

FINAL MEETING SUMMARY

HANFORD ADVISORY BOARD RIVER AND PLATEAU COMMITTEE MEETING November 17, 2009 Richland, WA

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This is only a summary of issues and actions in this meeting. It may not represent the fullness of ideas discussed or opinions given, and should not be used as a substitute for actual public involvement or public comment on any particular topic unless specifically identified as such.

Welcome and Introductions

Pam Larsen, River and Plateau Committee (RAP) Chair, welcomed everyone and introductions were made. The committee approved the October meeting summary.

Maynard Plahuta announced that the Base Assumptions Committee of the Whole (COTW) meeting was moved to the week of December 15 because the Environmental Protection Agency (EPA) cannot attend during committee week. Susan Hayman said the Tank Closure & Waste Management Environmental Impact Statement (TC&WM EIS) workshop is tentatively scheduled for December 8, and the COTW is tentatively scheduled for the December 13.

Dale Engstrom elaborated on what the Base Assumptions COTW meeting would cover. Dale said the meeting is intended to be a discussion of basic assumptions that the Department of Energy (DOE) has been using and incorporating into decision making. Dale said the Hanford Advisory Board (HAB or Board) asked for this meeting to talk about any issues with the assumptions, discover where the assumptions came from, and see if both sides can meet in the middle. Maynard added that Board members would like to know the background and rationale for the assumptions to better understand their basis. Maynard thought that a good dialogue and interactive discussion would help the Board reach an understanding. Maynard said that there may be points that the Board and DOE agree to disagree over, but he felt it was important to discuss both sides.

Susan Leckband said the Board has a lot of work coming up, and asked the issue managers to frame the meeting in a way that relates to advice the Board might develop on

the TC&WM EIS or other upcoming work. Maynard said the assumptions the meeting will focus on are related to work plans and strategies in process now and will impact cleanup decisions. Wade Riggsbee said the assumptions are also tied to the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA) guidance.

Pam asked if anyone was able to attend the 100 BC workshop. Wade said he attended and learned about an issue with chromium upwelling that shows the geology is more complex than what some people had thought. The other issue that came up at the workshop was the treatability tests that are happening now. Wade said the tests include exposure scenarios that do not account for the level of detail necessary to address the geologic conditions in the environment. Sandra Lilligren thought that the level of interaction the agencies allowed for in the workshop was great. She said the tribes often are not invited to be involved in discussions about what is working and what is not working, and she thanked the agencies for the involvement. Emy Laija, EPA, said she would like to know how people thought the workshop went and encouraged people who attended to send comments to the Public Involvement Committee (PIC). Dale agreed with Sandra and said the attendees were able to look at a topic where a decision had not been made and the agencies were looking for input. Dale said this is a tough topic and will be a tough issue to find a remediation. Dale said the workshop was an honest discussion of what the agencies know and what they do not know. Susan said that the agencies specifically asked the Board to identify policy issues. Susan thought the policy issue on this topic was how much money should be spent on this work. Susan thought the larger public needed to be engaged in this discussion.

Transuranics and the CERCLA Cleanup Decision Process

Harold Heacock said that transuranic (TRU) material and process material is in various forms across the site, and some is being packed and shipped offsite. Harold said the committee asked DOE for a presentation on this topic focused on the CERCLA cleanup process and the residual material that is in the burial grounds across the site. Harold said the framing questions are attempting to provide a broad look at external waste to the processing facility under CERCLA.

Matt McCormick, DOE – Richland Operations Office (RL), said his presentation would cover the definition of TRU material, the history of TRU waste and policy, plutonium and the CERCLA process, a review of ongoing and future actions, and the risks of TRU to human health and the environment. Matt said in 1970 the Atomic Energy Commission (AEC) defined TRU waste as “wastes with known or detectable contamination of transuranium nuclides.” Before 1970, TRU waste was not differentiated from other radioactive wastes. After 1970, the direction from the AEC was to separate TRU waste from other radioactive waste and await disposal instructions. In 1982, the limit for TRU was defined as 100 nanocuries per gram. Before 1982, when DOE retrieved waste at Hanford, they set aside and stored TRU waste to make sure that it met the TRU requirements. About half of what was stored does not meet the requirement now.

Matt said the 40 Code of Federal Regulations, Part 191 covers TRU waste and is much like RCRA in that the code says waste disposed of before 1985 is not covered by federal regulations. Also like RCRA, the TRU policies were prospective, addressing how TRU waste would be handled in the future, rather than how to deal with waste previously disposed of through the policy. Matt said previously disposed waste is not covered by RCRA, and instead is covered under CERCLA. CERCLA uses a risk based approach to determine an action. When DOE looks at waste disposed of before these policies, they look at it through CERCLA.

Matt said PW-1 and CW-5 operable units have TRU waste and have been discussed with the Board many times over the past year. DOE decided with the Washington State Department of Ecology (Ecology) to combine those units and plans. Matt said a draft plan will be available in the spring for public comment on those operable units. Other areas of the site that contain TRU include the solid waste burial grounds in 200 Area, the canyon facilities, REDOX and PUREX. Matt said DOE will have to address these areas through CERCLA by developing a Feasibility Study (FS), proposed plan, and record of decision (ROD).

Matt reviewed some of the estimates DOE has made for the amount of buried TRU waste onsite. The canyons and tunnels have approximately 33 Kg in the 200 West Area and 22 Kg in the 200 East Area. Matt said liquid disposals will be covered in the combined proposed plan coming out this spring and there is approximately 217 Kg in the 200 West Area and 10 Kg in the 200 East Area. The majority of TRU is considered pre 1970's buried and is in the 200 West Area (approximately 346 Kg); there is also approximately 18 Kg in the 200 East Area.

Matt explained the threat of Pu or TRU to human health and the environment. He said Pu or TRU are not external hazards – they are harmful when taken internally through ingestion or inhaling. The significant hazard in terms of exposure is inhalation; ingestion is a concern mainly in the case of workers health. Craig Cameron, EPA, added that there is some risk from the anorecium as well. Matt agreed but said the decay of Pu is the dominant risk because the half life is 75 years for anorecium. Matt said the ecological risk is from flora or fauna is from direct contact. Matt said the risk can be reduced by isolating Pu from intrusion by roots or animals.

Matt said the Pu is not a significant risk to groundwater. Matt said the Pu was dispersed in the vadose zone due to how waste was discharged into the soil. Matt said the risk of further movement is low because organics or acids are no longer being discharged to the soil, and large volumes of liquid are controlled in the vadose zone. Matt said the chemistry of the soil at Hanford precipitates the movement of Pu in the soil, and groundwater monitoring has shown no significant impact. Matt said the TC&WM EIS results shows Pu in the groundwater in two locations. Matt said a reverse well was used to inject liquid waste into groundwater and the impact evaluation shows the core zone boundary of contamination is coming from the reverse well. The EIS shows no migration of Pu from the vadose zone to groundwater. Matt said when DOE evaluates the risk in

this area they will take a close look at the reverse well and the contamination that was injected. The CERCLA process will determine if DOE can mitigate that impact. The second site with Pu contamination is the Columbia River site and is from a trench. The impact of the trench is also included in the TC&WM EIS.

Matt said CERCLA will be used to evaluate the risk of the TRU in burial grounds and waste sites. Radioactive contaminants will be evaluated in terms of the risk of exposure pathways. TRU constituents are evaluated as contaminant of concern (COC) along with other hazardous contaminants in a waste site. The specific characterization of contaminants, in terms of mobility, is evaluated as the remedial action alternative. Threshold criteria and balancing criteria will be used to determine final cleanup levels as part of the proposed remedy that goes out for public comment.

Matt said DOE completed sampling bore holes around PW-1, and CW-5 to determine the breadth and depth of contamination. This information was included in the Remedial Investigation/Feasibility Study (RIFS). The work plans determine characterization site by site, burial ground by burial ground, and waste site by waste site. Matt said the first step in characterization is evaluating the historical information available for a waste site or burial ground, and then DOE completes field characterization to confirm the historical process knowledge.

Regulator Perspectives

- Craig said EPA is still negotiating with DOE on the decision logic described in operable units. EPA is happy with plans for CW and PW, but they still have to talk about how to roll out the decision on the Central Plateau. When the U Plant remedy was developed for 221-U, EPA's legal team indicated it would be bad to consider waste in vessels as disposed, so it was considered as stored waste and therefore fell under TRU criteria. Craig explained that the only way you can leave waste behind, under the Nuclear Regulatory Commission's (NRC) provision, is if you are grouting the facilities or doing something else that will get the material to less than 100 nanocuries per gram. Craig said they do not want to abuse that provision and even grouting over a vessel leaves it very TRU. Craig this might be different than how DOE looks at it.
- Dennis Faulk, EPA, said EPA's perspective is that multiple remedies will meet the threshold criteria. Ultimately, public acceptance and policy issues surrounding TRU waste disposed of prior to the 1970s will influence the decision about how that waste is dealt with. Dennis said this will be a difficult decision and the agencies will rely heavily on the Board and the public. Dennis thought that it would be good to discuss the FS in February or March around the time the proposed plan is available.
- John Price, Ecology, said there are lots of other things in the burial grounds beyond TRU. The State is interested in characterization of all the waste. John said the RIFS work plan calls for phased characterization on the Central Plateau that would take seven years and cost tens of thousands of dollars. John said EPA has been running the Superfund program for a long time, and over the years they have ended up developing

similar remedies for sites because of the similar contaminants and disposal actions. John said Ecology would not like to see a lot of money wasted on characterization.

- John said under EPA guidance, for unusual circumstances like these burial grounds, the State's and community's concerns will weigh heavily and can motivate a remedy beyond a presumptive remedy. DOE has suggested military landfills are good guidance for these burial grounds. John provided some reference information for municipal and military landfills. John said radionuclides are not common in military landfills. The NRC has a program called site decommissioning. Some of the contamination at NRC sites was dug up and shipped offsite, and some was stabilized onsite. Most of these sites were smaller than Hanford. John said he also looked in the CERCLA RODs database and found some sites that had radioactive waste where the remedy was containment in place. John said if TRU material is excavated, it will need to be disposed of at the Waste Isolation Pilot Plant (WIPP) which would be expensive. John said that radiologic projects are unique and each site has to look at a remedy that makes sense for the situation. John reviewed a few other examples from the State of Washington landfills where targeted excavation and capping of specific areas was completed. John read the requirements for municipal landfill sites. John said that initial non-intrusive characterization can be relatively inexpensive. The more extensive characterization can be very expensive and even if you drill a lot of holes you cannot be very confident about what is in the landfill. John said often that characterization does not necessarily affect the remedy decision. John thought a policy discussion was needed about where the middle ground is for a balance between extensive characterization and a satisfactory remedy.
- Matt clarified that the Central Plateau Cleanup Strategy does not address a remedy, but says a likely response scenario is capping. John said DOE has suggested stopping characterization and considering these sites as landfills.

Committee Discussion

- Shelley Cimon said that DOE – Environmental Management (EM) recently said they are considering making changes to 435-1. Matt said the regulation is updated every once in a while, and the last one was in late 1990s. Matt said 435-1 covers all radioactive waste DOE generates, including low level waste, TRU, and high level waste. Shelley asked if the update would include a discussion of past practices. Matt said updating 435-1 would not address past practices; the order says waste pre 1980s will be looked at in terms of a CERCLA remedy. Matt said 435-1 looks forward and does not retroactively apply to wastes already disposed.
- Harold thought that approach of dealing with pre 1970s TRU under a risk based assessment needs to be communicated better. Matt agreed. He said much like RCRA, if you generate hazardous waste RCRA is prescriptive and you have to treat it to the requirements. This also applies to private companies that generate hazardous wastes. CERCLA is risk based and therefore not prescriptive.
- Shelley asked if DOE is acknowledging the wastes at the Ecology site. Matt said DOE accounts for the site in terms of a cumulative risk analysis in the EIS but does

not want to misrepresent the State in terms of how they will deal with the waste there. The site was decommissioned in the 1970s and has not received any waste since then. Susan clarified that if a cumulative effect was identified, the Board could look at that issue, but would not provide advice about the site itself.

- Shelley asked where SW-1 was captured in the TRU estimates. Matt said SW-1 is non-radioactive and SW-2 is included in the blue area. Briant Charboneau, DOE-RL, added that there are two landfills in 200 East Area and one is non-radioactive.
- Dave Rowland asked if the BC cribs were included. Matt said there is hardly any TRU material in the BC cribs, it is mostly liquid waste. Matt said the key contaminant in BC is not Pu but cesium. Dave asked about the 618-10&11 burial grounds. Matt said they are included in the River Corridor. Matt explained that as waste is retrieved, it is considered newly generated waste. Matt said any waste generated will be treated as TRU and disposed of at the WIPP. Matt said the remedy for the River Corridor has already been decided, but the sites on the Central Plateau have yet to have a decision.
- Pam said that Dirk Dunning would disagree with the statement Matt made regarding Pu mobility in the soil. Dale said work has shown Pu and TRU form complex molecules, gaseous units, and other compounds that allow them to be neutral in the groundwater and vadose zone. Matt said DOE has sponsored research on this topic and stands by technical information and chemistry that shows Pu does not move in the vadose zone. Matt said there may be certain situations where Pu could become mobile, but in his opinion those conditions do not exist at Hanford.
- Susan asked for a clarification the risk of Pu to the environment. She asked if the slide means that if the waste is left untreated, the amount is what will result in the year that is indicated. Matt confirmed the slide is showing the unmitigated result. Dennis said the results are what the analysis showed, but there are many assumptions that go into this. Matt felt the analysis was conservative. Mark Triplett, Pacific Northwest National Laboratory (PNNL), said the analysis does not show much Pu at the site now, and they will need to determine if it has leaked somewhere else. Dennis said treatability tests were done in early 1990s on the reverse well and they could not get any of the Pu out through standard pumping.
- Pam said she was not aware that there was any Pu in the 300 Area. Matt said it is from a liquid waste trench and probably came from liquid waste coming from hot cells that were used for research on how to separate Pu from spent fuel. Gerry Pollet said that when the process trenches were shut down there was extensive data about process upsets with Pu and there is a lot of uncharacterized material in that area. Shelley asked what the volume estimates are for that area. Matt said he did not have that information but offered to follow up.
- Sandra asked if there is a milestone associated with the decision on pre 1970s TRU. Matt said DOE owes the regulators a proposed decision as a milestone for the waste sites and burial grounds. A plan has already been submitted for PW and CW to meet a milestone. DOE also owes regulators a proposal for when they will complete SW-2. John said Ecology has an approved work plan which includes seven years for characterization, another year for a ROD, and does not leave a lot of time for cleanup

before the 2020 milestone. Pam said it is important to consider the timeline for when WIPP is open.

- Dick Smith said he shares John's concerns about the cost of characterization versus removal. Dick suggested characterizing by observation during retrieval. Dick said he did not think there were many records on the burial grounds anyway to guide the characterization. Dick suggested focusing on the material moving to groundwater, and not on the material that is stable. Dick said he suspects that a lot of the boxes out there will be so hot that they cannot be handled which will create problems because there is not a facility to deal with that type of waste, which may become a direct exposure problem.
- Gerry thanked John for the information on landfill remedies. Gerry said the American Recovery and Reinvestment Act (ARRA) contract work plans calls for capping. Gerry asked EPA to explain the 1100 Area landfill remedy. Dennis said the Horn Rapids landfill has a cap, and the Horseshoe landfill included excavation to get out PCBs, but the remedy decisions are made case by case.
- Gerry thought the figures for how much Pu is in the soil are off by fifty percent. Matt explained that the figures only include buried waste and not liquid or stored waste.
- Gerry said he has heard several presentations by DOE that suggest the soil at different sites is unique and the Pu does not move. Gerry said he would like to know the estimates on the chemicals in the waste site that could mobilize contaminants. Dennis said that is still an open question for the burial grounds. Gerry asked if there is information currently available on the chemical load estimates for the disposition. Matt said he would have to talk to the people who wrote the EIS about this.
- Gerry said the exposure pathways focuses on inhalation. Gerry asked if the model also considered the soil uptake followed by range fire. Matt said the FS for PW 1, 3, and 6 evaluated a risk assessment for intruders that included a well, ingestion, or inhalation. Matt did not recall if a range fire was included, but said they looked a rural residential farmer digging into the soil and getting exposure. Dennis said the waste is at a minimum depth of nine feet, and there is no Pu on the surface so a range fire would not create an exposure scenario.
- Maynard felt that it was not necessary to spend a lot of money on characterization. He said he would like to know what the cost estimate is for retrieving the waste instead.
- Wade said he was hoping to learn more about pre 1970s disposal history. Wade suggested that this would be a good workshop to address the soil waste issues. Wade said the Board has asked for this for years and needs a focused opportunity to look at what is out there, what was done by Ecology to pull records and evaluate what is there, and also look at studies on approaches. Matt said DOE is committed to doing that as part of the Central Plateau Cleanup Strategy.
- Wade thought it was important for the committee to learn more about the reverse well history. Wade suggested that the committee receive a presentation on the examination of their use, history, treatability at B Plant, and lessons learned from other sites with reverse wells.

- Shelley said the Data Quality Objective (DQO) material needs to be laid out for the public to see, including off-norm experiences. Shelley also said she would like to see the full sweep about what went on and what we know about these burial grounds. She said there are caissons and fissile material in the burial grounds.
- Shelley said the NRC is getting ready to open up their rule makings on waste classifications and it will impact EM. Shelley said currently decisions are made on a case by case basis without a regulator process and NRC is concerned about that and wants to define what risk means, what long term means, and what performance means. Shelley thought that the discussions on 435-1 will impact State legislation. Shelley suggested asking EM and NRC to come talk to the Board about that.
- Floyd Hodges said the NRC checklist addresses long term effectiveness and permanence. Floyd felt that the discussion has been too focused on the short term (around 100 years). Floyd said Pu has a half life of 25,000 years and the Central Plateau has only been there for 10,000 years. The Central Plateau is the highest point in the area and is most prone to erosion. Floyd reminded everyone that no one knows what will happen on the site 25,000 years from now. Floyd did not think it was possible to say covering the site will be protective for that length of time.
- Pam was concerned with Gerry's reference about the stimulus funding plans including capping. Pam also said that one of the landfill examples that John provided was at Mound, which was inside, city limits. Pam said that city struggled to keep the project going to remove the Pu and it was not an easy task. John clarified that the ARRA funding was for the SW-1 nonradioactive landfill, and capping is consistent with State regulations in this case. Matt said the schedule has not been finalized, but it calls for a barrier. Matt said this is the only capping in the recovery act funding.
- Dick said caps do not last forever and yet caps will be used over the Environmental Restoration Disposal Facility (ERDF). Dick thought it did not make much sense to consolidate the waste in one place and cap it. Matt said DOE feels that they have gained a lot by moving the material away from the river. Matt said that it is not a perfect remedy, but at this point there is not a better one. Matt said the decision to move waste to ERDF is consistent with the mission of the site to move waste away from the river.

Long Term Stewardship

Doug Mercer said the committee has been looking into Long Term Stewardship (LTS) for a long time to understand what is going to happen post closure for the River Corridor and residual waste sites. Boyd Hathaway, DOE-RL, has done a lot of work over the last year and is in the process of reframing and rethinking documents for LTS and Institutional Controls (ICs). Doug said today's topic is an opportunity to see what Boyd's groups is considering for LTS and what they intend to do in relation to priorities. Doug said his own sense of urgency on this issue is high because he thinks the committee needs to press DOE to make sure LTS is being considered. Doug said until 2002 the LTS plan was all on paper and did not feel integrated into decision making at the unit level. Doug said he is hopeful that the plan Boyd is working on will be more than a paper plan and

will permeate down the rank and file to project managers so stewardship issues are prevalent in everyday thinking. DOE will continue to have ownership over the site, and the LTS plan is an intergovernmental exercise to avoid forgetting. Doug said it is unclear how DOE plans to move from a risk management perspective to a long term management strategy.

Boyd Hathaway said DOE feels it is important to start developing plans for LTS now as cleanup along River Corridor is becoming eminent. Boyd distributed an annotated outline of the new LTS plan and asked for committee input. Boyd said DOE is trying to be consistent with corporate definitions and felt it was important to use language that is being used across the complex. DOE-EM is responsible for LTS until the site transfers to Legacy Management (LM). LM will not accept portions of the site until the entire site is cleaned up. Boyd said DOE has been doing LTS since the mid 1990s. The last LTS plan was developed in 2003 and there are many conditions that have changed since then. Boyd said DOE has said the site will stay under federal management in perpetuity. Boyd said the 2003 plan was a good starting point for implementation and he is now working on a site wide program for LTS. Boyd said it is important that the plan address the contractors and include a way to interface. The site will be in a holding pattern for a long time until DOE is “done” and the site can move to LM.

Boyd described the relationship between LTS and cleanup and outlined who will be responsible in each field office for implementing LTS. Boyd said Mission Support will carry out LTS once cleanup objectives have been achieved. Boyd said he will provide the annotated outline of the LTS plan to Mission Support so they can start working on it. The plan will identify roles and responsibly, define transition criteria, and will be institutionalized at the federal level.

During development, DOE will continue to brief the Board on progress of the plan. Boyd said they expect a draft of the plan to be available in late 2010 and will share that with this committee. Boyd explained that the LTS plan outline was developed through a series of workshops. The plan will be carried out until LM will take parcels of land. Boyd reiterated that he would appreciate comments on the draft LTS plan outline, and asked that comments be submitted by December 18.

Regulator Perspectives

- John said the timing for the LTS plan is great because in 2010 the outer area proposed plan will come out, and in 2011 plans will be available for the River Corridor. John said he was surprised to hear that DOE has decided that land will be held by the federal government in perpetuity. John asked what it would take for DOE to control land in perpetuity. Boyd said right now DOE has custody control in perpetuity. DOE’s mission is to protect the land and resources. John said if DOE does not need land to protect the remedy, then land should be declared excess to the mission. Boyd said there are policies that outline how to excess property, but DOE’s position is that they need it. John said holding the land in perpetuity could make it seem like DOE is taking advantage of ownership and will not clean up the land to the best use. Boyd

said there is the potential to use the site for future missions and not a closure site, which is why DOE might not want to turn land over. John asked how those policy decisions would be made. Boyd said that is something his manager would have to discuss. John was not sure that DOE-RL has the authority to decide that DOE should hold the land in perpetuity. Boyd said he would take the concern back to his management. Boyd said DOE has ownership of the property under the Atomic Energy Act which gives them the authority to decide whether to hold it or release it. John disagreed and did not feel that DOE-RL had the legal authority to hold the land.

- Craig agreed that DOE holding land in perpetuity is an interesting issue. Craig said legally ICs should be in place as long as they are needed and as long as the site does not allow unrestricted use. Craig said this does not mean that DOE would not have to look at intruder scenarios for cleanup, but they still need to think about what happens if the ICs fail. EPA wants to see cleanup done in a robust way and if the assumption is that land will always be federally owned, it puts a slant on cleanup and the standards that will be used.

Committee Discussion

- Sandra said the definition of cleanup needs to be made very clear. Sandra said the agencies view cleanup in terms of regulation, but the tribes view cleanup differently. Sandra clarified that everyone does not have to agree on the definition of cleanup, but it needs to be clear what DOE is talking about when they say cleanup.
- Pam said she shares John's concern about DOE holding land. Pam said she has posed this question to DOE – Headquarters (HQ) and they have said land should be released when it is ready to go. Pam thought that the fact that HQ view is not accepted by site managers is unusual.
- Pam said RAP has been involved in LTS and ICs for a long time. Pam said there have been multiple workshops on the topic and a lot of input has already been provided. Pam said it seems like what Boyd has presented is starting from scratch. Boyd said he is not throwing out previous work but the plan needs to be changed to align with the new structure of contractors at the site.
- Shelley said she was under the impression that HQ was planning to release land. Shelley agreed with John and Craig that the position Boyd stated begs the question of base assumptions. Shelley suggested adding this issue to the list of topics for the Base Assumptions workshop in December. Shelley said she is concerned that cleanup remedies would be based on the assumption that DOE would keep land forever. Shelley said it was unclear where LM gets to weigh in on this. Boyd said LM does weigh in but not until 2055 when LM takes over. Boyd said it took three years to gather information on LTS at Mound, and Hanford is much bigger. Boyd said he is developing a checklist on what information will be needed. Shelley suggested bringing people from HQ and EM in to get their thoughts on this. Pam said she did not think HQ and EM have the time or money to do that.
- Floyd said the timeframe for protecting the site is longer than any government has been in existence. He said that when you are talking about thousands of years, you

have to consider what institution will be there. Floyd reiterated that this is not a 100 year problem, it is a 10,000 year problem and the level of cleanup should be based on how long you can control it.

- Susan said she hoped that Boyd would provide opportunities like workshops for the public to weigh in on the plan before it comes out. Boyd said a workshop was not included in the schedule for the Mission Support contract, but he would bring the suggestion back to his management. Susan said a workshop is not regulatorily required, but felt DOE has an obligation to provide for public input. Boyd agreed.
- Dick said there is a continuity issue with contractors changing every five years. Dick asked how this was being addressed in Boyd's plan. Boyd said the plan falls under a federal program and does not rely on contractors. Boyd said there will be only one program plan that all of the contractors will use. Dick said there will be a long time where the site will be under LTS and that organization will have to do a lot of things to keep track and turn the site over to LM. Boyd said this is why he is pushing for a robust program that is on the top of everyone's plate right now.
- Dale said none of the information Boyd presented addresses how the National Resource Defense Act (NRDA) fits into the LTS plan. Dale said where CERCLA remediates a problem, NRDA identifies restoration and damages. Whatever is left behind on the site will be considered an injury under NRDA and will call for a damage assessment into the future. Dale felt DOE holding the land forever creates a problem with NRDA and thought this should be incorporated in the LTS plan.
- Dale said he can also see issues with releasing parcels to LM because of overlapping contamination and groundwater issues. Dale said it is likely DOE will be pumping and treating for a few thousand years. Boyd said DOE will have to reach pump and treat goals before the land goes to LTS. However, a passive pump and treat could be in operation for a long time to maintain the goal of the remedy. Dale asked what happens if there is a failure of the remedy. He thought it would be important to include this scenario in the LTS plan. Shelley said if a remedy fails, the CERCLA process will deal with that. Boyd agreed but thought it was important to identify a funding and a contractor to deal with a failure.
- Maynard said he is concerned about remedy decisions being put under LTS. Maynard said the cost of LTS is not easy to estimate over the long term and the costs are often short changed. Maynard felt that if the true costs were evaluated, DOE might end up choosing a different remedy. Shelley agreed and thought it was not worth allowing damages when DOE can remove, treat, and dispose of the waste now and not have to pay damages in perpetuity.
- Doug said these issues are central to cleanup and will not be addressed at one workshop, so conversations need to happen regularly. Susan Hayman suggested that Doug and Bob Suyama work with Boyd to determine what the next step is for this topic.
- Maynard said the Board still needs to have the presentation that the committee had last year by Jay Pendegrass, Environmental Law Institute and Mike Bellot, EPA. Susan Hayman said that is currently planned for the February Board meeting.

Follow up from the October 29 Committee of the Whole Meeting on the Central Plateau Cleanup Completion Strategy

Briant said he got a lot of value from the recent HAB meeting discussion on the Central Plateau Cleanup Strategy. Pam asked the issue managers if they have identified next steps for the topic.

Wade said the issue managers would like to step back and take another look at the strategy. Wade said the issue managers worked hard to get regulators and DOE in front of the Board so the technical, timing, and integration issues could be discussed. Wade said the issues managers need to go back and look at the issues that were identified during the Board meeting and decide where to go next. Wade thought that it might be necessary to involve some of the other committees to look at the issues from other perspectives. Specifically, there are budget, health/safety, and public involvement issues involved in the strategy. Wade said the issue managers' goal is to get comments and issues clearly laid out and bring that back to the committee for discussion and possible advice. Wade thought December would be a good time for an open discussion and technical determination in committee.

Pam said the notes from the COTW meeting have already been distributed and the notes from the sounding board at the Board meeting will be out later this week. Pam suggested asking for issue managers from other committees to team up on this topic.

Susan Hayman asked if the committee is interested in moving advice forward to the Board on this topic or wait for the change package to come out and comment on that. John Price thought advice would be more appropriate on the change packages.

Wade suggested that it might be worth getting the Board's comments in early so the agencies can incorporate their input into the change packages. Wade said it is important for the Board to make sure the issues have been heard because a lot of decisions will be made based on the Central Plateau Cleanup Strategy.

Shelley thought that the agencies have already heard the Board's perspective from the sounding board. Maynard thought that a lot can be learned through the dialogue and communications during meetings and advice might not be necessary until the change package comes out. Briant agreed that the dialogue with the committee and Board was enough for now, and formal advice would be good after the change package.

Susan Leckband said that she was concerned with waiting to issue advice because the strategy determines the path forward. Susan said the Central Plateau Cleanup Strategy is an issue that is at the policy level and the Board is supposed to provide policy advice. Pam agreed and said the Board cannot be in the room during the discussion on a remedy selection and that is when the Board would want their input considered.

Susan Hayman asked if advice in February would be timely. Briant said the agencies are aiming to get close to an agreement by December and work toward issuing the change package in January or February. Craig agreed with John and Briant that the dialogue from the Board was enough for now.

Pam suggested that the committee should ask Board members to review the minutes from the sounding board and submit any comments so the notes can be brought to the December RAP meeting for review.

Susan Leckband suggested that the change packages be reviewed by the Board in January or February to see whether the comments the Board provided during the sounding board were incorporated.

Briant commented that during the sounding board, everyone is listening for what they wanted to hear. Briant said he came out of the meeting with some good ideas to incorporate, but after talking with other agency staff he heard that other people thought the comments from the Board were very negative. Briant suggested making sure the comments accurately reflect how the Board feels because if something is stated negatively, people may think the Board feels negatively about the whole strategy.

Dale said he thought this was an important topic and it would be appropriate for the Board to agree or disagree with what is in the proposed strategy. Dale said he thought the State of Oregon feels this should be done quickly. Dale suggested that the issue managers could quickly put together a set of agree/disagree statements to the things in the strategy.

Floyd said after he reviewed the strategy carefully, he got a different impression than what was said at the Board meeting. Floyd said it was important for the issue managers to review the strategy before preparing any advice.

Wade reiterated that this topic originated with a COTW meeting and there are reasons for the other committees to remain involved. Maynard agreed but thought it was not necessary to have issue managers from each committee involved at this point; they can review what is going to be sent forward later. Dale thought it might be useful to pull issue managers into a central group to for the possible advice in January or February. Pam said when the issue managers review the sounding board notes they will probably be able to identify issues that members from other committees raised.

Susan Hayman summarized the path forward: Ask all Board members to review the notes and submit comments, have issue managers review the notes and summarize comments for review at the December RAP meeting. When the change packages are released, make sure the proposed changes align with Board comments and bring that to the Board meeting in February for possible advice.

Susan Leckband suggested asking Board members to submit their comments to issue managers within one week. Susan Hayman said that Board members could submit their

comments to her or Cathy McCague and they would make sure any changes are incorporated and passed on to the issue mangers.

Shelley asked where the COTW notes are captured institutionally. Susan Hayman said the notes are posted on the HAB Web site under the committee meeting notes and maintained as part of the record for the advisory board. Susan Leckband suggested that the COTW notes may need to be identified differently on the Web site so they are easier to identify. Maynard agreed and said that people tend to look at the advice on the Web site but do not look much further into meeting minutes for the Board's thoughts on an issue.

Floyd asked if there was a deadline for comments on the Central Plateau Cleanup Strategy. Paula Call, DOE-RL, said there is no cutoff date because there is not a formal review. Paula said the Strategy is a living document and will be revised on an ongoing basis.

Action Items / Commitments

The committee reviewed their six month work plan. The following schedule of topics was decided by the committee.

December:

- 300 Area RIFS update
- Central Plateau Cleanup Strategy Issue Manager update
- NRC Rulemaking changes
- 100 Area RIFS update
- COTW: Base Assumptions Meeting
- TC&WM EIS Workshop

January:

- TPA Change Packages (M-15, M-91) *tentative*
- LTS/IC
- MPTs
- Joint RAP/TWC technical meeting on the TC&WM EIS

February:

- ELI and EPA LTS workshop for the Board
- U.S. Ecology site closure issues
- RCRA Permit
- K Basin Sludge update
- Burial grounds workshop

March:

- River sampling status update and Yakama sturgeon sampling plan overview

- Limited Landfill update
- HAB meeting (1 day) on TC&WM EIS advice

April:

- PW 1, 3, 6 and CW-5 proposed plan workshop

Holding Bin Topics:

- 618-10 status update
- Update on groundwater fact sheet
- C-Tank Performance Assessment (possibly TWC?)
- Vadose zone
- LTS public workshop
- Groundwater alternatives workshop
- Status of Science and Technology roadmap
- Reverse well – use history, lessons learned from other sites

The committee identified the following framing questions and leads for the December meeting topics.

100 Area RIFS update

Framing Questions: What progress has been made since we heard about it last time?

Chrome 6 upwelling update: where is it showing up & anticipated response? (short version of technical workshop) ISRM barrier? Problems identified since last update? Did you find anything new?

Committee Leads: Dale, Shelley and Wade

Agency Leads: Jim Hanson, Laura Beulow, Mandy Jones/Nina Menard

Central Plateau Cleanup Strategy issue manager update

Framing Questions: Present issues from June Board breakout notes, COTW notes and sounding board notes. Is anything missing? What are the specific technical concerns from RAP?

Committee Leads: Dale, Shelley, Wade, and Maynard

Agency Leads: Matt McCormick, Briant Charboneau, John Price, Craig Cameron

Briefing on 300 Area RIFS

Framing Questions: PU volume estimates for process trenches? What is in the work plan/committee focus? Technologies being used/success?

Committee Leads: Dale and Pam

Agency Leads: Mike Thompson, Larry Gadbois

NRC & DOE-EM rulemaking (Part 61 - waste classification)

Framing Questions: situation overview?

Committee Leads: Shelley

Agency Leads: Craig Cameron, John Price

Debrief from Base Assumptions Workshop

Committee Leads: Greg, Dale, Wade, Pam, Maynard, and Shelley

Agency Leads: Nick Ceto, John Morse, Craig Cameron, John Price

Action Items:

- Issue manager work on the Central Plateau Cleanup Strategy
- Susan Hayman and Susan Leckband will send an email asking Board members to comments on the sounding board and COTW notes
- RAP members provide feedback on LTS plan outline by December 18

Handouts

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

- River & Plateau Committee – 6 Month Work Plan, October 9, 2009.
- River and Plateau Committee FY 2010 Issues Table, October 9, 2009.
- Transuranics and the CERCLA Cleanup Decision Process at Hanford, Matt McCormick, DOE-RL, November 17, 2009.
- Regulatory Perspective, John Price, Ecology, November 17, 2009.
- Handout on Threshold Criteria, Balancing Criteria, and Modifying Criteria.
- Hanford Long-Term Stewardship (LTS), Boyd Hathaway, DOE-RL, November 17, 2009.
- Draft Long-Term Stewardship Program Plan Outline, Boyd Hathaway, DOE-RL, November 12, 2009.

Attendees

HAB Members and Alternates

Shelley Cimon	Sandra Lilligren	Dick Smith
Dale Engstrom	Doug Mercer (phone)	
Harold Heacock	Maynard Plahuta	
Floyd Hodges	Gerry Pollet	
Pam Larsen	Wade Riggsbee	
Susan Leckband	Dave Rowland	

Others

Paula Call, DOE-RL	John Price, Ecology	Dale Black, CHPRC
Briant Charboneau, DOE-RL	Ginger Wireman, Ecology	Marc Jewelt, CHPRC
Boyd Hathaway, DOE-RL	Rick Bond, EPA	Sonya Johnson, CHPRC
Matt McCormick, DOE-RL	Craig Cameron, EPA	Dale McKenney, CHPRC
Greg Sinton, DOE-RL	Dennis Faulk, EPA	Bob Pippo, CHPRC

Arlene Tortoso, DOE-RL	Emy Laija, EPA	Janice Williams, CHPRC
Margo Voogd, DOE-RL		Susan Hayman, EnviroIssues
		Emily Neff, EnviroIssues
		Barb Wise, MSA
		Mark Triplett, PNNL