

HANFORD ADVISORY BOARD
Revised Meeting Summary, February 3-4, 2000
Kennewick, Washington

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EXECUTIVE SUMMARY

Tank Waste Treatment

A significant part of the February Hanford Advisory Board (HAB) meeting focused on the many issues related to obtaining tank waste treatment at Hanford. Todd Martin, chair of the HAB Tank Waste Treatment Ad Hoc Committee, provided an overview of the history and issues surrounding treatment, including a visual demonstration of the capacities of various vitrification facilities around the world in comparison to what is proposed for Hanford. The Board discussed technical and management issues; regulatory frameworks, and funding and financing alternatives.

Board members expressed concern about the probability of obtaining adequate Congressional funding for the project, the risks of aging infrastructure in the tank farms, and the frustration that even if the current contract succeeds, only 10% of the waste will be treated in the first phase of the project. The Board adopted a strong statement supporting implementation of tank waste treatment at Hanford that was to be distributed to all members and alternates for their individual signatures before being forwarded on to the Secretary of Energy. The final statement was approved and signed by 27 Board members, and 14 Board alternates. All Board seats were represented with the exception of the Yakama Nation and the Lower Columbia Audubon Society. This statement was mailed on February 15, 2000 to the Secretary of Energy Bill Richardson, members of the U.S. Senate and U.S. House of Representatives from Washington and Oregon states, DOE-RL, DOE-ORP, Ecology, and EPA.

Public Involvement regarding Off-Site Waste

The Board discussed the importance of national and regional public involvement concerning the recent DOE decision to dispose low-level waste (LLW) and mixed low-level waste (MLLW) in the states of Washington and Nevada. The HAB adopted Advice #102 regarding the importance of public involvement regarding the importation of off-site waste to Hanford.

Burial Ground Characterization and Waste Importation

The Board discussed the issue of whether Hanford's LLW burial grounds are correctly permitted and regulated. If the LLW burial grounds actually contain MLLW, they are not properly permitted and regulated. The Board adopted Advice #103 that encourages regulators to accurately characterize the burial grounds as either LLW or MLLW before adding any imported waste to the burial grounds.

Openness

The Board discussed the recent Hanford Openness Workshop (HOW) report for 1999. The Public Involvement Committee presented draft advice similar to that adopted in 1998 that encourages DOE to continue to work to improve agency openness. Some HAB members expressed concern about Board endorsement of specific HOW recommendations. The HAB adopted Advice #104 which encourages DOE openness but does not specifically endorse any HOW recommendations. Gordon Rogers, Public-at-Large, and Charles Kilbury, City of Pasco (Local Government) opposed this

advice. Susan Leckband, Non-Union, Non-Management Employees (Hanford Work Force) abstained from this advice.

DOE Budget Priorities for Fiscal Year 2002

The Board discussed the current DOE budget prioritization and budget allocation process for Fiscal Year (FY) 2002 in light of the three distinct budgets at the Hanford site: Richland, Office of River Protection, and tank waste treatment privatization. The HAB adopted Advice #105 that outlined key criteria and stakeholder values that should be incorporated into DOE's budget development for FY2002. Jeff Luke, Non-Union, Non-Management Employees (Hanford Work Force) abstained from this advice.

Cleanup along the Columbia River

The HAB discussed its ongoing concerns regarding an Inspector General report on cleanup along the Columbia River. Members felt that the U.S. Department of Energy (DOE) response to the Board's December 17, 1999 letter did not adequately respond to the Board's concerns. The HAB adopted a second letter specifically asking if DOE-Richland planned to adopt and implement the Inspector General's report recommendations in cleanup activities along the river.

Idaho High-Level Waste Environmental Impact Statement

Staff from the DOE Idaho National Environmental Engineering Laboratory (INEEL) and representatives from the Citizen Advisory Board attended this HAB meeting. They held an informal evening meeting to discuss INEEL's draft environmental impact statement (EIS) on treatment and disposition of INEEL's HLW. One of the EIS alternatives is to send this waste to Hanford for treatment in the proposed vitrification plant. The Board agreed to send a draft letter regarding the EIS to the HAB Health, Safety, and Waste Management Committee for review. The letter would then be distributed to the full HAB for comment before finalization. The proposed letter contained the message that until Hanford had an operational vitrification plant, it was premature to comment on the alternatives in the INEEL draft EIS. This letter was approved and mailed to the DOE- Idaho Operations office on March 7, 2000.

Update on Tritium Levels in Groundwater

Mike Thompson informed the HAB that a tritium reading of eight million pico curies per liter had been detected at a monitoring well at the 618-11 burial ground. In January 1999, a reading of 1.8 million pico curies per liter was found at the same site but the finding was not brought to anyone's attention for nearly a year. DOE plans to take samples throughout the area to determine the nature and extent of this contamination. It is estimated that it will take the tritium three to 30 years to reach the Columbia River.

Board members expressed strong concerns and frustration about how this contamination was not detected from monitoring samples in a timelier manner and how this new information will affect significant intergovernmental work that had focused on possible redevelopment of the area near the burial ground.

HANFORD ADVISORY BOARD
Revised Meeting Summary, February 2-3, 2000
Kennewick, Washington

This is only a summary of issues and actions in this meeting. It may not represent the fullness of ideas discussed or opinions given, and should not be used as a substitute for actual public involvement or public comment on any particular topic unless specifically identified as such.

The Hanford Advisory Board (HAB) meeting was called to order by Marilyn Reeves, Chair, Public-at-Large. This meeting was open to the public and offered four public comment periods on Thursday, February 3rd at 11:45 am and 4:45 pm and on Friday, February 4th at 11:45 am and 3:45 pm.

Board members in attendance are listed in Attachment 1, as are members of the public. All Board seats were represented.

MEETING OVERVIEW

Marilyn Reeves welcomed all to the meeting, and reviewed the agenda for the meeting. Marilyn announced that Dr. David Michaels, Assistant Secretary of the U.S. Department of Energy (DOE), planned to meet with the Board Thursday afternoon. However, Dr. Michaels' meeting with the HAB was subsequently cancelled.

This meeting marked the 6th anniversary of the HAB. Marilyn Reeves noted that the Board's first meeting was attended by Washington Governor Mike Lowry and Assistant Secretary Thomas Grumbly. The HAB has established itself as an independent and very effective body providing advice to the Tri-Party Agreement (TPA) agencies. Marilyn Reeves has served as chair for the last 5 years.

ANNOUNCEMENTS

- Frank Rogers is not tape recording this meeting because he is ill. A card will be sent from the Board.
- Marilyn Reeves announced that the 5th Hanford Advisory Board Annual Progress Report was available and encouraged Board members to distribute copies. The Progress Report is assembled by the facilitation team.
- An informal meeting on the Idaho High Level Waste (HLW) Environmental Impact Statement (EIS) was announced for the evening of February 3rd. Members of the Idaho National Environmental and Engineering Lab (INEEL) Citizen Advisory Board (CAB), as well as DOE-Idaho staff introduced themselves: Monte Wilson (INEEL CAB), Ann Dole (State of Idaho), Bill Case (DOE-Idaho), Richard Kimmel (DOE - Idaho).
- Max Power, Washington State Department of Ecology (Ecology), announced that the Hanford Openness Workshop (HOW) has compiled a packet of information on Tribal issues, which is available to any interested HAB members. He also announced that Yvonne Sherman, DOE, received a distinguished service award from DOE recognizing her work with the HOW.
- Marilyn Reeves announced that Todd Martin has been appointed to the national Environmental Management Advisory Board.

INTRODUCTIONS

Merilyn Reeves welcomed Wade Ballard, the new DOE Deputy Designated Federal Official for the HAB. Merilyn also welcomed the new Board members and alternates listed below with a reminder that a new member orientation must be attended by all prior to participation at Board meetings.

New Members:

- Mark Beck – Citizens For A Clean Eastern Washington (Regional Citizen, Environmental, and Public Interest)
- Victor Moore – Lower Columbia Basin Audubon Society & Columbia River Conservation League (Local Environmental Interest)

New Alternates:

- Todd Martin – Physicians for Social Responsibility (Local and Regional Public Health)
- Antone Brooks – Washington State University (University)
- Robert King – Columbia River United (Regional Citizen, Environmental, and Public Interest)
- Keith Smith – Hanford Atomic Metal Trades Council (Hanford Work Force)
- Cindy Meyer – Citizens For A Clean Eastern Washington (Regional Citizen, Environmental, and Public Interest)

APPROVE DECEMBER MEETING SUMMARY

Corrections to the December Draft Meeting Summary were made by Madeleine Brown, Non-Union, Non-Management Employees (Hanford Work Force); John Erickson, Washington Department of Health (WDOH); Merilyn Reeves; Tom Carpenter, Government Accountability Project (GAP) (Hanford Work Force); and Leon Swenson. Public-at-Large.

ADVICE ON BURIAL GROUND CHARACTERIZATION AND WASTE IMPORTATION

Susan Leckband, Non-Union, Non-Management Employees (Hanford Workforce), introduced draft advice from the Health, Safety and Waste Management (HSWM) Committee addressing importation of new waste to Hanford's burial grounds. The question of whether or not the low-level waste (LLW) burial grounds are correctly permitted was raised. If the LLW burial grounds contain mixed low-level waste (MLLW), the burial grounds are incorrectly permitted. The draft advice encouraged regulators to accurately characterize the burial grounds as either LLW or MLLW before adding imported waste to the burial grounds.

Mike Wilson, Washington State Department of Ecology (Ecology), clarified that DOE regulates the LLW burial grounds. Ecology is concerned that prior to 1989, MLLW and LLW were buried together in the LLW burial grounds. Doug Sherwood, U.S. Environmental Protection Agency (EPA), added that no MLLW disposal facilities existed prior to 1989, so MLLW was disposed of in the LLW burial grounds. Closure of LLW burial grounds active after 1980 are regulated by Ecology under the Resource Conservation and Recovery Act (RCRA), while closure of LLW burial grounds active prior to 1980 falls under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) regulated by EPA. Beth Bilson, DOE, noted that Hanford has a robust system for waste characterization to ensure that MLLW does not go into LLW

burial grounds. DOE has no plans to investigate the burial grounds until closure plans are developed based on its confidence that the LLW burial grounds are compliant.

Gerry Pollet, Heart of America Northwest (Regional Citizen, Environmental, and Public Interest), cited a report from Ecology documenting incidents of MLLW buried in the LLW burial grounds in 1995. Groundwater monitoring has indicated significant contamination under the burial grounds. Contaminant releases from the burial grounds may warrant corrective action from Ecology to require RCRA monitoring of the burial grounds. Current monitoring is not designed for a MLLW landfill. Tom Carpenter added that workers have reported a lack of protection from chemical hazards in LLW burial grounds work but that radiological protection is strong.

The Board reached consensus and adopted Advice #103 on the characterization of burial grounds.

LETTER REGARDING CLEANUP ALONG THE RIVER

Greg deBruler, Columbia River United (Regional Citizen, Environmental, and Public Interest), presented a draft letter from the Environmental Restoration (ER) committee requesting a clear answer from DOE on the Inspector General's (IG) report from June 1999 regarding cleanup along the Columbia River. DOE's response to the previous Board letter, dated December 17, 1999, to DOE-Headquarters (HQ) did not provide a clear answer. The original HAB letter specifically asked if DOE-Richland planned to adopt and implement the IG report recommendations.

The Board reached consensus and adopted this letter to send to Keith Klein, DOE.

ADVICE ON PUBLIC INVOLVEMENT REGARDING OFF-SITE WASTE

Doug Huston, Oregon Office of Energy (State of Oregon), presented draft advice from the HSWM Committee on public involvement in light of the National Waste Management Programmatic Environmental Impact Statement (WM PEIS) Record of Decision (ROD) designating Hanford as a disposal site for LLW and MLLW from across the DOE complex. The Board has repeatedly requested that DOE hold a national dialogue, which has not taken place, so the advice asks instead for a regional dialogue.

Gordon Rogers, Public-At-Large, noting the Board has requested a national dialogue numerous times, thought it futile to repeat the request. Doug Huston; Betty Tabbutt, Washington League of Women Voters (Regional Citizen, Environmental, and Public Interest); and Tim Takaro, University of Washington (University); agreed with Gordon's frustration, but felt such a dialogue must be held to communicate Hanford issues to the region, if not the nation.

Ken Niles, Oregon Office of Energy (State of Oregon), said the Public Involvement (PI) Committee identified two concerns about current off-site waste importation negotiations between Ecology and DOE: the public should be informed and engaged in the negotiations and the public involvement process must be based on full disclosure of the cumulative risks of adding waste to the existing burial grounds. Susan Leckband noted that the Pacific Northwest National Laboratory (PNNL) had published a study on cumulative effects that was presented at the Health of the Site Conference last year. DOE has not yet specified how much waste will be distributed between the Nevada Test Site and Hanford for disposal.

Tim Takaro suggested that a HAB seat be added for the State of Idaho.

The Board reached consensus and adopted Advice #102 regarding public involvement in the movement of off-site waste.

ADVICE ON DOE BUDGET PRIORITIES FOR FISCAL YEAR 2002

Harold Heacock, Tri-Cities Industrial Development Council (TRIDEC) (Local Business), introduced draft advice addressing the budget prioritization and budget allocation process for fiscal year (FY) 2002. Currently, Hanford has three different budget cycles (FY2000, FY2001, and FY2002) for three distinct budgets (Richland, Office of River Protection, and BNFL privatization). At the January D&S meeting, DOE illustrated that input from individual Board participants at a December DOE budget meeting had been incorporated into the budget process for FY2002 which was of great encouragement. Harold outlined the major points in the draft advice:

- Future budget decisions must be based on stakeholder, tribal and regulator input
- DOE should implement one coordinated public process for the three separate site budgets
- Detailed definition on minimum safe and essential services are needed for each budget.
- TPA compliance is a top priority.
- Development of a defensible risk analysis and funding related to risk is needed.
- Budget prioritization should look at past project performance.
- Cost savings by contractors should be reflected in the Integrated Priority List (IPL).
- The ER program (cleanup along the river) must be adequately funded, and the cost impacts of further delay must be addressed.

Paige Knight, Hanford Watch of Oregon (Regional Citizen, Environmental, and Public Interest), said the budget advice must be in plain, easily understood language to clearly communicate the Board's concerns to the public. Several Board members were concerned about the statement that the ER program must be prioritized and asked if ER would then become a higher priority than work in the tank farms, the Plutonium Finishing Plant, or the K Basins. Harold Heacock explained that essential services are top priority, which includes TPA milestones and K Basins. Dennis Faulk, EPA, said work in the 100 Area and 200 Area should not be in competition. Jeff Luke, Non-Union, Non-Management Employees (Hanford Work Force) stated he could not support this advice if it prioritized the ER program above other site cleanup activities, especially those that are TPA compliance activities. Keith Smith spoke about the effects of pressure to reduce indirect costs, such as a reduced site services budget that makes preventative maintenance difficult to complete. Tim Takaro suggested that the Board become the grand integrator of the IPLs.

Harold Heacock said that an important point is that there must be recognition of different kinds of risk. Gordon Rogers noted that the development of a useful risk assessment tool is a very, long laborious process that will not be ready for use in the FY2002 budget process. Gary Miller, City of Kennewick (Local Government) remembered the presentations on risk from the December Board meeting that revealed the complexity of the issue.

Wanda Munn, Benton-Franklin Council of Governments (Local Government), said worker health and safety needed to be added to this advice. Keith Smith, Hanford Atomic Metal Trades (Hanford Work Force), added that the shift in authority for site services, which was done without consultation between management and workers, has impacted worker safety. Jim Trombold, Physicians for

Social Responsibility (Local and Regional Public Health), said cost savings should never jeopardize worker health and safety.

Wade Ballard, DOE, explained that minimum safety is defined using benchmarks from other DOE sites with comparable operations. The purpose of developing the IPL is to establish site priorities. DOE is looking for ways to incentivize cost savings with contractors (e.g., super stretch incentives). He felt the recent dialogues between DOE and individual members of the Board have been productive. Closure sites (sites to be closed by 2006) and completion sites (sites that will take longer) have been grouped separately for the purpose of requesting funds from Congress.

Jeff Luke abstained from this advice. The Board reached consensus and adopted on Advice #105 on budget priorities, with one abstention.

ADVICE ON OPENNESS

Ken Niles presented draft advice from the PI Committee encouraging DOE to institutionalize openness similar to HAB Advice #89, dated December 1998. The new draft advice encourages DOE to look to the 1999 Hanford Openness Workshop (HOW) recommendations as further encouragement to achieve openness. The 1999 HOW made 25 specific recommendations in its report.

Some Board members expressed concern about Board endorsement of the HOW recommendations for a variety of reasons. The Board did not write the recommendations. Board focus should be on high-level policy issues while HOW recommendations were seen as "micro-managing". Some individual Board members could not endorse the specifics of some HOW recommendations. Gordon Rogers noted that HOW is funded separately from the Board and has a different function for DOE than the Board.

Other Board members did not view the draft advice as endorsing the HOW recommendations, but simply advising DOE to review the HOW recommendations, while endorsing the concept of openness.

Gordon Rogers and Charles Kilbury opposed this advice. Susan Leckband abstained. The Board reached consensus and adopted Advice #104 on openness.

TANK WASTE TREATMENT OVERVIEW

Todd Martin, Chair of the Tank Waste Treatment (TWT) Ad Hoc Committee, provided a brief history of tank waste treatment and privatization at Hanford. In 1995, DOE presented the Board with plans to implement Tank Waste Remediation System (TWRS) privatization. The 1995 plan was to build two pilot vitrification facilities and to build larger facilities at a later date. The pilot facilities were to be built by two separate contractors, with start up dates in 2002. DOE had estimated the cost of these facilities, which would treat about 10% of the tank waste, at \$3.9 billion over a 10 to 14 year period. The situation today is quite different, with one contractor designing both LLW and HLW vitrification facilities at a cost of \$6.9 billion to treat 10% of the tank waste over a ten-year period.

Todd Martin reviewed past Board advice on privatization outlining Board expectations of DOE. These include illustrating adequate funding; aligning decision points and deliverables with TPA milestones; and funding the movement of waste from tanks to the vitrification facility.

Currently, 54 million gallons of waste are stored in tanks. Pretreatment of tank waste result in two waste streams: Low-Activity Waste (LAW) and HLW. After vitrification, LAW will be disposed at Hanford, while HLW will be disposed at a Yucca Mountain facility that currently does not exist. The Office of River Protection (ORP) is responsible for the overall project. CH2MHill manages the storage and retrieval of tank waste, and BNFL is charged with pretreatment and treatment of tank waste.

Vitrification as a treatment technology has a long history of use during the last 30 years at sites around the world. Todd Martin used various sized boxes as visual representations of the volume of waste treatment melter capacity for various facilities in Great Britain, France, Ohio, and South Carolina in comparison to what is proposed for Hanford. Each facility progressively increased in volume capacity. Current Hanford plans are to build one HLW melter and three LAW melters. The Hanford operation is the largest vitrification effort ever undertaken with an estimated price tag of \$10 billion.

Todd Martin explained that the estimated cost for treating all of Hanford's tank waste is \$40 billion dollars over the next 40 years. The average of \$1 billion per year is equivalent to the current total Hanford site budget. Every year DOE needs to set aside funds to pay for the BNFL privatization contract. This amount should be \$600 million a year. In actuality, between \$300 and \$400 million has been set-aside in past years, falling significantly short. This is a major point of concern affecting the success of the tank waste treatment program. Past efforts to get tank waste treatment on line have consistently failed when Congress has refused to provide adequate funding.

The purposes of this HAB workshop on the tank waste treatment program were to educate the Board and to provide direction to the TWT Ad Hoc Committee for future committee work. For example, an issue that remains with the BNFL facility is removal of sulfate from the tank waste prior to vitrification. The Committee felt the need for a strong statement from the Board on its expectation that this effort to get tank waste treatment succeeds, including adequate funding for the project.

Ken Bracken, Benton County (Local Government), observed that the \$40 billion needed for the tank waste treatment program is in direct competition with all other Congressionally funded programs. The return on such an investment must be clear to secure Congressional funds. While the Board cannot make direct statements to Congress regarding funding, individual Board members can take the message to Congress. Tom Carpenter emphasized that the HAB must communicate the urgency that is faced here if Congress does not fund tank waste treatment. Leon Swenson, Tim Takaro, and Paige Knight agreed that Todd Martin's presentation would be an extremely valuable presentation for Congress to illustrate the magnitude of the problem and the urgency of funding. Technical issues have not held up progress on getting tank waste treatment. The hold up has been securing funds from Congress. Paige Knight also suggested that Todd's presentation be included in the public involvement "road show" that DOE and Ecology are taking out to the public.

Jim Trombold noted that near-term budget requests to Congress and DOE-HQ only aim at 10% of tank waste, without consideration for what will happen to the other 90%. Todd Martin explained

that the TWT Committee's focus has been on the investment to begin this project. The assumption is that once the 10% of waste has been treated in Phase 1, the remaining 90% will be treated in Phase 2.

Tom Carpenter said the thermal water uprising found at Yucca Mountain is a serious consideration for Hanford because Yucca Mountain is the destination for Hanford HLW glass logs. David Johnson, Heart of America Northwest (Regional Citizen, Environmental, and Public Interest), asked about the distinction between HLW and LAW, specifically pertaining to waste containing cesium and strontium. All tank waste is HLW before pretreatment, and waste containing cesium and strontium is considered HLW. The NRC must confirm designation as LAW incidental waste.

Mike Wilson, Ecology, said the TPA includes provisions for lack of funding, but only if DOE requests adequate funding. If DOE does not request adequate funding, there are legal implications. Ecology does not think Congress will allocate the \$606 million set-aside needed for the upcoming fiscal year, which is of concern. If the allocation is less than \$606 million, Ecology expects construction of the treatment plant will be delayed. Another question is whether or not the alternatives analysis will be completed in time for use by the public and Congress.

Mike Wilson announced that January 31st was the deadline to complete negotiations on TPA tank waste treatment milestones between Ecology and DOE. An agreement was not reached. The next step is a unilateral determination by the Director of Ecology by February 14th. Currently, Ecology is speaking with the Washington State Attorney General and Governor's offices about possible direct intervention with the Secretary of Energy. Tom Fitzsimmons, Ecology Director, wrote a letter to Chuck Clarke, EPA Regional Administrator, asking EPA to be involved in the Ecology's determination. Mike Gearheard, EPA, said EPA supports the Ecology's effort to establish firm, clear milestones in the TPA.

MANAGEMENT AND TECHNICAL ISSUES

Office of River Protection

Dick French, ORP, opened his presentation to the HAB by inviting Todd Martin to make his presentation on vitrification facilities a part of the public participation "road show". Dick said Todd's clear illustration would be valuable in educating Congress.

Dick French announced that the FY2001 budget rollout would be February 7th. At that time, the public can view what DOE-ORP has requested for BNFL privatization. ORP is confident that its request is realistic for meeting TPA compliance and the Readiness to Proceed (RTP) decision in August 2000. If the decision to proceed is delayed into the next Administration, Dick warned of the danger that the whole process would have to restart. ORP did not ask for exactly \$606 million, but it has confidence in BNFL to deliver the company's deliverables in April to support the RTP decision in August.

Dick French reported CH2MHill successes in the tank farms. For example, the last pump-out of Tank 101-SY was completed. If the RTP decision is not made in a timely fashion, more tanks would have to be built in the tank farms, which would be a waste of time and money.

Dick French noted that technical and financial issues are faced, but can be overcome. Any strategy other than the current path is more expensive, and ORP is committed to the success of this project. ORP is supporting a property tax exemption for BNFL because the tax would drive costs up.

BNFL

Mike Lawrence, BNFL, gave a status report on the company's efforts to submit the required deliverables to ORP on April 24th. BNFL has committed 700 staff to this effort which includes tens of thousands of pages of documents. BNFL will be presenting ORP with a firm, fixed price proposal to complete the job.

BNFL will receive waste from CH2MHill into the BNFL pretreatment facility. After pretreatment, one curie of every 100 curies of cesium will go to the LAW facility. The rest will go to the HLW facility. Likewise, five curies of every 100 curies of technetium will go to the LAW facility, and the remainder will go to the HLW facility. The pretreatment facility will be able to process 60 metric tons per day. The HLW vitrification facility will be able to handle 1.5 metric tons per day with possible expansion capacity to accommodate up to three metric tons per day. The LAW vitrification facility will contain three melters that can process 10 metric tons per day each, for a total capacity of 30 metric tons per day. Currently, the pilot melter is successfully operating and can vitrify one-third the volume projected for the Hanford LAW vitrification melters. In comparison, the Savannah River facility has capacity to treat 2.4 metric tons per day. If requested, BNFL will have the capability to expand its HLW facilities and build a fourth LAW facility. Such a decision would be made by 2010, and could lead to treatment of all of Hanford's tank waste by 2047.

BNFL is confident that all key technical risks have been identified, and there are no technical showstoppers. One current challenge is sulfate removal. BNFL hopes to fully resolve this issue in the next month.

BNFL and Bechtel will put \$500 million of equity into the project. The remaining funds will be financed. Mike Lawrence reported strong interest from 16 banks with which BNFL has met. Pam Brown, City of Richland (Local Government), asked about the interest of the financial community in pursuing non-recourse financing. BNFL prefers recourse debt, but welcomes the non-recourse debt because it provides a third party to monitor performance.

To prepare for Readiness To Proceed (RTP), BNFL will separate into two companies to accommodate how BNFL does business in the United States and to effectively manage the project. One company will focus on engineering, procurement and structure, as well as start up of the facility. The other company, called the Special Purpose Company, will operate the facility. Mike Lawrence said the current objective is to identify and resolve all issues so there are no showstoppers the Authorization To Proceed (ATP) decision in August.

CH2M Hill

Fran Delozier, CH2M Hill, updated the Board on CH2M Hill's activities in preparation for the April 24th deliverable date and the August ATP date. Her update included an overview of tank farm activities in the last two years. For example, 615,000 gallons of waste have been transferred out of

single shell tanks into double shell tanks. Half of the tank farms' budget goes toward maintenance and retrieval, and the other half is allocated for construction of BNFL infrastructure.

Merilyn Reeves congratulated Dick French for the quick transition from Lockheed Martin to CH2M Hill. In response, Dick congratulated CH2M Hill for its work in ensuring a smooth transition. Fran Delozier noted that CH2M Hill is an environmentally focused contractor, which is good for the region.

In response to a comment from Gary Miller on communicating the sense of urgency that exists in the tank farms, Fran Delozier gave two examples of infrastructure failures in the month of January. The tank farms are over 40 years old, and one-third of the single shell tanks have leaked.

The January 6th leak was very serious. A salt well pumping transfer resulted in a leak out an electrical conduit box. The system was shut down and radiation control technicians found that three to five gallons had leaked, containing eight curies of cesium-137. The radiation reading was 10 rad at 10 inches. The break was in the pipe that is buried four feet under ground. This was first time in the tank farms' history that the EPA National Response Center was notified to put emergency response agencies in the Northwest on alert. If the leak had dried out and become airborne, this would have resulted in a plant-wide alert. Workers followed all procedures correctly such that cleanup was quickly completed, and the tank farm was back in operation in 15 hours.

The January 20th leak was not as serious. The leak was a result of hydro-testing a line before starting salt well pumping. The line broke in this test, releasing 60 gallons of water containing residual waste.

Fran Delozier explained that tank farms infrastructure fails in about 20% of waste transfers, which is why it is important to complete upgrades for waste transfers.

Keith Smith asked if staffing for the vitrification plant is being coordinated with the Spent Nuclear Fuel (SNF) project since the timing of SNF completion and the vitrification plant start up coincide. Mike Lawrence said BNFL is examining this possibility. Fran Delozier said CH2MHill would look into this suggestion. Stan Stave, City of West Richland (Local Government), suggested that Payment-in-Lieu-of-Taxes (PILT) be used to pay for the increased infrastructure costs that will result from the additional people the vitrification operation will bring into the Tri-Cities. Mike Lawrence said the privatization contract has raised the issue of property taxes. If the vitrification plant were being constructed under a Government Owned/Contractor Operated contract, there would be no personal property taxes assessed on the plant.

Paige Knight said she heard about the January accidents on the news, but that the media did not convey a sense of urgency. This was a lost opportunity to communicate the urgency that is faced on the site to the general public.

Dan Simpson, Public-At-Large, asked about BNFL's obligations to adhere to regulations in its construction and permitting process. Dick French said BNFL's Special Purpose Company would ensure that all permits and regulations are met in the construction process.

On Hanford waste versus imported waste, Dick French said the regional message is that Hanford's waste must be treated first. In the case of Idaho's HLW EIS, Hanford should be an alternative

because of limitations to Congress' ability to fund additional vitrification plants and to gain national support for funding Hanford's plant.

Betty Tabbutt asked what message DOE is sending to Congress in its current refusal to accept TPA milestones in negotiations with Ecology. Dick French said DOE had successfully negotiated a set of TPA milestones in November 1999. Ecology has brought forward additional issues, including shipment of LLW and MLLW to Hanford, which are points of current disagreement.

On the budget, Marilyn Reeves observed that the budget for Hanford has remained flat to accommodate the cleanup of Rocky Flats, Colorado and other sites to be cleaned up and closed by 2006. She asked about the timing of funding work in the Canister Storage Building in FY2002 for storing HLW glass logs and SNF rods. Fran Delozier explained that the facilities for accepting HLW glass logs must be designed and that this timing is on track to meet the 2007 goal of BNFL production of the first HLW glass logs.

BIG PICTURE OPTIONS

Don Wodrich, DOE, gave an update on the alternatives analysis work underway on technical, contractual, and financing alternatives. The draft report, due March 1, 2000, is 75% complete. The report only examines planning assumptions and will not recommend or select an alternative. The analysis assumes that Congress will provide funding and that the end goals remain unchanged. The alternatives considered for privatization in the analysis are:

- 10% BNFL equity and 90% private debt financing (with government credit support),
- 10% BNFL equity, 45% private debt financing (with government credit support), and 45% government financing, and
- 10% BNFL equity and 90% government financing.

In closing, Don said pursuance of any alternatives to the current project plan would result in schedule delays and a significant Congressional funding change. A limited number of alternatives exist, and no alternative can be selected until the point of failure is determined.

Todd Martin said a discussion on alternatives related to technical issues would be valuable to the TWT Ad Hoc Committee since this presentation was focused on financial and budget issues.

Gerry Pollet raised two concerns. One concern was the issue of risk to taxpayers under the various financing alternatives. Another concern was on the timing of when BNFL would commit its 10% equity. For example, if BNFL puts in its equity in 2018, the near-term risk lies with the public not BNFL. Dick French clarified that BNFL's 10% equity is based on the estimated cost of operations but does not include taxes, fees, or interest.

Mark Beck, Citizens For a Clean Eastern Washington (Regional Citizen, Environmental, and Public Interest), suggested that DOE alter the end goals, based on history, to accommodate the reality that Congress might not provide the needed funding. Don Wodrich responded that altering end states is not an option because it would be difficult to ensure meeting all TPA milestones. Operations should function under the assumption that Congress will provide adequate funds. DOE is committed to make the current path a success, but DOE will not enter an agreement that is not the best value.

REGULATORY ISSUES

Harold Heacock reviewed major regulatory players and their roles in the tank waste treatment program. The DOE-Richland Regulatory Unit provides review and regulation of the design and construction of the plant. Ecology permits the plant for processing, storage and disposal of dangerous and mixed wastes under RCRA. Public involvement is an important part of the RCRA permitting process. The Washington State Department of Health (WDOH) has regulatory authority over airborne radioactive emissions. EPA is not involved in the permitting process.

DOE-Regulatory Unit

Clark Gibbs, DOE, explained that DOE had asked the Nuclear Regulatory Commission (NRC) and the Occupational Safety and Health Administration (OSHA) to regulate the tank waste treatment project. When they declined, DOE created its own Regulatory Unit. The public has access to all Regulatory Unit information. Meetings in which decisions are made are open to the public, including monthly technical meetings. The Regulatory Unit is independent from the project, and has no line reporting responsibilities to ORP. Therefore, ORP has no influence over the Regulatory Unit.

The major submittal to the Regulatory Unit is the Preliminary Safety Analysis Report (PSAR) which is due in December 2000. At that point, the Regulatory Unit has seven months to review it to support a decision in June 2001 to authorize the beginning of construction. Currently, there are no known showstoppers. BNFL submittals have improved, and must continue to improve. This regulatory concept is working well with adequate staffing and funding.

Tom Carpenter asked about Regulatory Unit tools available regarding contractor accountability for worker safety and quality assurance/quality control. Clark Gibbs responded that BNFL has an employee concerns program. The Regulatory Unit is currently inspecting the BNFL program, a process that includes random interviews of BNFL and Bechtel staff, to determine the effectiveness of the program. Regulatory tools include enforcement authority to stop work and issuance of corrective action notices.

Merilyn Reeves asked how the Regulatory Unit is funded. The Regulatory Unit has 2 separate budgets with 2 different budget sources. These are: the Program Direction budget, which is funded from the DOE-RL budget, and the General Support Services Contractor budget, which is funded from the overall TWRS privatization budget.

Washington State Department of Health

Al Conklin, WDOH, explained that WDOH has regulatory authority over airborne radionuclides in the state. DOH represents EPA on the Hanford site in this capacity. Al said WDOH does weekly infrastructure inspections throughout the site.

WDOH is concerned about the 30% design requirement for BNFL because in order for WDOH to authorize construction, BNFL must outline its process design and equipment for pretreatment and vitrification, complete 100% design for the effluent monitoring system, assess the technical feasibility of its control technology, and outline its emergency response system. BNFL must submit a Notice of Construction to WDOH by July 2000, so WDOH can determine its approval by June

2001. One WDOH staff person works consistently with BNFL. WDOH is confident in the technical capabilities of BNFL. No showstoppers threaten the project from a WDOH perspective.

U.S. Environmental Protection Agency

Mike Gearheard described EPA's response to the Ecology's letter regarding stalled TPA negotiations between DOE and Ecology. TPA milestones are a high priority for EPA, and EPA supports Ecology in the enforcement of milestones. There is a long history of delay in getting the tank waste treatment program into place, and EPA would like to see progress in addressing the nation's most serious waste management problem. TPA milestones are crucial to assure that the 2007 date for plant operations will be met.

Gordon Rogers asked if the delay in negotiations has come from DOE-HQ, rather than from the Hanford site. Mike Gearheard explained that the regulators' perception is that the Hanford site has been cooperative and that DOE-HQ has been reluctant to allow Hanford to complete the negotiations.

Washington State Department of Ecology

Note: At the request of many HAB members, a transcript of Suzanne Dahl's presentation on behalf of Ecology is printed here instead of a summary of her comments.

I want to talk about three or four issues, which are the sense of crisis talked about yesterday, the status, and challenges Ecology sees in the permitting process.

We talked about the sense of crisis yesterday, and how to demonstrate that. Consider Todd's three boxes that he used to represent the treatment capacity needed to treat 10% of the waste. Those three boxes could also be used to demonstrate how long it would take to treat 10% of the waste. Now add on the other 90% and imagine how many boxes we would have. If you think about that, it will be 30 to 50 years, depending on how the facility is expanded, to get this job done. Keep that in mind while I talk about some of the risks that are there, regardless of which treatment is used. One million gallons of tank waste have already leaked. Eight of the 12 single shell tank farms have impacted groundwater. Groundwater concentrations beneath one of the tank farms is at a shocking 30 times the drinking water standards for technetium. Technetium is a long-lived radionuclide that travels like a water molecule does. It is the thing that defines the environmental and health risks, existing in at least one of the tank farms at 30 times the drinking water standards. To put it into perspective, that's greater than any concentration of technetium found anywhere else on the site. Now think of the 30 million gallons, or so, sitting in the single shell tanks, which are right now 30 years past their design life. In 2018, these single shell tanks will be 50 years past their design life. After interim stabilization is done, there will be another 24 million gallons or so in the double shell tanks. As we go through the future, imagine more tanks will leak. We know that they will, quoting an unattributed source, "There are two types of Hanford tanks. Those that have leaked and those that will leak." There's actually a third type: those that will leak again as we leave waste sitting in them. So what will the groundwater concentrations and those contaminant plumes look like underneath the 200 Area as more than a million gallons leak, perhaps three million gallons or 10 million gallons? If you think about that, the groundwater concentrations in those plumes will make the plumes that exist under the 200 Area now look miniscule by concentration. They may not be as wide spread initially, but they will be significantly higher in comparison. The TWRS EIS clearly

demonstrated that if we did nothing there was a significant risk to the groundwater, to the Columbia River, and to the Region. That risk starts in about 100 years and lasts for 4,000 years.

Yesterday Fran talked about two infrastructure failures that happened just in the last month on pipelines. What about a more significant infrastructure failure? What about something like a dome collapse? The engineers say that's not going to happen any time soon, but if it takes so long to get all this waste treated? And if you don't start soon, what happens when a dome collapses and we put aerosols and contaminants up into the air on a typical Tri-Cities windy day? What would be the environmental and economic impacts to our region from something like that? I don't want to think about it, but I do. So how long do we wait to get started on treatment? Especially considering how long it will take to remediate this risk. Do we wait for a massive dome collapse? Do we wait for more leaks to occur? Do we wait until 10 million gallons have leaked? Isn't one million gallons out of the tanks enough? Do we wait until there is an irreversible regional impact? Or do we work now to avoid this inevitable consequence and disaster. Do we work now to get treatment plants on line, and say 'No we've had a 10-year delay'? Let's not have another decade delay.

From my perspective, the crisis is really here. It's here now. It's been here. We have to find ways to express that to folks. As you can tell I am very passionate about this. It has to do with how much I know, and the more I know and the more I look at things from different perspectives, the more passionate I get about it. I just wanted to share that with you to answer yesterday's question on how to put the crisis into perspective.

I was asked to talk about the status, the challenges and Ecology's permitting process. The status of what Ecology is doing is we are actively reviewing the alternatives analysis, the funding and financing mechanisms and schemes, the contract changes as they move along. And there's been several contract changes: the technical process development, some of things that Mike Lawrence talked about yesterday of how do you remove the sulfate? Other things such as: What will the off-gas systems look like? What is the actual facility going to look like? We are actively reviewing these engineering developments. We've been looking at draft permit chapters, for the RCRA permit and working with the draft work plan and development of a risk assessment that is required within the dangerous waste permit. This is what we've been doing, in spite of our current disagreements over negotiations. We've been spending a considerable effort in outreach to DC and to regional groups and trying to promote the need for treatment. For example, the Road Show that we will talk about later about our public involvement efforts.

These are the kinds of challenges that we see, and I think we see the same challenges that Dick French enumerated. We need to get a Congressional commitment to fund the treatment complex. That will require pressure from the region and, more likely, from beyond the region. It will also require that Congress is presented with a defensible package that is financable and fundable that can work within their constraints of how they fund and how they score projects. I think that reaching a "Go" decision in August for Authorization To Proceed is a key issue, as Dick French sees. I think that is an ORP, HQ and BNFL issue. A third challenge that we see is ensuring that environmental criteria are embodied in retrieval sequences. There are various types of sequences, some are more beneficial to the ability for CH2MHill to move the waste quickly with less programmatic risk to them, and some sequences are better for treatment of waste. One thing that should be considered are environmental criteria. Some of the sequences are not as environmentally friendly as others.

To talk briefly about Ecology's permitting process, we have the dangerous waste permitting with the associated risk assessment and then the air permitting. The dangerous waste permit will be a modification to the RCRA site-wide permit that we have. It will have a risk assessment that is different than most of the dangerous waste permits that people are used to looking at. This is due to the thermal unit, the melters, which require that we do a risk assessment that is embedded in the permit process, and has public involvement at the same time as the permitting process.

Some challenges over the last two years include the disconnect between the design level from BNFL and the permitting schedule. The upshot of that is the permitting schedule has slid to the right. It has slid out in time. This means the start of construction was either needing to be moved out in time, which is not a favorable thing, or Ecology would have to allow them start construction under interim status. Ecology chose the latter, but there are some holds on that. Some of the key dates: April of this year BNFL will submit a permit application; In March of 2001, Ecology will publish the draft permit conditions, which will be followed by public involvement and comments; Then in September of 2001, we will publish our final permit conditions.

Some key things I want to point out are between the April 2000 date and the March 2001 date. This is a short permit preparation time for Ecology. We are aware of this, and it's a challenge that we will address. The way we are addressing this is in the level of permitting staff that we have put on this and the level of expertise. We have the best permit writers working on this. Another reason we think this is doable is because we've seen all the permit chapters and the risk assessment prior to the submittal in April of 2000. In fact we've seen two drafts of some of these chapters. We've given comments and the comments have been worked through. We have worked through issue resolution. We've been involved in reviewing their engineering packages. We've been involved in trying to make sure that the regulations are embodied in these engineering packages as they're developed. That's why we think the shortened permit cycle preparation on Ecology's part is doable. Another note is that when Ecology started pushing the permitting cycle out in time, it was a very important issue to us that the public comment be done and that we get the comments back prior to the start of construction. We very purposely designed the permitting schedule so that this would be accommodated, and so if there were show stoppers identified by the public, then we could consider a Go/No Go decision on whether or not to let construction begin under an interim status. Those are the things to point out regarding the dangerous waste permitting.

Air permitting: Al Conklin did an excellent job of talking through the air permitting cycles. The Department of Health cycle is very similar to Ecology's. In January, Ecology was supposed to get, but will now get in February, the best available control technologies for the criterion toxics pollutants. In July of 2000, BNFL will submit their NOC and their prevention of significant deterioration permit to Ecology. In June of 2001, Ecology will issue the final permits on both of those. There will be public involvement in between there. Those are essentially, without going into detail, Ecology's permitting processes. In the next session there will be more detailed discussion on the public involvement.

Note: This concludes the transcript of Suzanne Dahl's presentation.

Greg deBruler raised concerns about the disconnection of the vadose zone from all aspects of the regulators' presentations because there are currently no monitoring or characterization efforts in the vadose zone and no budget efforts to implement any. Suzanne Dahl answered that TPA milestones address the vadose zone in requiring increased monitoring over the next five years. Mike Wilson

noted that Milestone 24 addresses the investigation of groundwater wells, and Ecology has expressed concern that DOE is not funding this milestone.

Betty Tabbutt asked if Ecology was satisfied with the scope of the ORP alternatives analyses. Suzanne Dahl said the scope is adequate, but it would have been more beneficial to the process if this analysis had been done three years ago, rather than now, to ensure the best path forward.

Wade Riggsbee, Yakama Nation, asked about the status of the PSAR and if reviews of the PSAR were independent. Clark Gibbs responded that the DOE Regulatory Unit, which is independent of ORP, reviews the PSAR. Before the final PSAR is issued, there will be opportunity for public comment.

David Johnson asked if an additional TPA milestone would address treatment of waste beyond the 10% in 2018. Mike Wilson explained that part of the TPA negotiations would determine a schedule for Phase 2 between the years 2018 and 2028. Dick French added that the current plan does not include additional treatment capacity because the focus is on getting the plant online. Gerry Pollet stated that an additional treatment capacity milestone must include a public involvement plan as well as disclosure of risks in the instance of further delay.

Dan Simpson asked about the role of the Defense Nuclear Facilities Safety Board (DNFSB) in the tank waste treatment program. Clark Gibbs said that DNFSB has an oversight responsibility and will make recommendations to DOE-Headquarters if problems arise.

PUBLIC INVOLVEMENT

Doug Huston explained that the tank waste treatment public involvement process has three parts: public information, public involvement, and public relations. Public interest began when BNFL was chosen as the contractor in July 1998. Schedules were developed under the contract with public involvement. In response, the HAB created the TWT Ad Hoc Committee. HAB advice #93 advised the development of a proactive public involvement plan.

MaryAnne Wuennecke, Ecology, explained that Ecology convened the Tank Waste Treatment Public Involvement Steering Committee in Spring 1999. Its biggest recommendation was to develop a public involvement "road show" as a pilot program to visit regional cities of varying sizes. The target was to reach populations that have not been involved with Hanford issues. Hermiston, Oregon and Spokane, Washington were visited in November 1999, and Vancouver, Washington will be visited in February 2000. Presentations were given to civic groups in Hermiston and Spokane. Successful focus groups were held with elected officials and business leaders in the communities. Open houses were also held, but were not as successful as the focus groups. Lessons learned from the Hermiston and Spokane experiences will be applied to the upcoming road show presentations in Vancouver. Peter Bengston, PNNL, noted that both ORP and BNFL are committed to public involvement.

Pam Brown said the local community has a speaker's bureau that has successfully held events to inform the public. She introduced Lt. Steve Kalmbach, who deals with transportation of waste in the State of Washington and has been active in preparing the region for waste shipments to the Waste Isolation Pilot Plant (WIPP). Ken Niles has the equivalent responsibility in the State of Oregon.

Tim Takaro said it is difficult to get a captive audience to listen to such devastating information. He raised the question of how to communicate these issues without scaring people away. Suzanne Dahl commented that the issues are often better understood if they are put into perspective of the crisis. John Erickson, WDOH, illustrated the economic impact of this risk. The Chernobyl incident in 1986 resulted in a deluge of requests to WDOH from ports of entry around the world to certify that the Tri-Cities products were safe. It took 15 years for WDOH to respond to all these requests.

Merilyn Reeves requested that Peter Bengston compile a packet of information on the tank waste treatment program that could be shared at the Site Specific Advisory Board (SSAB) meeting in Idaho that will be attended by both Merilyn and Shelley Cimon. Merilyn also suggested that the public involvement "road show" visit the INEEL CAB, because of Idaho's keen interest in Hanford getting a vitrification plant.

Ken Niles said the Public Involvement Committee would also work on this issue.

HAB STATEMENT ON TANK WASTE TREATMENT

Todd Martin presented a draft statement to the Board containing the message that the big remaining issue is whether the nation has the will to fund tank waste treatment or not. If adopted, this statement would be directed to the Secretary of Energy.

Merilyn Reeves acknowledged that the introduction of this statement on a Friday was a deviation from the normal HAB process for adopting advice and letters. She noted that the timing of issuing this statement was crucial, because if the HAB waited until the April Board meeting, it would be too late. Ken Niles and Shelley Cimon agreed. Ken Niles suggested that signatures of all Board members and alternates be attached to the statement to illustrate the importance of the issue.

Gerry Pollet was strongly opposed to any change in HAB process and felt this statement should follow the regular Board procedure for adopting consensus advice. Keith Smith and Jeff Luke agreed, acknowledging that consensus could not be reached in this short time.

Regarding the content of the statement, Gerry Pollet said the wording implied HAB endorsement of DOE's budget request that would not be public until the following week. He also requested that the issue of funding additional capacity to treat more than 10% of tank waste by 2018 be included in the statement. Jeff Luke agreed. Greg deBruler disagreed with the statement that the vitrification plant was "technically feasible and defensible". Ken Bracken said the point of the statement was to eliminate the use of technical obstacles as an excuse to not fund tank waste treatment.

Gerry Pollet strongly opposed the statement if it was to be adopted as advice. As advice, he requested to attach a strong statement of opposition. Susan Leckband responded that because the statement Gerry proposed to attach would hurt the message of the advice, the advice should not go forward. Members of the HAB put much effort into finding wording that would address Gerry's concerns. Consensus on a tank waste treatment statement, not considered HAB advice, was reached. Because the extensive wordsmithing made it difficult for Board members to clearly discern the precise wording of the statement, Jerry Peltier, City of West Richland (Local Government), suggested that a clean copy be distributed to all members and alternates early the following week. At this point, Board members and alternates could decide on their support of the

statement. The Board agreed that individual member and alternate signatures would be attached to the statement. Anyone member or alternate in support of the statement was asked to fax his or her signature to EnviroIssues.

The final statement was approved and signed by 27 Board members, and 14 Board alternates. All Board seats were represented with the exception of the Yakama Nation and the Lower Columbia Audubon Society. This statement was mailed on February 15, 2000 to the Secretary of Energy Bill Richardson, members of the U.S. Senate and U.S. House of Representatives from Washington and Oregon states, DOE-RL, DOE-ORP, Ecology, and EPA.

LETTER REGARDING IDAHO HIGH-LEVEL WASTE EIS

Merilyn Reeves said the HAB would submit a letter to DOE-INEEL regarding the Idaho HLW EIS. She read a draft letter stating that Hanford does not currently have a vitrification plant that can treat INEEL waste. Merilyn said that this letter would be reviewed by the HSWM Committee and be sent out for review by all Board members and alternates before being sent to Idaho. This letter was approved and mailed to the DOE- Idaho Operations office on March 7, 2000.

UPDATE ON TRITIUM LEVELS IN GROUNDWATER

Mike Thompson, DOE, presented a recent finding on tritium levels found in groundwater in the area near the Energy Northwest facilities. In January 2000, a groundwater monitoring well reading found a tritium concentration of eight million pico curies per liter at a monitoring well on the edge of these facilities at the 618-11 burial ground. A year earlier, in January 1999, a level of 1.8 million pico curies per liter was detected, but this information was not spotted.

The 618-11 burial ground was operated in the 1960's and stabilized in 1983. It contains remote handled, very "hot" material that would be difficult to characterize. Between the years 1995 and 1999, the monitoring well at the burial ground tracked on gross beta levels, not tritium. Current information is only from one well with samples from two points in time. There is no information on the plume. DOE has immediate plans to take samples throughout the area to determine the nature of the problem. The monitoring well in question is 3.6 miles to the river and is the only well that monitors the 618-11 burial ground. It is estimated that it will take the tritium three to 30 years to reach the river. As a point of comparison, the drinking water standard is 20,000 pico curies per liter.

Board members were very concerned that the reading of 1.8 million pico curies of tritium per liter found in January 1999 was not detected and acted upon sooner. Mike Thompson assured the HAB that DOE is implementing measures to guarantee that such reporting delays will not happen again. He also clarified that DOE is confident that the information presented at the September 1999 Board meeting on tritium levels in the North Richland well field is not connected to these findings.

Gerry Pollet asked the regulators how they will address the issue of DOE accountability in this matter. Mike Gearheard said this was the first information he had received on the issue, and so EPA will examine this issue further.

Tim Takaro asked if DOE has examined other contaminants that could travel with the tritium. Mike Thompson explained that DOE will go back and examine this issue but that the current focus is on tritium.

Pam Brown asked if DOE has access to aerial photos taken during the time the landfill was in operation. Dennis Faulk said photos could be obtained from the U.S. Geological Service.

Ben Floyd, Benton County (Local Government), expressed his frustration since recent interagency work has been exploring development just north of this burial ground. Information was requested on this burial ground over a year ago. A lot of money has been spent on this exact site when information was known for the last year that could have prevented this investment of time and money regarding redevelopment possibilities.

PUBLIC COMMENT

Monte Wilson, from the INEEL CAB encouraged the Board to look seriously at the issue of accepting HLW from Idaho for treatment, an alternative in the Idaho HLW EIS. He asked members to consider funding issues and other possible tradeoffs, including DOE-Idaho's plan to build a treatment facility for transuranic waste that Hanford could use. Monte also encouraged the HAB to review INEEL CAB recommendation on the Yucca Mountain EIS.

Gai Oglesbee spoke about the Thursday public meeting with Dr. David Michaels in Richland to address issues of past exposure to Hanford workers. She encouraged Board members to be respectful of those giving testimony, as many have traveled from throughout the region to attend.

Gene Weisskoph encouraged the Board to support the efforts to create the B Reactor museum. This effort has been ongoing for the past nine years. The B Reactor is an important piece of history.

ATTENDEES

FEBRUARY 3-4, 2000

HAB Members and Alternates

Mark Beck, member	Martin Bensky, alternate	Allen Conklin, ex-officio
Richard Berglund, member	Antone Brooks, alternate	John Erickson, ex-officio
Ken Bracken, member	Allen Conklin, alternate	Debra McBaugh, ex-officio
Pam Brown, member	Ben Floyd, alternate	Joseph Richards, ex-officio
Tom Carpenter, member	Doug Huston, alternate	
Shelley Cimon, member	David Johnson, alternate	
James Cochran, member	Pat Kenny, alternate	
Greg deBruler, member	Robert King, alternate	
Harold Heacock, member	Jeff Luke, alternate	
Charles Kilbury, member	Todd Martin, alternate	
Paige Knight, member	Cindy Meyer, alternate	
Robert Larson, member	Wanda Munn, alternate	
Susan Leckband, member	Wade Riggsbee, alternate	
Gary Miller, member	Ross Ronish, alternate	
Victor Moore, member	Dan Simpson, alternate	
Ken Niles, member	Keith Smith, alternate	
Jerry Peltier, member	Stan Stave, alternate	
Gerry Pollet, member	Art Tackett, alternate	
Merilyn Reeves, member	Dave Watrous, alternate	
Gordon Rogers, member		
Patrick Sobotta, member		
Leon Swenson, member		
Betty Tabbutt, member		
Tim Takaro, member		
Jim Trombold, member		
Jack Yorgesen, member		

Agency Staff and Contractors

Joel Case, DOE-ID	Rick Bond, Ecology	Mike Hughes, BHI
Richard Kimmel, DOE-ID	Laura Cusack, Ecology	Nancy Myers, BHI
	Suzanne Dahl, Ecology	Alan Dobson, BNFL
Leif Erickson, DOE-ORP	Max Power, Ecology	Andy Elsdon, BNFL
Dick French, DOE-ORP	Ron Skinnarland, Ecology	Geoff Harvey, BNFL
Lucy Love, DOE-ORP	Joy Turner, Ecology	Mike Lawrence, BNFL
Don Wodrich, DOE-ORP	Jeanne Wallace, Ecology	Sandi Murdock, BNFL
	Mike Wilson, Ecology	Fran Delozier, CHG
Wade Ballard, DOE-RL	MaryAnne Wuennecke, Ecology	Bill Dixon, CHG
Kevin Bazzell, DOE-RL		A.C. Ethendor, CHG
Beth Bilson, DOE-RL	Dennis Faulk, EPA	Kevin Kjarmo, CHG
D.C. Gibbs, DOE-RL	Mike Gearheard, EPA	Rick Wojtasek, CHG
Jim Kautzky, DOE-RL	Doug Sherwood, EPA	Amy Grotefendt, EnviroIssues
Gail McClure, DOE-RL	Gail Laws, WDOH	Ruth Siguenza, EnviroIssues
Janis Ward, DOE-RL		Tara Williams, EnviroIssues
		Deborah Iwatate, FH
		Joseph Panasiti, FH
		Greg Perkins, FH
		Barbara Wise, FH
		Sharon Braswell, Nuvotec
		Chris Chamberlain, Nuvotec
		Donna Sterba, Nuvotec
		Peter Bengston, PNNL
		Terri Traub, PNNL
		Ginger Benecke, TRI
		Dick Wilde, WM

Members of the Public

Al Boldt	Bruce Livingston	Gene Weisskopf
Gloria Cummins	Mike McCormick	Dennis Washenfelder
Gary Dunford	Gai Oglesbee	Ann Dole, State of Idaho
Steve Kalmbach	Doug Riggs	Monte Wilson, INEEL CAB
Ron Lerch	Kay Sutherland	John Stang, Tri-City Herald