



**FINAL MEETING SUMMARY**  
**HANFORD ADVISORY BOARD**  
**RIVER & PLATEAU COMMITTEE**  
*August 7, 2018*  
*Richland, WA*

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

## **Opening**

Jan Catrell, Public At Large and River & Plateau (RAP) Chair, welcomed committee members and introductions were made. The February 2018 meeting minutes were approved by consensus.

### Announcements

James Lynch, U.S. Department of Energy (DOE) Office of River Protection (ORP) and Deputy Designated Federal Officer (DDFO) informed members of a pre-solicitation special community day for the 222-S Laboratory Draft Request for Proposal (DRFP) on Tuesday, August 21, 2018. James noted that the special community day will consist of a tour, followed by a presentation on the 222-S Laboratory DRFP, and end with one-on-one sessions with an opportunity to ask questions. James stated that members can refer to the solicitation website for more information on the 222-S Laboratory DRFP at [https://www.emcbc.doe.gov/SEB/222S\\_Lab/](https://www.emcbc.doe.gov/SEB/222S_Lab/).

Bob Suyama, Benton County and Tank Waste Committee (TWC) Chair informed RAP members of a TWC meeting to be held on Wednesday, August 8, 2018 at the Richland Public Library.

## **Plutonium Finishing Plant Update**

### Agency Presentation

Jan Catrell introduced the topic of the Plutonium Finishing Plant (PFP). Tom Teynor, Project Manager for DOE Richland Operations Office (RL) provide members with an update on PFP.

Tom addressed the following framing questions before the presentation:

1. What is the status of demolition?
  - Tom noted that demolition has not resumed since the stop-work as a result of the contamination release incident in December. Stabilization work has been completed for the remaining contaminants left on the soil, which has been containerized and removed from PFP.
  - The contractor is preparing to conduct a management readiness assessment with oversight from RL, DOE Office of Environmental Management's (DOE EM) Office of Enterprise Assessments (EA), and other external consults.
2. What is left to do?
  - The strategy plan for resuming the PFP demolition is divided into a Lower-Risk Scope and Higher-Risk Scope, which is based on the estimated gram quantities of plutonium materials left in the debris.

Key points from Tom's presentation<sup>1</sup>:

- Tom referenced the first slide of the presentation, which shows a photo of a "super sacks" containing demolition debris from PFP. There were 20 "super sacks" removed and sent to the Central Waste Complex.

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<sup>1</sup> [Plutonium Finishing Plant Resumption of Work](#)

- There were 131 corrective actions as a result of the contamination incident. 94 of the 131 corrective actions are considered pre-start actions, which were required to be addressed and considered closed before the management assessment can start.
- As part of the basic plan for the path forward, the contractor reviewed the air dispersion models, assumptions, and ground disposition models. The contractor reached out to Pacific Northwest National Laboratory (PNNL) and Lawrence Livermore National Laboratory (LLNL), as part of the review of the work package. As a result of this review, the work package was broken down into multiple work packages.
- An option engineering analysis was performed in order to address the remaining demolition required for the 234-Z and 236-Z. Enhanced controls were developed, which include the assumptions from air dispersion models. The resumption work plan is available on the [Hanford website](#).
- The PFP demolition resumption schedule on slide eight of the presentation shows a timeline of scheduled and completed events through June of 2019. Once the management review is complete, debris disposition of 234-5z will begin and continue through October 2018. A stop work will be issued for a week in between phases to allow for “lessons learned.” The stop work will ensure any necessary changes will be addressed.
- A map on slide nine of the presentation shows a map of the PFP complex with the locations of the containerized waste, lower-risk demolition areas, and the higher-risk demolition areas. The risks are based on material-at-risk (MAR) and surface contamination configuration.
- The map on slide 14 of the presentation shows the current Radiological Buffer Area (RBA) and access control boundaries. There are certain areas within the RBA boundaries that require workers to wear suits and respirators.
- The code of operations consist of the Change Management Process (CMP), the Hazard Review Board (HRB), and the Senior Supervisory Watch (SSW). The PFP Manager and Deputy Project Manager provide oversight on the CMP. The HRB is comprised of a senior manager chairperson and subject matter experts. The SSW is comprised of 26 senior managers and subject matter expert.
- Since January 2018, there have been 54 briefings to approximately 1,800 workers. Weekly roundtable discussions have been held with PFP employees and project leadership to ensure questions and concerns are addressed. The questions and concerns are tracked and responses are provided to employees.
- An independent readiness review will be conducted prior to DOE authorizing the resumption of demolition activities. The team will consist of five members with expertise in conduct of operations and radiological control. There will be one week of documentation review and an additional week of field work. Any deficiencies found will be categorized as pre-start and post-start activities. A briefing is scheduled for August 23, 2018 in Richland, WA.
- DOE has implemented enhanced oversight with assessments conducted by DOE EM and EA to ensure all corrective actions have been addressed before demolition can resume.

## Agency Perspective

Stephanie Schleif, Washington State Department of Ecology (Ecology) provided her perspective on PFP. Stephanie noted that the Agencies took a phased approach to lifting the stop work. The first phase identified any pre-starts before the lower-risk stop work could be lifted. Ecology is awaiting the briefing for the management assessment to ensure all issues have been addressed. The next phase will be to work on completing any requirements before the higher-risk stop can be lifted.

### ***Committee Member Questions (Q), Responses (R), and Comments (C):***

*Note: This section reflects individual questions, comments, and agency responses.*

Q: “Has the RBA perimeter changed?”

R: “The inner perimeter area has changed significantly. We established a new work control boundary. The work control boundary requires employees to check into a field office before they can enter the work control boundary. The high contamination RBA has been expanded to three times larger than it was previously.”

Q: “Are we going to see any impacts to any milestones or any work going on, specifically Tank Farms?”

R: “As far as Washington River Protection Solutions (WRPS), I am not familiar with their milestones. WRPS does have full access to the Tank Farms within the RBA. WRPS has their own radiological program, which they check in with us in case of an incident with PFP they are alerted. As far as the RL Tri-Party Agreement (TPA) milestones, there was one groundwater milestone impacted by the work control boundaries.”

Q: “What about funding? How is that impacted?”

R: “Because we did not anticipate the PFP project going on as long as it has, we have not been able to receive additional budget authorization (BA). We have been able to use carryover, what we call control point. In our control point we have PFP, PBS-12 (sludge), and groundwater. We have about \$20 million carryover in our control point. Looking into FY2019, we are in the same situation. There will be an Independent Cost Evaluation (ICE) to validate the revised performance measurement, as well as the scope and cost.”

Q: “We have not seen any documents that explained why there were some of the highest levels of contamination in the northwest corner. What was the result of the investigation in terms of the contamination spread in the northwest corner? Was this a result of a historic event? We have not seen any information of how it occurred or how to prevent it.”

R: “The contamination was from the Plutonium Reclamation Facility (PRF) during the size reduction.”

C (Ecology): “Ecology is currently in a TPA dispute with DOE on two milestones they said they would miss, but we think there are several more. Environmental Protection Agency (EPA) and Ecology are working on a tentative agreement about which milestones are being missed and it will be going out for public comment.”

C: “We are concerned that the basic storm water demolition permit requirements have never been applied to the demolition activities at PFP. When you are spraying on vehicles in any other setting, are required to comply with those requirements including storm water retention and control of contamination storm water. I did not see any of this information in the review of the enhanced controls nor have the regulatory

agencies responded to some of my comments. Why are you not applying storm water controls permit requirements to the demolition activities when you are using large volumes of dust suppression water.”

R (EPA): “The permits wouldn’t be necessary. Usually when you have a storm water permit, it has to do with large bodies of water. I would be more concerned about having the right controls in place to keep the contamination from spreading.”

Q: “Where is the weather station located at?”

R: “We get most of our data from a station two miles from PFP. We do have a wind restriction of 15 miles per hour to do any load-out, demolition, or size reduction work. We are in constant contact with the weather station, so if it looks like the weather is going to change the crew will apply fixative before any inclement weather.”

### **Milestone M-91 Update**

#### *Agency Presentation*

Jan Catrell introduced the topic of Milestone M-91 (M-91). John Price, Washington State Department of Ecology (Ecology) provided members with an update on Milestone M-91.

Key points from John’s presentation:

- Retrievably stored waste (RSW) was stored in 24 burial grounds, which is now known as Transuranic Waste (TRU). After the passage of the Resource Conservation and Recovery Act (RCRA) in 1976, the RSW became a RCRA requirement which designates waste as solid or mixed radioactive/hazardous waste. The radioactive solid waste and mixed low-level waste is disposed on the Hanford site, but the TRU and TRU mixed waste is shipped off the Hanford Site to the Waste Isolation Pilot Plant (WIPP) in New Mexico where it can be disposed of.
- There are over 8,000 waste containers stored in the central waste complex at Hanford currently waiting for Hanford turn to ship waste to WIPP. There is a large amount of TRU remote handled waste that cannot be handled up close.
- The Federal Facility Compliance Act (FFCA) of 1992 ensures DOE cannot store mixed waste longer than a year without a plan and schedule to treat it. The plan includes constructing or acquiring treatment facilities that may not exist. The waste can be shipped to WIPP in lieu of treatment.
- DOE and Ecology are currently in negotiations for changes to the M-091 milestones. A few years ago, DOE and Ecology negotiated a deadline of 2030, which was the same closing year as WIPP. WIPP’s closing date has been extended to 2050. The 2030 deadline requires DOE to have two operating facilities to process two different waste streams at the same time. Extending the date opens up the possibility of process two different waste streams in on facility.
- The M-091 milestone only covers certain types of waste. The waste from PFP is not covered under the M-091 milestone. Currently, DOE is reviewing all of the waste schedules in an effort to coordinate the schedules.
- Ecology is waiting for DOE to provide a plan and schedule on what to do with the waste. Once DOE presents the plan and schedule for the waste, the TPA Agencies will discuss changes to the

M-091 finish date. DOE is coordinating with WIPP on the certification and transportation schedules. October 1, 2018 is the deadline for negotiating the M-91 milestone.

#### Agency Perspective

Al Farabee, DOE Project Manager provided his perspective on the M-091 milestone. Al stated that DOE and Ecology are currently in negotiations to extend the M-091 milestone finish date from 2030 to 2050. Al noted that in order to build and operate the two facilities to treat the different waste streams by 2030, there would be a funding need of \$200 to \$300 million dollars a year. Al stated that Perma-Fix Northwest is the only operating facility that treats waste currently on Hanford Site. He noted that there are many milestones that have been met over the years for processing TRU waste.

#### ***Committee Member Questions (Q), Responses (R), and Comments (C):***

*Note: This section reflects individual questions, comments, and agency responses.*

*Q: “What kind of treatment is going to happen in the facility that is needed in the M-091 milestone?”*

R (RL): “Primarily, we need a facility to process the remote handled waste. The waste can be segregated into two categories. There is waste that does not have a high radiation dose, but cannot be processed hands on. Then there is waste that has too high of a radiation dose that has to be processed in a shielded cell using manipulators. Additionally, we will need shipping facilities. We currently have the facility on site that has a processing side and shipping side. We are hopeful that we will be able to use that facility’s shipping side.”

*Q: “I heard there was a possibility of shipping TRU waste to a facility in Idaho. Have you heard any information about this?”*

R (RL): “The facility you are speaking of is the Advanced Mixed Waste Treatment Plant (AMWTP) in Idaho. That facility will be out of work by the end of 2019. It is a multi-million-dollar facility that cost about \$100 million dollars to operate. We have had some conversations with DOE Headquarters about the possibility to ship some of Hanford waste to AMWTP for quicker processing than at Hanford. The issue with this project is that in order to ship Hanford waste to AMWTP, we would have to do the same amount of work as if we were to ship the waste to WIPP.”

*Q: “What about the TRU in the burial grounds? I am concerned since it has not been dug up. Is this being considered and will it be met by 2050?”*

R (Ecology): “This is addressed in another milestone series. Ecology is currently in dispute with DOE on the starting of the SW2 field work, which was supposed to start September 30, 2018. DOE notified Ecology that they would not make the milestone date. Ecology has denied DOE’s milestone request. This is part of the milestone changes that Ecology is going to request public comment on. There is no decision on the burial grounds yet.”

R (EPA): “We had a similar situation with other canyon buildings besides U Plant. There is potential TRU that can go to WIPP. The work on the canyon has been put off, so I don’t believe the 2050 date will meet the timeframe for addressing this project.”

R (Ecology): “Those work plans have not started yet. For SW2 there is an approved work plan but DOE elected not to fund the start of field work. We have not started the work plans for the canyons.”

*Q: “What are the estimates of the volumes at the canyons?”*

R (EPA): “DOE has done safety documents in past. I don’t think there is a good feel for what needs to be characterized. I believe in U Plant there was some material that if it was stabilized it could remain in the building, but there is highly concentrated TRU in a vessel that is sitting at CWC.”

*Q: “Perma-Fix was mentioned to be located here in Richland, WA? Does is process waste at Hanford?”*

R: “Perma-Fix is a commercial facility that is located on the outskirts of Richland, WA. It processes Hanford waste, as well as non-Hanford waste under a permit with the State of Washington.”

*Q: “Does this include hazardous and radioactive waste?”*

R: “Perma-Fix has a low-level waste side, as well as a mixed waste side. In terms to the M-091 waste, there is three kinds of waste that they cannot process. There are remote handle waste containers that cannot go to Perma-Fix.”

*Q: “There was a M-091 alternative study that was release two year ago, and in that document, it mentioned some highly concentrated sources that are technically TRU waste. This document mentioned keeping the waste at Hanford for thousands of years to allow decay to occur. Are those sources part of the discussion that are ongoing?”*

R: “Yes, we have it on the radar screen. For example, the number on the German glass logs stated that it would need to be a million different shipments to the meet the shipment and disposal requirements at WIPP. There is waste at Hanford that we need to figure out what to do with and how to do it.”

R: “That subset of waste falls under the term of monitor natural attenuation (MNA). We just don’t have the number of shipments or life to ship thousands of these very small sources in big shielded containers to WIPP.”

*Q: “Are all the WIPP shipments via truck or railroad?”*

R: “Shipments are transported via truck.”

*Q: “Can you clarify the outdoor stored waste versus the retrieved stored waste? Is the outdoor stored waste going to be removed by a set deadline?”*

R: “Yes. We have milestones for that already. The outdoor stored waste is retrievable stored waste. Last year, six packages were removed.”

### **Plutonium Uranium Extraction Tunnel Two Update**

Jan Catrell introduced the topic of the Plutonium Uranium Extraction (PUREX) Tunnel Two. Al Farabee, DOE-RL provided members with an update on PUREX Tunnel Two.

Al provided a video presentation on [PUREX Tunnel Two Stabilization Project Animation](#). This video can be found on the [Hanford Site YouTube channel](#).

### ***Committee Member Questions (Q), Responses (R), and Comments (C):***

*Note: This section reflects individual questions, comments, and agency responses.*

*Q: "Do you feel that there is adequate observation that all of the void spaces will be addressed and filled?"*

R: "If you are addressing all of the void spaces inside each one of the tanks and lines associated with those tanks, we cannot fill all the voids. The important thing that we will do is encapsulate the tanks. The grout will fill most of the volume of the tanks. We have no way to ascertain that we are filling all the crevasses."

*Q: "It is the presumption that this waste will be cut up and disposed of eventually? It's a concern that when or if the grout is cut up, the void spaces could cause a contamination incident. We presume that grouting is the final path to disposition."*

R: "It's a logical concern. Nothing about the grouting of either of the tunnels will pre-disposition a final alternative. We know from industrial experiences that we can cut through grout. We have grouted all of the cells, except G-Cell at the Waste Encapsulation and Storage Facility (WESF)."

*Q: "At the public meeting you responded to questions I had about confirming that after grouting the chemical waste would be characterized. You said there was potential of characterizing TRU versus activity levels. Is there a plan for how to characterize what is in the tunnels after grouting?"*

R: "No. There are 17 risers, but we will only be using six of the risers to insert grout through. There was a discussion of maybe putting an empty thimble in some of the unused risers to lower the highly sensitive equipment."

*Q: "There is equipment available that is large enough to x-ray railroad cars. This is technology currently being used at the U.S. borders, etc. Has it been discussed to use this kind of equipment on the PUREX tunnels?"*

R: "I think when we are at a point in time when a final disposition decision is made, then it maybe a possibility as an option."

*Q: "I gathered from the video presentation that the airflow was by convection out of the HEPA filters through the top of the tunnel. If the grout fills the tunnel then the natural cooling will not be able to operate."*

R: "The HEPA filters is only put in place for the grouting process. There is no airflow and there hasn't been any airflow since 1996. We will put in a HEPA filter in the north end of the tunnel, so all atmosphere displaced by the grout coming into the tunnel will go through the HEPA filter."

R (Washington State Department of Health): "We will be issuing the rad air license for stabilizing the tunnel today or tomorrow. That license will be similar to the first tunnel license for grouting."

*Q: "Will the grouting be pouring continuously when you start?"*

R: "No, we will have six entry points for the grout to be poured through, but only two pumping stations. We will pump through two entry points every day until the grouting is complete. One day we will pump grout into entry point one and two, then at the end of the day, the crew will move the pumps to entry points three and four for the next day. This process will continue through the end of the project."

*Q: "Can you tell us about schedule for when it will start and what are you waiting for?"*

R: “Our schedule depends on the temporary authorization from the Ecology. The temporary authorization is for the installation of the grout insertion devices on August 13, 2018 and a subsequent authorization to begin grouting on September 6, 2018.”

R (Ecology): “We did request that DOE do additional evaluation for the structural integrity of the tunnel, as well as a visual inspection of the inside of the tunnel. Ecology received that recently and is currently reviewing it.”

*Q: “What fell off the table in order to free up funds to stabilize the tunnel?”*

R: “That is too intricate of a question for me to answer.”

*Q: “How can Ecology approve something before the comment period closes?”*

R (Ecology): “Under the Washington administrative code temporary authorization, it does state that the director can approve the temporary authorization for work prior to a comment period ending if it meets certain criteria. We know there will be a request for public hearings, so we sent out notices for the public comment period and meetings. There will be a public hearing on August 27, 2018 at the Richland Public Library and another one on September 5, 2018 in Seattle, WA. Ecology is trying to balance the want for the public to weigh in on this proposal and DOE to proceed with the tunnel because of the risk associated with it. This is one of the reasons we requested additional information in order to make a more educated decision.”

## **Committee Business**

### *Committee Leadership Nominations*

Jan Catrell noted that with the retirement of Dale Engstrom, RAP Vice Chair, there was a need to nominate and select a new Vice Chair for the RAP committee.

Lindsay Strasser, Facilitator stated that Helen Wheatley, Heart of America NW was nominated for Vice Chair of the RAP committee. Helen agreed to serve as Vice Chair for the RAP committee and the selection was approved by consensus.

### *RAP Committee Work Plan*

Members took time to review the proposed FY2019 RAP work plan items and were given an opportunity to provide input and/or suggest additional items to focus on for FY2019.

Items added:

- 100 D/H Record of Decision
- Milestone M-091

Items removed:

- RL/ORP Merger

### *Other Items*

Kristen Holmes, Public Affairs Specialist with DOE-RL informed members of an opportunity for a Hanford Site Tour during the October 2018 meeting placeholders in lieu of a meeting. Kris noted that the tour can be expanded to the Tank Waste Committee as well.

Potential tour dates:

- Tuesday, October 2, 2018
- Wednesday, October 3, 2018

## **Review of Risk Matrix**

### Agency Presentation

Jan Catrell introduced the topic of the Review of Risk Matrix. Doug Shoop, Manager for RL provided members with a Review of the Risk Matrix for the Hanford Site.

Key points from Doug's presentation:

- The sludge removal project is making progress with transferring the Sludge Transport Storage Containers (STSC) from K West to T Plant. The material will be stabilized, treated, and shipped to WIPP. The contractor completed the capital asset project ahead of schedule and under budget.
- The 105K West Basin houses highly contaminated equipment in the water, as well as the sand and garnet filters used to process the basin water. These were determined to be highly contaminated. The basin holds 1.2 million gallons of contaminated water. The debris along with the sand and garnet filters will be characterized and disposed of, including the basin itself which will be filled with grout, demolished, and disposed of.
- The 100-K soil sites located around the basin have not been cleaned up to date. There have been samplings taken from the 100-K East Reactor and soil sites. There are some 100-K East structures that will need to be demolished as part of the remediation of the 100-K area, this includes 110-K East gas storage tanks, 181-K East river pump house, and other various facilities in the 100-K East area.
- PUREX Tunnel One was stabilized with grout a little over a year ago. A structural evaluation determined that Tunnel Two was at a high risk for failure. Historically, Tunnel Two collapsed when it was initially being built. The engineer plans were redesign to using metal/steel for the structural beams. It was determined through photo and video surveillance that the metal/steel inside Tunnel Two has developed corrosion.
- The Waste Encapsulation and Storage Facility (WESF) houses cesium and strontium (Cr/Sr) capsules stored in pool cells. WESF contains 42% of radioactivity in the entire Hanford Site. The capsules will be moved from wet storage to dry storage. The cask transport system for moving the casks to the dry storage area was received from West Valley Nuclear Remediation Site in West Valley, New York.
- The remote excavation of the 300-296 waste site beneath B-Cell (Hot Cell) is part of the future disposition of the 324 Building project. The mockup building will be used to conduct surveillance and maintenance. The waste site will be excavated and stored in container in A, C, and D Cell, then grouted. Once the contaminated soil is removed, the floor in B-Cell will be reinforced.

- The low-level waste drums were repackaged, as well as the waste box. There are large boxes stored in an outside storage area in the Central Waste Complex (CWC).
- Plutonium liquids from PFP were disposed of at the 216-Z-9 Crib when they could not be processed. There are 59,000 grams equivalent of contamination in the Crib. This is underground and is adjacent to PFP. This structure has been determined to be subject to failure.
- There are many structures older than 60 years. Structures include cribs, stacks, filtration systems, and other various structures onsite.
- The 241-WR underground vaults have tanks that are two stories high. The plan is to characterize the vault before opening the tanks.
- 241-Z-361 settling tank has 28,000-gram equivalents of plutonium sitting on the bottom of the tank. This tank is 60 years old and beyond its design life. It has been determined that the tank is not structurally sound and is at risk for failure. This tank is below grade with soil on top of it. There are other below grade structures that still have significant materials inside.
- The 242 B/BL Buildings were constructed as an evaporator to support the 241B Tank Farm operations.
- Doug briefly mentioned other sites on the Hanford site that are of risk that will be addressed at some point. These risks include the 224B Building, 224T Building, Retired Canyon Ventilation System, REDOX, and other various facilities onsite. Doug stated that as part of his risk review of the Hanford Site, all facilities have been identified on a risk matrix that will be provided at the September Board meeting.

#### *Agency Perspective*

Rob Lobos, Washington State Department of Ecology (Ecology) provide his perspective on the risks at Hanford. Rob stated that there are projects around the complex that still need some work to be done. He stated that with all the projects that need finishing, funding is a concern. Rob noted that the priority is to prioritize which projects need to be addressed first.

#### ***Committee Member Questions (Q), Responses (R), and Comments (C):***

*Note: This section reflects individual questions, comments, and agency responses.*

*Q: "What is the plan when the sludge gets to the T Plant?"*

R: "Ultimately the sludge will be treated and shipped to WIPP. In my opinion, we should grout it before we ship it to WIPP."

*Q: "Will the garnet filters actually be changed out?"*

R: "No, they will be emptied of the contaminated garnet media in preparation for the empty vessels."

*Q: "How much garnet filter media waste volume will need to be processed or changed out in the end?"*

R: "Approximately four cubic meters will be loaded into four STSCs and shipped to T Plant for future storage and processing along with the sludge."

*Q: "So will the million gallons of water in the basin be evaporated?"*

R: "We will use a tanker truck system that will take the water out of basin and transfer to the Effluent Treatment Facility (ETF) where it will be treated."

Q: "How often is the water replaced or refilled?"

R: "We monitor the water levels in the basin. The water is never removed, but additional water is added as natural evaporation occurs."

Q: *There is a lot of equipment in the basin. Are you going to remove that?*

R: "We will do it similarly to what we did at K East. Some equipment will be taken out, but the other equipment will that is highly contaminated will be grouted with the basin itself."

Q: "Is the pump hose still in use in K area?"

R: "The K area pump house is no longer operational. There is one in the D area and one in the B & C area. These pump hoses pull water out of the Columbia River."

Q: "When was the airflow in PUREX actually shut down? Was it in 1996?"

R: "The HVAC was deactivated in 1996. PUREX deactivation was completed in 1998."

Q: "Were radiation readings taken inside PUREX Tunnel Two during the recent investigations and given to Ecology? What were the readings? What did the contractor think about the readings?"

R: "Yes, radiation readings were taken at each of the riser locations that was removed during the investigation phase. The readings were as expected, with a high reading of 5,570 millirem per hour."

Q: "What's the plan and date for having capsules moved to dry storage?"

R: "We are currently in the middle of regulatory process for setting milestones associated with this project. We proposed to have the capsules moved to dry storage by 2025."

Q: "Are the Cr/Sr standardized casks? Are they used elsewhere?"

R: "The casks are based on casks used for the storage of spent nuclear fuel. The Cs/Sr cask design is a modification of a Nuclear Regulatory Commission (NRC) licensed spent fuel storage system produced by NAC International and in use around the world."

Q: "How does the project for moving the capsules to dry storage compare to the PUREX Tunnels, risk-wise?"

R: "In my opinion, I think they are both high-risk projects and should be done in parallel."

Q: "What will happen to the pools of water in WESF?"

R: "Once the capsules are removed there will be water left behind, we will have to dispose of the water. Similar to the K Basin project, we will have to stabilize the pool."

Q: "Is the leak under B cell? Is there any indication that it is moving?"

R: "There is no indication that the contamination site is moving."

Q: "How many TRU waste boxes do we have onsite and are they all stored outside?"

R: "There are currently slightly over 130 non-standard TRU containers stored outside at CWC. In addition, a number of non-standard containers are also stored inside the CWC."

*Q: "What is the criticality risk for 241-Z-8 and Z-9?"*

R: "In their current configuration, criticality is not a credible hazard at these locations. Each contain a fissionable quantity of material but their current form and material distribution preclude criticality from occurring."

*Q: "How do you compare the risk of the Z-9 Crib to the risk of PUREX?"*

R: "It's hard for me to say which one of these risks is worse. For PUREX Tunnel Two, there has been some engineering evaluations conducted, so we know that the integrity of the tunnel is an issue. With the Z-9 Crib, I don't believe there needs to be an engineering evaluation, but it is evident that this below grade structure has 59,000-gram equivalent contamination and is 60 years old that could potentially have the same consequences as PUREX. We will be re-evaluating the crib to ensure there is no subsidence. I do believe both projects need to be stabilized."

R (EPA): "There is a Record of Decision (ROD) and work plan for this project in place, so we would prefer that this project is funded. We would like to see the work get done."

*Q: "Did they mine the effluent lines underneath the crib?"*

R: "I am not sure. I believe they took soil out of the bottom."

C (RL): "I would like to elaborate on what EPA stated earlier. The Z-9 Crib is part of the 200-PW-1, 3, 6 ROD, which is about \$1 billion dollars for the work that is needed to address the crib. We won't be able to get \$1 billion dollars to complete this project, but are some steps that could and should occur to start this project."

C (EPA): "The U Plant Canyon is one of my projects. Along with the sand filters, the U Plant Canyon is one of two waste sites that can remain in place when the cap is placed and the building is demolished. EPA has been in discussions with DOE for a remedy for this site. We want to expedite this project to ensure we are on task with the milestone. The 241-WR Vault has tanks that are two stories high. Historically, there has been an evaluation of what is inside the tanks, but the tanks will be to be characterized once they are open."

*Q: "Are the tanks dry or do they have something in them?"*

R (EPA): "Yes, but I believe at one point in time, one of the tanks floated up. There were some issues in the past."

C (EPA): "We did evaluate and have a feasibility study for the 241-Z-361 tank. There is a ROD and work plan for this project as well."

C: "We need to address the soil in relation to the tanks and WMA-C. The tanks are in the soils, the soils are contaminated, the groundwater is contaminated. I think it's an aggregation of responsibility to not look at the site in a holistic manner."

R: "I think it's a good point. We tend to segregate things which makes it easier for us to go back and analyze things again. We have to look at the totality of the site in whole. We are looking at conducting a composite analysis that looks at all of the total radiological inventory of the central plateau. We have a deliverable from our contractor in the next year for the composite analysis."

C: “There is a disconnect in the chemical and hazardous composite analysis. There is a need for more data for the remaining decisions.”

C (EPA): “We have been working with Ecology and DOE to try to think more holistically regarding those sites since they have the groundwater units, East area waste site, and the C Tank Farms. We have been planning to address certain groundwater areas we know we can deal with in the short term and potentially issuing a temporary remedial action. DOE is putting together a cumulative evaluation of different things that is contributing to groundwater and different sources.”

C: “I offer my appreciation for being up front. Thank you!”

**Attachments**

**Attachment 1:** Plutonium Finishing Plant Resumption of Work

**Attachment 2:** M-91 Milestone Negotiations

**Attachment 3:** Extension to the Agreement in Principle for the Negotiation of Hanford Federal Facility and Consent Order (HFFACO) Milestone M-091 Series

## Attendees

### **Board Members and Alternates:**

Jan Catrell, Member	Tom Sicilia, Alternate	Dana Miller, Member
Shelley Cimon, Member	Helen Wheatley, Alternate	Bob Suyama, Member
Gene Van Liew, Member	Pam Larsen, Member	Gerry Pollet, Member
Susan Leckband, Member	Emmett Moore, Member	Tom Carpenter, Alternate (Phone)
Ken Niles, Member (Phone)	Dan Serres, Alternate (Phone)	

### **Others:**

James Lynch, DOE-ORP	Jennifer Copeland, CHPRC	Tom Rogers, WA DOH
Stephanie Schleif, Ecology	Crystal Mathey, WA DOH	Tom Teynor, DOE-RL
Scott Davis, MSA-TPA	Kris Holmes, DOE-RL	Julie Atwood, Yakama ERNM
Craig Cameron, EPA	Ginger Wireman, Ecology	Kelsey Shank, the EDGE
Al Farabee, DOE-RL	Theresa Bergman, CHPRC	Jen Colborn, MSA
Dana Gribble, MSA	Sophia Guikein, CHPRC	Ron Skinnerland, Ecology
Lindsay Strasser, ProSidian	Melissa Amaro, ProSidian	