



Hanford Advisory Board

2006 Annual Report



The Columbia River flows through the Hanford site.

The Hanford Advisory Board: 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 (DOE), the U.S. Environmental Protection Agency (EPA), and the Washington State Department of Ecology (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.

Under the Federal Advisory Committee Act (FACA) 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. At Board and committee meetings, 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 over 190 individual pieces of advice in its 12-year history.

This twelfth progress report of the Hanford Advisory Board highlights the work done in calendar year 2006 and outlines the issues the Board will focus on in 2007.

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Aerial view of the Hanford site.



Chair's Message



While everyone knows Hanford cleanup is going to take a long time, it is difficult to maintain vigilance and energy from year to year when sometimes it seems like so very little changes.

For example, the Board focused a great deal of energy in the late 1990s on the removal of K Basin spent fuel and sludge. At that time, the issue appeared bogged down in schedule, cost, contractor and technical difficulties. Despite having made the K Basin project a high priority, the question on the minds of many was, "Are we ever going to get that spent fuel and sludge out of those basins?" The answer was, "Yes, but only after years of cooperative hard work in the Hanford community to lay the groundwork for decisions and provide the vigilance to stick with those decisions." As you will see in this report, in 2006, we see the K Basins as a cleanup success. It is easy, however, to forget yesterday's groundwork that supports today's cleanup success.

The Board acknowledged two cleanup successes in 2006 that fall into this "groundwork" category. First, the Board congratulated DOE and Ecology on reaching a settlement agreement that avoided a long and potentially fruitless court battle and gave us the Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). The Board appreciated the willingness and ability of the agencies to work in a spirit of collaboration. While the TC&WM EIS faces huge technical, logistic and policy challenges, it could provide an important step toward a comprehensive picture of the risks posed by Hanford contaminants leading to better cleanup decisions.

Another area the Board acknowledged as an important success was the agencies' agreement on the schedule and approach for Central Plateau soil and groundwater waste site cleanup decisions (Milestones M-13 and M-15 in Hanford's Tri-Party Agreement or TPA). The cooperative manner in which this agreement was reached was not the only important aspect to the Board. Additionally, and most importantly, the approach is one that appears consistent with Board values—it will provide for additional characterization of waste sites to arrive at the optimum choices for waste site cleanup.

Not all in 2006 was on the positive side, however. The Board is concerned that delays and cost increases at the Waste Treatment Plant (WTP) threaten the consensus behind the project as well as the funding for other

projects at Hanford. As a result, the Board urged DOE to develop a clear, credible, and integrated plan to maintain the schedule and control costs for completing Hanford tank waste retrieval, treatment and disposal. The Board also questioned the wisdom of DOE's plan to issue three major cleanup contracts over the next two years (Mission Support, Plateau Remediation, and Tank Operations).

In 2006, the Board continued to focus efforts on improving internal processes, especially leadership development and efforts to better publicize the successes of both the Board and Hanford cleanup. The Board was successful on both of these fronts. Board leadership visited multiple editorial boards around the Northwest, and the Board forged a new presence at public events with its display board that highlights the Board's work. On the issue of new leadership, the Board gained four new committee chairs and vice chairs, and unanimously recommended Susan Leckband to assume the Board Chair's seat in February, 2007.

As this is my last 'Chair's message,' it provides me the opportunity to type a few words about where the Board has been and where it might be going.

I will focus on only one issue—the place the Board held in the Hanford community in 1994 versus the place the Board holds today in the Hanford community.

In 1994...

...the ability of a large, diverse Hanford board to produce consensus advice was in doubt.

...the Board did not really have an identity yet—nobody was sure, if the Board succeeded, how it would work, what positions it would take, or how influential it might be.

...for a variety of reasons, DOE (including DOE-Headquarters), EPA and Ecology were desperate for a standing citizens board on Hanford cleanup. This agency desire left the newly formed Board with a great deal of resources and agency goodwill at its fingertips.

...agency personnel were willing and able to assist the Board in resolving many of its difficulties.

...issues were often divided between 'local' Board members and 'regional' Board members. Working relationships were limited or nonexistent.

In 2007...

...the Board is an established force in the Hanford community. The Board plays a significant role in voicing stakeholder values about important cleanup decisions and TPA deliberations.

...the Board's credibility and independence are established.

...the Board has a body of advice that continues to assist in guiding cleanup decisions.

...agency personnel, while often supportive, expect the Board to run smoothly on its own.

...working relationships between Board members have matured, as have members' respect for each other's opinions while working to find common ground on issues.

It is a vastly different set of challenges that I am handing over to Susan than when I became Chair six years ago. While some believe the Board's independence has been eroded over the years, in a certain sense, the Board's independence has increased. We have enough mature processes and institutional knowledge in place to keep doing our work despite ever-shifting politics, policies and personnel.

My bet is that as long as this Board continues to issue timely, insightful advice on pertinent cleanup issues, there will be plenty of political will within the agencies and the community to maintain support for the Board. In the end, it will be our ability to maintain our energy, commitment, and vigilance that will ensure our success.

Todd Martin,
Board Chair, 2001-2007



Servant leadership – I am so lucky to be following wonderful examples of that philosophy demonstrated by previous chairs, Marilyn Reeves and Todd Martin. They taught me that “balance” is key to the Board’s consensus-building process: every voice has equal weight in that process and there is no replacement for good dialogue. My goal is to continue in their footsteps helping the Board to provide the TPA agencies with valuable input and advice while encouraging individual Board members to become even more engaged.

The coming year will bring many challenges and opportunities. The Board will address requests from the TPA agencies for advice on public policy values including public involvement opportunities, cleanup priorities, institutional controls, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Five-Year review recommendation implementation, groundwater integration issues, end states/institutional controls and the TC&WM EIS. Additionally, the three new cleanup contracts to be awarded in the near term bring transition issues that could have an effect on Hanford cleanup progress, establishing Central Plateau cleanup milestones, high level waste disposition and emerging issues yet to be identified. This list presents a daunting workload for the committees and the Board. However, most of these topics are not new and there is a foundation of past Board values and advice to build on in the coming years as the issues change and mature.

The passion and dedication to Hanford cleanup demonstrated by Board members will drive me to do my level best to continue to help the Board be effective, credible and successful in providing stakeholder values to the TPA agencies.

Susan Leckband,
Incoming Board Chair

The 586-square mile Hanford Nuclear Site was the first and primary plutonium production facility for the United States's 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 1980s, Hanford produced over two thirds of the nation's estimated 111 metric tons of plutonium.

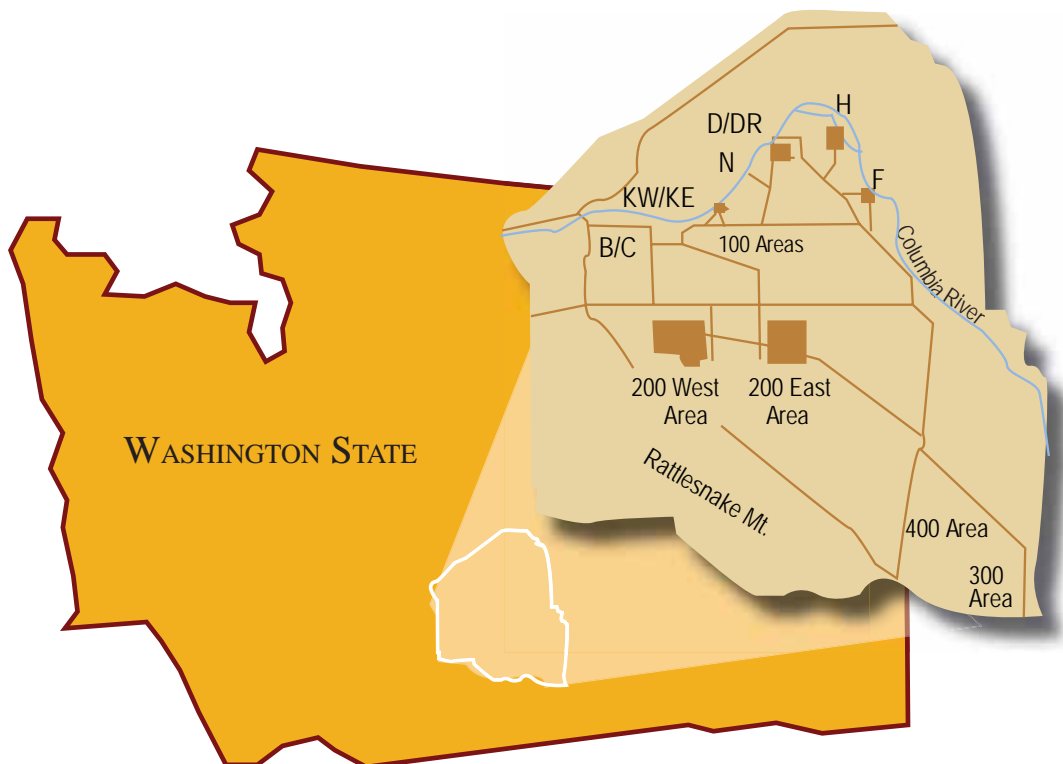
The production of plutonium generated large amounts of radioactive and chemically hazardous wastes. Hanford has 60 percent of the volume of the nation's military high-level radioactive wastes and over 1,400 waste sites containing liquid and solid waste.

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 DOE, EPA, and 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.

Hanford site

Map of the Hanford site.



K Basin Sludge Transfer

Sitting about 400 yards from the Columbia River, the Hanford K Basins were built in the early 1950s to hold irradiated fuel from the K East and K West production reactors until it was processed in Hanford's chemical-extraction plants. The K reactors closed in 1971, and their spent-fuel basins were emptied. Later in the 1970s, the K Basins were reactivated to store excess spent nuclear fuel from N Reactor. When the Plutonium-Uranium Extraction (PUREX) Plant was permanently deactivated in 1992, the plant left approximately 2,300 tons of fuel from the N Reactor in the K Basins with no means of processing.

*"While this [removal of spent nuclear fuel] is an important accomplishment, work at the K Basins is not complete. Removal of the highly radioactive sludge from these basins along the Columbia Rivers is actually behind schedule and milestones have been missed."
(Advice #171)*

"The long history of Board involvement in K Basin remediation work has helped to keep the work focused on issues critical to protection of the Columbia River. Their commitment to offering thoughtful advice on this complex project demonstrates the value of continuity in Board membership during the course of major remediation projects."

*Nick Ceto
Hanford Project Manager,
Environmental Protection
Agency*

Workers remove an empty spent fuel rack in the K Basins.

Under the Spent Nuclear Fuel Project, all of the fuel was removed from the K Basins between 1994 and 2004. After the fuel was removed, sludge remained in the K Basins, along with large, heavy racks used to store canisters of fuel, lids, tools for removing fuel, and miscellaneous solid waste debris from years of facility operations. Recently, Hanford site contractors completed radioactive sludge containerization and began moving sludge from the K East Reactor Basin to the K West Reactor Basin. Workers pumped the first of the sludge through a flexible pipeline to underwater containers in the K West Basin located approximately a half mile away. The pipeline is a "hose-in-hose" system,

consisting of a central line surrounded by a second line designed to contain material in case of a leak in the main hose. The sludge will be transferred in five separate batches and is scheduled to be completed by May 2007. Vacuuming the sludge into containers was a very complicated process, and the transfer is a sign of good progress.

While the containerization meets the October 31, 2006 DOE commitment to the Defense Nuclear Facilities Safety Board, it follows a string of missed deadlines. Prior to revision, the milestone had been to containerize the waste by March 1, 2005.



The Board has closely followed K Basins progress during the last twelve years and has offered advice at key points in the cleanup. In 1994, the Board advised DOE, Ecology, and EPA to continue pursuing expedited removal of spent fuel from the K Basins as quickly as possible (Advice #6). The Board repeatedly stated that the safe and cost-effective removal and disposal of the spent nuclear fuel from the K Basins was one of its highest priorities due to the threat improperly stored fuel posed to the Columbia River (Advice #163).

The long history of Board advice on the K Basins has led to changes in cleanup planning and activities. In response to a 1997 milestone change package prescribing a fast-track cleanup effort at K Basins, the Board advised DOE to consider adding target dates to monitor the program for signs of unforeseen technical problems to allow early intervention and minimize schedule slippage (Advice #72). The change package was modified to include a larger number of enforceable commitments.

More recently, the Board expressed its concern over budget cuts being justified by the completion of major projects, such as the removal of spent nuclear fuel from the K Basins. The Board also cautioned against assuming work is on schedule at K Basins (Advice #171).

This year, the Board was concerned that K Basin decontamination and decommissioning was not fully addressed in the Fiscal Year 2008 budget (Advice #187).

While the initiation of sludge transfer is a step forward, work at K Basins is only just beginning. Removing the sludge from the K East Basin clears the path for removing contamination from the concrete walls and floors of the spent fuel pool. Cleanup plans call for draining the basin, tearing down the facility, and removing the underlying contaminated soil. Completing this project will result in the removal of more than 55 million curies of radioactivity from an area near the Columbia River to the Central Plateau - a reduction of more than 95% of the radioactivity in the River Corridor.



"Fiscal Year 2006 budget requests for K Basins/Spent Nuclear Fuel Project appear to be ramping down based on the faulty assumption that work is on schedule. Funding for the project must be maintained until previously missed deadlines are met and work again meets schedule requirements." (Advice #171)

"We have encountered and overcome numerous challenges cleaning up the K Basins. The capture and transfer of sludge proved to be much more difficult and complex than first estimated. We appreciate the Board's encouragement and recognition of the progress made. We continue to look to the Board to provide us with input and advice that reflects the values of your constituents."

Keith Klein
Manager, Department
of Energy – Richland
Operations Office

Workers vacuuming radioactive sludge.

Hanford Cleanup 2006

River Corridor Cleanup

The Columbia River Corridor is composed of approximately 210 square miles along the outer edge of the Hanford Site. River Corridor work includes cleaning and taking down hundreds of excess facilities, remediating waste sites and burial grounds, and placing deactivated plutonium production reactors into safe and stable condition. Work includes projects in Hanford's 100 Area, where nine plutonium production reactors created material for nuclear weapons; the 300 Area, where uranium fuel was fabricated and laboratory facilities reside; facilities in the 400 Area (except the Fast Flux Test Facility); and two complex and highly-radioactive burial grounds in the 600 Area (618-10 and 618-11). River Corridor cleanup also involves monitoring and cleaning up the site's contaminated groundwater, which is an important part of protecting the Columbia River as the main source of recreation, irrigation, and drinking water for communities in Eastern Washington and Oregon. The goal is to clean up the River Corridor by 2015, with the possibility of accelerating completion to 2012, at which time the footprint of active cleanup will be reduced from 586 square miles to 75 square miles.

"The Board's advice has been consistent and supportive of more attention and resources being directed towards groundwater. We anticipate future opportunities for the Board to express its values, concerns, and priority for groundwater remediation."

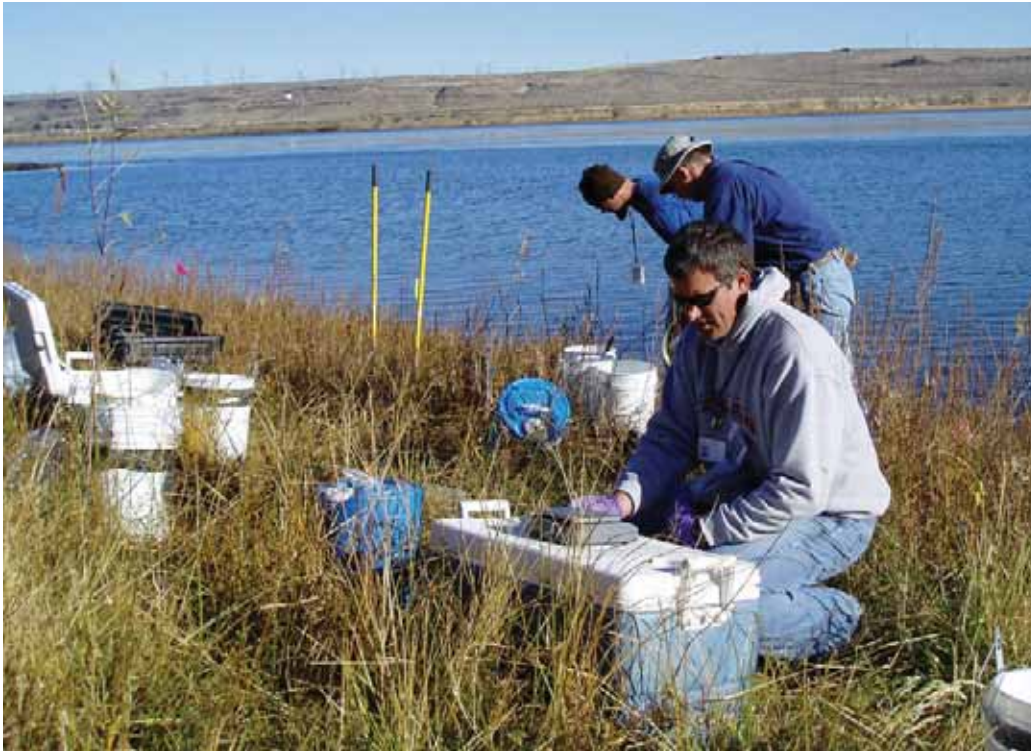
*Jane Hedges
Nuclear Waste Program
Manager, Washington
State Department of
Ecology*

For Fiscal Year 2006, Congress authorized \$10 million dollars for "analyzing contaminant migration to the Columbia River, and for the introduction of new technology approaches to solving contamination migration issues." DOE-HQ's Office of Environmental Management

(EM-22) administers the funds, and it is anticipated that they will be spent in Fiscal Years 2006, 2007, and part of 2008. Ten proposals were originally submitted to an independent peer review panel. After some revision, nine proposals have been funded.



*Workers demolish facilities
in the N Reactor area.*



Workers collecting soil samples near the Columbia River as part of risk assessment work.

This Congressional appropriation to address groundwater contamination helps satisfy previous Board advice to investigate technologies to remediate groundwater contamination and eliminate contamination sources (Advice #3, #120, #125, #131, #132, and #145).

In 2005, the Board stated (Advice #171) that the Fiscal Year 2006 Budget did not provide adequate funding for the deactivation of unused wells or funding for installation of groundwater wells. The Board also expressed concern that Fiscal Year Budgets 2006, 2007, and beyond do not adequately fund the River Corridor cleanup to ensure completion by the 2012 acceleration goals in the Hanford Performance Management Plan.



The Board appreciated that its advice to increase the funding level for cleanup of the River Corridor was reflected in DOE's budget request for FY07. The Board also advised (Advice #186) that funding should be increased to meet the goals of cleaning up the River Corridor to unrestricted use by 2012, including cleaning up the southern gateway to the Hanford Reach National Monument to allow for unrestricted public use.

In addition to its interest in groundwater contamination cleanup issues and ensuring adequate funding for River Corridor cleanup work, the Board continues to track risk assessment work, contaminated soil remediation efforts, facility decommissioning and demolition, and disposal of contaminated material at the Environmental Restoration Disposal Facility (ERDF).

"The River Corridor is making significant progress with the cleanup of 45 waste sites and burial grounds, the demolition of 68 facilities in the 100 and 300 areas and the disposal of 525,000 tons of contaminated material in the Environmental Restoration Disposal Facility, bringing the total disposed to nearly seven million tons since operations began in 1996. At the same time we are strengthening our processes for dealing with unexpected field conditions consistent with the Board's recommendations."

*Keith Klein
Manager, Department
of Energy Richland
Operations Office*

Disposing of N Reactor steam transfer lines in the Environmental Restoration Disposal Facility (ERDF).

Hanford Cleanup 2006

Burial Ground Waste Retrieval

In November 2006, Hanford workers emptied the first of several large trenches holding containers of waste from plutonium production in the 1970s and 1980s. The trench (Trench 4) held 1,926 cubic meters of waste in 9,960 containers. Completing the work, including designating and moving the waste to a compliant treatment, storage or disposal facility, met a TPA cleanup milestone due December 31, 2006. The trench was a high priority in the retrieval of transuranic (TRU) waste because the drums were in such poor condition. Another December 31 TPA milestone was met by retrieving more than 22,600 drums worth of waste.

"Lessons learned during this retrieval work will be important to designing the upcoming waste retrieval project at the 618-10 and 618-11 Burial Grounds."

*Nick Ceto
Hanford Project Manager,
Environmental Protection
Agency*

In October 2003, site contractors began retrieving suspect TRU waste drums and boxes from retrievable storage in the Central Plateau. Drums containing low-level waste can be disposed of on-site in the Environmental Restoration Disposal Facility (ERDF). Transuranic waste is prepared for shipment to the Waste Isolation Pilot Plant (WIPP) in New Mexico for disposal. In 2006, DOE made 300 shipments of TRU waste to the WIPP increasing the total TRU waste shipments to 306 - approximately 9,500 drums of radioactively contaminated waste.

The Hanford Advisory Board has a long history of advising DOE on burial ground waste, especially TRU waste and its characterization. While the Board is encouraged by the current retrievals, it is still concerned that DOE does not currently plan to characterize, retrieve, treat, or properly dispose of the large volume of unsegregated

contaminated materials (such as TRU waste) buried at Hanford prior to 1970 (Advice #170).

The Board requested (Advice #160 and #170) additional funding to retrieve TRU waste buried before 1970, and noted that pre-1970 TRU waste volumes may be two to three times greater than post-1970 quantities. The Board has also advised (Advice #154) that retrieval of the pre-1970 TRU wastes should be a high priority and fully funded, and the TPA should include milestones for quantification, retrieval and disposition of pre-1970 TRU waste.

The Tank Closure and Waste Management Environmental Impact Statement is intended to provide a comprehensive and integrated look at near-term waste management and tank waste cleanup actions at Hanford. As part of the continuing attention to burial ground issues, the Board advised (Advice #185) that the scope of the EIS should: "... include consideration of the range of alternatives for cleanup and closure of unlined burial grounds which includes pre-1970 waste sites and chemical wastes. The alternatives presented should be retrieval and cleanup to the extent practical in compliance with applicable requirements." (Advice #185)



Workers inspect severely corroded waste drums retrieved from burial grounds.

Cleanup Focus Topic: Tank Waste at Hanford

Tank waste storage, retrieval, treatment, disposal, and closure have long been the highest cleanup priority for Hanford stakeholders. Prior to the formation of the Board in 1994, DOE created the Tank Waste Task Force to provide principles and values specific to the implementation of the Tank Waste Remediation System. The Tank Waste Task Force was instrumental in the decision to vitrify tank waste.

The Board itself also has a long history of offering consensus advice on issues related to storage and treatment of Hanford tank wastes. The focus on tank waste issues has been driven by concern over the safe storage, retrieval, and disposal of 53 million gallons of radioactive and chemical waste that remains to be retrieved from 171 underground storage tanks on the Hanford Site. These tanks are located in the 200 Area at the center of the Hanford Site, approximately seven miles from the Columbia River.

Grouped into underground "farms" ranging from two to 16 tanks per farm, Hanford's tanks were built in support of nuclear materials production for national defense. The first tanks, single-shelled tanks built in the 1940s under the Manhattan Project, are near facilities that processed irradiated uranium fuel through the 1980s. The number of tanks increased with the demand for weapons-grade plutonium. It is believed that approximately one million gallons of hazardous and radioactive waste from single-shell tanks has leaked into the ground, creating concerns that it may eventually reach the Columbia River.

There are two types of tanks at Hanford. Single-shell tanks, consisting of a single carbon steel shell surrounded by reinforced concrete, were designed to contain waste for 20 years. Double-shell tanks, designed to last 25 to 50 years, are made of two carbon steel shells surrounded by reinforced concrete. One hundred forty-nine single-shell tanks were built between 1943 and 1964, and 28 double-shell tanks were built between 1968 and 1986.

Tank Waste Retrieval Progress

Tank capacity ranges from 55,000 gallons to one million gallons, and each tank contains

a mix of solid and liquid radioactive and chemical waste. Transferring waste from single-shell tanks to double-shell tanks, where the risk of leaks is less, is the first critical step in the cleanup and treatment process. As of 2004, all pumpable liquid had been transferred from single-shell to double-shell tanks, leaving only solid materials such as salt cake and sludge behind.

The Tri-Party Agreement requires the removal of 99% of waste, or to the limit of technology, from all 149 single-shell tanks by 2018. As of the end of 2006, six tanks have been completed and retrieval continues on three more. The total retrieval to date includes over 200,000 gallons of waste. Tank C-103, a 530,000-gallon tank, held over 69,000 gallons of hardened radioactive and chemical waste. This tank was retrieved in 2006 to the endpoint required by the TPA. The most recent tank emptied is called C-204 and is the last in a grouping of four tanks known as the C-200 series tanks to be emptied under the terms of the TPA.

Several new technologies designed to aid tank waste retrieval have been tested and deployed this past year. Examples include:

"The greatest single health and safety risk at Hanford is 53 million gallons of radioactive waste – much of it sitting in obsolete, leak-prone tanks that are decades past their design life. The Board advised DOE to keep WTP on track and meet the obligations - we could not agree more and we appreciate the support – current delays to TPA obligations and schedules are not acceptable."

*Jane Hedges
Nuclear Waste Program
Manager, Washington
State Department of
Ecology*

*Single-shell tank
construction (1943-1964).*



A Remote Water Lance used in tank S-112 to physically break up the 30,000 gallons of dense salt cake in the bottom removed all but approximately 3,800 gallons of waste. In Tank S-102, a High Pressure Mixer has been installed to mix the waste and to keep the pump inlet screen from plugging. A waste sluicing technology is currently being used in Tank C-108 to remove the 66,000 gallons of solid and liquid waste.

Treating Tank Waste: The Waste Treatment Plant

The hazardous and high-level radioactive nuclear waste currently being stored in Hanford's tanks will be treated at the Waste Treatment Plant (WTP). The WTP will treat waste by vitrification, a process incorporating waste into molten glass which is then poured into stainless steel containers for cooling and safe storage. The waste will be safely stored in glass form while the radioactivity levels decrease over hundreds to thousands of years.

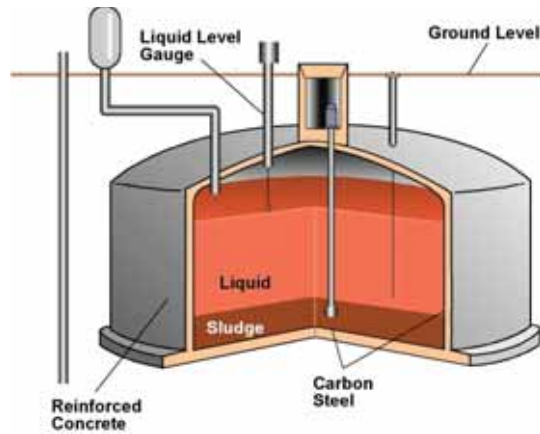
The WTP is the cornerstone of Hanford cleanup but over the years its startup has been significantly delayed by technical setbacks, cost increases and management challenges. Despite these challenges, the project is moving forward. In 2006, revised cost and schedule estimates and projections provided the foundation for a revised project baseline. External independent reviews of the estimates led to approval of the new baseline, as well as development and initiation of a corrective action plan. The total project cost is now approximately \$12.2 billion with operations scheduled to begin in 2019.

Hanford Advisory Board's Involvement and Cleanup Interrelatedness

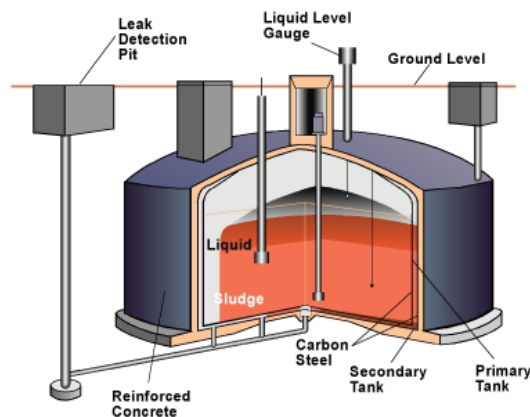
In 2006, the Board adopted five pieces of advice related to tank waste issues: the Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) and its scoping process (Advice #184 and #185); the Tank Waste Systems Integration (Advice #189),



Workers perform a tank inspection.



Single-shell tank structure



Double-shell tank structure

the Tank Waste Program Path Forward (Advice #192); and, the Double-Shell Tank Integrity Assessment Report (Advice #193).

The upcoming TC&WM EIS will evaluate options for managing and disposing of waste, selecting supplemental treatments, closing tanks, and closing the Fast Flux Test Facility (FFTF) at Hanford. The Board has repeatedly called for a cumulative impact analysis in the Central Plateau, and views the TC&WM EIS as an opportunity for such analysis. However, the Board is concerned that the TC&WM EIS schedule does not allow time for necessary characterization (Advice #185).

The Board's concern about the future storage, retrieval, disposal, and closure of high level tanks and tank wastes has increased due to recent budget shortfalls, increased costs, and delayed startup for the WTP (Advice #189). A plan to retrieve, treat, and dispose of all Hanford tank waste "is necessary to maintain public and Congressional confidence in DOE's ability to complete the job." (Advice #192). The Board believes delays in completing the WTP should not be allowed to cause a "ripple effect" of additional delays in retrieving sludge and other waste from Hanford's single-shell tanks.

Based on the interrelatedness and the challenges of tank waste retrieval, storage and disposal, the Board advised DOE (Advice #192) that a clear, credible, integrated path forward is necessary:

1. To provide a basis for preventing a potential disaster from tank leaks and contaminant spread;
2. To address the interconnectedness of the entire system and the far-reaching impacts of further delays to any single component; and,
3. To garner the broad regional support needed to ensure continued funding and successful execution of retrieval, treatment, and disposal of all Hanford's tank waste over the long term.

The Board is also concerned with double-shell tank integrity and issued advice

regarding the scope and quality of the Double-Shell Tank Integrity Assessment Report (Advice #193). The advice emphasized the analysis is critically important to Hanford cleanup because the single-shell tanks are in use beyond their design life and the double-shell tanks are forecast to be in use beyond their original design lives. Again, the Board's emphasis is on a safe and functioning waste storage system until all of the tank waste is retrieved, treated, and disposed.

This year's advice builds on past recommendations. The Board has long advocated for continued single-shell tank retrieval funding and performance paced to meet the TPA milestone completion of 2018 regardless of WTP schedule delays (Advice #187). The Board has also advised DOE (Advice #186) that adequate funding be provided to:

- Continue single-shell tank retrieval at a rate sufficient to meet the TPA retrieval milestones;
- Ensure leak detection during retrieval; and
- Characterize contamination under the tanks, including deep contamination.

Tank waste storage, retrieval, treatment, and disposal are essential to the cleanup path forward at Hanford. The Board will continue to monitor the tank waste retrieval schedule and the WTP progress to advocate for timely and protective cleanup.



"It is essential that we regain the trust and confidence of the public, Congress and others if tank waste cleanup is going to be successful at Hanford. The Board agrees with this and stressed the importance of having a credible plan and building the broad support necessary to ensure the success of this mission."

*Roy Schepens
Manager, Department of Energy – Office of River Protection*

"Tank farm work is a fundamental element of our efforts to protect and restore groundwater resources, and the Board's help in keeping attention focused on getting the job done right is important as we continue to integrate tank farm projects with other cleanup actions."

*Nick Ceto
Hanford Project Manager, Environmental Protection Agency*

Construction of the Low-Activity Waste facility at the Waste Treatment Plant.

Board Work and Advice 2006

"We have a stronger, more aggressive cleanup program at Hanford, reflective of broad public consensus values, because of [the Board's] efforts. Ecology applauds the dedication of board members and alternates. We look forward to the Board continuing its important work."

Jane Hedges
Nuclear Waste Program
Manager, Washington
State Department of
Ecology

Based on its values and principles, the Board frames policy issues addressing Hanford cleanup activities, which form the basis for consensus advice to one or more of the TPA agencies. The genesis of advice occurs at the committee level, where issues are identified and discussed in a consensus process. During Board meetings, members spend time discussing and considering draft policy principles developed by the Board's committees. Upon reaching consensus on principles for a particular issue, the Board issues advice describing its position and often recommending specific action. The TPA agencies have committed to respond formally to Board advice. The Board regularly reviews these responses as a means of tracking how its advice is taken into consideration in decision-making.

At five meetings in 2006, the Board produced 11 pieces of advice on Hanford cleanup. While the majority of this advice focused on tank waste cleanup, other advice topics included Hanford cleanup funding and future DOE budget requests, procurement strategy for major Hanford cleanup contracts, public involvement, and a five-year review of the protectiveness of Hanford cleanup remedies.

Board members discuss advice during a meeting in September.

Board Advice 2006

Advice #184
Tank Closure & Waste Management
Environmental Impact Statement Scoping
Process

Advice #185
Tank Closure & Waste Management
Environmental Impact Statement

Advice #186
Fiscal Year 2007 Budget

Advice #187
Fiscal Year 2008 Budget

Advice #188
Contracting Strategy

Advice #189
Tank Waste Systems Integration

Advice #190
CERCLA Five-Year Review

Advice #191
State of the Site Meetings

Advice #192
Tank Waste Program Path Forward

Advice #193
Double Shell Tank Integrity Assessment
Report

Advice #194
Multi-Tier Pension and Benefits Program

An index and links to all of the Board's advice and agency responses can be found on the Board's website at:
<http://www.hanford.gov/hab>



Board Advice Summary

Funding and Budget

A large portion of the Board's work in 2006 continued to be driven by concern over the impact of increasing budget constraints on cleanup activities. The Board has always been concerned that inadequate funding for cleanup activities jeopardizes successful, timely, and complete closure of the Hanford site. The Board issued advice on the Fiscal Year 2007 Hanford budget request and the Fiscal Year 2008 Hanford target funding, expressing concern that Hanford funding is inadequate to reduce risk and achieve cleanup requirements and schedule milestones. As in previous years, the Board continued to encourage DOE to request full funding for Hanford cleanup. The Board believes DOE's Fiscal Year 2007 budget "puts DOE further behind schedule for numerous Hanford Tri-Party Agreement and other regulatory compliance schedules" (Advice #186). In advice on DOE's Fiscal Year 2008 target budget (Advice #187), the Board advised that "TPA negotiations of milestones should not be based on changing milestones to meet available funding."

Contracting | *Contract Scope*

To ensure Hanford cleanup activities appropriately address all cleanup needs and priorities, the Board maintained its focus on evaluating DOE's contract procurement strategy in 2006. As DOE prepared the notice of solicitation requests for proposals for three new major Hanford cleanup contracts, the Board got involved early on in the contract scoping process to suggest what elements these contracts should include. In particular the Board advised DOE (Advice #188) that the contracts should emphasize integration between the DOE field offices, clearly present the scope of work, and explicitly link performance evaluation and incentives to successfully meeting regulatory requirements. Since these major contracts will determine the course of Hanford cleanup over the coming decade, the Board remains concerned about contract content and procurement processes.

Contracting | *Pensions and Benefits*

In addition, the Board expressed concern about the impact of unequal pensions and benefits for current and future workers left out of the Hanford pension and benefits system. The Board believes inequity in pensions and benefits for site workers "will likely create significant disruption in mission accomplishment by having a negative impact on morale and the teamwork approach...and make retaining a skilled workforce more difficult" (Advice #194). In 2006, the Board twice advised DOE (Advice #188 and #194) that the implementation of the new contracts should provide equal pensions and benefits for all Hanford workers.



Board members discuss advice at a meeting in November.

"Although we recognize the Board is not the primary vehicle for public involvement, it serves an important function by involving and informing its constituents and others in the Pacific Northwest. We are pleased with the Board's recognition and efforts to strengthen informational and involvement efforts with constituents and broaden overall involvement in tank waste cleanup in the northwest."

*Roy Schepens
Manager, Department of
Energy – Office of River
Protection*

"The Board plays a unique role in enhancing the dialogue between the agencies and the public at large."

*Nick Ceto
Hanford Project Manager,
Environmental Protection
Agency*

*Board members review
groundwater remediation
technologies during a site
tour in April.*

Public Involvement | State of the Site Meetings

Ensuring robust public involvement in cleanup decisions remains a high priority for the Board. In response to increased public participation and comment at Hanford State of the Site meetings, and corresponding frustration that the current meeting structure does not provide an adequate forum for the public to share its values and perspective on Hanford cleanup, the Board focused on restructuring the meeting to enhance public involvement opportunities. The Board believes State of the Site meetings are an important component of Hanford cleanup, as they provide the TPA agencies a chance to discuss cleanup activities and progress, as well as serve as a chance for the public to interact with agency managers. The Board advised the TPA agencies (Advice #191) that State of the Site meetings should continue to serve to demonstrate TPA agencies' accountability on public comments and values, include active facilitation to ensure meetings are efficient but flexible enough to allow for discussion of issues that may arise, and limit formal presentations to allow for the opportunity for dialogue with the public.

Public Involvement | Tank Closure and Waste Management Environmental Impact Statement

Since the TC&WM EIS will guide future Hanford cleanup and follows on the heels of previous inadequate EIS efforts, the Board believes robust public involvement is essential to the credibility of the document and the path forward for Hanford cleanup. In advice on the TC&WM EIS scoping process (Advice #184), the Board expressed concern that the accelerated process does not allow time for sufficient public involvement and comment. The Board advised DOE and the Ecology to extend the comment period, reschedule public meetings to allow sufficient notice, and make comments from previous EISs publicly available. "The settlement agreement and the spirit of the TPA charge DOE to engage the public from beginning to end on the document that will be the foundation for major cleanup decisions at Hanford for the foreseeable future." (Advice #184)

Public Involvement | Contracting

Due to the importance of the new major Hanford cleanup contracts on the future of Hanford cleanup and the implications for employee pensions and benefits, the Board believes the public, and union and non-union employees need to be involved in the contract procurement process. The Board advised DOE (Advice #194) that public involvement should include public meetings to take comments and explain potential changes in pensions and benefits.



In advice on DOE's contracting strategy (Advice #188), the Board recommended DOE "attempt to minimize or eliminate inequities in salaries and benefits when implementing new contracts and provide equal benefits for equal work performed."

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Five-Year Review

The goal of DOE's CERCLA Five-Year Review is to assess the protectiveness of cleanup remedies outlined in various cleanup decision documents, and to determine whether any new information warrants revising cleanup remedies to ensure the continued protection of public health and the environment. The Board was concerned that the CERCLA Five-Year Review does not adequately forecast the protectiveness of cleanup remedies beyond the point where institutional controls fail. For this reason, the Board was "unable to assess whether Hanford cleanup is on track to meet the Board's cleanup goals in the long-term" (Advice #190). The Board also advised the Environmental Protection Agency (EPA) to use the Board's advice (Advice #190) to make its own determination whether cleanup remedies evaluated in the review are protective of human health and the environment.

Board Work in 2007

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The Board's priorities for 2007, outlined in the Chair's message on page 3, focus on a variety of public policy values including public involvement opportunities, cleanup priorities, and cleanup end states and institutional controls. Hanford cleanup impacts are far-reaching, affecting public health, safety, the economy, and the environment in communities throughout the Pacific Northwest.

The Board serves as an important conduit for providing meaningful and effective public input into Hanford cleanup decisions. Board meetings are open to the public and serve as a good forum for interested members of the public to become informed about Hanford cleanup and timely decisions. We encourage you to come and listen, learn, and participate in determining the cleanup path forward for the Hanford site. Please visit the Board's Web site at www.hanford.gov/hab and see the back of this report for more information.

Board Meeting Schedule 2007

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February 1-2, 2007
Richland, Washington

April 5-6, 2007
Clackamas, Oregon

June 7-8, 2007
Pasco, Washington

September 6-7, 2007
Seattle, Washington

November 1-2, 2007
Richland, Washington

"Because of candid discussions and input from the Board and the public, we re-evaluated the protectiveness statements and revised the CERCLA Five-Year Review Report."

*Keith Klein
Manager, Department
of Energy – Richland
Operations Office*

"Board advice on the CERCLA Five-Year review clearly demonstrates their role in helping to assure that cleanup actions reflect long-term community goals."

*Nick Ceto
Hanford Project Manager,
Environmental Protection
Agency*

"I continue to appreciate the Board's diverse set of interests and perspectives, and am looking forward to our continued collaboration to ensure issues and concerns regarding our cleanup approaches and strategies are fully vetted in time to affect decisions."

*Keith Klein
Manager, Department
of Energy – Richland
Operations*

Board and Committee Structure

The Board is composed of five standing committees that typically meet monthly and perform the majority of the Board's work. The committees work on complex technical and policy issues and develop advice principles for consideration at Board meetings. Of the Board's five committees, the Tank Waste Committee and River and Plateau Committee are the technical committees charged with synthesizing the vast array of information about ongoing and planned cleanup work. Three cross-site committees, Public Involvement and Communications; Health, Safety, and Environmental Protection; and Budgets and Contracts, track broader, site-wide issues. Committees met jointly a number of times in 2006 to address cross-cutting cleanup topics. In addition, the Board held two Committee of the Whole meetings in 2006, to consider wide-reaching budget and contracting issues, and the Tank Closure and Waste Management Environmental Impact Statement, two topics beyond the scope of any one of the standing committees.

Issue manager work is an integral component of committee work. Committee issue managers are individuals with a strong interest and/or expertise in a certain area who volunteer to work with TPA agency liaisons and project managers to conduct background research and frame topics for committee discussions. The committees are also responsible for reaching consensus on advice principles and draft language prior to Board meetings. This process encourages broader participation in advice development and consensus-building.

Board Leadership

Chair: Todd Martin

Vice Chair: Susan Leckband

National Liaison

Shelley Cimon

Committee Leadership

Budgets and Contracts Committee

Chair: Gerry Pollet

Vice Chair: Harold Heacock

Health, Safety, and Environmental Protection Committee

Chair: Keith Smith

Vice Chair: Jim Trombold

Public Involvement and Communications Committee

Chair: Helen Wheatley

Vice Chair: Susan Hughes

River and Plateau Committee

Chair: Jerry Peltier

Vice Chair: Pam Larsen

Tank Waste Committee

Chair: Rick Jansons

Vice Chair: Rob Davis

Tank Waste Committee meeting.



River and Plateau Committee

The River and Plateau Committee is tasked with tracking cleanup issues in the River Corridor, Central Plateau (excluding tank farms), and 300 Area portions of the Hanford site. In 2006, the River and Plateau Committee focused primarily on the following topics:

- Groundwater – The committee developed a groundwater tutorial to educate the Board about the Hanford groundwater program and to discuss developing a values-based decision piece, modeled after the Board's successful Central Plateau cleanup decision flowchart, to guide groundwater cleanup decisions. The committee and the Board were encouraged by the \$10 million Congressional allocation to investigate technologies to remediate groundwater contamination and eliminate source terms.
- CERCLA Five-Year Review – The committee provided input into the scoping and process for the review. With the release of the review later in the year, the committee drafted advice (Advice #190) expressing concern that the review is an inadequate assessment of the protectiveness of cleanup remedies, and emphasizing the need to incorporate new information and data into the review.
- River Corridor cleanup – The committee continued to review River Corridor cleanup issues, including risk assessments, DOE integration strategy, and long-term stewardship planning.

Tank Waste Committee

The Tank Waste Committee tracks technical issues related to tank waste storage and retrieval, treatment, and disposal. Due to the timeliness of tank waste cleanup issues, the committee was the Board's most active committee in 2006, drafting half the Board's advice. Major topics the committee focused on in 2006 included:

- Waste Treatment Plant – Due to multiple cost increases and schedule delays, the committee continued to track information on WTP construction.
- Tank Closure and Waste Management EIS – The committee worked with the River and Plateau Committee to develop scoping comments to advise DOE on EIS content.
- Single-shell and double-shell tank status – The committee continued to track single-shell tank disposition and reviewed DOE's Double-shell Tank Integrity Report to consider and evaluate its conclusions on the life of the double-shell tanks.
- Demonstration Bulk Vitrification Project – The committee continued to receive updates on the status of bulk vitrification, which has been identified as a primary candidate for supplemental tank waste treatment. The committee is concerned about cost increases and schedule delays.

Budgets and Contracts Committee

The Budgets and Contracts Committee is charged with tracking Hanford funding and contracting issues, as well as monitoring and commenting on annual DOE budget requests and future budget targets. In 2006, the committee concentrated on the following topics:

- Hanford funding – The committee reviewed the impacts of budget reductions on cleanup work, and advised that future budgets fully fund scheduled cleanup activities.
- DOE contracting – With procurement planning for new major cleanup contracts in 2006, the committee drafted advice emphasizing specific recommendations for how the contracts should be structured.

Public Involvement and Communications Committee

The Public Involvement and Communications Committee focuses on ensuring opportunities for the public to participate in Hanford cleanup decisions. In 2006, the committee worked on the following topics:

- Changes to the Hanford State of the Site meeting format – The committee issued advice and worked with the TPA agencies to redesign the meetings to promote more dialogue between the public and the TPA agency managers.
- Review of existing methods of public outreach and involvement and investigation of new outreach and involvement opportunities for the Board.
- A proposal for a process to promote the availability of Board members as speakers for outreach on the Board and on Hanford.

Health, Safety, and Environmental Protection Committee

The Health, Safety, and Environmental Protection Committee considers how cleanup activities and DOE operations impact public health, worker safety, and the environment. In 2006, the committee worked on the following topics:

- Beryllium exposure – The committee continued to review and assess the Hanford Beryllium Program, and considered how the program will function during transition of future contracts.
- Worker compensation – The committee reviewed findings and recommendations from an audit of the worker compensation claims process.

Committee of the Whole

In 2006, two Committee of the Whole meetings were held to discuss issues spanning the interest of several Board committees:

- Fiscal Year 2007 budget request and Fiscal Year 2008 target budget – The prospect of continued budget constraints and funding reductions prompted a Committee of the Whole meeting to discuss and draft advice on funding and cleanup project priorities for the Fiscal Year 2007 and 2008 budget requests.
- Tank Closure and Waste Management EIS – Due to the site-wide scope of the Tank Closure and Waste Management EIS, meant to direct Hanford cleanup actions for the foreseeable future, the Board is concerned that to be effective the EIS needs to meet regulatory requirements and be based on robust analysis and current information. As a result, a Committee of the Whole meeting was convened to discuss and develop draft advice on the scoping process and content preparation for the EIS.

Board Leadership

In May, the Board leadership, composed of Board and committee chairs and vice-chairs, held its annual retreat to reflect on the previous year's work and outline priorities to guide the Board's work in the coming year. The retreat also affords Board leadership an opportunity to assess the Board's functioning and determine methods for improving the Board's operating procedures and effectiveness. In addition to developing future work priorities, Board leadership focused on several of the Board's most pressing leadership and management challenges, such as developing new leadership and membership, and clarifying issue manager, Board, and committee processes.

Workshops and Other Board Activities

Board members participated in several DOE-sponsored workshops in 2006 on Hanford cleanup issues. Workshop topics included:

- Groundwater
- CERCLA Five-Year Review
- River Corridor Risk Assessments

Board members participated in a site tour in April, to review current cleanup activities, including decommissioning and demolishing buildings in the 300 Area, tank waste retrieval, groundwater cleanup technologies, and WTP construction. The Board also sent members to the Site Specific Advisory Board's (SSAB) Chairs meetings in Knoxville, Tennessee and Santa Fe, New Mexico to participate in discussions of national cleanup issues, strategies, and priorities. The Board recognizes the importance of communication and cooperation across the DOE site complex and between SSABs, both to preserve institutional knowledge and to share successful cleanup approaches and technologies. In 2006, the Board signed on to three letters issued by the SSAB Chairs to DOE, recommending incorporation of lessons learned in future site closures; SSAB input to future site environmental budget requests; and the inclusion of public participation in technology development and deployment at DOE sites.

Tank Waste Committee meeting.



Meet the Hanford Advisory Board

New HAB Members and Alternates 2006

<i>Name</i>	<i>Seat</i>	<i>Appointment Date</i>
Steve Hudson Steve has had an interest in Hanford since his college days at Washington State University, where one of his fraternity brothers was employed at Hanford. He has undergraduate degrees in English, Math, and Chemistry, and a graduate degree in Linguistics and Rhetoric.	Hanford Watch	Feb 8, 2006
Ken Gasper Ken has over 30 years of technical and program/project management experience in the design, development, and deployment of technology. He has extensive technical and management experience at Hanford, focusing primarily on the Central Plateau and the 100 and 300 areas. He has a Master of Science and PhD in Nuclear Engineering, as well as an MBA.	Benton County	Mar 8, 2006
Mark Panther Mark has 30 years experience in law enforcement, including Chief of Police for West Richland, and has a bachelor's degree in Law & Justice. He is involved in many civic activities including rotary and United Way. He has been the city administrator for West Richland for the past year.	West Richland	Mar 17, 2006
Susan Kreid Susan has been a member of the Washington League of Women Voters for 31 years. She helped the league put together a glossary of terms related to the nuclear field, and was a technical editor on the Hanford Site for 11 years. She is interested in the HAB and Hanford as a resident and member of the Richland community.	WA League of Women Voters	Apr 10, 2006
Dr. Tony James	Benton Franklin Public Health	Apr 10, 2006
Barry Beyeler Barry is interested in Hanford because of its effects on the Columbia River, one of the few drinking water systems in the state of Oregon. He has been a member of several boards and committees, including the Oregon Hanford Clean Up Board and the Oregon Water Resources Department Groundwater Advisory Committee addressing Hanford and water quality issues.	Oregon Hanford Cleanup Board	May 9, 2006
Laura Mueller Laura is a lifetime resident of Washington State and a descendent of the Wenatchee Band of the Confederated Tribes of the Colville Indians. Laura has worked as an office administrator at Hanford, working for numerous site contractors. Laura has a personal interest in the long-term legacy of Hanford; environmental, recreational, and conservation activities; and also in the preservation of Native American cultures and interests.	Non-Union, Non-Management Hanford Workers	May 23, 2006

Larry Lockrem Non-Union, Non-Management Aug 29, 2006
 Hanford Workers

For the past 31 years, Larry has been active as principal scientist and manager in research, testing, commercial development, field operation, and management of administrative and technical analytical laboratories within industry and government agencies. He has been responsible for the Technology Project Management organization and was transferred to CH2M Hill as the lead for technology projects.

Donna Morgans Oregon Department of Energy Oct 13, 2006

Donna has served as an environmental consultant conducting risk assessments and environmental data analysis associated with the cleanup and restoration of Department of Energy and Department of Defense waste sites. Her work with the Oregon Department of Energy focuses on the review of human health and ecological risk assessments associated with remediation projects managed by the U.S. Department of Energy's Richland Operations Office and Office of River Protection. Her interests in restoring the Hanford Site have led her to provide support to the Hanford Advisory Board.

Current HAB Members & Alternates

<i>Seat</i>	<i>Member</i>	<i>Alternate</i>
Local Government Interests		
Benton County	Maynard Plahuta	Kenneth Gasper
Benton-Franklin Council of Governments	Rick Jansons	Gwen Luper
City of Kennewick	Bob Parks	Dick Smith
City of Pasco	Robert Davis	Joe Jackson
City of Richland	Pam Brown	Vince Panesko
City of West Richland	Jerry Peltier	Mark Panther
Grant & Franklin Counties	Jim Curdy	Art Tackett

Local Business Interests

Tri-City Development Council	Harold Heacock	Gary Petersen
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Hanford Work Force

Central Washington Building Trades Council	Mike Keizer	Dave Smith
Hanford Atomic Metal Trades Council	Becky Holland	David Molnaa
Non-Union, Non-Management Employees (2)	Jeffrey Luke	Laura Mueller
	Susan Leckband	Larry Lockrem
Government Accountability Project	Tom Carpenter	Allyn Boldt
		Tim Jarvis

Local Environmental Interests

Richland Rod & Gun Club	Gene Van Liew	Paul Kison
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Regional Citizen, Environmental and Public Interest Organizations

Columbia Riverkeeper	Greg deBruler	Steve Roney Steve White
Hanford Watch	Paige Knight	Robin Klein Steve Hudson
Heart of America Northwest	Gerald Pollet	Helen Wheatley Amber Waldref
Washington League of Women Voters Citizens for a Clean Eastern Washington	Susan Kreid Todd Martin	Betty Tabbutt Dr. Mark Beck Dr. Susan Babilon Cindy Meyer

Local and Regional Public Health

Benton-Franklin Public Health	Dr. Margery Swint	Dr. Gerry Dagle Dr. Tony James
Physicians for Social Responsibility	Dr. Jim Trombold	Dr. Charles Weems Jeanie Sedgely

Tribal Governments

Nez Perce Tribe	Gabriel Bohnee	John Stanfill Kriste Baptiste-Eke Sandra Lilligren
Yakama Nation	Russell Jim	Wade Riggsbee David Rowland

State of Oregon

Oregon Hanford Cleanup Board	Larry Clucas	Maxine Hines Wayne Lei Barry Beyeler Robert McFarlane
Oregon Department of Energy	Ken Niles	Dirk Dunning Susan Hughes Tom Stoops Paul Shaffer Donna Morgans

University

University of Washington

Mark Oberle

Michael Silverstein

Vacant

Public At Large

Member

Alternate

Norma Jean Germond
Keith Smith

Nancy Murray
Shelley Cimon
George Jansen, Jr.
Geraldine Main

Bob Parazin
vacant

Ex-officio Representatives

Confederated Tribes of the Umatilla Indian Reservation
Washington State Department of Health

Armand Minthorn
Earl Fordham

Debra McBaugh
Allen Conklin

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

Dave Brockman
Shirley Olinger
Nick Ceto
Jane Hedges

Karen Lutz
Erik Olds
Dennis Faulk
Nolan Curtis

Members and Alternates Who Left the Board in 2006

Martin Yanez
Lynda Horst
Jane Twaddle
Adam Fyall
Patrick Conley
Madeleine Brown
Wanda Munn

Acronyms and Glossary

Central Plateau: The location of the 200 East and 200 West Areas and waste management facilities situated in those areas.

CERCLA: Comprehensive Environmental Response, Compensation and Liability Act of 1980, also known as Superfund, providing statutory authority for cleanup of hazardous substances.

DOE : U.S. Department of Energy.

DOE-HQ: Department of Energy Headquarters in Washington, D.C. Hanford cleanup is overseen by DOE's Office of Environmental Management.

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.

EIS: Environmental Impact Statement, a document prepared to comply with the National Environmental Policy Act (see below).

EM: Environmental Management.

ERDF: Environmental Restoration and Disposal Facility, a massive landfill where low-level radioactive waste and mixed low-level wastes from Hanford cleanup are disposed.

EPA: U.S. Environmental Protection Agency.

FACA: The Federal Advisory Committee Act, a U.S. law (Pub. L. 92-463, Oct. 6, 1972) which governs the behavior of advisory committees. DOE chartered the Board in 1994 under FACA.

FFTF: Fast Flux Test Facility, a fast neutron flux nuclear test reactor owned by the DOE. The facility is located in the 400 Area of the Hanford Site and is currently undergoing deactivation (i.e., shutdown or transition).

FY: Fiscal Year.

HAB or Board: The Hanford Advisory Board.

K Basins: Water-filled basins located less than 1,000 feet from the Columbia River that were used to store spent nuclear fuel from reactor operations.

NEPA: National Environmental Policy Act of 1969 requiring federal agencies to use an interdisciplinary approach in planning and decision making for actions that impact the environment. NEPA requires the preparation of an Environmental Impact Statement (EIS) on all major Federal actions significantly affecting the human environment.

PFP: Plutonium Finishing Plant, a facility used for stabilizing and repackaging plutonium and plutonium-contaminated material at Hanford. The PFP was used extensively during WW II and the Cold War to purify and convert plutonium-laced solutions into a solid form to be used by nuclear weapons facilities.

PUREX: Plutonium-Uranium Extraction Plant that separated used nuclear fuel into components that produced plutonium, uranium, and waste.

River Corridor or Columbia River Corridor: Hanford facilities and waste sites along the Columbia River.

SSAB: Site Specific Advisory Board, a community board that provides advice and recommendations to DOE about environmental restoration and waste management activities. Seven local community boards are chartered under the EM SSAB Federal Advisory Committee Act (FACA) Charter.

TC&WM EIS: Tank Closure and Waste Management EIS, the EIS intended to provide a comprehensive and integrated look at near-term waste management and tank waste cleanup actions at Hanford.

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. Cleanup milestones are identified in the TPA through numbered series, such as M-91 for transuranic waste disposal and M-24 for groundwater monitoring.

TRU: Transuranic waste.

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, the facility where tank waste will be vitrified.

WIPP: Waste Isolation Pilot Plant, the world's first underground repository licensed to safely and permanently dispose of transuranic radioactive waste left from the research and production of nuclear weapons.

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

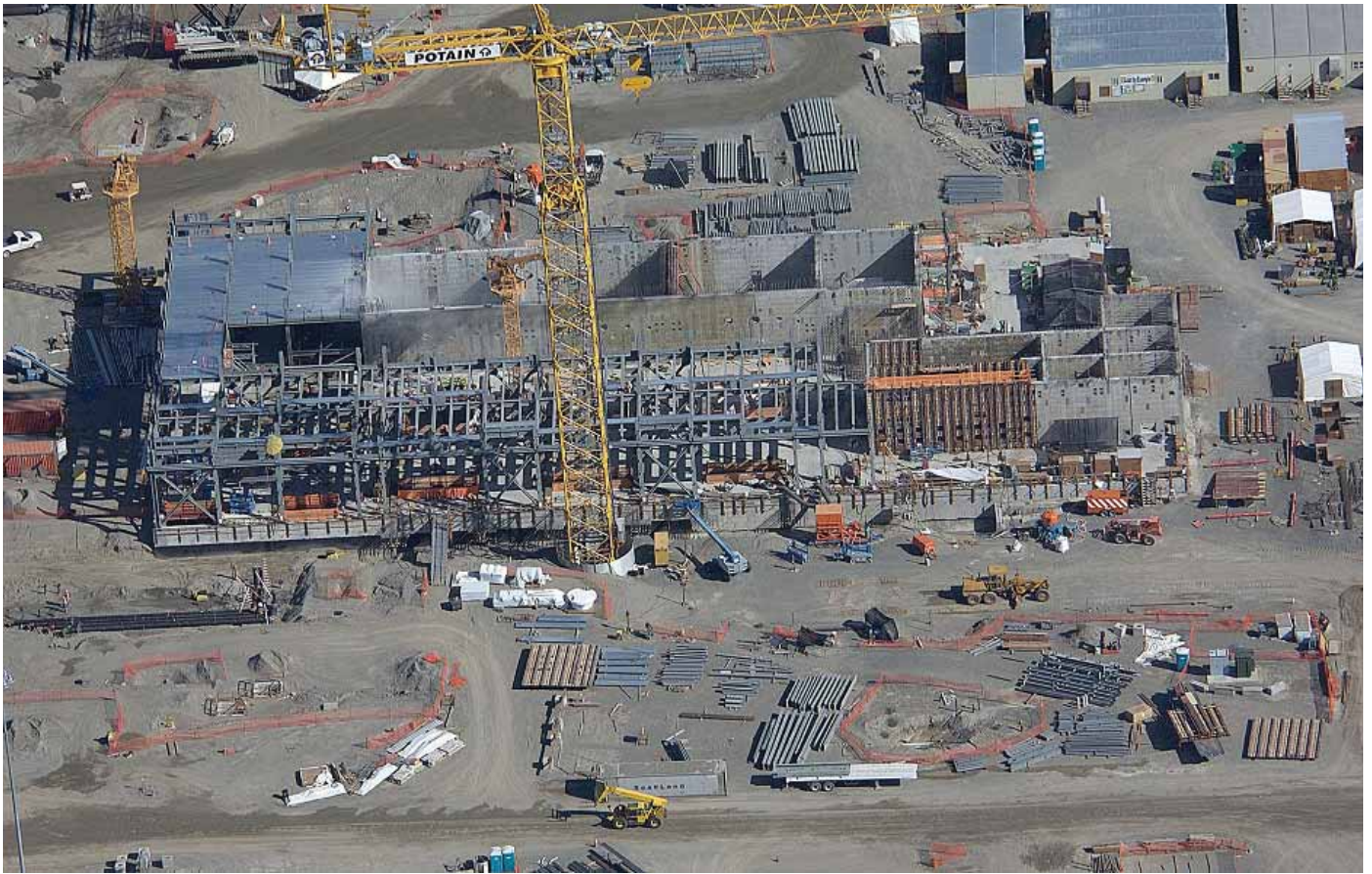
200 Area: The location on the Central Plateau of the 177 underground tanks, principal nuclear chemical processing facilities, and defense waste management activities.

300 Area: An area three miles north of the city of Richland, location of former research and development laboratories and reactor fuel manufacturing facilities.

Acknowledgements

The Hanford Advisory Board would like to thank the following sources of information that contributed to the content of the Board's Annual Report:

- "Waste Treatment Plant Vitrification: Immobilizing Waste in Glass" Department of Ecology, 2006
- The Department of Energy Hanford website <http://www.hanford.gov>
- The Department of Energy website <http://www.doc.gov>
- "Hanford Tank Farms" CH2MHill, August 2005
- "Hanford Tank Waste" CH2MHill, March 2003
- Hanford Site Groundwater Remediation Project
- Report of the Exposure Scenarios Task Force
- Department of Energy-Richland Operations Office <http://www.hanford.gov/rl/>
- Department of Energy-Office of River Protection <http://www.hanford.gov/orp/>
- Washington State Department of Ecology Nuclear Waste Program <http://www.ecy.wa.gov/programs/nwp>
- Environmental Protection Agency <http://yosemite.epa.gov/R10/cleanup.nsf/webpage/hanford,+washington>



Construction of the Low-Activity Waste Facility
portion of the Waste Treatment Plant.

For More Information

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Additional Written Information

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<http://www.hanford.gov/hab>

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