

FINAL MEETING SUMMARY

**HANFORD ADVISORY BOARD
RIVER AND PLATEAU COMMITTEE MEETING
September 15, 2010
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

Pam Larsen, River and Plateau (RAP) committee chair, welcomed everyone and introductions were made. The August RAP committee meeting summary was adopted.

Emy Laija, Environmental Protection Agency (EPA) announced that EPA met with the remedy review board regarding leaving Plutonium (Pu) waste on the plateau, and the Hanford Advisory Boards (HAB or Board) Advice #206 was discussed and incorporated. She said once the memo with recommendations is released, EPA will share it with the RAP committee.

U-Canyon Demolition

Wade Riggsbee said he was a past manager at the U-Canyon and has knowledge of the decommissioning and decontamination (D&D) process of the buildings on the plateau. He worked with several different companies regarding technologies and how the buildings would be taken down. He said the RAP committee should follow the D&D process and said the discussion on the U-Canyon barriers will be a separate committee discussion.

Al Farabee, Department of Energy-Richland Operations Office (DOE-RL), presented on the U-Canyon demolition and used a photograph to show the size of the structure. He said

the U-Canyon was a robust, highly shielded building. It is 810 feet long, 66 feet wide and 77 feet tall. The main sections of the building are made up of shielded process cells, an operation floor, an operation gallery and support areas. There are 40 process cells that housed the main process tanks and piping. He showed the diagram and listed the components of the building.

U-Canyon was built in 1944 for Pu separation, but was never used for these purposes. Al said the U-Canyon was used for training until 1952 and then became part of the uranium recovery process that operated until 1958. During this process, the Uranyl nitrate was converted to uranium nitrate. Al discussed how DOE reached their current approach to the U-Canyon, including the 1996 canyon disposition initiative, and other studies and interactions from 1997 to 2005. He said a record of decision (ROD) was issued in 2005, which was the first Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) document for a canyon in a DOE complex. With this it was decided to pursue a close in place approach and partially demolish the structure. He said DOE plans to remove tank D-10, fill process cells with contaminated equipment, fill voids with concrete, knock out the majority of structures, apply cap and barrier and then monitor the facility.

Al said tank D-10 had enough contaminants that the contents were deemed necessary to remove. D-10 was about 7-8 feet in diameter and 7-8 feet tall. He said the D-10 tank was removed from situ reduction-oxidation (REDOX) in 1965 and from recent testing the tank only has 3-5 gallons of liquid, 477-497 gallons of solid crust and 543-594 grams of Pu. He said the next step is to remove the tank in cask and store until disposal.

Al presented pictures of 221-U cell 30 and Tank D-10 and said DOE is removing the cask. He said DOE calculated the cell size from drawings and historical photos. He showed a diagram of the process cells where all the equipment will be placed and a picture of the equipment on the operating room level. He then showed a photograph of the canyon floor and said that it is almost completely clear.

Al presented the design considerations affiliated with filling voids in the U-Canyon with concrete. He said DOE looked at heat generation, flow-ability, expansion, sequence, component floating, need for ventilation, use of foam dams and rinse water management. He said the cells could be left open for pouring grout or the cells could be closed and DOE could drill holes in the cells. DOE settled on a combination of the two processes to fill all voids. He showed a diagram illustrating where the grout fill points are. He said the study for this process is just a concept and has not been approved or reviewed. He then showed the rough calculation of the amount of material it will take to fill the containers and said it would be around 20,318 cubic yards of material in total.

Al said the goal for demolition at U-Canyon is to lay the walls down and then cover the rubble with a barrier, after which radiological surveys would be done. DOE is looking at conventional demolition and use of explosives, which is known as harmonic delamination where the concrete is separated from the re-bar. He said for conventional demolition there is an increased risk to workers, and it would take 251 days and cost 5.3 million dollars. He said the more time it takes the more risk there is. He said the explosive demolition reduces risk to workers by reducing overall time of completion to 120 days, making it more efficient and less costly at 4.7 million dollars. He said there is a history of success

with explosive demolition with several stacks being demolished using this method at Hanford and at other DOE sites. U-Canyon is in the engineering study process. Wit is completed it will be submitted for review by DOE and regulators. He said the safety and logistics will then be analyzed. He said the negative aspects of explosive demolition are dust and the heavy debris falling on the floor, which DOE will try to mitigate by putting debris on the floor to act as a cushion.

Al said U-Canyon will use recycled concrete fill. He said clean concrete rubble fill from the 100-K sedimentation basin will be put in the engineered barrier, which will reduce amount of concrete debris in the Environmental Restoration Disposal Facility (ERDF).

Wade Woolery, DOE-RL, said part of the process of taking down the U-Canyon is taking down the ancillary structures. He said originally U-Canyon was not needed and then, with the Plutonium-Uranium Extraction (PUREX) process, 224-U was built. He presented a picture of U-Canyon in 2001 to show which structures had been taken down. He said in 2005 the ancillary demolition was underway, and by 2010 the exterior tanks had been removed and the only remaining structure is an instrumentation shed.

Agency Perspective

- Rick Bond, Washington State Department of Ecology (Ecology), said the presentation was good and he had nothing to add.
- Craig Cameron, EPA, said there are many design phases, and the EPA looks forward to the final plans for taking the D-10 tank out, the use of grout, and the potential of using explosives. He said EPA is pleased with how things are going.

Committee Discussion

- Wade asked if weather conditions were addressed in the grouting considerations. Mike Swartz, CH2M HILL Plateau Remediation Company (CHPRC), said weather is considered with flow-ability.
- Dick Smith asked if DOE has considered wire saws for demolition. Mike said it can be done, but is not efficient, creates more potentially hazardous dust, would cost more and take more time.
- Maynard Plahuta asked about the quality of the grout. Al said the grout design and method of placement envisions 4 to 6 types of grout, depending on the use. He said the new method has been simplified to using one type of grout, but the study has not yet been vetted. Mike said the grout has been engineered and needs to flow and not set too fast.

- Maynard asked if the material in U-Canyon is considered Transuranic (TRU) waste. Mike said it is non TRU waste with the exception of the D-10 tank. Al said there is some uranium but not in a high volume.
- Dale Engstrom said there has been talk at the Oregon Department of Energy on how this demolition might go forward. He said the building was built in sections, and there is concern that there is still reliance on the equipment being contained. However, with the grout and the contamination levels, it does not seem to be a problem. As for the dust from the explosion, he said every building he has seen demolished has created a huge dust cloud. Al said demolition is commonly done with verticality of fall because of nearby inhabitants. He said in this case there would be a series of explosions and dust should not be too much of a problem, as dust suppressants will be used. Mike said DOE completed surveys on using explosives.
- Dale said there is a concern the lid of the building will fall, but it was mentioned that DOE will put something down as a cushion to ensure it does not fall through the floor. Al said there are studies going on to ensure that enough material is put down so the roof does not puncture the floor when falling.
- Dick asked if the roof could be lifted off. Mike said the risk is too great with this option due to its weight.
- Dick asked about the highly contaminated sand filter. Mike said DOE is doing more characterization on the sand filter. Al said the decision is to be determined.
- Dick asked if the residual contamination in the building will cause a problem for groundwater. Craig said there was modeling for cesium and strontium, and it showed that the present contaminants would not be a problem for the groundwater. Kevin Leary, DOE-RL, said the Pacific Northwest National Laboratory (PNNL) did some studies that looked at what kind of waste the U-Canyon could contain, and a study suggested that adding fly-ash to the grout would help bind the contaminants so they do not get in the groundwater.
- Wade said the roof panels are not as much of an issue due to the lack of contamination. There is less risk for a large release from the roof puncturing cells. He said the sand filter should be explored for its inventory and its ultimate fate. He said the sewer under the building is another issue that has been discussed. Kevin said it is not just the sand filter, but the other waste sites around U-Canyon that need to be characterized. He said these things need to be considered along with the size of the barrier. Wade said it would be good to see the selection process for the final approach for the sand filter.

- Dick asked if there is a work plan for the U-Canyon being issued. Al said yes. Wade Woolery said the first draft of the demolition work plan should be out by November or December. Craig said the 90 percent of design document has to have EPA approval and can be reviewed by the HAB.
- Jerry Peltier asked if there is a need to take the building down if the vaults are sealed. Craig said if the U-Canyon is closed under Resource Conservation and Recovery Act (RCRA), a barrier is required.
- Jerry said it was previously concluded that grout was not a safe storage method due to possible seepage. Craig said the difference at U-Canyon is that the bottom of the facility was found to be an adequate barrier, but there is a small amount of contaminated material. Therefore there will be no driving force with the cap.
- Pam asked if there was a path forward for characterization of the waste sites around the buildings. Kevin said there is one, but funding has been difficult to track down for this project. He said the buildings will have to be characterized before a decision will be made.
- Pam asked if more advice was needed on this topic. Craig did not think advice is necessary. He said these actions are scoped under the 200 West Area and should be included in those decisions.
- Dick asked about the condition of the central drain line. Craig said the drain line is in the building and there was a video taken to survey the condition. It looks like the drain is within the building and there is no evidence of a release.
- Wade said next steps for U-Canyon are to set up a tracking process and receive status updates. He said a separate meeting with Kevin on barriers would be useful to capture the issues with characterization that have potential for advice. Pam said barriers might not be ready to discuss yet. Craig said there is a 2017 Tri-Party Agreement (TPA) date for the barrier. Wade said a briefing on the studies would be good at some point. Mike said it could be revisited in the spring when there is more information. Craig suggested that February might be a good time, and would allow time for EPA to review the documents before bringing this back to the committee.
- Kevin said there will be some sampling in the waste sites, and the results should be ready to discuss in the spring.

River Corridor/Groundwater Briefing

Dale said the 100-Area cleanup is progressing quickly, but groundwater is still a concern. He said groundwater is now being addressed with pump and treat systems and wells. This

topic was requested to get an update on contamination issues and the 100-Area groundwater treatability test plan.

Jim Hansen, DOE-RL, began the presentations. He said at the end of August there were two treatability test plans (TTPs), one for groundwater and one for the K Area focused on the vadose zone. He said DOE is looking at bio-remediation as a potential solution and there are continuous remove treat and dispose (RTD) activities. He showed an illustration of the groundwater plume at the K West reactor area. He said the sedimentation basin has nearly been removed and DOE is looking at where the source of contamination is. He showed a picture of the D/H Area reactors and the groundwater contamination, pointing out the areas of higher concentrations.

Jim said DOE is conducting studies in the concentrated areas of contamination and showed a picture of contaminated groundwater. He said DOE will be starting out with activities in the K Area.

Steve Balone, DOE-RL, said the objectives for the K Area TTP are to demonstrate reducing conditions can be established throughout the vadose zone to effectively remediate contamination. Moreover DOE is determining the optimal infiltration rate and substrate concentration to maximize system performance. He said the conclusions of the TTP are to show the effectiveness of bio-infiltration, the feasibility of implementation method, full scale implementation of RTD, and regulatory acceptance.

Steve said DOE has completed D&D of the head house and that the excavation of waste sites around the head house is in progress. He said DOE is preparing the site for the treatability test following excavation and the installation of the bio-infiltration system. He said DOE will perform bio-infiltration for up to 6 months, and then evaluate results of the treatability test to determine a course of action.

Steve said as a result of the treatability test, DOE wants to conduct enough characterization to see the extent of hexavalent chromium. He said operations should start in February, and then provided a diagram of the extraction wells south of the K East reactor.

Jim discussed the D/H Area TTP. He said tests were conducted in the low concentration areas of the plume, and the substrates have changed. He said DOE is looking to determine the magnitude and extent of decreases in chromium VI concentrations during and after the test. DOE will measure the longevity and effectiveness of any residual reducing capacity produced in the aquifer, and identify the extent of any post-treatment chromium VI rebound. He said DOE will develop information to support full-scale implementation of half life and region of influence for each substrate, determine the extent and mobility of contaminants, analyze performance versus cost, and minimize or prevent bio-fouling by optimizing injection practice. He said what is learned in the D

Area can be applied to the K Area. He said DOE wants to look at the reducing agents with the use of lactate and cheese whey to analyze potential success.

Jim showed a diagram describing the re-circulating process for situ bioremediation. He said the timing of these activities is based on the remediation activities and is tentatively planned for the fall. The groundwater activities should be next spring.

Briant Charboneau, DOE-RL, said DOE made a commitment to stop chromium from entering the river from the 100 Areas. He said there is an interim record of decision (ROD) mandating pump and treat systems in the H, K and D Areas. He showed a model of what DOE believes will be the outcome of the pump and treat system in the 100 K Area and said by 2012 a separation of the plume from the river is expected. He said the model for treating groundwater in the D/H Area with the pump and treat systems predicts that by 2012 contaminants will cease to reach the river. He added that the plumes should be completely gone by 2020. However, he said the models do not take into account any source term.

Briant said DOE is searching very hard to find the source of contamination. He said DOE has expanded the capacity of facilities to address groundwater issues. He said there isn't a ROD for the F or BC Areas. He said with American Recovery and Relief Act funding, over 250 wells are being installed, which has been a big boost to productivity. He said the groundwater project will be spending 250 million dollars a year compared to the 30 million per year spent in past years. He said the amount of treated water has been greatly increased. DOE is constantly checking performance to adjust and improve groundwater treatment.

Briant presented a bar graph of the 100-Area Operable Unit (OU) treatment achievements from 1997 to 2011, which illustrated an exponential increase in activities. He said for the B/C and F Areas, most of the contamination levels in the wells meet drinking water standards, but not aquatic standards. He said DOE is not certain of the mixing ratios of groundwater going into the Columbia River. He said divers have taken samples from the bottom of the river, from which estimates of a 1 to 2 dilution were made. However, the final RODs will evaluate this ratio again. He said the ROD for the B/C and F Areas could take a year or more, so DOE is proposing to take action now based on their commitment to stop contamination. DOE will complete an Engineering Evaluation/Cost Analysis (EE/CA) so action can be taken.

Briant discussed chromium containment methods. He said there is groundwater flow control, flow control with pump and treat, and pump and treat only. He said the TPA commitment was to stop the contamination from reaching the river by 2012 while finishing the Remedial Investigation/Feasibility Study (RI/FS) process. He said there is high confidence that these commitments can be achieved with flow control methodologies. He said for flow control and pump and treat scenarios, there is mid-level confidence in its ability to meet the set goals by 2012. He said that the pump and treat

only scenario has a low confidence that it will work by 2012. The reasoning behind this level of confidence is the fear of trapped contamination that makes it hard to know if the goals have been met.

Briant showed a picture from a flow control modeling demonstration with potential locations of extraction wells. He then compared different injection and extraction well placements and said that there will likely be more modifications. He then provided a schedule of activities and compared actions to the chromium plume containment milestone for the 100 Area. He said that the RI/FS data will be finalized before these treatments begin. He said DOE has been aware of these issues for a long time and there is a TPA commitment and a target date established. He said this is a stepping stone and will get activities employed before the RI/FS process.

Briant said a catalyst for DOE's renewed commitment was river samples that were higher in chromium than expected. He said there is only so much money, but he has talked to the managers, who feel this treatment is a priority and a commitment.

Agency Perspective

- Laura Buelow, EPA, said the chromium treatability tests have been followed, and there was a workshop for the BC Area groundwater. She said the lack of a pump and treat system is a concern. She said the K Area is a better place to try the pump and treat system.
- Jacqui Seiple, Ecology, said Ecology supports the plan to speed up remediation and remove contamination around the river and target chromium. Ecology has submitted comments on the design and degradation of the substrates and hopes these issues will be resolved.
- Laura said EPA has met with DOE and the plans have changed since the last time she saw this presentation. She said there is an alternate compliance point where certain criteria have to be met in the near shore wells as opposed to the amounts detected in the river itself. She said there is no chromium in the Ringold Upper Mud. The flow control is a hydraulic barrier and EPA will look at this process, but DOE has the removal authority. She said it has been two years and through the RI/FS process EPA feels that there is a decision that needs to be made, but it seems that the information from the RI/FS could be delayed. She said the conditions of groundwater could be changed by the ROD, which is an issue. EPA is wondering what the driving force is for doing this groundwater work now. She said DOE has expanded pump and treat systems, which was a goal of the agreements made.

Committee Discussion

- Pam asked if DOE is still looking for the source term in the B/C Area. Jim said there are less concentrated areas of contamination much like in other areas, so it is hard to say where the source term is. He added that there will be more characterization done for the BC Area.
- Jerry said he has seen scenarios that project this work taking 5 to 10 years and asked if these actions will be funded in the future. Brant said these actions are a short term action and funding will be allocated, about 10 to 15 million dollars.
- Wade said in the bio-remediation process there are bio-fouling issues, and in the reducing environment there is bio-toxicity with contaminants. Briant said that a treatability test is being done, and those are risks that are being considered. He said mobilization is a concern as well.
- Wade said iron forming bacteria could also be accidentally introduced during the bio-remediation process. Jim said there have been other barriers and he is not aware of iron bacteria forming as a result. He said with other treatability studies the activities have to be a certain distance from the river, which is being considered in the treatability test.
- Wade said the reality of what is going on is more complex than what is being depicted in the modeling as shown with the upwelling in the river. He said if there is a hydraulic barrier, there are issues with contaminants going around and under the barrier. He did not see any wells to ensure that contaminants were not continuing to contaminate the river. Briant said DOE generally does have wells between the extraction wells and the river.
- Pam asked if the 2015 vision is a driver for this groundwater work. Brandt said it is the 2012 commitment that is the main driver, and the TPA thinks that focusing efforts towards groundwater is the right thing to do.
- Pam asked if this work is affiliated with the Natural Resource Trustee Council work. Wade said ultimately the work is related with respect to the aquifer.
- Dale said bio-remediation is essentially counting on one cell creatures. As you add sugars the ecological processes change the composition of the soil and this forms a mineral. He said once the minerals return to a natural state the material could re-oxidize and enter the groundwater as either chromium III or VI, which is worth considering. He said in other places contaminants are locked in carbonate which is more permanent. These processes are creating a waste deposit and are more temporary. Laura asked where Dale found this information; she thought it was more difficult to transform back to chromium VI.

- Dale said some of these applications will be difficult due to the heterogeneous soils and that foams should be considered. He said he is glad to see that action is being taken and that DOE is treating groundwater and keeping contamination out of the river.
- Dick asked if chromium VI and chromium III are both liquid. Jim said chromium III will become a particulate and become immobile. He said the ion exchangers will be focused on the hexavalent chromium.
- Dick asked where the water will be coming from for the pump and treat activities. Briant said the water will be coming from the river or out of nearby reservoirs. He said there is a large infrastructure for pumping water.
- Dale said the path forward for this topic is to keep track of the documents and to plan to have DOE talk about the potential success of these programs. He said the RAP committee has not yet reviewed the characterization documents. He added that the RAP committee will review and discuss draft EE/CAs. Jim added that the RAP committee should review the RI/FS reports as well. Dale said the RAP committee would like to look at the RI/FS as soon as possible. Briant said that substantial early data was given in these presentations.
- Pam asked if the presentation is available. Briant said there have been changes to this presentation; Paula Call, DOE-RL, said it has not been approved for distribution, but she will work with Susan Hayman, EnviroIssues, on when the presentation can be distributed to the committee.
- Harold Heacock asked about how the risks are considered. Briant said there is substantial documentation that evaluates the risks. There have been studies on salmon and the early studies are inconclusive. DOE is still pursuing the risks. Harold said he would eventually like to see the risk evaluation. Briant said the main risks are being mitigated by extracting the water before it gets to the river. Paula said there is a Columbia Risk Assessment document coming out as well. Briant said the interim actions have been based on contaminants dramatically higher than the drinking water standards.

Susan Hayman noted the follow up actions for the committee on this topic.

K-Reactor Update

Tom Teynor, DOE-RL, provided an update on the study for the 105 K East reactor core removal and showed a picture of the front face of the reactor taken in July. He said DOE took off the south wall to provide access to the core and is continuing with interim safe storage actions.

Tom said additional package information was added to further validate the project and DOE has reached Critical Decision (CD)-0. An amendment was made to handle the 8 surplus reactors and their dismantlement. He said DOE is working towards CD-1. He said EPA has provided comments, and once DOE has these comments it will be open for public review, which should happen within the next few weeks. He said DOE-RL senior management is concerned about budget. The design is being revised and funding will be evaluated. He said DOE does not want to breach the core before finding money, and there are interim safe storage actions taking place that are compatible with core removal. He said the stack at 105-K East and the office building have been removed, and the only thing left will be the central core. He said DOE will do push samples to look at where the plume is under the reactor. He said there is data being taken and it will influence the refine of the design moving forward.

Agency Perspective

- Emy said EPA supports the efforts on the river corridor. It is important to use the funds to take the buildings down now and EPA is very supportive.
- Rick said there are some soil plumes that cannot be reached and the funding has to come from somewhere. He suggested that the RAP committee weigh in on prioritizing.

Committee Discussion

- Dick said there are seven more of these reactors and it is important to know what to do with them. He contacted Brookhaven about their reactor and their reports had not been released.
- Harold said he remains concerned about the feasibility of the removal. He said the Brookhaven reactor is a different situation, and it needs to be significantly studied and evaluated. He said it will not be easy. Tom agreed.
- Pam said comparing this action to K-Basin demolition is a good comparison to make sure to apply lessons learned. Tom said these concerns are known by DOE-RL and worker safety is paramount.
- Tom said there are many differences between Brookhaven, but robotics are something that could be used. He said DOE will take a programmatic approach, but the data is not yet available. He said DOE is not rubber stamping this; they are waiting for more knowledge.

Deep Vadose Zone/BC Cribs Treatability Plan

Glen Chronister, CHPRC, presented on the deep vadose zone treatability test plan. He showed a picture of the BC cribs and showed a diagram of the desiccation process that is being tested. He said CHPRC has been using desiccation and monitoring for six months. He said there are over 700 instruments being used to monitor this process, which will help to better understand what is happening underground.

Glen said the TPA milestone M-015-110 is a driver of the desiccation testing. The purpose is to demonstrate potential to reduce water flux, which is the driver for contamination transport. He said because of the saturation of contaminants, the BC cribs were selected to evaluate the potential of desiccation to slow or halt the advance of technetium (Tc-99) toward the groundwater.

Glen said an expert panel reviewed project design and the monitoring system for the treatability plan. He said 10 instrument boreholes were drilled to install over 700 instruments and 10 logging boreholes were drilled to allow cross-hole measurements. He said the field test plan and sample analysis plan are in the approval process.

Glen said CHPRC will be starting desiccation test activities in mid October. He said there will be continuous data collection during the six months of operation with electrical resistivity tomography, cross-hole radar, tracers, and moisture logging at prescribed intervals. He said nitrogen gas will be used in the injection well instead of dry air to get better data. He said effluent monitoring and sampling from extraction wells will be used, and liquid condensation samples will be collected. The testing will conclude six months after its commencement.

Glen displayed a map of the pilot test detailed plan view and showed the location of the logging systems and wells. He said this will be coupled with a surface barrier to pull out contaminants. The natural recharge will not affect this. He said a second test will be launched to repeat this phenomenon. He said different applications are being investigated.

Agency Perspective

- Dib Goswami, Ecology, said the BC crib was a prime contamination area back in 2000 and the expert planning members provided many suggestions for this technology, including reports on desiccation. He said Ecology is pleased with this whole process and believes desiccation is a good deep vadose zone technology. He said a lot is learned through this process. It was surprising to have such a high level of contamination in the extracted liquid. He suggests having the expert panel look at the report.
- Craig said EPA agrees that the expert panel was a big help and hopes that can be continued for uranium. He said EPA is pleased that there is some successful contamination removal. However, what is done with the waste after it is removed is a different discussion.

Committee Discussion

- Dick asked if the high velocity test will be done. John Morse said DOE has not made a final decision on where the best location will be to do high vacuum extraction.
- Dick said if high vacuum extraction could be done deeper it would be possible to flush contaminants down to a vacuum. Mike said that will have to be considered down the road.
- Gerry Pollet asked where the Tc is going to go once it is removed. Craig said there is not a plan yet. John said there are treatability tests that will be considered.
- Bob Popielarczyk, CHPRC, said he wanted to make sure it was clear that there are two tests. One low-velocity test to dry out the soil and another test that is a high velocity extraction. The size of the area influenced is to be determined later. He said these technologies are at the test level.
- Maynard Plahuta asked if funding is a problem. John said the treatability tests are in the baseline and are funded.
- Maynard said it would be good to look at the report when it comes out. John said DOE could give a briefing on the BC cribs soil desiccation test.
- Dick asked about the schedule for the high velocity testing. Glen said the high velocity test is still being discussed.

Solid Waste Burial Ground Committee of the Whole Planning (Joint Topic with the Public Involvement and Communications Committee)

Dale said there is a plan to have a Solid Waste Burial Ground (SWBG) workshop, and issue managers are planning the agenda for this Committee of the Whole (COTW). He said this discussion is geared toward looking at the agenda and discussing what will be covered and the goals of the workshop:

- Provide the opportunity for Hanford Advisory Board members to gain a strong foundation of knowledge about the 200-SW-2 Operable Unit through presentations, visual displays and discussions that focus on
 - * physical setting
 - * operational history and burial information
 - * characterization results and environmental monitoring
 - * public involvement and regulatory decision process

- Through discussions and feedback, highlight Hanford Advisory Board interests surrounding the 200-SW-2 Operable Unit for the TPAs to consider as they revise the 200-SW-2 RI/FS Work Plan in 2011.
- Provide the TPAs with informal feedback on presentation materials for upcoming regional public meetings

Doug Hildebrand, DOE-RL, said the workshop is divided into sessions and past HAB advice has been incorporated. He said that during the first session it would be helpful to have someone from HAB present past HAB advice.

Doug said Session Two will be a break out poster session to show where DOE is and the dimensions of the burial grounds, such as, physical setting, statistics, landfill types and waste packaging and how this has changed over time.

Doug said Session Three will be a discussion about the process history and burial information for the SWBG, such as waste types, quality and quantity.

Doug said DOE was talking about moving Session Five to before lunch, which would be another poster session. Then after lunch there would be discussion about post 1970 waste. This discussion is to include landfills and TRU waste retrieval, waste volumes, status and experiences to date.

Doug said during Session Six, DOE will talk about the regulatory decisions associated with the SWBG. He said at the end of the day, DOE would like feedback on what is thought to be important.

Paula said the intent of the round robin at the end of the discussion is to provide people an opportunity to say how they feel about what the TPA is focusing on.

Committee Discussion

- Gerry said that understanding the process and knowing when people can comment is important.
- Pam asked if this will be similar to the PW-1, 3, 6 workshop. Barb Wise, Mission Support Alliance (MSA), said she thinks that the SWBG workshops will be similar. John Price, Ecology, said something that is not similar to PW-16 is the stage at which information is being shared since information on the burial grounds is being shared much earlier in the process.
- Dale said it might be good to have a DOE point of view and then a regulator point of view at the COTW. John Price said agencies will be there and will provide their perspective.

- Gerry said Bob Alvarez, who has done reports on TRU waste in the burial grounds, could come speak. He said the thought is to have information presented and then have the opportunity to respond as a panel. It was suggested that a panel dialogue may not be the best option. Gerry said only allowing people to ask questions and not present facts is not as useful. Doug said he does not think there is enough time to have a panel discussion. Dib said for specific issues, such as plutonium, a lot of time can be spent on details. Gerry said the public does not know it is an issue unless it is discussed. Pam said if individuals have specific concerns they should meet with agency representatives. Gerry said if there are not any other viewpoints than DOE's presented at the workshop it might be a deterrent to going.
- Susan Hayman suggested that HAB issue managers could present their perspective on their issues of concern. Doug said if this is the case then it would be appreciated if this information could be provided to the agencies ahead of the COTW workshop so they can be prepared to talk about the issues.
- Paula said that using the base assumptions COTW model of identifying hot topics ahead of the meeting would be useful here.
- Gerry said he thinks Wade Riggsbee or Floyd Hodges should present the HAB's point of view.
- John said the workshop is October 5. If there is advice it would be likely come in February, so there should be time to identify issues.
- Maynard said if there is identification of an issue or challenge or disagreement, it would be good for the public to hear that. He thinks it would be good to have Floyd or Wade express these issues.
- Maynard said the issue of waste volume is at the end and suggested that it not be last. He thought Wade and/or Floyd could follow that topic.
- Pam suggested having the issue leaders speak before the general dialogue and after the agency presentations.
- Dale said it is important to have Wade and/or Floyd provide the agencies with what they will say prior to their presentation.
- Harold asked where the COTW workshop will be held and who will be attending. Susan Hayman said it is at Washington State University Tri-Cities in the Consolidated Information Center. The workshop is for HAB, but will be open to the public.

- Gerry requested that the name of the workshop be more accessible and be consistently used. Paula said the TPA discussed having the title of the workshops be: Introduction to Hanford's Radioactive Solid Waste Burial Grounds.
- Gerry asked how information from the workshops will be captured and used for the upcoming public workshops. Susan Hayman said the intent is for HAB members to gather after the meeting to identify the most important topics/discussions to bring to the public workshops. Paula added that information will be gathered with notes during the round robin. Doug said DOE will be taking notes and gathering the concerns during the question and answer period.

Committee Business

The RAP Committee identified the October meeting topics.

Dick said a discussion on reverse wells would be useful. Pam said there has not been a briefing on reverse wells. Dick said the RAP committee should find out if the reverse wells are being characterized, and if so what is being found. Dale said how the waste is being disposed would be a consideration as well.

Susan Hayman added the water, sewer and infrastructure topic for October.

Dale said the unrestricted surface use topic might not be worth re-addressing. Maynard said the concern was with public perception. Gerry said he does not think this issue should be dropped due to the public perception issues. Dale said he will talk to John Price and Dennis Faulk, EPA, to request that they weigh in on the topic one last time.

Susan asked what the RAP committee would like to do with the RCRA permit topic. Gerry said he thinks the RAP committee should get another update on this.

Paula said the information on the 618-10 burial ground will be ready for October.

The RAP Committee updated the six month work plan.

The committee reviewed the Board and agency 2011 priorities, plus topics still in holding on the current 6-month work plan. They discussed and mapped out potential discussion topics for the next 6 months.

Paula said the River Corridor risk assessment plan should be ready for discussion in November. Dale said the sampling documents would be good to review.

Pam said the Lysimeter barrier and Permafix tour should be done in November.

Susan Hayman asked about the status of design documents for U-Canyon for a potential February discussion. Dale said the RAP committee should discuss the sand filter for U-Canyon.

Paula said the deep vadose zone program plan will be available in the November time frame.

Gerry said advice on RCRA will have to be ready by the April Board meeting and suggested a discussion in December.

Dale said there should be a discussion about the barriers at the U-Canyon in January.

Paula said the draft EE/CA for the hydraulic barrier and pump and treat systems will be ready by November or December. She said the K East EE/CA is also expected to be out in December.

Gerry said the Greater Than Class C Environmental Impact statement should be a topic for January.

Harold suggested revisiting the K East reactor.

Gerry said the Ecology site closure issues can be kept in the holding bin.

Pam said TRU waste can be discussed in November. Emy said EPA will have a draft feasibility study in March.

Paula said there will be a vegetation management Environmental Assessment coming out and asked if the RAP would be interested.

Susan will update the 6-month work plan and distribute it to committee members.

Action Items / Commitments

- Future discussion of barriers at U-Canyon (with Kevin Leary) Potential Advice?
 - Cap
 - Structure
- Status of design and decision documents for U-Canyon
 - Early/mid spring (check in February)
- U-Canyon Sand Filter waste site exploration (Kevin Lear – Spring 2011)
- Receive updates on treatability plans
- Review and discuss draft EE/CAs
- Review and discuss RI/FS reports (an early look – Pre-Draft A?)
- Paula will get appropriate clearance for presentations on RC prior to Susan Hayman sending them electronically to committee
- Summary of risk evaluation of cleanup along river (Columbia River cleanup document this fall)
- Brookhaven - lessons learned on core removal
- HAB input on priority of K-reactor removal versus other site actions
- Committee would like to see evaluation of K-East reactor risk before final decision
- Receive update on soil desiccation test for BC cribs, when completed

- Update on high vacuum extraction test

Handouts

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

- Hanford Advisory Board 2011 Priorities, September 10, 2010.
- Draft Agenda Outline: 200-SW-2 OU – Solid Waste Landfills Committee of the Whole, October 5, 2010.
- Deep Vadose Zone Treatability Test Plan Project, John Morse, September 15, 2010.
- U-Plant 221-U Facility: History, Planning and Status, Al Farabee, August, 2010.
- 105KE Reactor Removal Study Update, Tom Teynor, September 15, 2010.
- The Path to 2012 Protecting the Columbia River, CHPRC, September 15, 2010.
- 100 Area Bioremediation Treatability Test for the K and D Areas, Jim Hanson, September 15, 2010.

Attendees

HAB Members and Alternates

Dale Engstrom	Doug Mercer (on phone)	Gerry Pollet
Harold Heacock	Vince Panesko	Wade Riggsbee
Floyd Hodges (on phone)	Jerry Peltier	Dick Smith
Pam Larson		

Others

Steve Balone, DOE-RL	Dieter Bohrmann, Ecology	Theresa Bergman, CHPRC
Paula Call, DOE-RL	Rick Bond, Ecology	Jim Butmer, CHPRC
Briant Charboneau, DOE-RL	Elis Eberlein, Ecology	Glen Chronister, CHPRC
Allen Dogan, DOE-RL	Nina Menard, Ecology	Maren Disney, CHPRC
Al Farabee, DOE-RL	John Price, Ecology	Frank Pellegrini, CHPRC
Bryan Foley, DOE-RL	Jacqui Seiple, Ecology	Bob Popielarczyk, CHPRC
Jim Hanson, DOE-RL	Deborah Singleton, Ecology	Mike Swartz, CHPRC
Doug Hildebrand, DOE-RL	Dib Goswami, Ecology	Janice Williams, CHPRC
Kevin Leary, DOE-RL	Ginger Wiremen, Ecology	Susan Hayman, EnviroIssues
Cathy Louie, DOE-RL	Laura Buelow, EPA	Blair Scott, EnviroIssues
John Morse, DOE-RL	Craig Cameron, EPA	Sharon Braswell, MSA
Tom Teynor, DOE-RL	Emy Laija, EPA	Jaren Scott, MSA
Geoff Tyree, DOE-RL		Mike Priddy, WDOH
Wade Woolery, DOE-RL		Peter Bengtsen, WCH