

**FINAL MEETING SUMMARY**

**HANFORD ADVISORY BOARD**  
**BUDGETS AND CONTRACTS COMMITTEE MEETING**  
*May 28, 2009*  
*Richland, WA*

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*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.*

**Welcome and Introductions**

Gerry Pollet, Budgets and Contracts Committee (BCC) Chair, welcomed the committee, introductions were made, and the committee adopted the January meeting summary.

**Fiscal Year (FY) 2009 & 2010 Budget Review and American Reinvestment and Recovery Act (ARRA) for Department of Energy – Richland Operations Office (DOE-RL)**

Mark Coronado, Department of Energy – Richland Operations Office (DOE-RL), provided an overview of the fiscal year (FY) 2009 and 2010 budget at the project baseline summary (PBS) level and reviewed planned communication and work scope. Mark said DOE-RL is committed to reaching significant accomplishments in cleaning up the site and meeting compliance commitments. He reviewed the proposed milestones in the Tri-Party Agreement (TPA) tentative agreement from February 2009 and presented work scope to be performed in FY 2010.

Mark reviewed planned communications and briefings. On May 7 DOE-RL received the FY 2010 President’ Budget and will receive the Department of Energy – Office of Environmental Management (DOE-EM) FY 2011 Budget Guidance in late May. Mark

said DOE-RL is working to communicate budget information quickly. DOE provided a briefing on the FY 2010 budget and scope to the Environmental Protection Agency (EPA), the Washington State Department of Ecology (Ecology), the state of Oregon and the tribes, as well as BCC. Mark said in June or July DOE-RL plans to provide these groups with a briefing on the FY 2011 budget request. Mark reviewed a summary of funding for FY 2009 and 2010, including the base budget and American Reinvestment and Recovery Act (ARRA) funding for FY 2009. He said the FY 2010 President's Budget does not include ARRA funding, and will allow DOE-RL to make significant progress.

Matt McCormick, DOE-RL, reviewed the ARRA funding, which is additional funding going toward various projects in FY 2009 and 2010. Contract requirements for this work will be completed by the end of September. Matt said an interim work plan is in place for FY 2009 that lays out the work contractors will complete during the next three months under ARRA funding. Matt said a work plan for ARRA funding should be approved by DOE Headquarters (DOE-HQ) by the end of September and will provide details on work, schedule and cost.

Matt said the 2015 Vision, which has the goal of shrinking the footprint of active site cleanup, guides budget requests and priorities for DOE-RL. He reviewed the three main points of the 2015 Vision, which are completing river corridor cleanup by 2015, moving contamination to the Central Plateau and implementing groundwater remedies in accordance with the TPA change package. The other key component of the 2015 Vision is demolishing the Plutonium Finishing Plant (PFP) by 2015 or sooner and implementing groundwater systems on the Central Plateau. Matt said this is a shared vision and the touchstone for how DOE-RL prioritizes work during the next several years.

Matt next reviewed DOE-RL cleanup priorities. He said these are consistent with the budget request for FY 2010 and will be used for the FY 2011 request. These priorities are:

- Maintaining safe and compliant facilities and providing essential services
- Executing the DOE-RL 2015 Vision and achieving regulatory and TPA compliance by completing the following:
  - Cleaning up and demolishing facilities, waste sites and groundwater along the river corridor
  - Treating sludge stored in the K-West Basin
  - Decontaminating and decommissioning (D&D) of the PFP
  - Remediating 180 waste sites on the Central Plateau, with the outer area being the priority
  - Repacking transuranic (TRU) waste for certification and shipment

- Retrieving suspect TRU waste from underground storage
- Continuing the remedial investigation/feasibility study (RI/FS) process for the Central Plateau
- Completing D&D activities on the Central Plateau in addition to PFP
- Treating mixed low-level waste (MLLW)
- Meeting community and regulatory requirements
- Completing reliability upgrades, such as upgrading water mains, to support cleanup

Matt said DOE-RL is focusing cleanup resources in four areas in order to shrink the active site cleanup to the Central Plateau: the river corridor, Central Plateau outer zone, Central Plateau inner zone and Hanford Reach National Monument.

Joe Franco, DOE-RL, reviewed the plan for cleaning up the river corridor, which covers approximately 210 square miles. For FY 2009, cleanup under the RL-0011 PBS is focused on complete D&D of the K-East Basin and initiating soil remediation under the K-East Basin within 30 days of removing its substructure. DOE-RL also plans to demolish three buildings in the southeast corner of the K-East reactor area: 1706 KE, 1706 KER and 1706 KEL. The 1706 KE treatment storage disposal (TSD) facility will be cleaned and closed. Joe said this work will be completed by the end of July. Activities for FY 2010 include operating and maintaining the K-West Basin and associated structures in a safe and compliant manner, supporting the continuation of sludge treatment design, and characterizing the knockout pots (KOP), engineered containers and settler tubes.

Joe reviewed cleanup actions planned in the river corridor to meet PBS RL-0041 in FY 2009. For FY 2009 DOE-RL completed 618-7 and 100-F, which were due at the end of December 2008. Remediation of the B/C area waste sites has also begun. Joe said remediation at the 100-D area is continuing and C-7 is getting documentation to allow bioremediation. Some waste sites around the 300 Area, 100-D-41 and remediation of burial ground 118-H-1 are scheduled to be completed by the end of July. Joe said DOE-RL will continue risk assessment (RA) activities as part of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process. Joe said DOE-RL is looking at the 324 and 327 buildings in the 300 Area and plans to remove the first hot cell in 327 this year. He said DOE-RL has completed construction of cells 7 and 8 at the Environmental Restoration Disposal Facility (ERDF) and has received authorization to use them.

Joe reviewed activities for PBS RL-0041 for FY 2010, including the disposition of 11 surplus facilities and continuing remediation of waste sites and burial grounds in the 100-B/C, 100-D and 100-H areas. Joe said remediation of three 100-H burial grounds will

continue, and this milestone is set to be completed by December 2010. Interim safe storage of the 109-N reactor will be initiated in FY 2010, and Joe said this will include construction for the roof of this facility. DOE-RL will also support continued field remediation of ancillary facilities and waste sites in the 100-K Area and will operate ERDF to support field remediation and demolition activities.

Matt discussed groundwater protection along the river corridor, which is managed under RL-0030. He said the main objective for FY 2009 is installing an expanded pump-and-treat system for chromium in the K Area to a capacity of 900 gallons per minute (gpm). The contractor met this capacity in May 2009. Matt said the new facility has many wells and is effectively capturing that plume to contain and treat chromium. Additional cleanup goals for FY 2009 include operating and maintaining existing groundwater remediation systems, drilling monitoring wells, continuing groundwater monitoring, completing groundwater river corridor tentative agreement work plans, and continuing groundwater integration activities and environmental data management. Matt said two work plans for remediation along the river are due at the end of June for the D, H and K Areas.

Matt said groundwater protection activities planned for FY 2010 include continuing FY 2009 groundwater systems and progressing on the CERCLA RI/FS and proposed plan process to obtain a final record of decision (ROD) for the 100 Area groundwater operable units (OUs). Matt said there are some activities that will be done with ARRA funding. The main activity is to install a new pump-and-treat system in the D Area to work on the chromium plume. He said this will start in 2010 and finish in 2011.

Matt reviewed activities related to D&D of the Fast Flux Test Facility (FFTF) under RL-0042. In FY 2009, long-term surveillance and maintenance will be initiated by shutting down support systems that are no longer required. Matt said in FY 2010 DOE-RL will continue long-term safe and compliant surveillance and maintenance of FFTF. He said the project is awaiting D&D and a decision from the Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS), and there will not be activity at FFTF during the next four to five years.

Matt reviewed FY 2009 groundwater protection activities for the Central Plateau inner zone under RL-0030, which include completing a RI/FS work plan for implementing a remedy for a ROD on the ZP-1 OU to treat carbon tetrachloride and have the capability of removing technetium, uranium and nitrates during groundwater remediation in the West Area. He said FY 2010 activities will be similar and include operating and maintaining existing systems and integration. Matt said a large pump-and-treat system in the West Area will be installed using ARRA funding, which required transferring funding from base FY 2009 dollars to ARRA funding in FY 2010. Matt said under the effects of

baseline planning there are activities that are not fully funded through either ARRA or baseline dollars in FY 2010 and DOE-RL is looking at combining ARRA funding with base dollars to complete the deep vadose zone treatability test. He said the completion of the RI/FS process is also not fully funded. Completing this process would involve finishing the study and proposing remedies for all wastes sites and burial grounds except tank farms.

Matt reviewed planned activities for PFP, which fall under PBS RL-0011. He said for FY 2009 DOE-RL is on schedule to complete shipment of plutonium off-site and prepare to ship spent fuel to the canister storage building (CSB) or an interim safe-storage area on the Central Plateau. He said D&D of the main PFP facility is also being done during FY 2009 using ARRA funding. Matt said in FY 2010 the key objective is completing de-inventory of special nuclear materials to shut down the protected area outside PFP. DOE-RL hopes to finish this by January 2010 to allow D&D to continue. Additional activities for FY 2010 are completing shipment of unirradiated and slightly irradiated fuel to the interim storage area and transitioning building 236-Z and cell and canyon buildings in the 242-Z and 2736-Z/ZB complex.

Matt said RL-0040 focuses on demolishing excess facilities and remediating waste sites on the Central Plateau as well as infrastructure activities such as steam, occupational medicine and service contracts. Activities on the inner area of the Central Plateau for FY 2009 and 2010 focus on maintenance and surveillance of existing facilities that are awaiting final disposition. Matt said ARRA funding is going toward the Central Plateau, specifically D&D of facilities such as U Canyon, U Ancillary facilities, warehouses, and potentially a power plant. He said funding is also going toward wastes site remediation in the outer area. The effects this has on the baseline plan are that it allows for soil remediation for the U Area, remediation in the BC control zone and continuation of the decision-making process for four canyon facilities.

Matt reviewed solid waste stabilization and disposition activities for the Central Plateau inner zone, captured under RL-0013. For FY 2009 DOE-RL plans to operate key treatment facilities on the Central Plateau, including T Plant, the waste receiving and processing facility (WRAP) and the effluent treatment facility (ETF). Other work includes supporting work on the TC&WM EIS, continuing suspect TRU retrieval, continuing minimal repackaging of TRU waste, and continuing minimal treatment of waste. Matt said much of this work was going to be stopped in the spring of 2009 due to budget constraints, but DOE-RL can now continue this work through at least 2011. Matt said the activities for RL-0013 differ for FY 2010. The design of the M-91-01 Large Box/Remote-Handled (RH) TRU Capability Project is not funded through ARRA or baseline dollars. Matt said DOE-RL is looking at ways to retrieve RH waste through

ARRA funding. DOE-RL is currently looking at a contractor's technical proposal to support the engineering and design of this project and avoid incurring the capital cost of building a new facility or modifying an existing facility to deal with RH waste.

Matt reviewed safeguards and security, captured under PBS RL-0020. For FY 2009 and 2010, DOE-RL plans to maintain protection of special nuclear materials and site-wide security. For FY 2009 DOE-RL will also continue supporting offsite plutonium shipments from PFP.

### **Regulator Perspectives**

- Larry Gadbois, EPA, addressed the question of the obligation of DOE to request funding to meet milestones. He provided a handout of referenced excerpts from the TPA, which states that DOE is obligated to put together a work scope. The Tri-Party Agencies then work with this work scope to develop TPA milestones. Larry said the process begins with DOE baseline planning, and the parties work with the estimated funding levels to determine what is needed to achieve compliance. DOE must also identify obligations and funding shortfalls, and regulators comment in terms of the work scope defined by DOE. There is an article in the TPA that allows DOE to request an extension when there is insufficient availability of appropriated funds. Larry said DOE is obligated to request all funding necessary to achieve all of the work in its scope, but if sufficient funding is not provided a milestone can be extended.
- Ron Skinnarland, Ecology, said the allocation of ARRA funding will be determined soon, and until the TPA is lined up it is difficult to determine the compliance. He said the ARRA funding will result in less of a compliance gap. Ron said he thinks the goal of the Tri-Party Agencies is to line up the TPA and the baseline to ensure there is enough funding to complete the work.

### **Committee Discussion**

- Maynard Plahuta asked whether the projected ARRA funding is reflected in the funding amounts shown for each PBS in FY 2009 and 2010. Matt said there is a correlation between these. The PFP project falls under PBS RL-0011, the river corridor's soil remediation and D&D activities correspond with PBS RL-0041, Central Plateau D&D and soil remediation fall under PBS RL-0040, soil and water remediation in the groundwater corresponds to RL-0030, and solid waste stabilization and disposition correlates with RL-0013.
- Harold Heacock asked whether cleaning and closure of the 1706 KE TSD facility includes removing underground materials and structures. Joe said for FY 2009 the

goal is to remove TSD by end of June/July and conduct pre-planning to remove the underground portion of this facility in later years.

- Gerry asked how much of the \$122 million for RL-0012 in FY 2009 is for operating and maintaining the K-East and K-West baselines. Joe said approximately \$40 million is going toward maintenance, and this includes some infrastructure costs for these facilities. He said for FY 2010 this maintenance will require a smaller amount of funding.
- Gerry asked how much the ZP-1 pump-and-treat system costs. Matt said DOE-RL does not have a definitive number, but overall \$146 million is allocated to groundwater treatment. He estimated it would cost more than \$10 million to complete the design and construction of ZP-1 during the next couple of years.
- Maynard asked how much additional funding would be needed to complete the partially funded activities under RL-0030, which are completing the deep vadose zone treatability test in the 200 Area and finishing the groundwater and waste site RI/FS for the Central Plateau. Matt said DOE-RL has not yet determined the amount needed to complete these activities. DOE-RL is working to see whether these activities would meet ARRA funding requirements.
- Susan Leckband asked what the ARRA funding requirements are. Matt said activities must demonstrate job creation and the work must be completed by September 2011 to be eligible for ARRA funding.
- Gerry asked whether the \$75.3 million figure associated with the groundwater and waste site RI/FS study is the unfunded amount for this baseline item. Matt said this is the amount DOE requested to support the work necessary to complete the M-15 milestone. He said some of this scope is funded by ARRA dollars, specifically moving forward with the outer area ROD for remediation of the 180 waste sites on the Central Plateau.
- Gerry said there has been public comment regarding not delaying investigation of trenches in the Central Plateau inner area under the M-15 milestone. He asked the cost of meeting this portion of the milestone. Matt said this is part of the SW-2 RI/FS process, and DOE-RL is funding part of this work plan using ARRA funding. Matt said he would follow up with Gerry regarding the scope and initial cost of this work.
- Harold asked how much of the \$75.3 million would fund studying and planning groundwater and waste site remediation on the Central Plateau and how much would fund on-the-ground cleanup. Matt said most of the \$75.3 million would go toward on-the-ground work. He said the most expensive part of the RI/FS process is obtaining environmental data to write the study, which requires boreholes, well drilling and analyzing samples. Matt said most of the \$75.3 million would fund the physical

characterization of waste sites, with only a small amount going toward writing the RI/FS report.

- Harold asked whether the FY 2009 funding reflects ARRA funding. Matt said it does not, and DOE-RL is currently determining how ARRA funding will be distributed between now and the end of September 2011. He used the example of the \$146 million ARRA funding for soil and water remediation of the groundwater, and said this will be spread between FY 2009, 2010 and 2011. Larry said a number of projects included in the baseline funding fit stimulus criteria, so some baseline funding will be available. He said almost all of the well drilling completed before 2011 will be funded by ARRA, which will make baseline funding available to complete additional groundwater work.
- Harold said the budget for safeguards and security is increasing in FY 2010 and asked when this budget will decrease. Matt said this budget will decrease when spent fuel is disposed of. Some of the spent fuel is slightly irradiated and must be stored in accordance with specific requirements. He said updated security requirements were waived for the plutonium stored at PFP but not for the storage of spent fuel at CSB. He said the security cost for remaining material has increased significantly due to the updated security requirements.
- Maynard asked if the safeguards and security budget is a workforce cost. Matt said it is a combination of security officers, training, and weapons, as well as infrastructure costs such as maintaining alarms and conducting inspections.
- Susan asked whether the same security requirements would apply if glass logs are stored on site in the future. Matt said the same security requirements apply, but glass logs are considered less attractive than spent fuel.
- Susan asked whether ARRA funding could go toward the baseline activities for the Central Plateau under RL-0040 that are not funded, which include soil remediation for the U Area, remediation in the BC control zone and continuation of the regulatory decision process for four canyon facilities. Matt said DOE-RL is not planning to put ARRA funding toward these activities.
- Gerry said DOE-RL had already negotiated reducing the amount of TRU retrieval to 50 cubic meters this year. He asked how much TRU will be retrieved since an additional \$200 million is available for the next couple of years. Matt said TRU retrieval was slowed due to the budget, but DOE-RL is working with the contractor to define how much can be retrieved.
- Susan asked whether TRU retrieval is all contact-handled (CH) waste or if there are plans to retrieve RH TRU. Matt said with ARRA funding the goal is to start RH TRU retrieval and ensure the capability to safely remove RH TRU is in place. Susan noted the difficulty of Hanford's place in line to ship this waste to the waste isolation pilot

plant (WIPP). She asked whether DOE-RL will work to resolve this issue with ARRA funding. Matt said Hanford is fourth in terms of national priority, and its goal is to prepare a shipment for WIPP and have WIPP certify this waste in 2013 or 2014. He said DOE-RL is reviewing this process if they can do it as early as 2012. If DOE-RL is successful at removing RH TRU, Matt said the goal is to do this within the 2013-2014 timeframe.

- Maynard asked whether WIPP received ARRA funding to improve its staffing and increase the number of vehicles able to transport waste. Matt said WIPP did receive some funding, but there are also permitting constraints on how much waste WIPP can accept. He said he is not sure whether WIPP's limit is due to transportation assets or receiving constraints.
- Maynard asked the timeframe for reducing the 324 and 327 buildings in the 300 Area to slab. Joe said there are plans to pull a hot cell out of 327 in July, and DOE-RL is looking at 2011-2012 as its goal for completing these.
- Harold asked how long it will take to finish the chromium plume. Matt said the near-term objective is to stop chromium from entering the river above the 20 micrograms per liter level by 2012. The long-term goal is to restore the groundwater to meet cleanup levels. Matt said this depends on how well the aquifer reacts to the pump-and-treat system, but the goal for completing this is the 2018-2020 timeframe. Joe said the other key factor in treating this plume is removing the source term from the soil. He said ensuring the waste sites have been remediated by 2015 is another important aspect of this.
- Maynard asked whether new pump-and-treat systems are expensive to maintain. Matt said they are not expensive to maintain and take nuclear chemical operators (NCOs) to operate. He said the contractor is designing pump-and-treats to monitor the pumps and the flow to monitor pressure along the ion exchange. Matt said the pump-and-treats will shut down safely if something is detected, which allows for roaming NCOs. He said replacing pumps, ion-exchange resin and maintaining equipment is a greater amount of the cost since the systems run 24 hours each day and these components wear out.
- Susan asked whether there are specific areas within the budget that DOE-RL would like the Hanford Advisory Board (HAB or Board) to issue advice on. Matt said Joe has an initiative for removing knock out pot (KOP) sludge sooner, and there is a need for approximately \$40 million of additional funding in the baseline to meet the 2015 vision. He said this work is not appropriate for ARRA funding and would need to be added to the baseline budget. Susan asked whether it would be helpful for the HAB to suggest that even though ARRA funding is available, full funding for baseline work is still needed. Matt said a key challenge to completing the river corridor by 2015 is removal of sludge from the West basin, and baseline dollars are needed for this work

under PBS-0012. Matt said DOE-RL would prefer this funding to be available in FY 2010. Joe said much of the work involves ordering multi-canister overpacks (MCOs) and getting shipment material in place for the sludge. Additionally, Matt said approximately \$40 million is needed for the groundwater project so the RI/FS process can proceed. He said this would allow the decision-making process for the waste sites and burial grounds to be completed, specifically in the inner area of the Central Plateau. Matt said there is a possibility that hundreds of millions of discretionary dollars may become available in the 2013-2014 timeframe, and preliminary work must be completed to justify future actions on the Central Plateau. He said since funding is requested two years in advance having a decision on Central Plateau cleanup would more adequately support the budget request.

- Gerry said TPA milestones drive budget requests and delaying TPA milestones would result in a loss of authority for funding requests. He said Hanford does not receive funding unless there is a milestone driving the request. Matt said this has not been his experience, and budget requests require more information than a milestone includes, such as how the money would be used. Susan said delaying a milestone does not mean the work stops, and the Board can still advise funding specific activities. Gerry said the existing milestone is 2011. Matt said DOE-RL included \$75 million to meet this milestone as part of the request. He said it is more compelling to describe the overall picture of river corridor cleanup, and when he has briefed lawmakers they have not focused on milestones. Maynard asked whether DOE requesting its budget from the President and Office of Management and Budget (OMB) meets its commitment. Gerry said the OMB request process is an informal process that is not recognized by law, and the annual request is to Congress and is established by law. Gerry said the force majeure in the TPA is DOE's only defense and can be used if Congress does not provide adequate funding based on DOE's request.
- Gerry asked for EPA and Ecology's perspective on what is missing for FY 2010 that cannot be funded with ARRA funding. Larry said additional funding is needed for K Basin sludge and the RI/FS work in the 200 Area, which will provide a base to write the 200 Area RODs. Ron agreed that this work is important and the Tri-Party Agencies are working to achieve these goals as part of negotiations. He said Ecology supports the work planned for PFP and retrieving RH TRU waste.
- Al Boldt asked whether cleaning up the river by 2015 includes a solution for a design on sludge treatment. Joe said labs are currently analyzing the sludge and DOE-RL is considering moving sludge to the Central Plateau and treating it there. Al asked the overall disposition of the sludge. Joe said DOE-RL is considering either disposition of the sludge or putting it at CSB. Al suggested the Board look at sludge disposal. He said DOE-RL is still studying design and has not defined sludge treatment. He asked when DOE-RL will determine the budget needed for disposition and treatment of

sludge. Joe said the sludge has been moved from the K-East basin, where it had the highest vulnerability. When this was done it was determined that the characterization of the sludge was not well understood. Joe said the goal is to first get the sludge off the river and then to treat it.

- Gerry asked whether BCC can have a briefing on the FY 2010 and 2011 ARRA funding when this is determined in fall 2009. Matt said DOE can brief the committee, but there will be little opportunity to make adjustments after September. He said a briefing can be provided to BCC in August or September before the proposal is submitted to DOE-HQ for approval.

### **FY 2009 & 2010 Budget Review & ARRA for the Department of Energy – Office of River Protection (DOE-ORP)**

Janet Diediker, Department of Energy – Office of River Protection (DOE-ORP), provided an update on the near-term focus of the site's tank farm projects. She said the tank farm project and Waste Treatment Plant (WTP) maintain a constant focus on safety. Washington River Protection Solutions (WRPS), the new tank farms contractor, safely transitioned more than 1,000 workers. Additional areas of focus include reducing overall lifecycle cost and project risks, preparing a consistent waste-feed-delivery system, retrieving tank waste to prepare the feed to WTP and identify technical needs, expanding the retrieval technology toolbox, and executing tank farm upgrades funded by ARRA. Delmar Noyes, DOE-ORP, reviewed the near-term focus for WTP. He said priorities are increasing WTP focus on project performance and increased accountability, resolving remaining WTP design technical issues, and continuing WTP construction progress. Janet said DOE-ORP has the overall goal of working closely with regulators, tribes, stakeholders and the public on existing work.

Janet discussed the FY 2010 budget request for DOE-ORP. In FY 2008 the tank farm project had \$292.4 million and the appropriation for FY 2009 is \$319.9 million. Janet said the ARRA appropriation for FY 2009 provided additional funding, and FY 2010 funding is up to \$408 million. Delmar said WTP is planned to be funded at a flat level of \$690 million per year. He said during the early period of the WTP project DOE-ORP spent less of the \$690 million yearly allocation with the projection that the middle of the project would require additional spending. Delmar said projected spending for FY 2009 is \$780 million and \$784 million is planned for FY 2010 due to carryover from earlier in the project that is now being applied. He said WTP funding is primarily going toward the high-level waste (HLW) and pre-treatment (PT) facilities, which are critical to 2019 startup of WTP. He said the budget request figures include construction and commissioning of WTP but do not include operational costs.

Delmar reviewed accomplishments in FY 2009 and 2010. He said DOE-ORP anticipates that by the end of FY 2009 approximately 75 percent of WTP design and 47 percent of construction will be completed. For FY 2010 this is expected to increase to 82 percent design and 54 percent construction. In FY 2009, the low-activity waste (LAW) facility will be 68 percent complete overall, the analytical laboratory (LAB) will be 43 percent complete, the balance of facilities (BOF) will be 52 percent complete, the HLW facility will be 48 percent complete and the PT facility will be 46 percent complete overall.

Delmar said in FY 2009 the LAW facility is focused on internal work, such as melter bays, commodity insulation, piping and electrical work. In FY 2010, goals for the LAW facility are continuing construction, completely fabricating melters 1 and 2, continuing to install commodities throughout the facility, and completing the switchgear building and truck bay. Delmar reviewed plans for the LAB facility, and said much of the remaining LAB work is related to procuring analytical equipment, which will not take place until immediately before startup of the facility. In FY 2009, the hot cell, HVAC system, walls and internal structures of the LAB facility were completed. Delmar said in FY 2010 goals are installing the pit, concrete, bulk piping and HVAC system. Regarding BOF, Delmar said construction of the water treatment building will be completed in FY 2010.

Delmar said the majority of WTP work is occurring in the HLW and PT facilities. The HLW facility will continue civil build out, piping installation, heating ventilation, and completion of the air-conditioning duct and other commodities in FY 2010. Delmar said goals for the PT facility in FY 2010 include setting one of four filtration vessels in place, completing 3,000 cubic yards of concrete placements, erecting 1,900 tons of steelwork, and installing a total of 16,800 linear feet of pipe. The PT facility is the largest and most expensive facility. Delmar said the most outstanding technical risks lie in the pre-treatment engineering platform (PEP), but initial results seem to confirm positive leaching and filtration assumptions.

Janet reviewed FY 2009 planned baseline accomplishments for the tank farms, which were allocated \$319.9 million. Base operations for the tank farms include double shell tank (DST) and single shell tank (SST) operations, surveillance and maintenance, safety, quality and radiation protection programs, the 222-S laboratory, tank sampling, DST space management, DST integrity, conducting two 242-A evaporator campaigns, conducting core, grab and vapor tank sampling, environmental compliance, engineering, radiological controls, site services such as road and fire protection, business services, waste management, training procedures and standards compliance, tank operations contract (TOC) management administration, WTP electricity, and Phase II of Integrated Safety Management Systems. Janet said these are called minimum base operations.

Janet reviewed retrieval and closure planned accomplishments for FY 2009. For C-110, retrieval has been completed to 90 percent. Construction activities were initiated on C-104, and Janet said DOE-ORP plans to initiate retrieval in September. She said the removal of five hose-in-hose transfer lines (HIHTLs) was initially planned, but 11 are now planned due to additional funding. A second expert panel was completed on SST integrity, and Janet said results will be issued in October 2009. Other retrieval and closure planned accomplishments include initiating the design of C-111, conducting proof-of-concept for enhanced chemical cleaning, completing the design, fabrication and initial testing of the mobile arm retrieval system (MARS), completing liquid mitigation from the UX-302A catch tank, completing 244-CR vault sump pumping, completing near-surface characterization for the TY interim barrier, completing the design of the TY Farm interim barrier, completing near-surface characterization at SX Farm, deploying surface geophysical exploration (SGE) in S-SX and C farms, and conducting C Farm direct push activities. Janet said these activities will finalize a path forward to complete the construction of the barrier in FY 2010.

Janet said an omnibus allocation of \$30 million will be used to focus on retrievals with the collective goal of retrieving C Farm by 2014. This additional funding will be used to conduct a direct push in C Farm, accelerate C-104 retrieval activities, conduct sampling and analysis of C-108 residual waste, restore the S-102 exhauster by installing leak-detection equipment, accelerate C Farm HIHTL removal and shipping, prepare a criteria document for interim barriers, and accelerate the long-lead procurement process for C-111.

Janet said additional omnibus funding for SST retrieval and closure was sent to the contractor in April. She said some of this funding will be used to pursue new technologies and procure critical parts such as pumps, valves and HIHTLs. Janet said some of this funding will also focus on improving retrieval infrastructure, radiation instrumentation, installing outdoor nationally recognized testing lab rated continuous air monitors, leak-detection monitoring efficiencies, and installing a crane pad at the cold test facility. Omnibus funding will also go toward an offsite closure demonstration, improving ventilators and exhausters, developing a hard-heel strategy, removal of the SX duct, and removal of sludge cooler S/SX. She said DOE-ORP is currently working with the contractor to provide incentives, design a scope and add this work to the baseline.

Janet said planned base operations accomplishments for tank farms in FY 2010 are similar to FY 2009. Facility management is an important aspect of the planned work, such as maintenance and lease agreements for all tank farm buildings, including 200-East and 200-West. Janet said DOE-ORP is working to solidify a baseline scope in terms of dollars.

Janet said planned retrieval and closure accomplishments for FY 2010 include retrieving at least two tanks each year. Additional planned accomplishments are completing the retrieval of C-104, conducting post-retrieval sampling and analysis of C-104 and C-110, initiating design on SSTs C-102, C-107, C-111 and C-112, initiating and completing retrieval operations on C-111, continuing testing and procurement of MARS, designing a large riser for MARS, removing at least five HIHTLs, constructing a TY interim barrier, conducting direct push waste management area C vadose zone characterization, conducted SGE characterization in two C Farm sites, and expanding SST integrity work based on recommendations from the expert panel.

Janet said DOE-ORP is interested in enhancing cooperation between tank farms and the WTP. She said a concerted effort is planned for FY 2010 to resolve issues of concern. DOE-ORP is also planning to conduct applied research and development activities with EM-21, including mixing studies, formulating a sodium-mitigation strategy and conducting PEP phase two testing, which will optimize the schedule and reduce the overall risk of the project.

Tom Fletcher, DOE-ORP, reviewed tank farm ARRA funding focus areas. He said DOE-ORP selected activities by starting with DOE-EM priorities for HLW and spent nuclear fuel while fully funding WTP. He said DOE-ORP then took priorities associated with ARRA, such as job creation and shrinking the site footprint, and aligned these with the potential work scope. Tom said the planned work scope is in accordance with upgrading infrastructure, as aligned with Board Advice #213. ARRA funding focus areas are broken into four sub-projects: tank farm infrastructure, other infrastructure, waste feed infrastructure, and facility upgrades. Tank farm infrastructure includes ventilation at AP/SY farms, waste transfer infrastructure such as valve funnels, level rise modifications, control systems, and AP Farm valve pits. Tom said level rise modifications at AP Farm will provide an additional 700,000 gallons of capacity at AP Farm. The ARRA funding area focusing on other infrastructure will include a wiped film evaporator and a core sampling truck that will replace the 30-year-old core sampling vehicle. Tom said waste feed infrastructure includes upgrading DST control systems by installing an automated leak-detection system, D&D of the AW/AN exhauster, conducting a mixing demonstration to prove the ability to homogenize waste left in tanks for WTP feed, and transfer and condensate of line upgrades to prepare for transfer between the facilities and WTP. Finally, the ARRA funding focus area of facility upgrades will replace the exhauster system and provide vital spare parts for the 242-A Evaporator, upgrade the 222-S laboratory and upgrade ETF facilities.

Tom provided an update on ARRA funding as of May 2009. DOE authorized work to begin on April 7, and DOE-EM provided 80 percent of the ARRA allocation, or \$261 of \$326 million. DOE-ORP released \$42.5 million to WRPS. Tom said the remaining 20 percent of the funding is being held at DOE-HQ and will be released after the projects demonstrate adequate performance, which is a standard practice with ARRA funding. DOE-ORP successfully completed the first DOE-EM readiness review on May 20-22. The contractor is currently starting projects by hiring and training workers. Tom said 84 procurements have been released, 73 percent to small businesses, and approximately 206 full-time equivalent jobs have been created with another 700-800 sub-contractors. ARRA work is being incorporated into the WRPS baseline, and Tom said a 180-day plan will be delivered on May 28, 2009.

### **Regulator Perspectives**

- Ron said Ecology approves of the continued progress and funding for the bulk vitrification plant. He said Ecology is encouraged by the additional funding to work on the base plan and supports the use of funding to complete upgrades to the feed-delivery system. He said Ecology would still like to see retrieval emphasized but realizes there is a space issue. Overall, Ron said Ecology is happy with the alignment of priorities with the budget.
- Ron said he thinks DOE should look at what retrieval rate it can sustain during the next couple of years unless DOE wants to ask for hundreds of millions of dollars to support tank retrieval. He said he thinks the options are to do retrievals faster or to stop retrieval at a certain point. DOE-ORP has argued that it is best to retain trained workers. Ron said there is a set of regulatory steps related to consolidating waste in SSTs within a tank farm, which could possibly be more cost effective. He said another idea is to use waste-receiver facilities and research the cost of making them bigger. He said he thinks the right question is to continue evaluating the system plan to see whether there are ways to accelerate retrieval.
- Madeleine Brown, Ecology, asked whether DOE-ORP upgrades parts when replacing the vital spares. Tom said they do.

### **Committee Discussion**

- Maynard asked how much funding is being carried over from the earlier phase of WTP, and when this will reach a plateau. Delmar said this carryover will plateau in 2011. He said at the end of FY 2010 an anticipated \$120 million will remain. He said the ongoing plan was that between FY 2008 and FY 2011 a higher spending level will occur, with spending at approximately \$780 million per year.

- Gerry asked how Bechtel's increased cost affects the \$690 million yearly appropriation for WTP. Delmar said DOE-ORP is focusing on efficiency in the cost of management reserves. He said the project is currently still within the estimate at completion (EAC). DOE-ORP is evaluating its risks and re-confirming where the project is based on progress since May 2006, when the contingency and management reserves were established in the EAC. Delmar said the EAC and projections are within the current project baseline.
- Gerry asked whether the \$690 million per year is based on meeting Bechtel's estimate for construction, and whether DOE's management reserves are separate from this. Delmar said the management reserve, or contingency, is in the \$690 million funding profile and is back-loaded, meaning most of the funding in the early years was used for the project baseline and funding the contingency. He said this is because most of DOE's risks are believed to be within startup and construction.
- Susan asked whether the contingency is different from the management reserve. Delmar said the contingency and management reserve are separate. The current contingency is approximately \$1.1 billion and the remaining unidentified funding to be used from that reserve is approximately \$500 million. He said DOE-ORP is pushing Bechtel to look at opportunities and risk, and is looking at ways DOE-ORP can push back in the management reserve.
- Harold asked how DOE plans to fund actions on recommendations from the SST integrity expert panel. Janet said DOE-ORP plans to use base and ARRA funding for implementing the panel's recommendations.
- Susan asked whether pieces of the SST retrieval work being funded by the additional omnibus allocation were brought forward. Janet said some is new work, but the S/SX sludge cooler was brought forward. She said getting spares and infrastructure in place for retrieval and base operations will make it easier to achieve goals and ensure continued progress.
- Gerry asked whether there is a breakdown of the funding allocated to each item that will be receiving funding from the omnibus allocation. Janet said she can provide BCC members with the breakdown for FY 2010. Gerry said without this it is difficult to give advice.
- Gerry asked when DOE-ORP plans to design ETF upgrades and how DOE-ORP plans to design the treatment without knowing the regulatory requirements. Tom said DOE-ORP believes this is a valuable item and is looking at ways to optimize the upgrade by identifying items that need to be replaced, such as vessels or piping.
- Gerry said the wiped film evaporator is within the \$30 million figure, and asked whether all of this will go toward research. Tom said the wiped film evaporator is already operational in a small-scale pilot test and DOE-ORP plans to bring it to a full-

scale pilot test and deployment after the completion of the ARRA funding. He said final deployment will be funded by base, rather than ARRA, funding.

- Gerry asked whether the wiped film evaporator would make the 242-A Evaporator redundant because it serves the same purpose. Tom said the 242-A Evaporator is a single-point failure system and the wiped film evaporator would provide capacity if the 242-A Evaporator fails. Gerry asked whether it would be possible to deploy a second wiped film evaporator. Tom said this is not being looked at and he does not know of any plans to buy an additional wiped film evaporator if testing is successful. Steve Pfaff, DOE-ORP, said there is currently no evaporator capacity in the west tank farms and the mobile system would give flexibility to do waste reduction in three SY tanks as well as providing backup capacity.
- Susan asked whether there is a particular area or issue that DOE-ORP would like to see the Board comment on in its advice. Janet said the budget alongside technology development and ARRA meets the needs of DOE-ORP's near-term project. Delmar said WTP does not have a basis to say it needs more money until it works off its carryover in 2011. Susan asked whether DOE-ORP has had to make choices between funding certain activities and whether the HAB should weigh in on what should be funded if DOE-ORP does not have full funding. Janet said she would like to take this question to Stacey Charboneau, DOE-ORP.
- Harold asked what extra money DOE-ORP would be asking for since the FY 2009 and ARRA funding have been appropriated and the FY 2010 budget is going forward. Susan said DOE-ORP mentioned adjustments to baseline and ARRA and the possibility that some work would be pulled forward. Gerry said the Board does have the opportunity to say the budget request should include certain work.
- Al said DOE has not looked into accelerating SST retrieval and should focus on asking for funding to meet the current TPA milestones. Steve said the evaporator will free up some space. Al suggested that deploying multiple wiped film evaporators would allow for the capacity of a DST. Steve said there are limits to the concentrations DOE-ORP can have in SSTs.
- Al said DOE should be evaluating whether there are ways to accelerate tank retrieval by potentially funding a formal study this year and proceeding with accelerated SST waste retrieval. Ron said this is a technical question, and it would be important to first look at what the options are. He expressed concern that technical workers are not sure the wiped film evaporator will work, and this is the first issue that must be resolved.
- Gerry said the obstacles for putting waste back into SSTs are substantial and could have a significant impact on cost and timeline. He suggested that it could be cheaper to design a new tank, but this comparison has not been analyzed on paper. Ron

suggested that it may be helpful to have technical workers pull together a list of all of the options that have been considered in the past, including early LAW.

### **Draft Advice Preparation**

The committee discussed developing initial draft advice principles on the FY 2009 remaining budget, ARRA funding and the FY 2010 budget request.

The committee members in attendance generated the following lists of draft advice principles for FY 2009, 2010 and ARRA funding.

#### **Overarching Themes**

- DOE should request enough money to meet committed TPA milestones
- DOE should plan for continuation of accelerated work within the TPA milestones
  - For example, Central Plateau Remedial Investigation/Feasibility Study, single shell tank retrieval and TRU waste treatment and storage capabilities –RL 13 (reiterate that this was a previously stated Board priority in Advice #213)
- The Board would like DOE to provide dollar amounts for projects
- Board concern over continued maintenance and increased security cost of PFP due to spent fuel – do not spend more money as necessary on PFP security
  - Examine cost efficiency of securing spent fuel
  - Minimize security costs
  - Review alternative actions to decreasing security costs
- Overall, DOE is on the right path with ARRA spending

#### **DOE-RL**

- Increase in funding for K Basin sludge removal (PBS 12)
  - Put budget dollars to address sludge disposition and schedule
- Adequate funding to continue forward progress on Central Plateau RI/FS beyond ARRA funding
- Delayed milestones make it harder to get additional funding, not a compelling reason
  - Milestones drive funding
  - Meet requirements/schedule
  - More money available for cleanup and why
  - Maintain level of funding will ensure future adequate funding

#### **DOE-ORP**

- Require additional funding to accelerate tank retrieval
  - Encourage DOE to fund a study/options analysis to explore opportunities for acceleration

- Example includes employ more wiped film evaporators
- Examine the out-year funding requirements

### Committee Discussion

- Harold expressed concern about the advice principle that states that delaying milestones makes it more difficult to obtain adequate funding. He said extra funding is due to outside allocations and the OMB decides how funding is allocated to agencies. He said the Board should say it would like to see more money available for cleanup and list the reasons, rather than telling DOE they do not have enough money.
- Al said since ARRA funding decreases in FY 2011 and will be gone in 2012 the Board should say how work should be done to maintain a level of funding. Susan suggested that to support this, the Board should recommend that stimulus funding be provided for the initial RI/FS process so when stimulus funding ceases that work is ready.
- Gerry said the power of the Board's advice and what Congress wants to know is whether DOE requested enough money to meet milestones. Without a milestone in place, he said the presumption is that the work is not important.
- Harold said one policy issue is to continue to request funding to meet milestones and a second issue is that there needs to be a plan developed to identify the continuation of work that can be accelerated, with milestones, and funding should be provided to maintain those levels. Susan suggested adding that it is important to initiate work that will support additional work in the out-years, and it is not only about having a milestone in place.
- Al said the tank farms received a substantial increase in funding and he did not see a plan for the possibility that this could continue. Harold said this is a legitimate issue that needs to be addressed by the HAB Tank Waste Committee. He said this additional funding and allocation should be a part of the systems study.
- Gerry expressed concern over the funding increase of \$50 million going to DOE-EM-21. He said five-eighths of the increase is for research and development (R&D) projects, but the committee was not provided with a breakout of this allocation.
- Gerry was unclear why DOE is decreasing and slowing down RH TRU retrieval. Susan explained this is due to the waste certification process. She said representatives from WIPP must certify this waste and there are limited workers who can do this.
- Harold commented on the storage problem of retrieving waste without having a place to send it. He said Hanford does not have the processing capacity to sort, package and analyze this waste. Gerry said he thinks Hanford has the capacity to sort and treat it and contracts are in place to treat the mixed-waste half of the waste. The HAB issued

Advice #213 for the FY 2009 budget that said this was a major priority, and he suggested referencing this and saying it is not being prioritized.

- Gerry suggested that the Board advise DOE on the increased costs of PFP security requirements. Al said he does not think spent fuel can be included in this advice, as it is necessary to research the specific costs of this. Harold said spent fuel is spread throughout the Hanford Site, and suggested that DOE look at the issue of increasing security costs and that consolidating this material or evaluating other ways to minimize the site security cost.

### **Committee Business**

- Gerry said the Board had a presentation on ARRA funding, and suggested DOE-RL and DOE-ORP provide a short presentation on FY 2010. Susan agreed that the HAB should have a budget request update.
- Gerry and Harold will draft advice for feedback from the full committee.

### **Action Items / Commitments**

- Matt said he would follow up with Gerry regarding the scope and initial cost of this work.
- DOE will brief BCC on the FY 2010 and 2011 ARRA funding when available this fall 2009.
- Janet said she can provide BCC members with the breakdown for FY 2010.

### **Handouts**

*NOTE: Copies of meeting handouts can be obtained through the Hanford Advisory Board Administrator at (509) 942-1906, or [tgilley@enviroissues.com](mailto:tgilley@enviroissues.com)*

- FY 2009 Omnibus and FY 2010 President's Budget HAB Briefing, Environmental Management Richland Operations Office, May 28, 2009.
- Support information to address the question: "What is the obligation of DOE to request funding to meet the Tri-Party Agreement (TPA) milestones?," Larry Gadbois, May 28, 2009.
- Fiscal Year 2009, 2010 and American Recovery and Reinvestment Act, Delmar Noyes, Janet Diediker and Tom Fletcher, May 28, 2009.
- Re: Priorities for Fiscal Year 2010, Out-Year and Economic Stimulus Budgets, Hanford Advisory Board, February 6, 2009.
- Response Letter to HAB Advice #210, Merle Sykes, March 19, 2009.

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**Attendees**

**HAB Members and Alternates**

Al Boldt	Susan Leckband	Gerry Pollet
Harold Heacock	Maynard Plahuta	

**Others**

Paula Call, DOE-RL	Melinda Brown, Ecology	Dale Black, CHPRC
Joe Franco, DOE-RL	Annette Carlson, Ecology	Rob Pippo, CHPRC
Mark Coronado, DOE-RL	Ron Skinnarland, Ecology	Barb Wise, CHPRC
Dawn MacDonald, DOE-RL	Larry Gadbois, EPA	Molly Jensen, EnviroIssues
Shannon Ortiz, DOE-RL	Lori Gamache	Cathy McCague, EnviroIssues
Janet Diediker, DOE-ORP		
Tom Fletcher, DOE-ORP		
Delmar Noyes, DOE-ORP		