



Hanford Advisory Board Progress Report Fiscal Year 1998

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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Can the Hanford Advisory Board do more to communicate the complexities, risks, needs, and cost of cleanup and stabilization of Hanford's wastes? This was one of the challenges for the Board in 1998.



Marilyn Reeves, Chair
Hanford Advisory Board

It has long been recognized that radioactive wastes must be removed from aging underground tanks, treated, and stabilized into a safer form. Mixing these dangerous wastes into molten glass, a process referred to as vitrification, poses technical challenges, but there are operating plants in South Carolina, New York, and Europe. Much was done in 1998 to deliver the message that Hanford has no vitrification or treatment plants for tank wastes.

During the year, Hanford Advisory Board members attended many national meetings, explaining our risks and needs and learning about cleanup needs at other sites. Meeting with U.S. Department of Energy-Headquarters staff, citizens and state officials from other sites, regulators, and journalism students in San Diego, Chicago, and Nevada, members explained the Hanford story.

In official meetings with other site-specific advisory boards, every effort was made to make the expensive and complex issues at Hanford understandable. At one of these national workshops, a health official from West Valley, New York (a site that has a working vitrification plant), stated "...I consider it unconscionable that Hanford, with its many thousands of cubic meters of leaking wastes, has no treatment facility."

Yes, it is unconscionable that construction is many years away for treatment of tank wastes, and the embarrassment caused by the costly delays and mismanagement at the K Basins is unforgivable. In May 1998, at the request of a Congressional oversight committee investigating work at the K Basins, the Board explained the importance of speedy removal of spent fuel rods from the shores of the Columbia River. We also made clear that there are other urgent risks at Hanford. No other site-specific advisory board has been invited to present testimony in Congress.

The Hanford Advisory Board has persistently emphasized that there are no quick fix solutions to the vast amount of legacy defense wastes. Treatment and stabilization will be costly and there are technical challenges and many risks.

The nation has a moral responsibility to adequately fund cleanup. A former U.S. Department of Energy Assistant Secretary for Environmental Management noted, "Dealing with the environmental legacy of the Cold War is in many ways as big a challenge for us today as the building of the atomic bomb was for the Manhattan Project pioneers in the 1940s."

The Board will continue to demand cost-effective, safe, and timely cleanup and stabilization of radioactive and hazardous wastes. Pay now or pay more later. Get on with it.

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

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

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

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

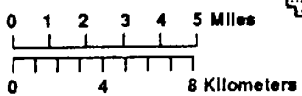
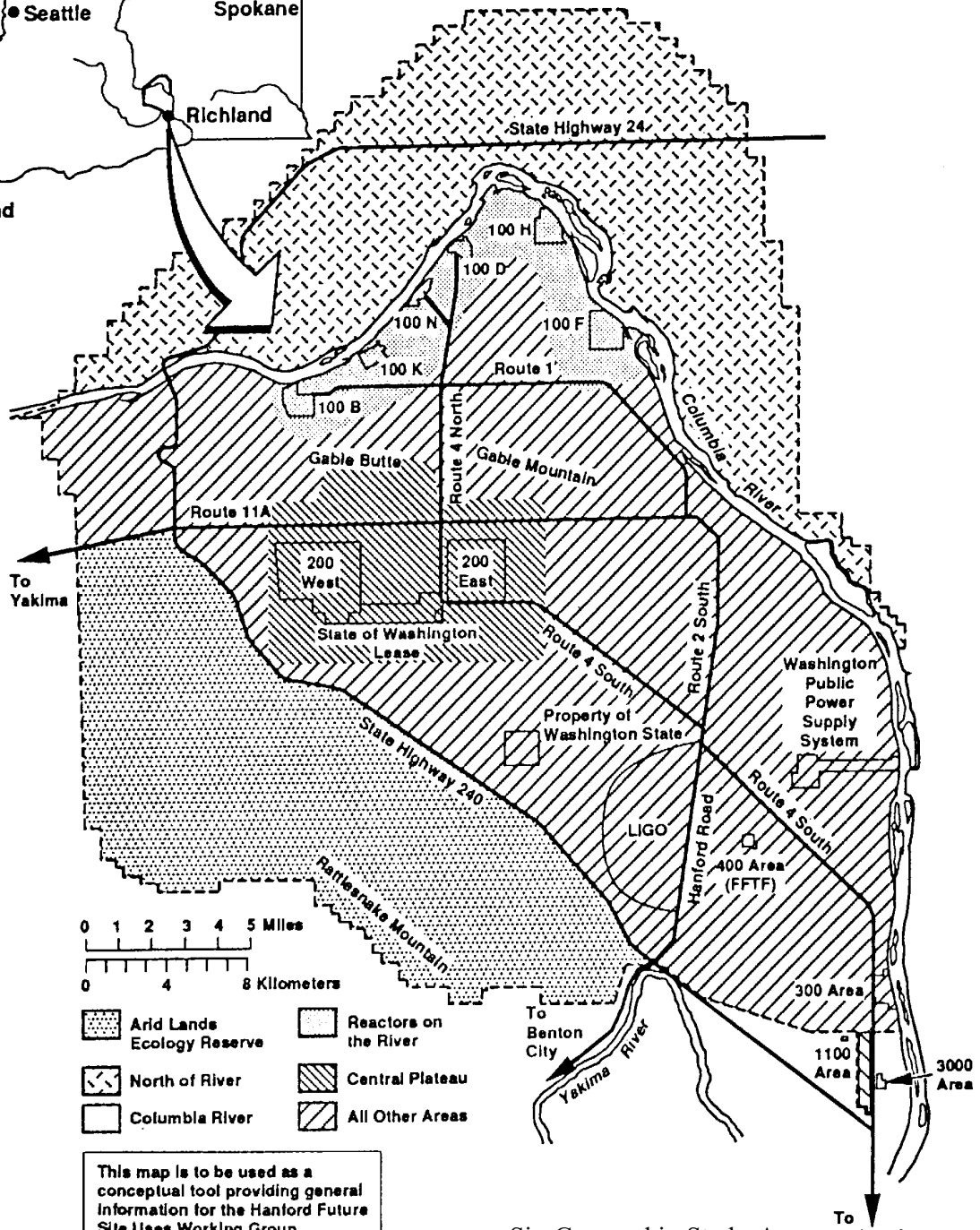
During production years, Hanford handled enormous volumes of contaminated process water. More than 450 billion gallons of low-level wastewater were piped to drain fields called cribs. Cribs were engineered to allow soil layers to filter contaminated wastewater, and trap radionuclides before the wastewater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

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

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

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

This fourth progress report of the Hanford Advisory Board highlights the work the Board undertook in Fiscal Year 1998 (FY98) 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 1999 (FY99). A list of Board members and their interests and expertise are also highlighted along with a summary of the Board's history and operations.



- Arid Lands Ecology Reserve
- Reactors on the River
- North of River
- Central Plateau
- Columbia River
- All Other Areas

This map is to be used as a conceptual tool providing general information for the Hanford Future Site Uses Working Group.

ERE/TRI-GEO.DWG

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

The cleanup program at Hanford faced significant challenges in 1998. At its December 1997 meeting, the Board identified urgent cleanup issues that deserved special consideration. Throughout 1998, the Board spent a majority of its time on these issues, including meetings in which members listened to technical, cost, and schedule information on a program, and then focused on discussing issues and concerns related to the project. Below is a brief description of the major issues tracked by the Board in 1998. The following pages highlight what the Board accomplished on each of the issues, what progress was made, and challenges and responsibilities that remain for the Board, regulators, the Hanford Site, the people of the Northwest, and the United States government.

- 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.
- 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, 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 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 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 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 budget, ensuring this occurs 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 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.
- 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.

What is the Issue?

The mission of the Tank Waste Remediation System (TWRS) is to “store, treat, immobilize, and dispose of the highly radioactive tank waste in an environmentally sound, safe, and cost-effective manner.” The TWRS program continues to top the priority list for immediate attention at Hanford. There are 54 million gallons of radioactive waste in 177 single and double-shell tanks, which will be treated through a process known as vitrification. Most of the single-shell tanks have already exceeded their lifespan and at least 67 single-shell tanks are known or suspected to have leaked an estimated one million gallons of waste into the groundwater.



Board Action in FY98

The Board spent much of the year reviewing the TWRS program and communicating its most important message to Congress, DOE, and the region’s stakeholders: **Hanford must have treatment capability.** After an evening session open to the public and a two-day workshop in February 1998, over 40 Board members and alternates signed a statement to DOE and Congress which stressed the urgency of obtaining treatment capability. There continue to be concerns about the feasibility and cost-effectiveness of the current approach of using private financing. The Board is united in agreeing that treatment facilities must be built. Several information sessions were held throughout the year to help Board members and the public understand the technical difficulties facing the program.

“The Board must focus, not on whether privatization is the right vehicle, but what will it take to get treatment capability at Hanford.”
 Todd Martin, Hanford Education Action League

Progress in FY98

- A privatization contract to treat the tank waste was signed between BNFL, Inc., and DOE. BNFL, Inc., is currently in a 24-month design phase, which will complete 30% of the design of the treatment facility, begin construction preparations, and obtain the necessary private financing.
- Construction was finished on a transport system to move waste out of the 200 West area to the 200 East area. The 6.5-mile transfer line will take waste from the leaking single-shell tanks to double-shell tanks, where it will be stored until treated.
- Preparations were finalized to transfer radioactive sludges from Tank C-106, the highest heat generating single-shell tank, which will move the tank waste to a safer storage container with a ventilation system.

Challenges for FY99

- Completion of the BNFL, Inc., 24-month design phase and a decision to move forward with construction.
- Agreement on Tri-Party Agreement milestones for the TWRS program.
- Continued progress toward ensuring tank waste will be ready to be given to BNFL, Inc., for treatment.
- Remove waste from high-heat generating single-shell Tank C-106.

In July 1998, DOE sent a report to Congress explaining the decision to choose one contractor, instead of two, to build vitrification facilities at Hanford. The Board spent an extensive amount of time reviewing the report, trying to understand the basis for the decision, and then reviewing the terms of the BNFL, Inc., contract.

The Board took an additional step in addressing TWRS issues by creating a separate committee to address this challenging program. The committee will focus on Tri-Party Agreement proposed changes, design, regulatory submittals, and negotiation of the contract for construction and operation of a vitrification plant. The committee is working to define solutions and provide advice to assist the Tri-Party Agreement agencies in moving forward in these areas.

What is the Issue?

Inspection of the soil and groundwater near the tank farms has confirmed that wastes leaking from the tanks are now close to or have already reached groundwater, which eventually will flow into the Columbia River system. To reach groundwater, these contaminants had to travel through a thick, 260 foot vadose zone, which is the unsaturated soil between the ground surface and groundwater. In FY98, DOE began integrating groundwater and vadose zone research across all programs at Hanford by considering discharges and leaks from the high-level radioactive waste tanks, along with all other relevant contaminant discharges to the vadose zone. Future impacts to the Columbia River, as well as on the health and safety of the public need further assessment.

Board Action in FY98

In FY98, DOE began development of an integrated site-wide plan to characterize the vadose zone and groundwater and to assess all relevant site programs and plans which might impact the groundwater. Through many presentations and one-on-one meetings with DOE and contractor staff, the Board attempted to gain a better understanding of how DOE will address this urgent problem.

The Board had previously made a series of recommendations on vadose zone characterization. In December 1997, the Board reiterated that DOE must get on with vadose zone characterization and use slant

“We don’t have enough data to do a risk assessment. The best thing to do is to get on with it and get the data.”
 Ralph Patt, State of Oregon

Progress in FY98

- Pump and treat systems processed over 270 million gallons of groundwater contaminated with hazardous and radioactive waste.
- A plan for the groundwater/vadose zone integration project was completed and an expert panel established.
- 669 tons of waste were removed from the 100 and 300 Areas remediation sites and delivered to the Environmental Restoration Disposal Facility for disposal.

Challenges for FY99

- Continued assessment and research of the contaminants in the vadose zone and groundwater across the site and identification of funding sources.
- Elimination and containment of all source terms as quickly as possible.

drilling for follow-up boreholes to supplement the results of previously-drilled boreholes. Recognition that tank leaks have reached groundwater added urgency to addressing this issue. The Board also supported a process that involves stakeholders, tribes, and regulators in the development of the vadose zone characterization plan.

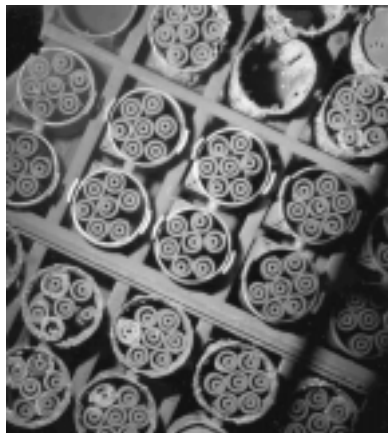
After offering its advice, the Board received updates on the groundwater/vadose zone integration strategy at its June and September meetings. Based on discussion during those meetings, Board members continue to be concerned about adequately involving stakeholders, tribes, and regulators in the development of the strategy.



What is the Issue?

Almost 80% of DOE's national inventory of spent fuel is housed in the K Basins at Hanford. The K Basins are located only 1,000 feet from the Columbia River and have leaked more than 15 million gallons of waste into the ground. The facilities were constructed in the early 1950s and designed to operate for 20 years. The long-term goal calls for the removal of spent fuel from the K Basins in 2000, all spent fuel to be placed in dry storage in 2001, all sludge removed in 2001, and all other Hanford spent fuel in dry storage by 2003.

In FY98, the spent nuclear fuel program was plagued by schedule delays, escalating costs, management problems, and complex technical issues and thus received attention from the highest levels of the Defense Nuclear Facilities Safety Board, Congress, DOE, and the Board. Also, after two and a half years of negotiations on enforceable milestones for the project, EPA, Ecology, and DOE entered into a formal dispute resolution process.



Board Action in FY98

At the beginning of the fiscal year, the Board learned that the original schedule to begin fuel retrieval in late 1997 was delayed to late 1999. The estimated cost of removing spent nuclear fuel from the K Basins also escalated from \$740 million in 1995 to \$1.4 billion in 1998. These schedule and cost overruns were attributed to many factors, primarily poor management, change of contractors, unresolved technical issues, and a failure to monitor costs.

To better understand these issues, the Board held an evening session open to the public and a two-day workshop in April 1998 that focused on the cost, schedule, management and technical issues surrounding the spent fuel program. During this workshop, the Board approved a letter requesting additional information on the corrective actions for these issues.

“The Board will focus on these issues: implementation of management improvements; monitoring progress on the project management controls; milestone application; project cost; and safety control.”
Harold Heacock, Tri-Cities Industrial Development Economic Council

Progress in FY98

- In response to cost overruns and management problems, EPA assumed regulatory responsibility over spent fuel removal.
- New Tri-Party Agreement milestones and specific changes to improve program management and schedules were agreed to by the Tri-Party Agreement agencies.
- Characterization of the spent fuel and sludge in the K East Basin was completed in FY98.
- The Canister Storage Building neared completion.

Challenges for FY99

- Successfully implement corrective actions for management problems agreed to by the Tri-Party Agreement agencies in FY98.
- Continue to meet Tri-Party Agreement milestones.
- Bring down the current cost estimates below the \$1.4 billion level.
- Completion of four major safety analysis documents.

In May 1998, Marilyn Reeves, Chair of the Board, testified to a House Congressional oversight committee investigating cost overruns and charges of mismanagement. Her testimony stressed the importance of spent fuel removal for the Northwest citizens and the need to ensure that the cost and schedule issues were addressed.

In June, members of the new contractor management team met with the Board and outlined their commitment to the success of the spent fuel program. Also explained were the corrective actions which would be taken to bring down the estimated costs, begin fuel removal as soon as possible, and address the technical challenges.

What is the Issue?

The Tri-Party Agreement was signed in 1989 and was the first of its kind. It is a legally enforceable document and is based on the Federal Facilities Compliance Act. The intent of the Tri-Party Agreement is to bring Hanford into compliance with environmental laws, including the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), and Washington State hazardous waste regulations.

The main goals of the Tri-Party Agreement are to bring waste management activities up to current practices; safely dispose of and treat waste; and clean up where contamination has reached the environment. The Tri-Party Agreement establishes milestones for cleanup by outlining deadlines for completion of major activities. The Board has focused its attention on compliance with the Tri-Party Agreement to achieve cleanup of Hanford.

Board Action in FY98

In November 1997, the Board received an overview of major Tri-Party Agreement milestones and reports from the Tri-Party Agreement agencies on the effectiveness of past Board advice. Based on this information, the Board agreed to focus its attention in FY98 on ensuring compliance with existing Tri-Party Agreement milestones and assisting the agencies in reaching agreement on new milestones for the most critical programs, including the Spent

“The Board is on record as opposing changes to the TPA based on inadequate funding. However, the Board does support changes based on new information which will allow us to achieve cleanup faster and better.”
 Dr. Richard Belsey, Physicians for Social Responsibility



Progress in FY98

- A change to the Tri-Party Agreement redefined how waste sites will be investigated in the 200 Areas. The approach includes investigating a representative number of sites of each waste group to make a decision on the way to remediate those sites. Additional site-specific characterization work would be performed as part of the design or implementation of the remediation for each site.
- The Tri-Party Agreement agencies reached agreement on enforceable milestones for the spent nuclear fuel program that established new milestones and specific changes to improve program management and schedule.

Challenges for FY99

- The privatization contract signed by DOE and BNFL, Inc., for the vitrification of tank waste in FY98 will require agreement on new Tri-Party Agreement milestones.
- Ensuring adequate funds are provided to meet all regulatory requirements.

Nuclear Fuel program and Tank Waste Remediation System.

In response to a proposed amendment to the Tri-Party Agreement regarding waste site investigations in the 200 Area, the Board offered advice noting that the proposed changes appeared to be a reasonable approach to streamline characterization needed prior to remedial decisions on 200 Area waste sites. The Board noted the proposed amendments commit DOE to develop an implementation plan to lay the foundation for further work and urged that the parties involve stakeholders and tribal nations in development of the implementation plan. The Board also recommended that a clear process for making decisions on remedial actions be identified in the implementation plan.

Because of the urgent nature of getting Hanford’s tank waste treated, the Board created a tank waste treatment committee to focus specifically on this issue and assist the Tri-Party Agreement agencies in reaching agreement on new milestones for this program.

What is the Issue?

It is imperative that funding be provided to move cleanup forward in a timely and cost-effective manner. In FY98, Hanford continued to receive flat budget allocations, with no adjustments for inflation and in the face of increased need for capital expenditures for critical projects, such as tank waste treatment and spent fuel removal. Also, the site faced increased costs from a number of programs and new challenges, such as the groundwater/vadose zone integration program which further constrained the already tight resources.

Board Action in FY98

The Board spent considerable time discussing the budget and how best to allocate resources to ensure that progress is being made in cleanup. Through several pieces of advice, the Board stressed the need for increased efficiencies and the obligation of DOE to request adequate budgets to ensure compliance with all laws, regulations, and the Tri-Party Agreement.

In December 1997, the Board adopted advice urging DOE to fund an accelerated interim safe storage project in Hanford’s decontamination and decommissioning budget. This would efficiently employ a trained, motivated, and experienced work force and minimize the need for access to shutdown reactors. It would also significantly reduce surveillance and maintenance costs and the potential for releases to the environment and save costs of severance, rehiring, and retraining for the decontamination and decommissioning work force.

Also in December 1997, the Board urged DOE to extend the deadline for input to the site’s FY2000 budget planning process in order to allow time for additional stakeholder input. The Board also advised that public comment should be allowed simultaneously on both the Paths to Closure (2006 Plan) document and the FY2000 budget.

“Hanford was a military mission and as a result it should continue to be a military mission until it is cleaned up. When we go to war we take away and bury the dead and it is time we buried the dead waste at Hanford.”
George Kyriazis, City of Kennewick

Progress in FY98

- Opportunities were provided for stakeholder involvement in the development of the FY99 and FY2000 budgets.

Challenges for FY99

- Continuing to keep programs on schedule despite a flat budget.
- Ensuring that Congress, the Administration, and DOE continue to place a high priority on the cleanup program and provide the resources necessary to make progress.
- Improved contractor efficiencies and DOE management.

In FY98, the Board spent a number of committee and Board meetings discussing and preparing advice on the FY2000 budget. While the Board’s advice focused on all the major programs at Hanford, it included the following three overarching themes on the budget:

- DOE is obligated to request full funding from Congress, the Office of Management and Budget, and the Administration for all legally required cleanup and safety activities at Hanford for each fiscal year.
 - Cleanup funds should not be used for non-cleanup activities.
 - Level funding as proposed in Accelerating Cleanup - Paths to Closure (formerly the 2006 Plan) document or reduced funding as proposed in the Office of Management and Budget targets will not be adequate.

The Board also adopted additional advice in June 1998 on the FY2000 budget, outlining continuing concerns about the level of funding for critical cleanup programs and public involvement activities.

What is the Issue?

It is imperative that tax dollars are spent in an efficient and cost effective way, taking into account cleanup goals and the increased costs caused by unnecessary delay. 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. Efficiencies must be implemented and programs held accountable so that a maximum amount of dollars are spent on measurable cleanup.

Board Action in FY98

In November 1997, the Board urged DOE to structure its performance agreements with Fluor Daniel Hanford, the Project Hanford Management Contractor, to better provide incentives and disincentives for completing work, a direct link between performance agreements and Tri-Party Agreement milestones, and real incentives for creating jobs in the Tri-Cities region that are not directly dependent on Hanford.

The Board spent time at its April 1998 meeting reviewing the status of the FY97 performance fee determination as well as the progress being made on the FY98 performance agreements. An update was also heard on the status of the Paths to Closure (2006 Plan) document.

In June 1998, the Board sent a letter to DOE regarding the proposal to revise the fee policies and related procedures for management-and-operations and other

“The key to a successful cleanup program is to guarantee that more money goes to real cleanup and less to overhead costs.”
Gerry Pollet, Heart of America Northwest

Progress in FY98

- The Board was able to provide extensive input into the FY99 performance agreements through an interactive process with DOE.
- There were \$250 million cost savings in overhead and indirect costs.
- The FY99 performance agreements were more directly tied to Tri-Party Agreement milestones, ensuring that work being performed was linked to regulatory requirements.

Challenges for FY99

- Continued emphasis placed on correlating performance fees to meeting Tri-Party Agreement milestones.
- Continued reduction of overhead and indirect costs.
- Increased efficiencies in all cleanup programs.

contracts. The Board expressed its opinion that all performance-based contracts entered into by DOE should send the message that services will be paid for only when excellent performance is provided. At the same meeting, the Board heard the final results of the FY97 performance fee award, the progress being made on the FY98 performance agreements, and how input could be provided into the FY99 performance agreements.

Then at its September meeting, after extensive discussion in committee meetings with DOE, EPA, and Ecology, the Board offered advice on the FY99 performance agreements. That advice centered around the following theme:

Contract incentives, both positive and negative, are what drive progress. Where incentives have been well-defined, the contractor

has demonstrated better performance. Where incentives have been ill-defined, there has been poor performance.

What is the Issue?

Improving conditions related to the safety and health of the workers and public around the Hanford site is a top concern of everyone involved at Hanford. Issues such as acquiring accurate and current safety data, ensuring workers feel safe in bringing forward accident reports, taking a proactive approach towards safety, and ensuring that all subcontractors are covered by safety guidelines, faced the site during FY98.



Progress in FY98

- DOE and contractor statistics show that worker activity is up and lost workday rates are down. Workman’s compensation costs are down also, suggesting that fewer safety issues arose in FY98.

Challenges for FY99

- Discovering methods to promote a more effective safety culture at the Hanford Site.
- Ensuring that health and safety is incentivized in the Project Hanford Management Contract, and those incentives do not have unintended consequences such as underreporting.

Board Action in FY98

In November 1997, the Board discussed the need for improved worker health and safety on the Hanford site. This “framing of the issues” resulted in advice in December which stressed the following points:

- There should be visible management and worker accountability for accidents.
- No retribution against employees for reporting incidents should be allowed.
- Incentives for improving safety performance should be structured to encourage open and straightforward identification of safety concerns within both the DOE and contractor organizations.

“The heart of integrated safety management is engaging workers to identify safety issues and how to address them.”
 Pam Brown, City of Richland

- Environmental, safety and health performance objectives and agreements should be incorporated at a significant level into incentive fee arrangements with the contractors.
 - DOE should reaffirm and accelerate its commitment to establishing independent regulatory oversight of health and safety conditions at the Hanford Site.
 - Management should implement a safety-conscious work environment that promotes reporting of employee safety and health concerns.

What is the Issue?

In the DOE complex, there are tons of hazardous and radioactive waste that must be treated and placed into long-term storage. The costs of treating and storing waste has led to proposals to consolidate some waste at one or several sites throughout the country for treatment and packaging for long-term storage. These proposals raise many concerns for those living near cleanup sites and along a route that is used for the transportation of waste. Thus, the Board has taken a more active role in meeting with other sites, reviewing and responding to programmatic planning activities, and focusing on decisions which will have a national and regional impact.

Board Action in FY98

DOE published several planning documents in 1997 that caused confusion about what each was meant to accomplish and how they were integrated with existing legal requirements such as the Tri-Party Agreement. In November 1997, the Board asked DOE to provide a clear and concise explanation of these planning documents, including the Paths to Closure (2006 Plan), Contractors Integration Report, and the Waste Management Preliminary Environmental Impact Statement. The Board noted that such an explanation should include the relationships between them and plans for coordinating their assumptions and recommendations, review and public comment, and implementation or utilization.

As a result of a court ruling regarding the potential disposal of DOE wastes in unregulated private waste disposal facilities, the Board offered advice to DOE in November 1997. This advice stressed the fact that consideration of unregulated, offsite private facilities for disposal of DOE wastes was an unacceptable setback to ending DOE's self-regulation of its waste disposal. The Board urged and DOE agreed to present a vigorous defense, including a clear record of (1) the need for external regulation of any offsite waste disposal and (2) the lack



"The most urgent risks at Hanford must be addressed before any discussion can occur on the transfer of waste."
Shelley Cimon, Oregon Hanford Waste Board

Progress in FY98

- In FY98, the League of Women Voters hosted a series of intersite workshops that allowed the many stakeholders from around DOE sites to meet with each other and discuss their own issues and concerns regarding intersite waste transfers.

Challenges for FY99

- Supporting efforts to increase participation by interested members of the public in the discussion and decisions surrounding intersite waste transfers.
- Changes in leadership at DOE must not impede public involvement processes as important decisions are being made.

of NEPA review of offsite waste disposal at unregulated facilities. DOE subsequently appealed the ruling and succeeded in getting it overturned.

Every year, the chairs of the site-specific advisory boards meet to discuss both how the boards are working and any major issues that are facing the entire complex. Issues discussed at the site-specific advisory board attended by Marilyn Reeves, Board Chair, and George Kyriazis, Board Vice Chair, included equity across the complex and low-

level waste. The chairs present at the meeting agreed that more interaction between the boards was beneficial to all and scheduled a future meeting to focus on transportation of waste with additional ones to follow.

A meeting was held in Las Vegas regarding the closure of tanks across the DOE complex. Members of the Board attended the meeting, which focused on the closure of leaking tanks, the reduction of liquids in the tanks, and the subsequent disposal of waste. The meeting highlighted the fact that tanks being closed (e.g., three tanks have been closed at Savannah River), but there are unresolved regulatory issues with these.

There was also recognition by other sites of the complexity facing the tanks at Hanford, both in terms of treatment and ultimate disposal.

What is the Issue?

It is critical that the Hanford Site is fully involved in national decision-making processes so that the issues and concerns at Hanford are fully considered. To help achieve this, members of the Board made a concerted effort to participate in meetings with other site-specific advisory boards, DOE officials, the public, and technical experts.

Board Action in FY98

October 1997: In October 1997, Board members participated in a series of “national dialogue” pilot workshops in the Pacific Northwest which were designed to educate the public on the issues regarding intersite waste transfer and start a dialogue on some of the upcoming decisions. However, the Board as a whole felt that the workshops were only a first step to a national dialogue and much more work would need to be done to truly get public input into the process.

December 1997: The Board co-sponsored the Health of the Site meeting, which provided an opportunity for presentations of research on community, ecological, and occupational health. There was strong support for continuing and beginning public health studies. Participants expressed concern about gaps in existing ecological and occupational health data.

February 1998: The Board was visited by members of the Idaho Citizens Advisory Board, including Chuck Rice, chair, and members Maxine Dakins and Dieter Knecht. They shared with the Board a brief history of the Idaho site, the Citizens Advisory Board, and some of the issues facing the site. A major topic of the Board meeting was the tank waste treatment at Hanford, which is also an issue facing the Idaho site.

April 1998: The Board was visited by the facilitators of the Pantex site-specific advisory board, James Hallmark and Jennifer Kunz. They provided the Board with a brief history of the Pantex board, how it operates, and some of the issues facing the site.

May 1998: Marilyn Reeves was invited to provide testimony to the U.S. House of Representatives, Commerce Committee, Subcommittee on Oversight and Investigations regarding cost overruns, schedule delays,

and technical challenges facing the spent nuclear fuel removal program at Hanford. The testimony provided by Ms. Reeves focused on the importance of spent fuel removal to the citizens of the Northwest and the need to ensure that the cost and schedule issues were addressed by DOE and its contractors. The hearing was broadcast on CSpan.

June 1998: Several representatives from the Board attended intersite waste transfer workshops held in Chicago and San Diego. The purpose of the meetings was to share information on the sites and enable discussion on differing ideas and perspectives between DOE and stakeholders concerning waste transfer. The major issue raised at the workshops regarded the need for DOE to address the most urgent risks before transferring waste. The workshop highlighted the enormity of the problems of legacy waste across the nation.

August 1998: Some members of the Board attended the Nevada Low-Level Waste Forum in Las Vegas, sponsored by the Nevada Test Site’s site-specific advisory board. The objectives of the meeting included establishing communication between the site-specific advisory boards regarding low-level waste. Information was presented about the DOE low-level waste program and the current low-level waste at each of the sites.

October 1998: Members of the Executive Committee met with DOE Secretary Richardson to discuss urgent issues pertaining to Hanford, including protection of the Columbia River, adequate funding for cleanup, tank waste treatment, public and worker safety, and the groundwater/vadose zone integration project.

U.S. Department of Energy

How the Board's Advice Helped or Did Not Help

In Fiscal Year 1998 regulators and the Hanford Advisory Board (HAB) focused on Spent Nuclear Fuel (SNF) Project issues, bringing additional pressure on the Project to move forward quickly to close outstanding technical and contractual issues. The Chair of the HAB was asked to speak at a Congressional Hearing in May and provided an honest and clear expression of frustration with the lack of progress. Tri-Party Agreement (TPA) negotiations also provided a forum for demanding action and the final milestones reflect that sense of urgency.

HAB advice in FY98 was important/helpful in guiding the Department of Energy (DOE) Richland Operations Office (RL) to include the necessary cultural foundations of Worker Involvement and the need for inclusion of "Safety Conscious Work Environment" concepts into the development of an Integrated Safety Management System (ISMS) at Hanford.

The HAB's advice was also useful in helping DOE identify public involvement processes for decisions involving potential future intensive transfers of nuclear waste and materials, and a public involvement process for development of the Groundwater/Vadose Zone Integration Project. DOE strives to involve stakeholders in important decisions and the HAB's advice on how to accomplish this is valuable.

It would be helpful if the Board worked more closely with DOE-RL when developing HAB agendas to ensure that the DOE and contractor staff who are asked to participate in HAB meetings are in fact the most appropriate for the subject matter to be discussed. DOE has growing concern regarding the increasing amounts of staff time required to respond to inquiries and prepare for participation in various presentations and discussions. Frequent requests for development of information and invitations to appear before the HAB and/or its committees are directed to a specific individual instead of following HAB protocols for obtaining DOE and contractor support.

The HAB advice on the FY2000 budget was very helpful in expressing concern over funding for high-risk, urgent clean up projects and meeting compliance agreements, as well as concern for funding for activities not directly linked to clean up, such as

down-winder litigation, payments-in-lieu-of-taxes, grants, the HAB itself, and document declassification. Since DOE is often faced with limited funding, RL would like to have additional advice on prioritization of work to be accomplished at lower funding levels.

For the Future - Hot Topics

In FY99 our hot topics include SNF which will center on the installation of three nuclear systems into the K-West Basin, two process systems into the Cold Vacuum Drying Facility (CVD), complete all construction activities on the Canister Storage Building (CSB) and CVD, and submit for review and approval four Final Safety Analysis Reports. All this is being done while the project puts additional focus on start-up activities.

Environment, Safety, Health in FY99 and FY00 is another Hot Topic:

- Continued implementation of ISMS
- The Environmental Protection Agency's (EPA) Multi Media Review/Report and potential penalties
- Quality Assurance (QA) deficiencies at Fluor Daniel Hanford
- TPA Milestone Issues
- Tank Waste Remediation Systems/Office of River Protection (TWRS/ORP) Privatization (both regulatory interface issues and TPA milestone issues)

In FY00 the SNF project will be installing three nuclear systems into the K-East Basin, 1-2 additional process systems into the CVD and performing a management self-assessment. The Operational Readiness Review (ORR) for the project will be conducted near the end of the FY.

Continued HAB involvement is also desired in the development of the Office of River Protection and how these interfaces with other DOE projects will take place, as well as ensuring progress with the privatization contract and tracking of FY99 and FY00 deliverables.

The Groundwater/Vadose Zone Integration Project will require some guidance from the HAB as it continues to identify areas that need to be integrated. The HAB can help the project by providing guidance on integration opportunities, funding priorities, and policy issues related to risk assessment and future land use.

The Canyon Disposition Initiative (CDI) will need HAB advice and support if a decision is to be made by 2001. HAB advice is needed on 1) should the canyons be

decommissioned in place or removed and the waste put into a shallow land disposal in the 200 Area, and 2) can the canyons be used to dispose of some other types of waste assuming the decision is to decommission them in place.

Finally, DOE desires continued HAB involvement in budget development and would like advice on prioritization to ensure that the highest priority work gets done first.

U.S. Environmental Protection Agency

The following are excerpts from a speech made by Randy Smith, Director of the Environmental Cleanup Office, to the Hanford Advisory Board at its December 1998 meeting. Randy has taken a position as Director of the Office of Water, and will no longer be representing EPA to the Board.

The Board and its predecessors—the Tank Waste Task Force and the Future Sites Uses Group—have provided a critical setting where relationships between EPA, Ecology and DOE have gotten worked out. That has led us to think about what the Board has done to influence EPA. To begin, we have gotten perspective from you. We would venture to say the State and DOE, can get very narrow and focused on viewing a problem from one angle. Together you give us a perspective to problems that helps us see them in more richness. In addition, you put your values on the table. Typically, agencies are not comfortable with values as it is not cool in a bureaucracy to put your values out in the open. People on this board have been willing to do it and your values have helped move cleanup forward.

Your common sense has been very helpful. Again, at the agencies, we tend to focus on an issue and get buried in the depths of it. Let's go back to the Tank Waste Task Force when many of you were assigned to the issue of helping us determine how to deal with the tanks and the number one piece of advice was "get on with it," stated that simply and that profoundly. It gave an energy and a kick in the rear to those of us that were in the middle of cleanup and you as Board members have continued to do that when needed.

You've also given a depth to problems, there's a depth to the way the Board attacks problems. This is not a group that is satisfied to just stay an inch deep, to toss a

slogan out. There is a depth to what we hear from you, and that depth has been profoundly helpful. Finally, the last thing that the Board and you individually are good at is bringing your passion to issues. If you disappeared and left this to the DOE, the contractors, EPA and Ecology, passion would not be something that these bureaucracies are good at. But passion is crucial on a really difficult issue like Hanford. Although you have been chartered to give advice to the agencies, I want to take this opportunity to give the Board some advice. And I'll just say, "keep it up." We know this can be very difficult. Again, if we go back to thinking about the overwhelmingness of Hanford, it is very hard to keep up the kind of effort needed on this issue. We know when we think about these issues of dealing with toxics that will be dangerous for many years, and that our children's' children will be still working on these issues. That can be discouraging to you as an individual. Always remember you are making a difference and just "keep it up."

Washington Department of Ecology

We commend the Board for focusing its activities on a few key Hanford issues during 1998. The Board's concentrated oversight and pressure on the K-Basin Spent Fuel project led to course corrections and improvements that probably would not have occurred without such oversight. The Hanford Advisory Board also carried Hanford's unique issues and concerns into constructive dialogue with stakeholders from other DOE nuclear sites. Finally, the Board organized itself to deal aggressively with issues surrounding tank waste treatment.

The major task we see for the Board in 1999 is to help assure progress toward retrieval and treatment of Hanford's tank wastes. The course we are on will not succeed without the engagement and common sense of the stakeholders participating in the Board. We need the Board's help in charting the course. The Board can also play a valuable role by driving groundwater and vadose zone study activities toward long-term protection of the Columbia River. Finally, 1999 looks like the year when Hanford and DOE solid waste treatment, storage and disposal will require some focused attention if DOE is to arrive at better national and Hanford site decisions.

The Board has identified urgent cleanup issues that deserve special consideration in FY99 while maintaining input on all cleanup-related issues. The major issues identified by the Board are:

- **Tank Waste Retrieval and Vitrification** - Removal of high-level radioactive tank wastes is urgent and behind schedule. Hanford currently has no capability to put these wastes into a safer form. Many of these huge tanks 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. During 1999, the Board intends to focus on tank waste issues, working toward achieving production of vitrified waste.
- **Protection of the River and Groundwater** - Protection of the Columbia River continues to be a Board priority. A pump and treat program is necessary to 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 (vadose) zone that may be moving to the groundwater and then to the River.
- **Removal of Spent Fuel, Water, and Sludge from K Basins** - One of the major threats to the River is the K Basins spent fuel, located about 400 yards from the shoreline. The aging spent fuel rods and sludges are an unacceptable, high risk to the workers and the environment. The Board is deeply concerned about potential delays in the spent fuel removal program as well as cost overruns that will adversely impact other cleanup work.
- **Cleanup of High-Risk Facilities and Emergency Response** - The May 1997 explosion at the Plutonium Reclamation Facility highlighted the importance of complying with hazardous waste laws and planning for chemical hazards while decontaminating and decommissioning such high-risk facilities. 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. Safe disposal of these wastes is of critical importance, and numerous options for disposal, including the canyon disposition initiative, must be explored.
- **Management for Results** - The cleanup program at Hanford faces challenges in 1999. But whatever the challenge, cleanup work requires more emphasis on decision-makers in place at DOE-Headquarters, results-oriented management, streamlined decision-making, improved safety performance, and greater accountability for both DOE and its contractors. As part of this, the Board will continue to examine DOE decision-making on intersite transfers of waste and materials and the associated transportation.
- **Predictable and Adequate Cleanup Budgets** - 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 stable budgets 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.
- **Protection of Worker Safety** - 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, including feedback to the Integrated Environmental, Safety, and Health Management System, will get the job done faster, safer, and cheaper.
- **Tri-Party Agreement and Treaty Compliance** - 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. The Board has urged DOE to hold contractors accountable for meeting Tri-Party Agreement milestones. The Board is also concerned that treaty rights are honored during cleanup. The Board will continue to focus on incorporating tribal recommendations to ensure that treaty rights are respected as Tri-Party Agreement compliance activities evolve.
- **Cleanup Standards** - The Board will continue to focus its attention on how cleanup levels are set, including regulatory guidelines for risk assessments, exposure scenarios, current and future risks under those scenarios, and future land use questions. Additional challenges include developing criteria for what constitutes a successful cleanup for the 200 Area.

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, Alice Murphy, 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.

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*

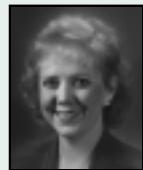


Robert Larson, Richland, is a Commissioner for the Port of Benton and a member of the Benton-Franklin Regional Governmental Council, which he represents on the Board. The Council is composed of 13 local governmental jurisdictions and follows issues of regional significance to its members. He was Director 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: Abe Greenberg*



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. She chairs the Health, Safety, and Waste Management Committee.

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*

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 FY98, it had reached consensus on 87 pieces of advice. The Board's charter recognizes several levels of consensus, from unanimous agreement, to willing to "live with," 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 FY96, both the Public Involvement and the Cultural, Socio-Economic Impacts Committees were dispersed among the other three committees, with the caveat that these committees could be reconvened to deal with issues as needed. In FY97, the Public Involvement Committee agreed to meet again, in conjunction with the Tri-Party Agreement's quarterly public involvement meetings. In FY98, the Board created an ad hoc committee to focus solely on the programs related to obtaining tank waste treatment at Hanford.

For FY99, the Board and its five committees have developed a work plan for the issues on which it will be focusing. 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 the removal of spent fuel from the K Basins, waste management, removal of materials from the Plutonium Finishing Plant, and intersite waste transfer. The Dollars and Sense Committee will review 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. The Tank Waste Treatment Ad Hoc Committee will be looking at how best

to assist the Tri-Party Agreement agencies in agreeing to milestones, keeping the project on schedule and on budget, and ensuring adequate funding is available for tank waste treatment.

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 FY98, the Board used an Executive Committee composed of the Chair, Vice-Chair, and chairs of the Dollars and Sense, Environmental Restoration, Public Involvement, and Health, Safety, and Waste Management Committees, to serve a coordinating 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 and continues to serve as Chair of the Board.

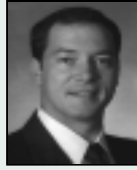
Evaluations, Workplans, and Workproducts

To improve its own functioning and understand where it was going, the Board has conducted four annual self-evaluations. These evaluations have contributed to the process of refining both WHAT the Board does and HOW it does it. The evaluations have led to recognition of difficulties and improvements in its functioning, and contributed to the Board's work plans for each year. The Board has reaffirmed that its key work products continue to be consensus advice, sounding board type feedback, and in-depth reports.

Looking to the Future

In the Board's self-evaluation in November 1998, members felt its most significant accomplishments during FY98 were its advice on the spent fuel removal program and tank waste treatment and the creation of the Tank Waste Treatment Ad Hoc Committee. In FY99, the Board wants to see progress in tank waste treatment, spent fuel removal, groundwater/vadose zone, interim safe storage of reactors, and reducing the risks associated with the Plutonium Finishing Plant. The evaluation identified four focus areas for future Board work: staying on top of priority issues, keeping up regulatory pressure, providing a vision for the need to succeed, and supporting good technical decisions.

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*

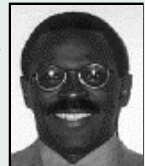
Jim Watts, Richland, is a longtime Tri-Cities labor leader. He is a member of Hanford Atomic Trades Council, which is composed of fifteen unions that represent 3,500 workers. He has represented workers in the energy field since 1960 and is a 32-year member and current President of his union local, the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



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 since 1981. 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. She chairs the Environmental Restoration Committee. *Alternate: Jeffrey Luke*



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, and Science Achievement. *Alternate: Susan Leckband*



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: Norm Buske*



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

Kristie Baptiste, Nez Perce Tribe. **No biography available.** *Alternate: John Stanfill, Rico Cruz, Dan Landeen, Stan Sobczyk*

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: Barbara Harper, Lino Niccoli, Nanci Peters, Wade Riggsbee*

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

Gregory deBruler, White Salmon, 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. *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. Todd chairs the Tank Waste Treatment Ad Hoc Committee and is the vice chair of the Health, Safety, and Waste Management Committee. *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: Paige Leven*



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.



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. He previously served as Chair of the Health, Safety and Waste Management Committee. *Alternate: Dr. Jim Trombold*



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. She is the vice chair of the Environmental Restoration and Public Involvement committees. *Alternate: Patty Yraguen*



Ken Niles, Salem, Oregon, is the Deputy Administrator for the Oregon Office of Energy's Nuclear Safety Division. He primarily focuses on the safe transport of radioactive materials through Oregon. Ken is lead staff to the Oregon Hanford Waste Board's Transport Committee, represents Oregon on the Western Governor's Association Technical Advisory Group for Safe Transport of Radioactive Materials, and is co-chair of the Western Interstate Energy Board's High-Level Radioactive Waste Transportation Committee. *Alternates: Mary Lou Blazek, Dirk Dunning, Mike Grainey, Doug Huston*

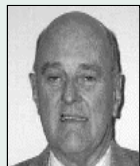
Public-At-Large (4 seats)

Norma Jean Germond, Lake Oswego, Oregon, has served on the Board of Directors of Portland Community College for 13 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. She chairs the Board's Public Involvement Committee.





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 the Soil Conservation Service, as Emergency Loan Supervisor for the Farmers' Home Administration, and as Director of the 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. *Alternate: Pat Kenny*

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*

Members and Alternates Who Have Resigned in FY98

- | | |
|----------------|------------------|
| Paul Danielson | Cindi Laws |
| Thomas Engel | Kathleen Leopold |
| Gerry Hess | Gary Muth |
| Ralph Patt | Jay Rhodes |
| Donna Powaukee | Ruth Sechena |
| | James Vache |
| | Tom Woods |

Ex-Officio (5 seats, biographies were unavailable for 1 of

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.

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.

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.



Who to Contact about the Hanford Advisory Board

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Additional Written Information

Additional information about the Hanford Advisory Board is available. If you would like to receive a copy of any of the following or additional copies of this report, you can contact Donna Sterba, TRI, (509-943-5319). You can also find information on the Board on its Internet Web page:

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

- *Hanford in context: public principles guide new mission*
- *Advice Adopted by the Hanford Advisory Board*
- *Hanford Advisory Board Charter and Operating Ground Rules*
- *Site Specific Advisory Board Charter*
- *Comparison of the Hanford Advisory Board's First Two Self Evaluations (A Report)*
- *Hanford Advisory Board Strategic Planning Workshop Report, May 1996*
- *Future Site Uses Working Group Report, December 1992*
- *Tank Waste Task Force Report, July 1993*

Where to Find More Information About the Hanford Advisory Board

Hanford Public Information Repositories

Portland

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

Seattle

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

Richland

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

Spokane

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

This report was written and designed by the staff of EnviroIssues. Much help and information was provided by agency personnel - Max Power (Ecology), Dennis Faulk (EPA), and Gail McClure, (DOE). Photos were provided by Rosemary Guse, Fluor Daniel Hanford, November 1996 and Sandra Greer, Technical Resources International, February 1998.