shelley Cimon Doug Huston	Norm Dyer Ken Niles Sue Safford Dirk Dunning Susan Coburn Hughs Deanna Henry Tom Stoops	
University				
University of Washington		Dr. Tim Takaro	Dr. David Stensel Dr. Joel Massman	
Washington State Univer	rsity	Dr. James Cochran	Antone Brooks	
Public At Large				
		Norma Jean Germond vacant	Martin Bensky George Jansen, Jr. Keith Smith	
		Leon Swenson	Daniel Simpson	
Ex-officio Repres	entatives	David Cortinas		
Confederated Tribes of the Umatilla Indian Reservation Washington State Department of Health		Michael Farrow John Erickson	Jeff Van Pelt Debra McBaugh Allen Conklin Susan May	
U.S. Department of Energy - Richland Operations Office U.S. Department of Energy - Office of River Protection U.S. Environmental Protection Agency Washington State Department of Ecology		Wade Ballard Greg Jones Michael Gearheard Michael Wilson	Beth Bilson Steve Wiegman Nick Ceto Max Power	
Members and Alternates Who Left the Board in 2002				
	Norm Buske Robert King Stan Stave	Abe Greenberg Joseph Richards Jerry Peltier	Charles Kilbury Gordon Rogers	
In Memoriam	Frederick Roeck			

## Information

#### Who to Contact about the Hanford Advisory Board:

Todd Martin HAB Chair Hanford Advisory Board 1933 Jadwin Ave. Suite 135 Richland, WA 99352 (509) 942-1906

Penny Mabie Envirolssues 101 Stewart St. Suite 1101 Seattle, WA 98101 (206) 269-5041

Max Power Washington State Department of Ecology Nuclear Waste Program PO Box 47600 Olympia, WA 98504-7600 Richland, WA 99352

(360) 407-7118

Dennis Faulk U.S. Environmental Protection Agency 712 Swift Blvd. Suite 5

(509) 376-8631

Yvonne Sherman U.S. Department of Energy PO Box 550, A7-75 Richland, WA 99352 (509) 376-6216

#### **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, Envirolssues, (509) 942-1906. 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

#### **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

#### Richland

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

#### Seattle

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

#### **Spokane**

Gonzaga University Foley Center E. 502 Boone Spokane, WA 99258 (509) 323-6525 Attention: Tim Carter