HANFORD ADVISORY BOARD
Final ~~Draft~~ Meeting Summary
May 1-2, 1997
Richland, 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.

Note: Attachments are numbered according to the order they are mentioned in the summary. The attachments that were distributed at or before the Hanford Advisory Board meetings are not routinely distributed with this summary. If you need a copy of an attachment, please request it from Colette Casey or Donna Sterba at Technical Resources International, 509-943-1804 or Enid Reck at Fluor Daniel Hanford, Inc., 509-376-5856.

100-D Treatability Study/Deployment Plan

A proposed treatability test of the In Situ Redox Manipulation technology was discussed with regards to technical application and protecting the salmon redds. Board members expressed concern over the proximity of the test to the River and the potential for the treatment technology to result in more harm to the salmon. Clarification was provided that the In Situ Redox Manipulation technology needs to be tested on a large scale in the chromium plume in the 100-D Area to ensure the technology's effectiveness. It was noted that other sites may benefit from the use of this technology. Conditions for implementation of the test plan that were discussed included: (1) long-term groundwater monitoring of pertinent constituents, (2) long-term mitigation of impacts from the technology, (3) funding to address peer review panel recommendations, and (4) characterization of the chromium source(s) at the test plan and deployment site. Other concerns were expressed over the use of research and development funding for a process that has been developed. Advice was adopted addressing the need for the adoption of Board values and funding for a treatability study and deployment initiative. It is Consensus Advice #71.

Tri-Party Agreement Negotiations

Tri-Party Agreement (TPA) negotiations on the reactors on the River and K Basins/spent fuel were recently completed. One of the major new elements in the reactors package is the opportunity to revisit technologies for reactor removal and ultimate disposition within a five year period. The spent fuel negotiations agreement aligns DOE, contractor, regulatory agency, and Defense Nuclear Facilities Safety Board milestones. An added benefit of the negotiations is clarification of language as well as roles and responsibilities in the TPA. Concern was expressed over the 200 Area Soils Remediation Strategy negotiations and Board members emphasized the need to work with the more seriously contaminated sites first. The Plutonium Finishing Plant negotiations are scheduled to begin in September 1998.

Tracking of FY97-99 Accomplishments

The Health, Safety and Waste Management and Environmental Restoration Committees have developed lists of objectives for tracking success of each of the programs at Hanford. The objectives were derived from FY99 budget presentations. The committees will use these to define specific indicators to measure success in the Board's areas of interest.

Defense Nuclear Facilities Safety Board

A presentation was made by Defense Nuclear Facilities Safety Board (DNFSB) representatives on DNFSB's mission and objectives. The DNFSB is not a regulatory organization. It is empowered by the President and Congress to make recommendations for improvements. Once the recommendations are submitted to the Secretary, they must be implemented or a formal document explaining why they were not must be submitted. Current DNFSB initiatives at Hanford were discussed as well as initiatives at other sites such as Pit 9 at the Idaho National Engineering and Environmental Laboratory.

Columbia River Comprehensive Impact Assessment meetings will be held May 15 at the Shilo Inn in Richland from 6-7 p.m. May 20 in Hood River at the Hood River Inn. May 25 in Portland at the State Office Building, and May 22 at the Mountaineers Building in Seattle.

The Hanford Remedial Action Environmental Impact Statement/Comprehensive Land Use Plan is being revised to incorporate stakeholder comments. This document is intended to be a comprehensive land use plan for the period of time the agency is managing the land.

An agreement between the Consortium for Risk Evaluation with Stakeholder Participation (CRESP), DOE and stakeholders on how the Openness Initiative will proceed is in progress. Workshops versus panels will be developed. Board members were pleased that CRESP is partnering on this issue.

Over one hundred inquiries for submittal forms have been received for the non-union, non-management seats. The deadline for applications is May 15, 1997. Recommendations should be available by the July Board meeting.

- Madeleine Brown, Fluor Daniel Hanford (Hanford Work Force), invited the Board to the Hanford Safety Expo on May 14-15 at the Benton-Franklin County Fairgrounds in Kennewick.

- Dick Belsey, Physicians for Social Responsibility (Local and Regional Public Health), introduced Ross Ronish, who is Margery Swint's alternate for the Local and Regional Public Health seat.

- Peter Bengtson, Fluor Daniel Hanford, has taken a new position with the Oregon Department of Energy beginning in May.

- Gerald Hess, Gonzaga University (Public-At-Large), announced that Greg Engel, a Western Washington University student, would like to provide free research to the Board and provided a copy of his resume.

- Merilyn Reeves provided clarification on Board members' activities. She emphasized that when individuals who serve on the Board are invited on trips, they represent their own organizations and not the Board.

- Tom Engel, University of Washington (University), announced that there will be a workshop on "Scientific and Engineering Challenges in the Remediation of Contaminated Soil and Groundwater" on May 29-30. A section of the workshop will address the challenges of the Hanford site and the region of the Northwest. There is no charge for the workshop.

- Loretta Ahouse was introduced as a representative of Heart of America Northwest (Regional Citizen, Environmental & Public Interest Organizations), serving as alternate to Gerald Pollet.

- Ecology comments on the FY99 budget are now available.

AGENDA ITEM 1: WELCOME AND INTRODUCTIONS

Louise Dressen, EnviroIssues, along with Merilyn Reeves, reviewed the agenda and allotted time for the BNFL and the Lockheed Martin Advanced Environmental Systems (LMAES) privatization companies. The importance of equal time was stressed for both companies. Merilyn noted that the Tank Waste Remediation System (TWRS) framing of issues is intended to initiate discussion and will be brought back as advice at the July meeting.

Tim Takaro, University of Washington (University), provided a status report on the "Health of the Site" meeting. He explained that a call for summaries has been released. The organizing committee will select the program for December 3-4, 1997. Merilyn Reeves reminded the Board that it agreed to co-sponsor the activity; however, she is not able to serve on the organizing committee and asked for a representative. Bob Larson, Benton-Franklin Regional Council (Local Government Interests), recommended that Marjorie Swint serve on this committee. Prior to the

Pam Brown. City of Richland (Local Government Interests), asked about the Plutonium Roundtable meeting in Seattle in which the Ukrainian people expressed concern over not being able to access information. Mary Lou Blazek said it is her belief that they do not have any information that is in accessible form. She added that they are gathering information but have not taken the next step in preparing the information for anyone other than scientists. Ralph Patt commented that there is good information in the Ukraine which has been gathered by international associations. He added that the lab facilities were questionable.

AGENDA ITEM 2: APPROVE APRIL MEETING SUMMARY

Madeleine Brown requested the reference to the Board's Public Involvement Committee meeting be changed to reflect that it was the first meeting this year. The April Meeting Summary was approved with minor spelling changes.

AGENDA ITEM 3: TEN YEAR PLAN

Alice Murphy provided an update on the Ten Year Plan. She explained that the Integrated Priority List was used at public meetings in Richland, Portland and Seattle. DOE has received FY99 budget comments and the Board's consensus advice. The closing dates for comments has been extended to May 30 due to DOE-Headquarters extending its schedule. She commented that there has been a lot of Secretarial interest in the Ten Year Plan development. Secretary Peña has been briefed by Al Alm and is interested in consistency in the field submissions. The first Ten Year Plan will be called a discussion draft and will be out in mid-May, followed by a public comment period of 45-60 days, with comments accepted until mid to late July.

When the discussion draft comes out, DOE will be able to release the revised FY99 Integrated Priority List which shows the out-year projections and the Project Baseline Summaries. There will be a national conference with stakeholders to kick off the discussion draft around mid-May and there will also be a national tele-video conference around mid-June to the end of July. During the comment period, DOE is expecting Al Alm and Gene Schmidt from DOE-Headquarters to visit.

Due to the Ten Year Plan delay, there will be another draft around the end of September. The final plan is expected to be released in February 1998 in conjunction with the release of the FY99 budget to Congress. Because the schedule for the Plan is extended, DOE will probably be using the Integrated Priority List. The comments received to date have been forwarded to the assistant managers for their consideration. The Integrated Priority List will be reviewed to ensure the compliance issues have been met and any updates from the FY97 and FY98 appropriations will go into the Ten Year Plan.

Alice Murphy explained the two levels for the FY99 budget are a $6 billion case and a $5.5 billion case. For DOE-Richland, the $5.5 billion case equates to $950 million, which is the Office of Management and Budget target, and the $6 billion case equates to $1.21 billion for DOE-Richland. She added that the purpose of the Ten Year Plan is to convince Congress of the

Bill Taylor said the TWRS privatization contract is on track and Interface Product and Process Teams are meeting. To date no "technology process show stoppers" have been identified. He said he believes DOE will have viable programs when it evaluates the privatization contractors' products in May 1998. Bill added that a lot of energy is coming from the Privatization Review Board which is chaired by Al Alm and has representatives from procurement, legal counsel, and DOE senior managers. He said the involvement by senior management at DOE-Headquarters is a positive step.

Mike Wilson provided his perspective on the privatization process and said Ecology's key concern with privatization is that it is a high risk approach to a high risk environmental problem. He said Ecology still wants to see contracts awarded for initial vitrification and treatment facilities that will come on line by 2002. A definition of success for Ecology is the construction and operation of the plants. Ecology's only definition for failure is not treating waste. He agreed that there is a need for the set aside money to show Hanford is serious about cleanup and that Congress needs to get that message. He expressed concern over the Pit 9 situation at the Idaho National Engineering and Environmental Laboratory in that it was one of the first privatization efforts. The project budget was overrun and there were questions about the ability to process the waste. Mike expressed concern over adequate funding of TWRS activities in the retrieval and treatment process as they are a dependent part of the critical path for waste processing.

Suzanne Dahl, Ecology, provided a status report on the permitting activities. Ecology is working with both contractors and the DOE on the permitting issue. She discussed the tentative permitting schedule (*Attachment 5)* which is based on supporting two commitments: (1) plant construction needs to start by 1999, and (2) hot operation needs to start by 2002. A schedule and permitting plan has been developed and it will be shared with the Board, Indian Nations and any other stakeholder groups in May 1997. The plan will include the contractor and DOE deliverables, the major permitting steps to achieve the schedule, and interface relationships between treatment plants and supporting activities. Several facilities will require physical and operational as well as administrative modifications and some permitting changes will be needed to address secondary waste.

John Erickson. Washington Department of Health (WDOH), expressed concern over the air operating permit and noted that permitting requirements will remain the same whether the plants are privatized or not. He stated that the license holder is still DOE. He wants to make sure technical people are included early enough to conduct the required analysis. Regarding external regulation by the NRC, John said WDOH pushes to have external regulation at the DOE facility and has always supported the NRC regulations. He expressed concern over activities not covered by the NRC, such as machine generated radiation and naturally occurring radioactive material. He questioned who would perform those duties. John said it is his understanding that Occupational Safety and Health Act (OSHA) requirements will take over the occupational radioactive oversight when DOE regulates. However, when the NRC regulates, OSHA does not apply, so he is not sure how that regulation will work. He expressed concern over DOE versus NRC regulations and questioned how regulators would select applicable regulations. He

approach. When it appeared the government was downsizing, LMAES revised its vitrification technology to be the best while meeting Tri-Party Agreement (TPA) milestones. He explained that the schedule has been affected due to having spent the first six months on a technology that is now set aside. He added that LMAES will make its deliverables on time and is still going to build a catalytic extraction process plant in Richland.

He reviewed Lockheed Martin's successes in integration and cited the Lunar Lander project as an example. He said that EnVitCo takes the place of Molten Metals Technology as the low- activity glass processor. The members of the LMAES team and their areas of responsibility include: (1) EnVitCo and Molten Metal Technologies will be the low activity waste processor, (2) Numatec will provide high-level waste processing services and has been processing high-level waste for a number of years, (3) AEA and Nukem will provide pre-treatment technologies, (4) OHM Remediation Services will handle the secondary waste management, (5) Los Alamos Technical Associates and Duke Engineering and Services will oversee safety, health and environmental permitting and regulations, (6) Fluor Daniel will oversee the facility design and construction, and (7) Babcock & Wilcox will provide safeguards and security services. He explained that EnVitCo was involved in the Hanford Waste Vitrification Project.

Jack Dickey explained that low-activity waste will be processed in May in the EnVitCo melter in Oak Ridge, Tennessee. He said that it is their belief that EnVitCo has the best technology. EnVitCo is owned by Teaco, one of the most experienced glass melter processors in the United States. He added that Cogema, Numatec's parent company, recently purchased 49 percent of Teaco, thereby providing a strong combination of Numatec's radionuclide processing experience with Teaco's glass melters. He emphasized the pre-treatment benefits of having an immobilization process that is done outside the hot cell with multiple melters. He explained that all LMAES needs is four EnVitCo Transportable Vitrification System melters to operate for three to five years and the goal of 2,800 tons of waste processed will be met.

Jack Dickey explained that financing is LMAES' biggest challenge due to the risk and commented that the risk balance is in favor of DOE. He believes DOE should share the risk. He said that in 2002 when the plant is finished, LMAES will have committed around $2 billion. When LMAES starts processing waste in 2002, they will have a debt service of more than $1 million per day. He cited the fact that only two companies bid on this project as an indicator of the risk being asked of the contractors by DOE.

Discussion ensued on the Pit 9 project at INEEL. Jack Dickey explained that the privatization issue was not due to technology, but the contract structure. He commented that Lockheed should have gone back and renegotiated the contract. Bill Taylor said he has little information other than Pit 9 has some effect on the 12 projects that DOE is currently trying to privatize. Bill added that DOE has obtained a copy of the Pit 9 contract to make sure TWRS does not run into the same problems.

Dick Belsey presented a draft framing of issues from the Health, Safety and Waste Management and Dollars and Sense Committees on TWRS privatization. He asked the Board to review the issue paper as it may possibly be advice for the July Board meeting. Comments can be

Madeleine Brown asked if the two plant approach fails, will one contractor be capable of doing twice as much in the same time. Jack Dickey said that is not currently in the contract and it is his belief that the best way to privatize is with two contractors.

Paige Knight, Oregon Hanford Watch (Regional Citizens, Environmental, and Public Interest Organizations), asked how LMAES provides interface management within the ten companies. Jack Dickey said LMAES will use systems engineering management. He explained that Lockheed Martin is responsible for providing the deliverable, but he foresees a limited liability partnership between the companies in which each will become responsible for its area of work. Paige asked how LMAES will be able to meet its timeline with the change in the technology provider. Bill Dixon, LMAES, explained that the process analysis is complete for all processes except vitrification. LMAES is in the process of doing that one and a draft set of standards, which will include the EnVitCo process, will be shared with the Health, Safety and Waste Management Committee around the end of May. The package will be delivered to DOE by July 1, 1997. Bill explained that this can be accomplished because the EnVitCo technology does not raise new challenges or hazards.

Stan Stave, City of West Richland (Local Government Interests), asked Jack Dickey what consideration has been given to the ratio of debt versus equity financing and what the scenario would be if DOE is not willing to take on the risk in relation to the debt load. Jack Dickey responded that there would not be a deal. He added that when the pro forma was done, certain things, including permitting, were identified that must happen before financing can occur. LMAES original input had equity investments up until the start of construction. He said that LMAES does not have large government investments backing it on this project and the equity investment is large.

Dick Belsey asked for clarification if the goal is to have a low-activity fraction that can be handled. He asked what that means in terms of a structure. His concern was with fire and the dispersion of low-level activity waste into the environment. Bill Dixon said LMAES has to reach agreement on the set of safety standards in July. Based on that, the robustness of the structure will be evaluated. Dick Belsey referred to Westinghouse Savannah River Company being able to clear 99.99% of its high-activity fraction grout. He asked if LMAES will be able to meet Hanford's 67-90% separation. Bill Dixon said yes, and the waste samples LMAES has received so far indicate that 99.9% of the material can be removed from the low-activity waste stream.

Tim Takaro asked about the standards LMAES will be using. Bill Dixon said that where DOE regulations do not exist, NRC and Washington State regulations will be used. He added that for industrial health and safety, LMAES will be looking at OSHA.

Paige Knight commented that BNFL will be picking up 30% of the equity and asked for the LMAES figure. Jack Dickey responded that LMAES does not have a figure right now, but it will not be 30% due to the high risk. He said that if the risks are in balance, they will consider higher equity contribution. He said the risk can be balanced by obtaining guarantees that LMAES will

Doug Sherwood, EPA, said EPA's comments have not changed from previous comments, but the agency still wants to see the Ten Year Plan and hopes to have its budget comment letter signed and available shortly. Mike Wilson said Ecology provided comments on the budget and a joint letter between EPA and Ecology will be coming out soon. He thanked DOE for the open process.

The Dollars and Sense Committee will be meeting on June 13 and hopes to have the opportunity to review the Project Baseline Summaries. Merilyn Reeves said information from that review should be available by the July Board meeting.

Board Discussion

Bob Larson asked if the FY99 budget includes the two TWRS privatized facilities. Lloyd Piper, DOE, explained that the privatization contracts are not impacted by the FY99 budget and the privatization set aside is over and above the $6 billion case. Gordon Rogers (Public At Large) asked when the Project Baseline Summaries will be available. Alice Murphy said they will be available by mid-May.

AGENDA ITEM 7: 100-D TREATABILITY STUDY/DEPLOYMENT PLAN

Ralph Patt described three Environmental Restoration Committee breakthroughs. The first breakthrough issue is a plan that has been developed by DOE and Ecology to address N Reactor cleanup, cribs, strontium-90, and skyshine. He said the Committee will have advice on this by July. The second breakthrough addresses the vapor extraction project. He explained that a percentage of the carbon tetrachloride plume in the 200 West Area has reached groundwater. The vadose zone still has 60-70% of the carbon tetrachloride plume, and the vapor extraction system has been able to catch the contaminant before it gets to groundwater. He said the DOE, Ecology and EPA are doing a great job. The third breakthrough issue is vadose zone integration. Ralph Patt said he believes there has been a great step forward in integrating vadose zone and groundwater work and he believes DOE is following the Board's recommendation on integration.

Gordon Rogers commented that he was pleased with the integration of the groundwater, soil and reactor cleanup and suggested this plan be taken as a model for other areas. Merilyn Reeves said she was impressed during the new member orientation session regarding the amount of work being done at N Reactor and the fuel basin cleanout. Doug Sherwood said the N Reactor pilot project was started to address the N reactor deactivation after which time groundwater would be cleaned up. He said the only issue is that deactivation does not equal interim safe storage.

Ralph Patt discussed the Environmental Restoration Committee's draft advice on the In Situ Redox Manipulation technology. He said the draft advice is intended to be the Board's statement to Technology Development (EM-50) that this is a worthwhile program and should be funded. Paul Danielson, Nez Perce Tribe (Tribal Governments), presented information on the proposed treatability test of In Situ Redox Manipulation. Paul explained that chromium is in the groundwater in 100 Areas and when it flows with groundwater into the river, salmon embryo can

other sites in the Northwest that would benefit. He acknowledged that there are issues that need to be addressed. such as clogging the pore space. but believes this is a good test.

Madeleine Brown commented that there needs to be more emphasis on funding and putting it to use in the field. Tom Engel supported the recommendation from Emmett Moore. Washington State University (University), to emphasize the value to "do no more harm."

Greg deBruler, Columbia River United (Regional Citizen, Environmental & Public Interest Organizations), asked if there is another site that does not have a redds population directly off shore. Mike Thompson responded that the best way to use this technology would be placement near the Columbia River. He added that this area is not impacted by the pump and treat system and believed this would be a good site. After summarizing the Board's comments, Merilyn Reeves suggested incorporating some of the Board's values of protecting the river, do no harm, and use available technology.

Louise Dressen reviewed proposed changes to the document. including the addition of a referenced letter from DOE to the Nez Perce Tribe. The Board strongly agreed that terminology referencing the adherence to the commitments was needed. Revisions and changes were accepted and it was adopted as Consensus Advice #71.

AGENDA ITEM 8: TRI-PARTY AGREEMENT NEGOTIATIONS

George Sanders, DOE, reviewed the TPA negotiations and resulting change packages for the Reactors on the River and Spent Fuel/K Basins (*Attachments 8-10*). George provided a background on the Surplus Reactors Disposition negotiations. The key points in the negotiations are that safe storage is to be followed by deferred one piece removal and the N reactor has been included in the reactors package. He explained that the M-93 milestone series addresses interim safe storage activities. procurement initiatives, and Tri-Party Agreement negotiations for disposition and defines an integrated 105-B Reactor Museum or landmark/cleanup decision. In addition to these activities, target milestones for the 105/109-N Reactor interim safe storage design are identified as are the interfaces with other site work.

Revisions to Section 8 of the Tri-Party Agreement include the addition of key Hanford facilities: (1) the 105 Reactors, (2) U-Plant, (3) REDOX, and (4) K East and West Basins. Language was clarified regarding decommissioning processes and regulatory involvement in key decisions. Language was strengthened relating to "surveillance and maintenance" and "disposition". George Sanders explained that terminology was addressed and interim safe storage of the reactors was defined as the first stage of final disposition. The final disposition of the reactors was defined as removal of the reactor cores from their present locations to a disposal facility in the 200 Area. George Sanders said there will be a public review and comment period for both the reactors and spent fuel TPA change packages from June 1 to the middle of July. The intent is to have the 45-day comment period coordinated with a Board meeting. The final Tri-Party Agreement change package is anticipated to be done by August 31, 1997.

for new technologies in the future that could benefit the project. Allowing for another five years of technology development in the country provides the opportunity to go to the commercial world where new technology might exist and obtain the best ideas.

Gordon Rogers asked about the PCB situation in the K Basins, which pose a problem. George Sanders said that when the sludge is treated, DOE will be able to address the PCB issue.

Emmett Moore asked which regulators had responsibility for what area. Roger Stanley said Ecology is the lead for K Basins, and once the basins are transitioned, they will fall under EPA's lead for final cleanup. George Sanders explained that once a project is in Environmental Restoration, there are "split leads" between EPA and Ecology. Anything that is waste management or facility transition is led by Ecology only. EPA has the lead in the Environmental Restoration Program for the B Reactor, K Reactor and the F Reactor areas. Ecology has the lead for the DR, D, H and N Reactor areas. Ecology is the lead for all of the waste sites, groundwater and all decommissioning and decontamination efforts in each of those areas. EPA is the lead for the other areas. Merilyn Reeves commented that this is a good example of the regulators working together on cleanup of Hanford. She said this is a part of the follow up from the St. Louis meeting when the regulators, DOE-Richland and DOE-Headquarters met together for the first time and took a hard look how to streamline cleanup. The regulatory split occurred at that time.

AGENDA ITEM 9: TRACKING OF FY97-99 SITE ACCOMPLISHMENTS

Dick Belsey said the Health Safety and Waste Management and the Environmental Restoration Committees have developed success indicators from DOE budget presentations that identified planned accomplishments. These indicators were presented to the DOE's assistant managers for review and comments. One of the groups has returned recommendations and metrics and all the information will be provided to the Board when more detail is available. He asked Alice Murphy and Lloyd Piper to review the indicators and encouraged a quick turnaround from the other assistant managers. Merilyn Reeves said this activity is a follow up to Dan Silver's success indicators for TWRS. Merilyn explained that this is an attempt to get the success indicators down to understandable language to be used by the Board. These indicators will be able to say "this is what we said we would do, how much it would cost and how are we doing."

AGENDA ITEM 10: DEFENSE NUCLEAR FACILITIES SAFETY BOARD

Paul Gubanc, Defense Nuclear Facilities Safety Board (DNFSB), presented information on the activities and responsibilities of the DNFSB. (*Attachment 11*) He explained that the DNFSB is an independent agency of the Executive branch. In this relationship, DNFSB does not work for DOE, the Department of Defense or Congress, but has a direct relationship with Congress and the President. There are five board members appointed by the President and confirmed by the Senate. DNFSB members are required by law to be respected experts in their respective fields.

Paul Gubanc informed the Board that information, including member biographies, is available on the DNFSB homepage. He explained that the major function of the DNFSB is to provide

Bob Larson and Merilyn Reeves asked to see the Hanford recommendations. Tom Engel asked who set the sampling requirement for the tank waste characterization, as he questioned the logic for the measurement requirement. Paul Gubanc responded that DOE selected the requirement and said that unless DNFSB can find a technical error, it will hold DOE to the requirement.

John Erickson asked what will happen to the DNSFB when the legislation being drafted by DOE and NRC to regulate the privatization efforts is implemented. Paul Gubanc explained that there has been a recommendation to phase out the DNFSB over the next 5-10 years. He said DNFSB would like to see the language in legislation; but has not obtained it yet. The goal is to get the legislation changed within the next two years. Merilyn Reeves requested a copy of the slide used to discuss the legislative changes.

Stan Stave asked when the Hanford recommendations were made. Paul said there have been no new recommendations at Hanford in the last three years. He said that relative to Hanford, DNFSB has enough to oversee implementation of these recommendations and does not want to flood the system with additional recommendations that could dilute the issues.

Madeleine Brown expressed concern that some performance agreements are tied to actions that should be simply a statement of work. Paul Gubanc responded that it is DOE's responsibility to establish contractor incentives. He cautioned against establishing incentives that would encourage people to not report a problem. He reiterated that the DNFSB does not have the authority to direct or fine DOE. However, its enabling legislation states that the Secretary shall carry out and complete an implementation plan in response to a DNFSB recommendation. If the Secretary determines that the implementation or part thereof is impractical due to budgetary considerations, the Secretary shall submit to the President, to the Committee on Armed Services, Senate Appropriations Committee, and the Speaker of the House, a report containing the Secretary's determination.

AGENDA ITEM #11: CANYON DISPOSITION INITIATIVE

John Sands, DOE, provided a background on the 200 Area Canyon Disposition Initiative *(Attachment 16)*. He explained that the initiative is to look at final disposition of the five canyons. U-Plant is the pilot for the initiative. The Phase I feasibility study was published in February and DOE has received regulatory comments. The study will be out for public comment in June. There are seven alternatives identified in the feasibility study and all have passed the screening process, i.e., all can be implemented. John explained the seven alternatives are: (1) no action, (2) full removal and disposal, (3) decontaminate and leave in place, (4) entombment with internal waste disposal, (5) entombment with internal/external waste disposal, (6) close in place-standing structure, and (7) close in place - collapsed structure. DOE is seeking technology development funds for U Plant characterization activities for the initiative.

John Sands described the canyons as chemical processing facilities with support facilities. He showed slides of the U Plant facility and said that DOE will begin characterization work in 1998. The Phase I feasibility study, which is being done under CERCLA, identifies remedial action

his belief that there is too much uncertainty and not enough specific information to drop any of the alternatives at this early stage.

Merilyn Reeves asked the Board to provide input to the Committees. Dick Belsey said he did not think the Committees and the Board are at the point of doing consensus advice. He said they are asking for information and clarification of data and have expressed their concerns.

Dick Belsey commented that the draft report will eventually serve as an official report from the Board, along with the Future Site Uses Working Group Report, Tank Waste Report, and other base reports upon which advice has been built. Louise Dressen added that the paper needs to be revised and updated because the draft was written before the Phase I feasibility study was complete.

Tom Engel expressed concern over creating another waste facility without the same level of review and protection measures as the ERDF facility.

AGENDA ITEM 13: PHMC ES&H PLAN

Paul Kruger, DOE, provided a briefing on the draft Project Hanford Management Contract (PHMC) Environment Safety and Health Plan. *(Attachment 17)* He explained the history surrounding the plan in that it was submitted and then rejected by DOE. This resulted in the creation of a team to re-work the plan. Paul reported that some accident cases are down. He referred to recent newspaper articles regarding a fine to Fluor Daniel Hanford and added that although the safety statistics are improving, there still needs to be some work done. He reviewed the Bechtel Hanford OSHA lost workday statistics and noted that Bechtel and DOE are seeing improvements. He added that the Pacific Northwest National Laboratory has also posted a decline in OSHA lost workdays.

Larrie Trent, Fluor Daniel Hanford, provided information on safety statistics and a status report on the integrated safety systems plan. He said that dramatic progress is being made. There is a strong project team getting input from a lot of sources to assure the paper document will work in the work place. He said there is a sharp decline in the injury rates, including the PHMC major subcontractors and enterprise companies. He added that not only are injuries declining, but injuries are less severe. He said the purpose behind the integrated safety management system is to develop a more consistent approach to involve workers. The workers are part of the work planning, execution and feedback of this group. He noted that on April 17, 1997, the Hanford railroad operations crew marked 50 years without a lost-time injury.

Mike Humphreys, DOE, explained that he is the team lead for the working group established for the integrated safety management plan. He said DOE is committed to systematically integrating safety into management and work practices. He referred to a 1995 recommendation from the DNFSB to institute a complex-wide safety management system. In October 1996, DOE issued a policy statement for integrated safety management. The overall objective for the integrated safety management system is to systematically integrate safety into management and work practices such that missions are accomplished while protecting the public, the workers, and the

Dick Belsey inquired if there will be institutional guidelines for the graded approach and if so, will these be accessible to the Hanford worker or will an ad hoc decision be made by a supervisor or someone in the field. Mike Humphreys responded that there are policies and procedures, including a stop work policy, in place today to define graded approaches. The team is working on defining a set of expectations to make the graded approach more consistent. Paul Kruger added that DOE is looking at the employee culture to make sure there is not some sort of effect that involves workers not reporting dangerous situations.

Ross Ronish referred to the increase in health care in the Tri-Cities and asked if there is any correlation between the new contractor and increased medical services. Paul Kruger said DOE is looking into that issue. Ross also expressed concern over the safety statistics, especially with a new contractor. Mike Humphreys responded that it is his belief the safety message is getting through to the employees.

Madeleine Brown expressed concern over reduced security in the workplace, specifically the freedom for individuals to come and go in the buildings. She is also concerned with the increased stress levels and the higher-than-normal suicide rate in the Tri-Cities. She believes this could be tied to the high use of medical services.

Merilyn Reeves explained that the Health, Safety and Waste Management Committee will be following these issues and hopefully the "Health of the Site" meeting will provide more information.

Public Comment

Gai Oglesbee, speaking as an independent stakeholder, expressed concern over worker safety and questioned the figures presented relating to worker safety. She said that until the Board can get accurate information, it cannot make informed decisions. She expressed concern that the lost workday figures do not represent worker exposure.

AGENDA ITEM 14: K BASINS/SPENT FUEL PROGRAM

Beth Sellers, DOE, provided a status report and schedule on the K Basins project. *(Attachment 18)* The activities reviewed included the Canister Storage Building, Hot Vacuum Conditioning, Cold Vacuum Drying, Multi-Canister Overpacks, Fuel Retrieval, Cask/Transportation and Fuel and Sludge Characterization. She reviewed the process for the retrieval and processing of the fuel and sludge from the K Basins as outlined in the handout. Debris will be disposed of or recycled and sludge will go to the TWRS double shell tanks. The fuel will go through fuel cleaning and will then be loaded into fuel baskets and put into a multi-canister overpack and cask. From this point, the fuel will go through cold vacuum drying and then to the canister storage building. After a period of time, the cask will go through the hot conditioning system and be transported for final disposition.

Beth Sellers explained the schedules for K Basins are tight because DOE is trying to address urgent risks. She reviewed the schedule for the canister storage building, which is currently

Hanford, acknowledged that those people will be returning to the project. She added that the need for additional operators will be occurring in early 1998 when the system training will take place.

Gordon Rogers asked if the problems relative to the sludge disposal are a result of PCB contamination. Nancy Williams responded that the sludge problem is more than a PCB issue. There are cost, schedule, technical and safety issues in addition to the PCB. The existing baseline is to dispose the sludge in the 105-AW tank. She said they are well along in addressing the safety issues. The key is the schedule and cost for the pre-treatment requirement. Having solved technical issues, they are dealing with the regulatory issues, mainly PCBs, with the driver being the technical and schedule feasibility.

Maureen McCarthy, Washington League of Women Voters (Regional Citizen, Environmental and Public Interest Organizations), asked about the success of integrating several contractors. Beth Sellers said she is pleased with the integration and explained that Nancy Williams is doing the integration for Fluor Daniel Hanford. Merilyn Reeves commented that the Board has strongly recommended removing the spent fuel and said that the Health, Safety and Waste Management Committee is working this issue.

AGENDA ITEM 15: TPA AGENCY NEEDS FROM HAB

Merilyn Reeves welcomed Chuck Clarke, EPA, Tom Fitzsimmons, Ecology, and Lloyd Piper, DOE. Merilyn explained that they were invited to discuss agency philosophy and hear the Board's perspectives. She said that this dialogue will hopefully enable the Board's work to be more productive.

Chuck Clarke described his background and explained that he has been involved in Hanford issues since 1972 with about three years on the regulatory side. He commented that he is amazed at the strides taken at Hanford, especially in its single regulator approach. He found it interesting that a large issue in the past was simply people wanting information and he credits Hazel O'Leary and her administration for the openness and availability of information that has taken place. He said the Board has played a significant role with the regulators, DOE, and the contractors, and sees opportunity for the Board in the future. He said it is very easy for the regulators to get narrowly focused and the public helps to provide a positive impact by providing perspective. He is pleased to see the single regulator approach, not just at Hanford, but on a national level as well. Hanford has been used as a starting point and provides a framework for others to reference. His major concern is that even though gains are being made, Hanford may not get enough money. He added that there should be more pressure for having a long-term financial commitment.

Tom Fitzsimmons explained his background and noted that he has been on the job for three months. He believes that Hanford is important to working relationships between the state and federal governments and to the media and noted that the nation is watching. He said Hanford is high on his priority list and commented that it is hard to bring this to the attention of a new governor, but believes he has the insight on how to keep things on the Governor's agenda. He

diminishing Hanford contractor support, especially over the last six months. Regarding technical issues. Tom Engel believes that there needs to be two or three technical reports per year from the Board. He asked Tom Fitzsimmons and Chuck Clarke for their support. He said the Board has provided quality documents such as the Paulson Report on tank farms.

Dick Belsey said Hanford is an important health and safety issue. He explained that the Board is trying to ensure that future generations are not impacted by the radioactive inventory on the Hanford site. He explained that the value of the contributed time by Board members is great and that this is a knowledgeable Board. He requested the Board be given the tools to do the job.

Maureen McCarthy stressed the importance of the regional and national perspective as the work done here may benefit others. Issues such as transportation, final disposition, and plutonium disposition need to be shared with the nation. Jim Watts commented that prior to creation of the Board, he spent a lot of time trying to develop consensus among the stakeholders.

Merilyn Reeves reminded everyone that there is a lot of interest from others wanting to become a part of the Board. She said this is a Board of organizations, governments, environmental interests and others. The Board works because the organizations are committed to have individuals come to this Board. She suggested that Tom Fitzsimmons serve on the Environmental Management Advisory Board, as it is important to have representation at DOE-Headquarters. She added that there should also be representation on the DOE Secretary's advisory board. Tom Fitzsimmons stated he was impressed by the Board and said he would look at what else can be addressed in this forum. Chuck Clarke commented that he would look into the resources issue at EPA. He said EPA tries to keep a priority on Hanford.

AGENDA ITEM 16: UPDATES

Jim Goodenough, DOE, said the PUREX closing ceremony will take place in June with Al Alm in attendance. DOE-Richland invited Secretary Peña, but his next availability will not be until late September, the same time as the Health and Safety Conference. He suggested coordinating a Board meeting date with the Secretary's visit.

Paul Danielson and Greg deBruler reported that the Columbia River Comprehensive Impact Assessment public meetings will be May 15 at the Shilo Inn in Richland from 6-7 p.m, May 20 in Hood River at the Hood River Inn, May 25 in Portland at the State Office Building, and May 22 at the Mountaineers Building in Seattle.

Lloyd Piper reported that the Hanford Remedial Action Environmental Impact Statement/ Comprehensive Land Use Plan received many comments. As a result, a working group of stakeholders was developed. The plan is to go to a final environmental impact statement that includes stakeholder comments. Lloyd explained that this document is intended to be a comprehensive land use plan for the period of time the agency manages the land. He met with the working group and concerns were expressed that there should be a second draft. He said the

Attachments

1. Attendance
2. Mary Lou Blazek Moscow, Russia Trip Report
3. Ralph Patt Ukraine Trip Report
4. TWRS Privatization
5. TWRS Privatization Major Permitting Activities
6. Presentation to Hanford Advisory Board by Maurice Bullock, BNFL
7. Presentation to Hanford Advisory Board by Jack Dickey, General Manager, LMAES
8. Conclusion of Surplus Reactors Disposition Negotiations
9. Conclusion of Spent Nuclear Fuel Negotiations New Major Milestone for the Tri-Party Agreement
10. Tentative Agreement on Hanford Federal Facility Agreement and Consent Order Negotiations for the Disposition of Hanford Surplus Reactors
11. Defense Nuclear Facilities Safety Board
12. Seventh Annual Report to Congress
13. NRC External Regulation of DOE
14. Enabling Statute of the Defense Nuclear Facilities Safety Board
15. Hanford Related DNFSB Correspondence
16. 200-Area Canyon Disposition Initiative (CDI)
17. Integrated Safety Management System - "The System for Managing Environment Safety & Health"
18. Spent Nuclear Fuel Project Status

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group believed there could be a comprehensive public comment period and if there were strong issues, another draft would be prepared.

Mary Lou Blazek reported that the Openness Initiative discussions have been very productive. An agreement between the Consortium for Risk Evaluation with Stakeholder Participation (CRESP), DOE and stakeholders on evaluating how the initiative will proceed is close. She explained that there will be workshops with deliverables versus a separate panel. There should be more information at the next Board meeting. Merilyn Reeves commented that she was pleased that CRESP is working with stakeholders and likes the workshop forum.

Max Power provided an update on the non-union, non-management seats. He said the seats were advertised and the deadline for applications is May 15, 1997. To date, 110 requests for packages have been made with about six dozen completed packages returned. EPA and Ecology should have more information by the July Board meeting.

The meeting adjourned at 4:00 p.m. on Friday, May 2, 1997.

told the Board to not underestimate the connection this issue has to the entire State of Washington. He commented that there is a need to keep state-wide attention and to provide more information and education. Economic issues are also important and he recommended raising the profile of the Board's work at Hanford so that others can lend their assistance and monetary support. He added that it was important not to lose sight of what is taking place in the community, as it is tied to Hanford's success and Ecology's success is tied to how well it communicates and focuses on the important issues. He recommended focusing on a longer term future. He understands that it is not easy, but progress will come through open communication. He said the Board has his attention and support and he looks forward to working with them.

Lloyd Piper thanked Tom Fitzsimmons and Chuck Clarke for visiting the site. Lloyd said the Board has raised a number of important issues that have helped DOE. He recommitted DOE to a continued and active public involvement process. He urged the Board to focus on the regional perspective and noted that the diversity of the Board is its greatest benefit. Lloyd said that the budget and the Ten Year Plan are emerging issues. He explained that the target in Congress is not necessarily TWRS privatization, but the other billion dollars that DOE is requesting. Congress recognizes the importance of the TWRS project and Lloyd said they will continue to work this issue. The other privatization budget problem is the funding for construction but he believes it is an issue that can be managed. Lloyd explained that DOE has been caught up in Secretarial transitions and commented that Secretary Peña has become personally involved in the Ten Year Plan and privatization. Secretary Peña is concerned that an appropriate public process takes place and supports public involvement. The Ten Year Plan will have site wide integration issues in it and will be released in February. Lloyd commented that it is his opinion that compliance and funding is a growing issue. He said a way needs to be found to work together with the government agencies, and stakeholders to gain the largest support available in Congress. He emphasized partnership with regulators and the Board and stated that all parties need to continue to look for new approaches. He commented that DOE is still working on compliance issues with the FY98 and FY99 budgets.

Board Discussion

Merilyn Reeves commented that Secretary Peña was invited to this meeting and the Board still wants him to come to the Northwest. She said the Board would like him to come to a Board meeting to provide comments on the Ten Year Plan and point out to the Secretary the need for a stable level of funding. Merilyn said the main thing that comes from the Northwest interest is the desire to have a process for implementable and sustainable decisions that will benefit the nation. She said that there needs to be an understanding of how DOE makes decisions and cited interstate waste transfers as an example.

Ralph Patt, Tom Engel, Dick Belsey, Norma Jean Germond, Oregon League of Women Voters (Public At Large), and Greg deBruler expressed concern over Hanford contractor support for the Board and the need for independent technical expertise beyond what the facilitation contractor can provide. Ralph acknowledged Senator Pat Hale and noted that she was a tremendous supporter for the Board when she was at Westinghouse. Tom Engel is concerned over the

under construction, and the material handling machine within the building. She commented that this is a unique system that will transport the fuel within the canister storage building. She explained that several activities are being conducted in parallel (e.g., the safety analysis is being conducted at the same time design details are being completed). The hot vacuum conditioning system has been incorporated into the canister storage building design and construction began in February 1997. She added that some costs for process equipment are increasing and there are some financial issues on this project. She noted that this work has never been done anywhere else in the world. The Cadarache experience in France is being considered; however, that facility processes one fuel element at a time versus six tons at a time at Hanford.

The Cold Vacuum Drying facility design is complete and the construction contract has been awarded. Beth said she is hopeful that construction will start by mid-May. The approval to begin construction was given based on closure of two issues: (1) the leak type rate and (2) connecting the pre-formed concrete walls to the base of the facility. Beth said external reviews are confirming the productivity of the facility, but will result in a three month slip in the schedule. Beth explained that the multi-canister overpacks will store the fuel and serve as a transportation vessel. There was an issue with the reaction rate of the fuel as it goes through the cold vacuum drying process. DOE is approaching closure on this issue by placing copper fins at the end of the scrap baskets to provide a heat transfer area. Regarding the fuel and sludge characterization program, the main concern is integration of four major equipment vendors. The cask transportation project is currently on schedule.

Beth Sellers explained that a "look and lift" campaign was completed on the K Basin canisters and more corrosion than expected was discovered, resulting in the need for a new integrated water treatment system into K West as well as K East. This added a schedule slip of five months, pushing fuel movement to May 1998. Regarding the K East sludge, hydrogen generation issues have resulted in the need for pretreatment of the sludge prior to placement in the TWRS tanks. She commented that the sludge is becoming almost as large an issue as the fuel itself.

Overall, Beth explained that the spent nuclear fuel project is balancing the FY97 budget. She commented that the cost of doing business has increased in light of project growth and funding reductions. They are addressing the increases by deferring some work, eliminating work or reducing the size of work and reducing procurement and subcontract cost. Beth added that the new PHMC found $53 million in issues needing to be addressed at the spent fuel project. She reviewed the schedule in the handout and individual project activities.

Board Discussion

Pam Brown asked if the vehicle for moving the canisters can be used for moving glass canisters. Beth Sellers responded that the TWRS canisters are different from the spent fuel project's but noted that some of the glass logs could be stored at the canister storage facility.

Jim Watts commented on the workforce cuts and recommended using some of the trained employees that have been relocated elsewhere on the site. Nancy Williams, Fluor Daniel

environment. The plan is to provide consistency between the principles of ISO 14000 and the safety management system policy.

Mike Humphreys identified the ten guiding principles for the integrated system as: (1) identification of safety standards and requirements, (2) clear roles and responsibilities, (3) line management responsibility for safety, (4) competence commensurate with responsibilities, (5) hazard controls tailored to work being performed, (6) balanced priorities, (7) operations authorization, (8) communication, (9) feedback and improvement, and (10) management review. Mike commented that he believes they are on a path to true integration of these two disciplines and feels this could be a model for the DOE complex.

Lou Simmons. Lockheed Martin, described the process for integrating the safety mission into work. He said there is a three level analysis which includes the PHMC, facility, and work activity levels. He commented that the model in the handout will be used as a primary process for integrating several other process and programs, such as the environmental safety management system and programs such as Responsible Care. Lou listed the expected improvements to include: (1) sitewide use of automated job hazard analysis (includes worker job, facilities, etc.), (2) increased worker involvement through use of work management teams, (3) hazard based work controls (apply a graded approach), (4) a consistent set of safety and environmental criteria to be used in facility assessments and performance measures, and (5) increased focus on continuous improvement. He said these goals will allow measurement against future performance improvements. He explained that the graded approach balances hazards with respect to individual job categories.

Mike Humphreys said the final draft of the plan will be submitted to DOE in July. Formal approval is expected in September. He explained that the integrated safety management system will be implemented at the PHMC level, DNFSB priority facilities, and other facilities and activity level actions. He said further interaction with the Board is anticipated as the team approaches the final draft.

Board Discussion

Dick Belsey asked how the statistics can be verified. Larrie Trent responded that the statistics are verified and explained that a recent external review was conducted across the DOE complex and Hanford came through the review very well. Larrie added that PHMC encourages the injured worker to file a report and then an investigation is done to determine the root cause of the problem.

Dick Belsey asked where the balanced priorities originated. Mike Humphreys responded that they related to risk management in that it balances the priorities between the environment, health and safety of the workers against the mission. In terms of safety management, it relates to a graded approach where work is efficient and hazardous identification is implemented. He added that it is his hope and expectation that the integrated safety management system will help balance priorities.

objectives, contaminants of potential concern, and potential remediation alternatives. Based on CERCLA analyses, all seven alternatives are considered technically feasible and protect human health and the environment. Alternatives two and five are not recommended for further study. DOE will use CERCLA during Phase II for the disposition decision process.

Pam Innis, EPA Environmental Restoration Disposal Facility (ERDF) project manager, said from the ERDF perspective, there has been some difficulty dealing with waste that includes large amounts of concrete and metal. This has caused some engineering problems. One of the key objectives of ERDF was to create an engineered structure that could handle metals and concrete. But in dealing with the metals and concrete, compaction has become a problem. She believes it would be a good idea to look at other ways to deal with those wastes. She said EPA recognizes that there are very complex technical and regulatory issues for the canyon initiative. She said she agrees with some of the issues identified in the draft report provided by the Health, Safety and Waste Management and Environmental Restoration Committees. It is her intention to make sure that the Board's concerns are resolved in either the feasibility study or the continuing evaluation of the canyon initiative. She felt that in general, it is a good idea to move forward on this initiative.

Max Power said this initiative is worth exploring for a variety of reasons. He thinks viable solutions can be developed that achieve the environmental goals and are cost effective. He also believes the work done in the draft report from the Board committees captures many of the complex issues and will be helpful in structuring the public involvement phase of the initiative.

Jack Donnelly, Ecology, said he thinks the canyon disposition initiative is a good way to save money and dispose of waste that could not go to ERDF. There are some concerns with some of the burial grounds activities in the 100 Area. The 100 Area has a lot of waste that will be difficult to dispose of in ERDF. He commented that the premise for looking at this initiative was based on the burial grounds that would be remediated along the Columbia River. Ecology sees the need to continue to analyze the different alternatives. He said Ecology is still preparing detailed comments on the feasibility study and, at this point, all the alternatives in the feasibility study should proceed. He also said that another major question is what regulatory framework will be used and suggested remaining flexible at this time.

Dick Belsey said that the purpose is not to "stack and pack" barrels, yet the design shown to the Board shows barrels stacked. He recommended looking at what the canyons are suitable for handling as this has not yet been addressed. He added that looking at different alternatives for canyon suitability could provide an "alternate path tracking."

Board Discussion

Dick Belsey explained that the Health, Safety and Waste Management and Environmental Restoration Committees have reviewed this issue and Louise Dressen has prepared a draft report which addresses the Committee's issues and questions. John Sands said that DOE has received a copy of the draft report. Dick added that after going through the Phase I feasibility study, it is

independent oversight of health and safety aspects at defense nuclear facilities. DNFSB also oversees certain aspects of weapons complexes, such as Los Alamos and the Nevada Test Site. The DNFSB reviews and evaluates standards relating to the design, construction, operation and decommissioning of defense nuclear facilities. DOE orders, regulations, rules and requirements. He said that DNFSB makes recommendations to the Secretary of Energy that DOE is required by law to implement. If DOE is unable to implement the recommendation, it must explain to the President and Congress why it cannot comply. He said there are currently two site representatives at Hanford. Interested Board members can be added to the DNFSB distribution.

Paul said the current Hanford priority health and safety issues are tank farms, PFP, K Basins, Waste Encapsulation Storage Facility (WESF), PUREX, REDOX, B Plant, and 233-S. Issues such as the multi-function waste tank facility (systems engineering), upgrading DOE's technical capability, waste tank characterization studies, improved schedules for remediation, conformance with safety standards at low-level waste disposal sites, and transition from DOE orders to integrated safety management are being addressed. Paul said that the basis for interim operations, which is available on the Internet, will help with the integration of overall TWRS efforts. He added that DNFSB is interested in seeing the Fluor Daniel Hanford integrated safety plan when it is available. The DNFSB's other priority issues are listed in the Annual Report.

Paul explained that the DNFSB was created in response to a crisis in confidence in the DOE. He said Congress did not want regulation of DOE, but it did want process improvement. He added that the change in mission from defense to cleanup and waste management poses new health and safety challenges. The DNFSB is placing significant emphasis on DOE development and implementation of integrated safety management principles and welcomes opportunities to interact with the public and state and federal agencies. Paul provided a copies of the DNFSB legislation, the latest annual report to Congress, key recommendations and DNFSB correspondence relative to Hanford. *(Attachments 12-15)*

Board Discussion

Merilyn Reeves requested clarification between the roles of the DNFSB and the NRC, especially with reference to the Canister Storage Building and INEEL's Pit 9. Paul Gubanc responded that the DNFSB is an oversight board, whereas the NRC is a regulation board. In regard to the Canister Storage Building, Paul said DOE was instructed to build to DOE standards, but in a way that also satisfies NRC standards. He added that the standards may be mutually exclusive. He commented that the NRC works with standards and DOE works with probabilistic scenarios. Relative to privatization, the DNFSB legislation has not changed and Congress will still oversee DOE activities in that area. Dan Ogg, DNFSB, explained that Pit 9 is still considered a defense nuclear facility within the DNFSB jurisdiction and he has stayed informed throughout the project. He added that the problems at Pit 9 were programmatic and budget and the DNFSB addresses technical issues.

Gordon Rogers commented that the NRC and EPA do not agree on cleanup standards and asked if the DNFSB is involved in these criteria. Paul Gubanc responded that while DNFSB is not a regulator and does not create standards, it does provide input on the standards.

Roger Stanley, Ecology, said this is a good amendment to the Tri-Party Agreement. He said this is consistent with Ecology's value of clean up along the River and the five year time period provides time to learn more about decontamination and decommissioning technologies. He added that this package is consistent with current Environmental Restoration budget and work packages.

George Sanders explained the activities surrounding the spent nuclear fuel negotiations. He noted that the Board's advice to get past negotiations and "get on with cleanup" was taken. Another objective of the negotiations was to identify and utilize the most efficient regulatory path forward.

The new M-34-A Tri-Party Agreement milestone series includes utilization of a CERCLA removal action as a project regulatory approach, incorporates Fluor Daniel Hanford assessments of the K Basin baseline, initiates fuel removal by May 1998 and completes fuel removal to the canister storage facility by July 2000. Other actions included in the series are basin water remediation, transfer of K Basins to the DOE-Richland Facility Transition Program, complete deactivation, and transfer to the DOE-Richland Environmental Restoration program. The tentative agreement lines up DOE, contractor, regulatory agency, and Defense Nuclear Facilities Safety Board Project milestones. George explained that there will be a public review and comment period at the same time as that for the reactors package.

Roger Stanley provided a status report on the Plutonium Finishing Plant (PFP) negotiations. He said the actual negotiations are scheduled to begin in September. Roger commented that the initial stabilization of waste streams at PFP is in progress. George Sanders added that there are some issues relating to the national Environmental Impact Statement on Plutonium, but the agencies have reached an agreement and are proceeding. A change request will be out for public review simultaneously with the spent fuel and reactors change packages around mid-June. The M-83 change request, which changes negotiations schedules, will be out for public review and the PFP transition negotiations will begin in September.

Doug Sherwood provided a status report on the 200 Area soils remediation strategy. Dick Belsey said this has been an issue for some time and that this document needs a better ranking as to what site is addressed first. He is also concerned about the criteria used to select the sites for characterization and remediation. Dick said he is trying to get the attention of the group that is working on this but has not received any response. Doug said he will commit to meeting with Ralph Patt and Dick so he can fully identify and understand their concerns.

Board Discussion

Madeleine Brown requested information on the competitive procurement initiative for the Reactors on the River and expressed concern that the shorter term window (five years) may result in work being deferred. Doug Sherwood responded to the possible deferments and said he is not concerned about going back and doing additional negotiations. One of the issues that make the agreements possible is that everyone is working from the same baseline and recognizes that there is a schedule to get the work completed. Rich Holten, DOE, said DOE looked at the potential

be destroyed. The In Situ Redox Manipulation process controls this by converting chromium-VI to chromium-III. which does not migrate as much and is less toxic. He explained the process for the transformation and commented that some of the secondary effects. such as reduced oxygen in the groundwater. could also be detrimental to the salmon redds. He commented that DOE has basically resolved the concerns of an independent review panel and he supports the draft advice, contingent upon meeting the conditions outlined in the advice.

Board Discussion

Tom Engel said the Site Technology Coordinating Group Management Council spent time on the Redox issue. He expressed concern over the in situ procedure and cautioned the Board about pursuing it, mainly because of the site's proximity to the River. He was also concerned with the potential for plugging of the aquifer and mobilization of some materials while immobilizing others.

Gordon Rogers asked why the advice references issues that have been resolved. Paul Danielson said there are a lot of other concerns that need to be addressed such as funding. Ralph Patt concurred and said this is also an issue for the integrated priority list. Ralph commented that there is a need to use this technology because even though there is some risk, the points in the advice will mitigate some of these concerns.

Bob Cook, Yakama Nation, said the Yakamas are against this treatability test, not because the technology does not work, but they are against spending research and development funding on something that is already developed. He commented that the vadose zone remediation needs to be integrated into groundwater and that protection of groundwater and characterization of the source are key. He said it is not clear whether this method will resolve the problem because the source is not properly identified.

Mike Thompson. DOE. said the purpose of EM-50 is to deploy technologies into the field and many technologies die between bench scale and field implementation. He said it is DOE's belief that this technology meets the criteria for application. If funds are not received, this technology is in jeopardy.

Pam Brown inquired if the technology is available or needs to be developed further. Mike Thompson responded that this technology has been demonstrated in the laboratory and on a small scale in the field. The time has come to put it to a large scale or field deployment. Pam asked if an analysis has been done on the uranium content and if there is a way to stop this process if it creates more problems than it is solving. Mike said the analysis indicated there may be an issue with the uranium. He explained that if there is a problem. the wells that are being put in will be used to capture that zone and put it into the pump and treat system or reoxygenate the system again. resulting in a chemistry change.

Doug Sherwood said the standard technology is pump and treat and the chemical portion of this technology is understood. He said this needs to be deployed in the field as there are a number of

be paid for everything, except poor performance, and LMAES and DOE are currently working these issues. He emphasized that the Hanford tank waste represents a large unknown risk.

George Kyriazis, City of Kennewick (Local Government Interests), inquired if there was only enough money for one contractor. Dick Belsey acknowledged that there are some uncertainties in this area and noted that both contractors expressed the opinion that there is to be only one contractor. Dick said this is being addressed in the advice because of the perception that there is only enough funding for one contract. Bill Taylor said that DOE has asked Congress for $4 billion to fund two low activity waste plants and the question is will Congress provide the full $4 billion. He commented that the difficulty is convincing Congress and the Appropriations Committee that privatization is a viable and sound option.

Madeline Brown recommended looking at the privatization issue again. Dick Belsey said the Board must deal with the privatization issue and be careful that the Board is not misunderstood. He expressed concern over the amount of money that would be lost should this effort fall apart. He said the committee is supporting Phase I and will watch developments with interest. Pam Brown concurred and added that there are a lot of reservations, but Congress may not proceed if there is not a positive attitude coming from the Board.

Jim Cochran, Washington State University (University), commented that the privatization concept does not bother the Board as much as the TWRS application of privatization. He added that the Board can see all the concerns related to that application and the concerns should be addressed.

Public Comment

Gai Oglesbee commented on the need for an external disclosure process at Hanford. She expressed concern over employee pranks, the contractor's legal department qualifications and various safety issues. Dick Belsey commented that the Health, Safety and Waste Management Committee has discussed and is reviewing these issues, not as an arbitrator, but to include this as part of the public process. Gordon Rogers recommended DOE provide direction to the Board with respect to the Board's responsibility and charter on employee issues.

Jim Knight expressed support for medical isotope production at FFTF. He added that he will be communicating with Congress and Ecology and believes this is an issue to be seriously addressed.

AGENDA ITEM 5: FY99 DOE BUDGET

Alice Murphy described the process for the FY99 budget and noted that the schedule has changed to accept comments through May 31, 1997. DOE received the Board's consensus advice and is expecting formal input from EPA and Ecology. This input and advice will be used to update the integrated priority list for submittal to DOE-Headquarters in mid-June.

submitted to Louise Dressen at EnviroIssues prior to the May Health, Safety and Waste Management Committee meeting.

Board Discussion

Jim Watts, Hanford Atomic Metal Trades Council (Hanford Work Force), expressed concern over the privatization set aside funding and recommended speaking to the appropriate people to let them know the Board's concerns. Bill Taylor responded that DOE is aware of the set aside concerns of Congress and is developing plans to address the issue.

Pam Brown commented that under the Federal Advisory Committee Act, the Board cannot lobby. But, as a Board, they have issues such as the privatization set aside. She asked Bill Taylor to suggest the best process for working with DOE so the messages are consistent. Bill Taylor responded that Secretary Peña has developed a senior group, headed up by Debra Jacobson, to work with the Appropriations committees, staff, senators and representatives, and the Armed Services committee. He said DOE is doing everything in its power to convince the Appropriations committees that the TWRS privatization program is well thought out and is the answer to remediating the waste at Hanford. Maureen Hunemuller is with the TWRS program and offered to meet with interested parties to discuss the issues.

Bob Larson asked if BNFL was recommending that one facility be built, and if so, what guarantee would BNFL provide if there was only one facility. Maurice Bullock responded that BNFL is recommending one facility and noted that at the end of Phase I, Part A, each of the contractors is required to provide a firm-fixed price. He added that once the capital has been amortized, the costs will come down. This provides incentive in the contract for cost management.

Tim Takaro asked if the financial risk included indemnification and if BNFL would follow OSHA. Maurice Bullock clarified that the risk is performance risk and expects Price Anderson to apply to the indemnification issue. Regarding OSHA, Maurice explained that BNFL's safety standards and company standards are significantly tighter than the regulations and state worker safety standards and will apply at Hanford. Tim asked to see the preliminary hazard analyses. Maurice responded that the nuclear regulatory process is an open process which will provide access to information. Jim Watts asked about the workforce training schedule. Maurice said the workforce will be trained one year prior to coming on board, which is six to nine months before hot operations. He added that BNFL will be talking to workers a long time before that time.

Dick Belsey asked if the limiting process for the waste processing capacity is the separations or the availability of melters. Jack Dickey explained that the limiting process will be the pre-processing capability as LMAES is not building beyond what is needed. He explained that LMAES can simply add more ion exchange columns and melters if necessary.

concluded by expressing concern over the effectiveness of the NRC's public involvement process.

Maurice Bullock, BNFL, described his background and explained that he has been working with BNFL for 18 years. Before coming to the U.S., he managed and developed projects similar to Hanford at Sellafield, England. He provided information *(Attachment 6)* on business, finance, technology, health and safety. He said from the BNFL perception, Phase I privatization is viable, well conceived and can be financed. He explained that approximately 30 percent of the financing will come from BNFL resources and the balance through financial institutions. BNFL is having discussions with DOE regarding financing. While the money will come from BNFL, DOE will need to shoulder the risk of financing the project. If financial institutions are to support this project, DOE needs to change some of its terminology, especially reference to Phase I as a "demonstration." He commented that two facilities in Phase I are not required and financial institutions view this approach as indicating an expectation that one may not work. He explained that there are well tried alternatives to ensure value for money pricing. BNFL has worked contracts with the Japanese and the United Kingdom with built in assurances to drive down costs.

Maurice explained that BNFL has been doing privatization for 25 years. They provide nuclear services from their facilities at Sellafield, so this project is business as usual for BNFL. He added that BNFL has learned that proven technology is needed and has developed safe and effective technologies. He cited the TWRS flow sheet as being based on the BNFL team's proven technology. He explained that the Hanford facilities will be a cleanup asset for 30 years. By 2024, these facilities will remediate the 85 highest risk tanks identified in the TWRS Environmental Impact Statement. The Phase I facility will be able to deal with all high curie inventory tanks, transuranic waste, strontium and technetium.

BNFL has separate processes for dealing with strontium, transuranic waste, cesium and technetium removal. Maurice Bullock explained that the processes BNFL is using are well known and tried and BNFL is looking to meet or exceed waste requirements. He said flow sheet selection has been completed, the process design is underway, and the waste sampled to date confirms that the selected processes meet or exceed the specification requirements. He continued to describe BNFL progress by noting that the melter designs are being finalized and lessons learned from other complexes are being incorporated. He explained that communications have been established with the State and Ecology to assure agreement between the various permits and deliverables. In addition, the nuclear safety framework has been developed to use the NRC approach as closely as possible. He reviewed the three major safety documents including: (1) the Safety Requirements Document, which addresses standards used in design and construction, (2) the Integrated Safety Master Plan, which addresses management of the design process and operations, and (3) the Safety Analysis Report, which is the document in which the license application is provided.

Jack Dickey, LMAES, presented information and introduced members of the LMAES TWRS privatization team. (*Attachment 7*) He commented that when the privatization process originally started, the competitor had a low technology approach, whereas LMAES had a high technology

significant amount of cleanup that can be done at the higher case level and that it is a wise investment to make. She asked the Board to keep in mind that the target is $5.5 billion and is a work in progress. Alice commented some discussions are taking place regarding the privatization set aside. The amount DOE-Richland has in the set aside for FY98 is $427 million. It is Alice's understanding that Hanford is high on the priority list. but Congress is looking to reduce the amount.

Dick Belsey inquired about the programmatic impacts that would result from the lower case. Alice Murphy responded that DOE is working with the contractors to improve efficiencies, reduce overheads and indirects, and find other ways to achieve compliance within the budget.

AGENDA ITEM 4: TWRS PRIVATIZATION

Merilyn Reeves explained that the Board has had numerous presentations on TWRS privatization in the past, including consensus advice and sounding board opportunities. Maureen Hunemuller, DOE. introduced herself and explained her background to the Board. Prior to coming to Hanford. she was at DOE-Headquarters working on Hanford waste management issues. She invited the Board to call her directly if they have any questions, comments or concerns on the TWRS program.

Bill Taylor, DOE, presented information on the TWRS privatization effort (*Attachment 4*). He explained the privatization contract is for the acquisition of treatment and immobilization services, not facilities and equipment. In January 1998, the private vendors have a requirement to provide firm fixed unit prices. He explained that DOE will pay them upon acceptance of glass. Privatized facilities are privately developed, financed. constructed, owned, operated and deactivated. This will be accomplished through a two phased approach. He explained they are currently in Phase I, Part A, where the vendors are preparing definitive documents that DOE will evaluate between January and May 1998. Upon notice to proceed with Part B in May 1998, the contractors will develop detailed design and permit information with the authorization to proceed with construction from the regulatory unit expected in calendar year 1999. Six to thirteen percent of the tank waste is expected to be processed during Phase I, Part B. He added that the contractors have the opportunity to present their process for treatment of the waste and are taking on the risk versus DOE shouldering all the risk.

Bill Taylor acknowledged concerns that Congress is re-evaluating the funding level of the privatization set aside. He explained the mechanics of the privatization set aside account and emphasized the need for maintaining the integrity of the set aside fund, as it is very important as the contractors seek financing.

A Radiological Nuclear and Process Safety Regulatory Unit for TWRS privatization has been developed to determine regulatory issues for the privatization project during Phase I. He explained that this group is interfacing with the two private vendors. In parallel with this unit, DOE has established communications with the Nuclear Regulatory Commission (NRC). This will make the transition of regulatory authority to NRC seamless in Phase II and keep the regulatory aspects of the project on track.

principle meeting on June 20, each member of the organizing committee will receive 4-5 summaries for review.

Mary Lou Blazek, Oregon Department of Energy (State of Oregon), provided a report to the Board on her recent visit to Moscow, Russia. Mary Lou was invited by DOE International Affairs to work with the Russians and discuss Russian-United States health studies regarding the MAYAK Weapons Production Facility. She explained that the Center for Safe Energy invited Ralph Patt, Oregon Department of Energy (State of Oregon), due to his hydro-geology experience, which includes uranium mine cleanup. Mary Lou referred to her trip report, which described her talks with the Russian politicians, including assisting them with public involvement. (*Attachment 2)* She explained that the U.S. is doing at least seven health studies in the MAYAK area. The people being studied are concerned because no explanation of the reasons for the studies or the results have been provided. Mary Lou said DOE has taken the position that it is important to have public involvement and get information back to the people being studied. The first day focused on the issues surrounding Chernobyl and it became clear to her that the Russians have very little understanding or inclination about public involvement. She said that the Russians were told that the key to public involvement was talking with the public as well as educating the public about nuclear issues. The Russians expressed interest in public involvement related to an economic compensation package for those affected by Chernobyl, because there will be cuts in the compensation program and politicians are looking for a way to present this to the people.

Mary Lou Blazek went on to explain that there have been protests and demonstrations over a new reactor at Chelyabinsk and people are adamantly opposed to this construction. She explained the political process for local and national support for the new reactor. She said there needs to be more negotiations between DOE and the Russian government, because it was her opinion that DOE will be reluctant to fund these studies if they do not have public involvement. She recommended that the Russians put together a local group of experts that does not include any state authorities. Overall, she believed the trip was successful.

Ralph Patt explained that he was invited to attend a seminar in the Ukraine. (*Attachment* 3) The seminar addressed nuclear issues and effects on the Ukraine, including whether the Ukraine should build more reactors. Other issues discussed included closure of uranium mine sites and American experiences on these issues. After the seminars, he talked to technical people and was struck by their intense interest in public involvement. The Ukraine is dealing with the Soviet Union legacy which includes cleanup of the mines, Chernobyl, and other dangerous issues. Ralph added that the Ukrainian people are struggling to survive. He recommended that the Board try to help them with public involvement. Merilyn Reeves responded that this issue could be discussed in the Environmental Restoration and Health, Safety and Waste Management Committees.

Tim Takaro asked how the Russian politicians responded to talking directly to the people. Mary Lou Blazek said DOE recommended citizen advisory boards and the Russian politicians were intrigued but not excited about the boards.

HANFORD ADVISORY BOARD
Draft Meeting Summary
May 1-2, 1997
Richland, 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.

Thursday, May 1, 1997

The meeting was called to order by Chair Merilyn Reeves, Oregon League of Women Voters (Public-at-Large). The meeting was open to the public. Four specific public comment periods were provided, one at 11:45 a.m. and one at the end of each day.

Members present are listed in *Attachment 1*, as are members of the public and others attending. Board seats not represented were: Todd Martin, Hanford Education Action League (Regional Citizen, Environmental & Public Interest Organizations), Tom Carpenter, Government Accountability Office (Hanford Work Force), and Gerry Pollet, Heart of America Northwest (Regional Citizen, Environmental & Public Interest Organizations).

Announcements Made Throughout the Meeting
[Items are listed in chronological order, rather than in the order made. Announcements with no dates are listed last.]

- Mike Wilson, Washington Department of Ecology (Ecology), announced that a $90,000 fine was levied against the Department of Energy (DOE), Fluor Daniel Hanford, and Rust for dangerous waste violations at the 222-S Laboratories.

- Alice Murphy, DOE, reported that Secretary Peña terminated the management contract with Associated Universities at Brookhaven National Laboratory. John Wagoner will oversee management of Brookhaven for the next two months. Lloyd Piper will be acting manager at DOE-Richland during John Wagoner's absence.

- Rico Cruz, Nez Perce Tribe, announced that the Tribal Risk Assessment Forum #3 will be held on June 23-25 and the Second National Tribal Plutonium Forum will be held on June 26-27 in Albuquerque, New Mexico. There are plans to invite three or four speakers from the HAB.

- Max Power, Ecology, reported that there will be a Hanford site tour beginning at 10:00 a.m. on May 16 for Board members. Interested members can contact Dennis Faulk, EPA, prior to May 16, or sign up during this Board meeting. Max introduced Lt. Gail Otto, Washington State Patrol, who is responsible for transportation of hazardous materials. Gail is replacing retired Lt. Lonnie Brackenson.

Canyon Disposition Initiative

The 200 Area Canyon Disposition Initiative addresses five canyons and alternatives for their disposition. The U-Plant will be the pilot for the initiative. Currently, the Phase I feasibility study is going through regulatory review with a public comment period scheduled for June. There are seven alternatives identified for canyon disposition in the feasibility study. Technology funds are being requested to fund characterization activities for the initiative. The Health, Safety and Waste Management and Environmental Restoration Committees are preparing a draft report on issues and concerns to be addressed by the canyon disposition initiative. This will become a formal technical report from the Board.

PHMC Environmental, Safety & Health Plan

The Project Hanford Management Contract (PHMC) Environmental, Safety and Health Plan is currently being revised due to DOE's rejection of the first submittal. Members of a working group, representing a cross section of the workforce, are developing the plan for submittal by July 1997. A report on safety statistics was provided to the Board. The statistics show a downward trend in accident occurrences and an improved safety environment was identified as being responsible for the improvements.

K Basins/Spent Fuel Program

The K Basin and Spent Fuel Program is underway. Multiple projects within the program were discussed, including the Canister Storage Building, Hot Vacuum Conditioning, Cold Vacuum Drying, Multi-Canister Overpacks, Fuel Retrieval, Cask/Transportation and Fuel and Sludge Characterization. Overall, the program has been able to balance the increased workscope and reduced budget. Concerns were raised over schedule slippages that are due to new technical issues and increased equipment costs. Measures being taken to address these issues were discussed.

Tri-Party Agreement Agency Needs from HAB

Chuck Clarke, EPA, Tom Fitzsimmons, Ecology, and Lloyd Piper, DOE, shared their perspectives on the importance of the public involvement process as it applies not only to Hanford cleanup but to the nation. Each representative expressed the need to continue the public involvement process. Concerns were raised over diminishing funding and contractor support for the Board. Emerging issues that were identified included the Ten Year Plan, budgets and long-term stable funding.

Updates

The PUREX Closing Ceremony will take place in June with Al Alm in attendance. Secretary Peña's schedule was not able to accommodate the June schedule and it was recommended that a HAB meeting date be coordinated with the Secretary's visit scheduled for September.

Executive Summary

Ten Year Plan

The Ten Year Plan schedule has been changed to target a new issue date of February 1998. The Integrated Priority List was presented at public meetings in Richland, Portland and Seattle. Comments have been received on the FY99 budget. The closing date for comments has been extended to May 30. There has been increased interest in the Ten Year Plan from Secretary Peña. The first Ten Year Plan will be called a discussion draft and will be out in mid-May, followed by a public comment period of 45-60 days, with comments accepted until mid to late July.

TWRS Privatization

The Department of Energy (DOE) indicated the Tank Waste Remediation System (TWRS) privatization program is on track. Issues discussed included the need for stable long-term financial commitment and the privatization set aside. Both BNFL and Lockheed Martin Advanced Environmental Systems (LMAES) presented status reports. The BNFL team discussed its schedules and identified the need for changes in terminology in order to obtain financing. BNFL said it is on schedule to meet its deliverables. The LMAES team announced that M4 has been replaced with EnVitCo. thereby offering a more efficient and advanced technology for low-activity waste needs. The change in contractors impacts the schedule but LMAES is confident that it will meet the deliverable deadline in May 1998. Both contractors addressed the need for DOE to assume more of the financial risk of the project.

Discussion ensued on the possibility that the competitive privatization effort might be reduced to one contractor. DOE reinforced its desire to work with two contractors during Phase I of the privatization process to ensure the benefits derived from a competitive environment.

Public Comment

A former Hanford employee commented on concerns regarding health and safety on the Hanford site and will be leading an effort for full disclosure of information.

FY99 DOE Budget

Comments on the FY99 budget will be accepted through May 31. 1997. DOE received the Board's consensus advice and is expecting formal input from the Environmental Protection Agency (EPA) and the Washington Department of Ecology (Ecology). This input and advice will be used to update the integrated priority list for submittal to DOE-Headquarters in mid-June.