

FINAL MEETING SUMMARY
HANFORD ADVISORY BOARD
RIVER AND PLATEAU COMMITTEE MEETING
February 16, 2011
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

Dale Engstrom, River and Plateau Committee (RAP) vice-chair, welcomed the committee, introductions were made, and the committee adopted the December and January meeting summaries.

Dick Smith asked about the meeting summary process. He asked whether only the final version was posted on-line and if the committee would be able to view comments before approving the summaries. Susan Hayman said EnviroIssues distributes the first version and makes all changes received from the committee then posts that final version on-line after committee approval. She said that was the current process, but if there were concerns the committee could discuss alternative processes. Dale said they could talk about it if there is curiosity. Susan said that whenever there are significant opposing views or major concerns the summaries are given back to the committee for further discussion.

River Corridor Baseline Risk Assessment Plan

Dale introduced the first topic on the agenda, the River Corridor Baseline Risk Assessment (RCBRA) plan. He said there had been a two and a half hour issue manager (IM) meeting the previous day. He said they are in the midst of working through some of the topics and major concerns that should be included in the advice they are developing.

Liz Mattson provided a handout titled “RCBRA IM Mtg Feb 15th, 2011 – Richland Public Library”. She said the document laid out the structure they ended with at the meeting’s conclusion. She said the document begins by setting the context that would be important to explain before the advice points. Liz described the integration section of the handout which noted the importance of explaining how the human and ecological components were connected instead of having two separate volumes. She said the two volumes should inform each other. Liz also noted the importance of the vadose zone and said that 156 waste sites were not enough to characterize the entire river corridor. She said the RCBRA was not a baseline in its current form without considering some of the cumulative impacts.

Liz next moved into the sections on conservatism and modeling. She said the IMs felt the RCBRA was adequately conservative and disagreed with the U.S. Environmental Protection Agency (EPA) that the RCBRA was unduly conservative. She said over time, soil mixing would bring contaminants to the surface. She said the main point under modeling is that they want sampling to confirm whether the models are accurate.

Liz talked about the draft advice points. She said the Long-Term Approach/Cumulative Impacts, Information/Data and Document Timeline all fall within the category of integration. Liz said the long-term is now a site-by-site snapshot that does not take into consideration other cumulative impacts, which should be considered. She added that there is a point in the advice stating that cleanup needs to move forward and not be stalled, but since the RCBRA is setting a precedent it is important to have more integration.

Liz said data acquisition should be focused on where the biota live and grow to reflect ecological conditions of the river corridor. She asked about document timelines and noted that the scenario piece supports adding additional scenarios, which is a point they can work on. She asked whether there would be an implication that tribes would be banned from full-time residency at the site if the cleanup level selected is to the non-resident tribal scenario. She also noted that assumptions were discussed at length and the question of why the residual radiation analysis model (RES RAD) was no longer being used in favor of Subsurface Transport over Multiple Phases analysis (STOMP). Liz read through the remaining advice points as written in the handout for the sections on conservatism, scenarios, and modeling. She noted that the cleanup level point needed to be worked out. Jean Vanni said she would like to understand how the preliminary remediation goals (PRGs) are selected.

Liz discussed the Assumptions section of the advice points. She said there are assumptions informing the RCBRA that are not being written down. She said the assumption in the regulations is that things get better after a few years, but that is inaccurate because of the length of time contaminants remain. Liz then read through the public involvement category of the advice points. She said the Hanford Advisory Board (Board or HAB) appreciates the opportunity to comment on the RCBRA. Liz said they will be asking the U.S. Department of Energy (DOE) to provide a written response to the comments they receive during this comment period. She said they would like an opportunity to engage the broader public using understandable language to help them understand risk with agency assistance.

Agency Perspectives

- Paula Call, DOE – Richland Operations Office (DOE-RL), said she was attending the meeting representing Nick Ceto and others who were unable to attend. She said DOE will respond to the advice, although there will be no formal public comment period. She said the advice will be considered for the next version of the document.
- Larry Gadbois, EPA, said the advice contains many ideas, which will take time to work through. He said from EPA's perspective, a major component of the RCBRA is determining cleanup levels. He said the agencies need to be able to defend the final cleanup levels, but they are unable to do that very well. EPA supports better explanation of the factors that drive cleanup numbers. Larry also noted that EPA is somewhat disappointed in the long timeframe between RCBRA drafts. He said it is now too late for DOE make any major revisions in the document because of the length of time to develop drafts. He said they needed to move forward with this document. EPA provided copies of the comments provided to DOE.
- Beth Rochette, Washington State Department of Ecology (Ecology), said Ecology will submit comments by April 5. She noted these comments would carry some of the common elements being discussed.

Committee Discussion

- Gerry Pollet said the non-resident tribal scenario was brought up as an example in the discussion yesterday. He said the tribes have a treaty right to fish from the Columbia River and that data shows that exercising this treaty right would have cancer risks exceeding acceptable levels. He said no one will attempt to ban Native Americans from exercising their treaty right, but they will have higher cancer risks if they exercise their treaty right. Liz said the language of the advice can be modified to reflect this.
- Gerry said the risk for others who engage in similar activities, but are not Native American, needs to be examined. He mentioned the hunter scenario and the area-wide

exposure scenarios. He said the Board needs to examine the assumptions about whether or not those scenarios are reasonable.

- Dale said the Board needs to include language in the advice about the Environmental Protection Agency's (EPA) comment on not meeting the Reasonable Maximum Exposure (RME). He said that they should use language such as "while we understand the RME concept, we support the more conservative way of doing this."
- Tony James asked about EPA's viewpoint on arsenic since it is a driver of risk in many instances. Larry said the natural background levels of arsenic are six to seven parts per million (ppm). He said if you look at only risk from arsenic and what would be a risk protective cleanup level with a hazard quotient of one; the arsenic would be at about one tenth of that level, which equates to a one in a million cancer risk. He noted this was only considering soil levels and not agriculture. Larry said they do know that a big portion of Hanford was agricultural lands. They are struggling with this issue in the interim action Records of Decision (RODs). Larry said they have to decide on whether to set a number based on Model Toxic Control Act (MTCA) A for unrestricted use, which is 20 ppm. This number is above the background and above typical variability so it seems to be a reasonable choice.
- Dale asked whether arsenic was ever used in processing at Hanford. Larry said Hanford did use some arsenic and it is a legitimate contaminant of concern at some waste sites. He said there are other risk drivers that weren't explicitly used at Hanford such as radon gas and Potassium 40.
- Jean asked if the arsenic background is six to seven milligrams/kilogram (mg/kg). Beth said Hanford is six and a half mg/kg. Washington State background is seven mg/kg. Jean said she is confused as to why they chose to use 20 mg/kg because she thought cleanup would default to background levels under MTCA if MTCA levels are higher than background. Beth said that approach is used in Method A, which is not appropriate for Hanford; this method is appropriate for simple sites. Method B provides more flexibility without using exact values. She said the level of 20 was chosen because of arsenic inputs in the river corridor and that the levels had not been used for the Central Plateau.
- Larry said the original RODs used MTCA A for the arsenic cleanup levels. He said in the remediation design document, they did not use the Method B number and defaulted to background. He said in the 100 Area cleanup waste sites are still above the arsenic background levels and no matter how deep they dig, the levels will always be high. He said they had removed all other contaminants and were solely chasing arsenic. The decision was to take the agriculture background in the teens. Twenty is above that and is in MTCA A.
- Maynard Plahuta brought up the previous day's discussion of uncertainty. He asked what the range of uncertainty was. Dale said they should add error bar rates on the samples that were taken. Tony said the error bars were very small. Dale said they would like to see

more discussion on the range of numbers and the level of confidence RCBRA authors have in those numbers.

- Larry said there are many factors and lots of uncertainties in the RCBRA. He said they used a qualitative risk format and he would like to see quantifications. He wondered what factors were more academic and which affect the bottom-line.
- Gerry said the EPA letter contained interesting questions and he wondered whether DOE had provided any answers. He stressed the importance of receiving a response document immediately and revision to the RCBRA based on advice received. Paula said the agencies always respond to the Board's advice. Gerry said the answers need to be in writing and available for everyone (i.e. posted on-line). Jean said this needed to occur before the due date of March 31. She would like to have DOE responses to EPA in early March, which she acknowledged might be difficult for them. Paula said usually comments and questions from regulators are resolved face-to-face so writing out answers and posting a response would be out of the ordinary. She said she would talk to the appropriate people at DOE about this request.
- Jerry Peltier observed that this document is on Review C. He said the RCBRA will eventually impact everything in the future by acting as a justification for developing closure plans. He said a lot of comments could be addressed in Review D or E. He asked whether the RCBRA was a living document that would be updated as considerations are changing daily, such as changes in the vadose zone. Paula said the RCBRA was not meant to be a living document and it would be completed when the information is adequate to move forward with the cleanup. Maynard said the RCBRA is the baseline that will not change. The Remedial Investigation/Feasibility Study will be used to make decisions, which is why it is so important to cover as much of the RCBRA as possible and then to focus on the RI/FS.
- Larry said he agrees with all that has been said. The RCBRA is a step toward developing an RI/FS report, which will finally culminate into RODs. He said they are doing interim actions now and continue to evaluate the progress. He said the RCBRA was not intended to be reviewed every two years.
- Liz said there was a point in the draft advice about wanting new information from the site integrated into the RCBRA over time, which will need to be revised.
- Tom Carpenter brought up the modeling advice point. He said in addition to having models that are accurate, models also need to use the best obtainable or available data. Tom said they talked previously about whether institutional controls would be sufficient far into the future. He said they can all make good assumptions for 20 years, less for 50 years, and less far into the future. Tom suggested adding that institutional controls are not recommended over long periods.

The committee took a break from the RCBRA topic to address other agenda items then returned to their discussion.

- Susan Leckband said the Systems Assessment Capabilities (SAC) document was a groundwater modeling document prepared by the Pacific Northwest Lab (PNL) years ago. She said she was not convinced the models were accurate, so she asked people working on the project if they looked back after ten years to determine whether the actual results matched the modeling assumptions. She learned the answer was no – they did not check whether the model turned out to be right after the fact. Susan Leckband said it is important to understand the assumptions made in this risk assessment and that many come from a modeling program. She stressed the importance of encouraging the agencies to be as accurate as possible. She said the Board is wise to ask for better modeling and verification.
- Doug said within the permit there is a requirement to do a modeling exercise and to examine the results every five years to determine whether or not the results track to the model. When they find something other than what was predicated, they must examine the assumptions about that model and determine why the discrepancy exists. He said as part of the SAC exercise, they have been collecting data from groundwater for 40-60 years. Doug said they tried to duplicate and track with those results over time.
- Dick said there is an old axiom in the modeling business: all models are wrong, but some are useful. Even though model results are often inaccurate, it is possible to compare choices. Dick said the modeling struck him as being grossly over-conservative. Gerry said this warranted more discussion as the draft advice points developed by the IMs advocates the opposite opinion.
- Dick said he wasn't clear about the tribal non-resident scenario. He asked how they assign a specific risk of moving around and doing different tasks. Dick asked whether they average the risk of all the areas tribal members might move through, plus the risks of moving over background levels. Dale said they looked at the largest impact. He said in terms of plant uptake, they always assumed plants being eaten were grown on the waste site. They assumed that the non-residential tribal members were drinking water out of the river.
- Jean said the RCBRA is supposed to be a baseline risk assessment before there was any waste on site.
- Dick emphasized that his point is that the baseline and risks coming out of the RCBRA will inform the RI/FS. He said that the current conservative estimates within the document may force DOE to re-remediate to levels that are so low they will not be meaningful. He is concerned they will be spending money on marginal cleanup efforts when there are other serious issues to deal with on the Central Plateau.
- Gerry talked about the use of confirmatory sampling data on the bottom of the pit not taking backfill into account. He said this may be “conservative”, but it is not unduly conservative. The standard for exposure should be what the reasonably likely foreseeable failure of the cap and backfill will be. He said it is reasonably foreseeable that over

10,000 years human or biological intrusion and soil mixing will expose what is now at the bottom of the pit. He many houses built on the waste sites in last five years were not built on slabs and all have a sewer line. These lines will be dug through waste trenches, which is a very common failure mode for Superfund sites. He said that in 200 years it is very likely at least portions of the river corridor will have houses and other development.

- Tony said the residential scenarios assume an individual lives their entire life on-site. He said they have to think of timelines in terms of concentrations.
- Gerry asked if there are areas on site that have low levels of contamination down to 15 or 20 feet and then have increased contamination level at 40 feet. He said a common assumption is that no contamination exists below the level where the cleanup is completed, which cannot be supported.
- Dick asked whether they looked beneath the surface at the point where excavation stopped. Larry said they typically conduct soil sampling around the edge of the hole and have done test pits to confirm the assumption that the contamination decreases with depth. He said the concept is valid unless there is a gravel field below with some fine sediment below that, which becomes obvious when digging. He said the next fine layer is probably the most contaminated. If there is a groundwater plume from a nearby waste site and the groundwater at the bottom of the vadose zone is contaminated, there may be contamination at depth from the groundwater coming in. This would be unrelated to the waste site, but it is still there. Larry said the agencies do look at that. He said whenever they find contamination at depth they look at whether there is a risk to groundwater and conduct more modeling.
- Beth Rochette said she feels responsible that the analysis doesn't consider the backfill. She said in RCBRA Draft A, they assumed the amount of backfill that would be mixed with soil from the bottom or side walls. Beth would like to see an analysis considering the material left at the site.
- Jonathan Matthews, Nez Perce Tribe, asked Larry about the tribal scenarios. He said DOE created the non-residential tribal seasonal scenario based on numbers given to them by the tribes. He asked if there are other precedents with other Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) sites and tribes. Larry said there are a number of tribes in Puget Sound and just off of the coast. He said tribal members are crabbing and fishing in Superfund sites near the water, such as at the Duwamish River. At those sites, there have been surveys and interviews plus catch samples to examine what tribal members are catching, at what quantity, and how food is being prepared. The agencies then ask what cleanup level will be protective of these pathways.
- Susan Hayman asked about adding language that describes where the tribal scenarios come from. Gerry said he wants to ensure people understand that DOE cannot determine which scenarios are most reasonable to use for final cleanup decisions. It is ultimately the responsibility of EPA and other agencies, based on public and tribal input, to determine

the reasonable foreseeable maximum exposure. DOE must use the RME scenario for final cleanup numbers.

Dale said the next step will be to hold an IM meeting where they will write up draft advice. Susan Hayman will email the advice to everybody for comments. At the March RAP meeting, they will prepare the advice document for the next Board meeting.

Update on Building 324 – B Cell Contamination

Dana Bryson, DOE, provided a presentation titled “Soil Contamination below 324 Building.” He said Building 324 is in the 300 Area and operated from the 1960’s through the 1990’s. The building housed fairly complex and hazardous operations with high-levels of radioactive materials. Dana said that when Washington Closure Hanford (WCH) discovered the cell had a breach while conducting remediation. Characterization below the building showed extremely high contamination levels, but also indicated that the contamination hadn’t spread beyond the building footprint. He said the top priority is to keep the contamination from spreading and to fully understand what they are dealing with.

Dana said they have not found any groundwater contamination that could be attributable to B Cell after sampling all groundwater wells in the area. He said a new groundwater well was put close to the facility and did not indicate any levels of contamination.

Dana discussed the next steps. He said they primarily want to maintain control and keep any of the contamination from spreading. They will be evaluating the extent of the contamination; the immediate schedule and cost impacts; providing timely updates on findings and plans with regulators, stakeholders and tribes; initiating evaluation of potential disposal options; and seeking technology for remediation of highly radioactive soil.

Agency Perspectives

- Larry said it was good news that they have not seen any indication of contamination in the groundwater. He said it was fortunate that the building covered the contamination so no rain or other water infiltration can drive the contaminants. He said all indications are that they know where the contamination is and that it is in a safe configuration. They now need to decide how to clean it up.

Committee Discussion

- Maynard asked whether they knew the breadth or depth. Dana said they did have a breadth figure, which indicated the contamination had gone down in the seams and mostly remains under the building footprint.

- Jerry asked whether these cells were used to process cesium. Dana said that was correct. Don McBride, WCH, said 324 was not used for re-packaging cesium and strontium. He said the source of the spill was concentrated cesium and strontium glass logs for a repository test, known as “German Logs” or FRG logs.
- Tom asked about the decommissioned blue wells. Dana said data was no longer available from those, but they did have previous samples. Don said he has not seen anything that would establish the need for new wells. Dana said they had a well immediately downstream of the contamination. Larry said there were no plans to add groundwater wells in that area. The next investigation would involve using a cone penetrometer to better characterize the downward migration of the plume, which will allow better isotropic characterization of the cell.
- Tom said he heard from workers that they knew about the cell leak as far back as the 1970’s and that management did not take notice. He asked whether that was a lesson learned for the company. Tom said workers are an important source of information.
- Dick asked whether they determined if the leak went all the way around perimeter of cell. Don said they have not covered one hundred percent of the perimeter with pushes, but it does not appear that the leak is completely uniform around the cell. The leak appears to be from an expansion joint in the concrete slab.
- Shelley Cimon asked how deep the probes went. Don said the probes went just down to the cobble interface, which is about 17 feet below grade. He said they are planning to deploy probes that are able to go deeper.
- Jean questioned the statement that no contamination characterized in the new well could be attributed to B Cell. Don said that, while he is not responsible for groundwater monitoring, there are certain contaminants they look for in the groundwater that can be attributed to certain areas. Contaminants that might be attributable to B Cell are strontium and some other elements, which they have not found.
- Susan Leckband said understands why Don is not able to speak to the groundwater program. She is concerned, however, about integration between the contractors/programs if contaminants are found in the groundwater. Don said they have been working with a manager for CH2M Hill Plateau Remediation Company (CHPRC) to discuss findings from the groundwater wells. He said they have worked with CHPRC on siting the new well and coordinate frequently.
- Wade Riggsbee said there was a report done in the early 1990’s on releases across the 300 Area. They did see releases from that facility, but the information was never made available to the public.

Radioactive Solid Waste Burial Grounds

Dale introduced the next topic on the agenda - Radioactive Solid Waste Burial Grounds (SWBG). He said the Public Involvement Committee (PIC) and Tank Waste Committee (TWC) are also involved in the discussions. He said at the last IM meeting, they developed a good framework for the draft advice, but a revised draft is not yet ready for committee discussion. He said the IMs plan to prepare advice for the committee to bring to the next Board meeting.

Committee Discussion

- Gerry said Heart of American Northwest (HoANW) has a team of upper level economics students from Seattle University preparing a cost/benefit analysis for the burial grounds. He said they are examining the economic cost of not retrieving the waste based on the projected need to restrict groundwater use. He said the report will have broad implications, not just for the burial grounds but for a number of other issues as well. Gerry said he appreciates Larry's guidance for building a comparison to 100 Area cost issues. The report should be ready in the middle of March and can hopefully be part of the advice.
- Gerry said they received a handout containing the public involvement schedule for the rest of the year at the Tri-Party Agreement (TPA) Quarterly Public Involvement Update. He said there was nothing on the schedule reflecting the commitment by DOE-RL to return to the public on the topic of burial grounds.
- Doug Hildebrand, DOE-RL said the agency was looking at the month of October for such a public check-in, and asked if there was a preferable date in October. Gerry said he would need to coordinate with other groups, and the PIC would need to discuss this, to determine what might work in the fall, given other events already scheduled.
- Susan Leckband asked if the budget advice would be addressing some of the elements in the SWBG advice. Gerry said at the April Board meeting the two topics will be discussed and they will be coordinated, highlighting the need to fund burial ground cleanup.
- Jean said she would like the issue managers to also consider the closure plans and the RCRA permit associated with some of the burial grounds as part of advice since the permit is supposed to be out in September also. She said the issues are the same, but she did not see anything about RCRA. Dale said it had been in there, but was not sure what the resolution was.
- Dale concluded the discussion with the reminder that the next step is for the IMs to develop revised draft advice and provide it to the committee for review and revision at the March RAP committee meeting.

Resource Conservation Recovery Act Site-wide Permit

Susan Hayman provided a handout titled "Meeting on Wednesday February 9th".

Liz said the issue managers for the Resource Conservation Recovery Act (RCRA) permit are Pam Larsen, Gerry, Liz and Jean. She said Steve also attends the meetings. She said the IMs take two hours to discuss specific topics with agency representatives and then bring this information to the committee.

Liz said the handout details notes from the meeting of February 9. The purpose of the February 9 meeting was to review RCRA Part Two conditions. She said RCRA is not a fixed document; there are many inputs and outputs that are constantly changing. Liz noted the conditions of the permit that the IMs were discussing.

Liz said the Hanford Emergency Management Plan is updated outside of the permit and kept current. The IMs only considered areas that have to comply with RCRA under dangerous waste regulations, which do not include every unit on Hanford site. Liz said Madeleine provided helpful graphics that clarify areas that the permit covers. She said they are able to obtain copies of fact sheets, which summarize what is covered in more detail later in the document.

Liz said they discussed variance quite a bit at the IM meeting. Variance provides relief from requirements when there is a specific reason to do so. If a unit cannot be compliant for a given reason, a variance may be written. She said this will be important to talk about with the public. She said the IMs looked at specific permit conditions M, J, A, B, E, and Y. Liz said there is section at the end of the handout that describes how the permitting process works for re-issuing the permit.

Gerry said there are a lot of issues for the Board to be examining within emergency management and contingency planning, which he compared to a Venn diagram. He said this appears to be the only avenue for the local communities to have enforceable requirements in the event of an emergency. Gerry said the public has been left out. He said contingency planning should include not only emergency response and preparedness, but also what to do when there is a non-sudden release. He said these are the types of information that are supposed to be in a contingency plan, but it is not in the draft permit. The distributed draft states that the rule should be followed. The rule says to develop site-specific conditions. Gerry suggested having a workshop on contingency planning, especially in regards to specific facilities.

Jean said the list of follow-up questions and topics in today's handout is only the beginning. She said they are hoping to develop an understanding of the permit so when documents are available in the fall, they will have an understanding of the process in order to make meaningful comments. She said there are other documents that will involve the public aside from the emergency management plan, like the training plan that details how workers in the field should be trained. Jean said they need a discussion on that document as well since that is where the health and safety of the workers would be an issue. Jean stressed the importance of looking at each attachment in addition to understanding the individual conditions. She said the Board has provided some advice on corrective action at the Hanford Site when the modification permit first came out.

Jean said if they only look at the current draft they will only see what Ecology wants to make available. In order to understand Ecology's full obligation, they must look at the actual regulations. She said her first suggestion for the Board would be to read the current draft permit, bring any questions to the IMs and they will try to fill in what is missing.

Liz said they will not see the full draft permit until later, possibly September. Madeleine provided draft copies of the permit conditions and draft factsheets as part of the IM process. The permit itself is eight to nine thousand pages and "reads like a scavenger hunt." She said it will be difficult to present RCRA to the public and for the Board to fully understand it. Liz said they will continue to follow-up with questions and receive updates from Ecology. They will also continue to update the Board and will track suggestions.

Jean said the next topic will be the State Environmental Policy Act (SEPA), which will generate an entire new list the IMs will bring to the committee.

Gerry made several points on condition II Y. He said that this condition essentially allows DOE to challenge important policy level issues. If someone else wanted to challenge the issues, they would have to file a challenge within 30 days of the issuance of the permit. He noted this is very important for setting cleanup standards.

Gerry said another huge policy issue that requires extensive discussion is Ecology's determination of non-significance for issuance of the permit without relying on an Environmental Impact Statement (EIS) or any other environmental review. He said essentially, if this permit determines non-significance, it would mean that RCRA permits in the rest of the country have non-significance since Hanford is the most contaminated cleanup site in the nation. If Ecology issues a finding of non-significance, they will not be able to review the impacts and they have spent a lot of time identifying the impacts. He said they need to say strongly in the advice that it is inappropriate to have finding of non-significance before the permit is out.

Jean said these are all questions to ask Ecology at a workshop. She pointed out the second to last bullet on the last page of the handout which states that SEPA is a requirement of the permit, but not a part of the permit. A SEPA review and determination should be made available to the public prior to the permit so if they make a determination of non-significance, they will have to list the mitigations to determine the non-impact. The public can either agree with the findings or challenge them. If there are changes in the SEPA, it will affect the permit. She said the Board should emphasize they want the SEPA done early to allow time for review and to ensure the conditions that mitigate the permit are in the permit.

Agency Perspectives

- Madeleine said many issues were aired at the IM meeting and Ecology has many items to follow-up on. She noted Gerry's point about emergency management response and how the permit is a piece of that issue. She said the Board appears to be considering issues wider than the units that are covered in the permit since a large part of Hanford is not part

of the permit. She will be working on some of the IM suggestions, such as including a definition of variance that is more logical than the current explanation. Ecology has also drafted a timeline of environmental laws and what happened at Hanford, which will be put on the website after some vetting. She said Ecology will also be linking more of the attachments on the website as well.

Committee Discussion

- Tom said he is pleased that RCRA is on the table again because they have long wanted the permit and for RCRA to better describe how it integrates with the health and safety of the workers. RCRA is an environmental statute that most lends itself to protecting health and safety. Tom said he would like the permit to include better monitoring requirements and allow workers to know more about their exposure risks, especially to chemicals. He said there has been progress, such as for tank farms vapors. Tom said the progress was encouraging, but the program is voluntary so it can be eliminated if circumstances change. He said at other sites it is required.
- Tom said the other issue is personal protective equipment (PPE). He said the permit should state what equipment is required and under what situations. Tom suggested including the Health, Safety and Environmental Protection Committee (HSEP) into the conversation and expressed interest in being an IM on their behalf. Tom and Susan Hayman will follow up with Keith Smith, HSEP Chair, regarding Tom's offer.
- Dick asked Tom whether he thought it would be appropriate within RCRA to reference other documents instead of repeating information that could be found elsewhere and creating an unreasonably lengthy document. Jean said they needed to be careful about that. She said the IMs wanted further explanation on "incorporated by reference" because the law does allow Ecology to either directly put information into the document or to incorporate it through a reference. She is concerned that changes would be made to the referenced documents that could have significant impacts on the permit, but there would be no way to know about or comment on the change.
- Tom said Hanford has gone beyond the written requirements of DOE for monitoring tank farm vapors, but he is concerned that progress could be taken away. He said the Occupational Safety and Health Act (OSHA) does not apply at Hanford and OSHA cannot enforce the monitoring requirements. He said the procedures in place are really Washington River Protection Solutions (WRPS) procedures and are not regulations. If a new contractor comes in, the procedures could be completely different.
- Liz said the IMs will continue to work with the Ecology on topics of interest with the permit, and will keep the committee informed.

Columbia River Outfalls/Intake Structures

Susan Hayman handed out a document titled “Report out from the 100N River Structures meeting – January 11, 2011”.

Shelley said the handout provides a baseline of where the committee was as of January 20. She said Jean submitted questions to a supervisory biologist at the Washington Department of Fish and Wildlife (WDFW) who provided an update on where they are in the process. Shelley said the purpose today was to share the information they received and then ask DOE to offer their opinion and answer questions.

Shelley said the U.S. Fish and Wildlife Service (USFWS) was aware of similar projects coming up at the Hanford Site and had asked whether the projects could be batched together. The agencies could frame the idea into a mitigation package that would offset all impacts. She said USFWS issued a letter to DOE on bull trout critical habitat for 100-N. They suggested consultation would probably need to be re-initiated after the final rule was issued because USFWS expected adverse impacts to bull trout habitat from this project. In December, the National Marine Fisheries Service (NMFS), the U.S. Army Corps of Engineers (COE) and the USFWS discussed mitigation packages. Shelley said that since some laws were exempted under CERCLA, they wondered what would occur if consultations were not required. She added that USFWS provided letter of concurrence for bull trout, which is under review.

Jennie Seaver, CH2M Hill Plateau Remediation Company (CHPRC), provided copies of her Presentation titled “Update: Demolition and Disposition of 100K Area River Pump House Structures.”

Jennie noted how crews worked closely with archeologists to ensure grounds identified as being archeologically important were protected throughout the project. She said the access road for K East was completed on January 25 with no incidences. Silt barriers were placed in the water at K East and West starting on February 2 to ensure the river was protected from any debris as the rock was put into place. On February 3 crews began moving rock into the river. The goal was to complete this in less than six days and to minimize the time crews spent working in the river. The project was completed in four days. Jennie said the barrier worked very well, as can be seen in pictures showing cloudy water on one side of the berm and a clean river on the other side. She said the sediment settled after several days. Jennie added that K East is proceeding as planned.

Committee Discussion

- Jean asked whether the entire pump house structure would be taken down. Jennie said it would. However, there will be 30 feet of structure remaining below grade after demolition of the above-grade structure, and it will probably not be mined out.
- Jean asked where the fill for the void would come from. Jennie said the fill would come from the berm; once the structure is demolished, the berm will be pulled back and be

used, in part, to fill the void. Jennie said the rest of the fill will be used to re-contour the shoreline area. Don said they plan to remove pumps from the top of 100 N. The rubble will be placed into the interior of the structure as backfill. This rubble will provide a base for the excavators to work from.

- Dale noted that they were considering the intake structures and had not discussed the outtake structures yet. He asked what would happen if it was discovered that there is contamination underneath the structures at 100 N where they were talking about filling in the space with gravel in order to excavate it. Don said they will be placing rubble into the interior after resolving issues with the sediment at 100 N.
- Shelley said she wants to understand the administrative process. She asked whether DOE would be proceeding under the CERCLA mitigation agreements and about the consultations that led to those mitigation agreements. Mark French, DOE-RL, said they conducted an informal consultation since K Area did not have any major issues and there was a smaller amount of fill. He said they were asking for formal consultation from the National Marine Fisheries Service (NMFS). NMFS is preparing a biological opinion. Mark said they would have a conference call with the agencies next week to talk about mitigation.
- Shelley said she was considering the potential impacts of this process on completing the work. The biological opinion is the beginning of a 135 day process. Mark said they had started the clock and would be completing the mitigation proposal within the 135 days. They are waiting to receive information from USFWS and will be coordinating with them. They will also be coordinating with COE. Mark added that USFS has deadline of this Friday, February 18 to respond to requests for the re-initiation of critical bull trout habitat consultation.
- Shelley said she understood COE would not weigh in at all until the other agencies had commented. Mark acknowledged that COE had said that at a meeting a few months ago.
- Shelley asked whether the work would begin in the fall. Mark said it would be in the summer when river levels are low. He said DOE was offered a window in the summer from August first through the middle of October, which is the current project target. The work can also be done from December 15 through the end of February. Rob said the work window comes from NMFS because they have authority over migratory species, which is what they regulate and why they dictate that work window. He said bull trout does not have the same considerations.
- Jill Thomson, WCH, said they had to review work several times when working at 100 N, but the entire process went very smoothly. She said the silt curtain did a wonderful job isolating the cove from the river. The river stayed clean and the area where the rock was put in became very cloudy with a distinct separation.
- Dick said he heard the concrete will be hauled off. Don said it will be hauled off from 100 K, but the concrete from 100 N will be placed inside the structure. Dick asked if that

material would be contaminated. Jennie said the original plan was to remove the materials because it was determined to be a better choice than the cost of screening to determine if there were contamination issues.

- Rob Lobos, EPA, said the concrete probably would not need to go to the Environmental Restoration Disposal Facility (ERDF). He said it could go to the U Canyon. Dick said he thought they were going to use a machine to break up the materials. Rob said they would use a cost benefit analysis to decide whether to use ERDF or the U Canyon. Jennie offered to provide an update on that at a later time.
- There was concern among the committee on hauling the materials to ERDF and whether that was a reasonable solution. Don said he should not have specified ERDF. He only knew the material was being hauled. Jennie said the last update she received was that they planned to stage the material as rubble fill on the plateau. Rod said he is not sure where the material would go. Don said the decision to place material from 100 N in the hole was based on the thicker partitions in structure, which are twice the physical width of the 100 K pump houses. The cost for hauling the material was significantly different.
- Jean said there was a request several months ago for a calculation of the erosional component of the berm placed in the river over time. She was told that would be available and she would like to see it. She said she could envision a catastrophic event in the future if the berm material was left in the river because of the natural process of soil erosion. Dick said the berm is made of rock, rather than dirt, with some dust contamination washing out over time. There will be a rip-rap layer on the outside of the berm to protect the berm itself. Don said he is unsure whether there is a specific calculation for the amount of erosion. Mark said he will try to find an answer.
- Jean asked whether they were working with Ecology to determine the level of cleanliness that would be expected for the structure and the concrete that was left. Don said they were conducting a data quality objectives review with Ecology participation. Mark said the contaminants in the sediment are the same as what is present in the river. Don said some of the sediments in the structure had higher levels of contaminants than those found in the river sediment. However, all the sediment found in the river exceeds accepted guidelines for being left in place.
- Jerry said the contaminants are not likely from the site. Don said that is largely true, but they are not always able to determine if all the sediment comes from outside the structure. He said there could be materials within the pump causing contamination.
- Jean said she had heard there were discussions with DOE about having mitigation along the whole Hanford Site shoreline and not just having mitigation directly in front of 100 N because of the critical habitat for bull trout. She said it would be possible to mitigate by enhancing areas of habitat elsewhere. Mark said he was not aware of that discussion. He added that through conversations with Washington Department of Fish and Game he understood there was not bull trout in the area, so he is unsure how critical habitat would

fit into the work plan. Jean said there are impacts to many other marine animals, such as clams that use the deep pools of water.

- Maynard said he assumed there would not be an attempt to vegetate the rip-rap. Don agreed, and said the final shoreline will be re-vegetated with native plants to match the surrounding area. Maynard asked if that would be in front of the pumphouse. Don said it would be on the sides. Jill said the goal would be to plant where vegetation is normally supported.
- Maynard reflected that after the initial disruption of building the Hanford facilities the habitat returned. He wondered whether they were spending money on an issue that would rectify itself, and possibly more effectively, if nature is given the chance to repair itself. Mark said they have not had those discussions yet.
- Shelley asked if they are still proposing to install sluicing gates. Don said they plan to use sluice gates or stop logs where needed and have placed them in the pumphouses. He said they had removed all screens and put in all stop logs, except for the last series. Don said all the pumps were either out or broken lose to the point where they are confident they can easily remove the pumps.
- Shelley requested the presenters return so RAP can learn how the consultation proceeds, what the mitigation packet entails, and where things progress with the N Structure.

Committee Business

Susan Hayman reviewed RAP's six-month accomplishment table with the committee. They discussed what RAP accomplishments to date, as compared with the TPA and Board priorities established in September 2010.

The committee discussed the HAB membership selection priority item. Jerry said the Board was set up by jurisdiction. If one of the agencies appoints a member, DOE should not have an opinion about that. He is concerned that DOE could decide they no longer wanted a specific organization represented on the Board. Jerry said he did not think members should have to fill out a profile for the agency to then hear that person is not right for the Board. He said DOE should be able to offer an opinion on some of the at-large positions, but DOE should not have a voice in selecting Board membership that represents local interests. Jerry expressed concerned that it took eight months the previous year to determine who the board members were in certain seats, so representatives had no voting rights for half of the fiscal year.

Liz said the membership selection process had not been a priority before because it was unclear how much control the Board would have over that process. She also mentioned concerns about the aging Board and involving younger people. Susan Hayman said this was a cross-cutting issue that was made a board priority because it involved thinking about a succession process.

Jerry reiterated that his major concern is when a given jurisdiction makes an appointment they should not have to wait for approval for several months. He said the union had to wait six months for approval of the new representatives. Harold Heacock said the Board is a federally appointed, established board and the agencies can define who the organizations are that are going to be represented. He said individual positions are nominated by their sponsor for the position. Under the Administrative Procedures Act the agencies do have authority to determine if an individual is acceptable.

Jerry asked Barb, who was participating by phone, whether there was any talk about speeding up the appointment process. Barb said they had tried. She said diversity and interest were important dimensions for federal advisory boards. She said the Hanford Advisory Board is the only board to have alternates, which now go through the same process as full members. She said there were 53 names that need to move through headquarters this year, instead of the usual 15. Barb said groups cannot advise a federal government agency unless chartered under the Federal Advisory Committee Act.

The committee discussed issue manager assignments included in the accomplishment table. Maynard said they had previously limited issue managers to one or two people and had another two to three interested parties, which allowed more solid leadership on the topics. Shelley said the issues are complex and they should have a diversity of opinion without a few people carrying most of the burden. Maynard said he did not disagree, but there should be a couple people who are the IMs that the facilitators can talk to as the leaders. He said there needs to be someone in charge. Liz said that would be especially important since they would not have facilitation at issue manager meetings. She said it was wonderful to have more people to generate ideas, but it is very helpful to have a main contact person. She added training on facilitation and note taking for IM meetings would be helpful. Susan Hayman noted that EnviroIssues had never facilitated issues manger meetings until recently when the Board began looking at more complex issues.

Susan Hayman concluded the six-month progress discussion by noting there were six items that had not been included as a priority, but that the committee had been spent considerable time discussing. She asked whether they were emerging priorities that should be replacing other items. The committee felt that they were emerging issues, and that further discussion was needed at the spring leadership retreat regarding their priority.

Susan Hayman then led the committee in a discussion on RAP's workplan for the next six months. She provided a handout detailing the work plan as it stood prior to the meeting. The committee identified the topics they would like to discuss over the coming months, which are listed in Attachment 2. Susan said she would send a March meeting topic table out to committee for leadership approval. Susan will also send out the agenda. The committee decided not to have a committee call the following week.

Attendees

HAB Members and Alternates

Tom Carpenter	Susan Leckband	Gerry Pollet
Shelley Cimon	Todd Martin	Wade Rigsbee
Dale Engstrom	Jonathan Matthews	Richard Smith
Harold Heacock	Liz Mattson	Robert Suyama
Steve Hudson	Jerry Peltier	Jean Vanni
Tony James	Maynard Plahuta	

Others

Dana Bryson, DOE	Rick Bond, Ecology	Jill Bertna, CHPRC
Cameron Salony, DOE	Madeleine Brown, Ecology	Dale McKenney, CHPRC
Paula Call, DOE-RL	Elis Eberlein, Ecology	Jennie Seaver, CHPRC
Mark French, DOE-RL	Nina Menard, Ecology	Paul Seeley, CHPRC
RF Guercia, DOE-RL	Beth Rochette, Ecology	Nicole Addington, EnviroIssues
Doug Hildebrand, DOE-RL	Deborah Singleton, Ecology	Susan Hayman, EnviroIssues
	Larry Gadbois, EPA	Barb Wise, MSA
	Rod Lobos, EPA	Peter Bengston, WCH
		Jeff Lerch, WCH
		D.J. McBride, WCH
		Jill Thomson, WCH

Attachment 1: River and Plateau Committee Transcribed Flip Chart Notes

Follow-up

1. Request DOE response to EPA comments in writing (? on timing)
-To respond to EPA in writing, copy to committee, post on-line before April 5 committee deadline
Noted
2. Follow up w/DOE on public involvement follow up on SWBG – currently not on PI calendar (TPA update)
Follow up w/PIC re: DOE offer for October

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3. Would it be useful to have a workshop on emergency plan/contingency planning? (assoc. w/RCRA permit)
Back to IMS → Have IMs identify maybe a one day meeting w/multiple topics
4. Is there a need for advice on determination of non-significance for RCRA permit?
IM
5. Follow up SEPA discussion w/RCRA I.M.s
To be scheduled
6. RCRA IMs identify for committee if any “requirements” missing from draft permit
IM

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7. Check w/Keith/Mike about Tom C. joining RCRA permit IMs from HSEP
Tom & Susan H
 8. Jenny will get back to outfalls/intakes IM on where 100-K rubbish will be going/any
existing C/B analysis
IM
 9. Mark French will see if there is a calculation of the erosional component of berm at 100-
N & bring to committee/IMs
 10. SWBG advice development IMs

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Attachment 2: 6 Month Workplan Transcribed Flip Charts

March

Update of 324 Bldg B Cell – 30 m
Status & Design U-Canyon – Larry to check
SWBG (Advice) – 2 hrs
RCBRA Advice – 2 hrs
618-10/11 Briefing – 30 m

April

Hanford Site-wide Permit (RCRA) IM Update (SEPA, etc)
DOE deep vadose zone wksp (synopsis)
Address plan for TRU Waste -- PW 1/36 CW-5 (briefing)
Outfalls/Intakes update a consult.
Tanks update on rulemaking: NRC 61, DOE 435.1

May

Greater than Class C EIS
LTS Plan implementation (check for time sensitivity)
Characterization of reverse wells
324 Building, B-Cell
Hanford Site-wide Permit
ARAR tutorial

June

RCBRA – Volume 1
Lysimeter test patch & barrier – Perma Fix tour
324 Building, B-Cell
Hanford Site-wide Permit
COTW

July

Site infrastructure – briefing on implementation
Hanford Site-wide Permit
RI/FS COTW
324 Building, B-Cell

August

Hanford Site-wide Permit – IM update

Update on Building 324 – B Cell Contamination

River Upwelling Package (analysis, incl. 100-N) – Brett Tiller