

Hanford Advisory Board Progress Report Fiscal Year 1997

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

*A Summary of Stakeholder
Accomplishments and
Expectations*

The 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 Department of Ecology on major policy issues related to the cleanup of the Hanford Site.

*Mission Statement
Hanford Advisory Board*

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Message from the Chair



Marilyn Reeves, Chair
Hanford Advisory Board

Nine years ago Hanford's mission was changed from secret nuclear weapons production to cleanup. The Tri-Party Agreement, a legally binding blueprint for cleanup, established action milestones and public involvement requirements.

The U.S. Department of Energy (DOE) faced many obstacles, complicated by lack of trust. Cleanup decisions could not be made in secret. The public demanded information and questioned everything -- level of risk, cost, amount of waste, technology, and the stacks of planning documents. Public meetings were unproductive, hostile, and adversarial.

Citizens needed to find a way to resolve conflicts and get on with the task of cleanup. The first real breakthrough in public involvement occurred in 1992 when the Future Site Uses Working Group agreed on a common set of values to guide cleanup. This was followed in 1993 when the Tank Waste Task Force reinforced and added to those values. Effective and meaningful public involvement proceeded to establishment of the Hanford Advisory Board.

Since 1992, the diverse interests in the Northwest have reaffirmed adopted values, which have been used to evaluate all planning efforts. Today, a fragile level of trust permeates public perception of the cleanup program. The Hanford Advisory Board provides a forum for representatives from Indian tribes, local governments, the State of Oregon, workers, environmental, public health, business, and other public interest groups to meet with officials from the U.S. Department of Energy, U.S. Environmental Protection Agency, and the Department of Ecology and share information.

"decision-makers on site and in Washington, D.C. can benefit from the collective wisdom of informed Northwest citizens...The message from the Board is clear, "get on with cleanup."

There is not always agreement, but decision-makers on site and in Washington D.C. can benefit from the collective wisdom of informed Northwest citizens.

This report documents Board advice, outlines stakeholders' long term goals, progress made, and lists urgent cleanup needs. This report fails to document the countless hours spent by knowledgeable volunteers and professionals who seek out and share information in committee and Board meetings.

The Board acknowledges the cleanup progress that has been achieved. But the most dangerous risks remain. Removal of the radioactive wastes from the 177 aging underground tanks is urgently needed. These dangerous wastes cannot be removed until there is treatment and vitrification capability. Further delay is not acceptable.

The plutonium and uranium laced spent fuel rods and sludges must be removed from the K Basins. DOE must resolve the technical and management problems that have delayed this program.

The message from the Board to all decision-makers on site and in Washington, D.C. is clear, "get on with cleanup."

History of Hanford

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

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

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

Hanford is currently the only place without a treatment capability for its tank wastes. Monitoring wells have

"Radioactivity's capacity to impact human health and safety and the environment for tens, hundreds, or thousands of years makes cleanup an extremely complex and costly job."

detected leaks from tanks into the groundwater. Also, monitors in some tanks have detected worrisome accumulations of gases that pose explosive potential

and serious risk to people and the environment. Dealing with tank wastes has been and will continue to be a vexing, high-priority concern at Hanford.

During production years, Hanford handled enormous volumes of contaminated process water. More than 450 billion gallons of low-level wastewater were piped to drain fields called cribs. Cribs were engineered to allow soil layers to filter contaminated wastewater and trap radionuclides before the wastewater reached groundwater, most of which feeds into the Columbia River. But the natural filters did not work as well as was hoped. Large amounts of contaminated water reached the groundwater and some reached the River.

Highly radioactive spent nuclear fuel from production reactors is stored in one of Hanford's reactor areas, known as the 100 Area's two K Basins, and some of the fuel is damaged and corroding. DOE stores plutonium at the Plutonium Finishing Plant and huge volumes of low-level waste and transuranic (TRU) waste elsewhere on the site. In some cases, pre-1970 wastes are not well quantified, inventoried, or mapped.

Radioactivity's capacity to impact human health and safety and the environment for tens, hundreds, or thousands of years makes cleanup an extremely complex and costly job. In some cases, the cleanup technique is relatively straightforward. In others, there is no known technology (e.g., tritium cleanup will have to wait).

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

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

Based on experiences with two previous advisory groups, DOE, Ecology, and EPA agreed to form a standing site advisory board. The Board provides comments and values to guide the agencies in shaping the direction of Hanford cleanup. The Hanford Advisory Board

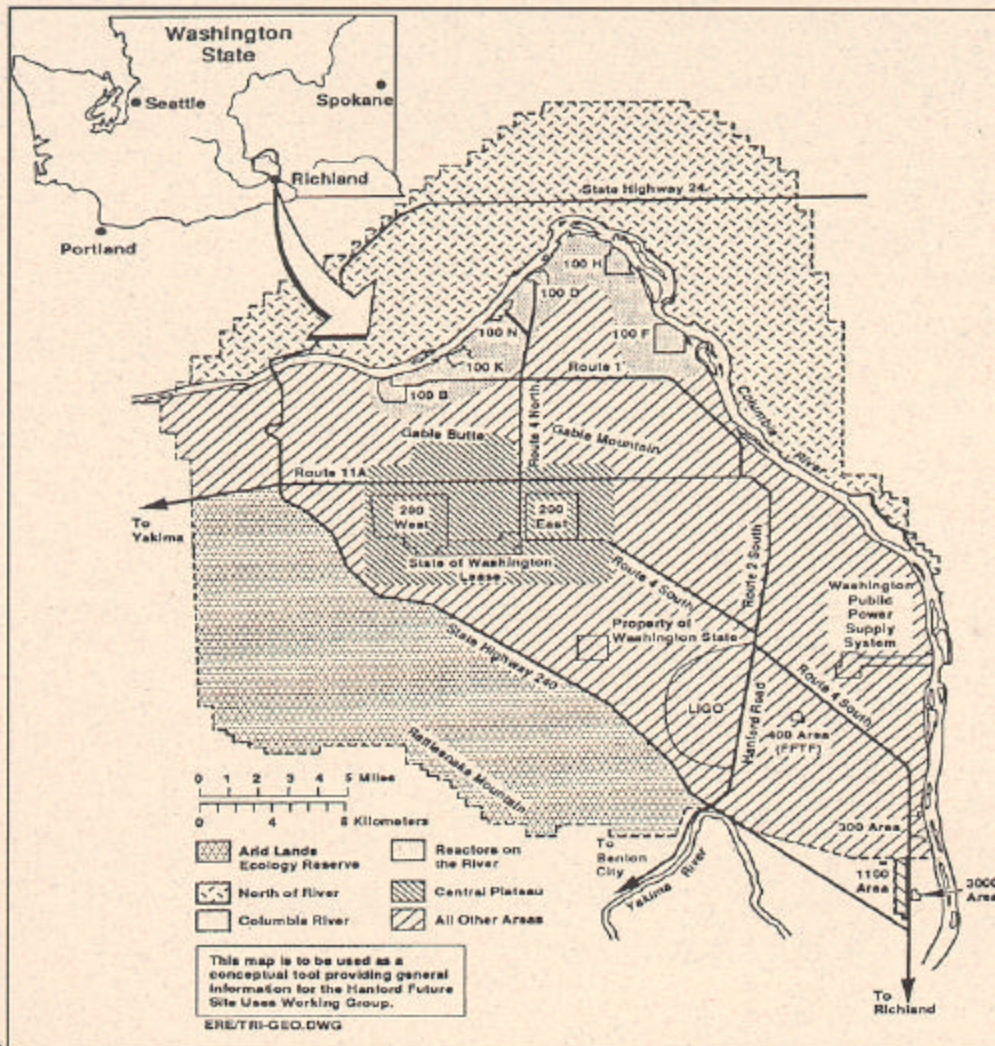
From Production to Cleanup

was convened in January 1994. It provides a forum for seeking a regional consensus on Hanford cleanup activities and works with the Tri-Party Agreement agencies to establish and maintain partnerships, build bridges, increase trust and credibility, and most of all, to solve problems and move the cleanup forward.

The thirty-one members of the Board include interests from the economic, environmental, tribal, public interest, government, and health and safety sectors. The Board members represent only some of the interests of the site and of the region, so the Board has made an effort to include broader public input into its and the site's activities. Opportunities for public input have included public comment periods at each of the Board meetings; articles in the *Hanford Update*, which is mailed on a quarterly basis to Hanford stakeholders; articles in

the *Tri-City Herald*; and co-sponsorship of public meetings, including the National Dialogue pilot workshops and the Health of the Site meeting. In addition, the Board has a Public Involvement Committee, which works with the Tri-Party Agreement agencies to structure public involvement activities in a manner that allows for all the public to be involved and affect the way decisions are made.

This third progress report of the Hanford Advisory Board highlights the work the Board undertook in Fiscal Year 1997 to move cleanup forward. It also outlines the most urgent cleanup issues that remain on the site and that will be the focus of the Board's work in Fiscal Year 1998. Current Board members and their interests and expertise are also highlighted along with a summary of the Board's history and operations.

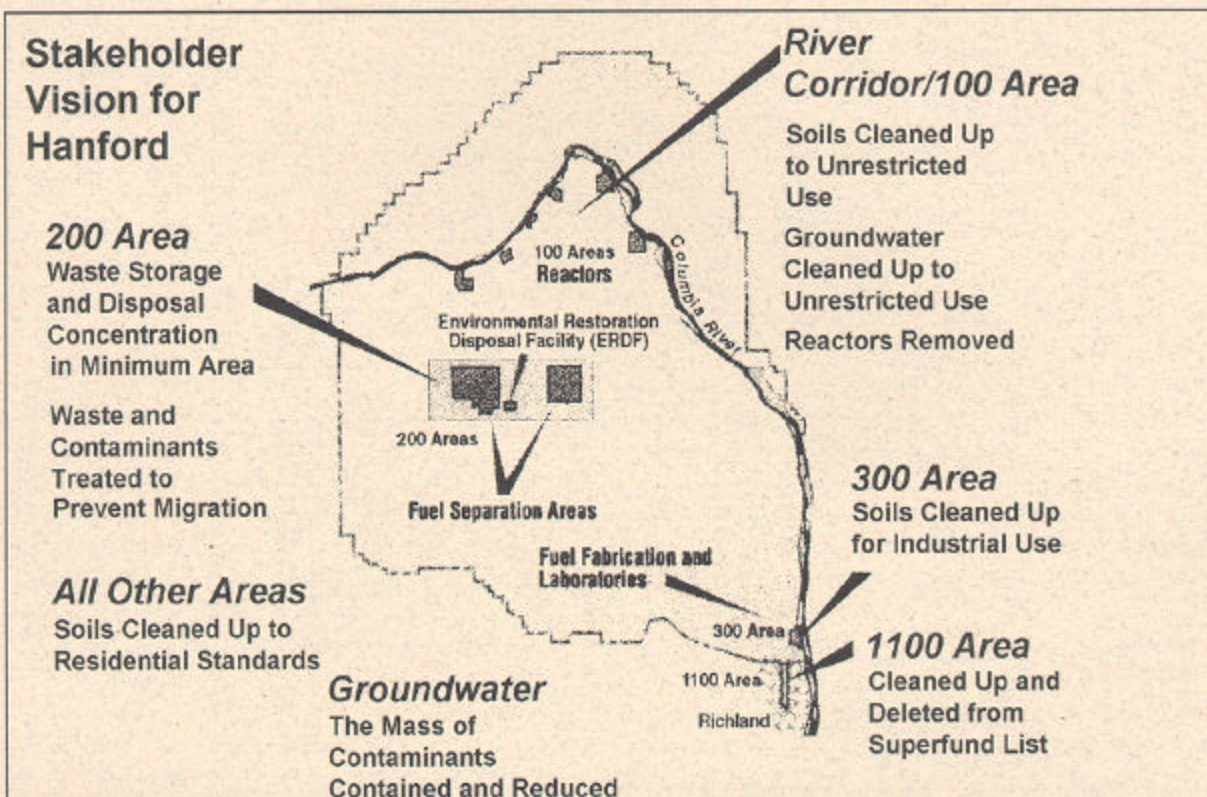


Six Geographic Study Areas for which stakeholders developed future use scenarios.

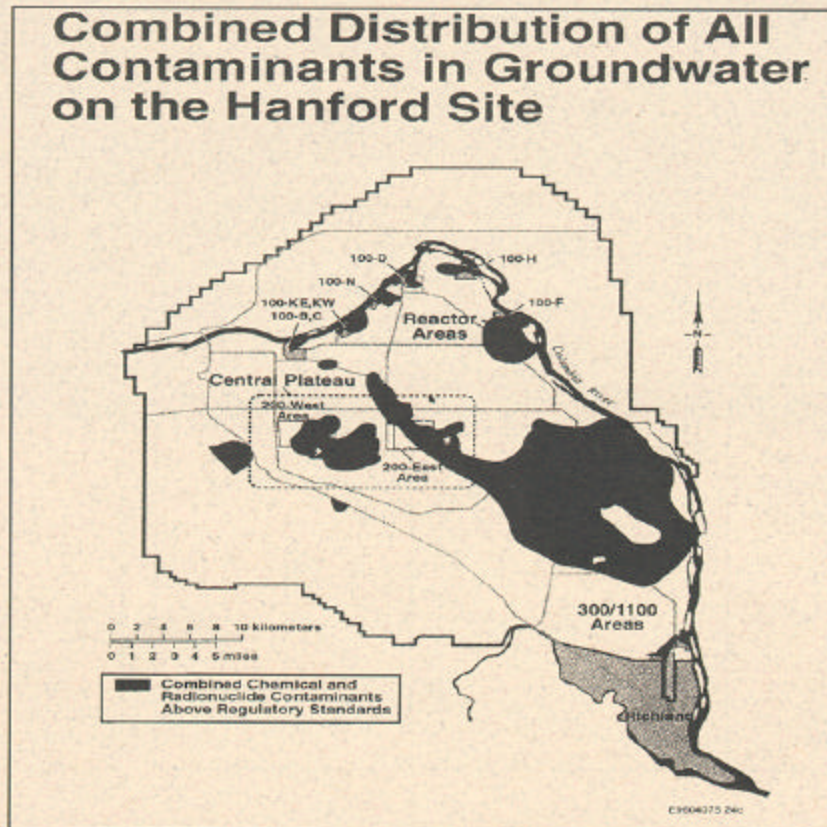
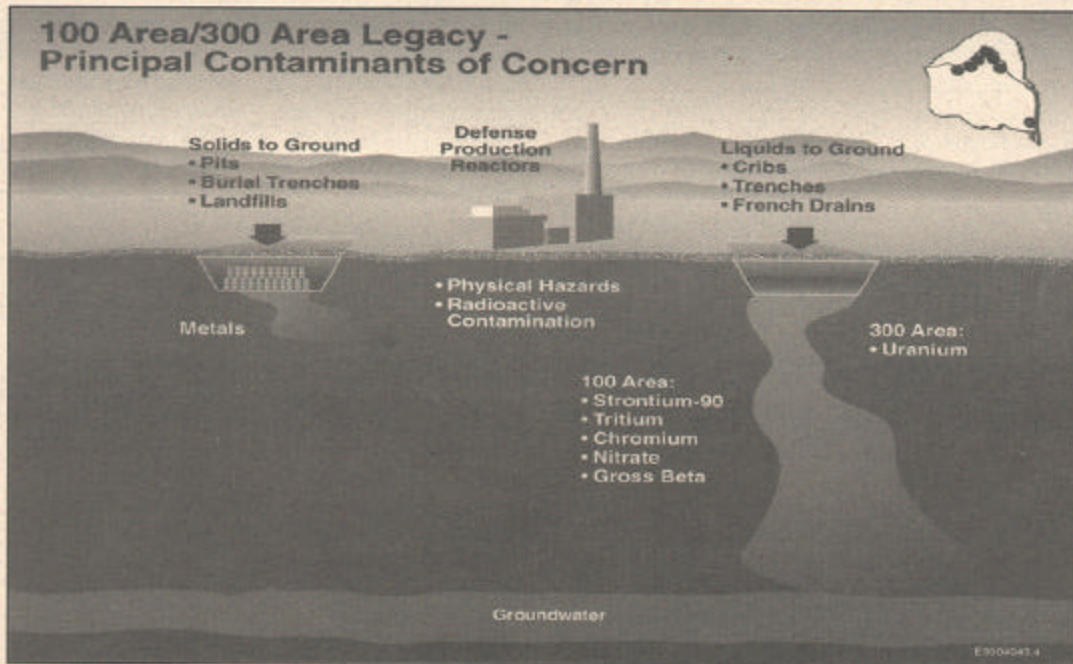
Stakeholder Vision for the Hanford Site

Key Principles Guiding Cleanup

- **Protect public and worker health and safety.**
- **Protect the Columbia River.** Stop actual and potential contamination of the Columbia River and prevent migration of contamination off site.
- **Avoid further harm.** Minimize use of land for waste management, avoid contaminating uncontaminated land, and avoid further damage to critical resources, especially cultural resources, habitat and groundwater.
- **Dilution is not the solution.** All liquid wastes need to be treated according to applicable regulations prior to discharge or disposal.
- **Treaty rights.** Preserve natural resource rights embodied in treaties, and enforce laws protecting natural and cultural resources.
- **Regional importance.** Hanford has ecological, economic and human resources of regional importance.
- **Vision.** An understanding of possible future uses of Hanford can focus decisions about what manner of cleanup is needed and what is most important to accomplish over time. The public, the agencies and the workers should be able to see the end of the cleanup, if not predict its exact date.
- **“Get on with it.”** Demonstrate substantive progress on cleanup to assure continued public support and funding.
- **Public involvement and accountability.** Involve the public and respect tribal rights in development of the goals, scope, pace and oversight of cleanup, and establish management practices that ensure accountability, efficiency and allocation of funds to high-priority items.
- **Compliance culture.** There should be a cooperative commitment to comply with environmental laws. The Tri-Party Agreement should not become a shield against enforcement of other laws.



Hanford Progress Made in 1997: River Corridor/100 Area



Hanford Progress Made in 1997: River Corridor/100 Area

Problems and Risks In the River Corridor

| | | | |
|---|--|---|--|
| Contaminated soils within 1/4 mile corridor along Columbia River restrict access to the River and its banks | Old reactors K Basins along the River contain spent nuclear fuel, which is unsafely stored, and its associated basin sludge and contaminated waters | Potential impacts of contaminated groundwater to the River's water quality include threats to the biological integrity of | spawning beds, the quality of downstream drinking water and irrigation supplies, and recreational uses |
| Contaminated groundwater | | | |

Key TPA Milestones In the River Corridor

Cleanup of soils to residential standard (CERCLA Record of Decision from September 1995 commits to cleanup of soils to a residential standard)

Groundwater cleanup of "hot spots" that are affecting the Columbia River

Reevaluation of plans for interim and ultimate disposition of the reactors in 2002, and negotiations to begin in 2003 for the ultimate disposition of the reactors

Recommendations for additional work for the Columbia River will be based on results of the Columbia River Comprehensive Impact Assessment

Stakeholders' Vision

Soils cleaned up to residential standards in the areas surrounding the reactor cores

Cleanup of groundwater to unrestricted status

Removal and interim stabilization of reactor cores

River is protected from contamination from the Hanford Site

Public access is not restricted because of residual contamination

Pipelines and islands in the Columbia River are remediated

Institutional controls are defined

Progress Made in 1997

More than 300,000 tons of waste have been disposed of at ERDF and there are plans to expand the facility to handle more waste

Deactivation of N Reactor completed, removing more than 400,000 gallons of radioactive contaminated water and 90 percent of the reactor's high-dose materials

Construction is 90% complete for fuel-drying facilities and canister storage building for the removal of spent fuel from the K Basins

Interim safe storage of the C reactor is ahead of schedule and will result in a leak proof 16,000 square-foot structure

Most Urgent Cleanup Issues in 1998

Continued progress towards the removal of spent nuclear fuel from the K Basins

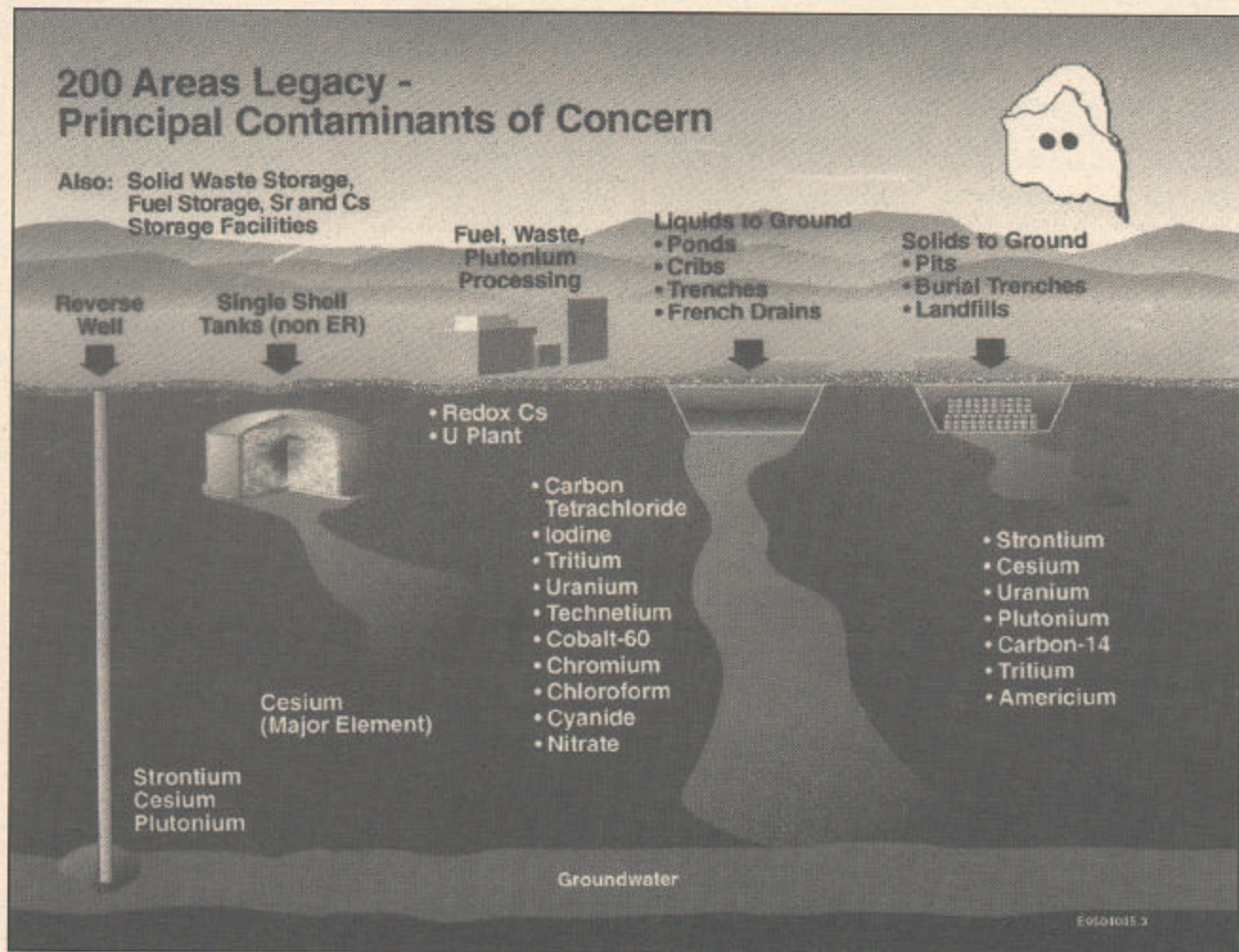
Contamination in the groundwater is contained and removed

Unsaturated zone above groundwater is accurately characterized

Sources of contamination to the groundwater are removed

Cleanup along the River is completed

Decontamination and stabilization of all remaining high-risk facilities



Hanford Progress Made in 1997: Central Plateau/200 Area

Problems and Risks In the Central Plateau/200 Area

The Central Plateau is unique in that it has been identified as a waste management area for the foreseeable future. It contains numerous areas of contaminated soils and is the location for the 177 underground single and

double shell tanks containing 55 million gallons of radioactive waste. Containment and reduction of the mass of vadose zone and groundwater contamination is a key issue because

of the potential risk that contaminated groundwater poses to the Columbia River

The Central Plateau contains large contaminated facilities

Key TPA Milestones In the River Corridor

Beginning of vitrification and resolution of tank waste issues

Groundwater: work underway to contain and reduce the mass of contaminants

Waste site investigations completed by 2008

There is no cleanup standard for such an area; the assumption is that it will ultimately be cleaned up to permit industrial uses

Stakeholders' Vision

Vitrification and resolution of tank waste issues

Removal and stabilization of tank liquids

Sitewide integrated vadose and groundwater management plan being implemented

Facilities transitioned as much as possible, reducing costly mortgages

Integration and identification of all waste systems

Continuing commitment to clean up and manage the long-term wastes

Waste management, storage, and disposal activities in the 200 Area and immediate vicinity concentrated to minimize amount of land devoted to or contaminated by waste management activities

Waste and contaminants within the 200 Area treated and managed to prevent migration from the 200 Area to other areas and/or off site

Institutional controls for the foreseeable future

Progress Made in 1997

Deactivation of PUREX facility, completed \$78 million under budget and 16 months ahead of schedule

U Plant deactivated

6.2 mile long pipeline system completed to safely transfer highly radioactive waste from one set of tank farms to another enabling safer disposal

Completed waste receiving and processing facility (WRAP) ahead of schedule to prepare transuranic waste for disposal

Most Urgent Cleanup Issues in 1998

Continued progress towards the retrieval and vitrification of tank wastes at Hanford. Includes results-oriented management, streamlined decision-making, greater accountability, and improved safety performance

Understanding contaminants present between the ground surface and groundwater (vadose zone) and their impacts on cleanup plans

Hanford Progress Made in 1997: All Other Areas

Problems and Risks In All Other Areas

Contaminated soil sites

Groundwater contamination reaching the Columbia River

Developed areas near Richland contain numerous old facilities

| Stakeholders' Vision | Progress Made in 1997 | Most Urgent Cleanup Issues in 1998 |
|--|---|--|
| <p>300 Area: Soils cleaned up for industrial use</p> <p>1100 Area: Cleaned up and deleted from Superfund list (completed September 1996)</p> <p>Arid Lands Ecology Reserve: Pristine - no contamination</p> <p>North (Wahluke) Slope: Completely cleaned up (completed September 1995)</p> <p>All other areas: Soils cleaned up to residential standards</p> <p>Institutional controls for groundwater contamination available for other uses</p> <p>Groundwater remediation</p> | <p>Initiated removal of contaminated soils at 300-FF-1</p> <p>Processed more than 120 million gallons of contaminated groundwater through pump and treat.</p> | <p>Unsaturated zone above groundwater is accurately characterized</p> <p>Sources of contamination to the groundwater are removed</p> <p>Cleanup along the River is completed.</p> <p>Contamination in the groundwater is contained and removed</p> |

Translating Vision into Reality: Maintaining Cleanup Progress

Highlights of Board Work in 1997: Commitment to Cleanup

The Hanford Advisory Board held seven, two-day meetings in Fiscal Year 1997 and tackled an extensive and complex agenda. Members received in-depth briefings from the Tri-Party Agreement agencies, reviewed technical reports and proposed budgets, and sought out more information on major public policy issues. From October 1996 through September 1997, the Board produced 22 new pieces of consensus advice (making a total of 75), co-sponsored several public meetings, produced numerous pieces of "sounding board" advice, and engaged in an ongoing dialogue with the Tri-Party Agreement agencies.

The following are highlights of the Board's work during the year, along with a brief description of the impact it had or the current status of the issue. The work is organized by programs, such as environmental restoration and waste management, and overarching issues, such as funding.

Commitment to Cleanup

The Tri-Party Agreement is the blueprint for cleanup at Hanford, and DOE must comply with it. Milestones should not be changed solely because of inadequate funding. However, in February 1997, changes were proposed for at least 12 milestones. In response, the Board urged that the Tri-Party Agreement be aggressively defended and enforced as currently written. Milestones critical to safety, program success, or resolution of prior regulatory violations should not be modified or missed because of increased costs and should receive enforcement priority.

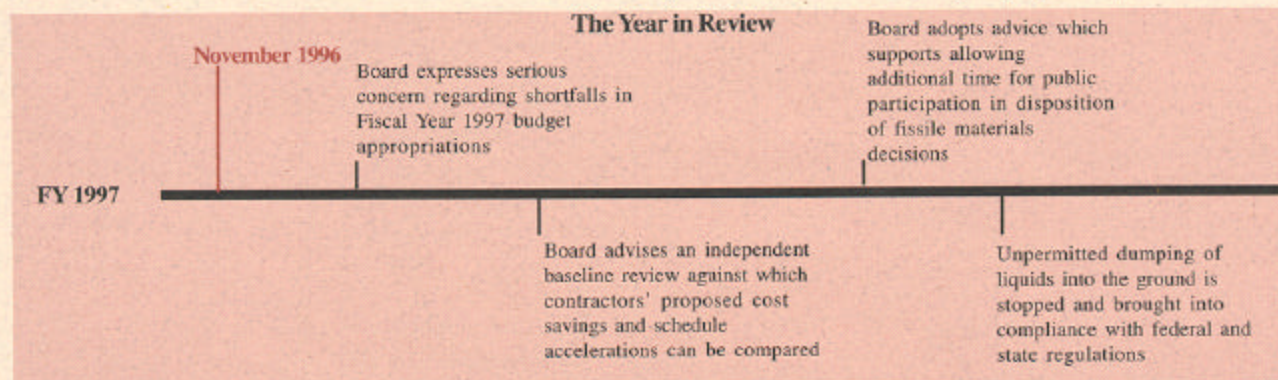
Impact: DOE has stated that it does not view the slippage of Tri-Party Agreement milestones casually and will continue to work with the regulatory agencies to ensure milestones are met based on available funding. Ecology and EPA have committed to enforcing milestones, especially on critical projects such as tank wastes and spent fuel removal. Funding issues alone do not represent good cause for missing milestones. Tri-Party Agreement milestones were missed in Fiscal Year 1997 and there was a \$42 million gap between funding and legal requirements.

Waste Management and Transfer

Tank Waste Remediation System (TWRS)

High level radioactive wastes stored in tanks continue to pose a serious risk to the public and workers' health and safety and the environment. Understanding what contaminants exist between the ground surface and groundwater (vadose zone) from past leaks is critical to moving forward with cleanup and the removal of wastes from the tanks. In April 1997, the Board advised that DOE follow the advice of experts who recommended extensive sampling of the vadose zone. This included full funding to develop a comprehensive plan and prevent further contamination.

Impact: This issue has commanded attention at the top levels in the Tri-Party agencies and recent reports have identified contaminants that have reached the groundwater. A vadose zone program plan is being developed, experts' advice is being taken, and actions are underway to minimize the spread of further contamination. EPA and Ecology encouraged DOE to complete a study to confirm that contamination in the vadose zone is a problem and are working closely with DOE to ensure that contamination between the ground surface and groundwater is receiving high priority.



Highlights of Board Work in 1997

Waste Management

While current plans call for the construction of facilities and treatment of waste by a private contractor, the funding of an alternate path is essential should privatization efforts fail. Tank waste sampling and analysis is also essential to the successful treatment of the waste. The Board recommended that proposals to layoff or reassign TWRS sampling crews should not be carried out.

Impact: The alternate path for TWRS privatization is not fully funded. Prioritization of waste sampling and characterization activities is ongoing within the DOE TWRS program. The TWRS contractor identified sufficient funding in savings, cuts, and efficiencies to allow the vadose zone characterization crews to remain intact.

Providing adequate funding, meeting Tri-Party Agreement milestones, and reducing management and overhead costs are essential to the success of the TWRS program. The privatization costs should continue to be funded outside the Hanford cleanup budget in order to avoid the confusion that this amount is part of the total cleanup authorization. The Board also requested and emphasized the importance of an ongoing dialogue on the privatization effort between itself and DOE-Headquarters.

Status: Though facing funding shortfalls, the TWRS program was able to develop technologies for retrieval of wastes from the single-shell tanks. A gap between available funds and planned work was eliminated due to cost efficiencies, work deferrals, and funding changes. Efforts were continued to reduce budgets for management and overheads. However, anticipated funding shortfalls in 1998 have caused DOE to refocus the program from safe storage activities to work needed to retrieve and immobilize the tank wastes.

K Basins

Moving spent fuel and related materials away from the Columbia River on an expedited schedule with adequate funding is a high priority issue for the Board. The Board continued to support an integrated approach to this complex and technically challenging program. The program must provide early warning of technical problems that might jeopardize project schedules and budget and quickly resolve technical and regulatory issues that arise.

Status: In Fall 1997, it was announced that significant technical challenges will require additional funding of \$274 million and a schedule delay of 19 months. DOE is in the process of addressing technical challenges, developing solutions, and identifying where additional funds are available. Both the Board and regulatory agencies have identified this as an urgent issue for Fiscal Year 1998 and will continue to remain intensely involved as the project moves forward.

Intersite Waste Transfers

Over the past two years, the Board has supported the proposed National Dialogue, which publicly addresses the nationwide problem of treatment, storage, and disposal of DOE wastes and nuclear materials. Public education about and input into disposition decisions is essential. DOE was urged to provide full commitment and support to the process. The Board and other organizations co-sponsored four regional National Dialogue pilot workshops that were held in October 1997.

Status: DOE committed to consider the results of the pilot workshops when making disposition-related decisions. However, specific steps beyond the regional pilot workshops to implement a National

The Year in Review

December 1996

Board adopts advice which requests additional time for public involvement in the historic preservation process

Board expresses support for the second phase of the Columbia River Comprehensive Impact Assessment

Report released which confirms that radioactive cesium 137 is present beneath the SX tank farm, location of 15 of the 149 single shell tanks

Board adopts advice which supports the interim safe storage of the C Reactor and use of innovative technologies on the project

Board adopts advice supporting decontamination and decommissioning of 100 Area facilities

Highlights of Board Work in 1997

Waste Management and Environmental Restoration

Dialogue have not been defined or taken. DOE is proposing several intersite workshops to be held in June 1998.

In September 1997, members of the Board met with the Idaho Citizens Advisory Board, another site-specific advisory board, to discuss issues of common interests. One of the main discussion topics was the 2006 Plan, which outlines which and how DOE will clean up sites across the country by the year 2006. Based on the meeting, the two boards issued a joint statement expressing concern about DOE's planning process. Both Boards are concerned that underlying assumptions in the Plan are not clear and have not received adequate public review. The Idaho Citizens Advisory Board and Hanford Advisory Board agreed to continue discussing issues of mutual interest.

In October 1997, Marilyn Reeves, Chair, and George Kyriazis, Vice Chair, represented the Board at a meeting of all the site-specific advisory board chairs. Discussion focused on the 2006 Plan, decision-making processes for waste and weapons disposition, and other areas of common interest among the advisory boards. These meetings will continue and meetings between all the advisory boards will occur where appropriate.

Nuclear Materials Disposition

Because of the technical nature and regional importance of the disposition of fissile materials, the Board believed the public required more time for comment and information than initially allowed by DOE. The Board urged DOE to provide additional time for public education and input into the Assessment for Arms Control and Non-Proliferation for the Programmatic Environmental Impact Statement on Disposition of Fissile Materials.

Impact: Because of a federal law requiring the President to submit a plan for the disposal of excess weapons-usable fissile materials with the Fiscal Year 1998 budget, a record of decision for the programmatic environmental impact statement was issued in early 1997 and opportunities for additional public input were not available. Fifteen public meetings were held in 10 cities, including Richland, Washington. Scoping for the siting of disposal facilities was conducted in Summer 1997 and a draft environmental impact statement will be published in late Spring 1998.

Environmental Restoration

Reactors on the River - Interim Safe Storage

The Board has focused much of its attention on the protection of the Columbia River. In 1997, the Board stressed the importance of moving ahead with the interim safe storage of Hanford's aging reactors, which includes reducing the reactors' footprints and threat to the River. The Board supports the use and funding of innovative technologies to accomplish this quicker and more efficiently. The Board also commended the approach to addressing historic preservation of the B Reactor.

Status: The interim safe storage of the C Reactor is proceeding and will result in the reactor being reduced from a 54,000 square foot facility to a 16,000 square foot structure. The project is on schedule, within budget, and the use of innovative technologies has proven invaluable to that success. The goal is to use some of the same team of workers to begin the interim safe storage of the F Reactor. Because of stakeholder input during committee and Board meetings, the B Reactor museum feasibility study has been included in budget plans.

The Year in Review

February 1997

Board publishes article in the Hanford Update

Board tells agencies to study how institutional controls may be used at Hanford

Board tells EPA and Ecology not to renegotiate Tri-Party Agreement milestones based on the lack of funding

Board publishes article in the Tri-City Herald annual progress edition

Highlights of Board Work in 1997

Environmental Restoration

Columbia River Comprehensive Impact Assessment

The Columbia River Comprehensive Impact Assessment is a tool developed to evaluate the impacts on the Columbia River from all current and future sources of contamination at the Hanford Site. The Board supported the development of this effort and stressed the importance of DOE funding the second phase of the assessment.

Status: Ecology and EPA have continued to express their support for the Columbia River Comprehensive Impact Assessment and the funding of the second phase. In response to the Board's advice, DOE expressed its support for the goal of the Assessment and committed to having its Environmental Restoration program review the proposed work. An alternative approach was proposed to perform portions of the second phase with available funding. Currently the agencies are working with affected stakeholders to determine how to fund and implement additional phases of the study.

Canyon Disposition Initiative

The Board has been concerned about plans for the five large chemical processing buildings (i.e., "canyons") in the 200 Area. In 1997, the Board sent the Tri-Party Agreement agencies a report (not consensus advice) outlining initial issues and concerns raised during discussions between Board members and agencies to be considered when addressing the feasibility and alternatives of storing waste in the canyons.

Status: Feasibility studies of alternatives for canyon disposition are proceeding in 1998. Work to sample materials in the U Plant is underway. This facility will be the first application of the proposed process for determining canyon disposition.

Institutional Controls

What Hanford will look like when it is cleaned up is still under debate. However, it is understood that certain areas may remain restricted to human use for some period of time. Institutional controls create and enforce some kind of restricted access to an area of land. The Board stressed that institutional controls should not be substituted for cleanup standards or practical available treatment requirements. If used, institutional controls should be established with consideration of existing and potential future land uses, including expected tribal use scenarios, economic considerations, and public education.

Status: The Board's principles and values are being considered as the Tri-Party Agreement agencies and local government consider effective and appropriate use of institutional controls. These issues are also being considered in the Hanford Remedial Action Environmental Impact Statement.

200 Area Soils Remediation

Throughout Fiscal Year 1997, the Environmental Restoration and Health, Safety, and Waste Management Committees spent a large amount of time discussing 200 Area soils remediation, including use of caps, covers, and barriers. That dialogue with DOE and regulators resulted in advice supporting a streamlined approach to understanding existing waste and developing plans for cleanup.

Status: Plans for investigations and soil cleanup are moving forward in 1998 and the Board will continue to be consulted in the decision-making process.

The Year in Review

April 1997

Board adopts advice supporting the National Dialogue process to obtain public input into intersite waste transfer decisions

Board adopts advice which supports the continued funding and characterization of the vadose zone

Board offers advice on the causes and solutions for the funding shortfall faced in Fiscal Year 1997

Board issues advice to DOE requesting adequate public input to the waste transfer decisions in the 2006 Plan

Highlights of Board Work in 1997

Environmental Restoration and Facilities Transition

Groundwater

The Board emphasized the need to integrate efforts to understand the contamination that exists in the unsaturated or vadose zone between the ground surface and groundwater. Use of an innovative technology to clean up chromium-contaminated groundwater was also endorsed by the Board, contingent upon measures for long-term monitoring and mitigation, resolution of technical issues, and additional characterization of the chromium source. The Board has identified groundwater protection and cleanup as an important component in protecting the Columbia River and will continue to follow this issue closely in 1998.

Impact: DOE announced in late 1997 plans to integrate site-wide vadose zone and groundwater programs. This is to include an action plan to understand and address groundwater contamination. These activities took on added importance with the finding of groundwater contamination beneath eight of the 18 tank farms.

Environmental Restoration Disposal Facility

One of the first pieces of advice offered by the Board supported development of the Environmental Restoration Disposal Facility for contaminated soil and material from Hanford cleanup activities. In 1997, the Board supported the expansion of the Environmental Restoration Disposal Facility. The Board reiterated its position that this disposal site should be limited to waste from Hanford.

Status: Design and construction of two additional disposal cells will be completed in 1999.

Decontamination and Decommissioning

The Board supported the decision to move forward with decontaminating and decommissioning six facilities in

the 100 Area under Superfund, including disposing of the waste at the Environmental Restoration Disposal Facility.

Status: Facilities in the 100 Area are the first decontamination and decommissioning actions at Hanford to be conducted under the Superfund program.

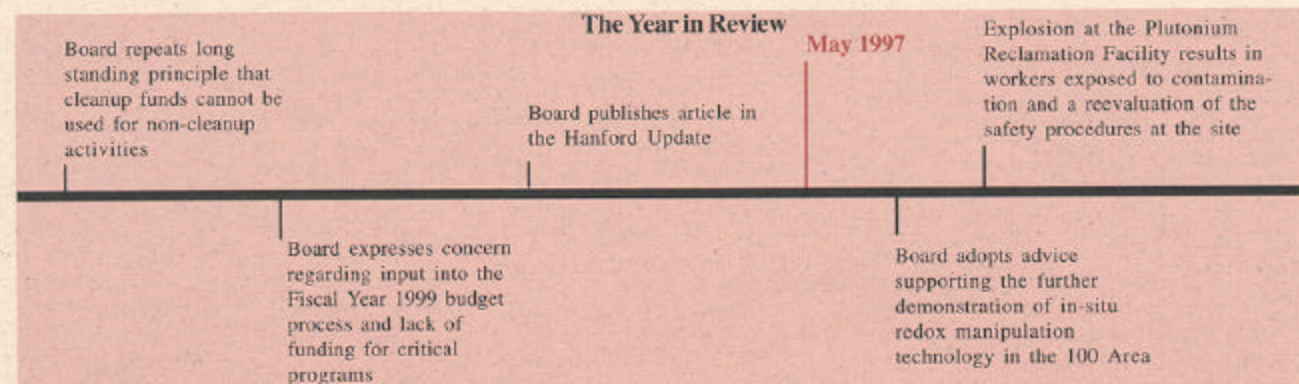
Historic Preservation

While cleanup of the Hanford site is of utmost importance, the Board recognizes the historical significance the site played in the Manhattan Project and Cold War and the importance of the site to Native Americans. Preserving historic buildings and cultural resources is part of the Hanford cleanup and must be given the same amount of attention and public involvement as the rest of the cleanup project.

Impact: In response to the Board's concerns about public involvement, DOE held a public workshop in November 1996 to provide an opportunity for public input and understanding of the historic preservation process. Another workshop was held in January 1997 to educate stakeholders on the process used to evaluate 180 representative structures.

Facilities Transition

Reducing the risks aging facilities pose to workers and the environment is of utmost concern to the Board. This includes full funding of the 324 Building "B Cell" clean out which poses a serious safety risk. As repeated over the previous four years, the Board advised that cleanup funds should not be used for non-cleanup work, such as maintaining the Fast Flux Test Facility in a standby mode. Also, Hanford should receive the savings



Highlights of Board Work in 1997

Health and Safety

achieved by reducing maintenance costs on facilities. Higher priority should be placed on meeting regulatory milestones, rather than demolishing vacant general purpose facilities that are not contaminated.

Impact: An action memo has been signed and \$4.2 million was allocated to the 324 Building "B Cell" clean-out. The Tri-Party Agreement agencies agreed that cleanup funds should not be used for non-cleanup activities. The Board is continuing to work to ensure that mortgage reductions remain on the site and can be used for further cleanup activities.

Health and Safety

Plutonium Reclamation Facility Accident

The Board has consistently placed high importance on protection of workers at Hanford. The accident at the Plutonium Reclamation Facility in May 1997 served as a wake-up call to DOE, contractors, stakeholders, and the region as a whole that Hanford is a dangerous place and poses an ongoing threat to its workers and nearby residents. A tank containing diluted hydroxylamine nitrate and nitric acid exploded, causing damage to the outer structure of the facility and exposing ten workers to a chemical plume.

The Board held several sessions on the accident, with particular attention given to lessons learned and corrective actions to prevent similar incidents and to improve emergency response and medical followup actions. The Board began to frame stakeholder issues with Hanford's safety culture and identified actions needed to ensure the highest quality safety environment for workers.

Status: DOE and its contractors have developed and are implementing corrective action plans to

identify and eliminate explosive chemicals in tanks, clarify emergency response and security procedures, retrain workers, and ensure adequate medical care for workers involved in accidents.

Integrated Safety Management System Plan Redraft

In January 1997, Fluor Daniel Hanford submitted a draft Integrated Safety Management System Plan to DOE to outline safety programs at the Hanford Site. The Health, Safety, and Waste Management Committee reviewed the document and individual Board members provided input to DOE, highlighting weaknesses, missing information, and inadequate safety procedures included in the document.

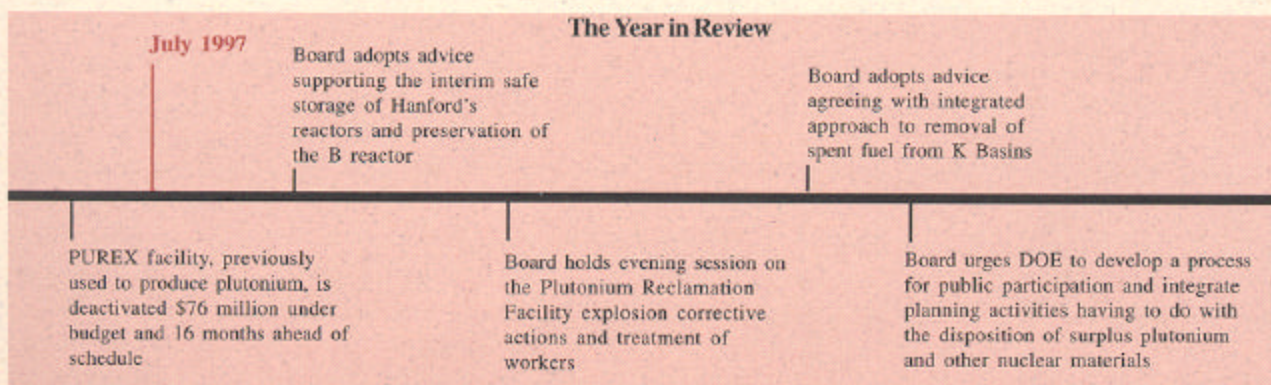
Impact: Based on DOE review and comments from individual Board members, DOE ordered Fluor Daniel Hanford to rewrite the Plan and resubmit it for approval. A revised draft was submitted in October 1997 and was approved by DOE. Fluor Daniel Hanford lost some performance-based fees associated with this project.

Health of Site Meeting

The Board co-sponsored a Health of the Site meeting which was coordinated by the University of Washington and had over 230 registered attendees. Several Board members actively participated in planning for this December 1997 meeting. The meeting focused on ecological, occupational, and community health studies which have been completed or are ongoing and directly relate to the Hanford Site.

Ensuring Funds Go To Cleanup

The Board's involvement in DOE's budget development process has been one of its most significant achievements. DOE's budget and planning information



Highlights of Board Work in 1997

Ensuring Funds Go To Cleanup

has been opened to the public in unprecedented ways, and the Board is clearly having an impact on budget decisions. The portions of that advice that related to specific area programs were referred to in discussions of those areas. Portions of the advice having broader application are highlighted here.

2006 Plan

The intent of the 2006 Plan is to encourage "breakthrough thinking" on achieving cleanup faster, quicker, and smarter so that a major part of the DOE complex is cleaned up by 2006. The Board expressed its concern that the 2006 Plan for Hanford contained assumptions that are not currently in the site's mission, such as receiving waste from other sites, which might decrease the amount of funding available for cleanup. Another assumption included in the Plan is that DOE would not request funding that increases with the rate of inflation, leading to a larger shortfall in funding for legally required activities. Such assumptions and/or decisions should not be made without adequate time for public process and feedback mechanisms. Also, links with other decision-making processes relating to disposition of waste and nuclear materials should be clearly defined and incorporated into the public process.

Status: DOE extended the process for public participation in the development of the initial 2006 Plan. DOE has said that any decisions will be made in collaboration with regulators and stakeholders and a process for public participation will be clearly outlined. Draft plans still consider moving waste to Hanford as well as requesting only level funding, which does not include the rate of inflation.

Contractor Efficiencies

The Board offered advice early in Fiscal Year 1997 on the Management and Integration Plan and performance

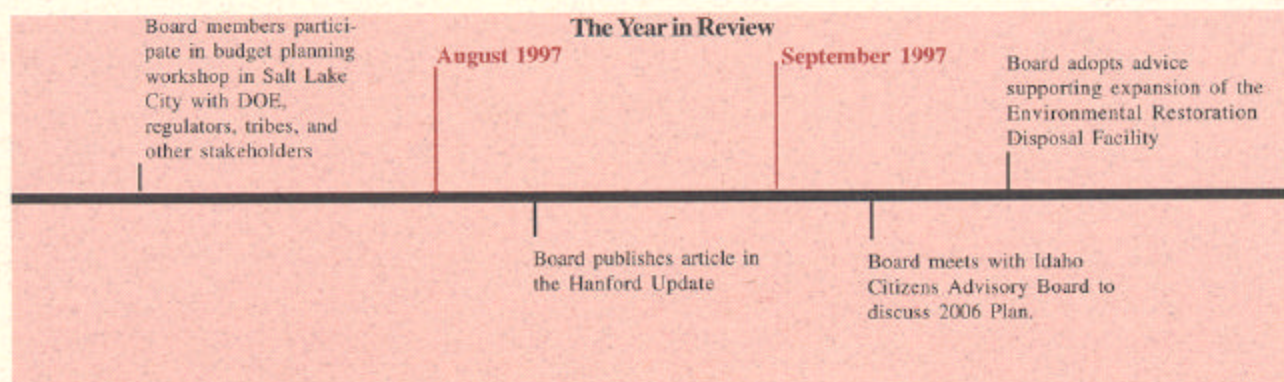
expectations for the Project Hanford Management Contract. Claimed cost savings must be based on validated information and must not impact the Tri-Party Agreement milestones or worker health and safety. The Project Hanford Management Contract should be required to live within existing budgets for overhead and indirect costs and not reduce workscope to fund overruns.

The Board spent time with DOE-Headquarters discussing lessons learned from the previous contractor and developing contract reforms for the new contractor, Fluor Daniel Hanford, which meet the goal of reducing costs complex-wide. Transition to a new contractor, six major subcontractors, and "enterprise companies" caused concern regarding worker safety. Multiple contractor layering should not reduce accountability.

Impact: DOE and its regulators are working together to ensure the completion of all milestones established in the Tri-Party Agreement or related to the health and safety of workers and the public. Whistleblower rights are being contractually imposed on all enterprise companies. DOE continues to work with the Project Hanford Management Contract contractors to ensure that overhead costs are not excessive (overhead costs increased in 1997 compared to the previous contractor) and do not affect compliance with the Tri-Party Agreement.

Economic Stability

The Board urged DOE to recognize only new jobs that are integrated into the Tri-Cities' economy when evaluating the Project Hanford Management Contract's economic transition performance. Transitory work that is easily relocated will not sustain economic transition.



Highlights of Board Work in 1997

Ensuring Public Involvement

Impact: DOE worked with the Project Hanford Management Contract contractor to establish criteria for what will be recognized as new jobs integrated into the Tri-Cities' economy. Fluor Daniel Hanford committed to outsource 50 percent of the Project Hanford Management Contract budget by 2001 to major subcontractors. Fluor Daniel Hanford has also committed to directing 60 percent of all outsourced dollars to local, regional, and Native American businesses within five years.

Budget

The Board emphasized to DOE-Headquarters the difficulty faced at the field level when the process of allocating funding is lengthy and uncertainty constrains legally-required activities. The Board told DOE-Headquarters that it is unacceptable to ask Hanford to support projects without providing adequate funding. In addition, non-cleanup activities should not be paid for with cleanup funds. DOE must meet its legal obligation to actively obtain funding for full regulatory compliance.

Impact: The budget process at Hanford has improved with the use of independent cost validations. However, increasing work scope without increasing dollars, coupled with the lack of contingency, compounds the problem of funding shortages and creates a "bow wave" of deferred and missed milestones in the future. DOE agreed with the Board's concern about the length of time required before final allocation of Hanford's budget. While every attempt is made to minimize the imposition of additional funding requirements, funding levels and requirements do change over the course of the fiscal year. DOE heeded the Board's advice on Fiscal Year 1998 by providing funding to maintain the Fast Flux Test Facility out of a non-cleanup budget.

Budget Summit

The Board participated in a budget planning meeting held in July at Salt Lake City. Participants of the meeting included DOE-Richland and DOE-Headquarters, DOE contractors, regulators, tribes, and stakeholders. The purpose of the meeting was to strategize approaches to closing the gap between regulatory commitments and the President's Fiscal Year 1998 budget request.

The Board provided a statement for the meeting in which it expressed concern that funding levels for Hanford

cleanup in Fiscal Years 1998 and 1999 are inadequate for compliance with the Tri-Party Agreement. The statement also stressed that if the tank waste privatization project is to succeed, DOE should fully fund two Phase I vitrification facilities to convert tank wastes into glass, ensure that adequate funding is available, give stakeholders opportunities to review and comment on proposals, and ensure a regulatory infrastructure to fully protect public and worker health and safety.

Status: Following the Salt Lake City meeting, DOE met with its contractors to identify efficiencies in order to meet Tri-Party Agreement obligations. EPA and Ecology continued to be concerned about the stabilization of the budget process and whether cost efficiencies would make up for funding shortfalls.

Ensuring Public Involvement

The Board continued in 1997 to place emphasis on providing adequate and meaningful opportunities for public involvement in decision-making by the Tri-Party Agreement agencies on Hanford cleanup.

- The Board provided a number of specific pieces of advice on the need for additional public participation in the planning documents, as well as the budget development process.
- The Board co-sponsored a series of regional pilot workshops to provide opportunity for the public to express its values for waste and materials disposition.
- Members of the Board participated in quarterly meetings on Tri-Party Agreement public involvement to give feedback and assist in identifying upcoming needs for Hanford cleanup public participation.
- The Board held an evening session on the Plutonium Reclamation Facility accident to discuss its concerns and allow for public input.
- Four articles on the Board's activities were published in the Hanford Update, a quarterly newsletter sent to interested stakeholders.
- The Board published an article in the Tri-City Herald updating the local community on its activities.

DOE-Richland published two public involvement handbooks for its program managers to assist them in designing and implementing public outreach activities for their projects. DOE also provided financial support for many of the public outreach activities conducted during Fiscal Year 1997.

MOVING CLEANUP FORWARD: FISCAL YEAR 1998

The cleanup program at Hanford faces significant challenges in 1998. At its December meeting, the Board identified urgent cleanup issues that deserve special consideration. Moving forward on tank waste retrieval and vitrification and removal of the K-Basin spent fuel is essential. The Board also recognizes the importance of decontamination and stabilization of the wastes in the many high risk production facilities. But whatever the challenge, cleanup work requires more emphasis on results-oriented management, streamlined decision-making, improved safety performance, and greater accountability for both DOE and its contractors.

- **Removal of high-level radioactive tank wastes is urgent and behind schedule. More than 54 million gallons of dangerous radioactive waste containing 200 million curies of radionuclides are in the 177 underground storage tanks.** Hanford currently has no capability to put these wastes into a safer form. Many of these huge tanks (30-48 feet tall and 75 feet in diameter) have leaked, and most are beyond their life span. The radiological and other hazardous wastes in these tanks are a threat to workers, the River, and the regional economy.

The Board has discussed the obstacles to tank waste retrieval and vitrification that must be overcome. Funding has been inadequate; commitments to treat the waste have been broken; and DOE, the Administration, and Congress have been unable to carry the program to success. The Board is demanding that Hanford get safe, reliable and fully operational capability to vitrify the tank wastes without further delay. Finally, DOE, the Administration, and Congress must provide sound management and be accountable for real progress in treatment of Hanford's tank wastes. During 1998, the Board intends to focus on tank waste issues, working toward achieving production of vitrified waste by the year 2002.

- **Protection of the Columbia River continues to be a Board priority.** A pump and treat program is necessary to help contain and remove hazardous and radiological contaminants that are now in groundwater. Much more needs to be done to understand the extent of contamination in the unsaturated zone that may be moving to the groundwater. Also, work must continue to put the reactors along the River into a low maintenance, cost saving interim safe storage status.

- **One of the major threats to the River is the K Basin spent fuel, located about 400 yards from the shoreline.** Nearly 80 percent of DOE's domestic inventory of spent nuclear fuel is in the K Basins at Hanford. The fuel storage basins were built in the early 1950s and designed to operate 20 years. The fuel rods contained in the basins are highly radioactive and many have corroded, creating a dangerous uranium-contaminated sludge in the basins and making removal very difficult. There are numerous safety and technical concerns relating to the K Basins spent nuclear fuel, including leaking uranium from the rods into the water, leakage of contaminated water from the basins into the soil, and lack of modern earthquake-resistant engineered features. The aging spent fuel rods and sludges are an unacceptable, high risk to the workers and the environment.

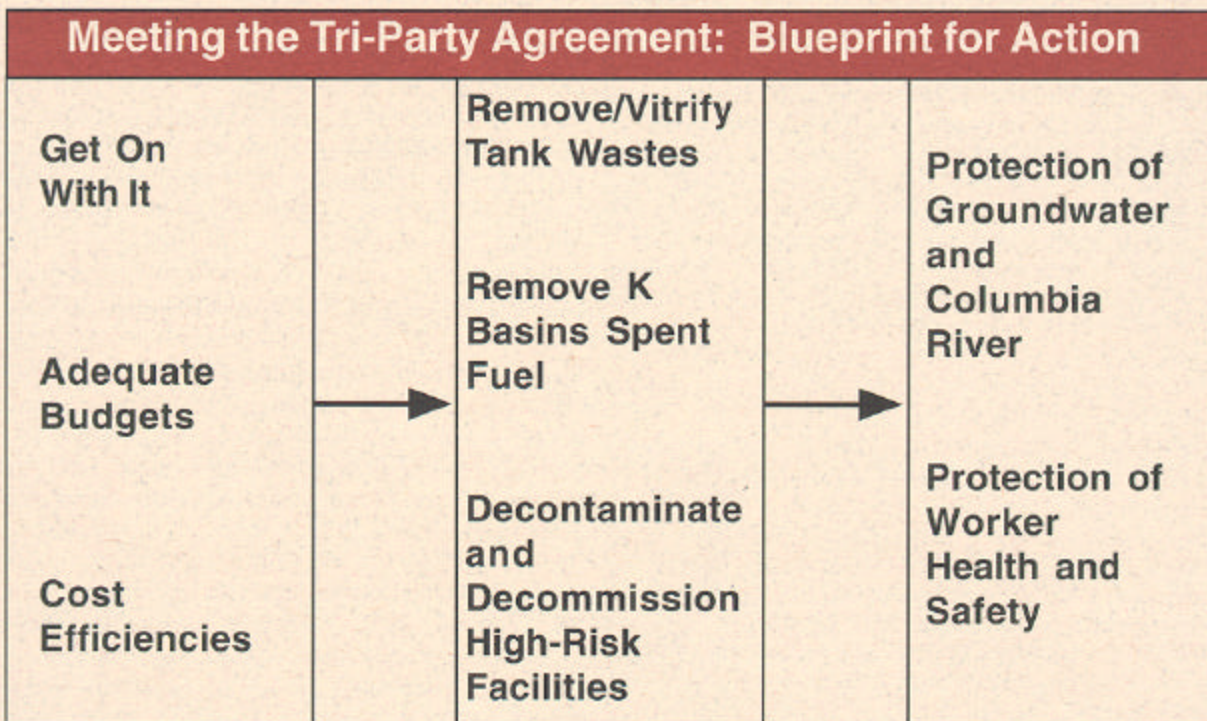
The Board is deeply concerned about the potential delays in the spent fuel removal program. It is anticipated that these problems will cause the project to fall over a year behind schedule. Cost overruns will also adversely impact other cleanup work.

- **The May 1997 explosion at the Plutonium Finishing Plant highlighted the importance of complying with hazardous waste laws and planning for chemical hazards while decontaminating and decommissioning such high-risk facilities.** These old buildings threaten worker safety and are an environmental and economic hazard for the region. Stabilizing and securing plutonium and other hazardous wastes permits the elimination of expensive security and reduces the maintenance cost. The Board believes it makes sense to get on with the job of decontamination and stabilization of the wastes in all remaining high risk facilities.

- **The Board has repeatedly advised federal and state agencies to “get on with cleanup.”** It has also affirmed support for the Tri-Party Agreement, the legally binding compact that is the blueprint for cleanup. One of the most critical components of success is the Congressional appropriation of enough funds to enable cleanup work to proceed in a cost efficient manner, avoiding false starts or stops, untimely layoffs of workers, and costly retraining. In the face of a declining federal budget, ensuring this happens is becoming increasingly difficult.
- **The Board has emphasized, and will continue to stress, that enough dollars be given to Hanford to move cleanup forward. Effective and efficient management requires a focused, streamlined decision-making process that is linked to a defined schedule, adequate funding, and a clear path forward toward achieving cleanup goals.** The Board expects that tax dollars are spent in an efficient and cost effective way, taking into account cleanup goals and the increased costs caused by unnecessary delay. The Board reminds decision makers that the nation pays now or pays more later.

Efficiencies must be implemented and programs held accountable so that a maximum amount of dollars are spent on measurable cleanup. The Board has urged DOE to find ways achieve more actual cleanup for the dollars spent and to hold contractors accountable for meeting Tri-Party Agreement milestones.

- **Worker health and safety is a very high priority for the Board.** Unless workers are protected, cleanup cannot move forward. The Board will continue to focus on ensuring that health and safety requirements are met. A safety-conscious work environment will get the job done faster, safer, and cheaper.



Meet the Hanford Advisory Board

Who is the Hanford Advisory Board?

The Hanford Advisory Board is composed of 31 members, with the seats being divided to represent 9 different interest areas. The interests include: Local Government Interests; Local Business Interests; Hanford Workforce; Local Environmental Interests; Regional Citizen, Environmental, and Public Interest Organizations; Local and Regional Public Health; Tribal Governments; State of Oregon; and Public-At-Large.

Chair



Merilyn Reeves, from Amity, Oregon, is chair of the Hanford Advisory Board. She is a former Vice President of the League of Women Voters of the United States and has been an active leader of that organization. She currently serves on the University of California Berkeley's College of Natural Resources Advisory Board and the Oregon Building Code Structure Board. She has served on a variety of federal advisory boards, including the USEPA National Drinking Water Advisory Council and the first USDOE Environmental Advisory Committee.

Local Government Interests (7 seats)

Ben Floyd, Richland, is the Hanford Coordinator for Benton County. He represents the Board of Benton County Commissioners on Hanford environment, public health and safety, and economic development issues. Ben worked two years at Hanford in the Solid Waste Management and Pollution Prevention organizations. He has been with Benton County since May of 1995. He has a B.A. from Brigham Young University in Political Science, with an environmental policy emphasis, and is currently pursuing a Master's degree in Business Administration through WSU Tri-Cities. *Alternate: Ken Bracken*



Robert Larson, Richland, is a Commissioner for the Port of Benton and a member of the Benton-Franklin Regional Governmental Council, which he represents on the Board. The Council is composed of 13 local governmental jurisdictions and follows issues of regional significance to its members. He was Director of Procurement for the Department of Energy at Richland for 15 years and previously the Director of Procurement for the DOE Project Office when the Fast Flux Test Facility was designed, constructed and operated. *Alternate: Charles Potter*

George Kyriazis, Kennewick, is the vice-chair of the Hanford Advisory Board and represents the City of Kennewick. He retired after 32 years with Westinghouse Corporation, having spent 20 of those years as a Project Manager at Hanford. He is also chairman of the Planning Commission for the City of Kennewick. George received his B.S. in Building Construction Engineering from Rensselaer Polytechnic Institute and is an active participant in a number of sports and social activities. *Alternate: Robert Noland*



History of the Board and Its Operation

After two landmark advisory efforts at Hanford, the Future Site Uses Working Group in 1992 and the Tank Waste Task Force in 1993, John Wagoner, DOE Site Manager, Mary Riveland, Ecology Director, and Gerald Emison, EPA Acting Regional Administrator, announced in July 1993 their intention to create an ongoing Hanford Advisory Board to advise them on key decisions about Hanford cleanup and the future of the Hanford site. The first meeting of the Hanford Advisory Board was held in Richland on January 24-26, 1994. Members were recommended by the regulatory agencies (EPA and Ecology) and appointed by DOE.

The Board consists of 31 members and 5 ex-officio members, each having one or more alternate. Each member is appointed by its organization. The Board has no control over which individuals are selected to represent interests on the Board. There are four public-at-large seats which represent the general public and are not associated with an organization.

In order to provide effective input, the Board studies and defines issues that require public input and are most significant. The agencies participate in an open dialogue with members concerning emerging issues and decisions that are still under early consideration. This dialogue includes identifying concerns and providing time for preparation of information and deliberations.

The Board's budget is allocated out of DOE's budget, and federal regulations apply. Board members are reimbursed for travel and other expenses, but no members, including the Chair, are paid for serving as members. The Board uses a substantial portion of its budget to fund independent facilitation and administrative support of the Board. It is currently using a facilitation/administrative support team which includes EnviroIssues in Seattle and Technical Resources International, Inc. in Richland.

A Designated Federal Official from DOE is required under the Federal Advisory Committee Act to attend all Board meetings. Hanford Site Manager, John Wagoner, has consistently designated either his Deputy Manager or the Chief Financial Officer, maintaining a constant connection with DOE at the highest levels and assuring that the Board is being heard. Both Ecology and EPA also maintain a representative at the same high level.

Commitment to Consensus

The Board committed itself in its Charter and Operating Ground Rules to operate by consensus on all but rare occasions. This commitment has served it well. By the end of Fiscal Year 1997, it had reached consensus on 75 pieces of advice. The Board's Charter recognizes several levels of consensus, from unanimous agreement, to willing to "live with,"

Independence While Making a Difference

to registering a level of dissent while not wishing to block the consensus from moving forward. There have been only rare occasions when the third level has been used and conveyed. Board members may block consensus if they believe that strongly held views of the interests they represent are not adequately addressed by a proposal put forth by other members. This has served to give a voice to different points of view and to require the Board to work harder to understand how all the views work together. It has allowed the Board to produce truly supported solid recommendations.

Using Committees

The Board has developed a collaborative way of working that makes use of a committee structure to consider more detailed information and then define and focus the issues on which the full Board should be informed and should perhaps develop advice for the agencies. Initially, five committees were created: Cultural and Socio-Economic Impacts, Dollars and Sense, Environmental Restoration, Health, Safety and Waste Management, and Public Involvement. In Fiscal Year 1996, both the Public Involvement and the Cultural, Socio-Economic Impacts Committees were dispersed among the other three committees, with the caveat that these committees can be reconvened to deal with issues as needed. In Fiscal Year 1997, the Public Involvement Committee agreed to meet again, in conjunction with the Tri-Party Agreement's quarterly public involvement meetings.

For Fiscal Year 1998, each of the four Committees has developed a work plan for the issues it will be focusing on. For the Environmental Restoration Committee, this includes vadose zone and groundwater contamination, decontamination and decommissioning, and facilities transition. The Health, Safety, and Waste Management Committee will focus on the tank waste remediation system program, the removal of spent fuel from the K Basins, waste management at the Plutonium Finishing Plant, and intersite waste transfer. The Dollars and Sense Committee will spend Fiscal Year 1998 reviewing the budget process, cost effectiveness of cleanup work, economic transition and stability, and contractual issues related to privatization. The Public Involvement Committee will continue to focus on public outreach as appropriate.

Coordinating Functions and Developing Board Agendas

The agenda for the full Board is developed primarily from the issues brought forward by the committees, but also from overarching issues brought to the Board's attention by individual members and the agencies. In Fiscal Year 1997, the Board used an Executive Committee composed of the Chair, Vice-Chair, chairs of the Dollars and Sense, Environmental Restoration, and Health, Safety, and Waste Management Committees and one other member, to serve a coordinating

Charles Kilbury, Pasco, is the mayor of Pasco and represents the City on the Board. The City's primary interests in Hanford cleanup are economic and transition issues, including a diversified economy, future land uses, and work force stabilization. He is a former Merchant Mariner, state legislator and insurance executive. He was Yardmaster for the Pasco rail yard from 1955 to 1967. *Alternate: Joe Jackson*



Pam Brown, Richland, represents the City of Richland. She deals with Hanford issues for the City and is staff person for the Hanford Communities. She was previously Land Use Planning Coordinator for Marion County, Oregon, and has managed economic development programs at the state and local levels in Washington and Oregon. Pam has a B.A. in Urban & Regional Government and a Master's in Management from Willamette University. As of December 1997, she chairs the Health, Safety, and Waste Management Committee. *Alternate: Joe King*



Jerry Peltier, West Richland, is the Mayor of West Richland, and represents that City. The City is located adjacent to Hanford and could be directly affected by site environmental releases. Jerry is currently employed by Fluor Daniel Northwest as the Manager of Quality Assurance. He is a graduate of Eastern Oregon State College and has worked for DOE contractors for the past 14 years. *Alternate: Stan Stave*



Jack Yorgesen, Matawa, represents Grant and Franklin Counties. He is a long time resident of Grant County and farms near Hanford. Jack lives near the Columbia River and is active in youth programs and the local school district. He is a Washington State Agriculture and Forestry Leadership Program Class 19 member and active in the Farm Bureau. He has an A.S. in Math at Rick's College and was in the College's Hall of Fame. *Alternate: Art Tackett*

Local Business Interests (1 seat)

Harold Heacock, Kennewick, is a member of the Tri-Cities Industrial Development Council (TRIDEC). TRIDEC is a vital non-profit, private organization that tracks economic impacts in the mid-Columbia region. TRIDEC represents the interests of the Tri-Cities in the economic impacts of "ups and downs" in federal spending at the Hanford Site. TRIDEC's particular interest is in diversifying the area's economy -- partly through privatization of some Hanford activities and services. *Alternate: Dave Watrous*



Local Environmental Interests (1 seat)

Rick Leaumont, Pasco, is a member of the Lower Columbia Basin Audubon Society. The Audubon chapter's prime interest in Hanford cleanup is to protect the longest uninterrupted stretch of the Columbia River by having the Reach declared a federal wild and scenic river and also protecting wildlife and native plants throughout the reservation. Rick has worked for the U.S. Internal Revenue Service for 24 years, 16 of them in the Tri Cities. *Alternates: Laura Zybas, Bev Weisbrodt*



Meet the Hanford Advisory Board

Hanford Workforce (5 seats)



Richard Berglund, Richland, is the Assistant Business Manager for the United Association of Plumbers and Steamfitters, Local 598. He is also President of the Central Washington Building and Construction Trades Council, AFL-CIO, representing 16,000 members. He is active in various organizations including TRIDEC, the HAMMER Steering Committee and the Yakima Democratic Club. He attended Yakima Valley Community College and Columbia Basin College.

Alternate: Bill Wilcoxson

Jim Watts, Richland, is a longtime Tri-Cities labor leader. He is a member of Hanford Atomic Trades Council, which is composed of fifteen unions that represent 3,500 workers. He has represented workers in the energy field since 1960 and is a 32-year member and current President of his union local, the Oil, Chemical and Atomic Workers Union. He is President of the union's Western District.

Alternates: Jay Rhodes and Gary Muth



Madeleine Brown, Richland, represents the non-union, non-management employees at the Hanford site. She is currently employed by Fluor Daniel Hanford as a broker for training services. Madeleine has worked at Hanford for 14 years. She is also involved with the League of Women Voters of Benton & Franklin Counties, the B Reactor Museum Association, and the Lower Columbia Basin Audubon Society. Madeleine has a Master's in Public Administration and a B.S. in Journalism from the University of Florida. In 1998, she will chair the Environmental Restoration Committee. *Alternate: David Riddle*



Wayne Martin, Richland, represents the non-union, non-management employees at the Hanford site. He is currently employed by Pacific Northwest National Laboratories and works in the Office of Environmental Science and Technology. Wayne is active as a member of the National Society of Black Engineers and the local Advisory Board for the Mathematics, Engineering, Science Achievement. *Alternate: Susan Lockband*



Thomas E. Carpenter, Seattle, is a lawyer activist who represents "whistle blowers" from Hanford. He heads the Seattle Office of the Government Accountability Project, a non-profit, public interest organization that protects the public interest and promotes government and corporate accountability by advancing occupational free speech, defending whistle blowers and empowering citizen activists.

He is a 1986 graduate of Antioch School of Law. *Alternate: Kathleen Leopold*



Tribal Governments (3 seats with 1 choosing ex-officio status)

Paul Danielson, Lapwai, Idaho, represents the Nez Perce Tribe. The Nez Perce is one of the affected Tribes that retains treaty rights on the Columbia River. The Tribe used Hanford lands as their aboriginal wintering grounds many years ago. Paul serves as the Tribe's Department Manager for Environmental Restoration and Waste Management. *Alternates: Dan Landeen, Stan Sobczyk*

and integrating role for developing issues and the agenda, and for occasionally responding to fast-breaking issues. The Executive Committee only provides advice to the full Board and does not attempt to represent its deliberations as Board consensus.

The Board's first Chair was hired from outside the Board membership. After she resigned in December 1994, the Board initiated its own process to advise DOE on selection of a new chair. It nominated Marilyn Reeves from among its own members. She was then officially appointed by DOE.

Evaluations, Workplans, and Workproducts

To improve its own functioning and understand where it was going, the Board conducted two self-evaluations, one in December 1994 and one in July 1995. A report comparing the two evaluations and the progress of the Board was prepared by the facilitation team in July 1995. The two evaluations contributed to the process of refining both WHAT the Board did and HOW it did it. The evaluations led to recognition of difficulties and improvements in its functioning, and contributed to the Board's workplans for each year. The Board reaffirmed that its work products continue to be: consensus advice, sounding board type feedback and in-depth reports.

Looking to the Future

The Board conducted another self-evaluation in October 1997, including many of the same questions in the previous self-evaluations. An ad-hoc group of Board members compiled and summarized the responses and presented the results to the Board in December. The overwhelming response from the self-evaluation was that, while the Board was a valuable component of the Hanford cleanup, it needed to refocus its efforts on major cleanup issues and not allow itself to be caught up in the details of operating and managing a complex cleanup site. The Board held a workshop in December, which allowed members to identify those major cleanup issues and suggest ways for the Board to refocus its efforts. The Board agreed to refocus its efforts on eight urgent cleanup issues (see pages 18 and 19), while still maintaining input on all cleanup-related issues. Also, the Board agreed to reexamine its committee structure and potentially make changes to it based on the identified urgent cleanup issues.

Meet the Hanford Advisory Board

Russell Jim, represents the Confederated Tribes and Bands of the Yakama Indian Nation. The Yakama Indian Nation is an affected Tribe that retains treaty rights on the Columbia River. The Tribe used Hanford lands as their aboriginal wintering grounds many years ago. Russell serves as the Environmental Restoration/Waste Management Program Manager. *Alternates: Thomas Woods, Barbara Harper*

Regional Citizen, Environmental, and Public Interest Organizations (5 seats)

Gregory deBruler, White Salmon, WA, is a technical consultant working on Hanford issues since 1989. Greg is a co-founder of Columbia River United, a grassroots citizen group that works to protect the water quality of the Columbia River. He is the author of "Hanford and the River," a reader friendly guide about the environmental problems at Hanford. He is a co-founder of Northwest Radiation Health Alliance, a citizen organization that works on human health issues relating to radioactive releases. He also serves on the Hanford Health Effects Sub-Committee. *Alternate: Cyndy deBruler*



Todd Martin, Spokane, is the staff researcher for Hanford Education Action League (HEAL). He represents HEAL, which is a non-profit, non-partisan watchdog group founded in 1984. One of HEAL's strengths is the technical expertise of its staff and its involved membership. HEAL is actively involved in public education and outreach.

Alternate: Lynne Stembridge

Paige Knight, Portland, is a member of Hanford Watch. The organization is concerned about Hanford cleanup, in particular, the health and safety of future generations and the environment. Paige is a teacher at an alternative school for at-risk youths. She also works with Nuclear Free Port Coalition in Oregon, which is a group working with long shore union members on issues of mutual interest. *Alternate: Robin Klein*



Gerald Pollet, Seattle, is an attorney and executive director of the region's largest public interest group involved in the cleanup of the Hanford site, Heart of America Northwest. The organization has focused on advancing the region's quality of life and lobbying for Hanford and U.S. Department of Energy complex clean-up funding and accountability. He is also the executive director and legal counsel for Legal Advocates for Washington. Gerry has a J.D. degree from the University of Washington School of Law and a Bachelor of Arts degree from Clark University. He serves as Chair of the Board's Dollars and Sense Committee. *Alternate: Cindi Laws*

Elizabeth Tabbutt, Olympia, is a member of the Washington League of Women Voters. She received her undergraduate degree from Oberlin College and her Masters in medical sciences from Radcliffe College. She is adjunct faculty at Evergreen State College in the environmental policy field. Betty has been involved in environmental affairs in the Pacific Northwest for 25 years. She serves as Chair of the Public Involvement Committee.



Local and Regional Public Health (2 seats)



Richard Belsey, M.D., Portland, is a retired physician and a member of the Oregon Chapter, Physicians for Social Responsibility. The organization strongly opposes nuclear weapons proliferation and has been involved in various nuclear related environmental issues. Dick's professional practice was in internal medicine, endocrinology and pathology. Through 1997, he served as Chair of the Health, Safety and Waste Management Committee. *Alternate: Dr. Ruth Sechena*

Margery J. Swint, M.D., retired in 1995 from the Occupational Medicine department of the Hanford Environmental Health Foundation (HEHF). She served as Director of the US Transuranium Registry from 1982 to 1989 and as Medical Director of HEHF from 1989 to 1992. She currently serves on the Boards of Kadlec Medical Center in Richland, Benton-Franklin Medical Society and Northwest Association of Occupational and Environmental Medicine. Margery graduated from the University of Michigan Medical School in 1961. *Alternate: Dr. Ross Ronish*



State of Oregon (2 seats)



Shelley Cimon, LaGrande, Oregon, has been a member of the Oregon Hanford Waste Board since its inception. The Oregon Board advises the Governor and the Legislature on Hanford-related activities that impact Oregon. She has degrees in art and drafting. *Alternate: Patty Yraguen*

Michael Grainey, Salem, Oregon, is the deputy director of the Oregon Department of Energy. Oregon's primary concerns with Hanford cleanup activities include protection for the Columbia River and river and overland nuclear materials and transport. Mike is an attorney. *Alternates: Mary Lou Blazek, Ralph Patt, Dirk Dunning, Ken Niles*



Ralph Patt, Salem, Oregon, served as an alternate on the Board and chaired the Environmental Restoration Committee until his retirement at the end of 1997. For the last 9 years, he has been a Hanford Hydro Geologist for the Oregon Water Resource Department/Oregon Department of Energy. He previously worked for the Desert Research Institute (University of Nevada), the U.S. Geological Survey (State of Colorado) and for a consulting firm in Bend, Oregon. He has an undergraduate degree in Geology from the University of Pittsburgh and a Master's in Hydro Geology from the University of Nevada. His background also includes 3 years in the US Army and 17 years as a professional guitarist.

Working Together

Public-At-Large (4 seats)

Norma Jean Germond, Lake Oswego, Oregon, has served on the Board of Directors for Portland Community College for 12 years and formerly served 6 years on the National Board for the Association of Community College Trustees. She is the past president of the Oregon League of Women Voters, past chair of an energy advisory committee for former Governor Tom McCall, and the public representative on the Hanford Environmental Dose Reconstruction Project. She serves on the Oregon Hanford Waste Board. Norma Jean is a longtime public activist and has coordinated several political campaigns.



Gerry Hess, Spokane, is a Professor of Law at Gonzaga University School of Law, where he teaches courses in civil litigation and environmental law. Professor Hess is the author of *Hanford: Cleaning Up the Most Contaminated Place in the United States*, 38 Arizona Law Review 165 (1996), which details Hanford's history, the applicable legal framework, and major challenges to the Site's cleanup. *Alternate: James Vache*



Gordon Rogers, Pasco, is a retired Hanford worker whose career at Hanford included broad experience in development programs and major facility projects with emphasis on safety evaluation. Since retirement he has been active in many Hanford issues. His principal interest in the cleanup program is in achieving the greatest reduction in risks with cost effective use of funds, permitting beneficial uses of the site. *Alternate: George Jansen, Jr., Martin Bensky*



Donald Worden, Wallula, farms with his two sons at Worden Farms, Inc. He is a graduate of California State Polytechnic College in meat animal husbandry. He taught vocational agriculture in Lancaster, California. He has been involved with the U.S. Department of Agriculture in Soil Conservation Service, as Emergency Loan Supervisor for the Farmers' Home Administration, and as Director on Warden Soil and Water Conservation District. For a number of years he served on the National Potato Promotion Board, a portion of the time as export chairman.

University (2 seats)

Dr. Thomas Engel, Seattle, has a doctorate in chemistry and is professor and the former Chair of the Department of Chemistry at the University of Washington, which he represents. His expertise is in physical chemistry with a background in instrument design. He also serves on the Site Technology Coordinating Group Management Council and on the Advisory Committee for the Environmental Molecular Sciences Laboratory. In 1992, he was co-facilitator of a group that explored methods for nuclear waste disposal. *Alternate: Dr. Tim Takaro*



James A. Cochran, Richland, has a doctorate in applied mathematics and is a professor and Dean of the Tri-Cities branch campus of Washington State University. He has had a long career in business and education. As a member of the U.S. DOE Community Leaders Network and TRIDEC, Jim brings both national and local perspectives to the work of the Board. *Alternate: Dr. Emmett Moore*

Ex-Officio (3 seats, biographies were unavailable for 1 of them)

John Erickson, is an ex-officio member of the Board. He represents the State of Washington Department of Health, where he is director of the division of Radiation Programs. He directs both regulatory and nonregulatory radiation programs on the Hanford site. The Department's priority for cleanup is the adequate protection of public health and safety. *Alternate: Deborah McBaugh*



Alice Q. Murphy serves as the Designated Federal Official to the Board. She was named Chief Financial Officer at the U.S. Department of Energy's Richland Operations Office in September 1995. She is a Certified Public Accountant with 22 years of DOE experience, 14 years with three field offices, and 8 years with a Headquarters element. In 1988, Ms. Murphy was selected for the Office of Personnel Management's Women's Executive Leadership Program. She was one of three women selected in the DOE Complex for this highly competitive program. She graduated from the training program in 1989 and a year later received her Master's Degree in Business Administration from the University of Bristol.

Dan Silver is the Assistant Director for Waste Management at the Washington Department of Ecology. He is a member of the management team and oversees the four waste programs, which include Waste Reduction, Recycling and Litter Control; Solid and Hazardous Waste; Toxics Cleanup; and Nuclear and Mixed Waste. Mr. Silver holds a Bachelor of Arts degree in Political Science from Kalamazoo College, Kalamazoo, Michigan, and has completed course work for a doctorate in American government at the University of North Carolina. He also studied at the London School of Economics, London, England.



Members Who Have Resigned in FY 1997

Paul Danielson
Mark Hermanson

Alternates Who Have Resigned in FY 1997

| | |
|----------------|----------------|
| Lori Ahouse | Deane Morrison |
| Alene Anderson | George Nelson |
| Max Benitz | Ralph Patt |
| Sharon Bloome | David Riddle |
| Patricia Boiko | Al Skinnell |
| Mike Garrison | Richard Steele |
| Ray Isaacson | Sandi Strawn |
| Fred Jamison | Carl Strode |
| Steve Laney | |

The Tri-Party Agencies

John Wagoner has been Manager of the U.S. Department of Energy's (DOE) Richland Operations Office since July 1990. In this position he is responsible for the Department's missions at the Hanford Site. Mr. Wagoner previously served as director and assistant director for the contract divisions at Schenectady Naval Reactors Office, Clinch River Breeder Reactor Plant Project, and DOE's Oak Ridge Operations Office, and as Deputy Director and Acting Director for DOE's Clinch River Breeder Reactor Plant Project, Project Manager for DOE's Strategic Petroleum Reserve, and as Deputy Manager for DOE's Savannah River Operations Office. He received a Bachelor of Science degree in industrial economics from Purdue University in 1962.

Randall F. Smith directs the Environmental Cleanup Office, U.S. EPA, Region 10, Seattle. His responsibilities include the cleanup of contaminated sites under the Superfund program, emergency planning and response, and oil pollution regulation and enforcement. He has been a manager in EPA's hazardous waste programs since 1985, playing a major role in federal facility cleanups and sites such as Commencement Bay and the Asarco smelter in Tacoma. In 1988-89, he led EPA's negotiating team for the Tri-Party Agreement with the state of Washington and the Department of Energy, which established DOE's multi-billion dollar Hanford cleanup. Prior to joining EPA in 1980, he worked at Battelle on problems of nuclear waste disposal. Mr. Smith has a PhD in Public Policy from Harvard.



Mike Wilson as Manager of the Nuclear Waste Program for the Department of Ecology for the past two years is responsible for the management of nuclear waste for the state of Washington. Mr. Wilson began his environmental career in 1976 doing water resources and water quality work in Yakima. He has held a variety of waste programs management positions, both from the Ecology headquarters office and Southwest Regional Office (SWRO). The last of those positions being the manager of Waste Reduction Recycling and Litter Control Program. Mr. Wilson received his Bachelor Degrees in Anthropology and Biology from Central Washington University.

The Board owes a great deal of its success to the support provided by the Tri-Party Agreement agencies. This includes a willingness to work with the Board and agency staff support in ensuring that that work proceeds smoothly and effectively. Agency staff help the Board focus its attention on urgent issues, provides the Board with up-to-date and relevant information, and guides members and the facilitation team through the many programs and personnel at the agencies. Without their support, the Board would not be the effective and efficient advisory

"The Hanford Advisory Board has provided excellent input to the Department of Energy on a number of key issues, including the establishment of an integrated vadose zone and groundwater strategy, development of the Hanford FY 1999 Budget, expansion of the ERDF and Reactors on the River TPA Change package, and the Focus on 2006 and Contractor Integration Reports. In the coming year, I look forward to working with the Board on major policy issues - as well as ensuring progress in moving spent fuel away from the Columbia River, and working toward the immobilization of wastes in the tanks. I thank the Hanford Advisory Board members for their time, dedication, and involvement."

"As 1997 turns into 1998, the Hanford cleanup is at something of a crossroads. We've continued to make excellent progress, especially in cleaning up soils along the Columbia and in dealing with Hanford's groundwater. But the road ahead looks uncertain. Progress is slower and a backlog is building up on difficult projects (TWRS, Spent Fuel) and funding for Hanford's full needs is highly uncertain. The cumulative effects of this problem will be ever more apparent in the coming year. The Board's work on a strategic look at the cleanup program could be especially critical."

"One way the Hanford Advisory Board can help move this cleanup along is to foster the notion that it is "do-able". Let's amend the old tenet 'Get on with it' to 'Get DONE with it.' The Board's greatest strength is its diversity of interest. But sometimes its cacophony of positions blurs its focus. Ecology welcomes the Board's efforts to focus on key issues and concerns that relate to 'getting done with it' on the biggest risks at Hanford. This will help 'grow' a 'can-do' attitude that will spread across the country to the other Washington."

group that it is. The following are just some of the people who support the board:

Dennis Faulk, U.S. Environmental Protection Agency
Gail McClure, U.S. Department of Energy
Nancy Myers, Bechtel Hanford, Inc.
Max Power, Washington Department of Ecology
Enid Reck, Fluor Daniel Hanford, Inc.
Barb Wise, Pacific Northwest National Laboratories