

FINAL MEETING SUMMARY

HANFORD ADVISORY BOARD

BUDGETS AND CONTRACTS COMMITTEE MEETING

November 18, 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 everyone and introductions were made. Gerry reviewed the agenda. Keith Smith said that he submitted comments on the last meeting summary. The committee approved the October meeting summary with the changes from Keith.

Gerry said the River and Plateau (RAP) Committee is asking Board members to review the recent Committee of the Whole (COTW) meeting notes and the notes from the sounding board at the June Hanford Advisory Board (HAB or Board) meeting to ensure that their input was captured accurately related to the Central Plateau Cleanup Strategy.

Lifecycle Cost & Schedule Report

Jeff Frey, Department of Energy – Richland Operations Office (DOE-RL), provided a brief update on the Lifecycle Cost and Schedule Report. Jeff said DOE had a meeting planned this morning with the Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) to go over the initial framework and review feedback from the HAB and the public, but the meeting was rescheduled to attend this meeting. Jeff said some of the comments they received would impact the milestone language, others may be taken into account to impact the content of the report but not the language, and the third type of comments are considered non-applicable. Jeff said they are thinking about the structure of the report in the context of the public input. Jeff said he would like to work with this committee proactively to determine when it will be appropriate to involve the Board. Jeff said there will be logical times for interaction from

the HAB, the State of Oregon, and the public, and defining these points ahead of time will make the engagement more meaningful.

Jeff said the agencies will meet tomorrow to start work on the framework and make sure everyone understands the comments that were submitted. Jeff said the Mission Support Alliance and Portfolio Management team are engaging the site contractors while DOE – Office of River Protection (ORP) is working with federal personnel to arrive at an integrative work breakdown structure. Jeff said as this process moves forward and they begin to develop tools for cleanup, the first thing they will need is a work breakdown structure to describe how work will be organized across the site. Jeff said past experience has shown that if the organization of the work structure is changed it causes difficulties. Jeff said they want to address this early to avoid issues so the work breakdown structure will be included in the lifecycle report.

Gerry distributed a handout that outlines the Board's concerns that the description of the report would not meet the goals of what they had hoped the report would accomplish. Gerry referenced previous HAB Advice #223 that described what the Board was hoping to see in the report. Gerry used an example that the Board has discussed several times; if you wanted to look at the assumptions for cleaning up the leaks from tanks, what would you see hypothetically under this report? Gerry said the Project Breakdown Structure (PBS) for tank farms is a quarter billion, and one level below that does not provide much in terms of detail. Gerry said he would like to know if one would be able to look at options for certain tank farms assumptions and alternatives, because it is not in the two-five year window.

. Gerry said he would like the committee to discuss what the report should include in terms of the range of alternatives, cost, and schedule. Gerry said there was a good discussion yesterday in the RAP meeting about characterization. Gerry said the Central Plateau Cleanup Strategy includes characterizing of soil sites that could take seven years to complete. Gerry said it is important to understand the assumption behind why it would take seven years. This is the type of detail the Board would like to see in the report so there is an opportunity to comment on the cost and schedule for doing the sampling. Gerry said if the characterization takes seven years it could put DOE in jeopardy of not meeting the milestone. Gerry said he expects the Lifecycle Report to explicitly include this information for soil sites so the public knows how DOE intends to meet those deadlines.

Regulator Perspectives

- John Price, Ecology, said the milestone says DOE should take into account public opinions. John said he thought it would be appropriate for Ecology to talk with DOE about the values the HAB has expressed for the lifecycle report. John encouraged the Board to define their issues with the report in terms of values because that is what the milestone says.
- John said it would be tough to include information for each soil site in the Lifecycle Report because RL's baseline is huge and it would be hard for anyone to go through

it. John suggested identifying specific examples the Board would like to look at, for example pre-70s transuranic (TRU) waste, that could be looked at in detail. John thought it would not be worth the time to go into detail on some of the smaller sites. John clarified that this is the type of value that Ecology would like to see.

- Jeff said the language says that where final cleanup decisions have not been made, the Lifecycle Report should be based on reasonable alternatives and include cost and schedule. Jeff said DOE would like to start collecting values and areas of consideration in March after they are organized. Jeff said they cannot look at every waste site, but would like to reach agreement on the areas of focus for the alternative analysis and get those going early. Jeff said he recognizes DOE needs to define what issues should be looked at, but he felt that the Board and DOE are closely aligned on this. Jeff said what DOE looks at over time will change as issues change. In order to do lifecycle planning, DOE had to make some assumptions for planning. Not everyone is comfortable with those assumptions and Jeff said they would like to spend extra energy on those to come up with a range of alternatives make sure people understand the impacts to the baseline.

Committee Discussion

- Keith said this planning reminded him of when the site was implementing Handy 1000. Keith said he urged management to implement the whole package back then, but they did not because the work planning part was too expensive. Keith said the result was that the program was not tied together properly. Keith said he supported having the work breakdown structure done early. Keith also suggested that it might be necessary to develop some rank and file procedures. Jeff agreed and said the relationship for work control (i.e. safe work practices) is at a lower level and DOE is trying to get the higher level architecture in place so those lower pieces can also fall into place.
- Gerry said he was concerned about John's suggestion to only express values because the issues outlined in the handout are more specific than values. Gerry felt that DOE is often not motivated to do more than what is included in the requirements and if several years down the road they look back at this, and only values are expressed then they will not do anything beyond that.
- Gerry did a round robin to solicit Board member input on what people would like to see in the report and an iterative process between the board/committee and the report writers.
- Dirk Dunning suggested identifying the criteria for the alternatives and conducting a public process on those alternatives. For example, Dirk said if you look at waste sites for TRU waste, the process would determine what marks a successful alternative, criteria, and timeframe. Dirk said that Vince Panesko has done a great job bringing up some things that are relatively unknown about the past, particularly in C Farm. Dirk said there is information about releases in the 1960's, and information from the 1980s, but not much in between. Dirk said you could assume that the same activities happened in between, but the record is not there. Dirk thought this would be common

in the burial grounds. Dirk said the project breakdown structure is a critical path type of planning for three to five years. Beyond three to five years, the planning becomes more speculative and will likely change; beyond that is even more difficult. Dirk said it was important to break out the timeframes so you can look at them separately.

- Keith said there are two reasons for the missing data between the 1960s and 1980s. The first is that there was a lull in activities in that timeframe. The second reason is that there was a zeal for avoiding keeping records for because people were afraid of what would be discovered in the future.
- Al Boldt said the inadequate characterization of pre 1970s waste spills was troubling. Al said the debate has been about whether to clean up the waste or leave it, but until the waste is characterized there will not be any more information to inform that decision. Al said the current characterization plan allows seven years. Al commented that the Board should suggest that the first Lifecycle Report address how to accelerate characterization of what is in the soil. Al thought that the report should say what can be done in terms of cost and schedule and what is involved in getting the data.
- Pam Larsen said that the site will have some interesting data over the next few years with what can be accomplished with the stimulus money in terms of cost savings in the out years. DOE will be required to report that, and Pam thought it would help set the stage for explaining the benefit of doing work sooner than later. Pam also said the planning should address the uncertainty in technology. Pam said it is not currently known what technology opportunities will be developed, especially in ORP for the melters, glass waste forms, waste loading, etc. Pam said this will have an impact on the long term cost of ORP. Pam said this needs to be captured in the report and should include a cost impact for getting work done faster and cheaper.
- Art Tackett agreed with Pam and said over the lifecycle there will be changes that occur and affect the outliers. Art said the length of time that it takes to complete work will continue to be an issue.
- Ken Gasper agreed with what Gerry said regarding not limiting the level of detail in the report to one level below the PBS for the lifecycle. Ken said the same level of detail that was used for EIS should be in the report when comparing alternatives. Ken said he is not requesting a costly analysis for the report, but to use the work already done rather than limiting it.
- Mike Korenko agreed that having the lifecycle separated from EIS was strange. Mike thought that having a summary of the alternatives in the EIS and the impacts on lifecycle would be valuable.
- Gerry suggested that the committee provide today's meeting summary as further input for the agencies. Gerry also suggested asking when the agencies would be willing to meet with the committee and have a discussion as scoping continues. Gerry said the committee supports an iterative process. Gerry said he is looking forward to seeing how the first edition of the report addresses the comments that have been received. John thought that a discussion early in 2010 would be appropriate. Jeff said after the meeting tomorrow with the regulators, they should know more.

- Jeff said he thinks the report will reflect the interests the Board has indicated. Jeff said they are still struggling with what level of detail to include, and that will take some time to decide. Jeff said he still would like to talk with the committee or Board about their values and how to integrate values in the report. Jeff thought this would be timely to discuss in the February or March timeframe.
- Harold Heacock said that the report is a work in progress and will represent the best estimates as of today on the alternatives and cost. Harold said the point is not to focus on the cost, but the overall scope and best assumptions on what can or cannot be done. Harold said once that information is available, the committee will be able to interact and tell DOE what they should be considering.

**Department of Energy – Office of River Protection (DOE-ORP) Draft Baseline
(joint topic with Tank Waste Committee)**

Gerry said the ORP baseline has been of mutual interest to the BCC committee and the Tank Waste Committee (TWC) for two years. Gerry said this topic is tied to the Lifecycle Cost and Schedule Report discussion about transparency of assumptions, costs and schedule of alternatives. Larry Lockrem said the discussion today would be focused on cost. Larry said the TWC is looking at technical issues, but would like to be informed about how costs will be projected over next 40-50 years.

Stacy Charboneau, DOE-ORP, said the presentation she prepared was put together for briefings with DOE offices, including headquarters (HQ) counterparts to inform them of where ORP's baseline was in 2007, where it is today, and deltas between the two. Stacy said the presentation also includes information about changes in assumptions and new initiatives to reduce cost and schedule of the mission. Stacy said ORP's focus in the tank farms is on continued tank retrieval, initiatives to reduce cost and schedule and the lifecycle of mission. The near term focuses will be on predictable/consistent waste feed, and providing reliable feed for the long run. The American Recovery and Reinvestment Act (ARRA) dollars are going to consistent and reliable feed for the long term. This focus was established after discussion/negotiations with the Tri-Party Agencies.

Stacy summarized the tank retrievals and technology advances that have happened to date and that are planned in the coming years. Stacy said C-104 did not begin in October as planned because ORP had questions about the reliability of the transfer system. Stacy said they have worked through that issue and expect to begin at the end of this month. C-111 construction is ongoing to prepare for retrieval which will start this year. Stacy said ORP just finished Phase 1 and 2 testing of the Mobile Arm Retrieval System (MARS). Stacy said this is a very promising system and is planned to be used in C-107 in 2011.

Stacy said the 242A Evaporator is a single point failure system so ORP has focused on it heavily. ORP challenged the contractor to run three back to back campaigns this year to evaluate the sustainability of the system. ORP has completed upgrades over last few years, and will do more with ARRA funds to extend life of facility to 2025. ORP is also

developing another evaporator technology called a Wiped Film Evaporator which would provide another option in case of a failure.

Stacy summarized other work that was planned for the 2009-10 timeframe. The T Farm barrier was put in place a couple years ago. ORP has been working on designs for an interim barrier to test the effectiveness of barriers; a report is due this fiscal year or early 2011 to determine if it makes sense to move forward with interim barriers. Stacy said ORP stopped working on Single Shell Tank (SST) integrity last year to bring in an expert review panel. Stacy said they have initiated an SST program this year with recommendations from the panel. The panel found that SSTs are sound from a structural integrity perspective, but clearly there are leak integrity issues.

Stacy said ORP's baseline was certified in 2007. The performance measurement on the funded portion was at a 50 percent confidence level. Stacy said the risk analysis for the baseline was used to determine what contingency is required for executing the baseline. Stacy summarized some of the circumstances in the 2007 baseline that are different today. Stacy said the Demonstration Bulk Vitrification System (DBVS) was in baseline at the time which has been shelved since then because of technical issues. ORP brought in an external review team to look at low activity waste (LAW) options to shorten the schedule of WTP. That option was included in the baseline today is a second LAW facility. Stacy said the external review panel said ORP could wait until 2017 to decide on second LAW. Stacy said ORP does not agree the decision can wait that long. The consent decree and Tri-Party Agreement (TPA) calls for a decision by 2015. Stacy said ORP is working on this today to meet that deadline. Second LAW is in the baseline but ORP is looking at other strategies to try to avoid another large facility.

Stacy said the schedule was put together in the middle of the core review of the Waste Treatment Plant (WTP). Therefore the project completion was 2042 at the time and one to two retrievals were planned per year because of the limitations on double shell tanks (DST) space. Stacy said ORP wants to maintain a knowledgeable and competent staff to do that work and if they accelerated retrieval it would create a gap in work until WTP starts up and staff would have to be laid off. ORP decided to space out retrieval until WTP starts up to continue work. Stacy said the start date for WTP is now 2019 and activities had to be adjusted around that date. Stacy said the new TPA changed the sequencing of retrieval to a farm approach instead of a 1, 2, 3 approach across farms. Also, Stacy said the baseline assumes TRU packaging for 20 tanks through WTP which extends WTP operations for one year. Stacy said ORP does not have a path forward for getting remote handled TRU waste into New Mexico. Stacy said the federal register is coming out next week and has a preference not to send waste to New Mexico. Stacy said ORP is planning to retrieve the waste in a way that will allow multiple disposition paths instead of creating orphan waste.

Stacy said another change in the baseline is that aluminum removal would happen as a separate facility from pretreatment to lower the sodium in the waste. Stacy said this is going through technology development now and is not at the technology readiness level.

Stacy said the new tank operations contractor started in fiscal year (FY) 2009. The new contract changed the contracting mechanism and allows ORP to authorize work scope as they receive funding and make decisions. Stacy said this approach does not put ORP on the hook for all work in the contract as previous contracts did and provides more flexibility. Stacy reviewed which contract items are currently turned on or off.

Stacy said the 2009 baseline was submitted in June and is currently undergoing review. The baseline just completed independent project review at HQ and is moving toward certification. The baseline includes a five year period from 2009-13 and out years. Stacy said the reason the Lifecycle Cost and Schedule Report plans for two to five years is because that is what is in the baseline.

Stacy said the new baseline builds in risk for unfunded uncertainty in the baseline. Stacy said ORP cannot reduce cost and schedule without addressing uncertainties. The uncertainties will determine how DOE moves forward. Stacy said ORP's performance management baseline is funded at \$55 billion and the unfunded contingency has been reduced to \$7 billion. Stacy said they do not feel confident in the risk analysis provided by the contractor so the unfunded contingency may go up a little. Stacy said second LAW costs are carried over as part of risk management. Also, until ORP addresses what closure means, the cost will be included as a risk. Stacy said the biggest risk with second LAW is meeting the WTP waste acceptance criteria. The canister storage is also a risk depending on when a national repository is available.

Stacy said the new baseline uses System Plan 4. Stacy reviewed a graphic that lays out where ORP is in meeting regulator requirements in the baseline. Stacy said ORP has given System Plan 4 to the contractor to build. They evaluated an unconstrained funding case, and a planning case. Stacy said this was a large undertaking and will include information on retrieval sequencing, flow sheet, waste loading, melter capacities, etc. The modeling took a number of months. Stacy said the contractor brought back results which included a schedule ORP could not live with. Energy Secretary Dr. Inéz Triay told ORP to build in risks to deal with issues early. ORP built everything into baseline to reach a cost and schedule that met TPA requirements. The new set of assumptions was run through the models and became ORP's new baseline case. Stacy said there are places where the new baseline runs better than the previous unconstrained case.

Stacy reviewed the TPA milestones in relation to the ORP baseline. She said the date for closing all SSTs is 2043 under the TPA. After providing all of the cases to the contractor, closure is not completed by 2048. Stacy said there is a long time between then and now, and ORP will go through closure workshops to determine what closure will look like and will build in efforts to meet the deadline. Stacy said they are working on System Plan 5 now that will help ORP achieve additional waste loading.

Stacy said ORP has received additional funds for technology this year because the Energy Secretary's focus on technology. A request was made for \$105 million this year and Congress allocated \$85 million, which ended up being \$70 million. Stacy said DOE did a good job working with Congressional delegates this year and was able to secure \$50

million of the total \$70 million. Stacy said they are trying to determine how to best leverage the money to keep supporting universities and labs. The money may not all go toward the baseline, but it might support tank activities between Savannah River and Hanford.

Stacy said ORP is working on ion exchange/rotary microfilter technology that could allow them to feed some tank waste to LAW directly. Savannah River has been working on this for a few years and has seen good performance. Stacy said initiatives are also underway to stage leaky tanks in sound SSTs. Also, the Wiped Film Evaporator may be able to be deployed at a tank farm. Stacy said those options are in the baseline but they are working on activities to reduce cost and schedule. ORP is also working on advancing the melters in HLW to reduce the amount that they need to be replaced. Stacy said they are bringing in technologies from other countries and looking at cold crucible melters that have fewer issues with secondary waste. Stacy said they are working with Dr. Triay to bring more funds through the next Recovery Act as well.

Regulator Perspective

- Melinda Brown, Ecology, said Ecology is still digesting this information. Melinda said moving waste into sound SSTs is of particular interest. New technology is also of interest and Ecology will be looking at this during a project managers meeting this afternoon. Ecology is interested in the new baseline and is pleased work is moving forward. Ecology is still maintaining hope for supplemental technology, and thinks second LAW is a good option. Melinda said Ecology will not be able to say any more about this until additional information is provided.

Committee Discussion

- Pam asked if monitoring had been done within the vicinity of the existing barriers. Stacy said so far they do not have a lot of results back but they will continue to look at it over the long term. Dirk asked if the full first year of C Farm barrier report was available. Stacy said she was not sure, but would look into it.
- Mike asked what the retrieval options were for T Barrier. Mike asked if characterization of the barriers would also look at retrieval options. Stacy said it would include retrieval of the vadose zone under the Comprehensive Environmental Response Compensation and Recovery Act (CERCLA) Record of Decision (ROD) for Waste Management Area closure efforts. The System Plan lays out retrieval sequencing. Stacy said given that leaks have occurred at TY and SX, and ORP knows they will not be able to get to retrieval there for a while, they are considering interim barriers. TY and SX will require infrastructure for retrieval which takes two-three years of construction.
- Dirk commented that the designation of SSTs as structurally sound is different from what most people think of when they consider the integrity of the tanks. What the experts meant is that the tanks will not collapse, but they do leak.

- Harold asked if DBVS had been taken off the table permanently. Stacy said DBVS is locked out, which does not mean it will never be resurrected, but the preference now is for second LAW.
- Larry asked what the cost was for lithium bayer facility. Stacy said she was not sure, but could get that information.
- Harold asked if the near term budgeting was \$600 million. Stacy said it was \$400 million per year and would start ramping up in 2012-13 and would go from \$410 to \$710 million per year. Stacy clarified that this does not include ARRA money but does capture the technology development funds (\$50 million).
- Harold asked when the supplement treatment design would begin. Stacy said the design work would start in 2014.
- Mike said he was concerned about the limitation of retrieving two tanks per year when ORP could do six tanks per year. Mike said it would save lifecycle costs to retrieve more tanks and instead of laying people off ORP could make new work scope for them. Stacy said there are several issues that limit retrieval. The current retrieval system can remove 85-90 percent of the waste but then requires deployment of a second technology to retrieve the remaining waste. The MARS technology could get closer to 99 percent of the waste and would only require one technology deployment. Stacy said they currently have retrieval, construction, and one technology deployment built into the baseline. Stacy said there is an issue with tank space that limits retrieval. Also, Stacy said if they deployed workers to other cleanup areas they would be under a different contract and there would be no guarantee they would come back to the tank farms.
- Gerry asked if the WTP operations increase of \$2 billion included second LAW. Stacy said it did not; the second LAW costs are included in supplemental treatment. Gerry asked if the costs included construction and lifecycle operations. Stacy said they did.
- Gerry asked about the costs for TRU processing. Stacy said the previous baseline was \$587 million which went down to \$180 million because they are not doing remote handled TRU. This contributed to the extended operations of WTP. Gerry asked if the cost still included contact handled TRU material. Stacy said it did. Gerry asked if any remediation dollars were included in the baseline. Stacy said that was part of the closure line item. She reminded the committee that the amounts shown are not all of the totals, but just the ones that have deltas.
- Al asked why tank waste pretreatment was at \$1 billion and now effluent treatment is at \$1.2 billion. Stacy said the secondary waste stream off of WTP was not previously dealt with in the baseline. ORP knows they will have to upgrade ETF and operate in 2015 which is reflected in the costs. Larry suggested this be a topic for a future TWC meeting.
- Al asked how much of the unfunded contingency was in the next one to two fiscal years. Stacy said very little unfunded contingency is in the near term baseline. The contractor has a management reserve for the risk they have identified in the near term.

- Tom Carpenter asked if any costs were included for the risk of losing Yucca Mountain as the national repository. Stacy said it is not included in the current risk management. She said depending on the final resolution, it may have little impact on the site. Stacy said the criteria for Yucca was higher than the criteria used at Hanford.
- Harold asked if money was included for the design of a storage facility. Stacy said it was; she said that money was in the previous baseline and did not change so it is not reflected in the presentation.
- Pam asked if System Plan 5 would address some of the issues in System Plan 4 with glass loading and waste optimization. Stacy said System Plan 5 would address some of the issues Pam listed. Stacy said waste blending will be a big part. Stacy said historically ORP has updated the system plan every three years, now they do it annually.
- Pam said the Nuclear Regulatory Commission (NRC) is opening up regulations on blending waste. She said she was not sure if that would impact tank waste but suggested that ORP should look into the effect. Stacy said it could affect their modeling.
- Dirk said he did not think the State would allow SST waste from leaky tanks to be transferred to sound SSTs. Stacy said their early discussions with Ecology were encouraging. Dirk said he could not imagine a circumstance where any state would allow that because the Resource Conservation and Recovery Act (RCRA) does not allow it. Dirk said System Plan 4 identified 2020 as the timeframe for limitations on tank capacity. Dirk encouraged Stacy to think about when they will need new DSTs for retrieval and juggling waste.
- Dirk asked if fractional crystallization is still being considered. Dirk said the sodium already in the waste, in addition to the added sodium, is the single limiting factor on the amount of glass. Dirk said fractional crystallization has the ability to address both issues. Stacy said it is not included in the baseline today. Stacy said they divided up treatment options between sites and she thought that Idaho got fractional crystallization. Stacy said Dr. Triay had chartered URS to manage the contracts for tank waste and bring business proposals for how to reduce the mission for EM. URS brought forward proposals that ORP is reviewing now. Fractional crystallization was not part of URS's proposal. Stacy said she did not think fractional crystallization would be pursued further. Dirk asked Stacy to reconsider that decision; Dirk thought that steam reforming could become like DBVS.
- Dirk said he did not think the numbers shown on slide 26 for TRU waste processing and decontamination and decommissioning are accurate. Dirk thought the numbers would be higher.
- Dirk said at a recent meeting in Salt Lake City the topic of NRC opening up the waste classification scheme was discussed. Dirk said the classification scheme is based on a 1990s document for how mobile contaminants are in soil. Dirk said if NRC switches to use the EPA numbers it will affect Hanford.
- Susan asked if the work on infrastructure is happening now so that retrievals can move forward if additional ARRA funding becomes available. Stacy said yes; ARRA

funding is focusing on infrastructure upgrades, not tank structure, but transfer lines, valves, exhausters, and upgrades are included.

- Larry asked about the reference on slide 41 to rotary microfiltration and other technologies. Larry said he was under the impression that Savannah River was looking at that, but Hanford was doing hot testing. Stacy said there are synergistic activities happening to leverage contracts with URS. National laboratories are participating too. The new team is challenging contractors to work across initiatives to leverage work at other sites. Larry commented that he would hate to see the hot system destroyed.
- Larry said he supported looking at fractional crystallization again. He said the technology was turned off because of a delisting issue with clean salt. Larry said \$110 million dollars is planned for a facility to deal with sodium.
- Larry asked how the contractors will work together on 222-S. Larry also asked how ORP can operate effectively with a two year contract. Stacy said that is an acquisition contract question that she could not address. Stacy mentioned that the contract can be extended to five years if the contractor performs well. She said they build contracts in a way to allow them to get rid of non-performing contractors.
- Larry said there was a breakdown between Bechtel and Washington River Protection Solutions (WRPS) in dealing with corrosion on analytical work. Larry said he heard that there is still a conflict of interest issue and the contractors are not working together and are sending work scope elsewhere. Larry said he thought Shirley was aware of the issue, but wanted to mention that it is not resolved.
- Tom asked if ORP is planning to do pretreatment at tanks or at the processing facility. Stacy said they are exploring an at-tank or near-tank facility, but that is not in the baseline; it is in the WTP baseline. Stacy said ion exchange or rotary microfiltration could be done at the tanks and would bypass pretreatment. Tom said the MAR presentation he received recently made it sound like infrastructure was being planned. Stacy said she thought it was being imagined, but was not built into baseline. Tom said if ORP does look at an at tank treatment process, then waste will end up going through three pretreatment processes, which seems like a lot. Tom asked if ORP has done a cost benefit analysis for pretreatment versus tolerating aluminum in the glass. Stacy said over the last five years ORP has looked at options for reducing the cost and schedule. WTP costs roughly \$1 billion per year for operations and anything ORP can do to reduce that will create savings. Tom said he is not interested in the greatest savings, but best long term treatment of waste. Stacy clarified that the schedule is the driver for ORP, not necessarily the cost.
- Tom said the average age of a tank farm operator is 51. Tom asked if ORP is thinking about attracting and training a younger workforce. Tom said it might not make sense to limit retrieval based on keeping a workforce because they might end up losing them to retirement anyway. Stacy said they think about this a lot. Stacy said when she came to the site there were 18,000 people employed at Hanford, now there are 12,000. Stacy said ARRA funds brought a new wave of workers but she is also concerned about tank farm workers leaving. She said they are working on training new employees with the seasoned workers to maintain the institutional knowledge.

Also, contractors are working with Columbia Basin College on a new nuclear worker track to train new nuclear operators. Tom said the ARRA money is not guaranteed and they may have to let those people go if the money runs out. Stacy said ORP has hired 500 people and thinks they can keep them all.

- Mike also endorsed fractional crystallization. Mike said the results were impressive. Mike also said URS is a great company but the fact they recommend steam reforming is not a surprise because they have an investment in the technology.
- Mike asked if the site is ready to receive additional ARRA funds. Stacy said yes. Stacy said getting acquisitions in place is a long process for other agencies and it takes them a while to use funds. DOE is ready and can use funds immediately.
- Mike said he was still troubled by ORP's decision not to accelerate tank retrieval. Mike said Rocky Flats did it successfully. Mike said he also did not realize that the vadose zone was a separate contract from tank farms. Mike said he heard talk of RL and ORP offices combining. He said if that happens, the contractors will be up for negotiating and DOE should be able to solve the administration problem. Mike said accelerating retrieval will affect the end state. Stacy said the Central Plateau Cleanup Strategy focuses on that and the work needed to complete tank farm closure. Stacy said soils and groundwater remediation would not look any different on the Central Plateau than anywhere else on the site. Under the Central Plateau Cleanup Strategy the tanks will be closed under RCRA and soils will be dealt with through CERCLA. Everything would have the same cleanup standards and will be addressed holistically. Dick said the TWC is interested in hearing about the scope of the glass program underway. Dick asked if the focus was solely on borosilicate, or if they were looking at iron phosphate seriously. Dick said the committee has been pushing that for years and would appreciate a briefing on that.
- Dick said it seemed like the waste blending idea would be in conflict with the farm by farm retrieval approach. Stacy said they would have to optimize for that. Stacy said if they could stage waste, they may have space available in their baseline. Dick asked about the capacity at Waste Retrieval Facility (WRF). Steve Pfaff, DOE-ORP, said the above ground vault has 150,000 gallons capacity and the two facilities have up to 900,000 gallons of capacity. Stacy said the DST system is full in the near term and ORP is doing mixing studies to see what can be gained. The study will show if blending is possible in DSTs or if something else is needed, like WRFs. Dick thought it would make sense to have that closer to WTP.
- Dick said he was interested in learning about what alternatives are being evaluated for CSB. Dick asked if anyone has looked at disassembling the old melters to make them easier to dispose. Steve said the current disposition path is in double lined trenches onsite, intact. Dick said the EIS says they will be disposed of in the national repository.
- Gerry said when the last baseline went through review at HQ, HQ did not have any information about the type of issues and questions the Board, regulators, and public had raised about the baseline. Stacy said this is very different now with Dr. Triay in EM-1. Stacy said Dr. Triay is more involved at Hanford and is aware of not just the regulator concerns, but tribal and stakeholder concerns too. Stacy said that Shirley

and Dave act as advocates with their HQ counterparts as well. Stacy felt that there was a much better system for responsiveness and people with a good knowledge base at HQ now.

- Gerry said he was glad that people at HQ know what the mood is at Hanford, but did not feel that addressed his concern about specific issues with the baseline. Lori Gamache, DOE-ORP, said that through the advice process HQ is informed of the Board’s concerns. Gerry said the Board has not given advice on this. Gerry felt that there needed to be a system to make sure input on the baselines is shared with HQ.
- Ken said the baseline case, unconstrained funding case, and yearly System Plan are all good things that the committee is pleased to see progress on. Ken thanked ORP for embracing these items, getting them into the contracts, and sharing them with stakeholders.

Committee Business

Cathy McCague distributed the committee work plan and said she would add the Lifecycle Cost and Schedule Report update in February or March.

Cathy said no meeting was planned for December, and January will likely be a busy month for the committee. Cathy said the committee had talked about doing review of budget advice and responses during December, but with the workshops happening that will probably be deferred until January.

Keith asked when the leadership selection process happens. Cathy said the leadership nominations will happen in February.

Handouts

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

- Lifecycle Cost and Schedule Report Issues, BCC, November 18, 2009.
- Office of River Protection Tank Farm Project Draft Baseline, Stacy Charboneau, DOE-ORP, November 18, 2009.

Attendees

HAB Members and Alternates

Al Boldt	Mike Korenko	Gerry Pollet
Tom Carpenter	Pam Larsen	Art Tackett
Dirk Dunning	Susan Leckband	Dick Smith
Ken Gasper	Larry Lockrem	Keith Smith
Harold Heacock	Liz Mattson	
Steve Hudson	Maynard Plahuta	

Others

Paula Call, DOE-RL	Melinda Brown, Ecology	Cathy McCague, EnviroIssues
Jeff Frey, DOE-RL	John Price, Ecology	Emily Neff, EnviroIssues
Shannon Ortiz, DOE-RL		Sharon Braswell, MSA
Stacy Charboneau, DOE-ORP		Dru Butler, MSA
Lori Gamache, DOE-ORP		Ken Alkema, MSA
Steve Pfaff, DOE-ORP		