



MEETING SUMMARY
HANFORD ADVISORY BOARD
RIVER & PLATEAU (RAP) COMMITTEE MEETING
Wednesday, October 16, 2019
Richland, WA

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| TOPICS IN THIS MEETING SUMMARY |
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|---|----|
| Opening | 2 |
| <i>Previous Month(s) Meeting Minutes</i> | 2 |
| <i>Announcements</i> | 2 |
| 100-B/C Proposed Plan | 2 |
| <i>Committee Discussion:</i> | 4 |
| 100 K Technical Impracticability (TI)..... | 6 |
| <i>Key Takeaways From The Presentation:</i> | 8 |
| <i>Committee Discussion:</i> | 9 |
| Tri-Party Agreement (TPA) Milestone M-37 Coordinated Closure – Public Comment Period | 10 |
| <i>Summary</i> | 12 |
| Committee Business and Wrap Up..... | 15 |
| <i>For November Committee Meetings:</i> | 16 |
| Meeting Adjournment..... | 16 |
| Document Attachments - Wednesday, October 16, 2019, River & Plateau (RAP) Committee Meeting | 16 |
| Meeting Attendees - Wednesday, October 16, 2019, River & Plateau (RAP) Committee | 16 |
| <i>Meeting Chair:</i> | 16 |
| <i>Board Members and Alternates:</i> | 16 |
| Others: | 17 |

The following meeting summary represents topics and presentations covered during the Hanford Advisory Board River & Plateau (RAP) Committee on Wednesday, October 16, 2019, in Richland, WA. This event took place at the Richland Public Library, Rooms A and B. This is only a summary of issues and actions discussed at this meeting. The following represents a summary of the topics corresponding with the meeting agenda with annotation of Questions (Q), Response (R), Comments (C) and may not represent the fullness of represented ideas or opinions, and should not be used as a substitute for actual public involvement or public comment on any particular topic unless specifically identified as such.

Opening

Janice (Jan) Catrell, Public-At-Large | River & Plateau (RAP) Committee Chair, welcomed committee members, and introductions were made.

Previous Month(s) Meeting Minutes

Jan Catrell (RAP Committee Chair) asked if meeting summaries were approved. ProSidian facilitator noted to members that The September 2019 Meeting Minutes are pending review and approval by U.S. Department of Energy (DOE) and shall be available for next committee meeting. James Lynch, Deputy Designated Federal Offices for DOE affirmed September 2019 Meeting Minutes are working through DOE for approval.

Announcements

Jan Catrell made an open call for announcements and updates.

Susan Leckband, Washington League of Women Voters (Hanford Advisory Board (HAB) Chair), made an announcement that HAB representatives attending the Committee Of The Whole (COTW) will be reconvening during lunch for off-line discussions and reminded everyone to sign in.

100-B/C Proposed Plan

Agency updates were provided by Ellwood Glossbrenner, DOE Richland Operations Office (RL) and Laura Buelow, U.S. Environmental Protection Agency (EPA).

The presentation¹ addressed the River Corridor and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Records of Decision Overview which covers Six Geographical Areas including (300 Area – Record of Decision (ROD) completed November 2013; 100-F, 100-IU-2, and 100-IU-6 Area – ROD completed September 2014; and the 100-D/H Area – ROD completed July 2018/ 100-B/C Area - ROD planned 2020/ 100-K Area – ROD scheduled 2021/ 100-N Area – ROD scheduled 2021.

The presentation also provided a 100-B/C Area Overview as well as the historical picture of 100-B/C in 1953 compared to 100-B/C in 2015. Further discussions presented Cleanup Completed to Date (with statements that Waste site remediation began in 1995), illustrated the Remediated Waste Sites and the Scope of the Proposed Plan: Waste Sites. The presenters noted that the following further action for 30 waste sites is warranted:

- 7 sites have residual contamination that poses a shallow direct- contact risk for residential use and/or effect on groundwater or surface water quality
- 23 sites that have residual radionuclide contamination in the deep zone (only) and do not have the potential to effect groundwater or surface water
- No sites have residual contaminant concentrations that pose a potential risk to ecological receptors

The Scope of the Proposed Plan was also discussed with a focus on Groundwater

- Groundwater actions were not prescribed by interim action ROD for 100-B/C

¹ [100 B/C Proposed Plan](#)

- Current contamination levels warrant remedial action consideration
- All groundwater contaminants exceeding standards are addressed by alternatives in the proposed plan
- Differences between the alternatives primarily affect how hexavalent chromium is addressed

A Summary of Alternatives Evaluated listed six (06) alternatives with a statement that "Alternative 2 is Preferred". This alternative lists ICs for 30 waste sites and Groundwater effects listed as Monitored Natural Attenuation (MNA) with ICs at a proposed cost of \$23M. Remediation Timeframes for Alternative 2 depends on the materials that exist as well as surface water and Groundwater located at the site with a note for Pump and treat required for an additional 25 years to maintain compliance.

Further Details on the Preferred Alternative: Alternative #2

- Removal, treatment, and disposal of a remaining grouted segment of sodium dichromate transfer line
- Natural attenuation with institutional controls (restrict uncontrolled excavation/drilling, prevent residential use, and/or prohibit irrigation) for 30 waste sites
- No action for 82 waste sites
- Monitored natural attenuation with institutional controls for groundwater (restrict drinking water and other domestic uses)

The presenter(s) also addressed a key question of "Why 187 years for 1 waste site?" with the following comments:

- The 118-B-8:4 site next to B-Reactor
- Shallow radionuclide contamination 12.5-15 feet below ground surface
- 187 years of decay to be protective of a residential scenario
- Currently protective for recreational uses, including B-Reactor tours (contamination is not accessible)
- Excavation/removal ability is limited by the waste site's proximity to the reactor building

The Estimated Future Costs for the Preferred Alternative was broken down for the total estimated cost of \$23M as follows:

- Waste site remediation of \$2.2M
- Waste Site Institutional Controls of \$6.7 M
- New monitoring well installations of \$1.5M
- Groundwater Monitoring and institutional controls of \$12.5M

Consideration of Previous HAB Advice (#296) was also discussed. The advice was considered and the proposed plan has been redrafted to provide greater clarity in areas:

- Clearer explanation of elements common to all alternatives so that elements that differ can be more readily distinguished
- Clearer explanation of the combination of waste site and groundwater components in the alternatives
- Revised evaluation of several balancing criteria to be more objective
- Responses to comments received during the public comment period for the proposed plan will be included in the responsiveness summary in the ROD (Record of Decision - A required document administered by EPA under CERCLA.)

There were key takeaways from the 100-BC Area Proposed Plan Overview presentation:

- The focus is on completing remediation of the B / C Reactor Area
- DOE believes that the preferred alternative is protective and provides the best balance of tradeoffs in consideration of the CERCLA balancing criteria

- The 100-BC Proposed plan was redrafted in consideration of previous HAB advice
- Because Strontium (Sr) contamination in groundwater will require institutional controls for 70 years, we are not planning to build a pump and treat system for chromium, because it will disperse naturally within 60 years

Committee Discussion:

Committee discussions including Questions (Q), Response (R), and Comments (C) took place during and after the presentation. The purpose was to identify the next steps for a review of the 100 B/C Proposed Plan. Key topics centered on the question “Does the committee want to develop advice on 100 B/C Proposed Plan?” other items addressed efforts to Identify the Issue Manager (IM) team to develop the draft advice.

Dr. Laura Buelow (EPA) noted that they have received a request for a comment period extension of 30-days, and that will be granted. Dr. Buelow further stated that “a Listserv will be issued and HAB has time to comment/issue advice”.

Susan Leckband (HAB Chair) stated that this can be accomplished in November but don’t delay just because we have an extension. This letter requesting a 30-day extension is to send out a public list service announcement with the extension.

Tom Sicilia (Oregon Department of Energy [ODOE]), Oregon Department of Energy (RAP Vice-Chair) referred to the advice offered previously in June 2018. The Agency response was noted to state a request to issue during the comment period. Tom now suggests reissuing advice or updating it (Advice # 296 Agency Response To # 296). During the discussions, Dr. Laura Buelow (EPA) provided a fact sheet regarding the issues discussed. Jan Catrell announced a block of few minutes to look the sheets over - members took a few minutes to review the fact sheet.

During the discussions, Gerald Pollet (Heart of America Northwest) offered to put up a PowerPoint Presentation showing 100-BC waste sites. The first slide illustrated B-111 (167 years to decay), 2nd slide – questions tribal rights, 3rd slide – groundwater contamination area. Dr. Laura Buelow (EPA) made clarifying remarks regarding the presentation (4th slide) referencing where the DOE will get water for B-Reactor and River Corridor. Slide 22 of the presentation highlighted Site B-111 alongside the river and stated that this site would be too contaminated to allow unrestricted use until the year 2247.

Gerald Pollet further stated that the water does occasionally come in a flow through the soil and not just out. The left side is Strontium (Sr) - the chemical element with the symbol Sr and atomic number 38. An alkaline earth metal, Strontium (Sr) is a soft silver-white yellowish metallic element that is highly chemically reactive chemical element with the symbol Sr and atomic number 38. The right side is chromium VI. Some questions were asking slide 26. It’s dangerous to be around.

- Q: Jan Catrell (RAP Committee Chair): “Do we have any authority of the B-Reactor if it’s been transferred to the interior?”
- C: Gerald Pollet (Heart of America Northwest): “It’s a Superfund site established under the Tri-Party Agreement (TPA) and the TPA Agencies have as much authority to clean up as necessary.”
- C: Jan Catrell (RAP Committee Chair): “Particularly focused on Strontium (Sr) until 2020.”
- C: Gerald Pollet (Heart of America Northwest): “You have sites right next to the river in the river corridor that will have very heavy use from tribes and the public. In the document, you don t see what it means for treaty rights, what it is to fish and cultural resources. The exposure scenario isn’t used for it.”
- Q: Jan Catrell (RAP Committee Chair) “We’re talking about the B-Reactor, B 111. Are there others?”
- C: Gerald Pollet (Heart of America Northwest): “118-B4 reactor.”
- C: Susan Leckband (HAB Chair) stated that presuming nothing is factually incorrect, “I do want to question the fact more than 100 years institutional controls are part of this here”. She stated that she has attended long

stewardships and back then no one would have believed institutions would have survived over 100 years. She commented that using them for exposure seems capricious at this point. Institutional controls were on the menu every time. She commented that there were many examples from document reviews that these issues persisted.

- C: Tom Galioto (Public At Large):” I am not sure Gerald Pollet’s presentation compares to standard.”
- C: Tom Sicilia (Oregon Department of Energy [ODOE]): “I do not disagree with a lot that has been said. There is a plan to review a couple of bullet points that have already been on the draft document and would attempt to tweak it or add a cover letter that might streamline it a little bit.
- C: Jan Catrell (RAP Committee Chair): “I hear you are saying that the best kind of advice we can begin from is 296 but also acknowledge getting with Issue manager team, doing comparisons and finding the gaps to find improvement.”
- C: James Lynch (Deputy Designated Federal Officer, DOE-ORP/DOE-RL): “I would encourage the group to look at the presentation that was provided last time by Ellwood Glossbrenner (DOE-RL) and Dr. Laura Buelow (EPA) because there are a few direct responses to the 296 advice in there. Finally, Jan Catrell commented, “then there are four documents to look over”.
- Q: Jan Catrell (RAP Committee Chair): “Gerry (Gerald Pollet - Heart of America Northwest), from your own slides/work, this is one waste site you think RAP should be concerned about?”
- C: Gerald Pollet (Heart of America Northwest): “I’m concerned about the soil behind the building.”
- Q: Jan Catrell (RAP Committee Chair); “Natural attenuation will take a long time. Do we have any authority over B-Reactor now it is a National Monument?”
- C: Gerry (Gerald Pollet - Heart of America Northwest); “It is a Superfund site so EPA has authority.”
- C: Susan Leckband (HAB Chair): “Assuming Gerald Pollet’s (Heart of America Northwest) presentation is factually correct, 100 years of institutional controls are in place, based on my lengthy and national experience, no one believes long-term stewardship will last longer 100 years or even 100 years. They simply don’t hold up. What I suggest to this Issue Manager Team, look at advice, look at their preferred advice, look at Gerald Pollet’s advice - See If There Are Gaps. Determine if we need advice. I am very concerned about long-term institutional controls. The HAB wants The DOE to be successful and to do more, dig deeper and clean it up right.”
- C: Tom Galioto (Public At Large); “I don’t understand (Gerald Pollet’s) years vs the fact sheet. We’re talking groundwater vs soils.”
- C: James Lynch (DOE ORP / RL): “I believe the previous advice was more technical, may I suggest any updates be at the policy level?”
- Q: Jeff Burrigh (Oregon Department of Energy): “100-years from when? The end of the Hanford cleanup? When the work is finished?”
- C: Gerald Pollet (Heart of America Northwest); “We’ve talked about that in HAB before. 2056? People will access from boating in the river and there are tribal issues too.”
- C: Liz Mattson (Hanford Challenge) “I like the plan, review the plan, review the prior advice, update and submit.”
- Q: Jan Catrell (RAP Committee Chair): “The important thing for the fact sheet is DOE and EPA prefer alternate #2. Is there anything that needs to change?”
- C: Dr. Laura Buelow (EPA): “There is nothing that needs to be changed.”
- C: James Lynch (DOE ORP / RL) “If it is approved, we have a full board meeting starting on the 4. If there is anything the full board wants to bring forward, the issue manager team can bring it in November then to the full board.”
- C: Susan Leckband (HAB Chair): “Because there has been so much interest in this over the years, the Issue manager team brings any issues to the next committee meeting in November. You need to get the full committee meeting in November to bring it to the board in December.”
- C: Tom Sicilia (Oregon Department of Energy [ODOE]): “Advice letter, DOE responded that we should comment during the public comment area. There are some easily defensible items given if it wasn’t approved or acted on.”
- C: Jan Catrell (RAP Committee Chair): “Ordinarily when advice is issued (June 2018 draft version)”
- C: Gerald Pollet (Heart of America Northwest): “In that advice which was changed at the board meeting. At the river corridor, were going to have used long before the 30 years from now.”

Liz Mattson (Hanford Challenge) commented from the GoTo Meeting chatbox That “previous IM team: Topic: 100-B/C | Authors: Dale Engstrom, Jan Catrell, Shelley Cimon, Dan Serres, Helen Wheatley, Gerry (Gerald Pollet - Heart of America Northwest) Pollet, Liz Mattson: Originating Committee: RAP.

At the close of the meeting Tom Sicilia (Oregon Department of Energy [ODOE]) (Oregon Department of Energy) stated: “We started Issue Manager (IM) team last meeting. Who here wants to join including on the phone?”

The current Issue Manager Team for this topic area now includes: Jan Catrell (RAP Committee Chair), Gerald Pollet (Heart of America Northwest), Tom Sicilia (Oregon Department of Energy [ODOE]) (Oregon Department of Energy), Shelley Cimon (Columbia River Keeper), Liz Mattson (Hanford Challenge. Tom will take the lead on The IM Team.

At the close of the session, Jan Catrell stated: “If there are no more comments that will bring to the close on this topic for now.”

There is now a planned call before The November 2019 committee meeting to get a draft going. Tom Sicilia (Oregon Department of Energy [ODOE]) will write the first draft.

100 K Technical Impracticability (TI)

The meeting continued with a presentation to the Hanford Advisory Board River and Plateau Committee by Ellwood Glossbrenner (DOE-RL) titled: “Approaches to 100 K Area Strontium - 90 Contaminated Groundwater”². The presenter asked that all questions be held until the end of the presentation. The Objectives of the presentation were to:

- Share background information on strontium - 90 (Sr-90) in 100 K Area groundwater and Monitored Natural Attenuation (MNA) for Sr - 90 in 100 K groundwater.
- Discuss the applicability of Technical Impracticability (TI) waiver and Monitored Natural Attenuation (MNA) for Sr-90 in 100 K groundwater
- Receive feedback on Technical Impracticability (TI) waiver and MNA

Images of the 100 K Area were presented as well as 100 K Area During Construction (1954) and 100 – KR -4 Groundwater Plumes with highlights stating that in 100-KR-4 the purple dots show Strontium (Sr) in 2.4 and 3.8 acres. Further in the presentation, there was a review of Regulatory Status with the following highlights:

- Sr-90 in groundwater exceeds drinking water standards (DWS)
- The current Interim Record of Decision (ROD) addresses hexavalent chromium through pump-and-treat systems. Other contaminants of concern are being evaluated in the final remedial investigation and feasibility study (RI/FS)
- Interim action pump-and-treat systems will continue until final ROD is issued, then may continue pending the decision in that ROD

The presenter stated that "we are here" meaning RI (Est. 2019), next step will be FS (Est. 2020), the Proposed Plan (Est. 2021) with a 30-Day Public Comment Period, with Final ROD (Est. 2022), leading to Remedial Activities. Additional images were shown illustrating the Primary 100 K Sr-90 Sites. This image points to the 116 – K -2 Trench, 116-K-1 Crib, The KE Fuel Storage Basin, 116-KW-3 crib / reverse well, and finally, The KW Fuel Storage Basin, 116-KW-2 crib / reverse well.

The presenter also reviewed Sr-90 Characteristics in 100-K GW and provided illustrations of Sr-90 Plumes in 100 K Groundwater showing Sr-90 Source along with a planned Remediation Approach.

Slide # 10 of the presentation highlighted The KW Sr-90 Plume [Plume Size: 1 acre | Natural decay to DWS: 134 years]. Specifically, The Sr-90 Source for KW Fuel Storage Basin (FSB) Leakage lists a Remediation Approach of

² [100 K TI Waiver](#)

Future soil excavation (limited extent due to reactor). Further, the 90 Source for Discharges to 116-KW-2 crib /reverse well lists a Remediation Approach of Future soil excavation (limited extent due to reactor)

Presentation Slide #11 called out the KE Sr-90 Plume [Plume Size: 3.8 acres | Natural decay to DWS: 300 years] with highlights for Sr-90 Source and Remediation Approach as follows:

- Sr-90 Source: KE FSB leakage (UPR-100-K-1) | Remediation Approach: Structure removed as of 2009. Soils were excavated up to 25 feet Below Ground Surface (BGS) between 2009 and 2012 were not restricted by potential effects to KE Reactor Building.
- Sr-90 Source: Discharges to 116-KE-3 crib / reverse well | Remediation Approach: Structure partially removed beginning in 2009. Soils were excavated up to 41 feet BGS between 2009 and 2012.

Presentation Slide #12 called out the K1/K2 Sr-90 Plume [Plume Size: 2.4 acres | Natural decay to DWS: 196 years | other: Located in the culturally sensitive area] with highlights for Sr-90 Source and Remediation Approach as follows:

- Sr-90 Source: Wastewater discharges to the 116-K- 1 crib | Remediation Approach: Soils excavated to 36 feet BGS in 2003
- Sr-90 Source: Wastewater discharges to the 116-K-2 trench | Remediation Approach: Soils excavated up to 25 feet BGS from 2004 to 200

Sr-90 Characteristics in 100-K GW:

- During operations, Sr-90 was pushed through the vadose zone by large volumes of discharged liquids that leaked from the fuel storage basins or infiltrated from the reverse wells, cribs, and trenches
- Sr-90 binds to soil and aquifer sediments, making it not readily Mobile
- Sr-90 has a half-life of 28.8 years
- The Sr-90 plumes are not projected to reach the river above the DWS, even if the pump-and-treat system is not operating
- The Sr-90 plumes will naturally decay to below the DWS in 200-300 years

Addressing the Restoration Period

- Even under the most active remediation scenario, (reactor-removal, treatment and disposal [RTD] and long-term pump and treat), long-term monitoring and land-use controls will be necessary at 100 K until Sr-90 naturally decays (about 200-300 years)
- Long-duration restoration period warrants consideration of Technical Impracticability (TI) waiver and MNA

Lastly, the presenter reviewed the concepts of Technical Impracticability (TI) waiver vs. MNA at 100 K stating that the Technical Impracticability (TI) waiver Administrative Action responds to requirements stated in 40 CFR 300.430(f)(1)(ii)(C)(3) whereas the MNA is a Response Action. However, both have Common Attributes such as:

- Reviewed by the public as part of the Proposed Plan
- Source control required
- Institutional Controls required
- Monitoring required to confirm continued protectiveness
- Monitoring required to confirm the plumes are not expanding
- Can be used in conjunction with multiple response strategies
- DWS met through the decay of Sr-90 in 200-300 years
- Protectiveness determined as part of 5-year reviews
- Reviews the regulatory status in groundwater SR 90 exceeds drinking water standards. We have a timeline of the process for the RFS, and it is currently out for review with EPA. The feasibility study in 2020 and the final rod in 2022.

As part of Next Steps, the Department of Energy and the EPA will continue to engage with the Hanford Advisory Board during the review of the FS (2020), Proposed Plan (2021), and ROD (2022). Draft A of the FS will have Technical Impracticability (TI) waiver in some of the alternatives. EPA will evaluate this during its review of the FS.

Key Takeaways From The Presentation:

- Sr-90 plumes in the 100-KR-4 area will naturally decay below the DWS in 200-300 years. Other technologies are unable to significantly reduce the cleanup period.
- Long-term monitoring will be necessary to confirm that decay occurs as expected and no unexpected migration occurs
- DOE is exploring the applicability of a Technical Impracticability (TI) waiver as a component of the remedies in the FS.

There was an opportunity for committee members to ask questions and make comments regarding the presentation titled: “Approaches to 100 K Area Strontium - 90 Contaminated Groundwater” presented by Ellwood Glossbrenner (U.S. Department of Energy, Richland Operations)

- Q: James Lynch (DOE ORP / RL): “Regarding the K1/K2 plumes 2.4 acres and will decay 196 years. Part of the reasons why this is a sensitive site and why The HAB wants to go with the waste site itself in proximity; these were excavated were they backfilled?”
- C: Ellwood Glossbrenner (DOE-RL): “Yes, there are the various intermediation and treatment programs (groundwater response slide), and the pump and treat have been actively going on Hanford. Under the most active remedial scenario. We still need long term monitoring and land use controls. The long duration restoration period.”
- Q: James Lynch (DOE ORP / RL): “You said these were excavated, were they backfilled?”
- C: Ellwood Glossbrenner (DOE-RL): “Yes.”

Dr. Laura Buelow (Project Manager, U.S. Environmental Protection Agency): walked through EPA’s role and achieving the Record of Decision. Key takeaways are that Sr-90 plumes will decay, long-term monitoring will be necessary, and DOE is exploring a Technical Impracticability (TI) waiver.

- Q: Susan Leckband (HAB Chair): “Did you dig deep enough?”
- C: Dr. Laura Buelow (Project Manager, U.S. Environmental Protection Agency): “As deep as we could. We would have gone deeper, but the reactor is there.”
- Q: Susan Leckband: “This is on our Q3-4 work plan. Is this the appropriate time for us to comment?”
- C: Dr. Laura Buelow: “I send the RI to DOE this week, the SF goes out to review this winter.”
- C: Susan Leckband: “We’ll need to move this up and expect you to notify us when this is ripe.”

*** ACTION STATEMENT MADE: CH2M HILL Companies, Ltd. notifies HAB/staff when this is ripe.

- C: Tom Sicilia (Oregon Department of Energy [ODOE]) – “There must be re-evaluation when reactors come down, plumes must be monitored.”
- C: Dr. Laura Buelow (Project Manager, U.S. Environmental Protection Agency): “These boundaries are rough estimates. New technologies discussion is not required by HQ EPA to advance new technologies for this TI.”
- Q: Jeff Burright (Oregon Department of Energy): “Are these plumes moving?”
- C: Dr. Laura Buelow: “We are not seeing a flux in K-Area. TI vs MNA discussion. Not a lot of talk of Sr-90.”
- Q: Bob Suyama (Benton County): “I like to look at things according to risk. What is the risk of Sr-90? Is it getting into the water and drinking it?”
- C: Dr. Laura Buelow: “Yes, drilling a well and drinking it.”
- Q: Bob Suyama (Benton County): “But it is not getting into the river for 200-300 years?”

Follow on discussions ensued regarding the risk of the Sr-90 Plumes getting into the river over in the future. Dr. Laura Buelow’s response was “modeling shows plumes are not moving. However, we must monitor. If they move, we must test and re-evaluate.” As a follow-up Bob Suyama (Benton County) stated that this seems pretty low-risk with all we have on our plate.

- Q: Shelley Cimon (Columbia River Keeper): “Where are tribal discussions with K and Sr-90?”

- C: Ellwood Glossbrenner (DOE-RL) – “We plan on taking it to tribes next month.”
- Q: Tom Galieto (Public At Large) – “What would give HAB the best assurance based on these options?”
- C: Dr. Laura Buelow: “I don’t think fundamentally there will be any different with a TI or an MNA. TI waiver seems more appropriate to me.”
- Q: Susan Leckband (HAB Chair): “What is the result of being exposed?”
- C: Dr. Laura Buelow: “It increases your chances of getting cancer. Replaces calcium in bones, particularly bad for children. If you built a wall, the water would not be meeting drinking water standards.”
- C: This could be a good topic to bring to the Health, Safety, and Environmental Protection Committee (HSEP) from HPM Corporation (HPMC).
- Q: Marissa Merker (Meeting Attendee) – “If there is No precedent set for radionuclides, how will EPA ensure this is handled responsibly? The Technical Impracticability (TI) waiver does require consideration of emerging technologies?”
- C: Dr. Laura Buelow: “I’ve been looking for that, please share that with me. After every ROD, there are 5-year-reviews.”

Dr. Laura Buelow (EPA), Environmental Protection Agency (EPA) concluded that K and N are the next ones. The K area has stronger ___ The EPA is looking at potentially maybe being a T waiver and continuing to look at other options though other options are expensive. There are on-going evaluations of the pros and cons so bringing these topics to the committee is useful to share some initial thoughts - this is an advanced notice that we (EPA) want to bring it up to see what are people’s thoughts and concerns. The Technical Impracticability (TI) waiver granted by TPA. The communities they have: institutional tools required the plume is not expanding its one part of the potential. Whether it’s a Technical Impracticability (TI) waiver or MNA. We’re looking at the same time frame and any part circle of remedy to reduce min exposure we have to go in every 10 years

DIFFERENCES: largely procedural, in Technical Impracticability (TI) waiver it’s a big deal. We (EPA) don’t grant many. It’s granted to certain areas. It goes through the process Technical Impracticability (TI) waiver, goes through the region as a possibility. MNA makes sure not expanding beyond that boundary. MNA is making sure it’s all decaying at the rate it’s supposed. Ellwood Glossbrenner (DOE-RL) stated that as the next step both DOE and EPA will continue to review and engaged the FS 2020 and ROD 2022. Draft a.... (Look at the slide)

Committee Discussion:

Committee discussions, including Questions (Q), Response (R), and Comments (C) took place during and after the presentation. The key focus was to outline the next steps concerning 100 K TI.

- Q: Susan Leckband (HAB Chair): “Understanding you have physical limitations here, have you thought about whether or not you would do a partial RTV for the basins and each of those discharge suits?”
- C: Dr. Laura Buelow: “On K - East it has already been done. The same plan is for K West., Eventually, all that will be dug out as deep as possible.”
- Q: Susan Leckband (HAB Chair): “You talked, in general, is it going to be in 2020. Is it at the appropriate time on the work plan?”
- C: Dr. Laura Buelow (EPA): “The RIS is out now and it has been quite a while. Comments were submitted comments to DOE about The RI (Remedial Investigation). The RFS will be submitted out around winter this time.”
- Q: Susan Leckband (HAB Chair): “Are you exploring any other technologies that will help with removal?”
- C: Ellwood Glossbrenner (DOE-RL): “We have looked at treatment options for pump and treat, these are the topics that have risen up to be a key focus. We did pump from 96-20.”
- C: Tom Sicilia (Oregon Department of Energy [ODOE]) (Oregon Department of Energy): “I have experience with TI, there were three criteria that always needed to be met.”
- C: Dr. Laura Buelow (EPA): “The boundaries that are on here are roughly what we’re looking at. I asked point-blank to require an evaluation and I was told EPA can make that require that. With that being said I do think it is something that would benefit that.”
- Q: Jeff Burright (Oregon Department of Energy): “We have migrating Strontium (Sr). That is why we needed an area because it moves. And then with this area, we do not expect it to.”
- C: Dr. Laura Buelow: “It is not moving as much: were not seeing a flux with that K area and even with the pump and treat turned off.”
- Q: Jeff Burright (Oregon Department of Energy): “It’s bound in the soils from the Aquifer?”
- C: Dr. Laura Buelow (EPA): “Yes.”
- Q: Jeff Burright (Oregon Department of Energy): “Could you have MNA require that?”
- C: Dr. Laura Buelow (EPA): “MNA would not make that a requirement either.”
- Q: Jeff; “Are you going to consider the cost of monitoring?”
- C: Dr. Laura Buelow (EPA): “Yes.”
- Q: Bob Suyama (Benton County): “I like to look at things according to the risk. What is the risk of Strontium (Sr)?”
- Dr. Laura Buelow (EPA): “In this case, the concern is someone putting it in the well and using it as drinking water.”

- C: Bob Suyama (Benton County): “I understand from what Jeff just asked the Strontium (Sr) is pretty well fixed and probably won’t get into the river if it decays.”
- C: Dr. Laura Buelow (EPA): “Based on the modeling, the modeling predictions do not show migrating towards the river. If that changes and it starts migrating towards the river we will have to go back and look at it.”
- Q: Shelley Cimon (Columbia River Keeper): “What kinds of discussions are happening right now about K?”
- C: Ellwood Glossbrenner (DOE-RL): “We plan on taking this information for next month.”
- C: Tom Galioto (Public At Large): “The chart on the common contributes are very helpful. It’s interesting it’s the first time I’ve heard a discussion about the actual Hanford clean-up will take 300 years to meet drinking water standards. If you had to make the best estimate at this point based on the comparative chart. The difference seems to be applicability. What would give the HAB the best assurance the site will be monitored and controlled and it would be detected?”
- C: Dr. Laura Buelow (EPA): “I don’t think fundamentally there will be any difference really. I think what you get with the Technical Impracticability (TI) waiver you get really high-level scrutiny from TPA looking at this. That is why a Technical Impracticability (TI) waiver seems appropriate to me. We would not readily agree to a 300 year if there was something else, we could do. We have looked at everything and there is nothing we can do to accelerate this cleanup short of using a billion dollars and everything else”.
- Q: Gerald Pollet (Heart of America Northwest): “Why would you not have a time limit on the TI?”
- C: Dr. Laura Buelow (EPA): “Potentially I don’t want to promise what EPA will do it’s out of my hands. It’s a built-in scenario and will have to evaluate that. The reactor removals have not been included in this.”
- Q: Jan Catrell (RAP Committee Chair): “Were using TI where things will be forever. We like to think 100 years is a tolerance for that. For this group TI makes sense. I hook up on this idea of technical impracticability. We know police departments keep DNA before it was available. Maybe the record or proposed plan could include some money for research? TI seems to be a high-level answer to the problems we have here The HAB wants to know the mitigating factors.”
- Q: Susan Leckband (HAB Chair): “So many discussions about risk. What is the risk? The risk of exposure can happen. What are the results of being exposed? That is what the risk is.”
- C: Dr. Laura Buelow (EPA): “Cancer is the risk. You’re an increased chance of getting cancer 1 in a million to 1 in ten thousand. It replaces the calcium in the bones.”

Committee members asked at this point it’s difficult to dig it out? And the answer included a statement that “We still have that will be down in the soil.”

- Q: Marissa Merker (Meeting Attendee): “There’s been no precedent set for radioactive in the K area and there looking at it in the 200 area how will EPA choose responsibly?”
- C: Dr. Laura Buelow (EPA): “The process doesn’t change. There’s one for every single decision we have to go through. It looks independently at these. Now we’re at a point where we will have to make harder decisions. We take a look at K N if the time works out similar.”
- Q: Liz Mattson (Hanford Challenge): “We can’t get 300 years down, were you including the reactor and doing that RTV in 2068 is that included in that? We’re still waiting for the final rods for the reactors?”
- C: Dr. Laura Buelow (EPA): “The assumptions were that the waste sites would be dug as deep as they can but the reactors wouldn’t come down. Magnitude: if we brought reactors down, pump-and-treat, -- how could we bring the timeline down somewhat but not 100 years. Yes, that is correct were waiting for the final rods for the reactors.”
- C: Ellwood Glossbrenner (DOE-RL): “The alternative back then was 2068 but can’t guarantee DOE will do that.
- Q: Shelley Cimon (Columbia River Keeper): one thing I’m mulling over which pathway would be administratively, legally more on point?”
- C: Dr. Laura Buelow (EPA): “If we had a straight answer we would have come here and said that and why. There is not a clear-cut answer on this one.”
- C: Jan Catrell (RAP Committee Chair): “Thank you, Laura, for bringing this to use early so we can discuss this again.”
- C: Dr. Laura Buelow (EPA): “Once the feasibility study is out in draft form, we will be having more conversations with headquarters and EPA too. We’ll keep you posted through Emy when that comes out sometime this winter.”
- C: Susan Leckband: “It’s currently on for April on the work plan lets us know sooner than later.”

Tri-Party Agreement (TPA) Milestone M-37 Coordinated Closure – Public Comment Period

Nina Menard (Project Manager at WA State Department of Ecology) and Deb Alexander (Nuclear Waste Program Manager) presented the topic of “*Coordinated Closure: Improving How State & Federal Regulations Work Together*”³ as an Agency Update.

³ [Coordinated Closure](#)

Summary – The presenter stated that coordinated closure makes good sense and allows cost savings by coordinating the paperwork and the fieldwork between CERCLA and RCRA permitting. DOE, EPA, and Ecology agree this makes good sense. The presentation posits that there are three main kinds of work at Hanford - each has its own laws/regulations:

- **Atomic Energy Act (AEA)** –
 - Manages radioactive source, byproduct, and special nuclear materials.
- **State Hazardous Waste Management Act (HWMA - Hazardous Waste Management Act)**
 - HWMA - Hazardous Waste Management Act is the state law to implement the Federal RCRA Program.
 - Permits/close areas that treat, store and dispose of (TSD - Treatment, Storage, And Disposal) of dangerous (hazardous) wastes.
 - Applies corrective actions for soil & groundwater contamination from past practices (waste disposal, leaks & spills) releases at facilities with a TSD permit.
- **Comprehensive Environmental Response, Compensation & Liability Act (CERCLA)**
 - Addresses contamination from past practices at uncontrolled or abandoned facilities.

The 3 Laws/Regulations overlap & can conflict - Tri-Party Agreement describes how to “coordinate”. August 19, 1987, is the date that USDOE and Washington agreed that Washington got the authority to regulate mixed waste

- **A TSD (Treatment, Storage, And Disposal) disposal site can look identical to a past-practice site. At Hanford the difference is:**
 - Whether the site was in use after August 19, 1987.
 - Whether the site handled mixed waste (dangerous and radioactive).

Settling basins at B/C Reactors weren't used after 1968. They are a “past practice” and 207-A basins near Evaporator were used after 1987. They are a TSD (Treatment, Storage, And Disposal) unit. Regarding the “Coordinated Closure” concept, At Hanford TSD and past practice sites can touch each other and have a) Identical cleanup goals; b) Cleanup goals named in 2 separate documents (HWMA - Hazardous Waste Management Act Permit and CERCLA ROD), and c) 2 different cleanup schedules.

CERCLA [Comprehensive Environmental Response, Compensation and Liability Act (1980)] is also known as a Superfund, providing statutory authority for cleanup of hazardous substances. ROD is the "Record of Decision". Section 5.5 of the TPA Action Plan describes the “interface” (coordination) of TSD (Treatment, Storage, And Disposal) waste management with the response to contamination from past practices. At Hanford, there has been confusion because CERCLA also addressed components that are non-dangerous. TSD (Treatment, Storage, and Disposal) and past practice sites can touch and have the same cleanup goals, cleanup goals named in 2 separate documents and 2 different

There has been Proposed Modification to the Hanford Facility Federal Agreement and Consent Order.

- Section 5.5 of the HFFACO already recognizes the need for a “...procedure to coordinate the TSD unit closure or permitting activity with the past-practice investigation and remediation activity to prevent overlap and duplication of work, thereby economically and efficiently addressing the contamination.”
 - Needed more detail to Section 5.5 on the coordination and alignment of the schedules (TPA milestones) for TSD closure and past-practice cleanup.
- Ensure that the environmental impacts associated with past and present activities at the Hanford Site are thoroughly investigated and appropriate response action taken as necessary to protect the public health, welfare, and the environment;
 - Provide a framework for permitting TSD Units, promote an orderly, effective investigation and cleanup of contamination at the Hanford Site, and avoid litigation between the Parties;
 - Ensure compliance with RCRA and the Washington Hazardous Waste Management Act (HWMA) (Ch. 70.105 RCW) for TSD Units including requirements covering permitting, compliance, closure, and post-closure care.

- Establish a procedural framework and schedule for developing, prioritizing, implementing and monitoring appropriate response actions at the Hanford Site in accordance with CERCLA, the National Contingency Plan (NCP), 40 CFR Part 300, Superfund guidance and policy, RCRA, and RCRA guidance and policy;
- Facilitate cooperation, exchange of information and the coordinated participation of the Parties in such actions; and F. Minimize the duplication of analysis and documentation.

In coordinating these two section 5.5 needs to be more detailed in order to determine how to coordinate these two sets of regulations.

A Key Question Was Posed: **Why Does The TPA Have To Change If It Already Allows Coordinated Closure?**

The listed/presented answer was

- We haven't done a lot of this.
- As we work on the Hanford Site-wide Permit, we saw that we need to spell out more details.
- Needed schedule alignment between the CERCLA documentation and the permitting modifications through TPA milestones.

There Is Also Proposed Modifications in HFFACO

Section 5.5 is the guts of the changes. New milestones that align the closure plan medication with the submittal corresponding CECLA RI/FS

- Section 5.5 in the Action Plan is the guts of the changes. Minor changes in sections: Section 3.3 | Section 6.1 | Section 7.4.2
- New milestones to align the closure plan modification with the submittal of the corresponding CERCLA RI/FS and/or proposed plan.

Nina Menard gave an overview of the slide of the explanation of the milestones.

DOE potentially could apply to Ecology for an alternative. The first set of milestones give DOE the opportunity to permit a modification that says this is just as protective, will you approve us using these requirements. The second set, how DOE would conduct closure of dangerous waste management unit. Looking at CERCLA comes after the rod.

- Milestones are coupled together to address alternative requirements and a complete closure plan.
 - WAC 173-303-610(1) (e) states that with approval by the director all or part of the closure requirements can be replaced.
 - The first milestone of a set states that DOE can request alternative requirements in conjunction with the CERCLA OU submittal of a proposed plan.
 - The second milestone states that DOE will submit a permit modification that contains all the detailed actions for closure in conjunction with the submittal of the CERCLA Remedial Action Work Plan.

Summary

When you have the work plan you will have a closure plan to go through modification and take that detail of the work plan and draw that into the closure plan. We will have description of the unit we will have to be TBD and reference then the appropriate milestone to be submitted to fill in those blanks.

Following the completion of the presentation, a Committee Discussion was held including Questions (Q), Response (R), Announcements (A), and Comments (C) took place during and after the presentation with Identification of the next steps.

- Q: Jan Catrell (RAP Committee Chair): "You say there are gaps in these laws. Do you want TPA Rev. 9 to have these changes incorporated?"

- C: Nina Menard (Project Manager at WA State Department of Ecology): Nina discussed Operable Units, lead agencies, work plans, records of decision. She stated “We are changing the tri-party agreement which dictates the conditions of what The RCRA (Resource Conservation and Recovery Act) Permit. The info that is missing that will be later on supplied through CERCLA work will be additional and effect the TPA milestone. When we catch up, DOE must do a modification of permit and incorporate what is described in the CERCLA Work plan into the closure plan.”
- C: Jan Catrell (RAP Committee Chair): “It also makes agency do part of the work.”
- C: Nina Menard (Project Manager at WA State Department of Ecology): “It makes DOE and ecology. It will be in class 3. We sign the work plans EPA signs record of decision and sign sampling and analysis plan. Though records and decisions signed by the state.”
- Q: Tom Sicilia (Oregon Department of Energy [ODOE]): “Under CERCLA is there any clawback?”
- C: Nina Menard (Project Manager at WA State Department of Ecology): “They must meet the cleanup criteria. There is already a feasibility study on that technology but they still have cleanup criteria they have to meet.”

Ecology explained permitting criteria for alternative requirements. First permit mod contains historical information, the second modification, once the CERCLA work plan is done, it must be pulled into the closure plan. Closure enforcement is added at that time. Then RCRA applies.

To provide further details to the discussion, Nina Menard (Project Manager at WA State Department of Ecology) stated that RCRA we have specific requirements more restrictive than CERCLA (Comprehensive Environmental Response, Compensation and Liability Act [1980]), we have to meet alternative. If DOE says yes it was met. Part of this is the modification, what has to happen and milestones the work plan has to be pulled into the closure plan and permit so we can reinforce. We need to make sure it is signed at that time. If you don't have the ability to apply or meet standards, we will put it under B.

- C/Q: Shelley Cimon (Columbia River Keeper): “When the digs were done out on the river and they were done on interim and part of the interim closure was filling them in. but they didn't meet the cleanup standards. How can we comment? After ROD is implemented no PI opportunity unless remedy doesn't work. Then DOE must do an amendment and ESD, then the public may comment again.”
- C: Gerald Pollet (Heart of America Northwest): “I teach this in law school and I have several issues. This short-circuits many steps when we do removal actions instead of remedial actions.”
- C: Nina Menard: “This is going into TPA as remedial actions.”
- C: Gerald Pollet (Heart of America Northwest): “I don't see that identified.”
- C: Nina Menard: “Look at milestone package, go to page 20, M-37-21, the copy is there. Also, look at the next item. Milestones are hooked to RODs.”
- C: Gerald Pollet (Heart of America Northwest); “This is specific and not in the general language. You're changing the TPA. You should add the wording to the general TPA Section 5.5.”
- C: Nina Menard (Project Manager at WA State Department of Ecology) further stated that deep digs were already in groundwater and DOE excavated to remove part of the Aquifer to removed Hexavalent chromium and it was already in groundwater. The decision was to make a pump and treat.
- C: Shelley Cimon (Columbia River Keeper): “I'm wondering how these proposed changed will address changing conditions.”
- C: Nina Menard (Project Manager at WA State Department of Ecology) stated that what is being called “changing conditions” is something that is in the actual work in implementing interim record decisions. The way it was done in the 100 area (as much as the soil was removed), it met the criteria. What didn't meet was the groundwater. It is still being treated; it's not being ignored. For RTV everything was done what could be done. It's different discussing in the future. You will always come across instances where it's not what we thought it was going to be.
- Q: Shelley Cimon “Are remedies bound sideways?”
- C: Nina Menard: “Not necessarily. If it is determined the remedy will not work DOE will have to do a ROD Amendment or ESD. And those would be an opportunity for public comment.”
- Susan Leckband (HAB Chair): “I'm presuming they're all on board with this and DOE?”
- C: Nina Menard: “Yes.”
- Q: Jan Catrell (RAP Committee Chair): “If it is already in the document, how can you not apply it to other things. Nina Menard: it has to be associated with past-practice units. There must be a close association. This

does not apply to the tank units. Ecology determines the definition of “closely associated.” RCRA / CERCLA areas can be right next to each other physically but not be part of this.”

- C: Gerald Pollet (Heart of America Northwest): “Every time we put something under CERCLA instead of RCRA, public groups beat their heads against the wall. Is the right to appeal reserved?”
- C: Nina Menard: “Yes.”
- Q: Gerald Pollet (Heart of America Northwest): “What you foresee when instead of doing remedial action US DOE as frequently does let’s do removal action which then many things you described there is no feasibility study there is no detail for RFS. Is this going to be applicable if removal action?”
- C: Nina Menard (Project Manager at WA State Department of Ecology): “This is written directly to RIS and being put into TPA as remedial action, not a response action. We have DOE committed to doing RIS response. Looking on page 20 m 37-21 within 271 is a ROD, the next one is currently. All these milestones hooked to record of decision and.”

Nina Menard provided more details stating that DOE and ecology sat down two years ago and went through all the units known at this time. Which ones will need to be coordinated? A shortlist of units met actual close criteria. EPA was part of the discussions. Only the ones agreed on will be the ones applied to. There are other units that will have to close during the RCRA protocol. Milestones address that.

- C: Gerald Pollet (Heart of America Northwest): “Should be adding to 5.5 which doesn’t limit this and in two years TPA at your door saying you.”
- Q: Jan Catrell (RAP Committee Chair): “If it’s in documents and says can be applied in other areas can it be restricted in other ways?”
- C: Nina Menard (Project Manager at WA State Department of Ecology): “Yes, it does. We have created milestones 3.04 this specifically does not apply to any of the tank units.”
- C: James Lynch (DOE ORP / RL): “This would have to be approved by Ecology’s director.”

The representatives from the WA Department of Ecology commented that enforceability was the priority for us entering into these discussions.

- C: James Lynch (DOE ORP / RL): “There’s language in the 5.5 a proposal that will have to get approval by ecology director anyways.”
- Q: Tom Sicilia (Oregon Department of Energy [ODOE]); “Who decided what is closely associated?”
- Q: Gerald Pollet (Heart of America Northwest): you just said the last milestone on page 21. Is that related to tank farms?”
- C: Nina Menard (Project Manager at WA State Department of Ecology): “This is CX tanks and they are small so they are located southwest C tank farm. They have associated with Strontium (Sr) semi-works. They are so many pipelines for so many underground tanks. Because physically DOE could not just close those 3 without addressing everything around it.”
- Q: Gerald Pollet (Heart of America Northwest): “Why wouldn’t it just be RCRA closure?”
- C: Nina Menard (Project Manager at WA State Department of Ecology): “Because there are so many CERCLA around there we could not do it.”
- Q: Gerald Pollet (Heart of America Northwest); “Why not RCRA instead of CRCLA?”
- C: Nina Menard (Project Manager at WA State Department of Ecology): “Some of the contamination is by radioactive streams that are not regulated by RCLA.”
- Q: Gerald Pollet (Heart of America Northwest): “I have a concern every time you put something under CRCLA rather than RCLA, people use rights for public comment and review. Is the right to appeal preserved for meeting closure and requirements under RCRA.”
- C: Nina Menard (Project Manager at WA State Department of Ecology): “Yes, because it is approved under admin record doesn’t mean it will approve the 3 to be.”
- Q: Gerald Pollet (Heart of America Northwest): “We preserve it is still in permit modification.”
- C: Nina Menard (Project Manager at WA State Department of Ecology): “Yes.”

James Lynch (DOE ORP / RL) suggested that the WA State Department of Ecology walkthrough example for folks on how this could work (Page 4 of the material presented). Nina Menard (Project Manager at WA State Department of Ecology) stated that Rev 9 DOE has submitted closure plan that has history, what went out there, groundwater, contamination, these are standards we will meet. We are not requesting alternative requirements. Clean closure. The

“How” actually comes along remedial action work plan for 200 then that work plan. All the work plans will essentially look the same. Once through process look at public comments and consider changes.

Nina Menard gave an example of how the closure might happen: DOE is saying we don't want to do RTD on this...feasibility study shows a certain way that's more efficient. It's a two-part process when requesting alternative requirements. James Lynch (DOE ORP / RL) commented that providing the opportunity to public is part of how we're going to do cleanup. Finally, Nina Menard stated, “it was a big consideration that we not lose forcibility in a phased process. There will be permit conditions to submit for milestones to make enforceable. That's when closure performance standards get outed that makes getting work done and making sure it's at standards. There are permits that will make sure it gets done the way it's supposed to do. “

To close the discussion Jan Catrell (RAP Committee Chair) asked if there were any more comments. The agenda item closed following no further comments.

Committee Business and Wrap Up

Jan Catrell (RAP Committee Chair) opened the forum for discussion on the topic of Cumulative Impact Evaluation (CIE). Key questions were asked centering on whether there is something specific the committee should be focusing on with James Lynch (Deputy Designated Federal Officer, DOE-ORP/DOE-RL) stating that elements that can be leveraged to work into the work schedule should be of focus. The main focus is in the central plateau those waste sites are in proximity we have broken A Central Plateau in Beta Zone Meta Boxes. They historicized down to the water.

- Q: Jan Catrell (RAP Committee Chair): “How does the information you generate fit in the work plans?”
- C: “We're using the info we now know today as a look forward. Work plans approved go to field to execute. Paraments get changed if different.”
- Q: Jan Catrell (RAP Committee Chair) “Who has access for the information the program provides?”
- C: “Tech is in admin record now, in for review, then get approved then implement.”
- Q: Jan Catrell (RAP Committee Chair) “Do all agencies have access to a Modeling Program.”
- C: “NO. The inputs and the outputs will be available to everyone. This tool is going to be used to help it's not the single decision making. CIE is meant to be a technical tool, not Policy Machine.”

Doug Hildebrandt gave further detail about the CIE modeling to HAB. Focused on 28 vadose zone boxes. DOE is using the graded approach. We incorporate what we learn and make the modeling available. It is not something you can run on a laptop. Who has access, how can HAB see/use it? Doug – the technical team, EPA, Ecology and external panel is reviewing and we'll incorporate all the comments/input. Eventually, the model packet reports will be available. The output will be available.

Bill Hammel stated that the computer program is accessible on the server, accessible from CHPRC (CH2M Hill Plateau Remediation Contract) for configuration control. The inputs and outputs will be available.

The Use of Technology to Support Issue Manager Teams Was Also Discussed

Specifically, some committee members referred to the possible use of Slack - Slack is a cloud-based proprietary instant messaging platform developed by Slack Technologies. Slack offers many features, including persistent chat rooms (channels) organized by topic, private groups, and direct messaging. Content, including files, conversations, and people, is all searchable within Slack. Users can add emoji buttons to their messages, on which other users can then click to express their reactions to messages. Slack is Freeware (Free software) which everyone can have access to. Instead of calls, we can have additional space available to do hot wash. It would have to be informal and unofficial.

Tom Sicilia (Oregon Department of Energy [ODOE]) described options offered with this software. It would have to be informal. Jan Catrell (RAP Committee Chair) stated that there is no impediment. However, other committee members (specifically The Federal Agency Representatives) stated that some offices might not be permitted. Gerald Pollet (Heart of America Northwest) also noted that there can be public record issues. However, Jeff Burright (Oregon Department of Energy) says you can download all and contribute as a package if asked. Oregon can and does use it. Jeff Burright also stated it is like a chat room. It is a place for conversations to live in. This must follow our processes.

Tom Galioto (Public At Large) stated that email works just fine for Issue Manager Teams. Others queried “Why slack vs google.docs. DOE can’t use google.docs”. An action was taken for the Agency representative (JoLynn Garcia, DOE-ORP – Federal Coordinator) to check with Ben Ellison to See If We Can Use Slack.

Update RAP 3 Month Work Plan

The facilitator spoke about drafts made to update the committee work plan with topics for K Area TI was moved up to January.

For November Committee Meetings:

- Some discussion about 324 Buildings should be included in the next meeting. Does Ben Vannah have PNNL report yet? RAP would like a few photos/updates for November.
- Tom Teynor can come bring an update on PFP.
- Potential advice for cribs? Start Issue Manager Team?
- Site-wide groundwater update – annual report? 618-11?
- Could we get a TPA milestone status on every topic from here out? Jim, that’s in the overarching questions in the work plan.
- Gable pond cap for January. Design on CAP is starting
- The IM Committee will start preparing advice for 100 B-C plans. It will be ready for November, go to December full Board and submit one day before deadline on comment period extended by 30 days.

Meeting Adjournment

Purpose: The purpose of the 4:30 P.M. Meeting Adjournment meeting agenda item was to close the meeting at 4:30 P.M. and enter an adjournment.

Document Attachments - Wednesday, October 16, 2019, River & Plateau (RAP) Committee Meeting

Document attachments represent presentations, literature, images, and exhibits distributed and covered during the Hanford Advisory Board River & Plateau (RAP) Committee Meeting on Wednesday, October 16, 2019.

- Attachment 01: RAP Sign In Sheet
- Attachment 02: Preso B 100-BC Area Proposed Plan Final
- Attachment 03: Preso C 100 K TI Waiver presentation FINAL
- Attachment 04: Preso D Coordinated Closure Presentation Oct 2019
- Attachment 05: RAP FY2020 Work Plan 101319 v0 (002)

Meeting Attendees - Wednesday, October 16, 2019, River & Plateau (RAP) Committee

The following listing represents Board Members/Alternates, Agency Representatives, presenters, and other meeting attendees present during the Hanford Advisory Board River & Plateau (RAP) Committee on Wednesday, October 16, 2019. This listing solely represents confirmed participants.

Meeting Chair:

Janice (Jan) Catrell, Public-At-Large | River & Plateau (RAP) Committee Chair
Mr. Tom Sicilia (Oregon Department of Energy [ODOE]), Oregon Department of Energy | River & Plateau (RAP) Committee Vice-Chair

Board Members and Alternates:

| | | |
|----------------|---------------------|--|
| Susan Leckband | Liz Mattson (Phone) | |
|----------------|---------------------|--|

| | | |
|---|---|---|
| Shelley Cimon | Janice (Jan) Catrell | Tom Sicilia (Oregon Department of Energy [ODOE]) |
| Jeff Burright (Oregon Department of Energy) | Gerald Pollet | Tom Galioto (Public At Large) |
| Jan Catrell, Member | Tom Sicilia (Oregon Department of Energy [ODOE]), Alternate | Dana Miller, Member |
| Shelley Cimon, Member | Helen Wheatley, Alternate | Bob Suyama, Member |
| Gene Van Liew, Member | Pam Larsen, Member | Gerry (Gerald Pollet - Heart of America Northwest) Pollet, Member |
| Susan Leckband, Member | Emmett Moore, Member | Dan Solitz, Alternate |
| David Bolingbroke, Member | Marissa Merker, Alternate | Vince Panesko, Member |
| Chuck Torelli, Memeber | | Tom Carpenter, Alternate (Phone) |
| Ken Niles, Member (Phone) | Dan Serres, Alternate (Phone) | |
| | | |

Others:

| | | |
|--|---|---------------------------------------|
| JoLynn Garcia, DOE-ORP | Jennifer Copeland, CHPRC | Tom Rogers, WA DOH |
| James Lynch, DOE-ORP | Crystal Mathey, WA DOH | Tom Teynor, DOE-RL |
| Stephanie Schleif, Ecology | Ginger Wireman, Ecology | Julie Atwood, Yakama ERNM |
| Scott Davis, MSA-TPA | Theresa Bergman, CHPRC | Kelsey Shank, the EDGE |
| Craig Cameron, EPA | Sophia Guikein, CHPRC | Jen Colborn, MSA |
| Al Farabee, DOE-RL | Dana Gribble, MSA | Ron Skinnerland, Ecology |
| Steve Balone, DOE | Laura Buelow, EPA | Jason Capron, CHPRC |
| Ellwood Glossbrenner, DOE-RL | Michael Cline, DOE-RL | Christopher Parsons, Sayre Consulting |
| Kim Welsch, Ecology | Nina Menard, Ecology | Ella Feist, CHPRC |
| Jason Hulston, CHPRC | Mostata Kamul, DOE-RL | Deb Alexander, Ecology |
| R Douglas Hildebrand, DOE | Annette Cary, Tri-City Herald (Phone) | Emy Laija, EPA (Phone) |
| Abi Zilar, (Phone) | Yvonne Levardi, DOE (Phone) | Lindsay Strasser, North Wind (Phone) |
| Theresa Bergman, CHPRC (Phone) | | |
| Adrian Woolcock (Facilitator), ProSidian | Ashley Herring, ProSidian Facilitation Team | |