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February 20, 2018, Meeting Minutes
Plutonium Finishing Plant (PFP)
Bi-Weekly Meeting on Ecology/EPA/WDOH Letters
Building 2420 STVCN/Room 408 9:00-11:00 am

Project Manager Representative, DOE-RL **Date:** 3/13/2018

Project Manager Representative, Ecology **Date:** 3/13/18

Administrative Record (M-83)	**H6-08**
S. G. Austin, CHPRC	**A6-01**
N. S. Cruz, CHPRC	**A6-01**
W. G. Cox, CHPRC	**T5-60**
L. J. Cusack, CHPRC	**A6-01**
D. R. Einan, EPA	**A3-46**
E. T. Faust, RL	**H5-30**
M. T. Hughey, CHPRC	**T4-53**
G. R. Konzek, RL	**A6-38**
E. Laija, EPA	**A3-46**
C. Mathey, WDOH	**B1-42**
L. C. Petersen, CHPRC	**A6-01**
S. N. Schleif, Ecology	**H0-57**
B. J. Stickney, RL	**H5-30**
T. K. Teynor, RL	**A6-38**
T. Vaughn, CHPRC	**T4-52**
K. A. Wooley, CHPRC	**T5-60**
A. K. Wright, RL	**H5-30**

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The purpose of this meeting was to status the remaining information requested in the January 9, 2018 Ecology/EPA PFP Creation of Danger letter, address Washington Department of Health (WDOH) questions related to change in PFP Radiological Boundary changes, reach agreement on RL's list of stabilization/risk reduction, and to provide a status of responding to and discuss clarifications needed to the January 30, 2018 WDOH Letter of Concern. The meeting was combined with the February PFP Project Manager Meeting (PMM). Separate meeting minutes were generated for the PFP PMM. The combined attendance roster, email with WDOH questions, and the January 30, 2018 letter are included as attachments.

January 9, 2018 Ecology and EPA Letter Topics:

Meeting Minutes:

Meeting minutes for the February 6, 2018 bi-weekly status meeting for the January 9, 2018 PFP Creation of Danger, and February 14th, 2018 briefing on the Radiological Boundaries will be provided to RL for review today, and then later forwarded out to Ecology and EPA.

Status of Action Items (Ecology/EPA):

Allison Wright, RL, provided a list of open action items

- Causal Analysis Briefing and Report – Teynor/Stickney (on-going/on agenda)
- Corrective Actions Briefing – Teynor/Stickney (on-going/on agenda)
- Bioassay Updates (including emails to regulators that website is being updated) – Vaughn/Tyree (on-going/on agenda)
- Input/Feedback on January 26, 2018 documents/information provided – EPA/Ecology/WDOH (on agenda)
- February 6, 2018 minutes – Allison
- Written response from EPA/Ecology on the 20 items approved under stabilization/risk reduction. (Einan/Smith)
- Brief workers (including ERDF) on radiological recovery boundaries and list of activities approved prior to implementing. – Teynor/Wooley
- Feedback on whether Negative Air Machine (on connex box) is a point source – Teynor
- Determine need to update RAWP with new Area of Contamination – Konzek/Cox/Schleif
- Provide revised Air Dispersion Model for 234-5Z to regulators – Teynor (available in March)
- Provide revised Air Dispersion Model for 236-Z to regulators – Teynor (available in March)
- February 14, 2018 minutes – Wright

Completed Actions

- Map defining PFP footprint for bioassay reference – Completed. On February 14, 2018, Glenn Konzek, RL, provided an email to Stephanie Schleif, Ecology, with a copy to EPA and WDOH, with the obsolete Figure 4.2 from the PFP Removal Action Work Plan and the current RAWP Figure 4-2 from TPA Change Notice 0756.

Questions on January 26, 2018 Information:

Stephanie Schleif, Ecology, stated there were no follow-up questions at this time, and no additional information needed for the information submitted on January 26, 2018. Allison Wright, RL, will confirm EPA has no questions before closing out the action item.

Causal Analysis Update (Item #1):

Tom Teynor, RL, stated the causal analysis is still in the process of being finalized. It should be delivered to RL today, and will include some corrective actions. The expert panel is meeting weekly, but have not been provided the causal analysis/corrective actions. Some panel members will be conducting a field visit and walkthrough of the PFP area today.

Corrective Action Update (Item #2):

Corrective actions have been drafted. However, their finalization is tied to finalizing the causal analysis. The requested briefing on the corrective actions will not take place until the causal analysis and corrective actions are finalized. The discussion also included the air dispersion modeling and if it would be updated or revised. Revision 5 to the air dispersion model is planned and will take into account reduced radiological source term.

Bio-assay Update (Item #7):

Tom Teynor, RL, provided a status of the bio-assay results. Not all of the bio-assay results are available yet. However, the information that is available will be posted to the PFP Updates website today.

Bio-assay Training 101 Feedback:

Tom Bratvold, CHPRC, asked if the Bio-assay 101Training that the Regulators attended on February 8, 2018 was beneficial. John Martel, WDOH, and Stephanie Schleif, Ecology, responded that it was very helpful. Crystal Mathey, WDOH, inquired about the status of being provided the two dosimetry manuals they requested (HNF-55719 and HNF-55720) at the briefing. Glenn Konzek, RL, stated they were delivered by CHPRC to Ecology (including a copy for WDOH) and EPA. Mr. Konzek took the action to verify.

Follow-up Questions to RL's List of Work to be completed as part of risk reduction/stabilization and implementation of revised PFP Radiological Boundaries:

On February 14, 2018, RL/CHPRC provided a briefing to Ecology/WDOH/EPA on the planned revisions to the PFP Radiological and Work Access Control Boundaries, and a list of stabilization/risk reduction activities required to implement the boundaries. At the February 14, 2018 meeting, Ecology and EPA requested the list to be updated to include their feedback. On February 16, 2018, Tom Teynor, RL, sent an updated list to Ecology, EPA, and WDOH. In response, Alex Smith, Ecology, requested additional information be provided. John Martell, WDOH, with input from Jim McAuley, EPA, provided an e-mail to DOE-RL with four follow-on questions. In response, Tom Teynor, RL, provided additional background information by e-mail to facilitate the discussion at this meeting.

The main topic of discussion was how the new radiological control boundaries were decided and what information was used to set them. Tom Teynor, RL, reiterated the new boundaries shown in the presentation are preliminary and may change. The boundaries will be finalized using the information from revision 5 of the air dispersion model and other inputs such as recommendations from the Expert Panel and implementation of corrective actions as a result of the root cause evaluation. Crystal Mathey, WDOH, asked what the numbers on the isopleths mean or what the units for them are. Tom Bratvold, CHPRC, responded that the isopleths are in DAC-hours/week based on a 40 hour working week and explained how the 12 DAC-hour isopleth corresponds to the 30% DAC value, which is an area that must be posted as an airborne radioactivity area.

Jim McAuley, EPA, asked if revision 5 of the air dispersion model would explain the plutonium and americium hits found outside of the radiological control area. He also inquired how those hits were communicated to the work force.

Tom Bratvold, CHPRC, explained that the project does recognize that there are detected air concentrations found outside the radiological control boundaries but pointed out they are at low levels. The challenge is to educate the people, including workers, that there are no zeros for radionuclides in the air. Jim McAuley, EPA, reiterated how important it was to communicate information.

There was agreement that the discussions at this meeting answered the four follow-on questions from WDOH. Stephanie Schleif, Ecology, stated she planned to provide a written response from Ecology coordinated with EPA on Wednesday, February 21, 2018. Jim McAuley, EPA, and Emy Laija, EPA, requested to be invited to the bi-weekly status meeting.

Stephanie Schleif, Ecology, and Jim Martell, WDOH, stated it would be beneficial to receive presentation material in advance, especially if decisions or agreements are expected. It was agreed that materials would be provided in advance when input is requested.

Next Meeting:
The next two bi-weekly meetings are scheduled for March 6 and March 20, 2018. Stephanie Schleif, Ecology, stated she would not be available on March 6, 2018, and would provide an alternative date. The March 20, 2018 meeting will be a combined meeting with the PFP Project Manager Meeting and will be held at the Ecology offices.

Bi-weekly Wrap up/Action Items:

1. Verify that the internal dosimetry manuals HNF-55719 and HNF-55720 were delivered. – Konzek verified it was delivered to EPA/Ecology (with a copy for WDOH) – Complete February 20, 2018.
2. Combine March 20, 2018 PFP PMM and bi-weekly, and hold at Ecology – Completed.
3. Add Jim McAuley, EPA, and Emy Laija, EPA, to the bi-weekly status meeting – Completed.
4. Stephanie Schleif, Ecology, to provide an alternative date for March 6, 2018 bi-weekly – Completed. Meeting rescheduled for March 8, 2018, 3:30-4:30pm.

WDOH Letter of Concern for Contamination Events Resulting from Plutonium Finishing Plant (PFP) Demolition Performed under Comprehensive Environmental Response Compensation and Liability Action (CERCLA) Removal Action, dated January 30, 2018

Eric Faust has the lead for coordinating the RL response to this letter. Linda Peterson is the lead for CHPRC.

Response Status and Schedule:
Linda Petersen, CHPRC, provided a draft proposed schedule for providing responses to the WDOH letter dated January 30, 2018. She stated that all information will be coming in to her to compile. Stephanie Schleif, Ecology, requested that the last two items on the schedule be modified to include …submittal to Ecology and cc: to WDOH.

Clarifications:
In order to ensure Hanford's response is satisfactory, RL/CHPRC asked a few questions of WDOH.

In reference to the two sub-bullets on page 5 requesting radiological surveys for equipment, tools and materials, and also stabilization methods used to address potential airborne releases, were these two items really sub-bullets or should they be main bullets? WDOH responded they should

be addressed as main bullets rather than sub-bullets of the log books, round sheets or work packages.

WDOH clarified that for the radiological surveys of equipment, tools and material the beta/gamma value should be 100,000, and WDOH only wants surveys that exceeded those values.

WDOH clarified that for the bio-assay information it is acceptable to point to the PFP Updates website where the information is being posted.

WDOH clarified that for the last two bullets, they are not information requests only suggestions and don't need a response.

Separate Meeting Need:
It was agreed to keep the WDOH requested information meetings together with the Ecology/EPA requested information meetings on a bi-weekly frequency.

Wrap up/Action Items:

1. Add cc: to WDOH to last two items on draft schedule for WDOH letter of concern response.

Attachments:

- Attendance Roster
- John Martell, WDOH, email with questions on Radiological Boundaries.
- January 30, 2018 Letter from WDOH.
- Draft schedule for WDOH letter of concern response.

PFP Project Managers Meeting/Bi-Weekly Meeting
2420 STVCN, CR 408
February 20, 2018
ATTENDANCE LIST

Name	Organization	Phone Number
1. Bill Cox	CHPRC	372-9345
2. Kelly Wooley	CHPRC	308-9861
3. Sara Austin	CHPRC	376-4339
4. Laura Cusick	CHPRC	376-1595
5. Allison Wright	DOE/ESQ	373-7303
6. JEAN MARTELL	WDOH	946-3798
7. Annie McLain	WDOH	946-6505
8. Tom Teigner	DOE	376 6363
9. Eric Faust	DOE	376-9607
10. LINDA Petersen	CHPRC	373-4200
11. Glenn Konzek	DOE-RL	376-8399
12. Tom Bratvold	CHPRC	373-2360
13. Crystal [illegible]	WDOH	943-5216
14. Stephanie Schlief	Ecology	372-7929
15. Jim McAuley	EPA (on phone)	
16. Emy Liaja	EPA (on phone)	
17.		
18.		
19.		
20.		
21.		
22.		
23.		
24.		

Wright, Allison K

From:	Teynor, Thomas K
Sent:	Monday, February 19, 2018 8:47 AM
To:	Martell, John
Cc:	Einan, David (EPA); Mathey, Crystal; Shoop, Doug S; Stickney, Brian J; Sosson, Gregory (HQ); Franco, Joe R; Olds, Theodore E (Erik); Tyree, Geoffrey T; Heeter, Mark A; McLain, Annie (DOH); McAuley, Jim (mcauley.jim@epa.gov); Wooley, Kelly A; Simiele, Connie J; Faust, Eric T; Boyd, Wesley; Wright, Allison K; Bratvold, Tom; Fulton, John; Smith, Alex (ECY); Teynor, Thomas K; Franco, Joe R; Konzek, Glenn R; George, Jack B; Payne, James D
Subject:	RE: Updated List of Activities to Implement Revised PFP Radiological and Work Access Control Boundaries

John and All,

Some background information to assist us in our meeting tomorrow.

1. The revised boundaries DOE has approved **are NOT the future demolition boundaries** but interim boundaries for stabilization. The revised demolition boundaries will be based on; the PNNL air model revision, to reflect current site conditions of demolition debris, remaining NDA estimated Pu and Am material, demo to go; lessons learned and corrective actions resulting from the causal analysis; consideration of all contamination spread/detection information for the June and December 2017 events; and work force input.

2. The **air model initial Pu volume is still being considered for the interim/stabilization boundaries** even though the majority of potential Pu and Am source term has been removed and packaged. Thus it is a conservative measure to consider when reviewing the initial air model airborne and surface contamination isopleths.

3. The 20 work scope items discussed at the February 14th meeting are part of DOE previously authorized stabilization and risk reduction work and are necessary to establish the stabilization boundaries over the next few weeks. The 20 steps are meant to provide additional detail and to be transparent to all. DOE and the contractor will continue to meet with all regulators and stakeholders to explain future work to avoid surprises, obtain your thoughts/concerns, and coordinate communications.

4. The contractor has and will continue to communicate all PFP work to the Hanford workforce, PFP, CHPRC, WRPS, and MSA, prior to starting.

This information was covered during our meeting on February 14th. For those not attending future meetings I respectfully request you make arrangements to get the needed information from those attending for your respective groups/agencies to avoid delays or misunderstandings. Call in to meetings is an option as well. Thank you

R/ Tom Teynor
PFP Closure Project
Federal Project Director
Ph: 509-376-6363

From: Martell, P John (DOH) [mailto:John.Martell@DOH.WA.GOV]
Sent: Friday, February 16, 2018 4:25 PM
To: Teynor, Thomas K <thomas.teynor@rl.doe.gov>; Smith, Alex (ECY) <ales461@ECY.WA.GOV>
Cc: Einan, David (EPA) <einan.david@epa.gov>; Mathey, Crystal <Crystal.Mathey@DOH.WA.GOV>; Shoop, Doug S <doug.shoop@rl.doe.gov>; Stickney, Brian J <Brian_J_Stickney@rl.doe.gov>; Sosson, Gregory (HQ) <gregory.sosson@em.doe.gov>; Franco, Joe R <Joe.Franco@rl.doe.gov>; Olds, Theodore E (Erik)

<Theodore_E_Erik_Olds@rl.doe.gov>; Tyree, Geoffrey T <geoffrey.tyree@rl.doe.gov>; Heeter, Mark A <Mark.Heeter@rl.doe.gov>; McLain, Annie (DOH) <Annie.McLain@doh.wa.gov>; McAuley, Jim (mcauley.jim@epa.gov) <mcauley.jim@epa.gov>; Wooley, Kelly A <Kelly_A_Wooley@rl.gov>; Simiele, Connie J <Connie_J_Simiele@rl.gov>; Faust, Eric T <Eric.Faust@rl.doe.gov>; Boyd, Wesley <Wesley.Boyd@rl.doe.gov>; Wright, Allison K <allison.wright@rl.doe.gov>; Bratvold, Tom <Tom_Bratvold@rl.gov>
Subject: RE: Updated List of Activities to Implement Revised PFP Radiological and Work Access Control Boundaries

Tom – Here are some questions. We are trying to make sure we understand DOE's decisions correctly.

Jim McAuley if you have anything to add for EPA please do, we tried to capture your questions.

If anyone needs any clarification please let me know.

1. What technical evaluation including assumptions, calculations and criteria were used by DOE to establish the new HCA/ARA boundary?
2. What are the expected DAC values at the respective isopleths used to determine the various control boundaries? Our understanding is ARA boundaries are normally set at concentration equivalent to 30% of a DAC.
3. Based on the discussion in the meeting, the isopleths from the air modeling document (PNNL-20173 Rev. 4 Add.) were used to determine new boundaries. (which is different than existing conditions, ie rubble piles on the ground) Because the model is hypothetical and not based on current field conditions we want to make sure conservative boundaries are being used. What is your rationale for using this existing model?
4. Results of the ambient air monitors detected plutonium and americium in the southern portion of 200W, was this data used in the evaluation of appropriate work control boundaries, if not, why? (We are looking for this answer because it is likely we will get asked this question from the media and potentially employees)

Thanks
John Martell

From: Teynor, Thomas K [mailto:thomas.teynor@rl.doe.gov]
Sent: Friday, February 16, 2018 2:40 PM
To: Smith, Alex (ECY) <ales461@ECY.WA.GOV>
Cc: Einan, David (EPA) <einan.david@epa.gov>; Mathey, Crystal D (DOH) <Crystal.Mathey@doh.wa.gov>; Martell, P John (DOH) <John.Martell@DOH.WA.GOV>; Shoop, Doug S <doug.shoop@rl.doe.gov>; Stickney, Brian J <Brian_J_Stickney@rl.doe.gov>; Sosson, Gregory (HQ) <gregory.sosson@em.doe.gov>; Franco, Joe R <Joe.Franco@rl.doe.gov>; Olds, Theodore E (Erik) <Theodore_E_Erik_Olds@rl.doe.gov>; Tyree, Geoffrey T <geoffrey.tyree@rl.doe.gov>; Heeter, Mark A <Mark.Heeter@rl.doe.gov>; Wooley, Kelly A <Kelly_A_Wooley@rl.gov>; Simiele, Connie J <Connie_J_Simiele@rl.gov>; Faust, Eric T <Eric.Faust@rl.doe.gov>; Boyd, Wesley <Wesley.Boyd@rl.doe.gov>; Wright, Allison K <allison.wright@rl.doe.gov>; Bratvold, Tom <Tom_Bratvold@rl.gov>
Subject: RE: Updated List of Activities to Implement Revised PFP Radiological and Work Access Control Boundaries

Thank you Alex for your note. We will be ready to discuss Joh M's additional questions on Tuesday.

R/ Tom Teynor
PFP Closure Project
Federal Project Director
Ph: 509-376-6363

From: Smith, Alex (ECY) [mailto:ales461@ECY.WA.GOV]
Sent: Friday, February 16, 2018 2:33 PM
To: Teynor, Thomas K <thomas.teynor@rl.doe.gov>
Cc: Einan, David (EPA) <einan.david@epa.gov>; Mathey, Crystal <Crystal.Mathey@DOH.WA.GOV>; Martell, John

<john.martell@doh.wa.gov>; Shoop, Doug S <doug.shoop@rl.doe.gov>; Stickney, Brian J <Brian_J_Stickney@rl.doe.gov>; Sosson, Gregory (HQ) <gregory.sosson@em.doe.gov>; Franco, Joe R <Joe.Franco@rl.doe.gov>; Olds, Theodore E (Erik) <Theodore_E_Erik_Olds@rl.doe.gov>; Tyree, Geoffrey T <geoffrey.tyree@rl.doe.gov>; Heeter, Mark A <Mark.Heeter@rl.doe.gov>; Wooley, Kelly A <Kelly_A_Wooley@rl.gov>; Simiele, Connie J <Connie_J_Simiele@rl.gov>; Faust, Eric T <Eric.Faust@rl.doe.gov>; Boyd, Wesley <Wesley.Boyd@rl.doe.gov>; Wright, Allison K <allison.wright@rl.doe.gov>; Bratvold, Tom <Tom_Bratvold@rl.gov>
Subject: Re: Updated List of Activities to Implement Revised PFP Radiological and Work Access Control Boundaries

Hi Tom - thanks for the response- the concerns I conveyed in my message came primarily from Health and EPA. I understand you already spoke to John Martell about this and what we are looking for, so I defer to him and Jim to provide more specifics for you.

Thanks!

Sent from my iPhone

On Feb 16, 2018, at 1:35 PM, Teynor, Thomas K <thomas.teynor@rl.doe.gov> wrote:

> Thank you for your note Alex.
>
> We have a scheduled PFP unit manager's meeting on 2/20/2018 at 9AM, 2420 Stevens, Room 408 and we can resolve your data needs then. If possible, please provide me with your additional PFP boundary question(s) in advance of this meeting. We will have the needed DOE and the Contractor personnel present to respond to your additional PFP boundary questions.
>
> R/ Tom Teynor
> PFP Closure Project
> Federal Project Director
> Ph: 509-376-6363
>
> ---
>
> **From:** Smith, Alex (ECY) [mailto:ales461@ECY.WA.GOV]
> **Sent:** Friday, February 16, 2018 12:16 PM
> **To:** Teynor, Thomas K <thomas.teynor@rl.doe.gov>; Einan, David (EPA) <einan.david@epa.gov>; Mathey, Crystal <Crystal.Mathey@DOH.WA.GOV>; Martell, John <john.martell@doh.wa.gov>
> **Cc:** Shoop, Doug S <doug.shoop@rl.doe.gov>; Stickney, Brian J <Brian_J_Stickney@rl.doe.gov>; Sosson, Gregory (HQ) <gregory.sosson@em.doe.gov>; Franco, Joe R <Joe.Franco@rl.doe.gov>; Olds, Theodore E (Erik) <Theodore_E_Erik_Olds@rl.doe.gov>; Tyree, Geoffrey T <geoffrey.tyree@rl.doe.gov>; Heeter, Mark A <Mark.Heeter@rl.doe.gov>; Wooley, Kelly A <Kelly_A_Wooley@rl.gov>; Simiele, Connie J <Connie_J_Simiele@rl.gov>; Faust, Eric T <Eric.Faust@rl.doe.gov>; Boyd, Wesley <Wesley.Boyd@rl.doe.gov>; Wright, Allison K <allison.wright@rl.doe.gov>
> **Subject:** RE: Updated List of Activities to Implement Revised PFP Radiological and Work Access Control Boundaries
>
> Hi Tom:
>
> Thanks again to you and Kelly and your respective teams for running through your new proposed PFP boundaries and the work you hope to accomplish at the PFP Site before resuming demolition activities.
>
> Ecology, EPA and the Department of Health talked further, and we would like to understand more of the data and assumptions that are going into the new controls and new proposed boundary before you begin the work identified below. Specifically, we would appreciate getting a chance to see the work

plan or technical evaluation you are basing the proposed boundary and controls on (i.e. an ALARA Worksheet or something similar).

We appreciate your help with this!

Thanks

From: Teynor, Thomas K [mailto:thomas.teynor@rl.doe.gov]
Sent: Friday, February 16, 2018 9:13 AM
To: Smith, Alex (ECY) <ales461@ECY.WA.GOV>; Einan, David (EPA) <einan.david@epa.gov>; Mathey, Crystal D (DOH) <Crystal.Mathey@doh.wa.gov>; Martell, P John (DOH) <John.Martell@DOH.WA.GOV>
Cc: Shoop, Doug S <doug.shoop@rl.doe.gov>; Stickney, Brian J <Brian_J_Stickney@rl.doe.gov>; Sosson, Gregory (HQ) <gregory.sosson@em.doe.gov>; Franco, Joe R <Joe.Franco@rl.doe.gov>; Olds, Theodore E (Erik) <Theodore_E_Erik_Olds@rl.doe.gov>; Tyree, Geoffrey T <geoffrey.tyree@rl.doe.gov>; Heeter, Mark A <Mark.Heeter@rl.doe.gov>; Wooley, Kelly A <Kelly_A_Wooley@rl.gov>; Simiele, Connie J <Connie_J_Simiele@rl.gov>; Faust, Eric T <Eric.Faust@rl.doe.gov>; Boyd, Wesley <Wesley.Boyd@rl.doe.gov>; Wright, Allison K <allison.wright@rl.doe.gov>; Teynor, Thomas K <thomas.teynor@rl.doe.gov>
Subject: Updated List of Activities to Implement Revised PFP Radiological and Work Access Control Boundaries
Importance: High

All,

Thank you for meeting with us this past Wednesday to discuss the Contractor's proposed workscope to implement the revised boundaries. RL considers these 20 activities to be part of previously authorized work required for project stabilization and risk mitigation. Please recall, these revised boundaries are interim to stabilize the area and may not be the demolition boundaries.

Per our meeting, The list of 20 items has been updated for clarification as indicated in red or blue print. The contractor will release an all employees communication in advance of starting this work (next week) to establish the revised PFP radiological and work access control boundaries.

Activities required to support implementation of the New PFP Stabilization Radiological Boundary will include:

1. Shipping previously containerized waste to CWC. (Approximately 20-TRU TL-1800s, 5-TRU SWBs, 10-TRU SLB2s, 10-LLW Boxes, 35-TRU Drums, 55-LLW Drums, 45-Hazardous Waste Drums, 5-Universal Waste Drums)
2. Placing covers over super sacs (containing PRF strongbacks and gallery GB sections) to ensure container integrity pending waste load out. (Approximately 25-IP1 Bags with PRF waste items, 20-Bags with PRF rubble)
3. NDA of loaded waste containers (with specific focus on the 1800 TLs noted in item #1 above)
4. Perform visual inspection & repack of 5 loaded waste drums
5. Perform inspections, surveys, and shipment to ERDF of previously loaded RO/RO containers (<20 containers)
6. Perform hydrant tie in to location adjacent to Dayton & 19th to support water source outside of new proposed CA supplying PFP water loop.
    a. Includes laying water line in and outside of current RBA/ PFP work control zone.
    b. Tie into current water loop replacing connection to current hydrant.
    c. Excavation of road crossings under 19th Street and Dayton Avenue are located in radiological clean areas outside the PFP access control boundary.
7. Isolation of water connections inside the PFP boundary and facilities

8. Define and implement access control updates in conjunction with MSA to support sewer maintenance activities and security surveillances. MSA is evaluating the possibility of sealing the manhole cover. Activities will not involve excavation inside of radiological posted Contamination Areas.
9. Working with MSA coordinate Electrical Utilities configuration in the proposed PFP boundary's to minimize impacts to 200W power distribution. Activities will not involve excavation inside of radiological posted Contamination Areas.
10. Implementation of additional expanded boundary monitoring equipment and associated power supply.
11. Relocation of personal items from the PFP trailers
12. Move clean equipment out of the work zones (NDA , chemicals, supplies)
13. Installation of back-up generators and battery change outs for the communications trailers.
14. Update Primary and alternate staging areas designations and postings
15. Update Primary and alternate ICP designations, postings, and materials
16. Update emergency response documentation to support the increased boundaries
17. Perform baseline surveys of areas to be included in new work control zones
18. Establishment of warming/cooling areas/tents/buildings at exit/release points
19. Protect/cover/wrap equipment that must remain in the new boundary to support future use
20. Remove or relocate approximately 30 empty ERDF containers

Completion of each item will be communicated to DOE/WDOE and EPA.

R/ Tom Teynor
PFP Closure Project
Federal Project Director
Ph: 509-376-6363

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL PUBLIC HEALTH
PO Box 47820 • Olympia, Washington 98504-7820
(360) 236-3000 • TTY Relay Service: (800) 833-6388

January 30, 2018

Mr. Doug Shoop, Manager
United States Department of Energy
Richland Operations Office
Post Office Box 550, MSIN: A5-14
Richland, Washington 99352

Re: Letter of Concern for Contamination Events Resulting from Plutonium Finishing Plant (PFP) Demolition Performed under Comprehensive Environmental Response Compensation and Liability Act (CERCLA) Removal Action

Dear Mr. Shoop:

The purpose of this letter is to express our concerns regarding the spread of radioactive contamination released to the air and the environment during PFP demolition activities.

We have been taking air samples at various locations on the Hanford Site, as well as off the Hanford Site. While we have seen elevated results, there have been no off site levels indicating a threat to public health. However, we are concerned if work resumes without better controls, a risk to the public may develop. We have used information requests and recommendations to express our concerns throughout calendar year 2017. Given the recurring nature of these contamination events and the significance of the December 2017 release, we would like to formally state our concerns and request additional information.

Issue 1: Protection of Public Health

After the contamination events occurring in December 2017, cars with alpha contamination left the Hanford Site, potentially spreading contamination along the way to their destinations. Alpha traveling off the designated CERCLA site, as well as off the overall Hanford Site is concerning from a radiation protection standpoint as alpha particles are difficult to detect. From a dosimetry perspective, spread of alpha contamination is troubling because of its greater potential for damage (per unit of energy deposited) in biological tissue and the potential for lifelong internal contamination. Allowing alpha contamination off site is a serious and uncommon issue that we believe should be preventable through best management practices.

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FEB 0 6 2018
DOE-RLCC

We have taken air samples at a public access point following the June 8, 2017, event. Elevated concentrations were detected for Americium 241 (Am^{241}) at 3.26 times above the National Emission Standards for Hazardous Air Pollutants (NESHAPs). (The NESHAPs value is a concentration that, if breathed for a year, would result in the 10 mrem ambient air standard.) We expected to see better controls after the June event and the communication of our results to your agency, as it was clear existing controls were not effective or sufficient. Given the repeated contamination events later in 2017, corrective actions were not adequate to prevent the continued spread of contamination.

Lastly, we are concerned about potential exposure to members of the public (service providers or tour participants) who were on site, or will be on site as work resumes.

Issue 2: Protection of Environment

We have seen elevated air samples, across the Hanford Site, showing the presence of Americium and Plutonium isotopes from PFP during active demolition. Additionally, other facilities' samples have shown potential deposition from PFP contaminants. The frequency of elevated ambient air samples we are seeing has trended upward. Once the contamination is allowed into the environment, it will migrate via air pathways, water, and through other biological vectors.

Issue 3: Loss of Control of Boundaries and Off Site Spread

A comparison of boundary maps from early in the PFP removal action to present shows that radiation contamination boundaries have moved drastically from the original commitments in the Removal Action Work Plan (RAWP). Loss of boundary control was even more significant based on the Tri-Party Agreement Change Notice (TPA-CN-0756, Figure 4-2 "Area of Contamination" map) which further reduced the allowed "Area of Contamination" on June 2017 and effectively revised the RAWP. Our recommendations have been for better controls to avoid boundary expansions.

It is our opinion that work at PFP should be performed in a manner so this loss of control does not occur. If work speed is increased with the intent of meeting a milestone, and doing so risks spreading contamination, we feel this should be discussed with lead agencies.

The RAWP calls out the entire 200 West Area as the CERCLA site. We have isotopically consistent samples (accounting for predicted spread for particle sizes) demonstrating spread beyond this area to US Ecology, Rattlesnake Barricade public access, as well as the contaminated cars that made it off the Hanford Site and into town. This would indicate that despite a generously large CERCLA site, a serious loss of control occurred. Case law (Docket No. RCRA-10-99-0106; *Determination Regarding CERCLA & RCRA Jurisdictional Relationship*) has determined the entire Hanford Site is not to be considered "on site" for CERCLA purposes. We will need to determine if further cleanup actions in areas outside the 200 West Area could then be subject to requirements of Washington Administrative Code (WAC) 246-247 and the Code of Federal Regulations (CFR) 40 CFR 61, Subpart H.

Issue 4: Lack of Adherence to RAWP Air Monitoring Plan (AMP) Controls and Modeling

The RAWP contains the Applicable or Relevant and Appropriate Requirements (ARARS) and the AMP, which are determined by Tri-Party members with input from us, as requested, and should be carried out as originally agreed.

Our November/December 2017 high volume and environmental air samples showed Plutonium/Americium concentrations elevated 5–10 times above NESHAPs limits. The ARARS call out the ambient air 10 mrem standard (40 CFR 61.92). If the NESHAPs levels are continually exceeded during the calendar year, it is possible the standard will be exceeded. Given that outside contractors, members of the public, and non-radiation workers are on site, we are concerned with these repeated exceedances.

We utilize our air samples to assess the effectiveness of the control technology in place and called out by the RAWP AMP. Our sample results demonstrated that the controls were not sufficient to properly reduce emissions. Controls called out in the AMP of the RAWP include wind speed work restrictions, misting, fixative, etc.

Given changes in the order of demolition as compared to the assumptions in the air modeling document (i.e., demolition and loadout of zones concurrently is not recommended, time of year demolition was to occur, and overall schedule), we recommend consulting with Dr. Napier from Pacific Northwest National Laboratory (PNNL) to reassess the need for additional modeling.

Issue 5: Failure to Meet Removal Action Intent

The stated reason for a removal action is to eliminate a health or environmental hazard. The definition of the removal action allows for the USDOE to have regulatory authority and reduces regulatory requirements. In this case, it seems risk has been created rather than avoided.

> Removal responses are common at Superfund Sites when the contamination poses an immediate threat to human health and the environment. Removals are classified as either emergency, time-critical, or non-time-critical depending on the extent and type of contamination. (EPA website)

We want to reiterate removal action should not disregard ALARA/ALARACT principles or use lead agency authority to the exclusion of those principles. This may include the need to use containment and/or confinement structures.

Issue 6: Protection of Workers (via Article 32)

Although our jurisdiction covers only public health, in this case we would like to express our support of Tri-Party agencies citing article XXXII, paragraph 106 of the Tri-Party Agreement (TPA). As the radiation protection authority for the state of Washington, we support pursuance of the Endangerment Clause. This invokes worker protection. We support this stop work on the

basis of our sample results, the high number of positive bioassays, delay in notifying us of elevated readings, and the practice of treating an outside Airborne Radioactivity Area (ARA) like an inside ARA.

Washington State Department of Health Requests

We would like to make the following requests on the basis of the requirements listed in the RAWP DOE/RL-2005-15 Section 4.3 Air Monitoring Plan. We would like to see data from November 1, 2017, through January 5, 2018, unless otherwise specified* (some of these items may have been included in other agencies' requests):

- Continuous Air Monitor (CAM) data to include readings, calibration dates, set points, detection limits, and round sheets (if available).
- Maps of boundary expansions from *June to current.
- The electron microscopy results analyzing particle size. If particle size is determined to be larger than the modeling assumption, please provide an explanation of how these larger nitrate particles are making it further away and not settling out via gravity closer in to CAMs and how this would impact the overall ratios of Americium and Plutonium.
- Plans indicating whether each modeled zone will be fully loaded out prior to demolition and load out of the next zone as advised in the modeling document.
- An estimate of the remainder of the radioactive source term in the Plutonium Reclamation Facility (PRF) rubble pile and the remainder of the building still standing.
- Any additional modeling performed after Dr. Napier's modeling document, PNNL-20113 Rev. 4 Addendum.
- Radiological smear survey data from cookie sheets.
- Ambient air data for N433, N554, N975, N165, N155, and N555 (isotopic data, if available).
- Current location and plans for disposal or reuse of exhausters/High Efficiency Particulate Air (HEPA) filters:
    - Include the date they were removed from service.
    - If they have been moved, we request the radiological surveys/analysis of the HEPA filters.
    - Date the vestibule was demolished and put in the rubble pile.
- Wind speeds during work times. (RAWP DOE/RL-2011-03 Section 4.3 Air Monitoring Plan limits to 20 mph, stated limit after prior contamination event was 15 mph).
- Regarding the use of foggers, were "lessons learned" from the prior contamination event utilized? If not, why?
- Criteria used for resuming work on December 15, 2017, after the stop work order was lifted.
- In addition to the non-radiation workers present during the December contamination event, were members of the public present?
- Log books, round sheets, or applicable work packages detailing:
    - Controls (i.e., water, fixative use, cover material).

  - Radiological surveys of equipment, tools, and materials verifying removable limits (>2,000dpm/100cm2 alpha or 100,000000dpm/100cm2 beta/gamma were handled according to the RAWP Section 4.3.1.2).
  - Stabilization methods used to address potential for airborne releases from "excessive crushing or size reduction."
- Additionally, we request the following (without requesting personally identifiable data; only requesting doses and locations):
  - All lapel monitor readings.
  - Bioassay results:
    - Dose, location, sample date, and result.
    - Dates employees were offered bioassays.
    - Any dose modeling done to account for delays from uptake to bioassay.
- In addition to the Hanford Site, lessons learned should be integrated from other USDOE sites, such as the Separations Process Research Unit (SPRU) Building H-2 Demolition. Lessons learned about contamination control can be found in the Type B Accident Investigation report for SPRU.
- We urge USDOE, as lead on removal actions, to use the lessons learned from these events to prevent similar losses of control in future projects where the margin of error is very slim (i.e., the upcoming demolition of the 324 Building) because of proximity to residents and agriculture. Risks to human health and the state's economy are of great concern to us.

We ask you to provide the requested data to us no later than March 9, 2018. If some items will take longer, please coordinate with us. If you have any questions, please contact John Martell by email at john.martell@doh.wa.gov, or Crystal Mathey at crystal.mathey@doh.wa.gov.

Sincerely,

Clark Halvorson
Assistant Secretary

cc: Shawna Berven, WDOH
Cliff Clark, USDOE-RL
Dave Einan, EPA
Mike Elsen, WDOH
Eric Faust, USDOE-RL
Emy Laija, EPA
Crystal Mathey, WDOH
Jim McAuley, EPA
Mike Priddy, WDOH
Stephanie Schleif, Ecology
Ron Skinnarland, Ecology
Alexandra Smith, Ecology

DRAFT SCHEDULE for WDOH LETTER OF CONCERN DATED 1/31/2018			
Actions	Action Lead	Dates	Notes
Prepare DOE-RL/CHPRC Draft Response Table; submit draft responses for review & comment	CHPRC - EPSP	1-31-2018 to 2-22-2018	
Review & comment on Draft Response Table and response; resolve comments	CHPRC – EPSP	2-22-2018 to 2-27-2018	
Review & comment on Draft Response Table and response; resolve comments	DOE-RL & CHPRC – EPSP & PFP Staff	2-27-2018 to 3-1-2018	
Prepare DOE-RL ghost email and attachments	CHPRC - EPSP	2-27-2018 to 3-1-2018	
Submittal of Draft Response email/Attachment(s) to DOE-RL	CHPRC - EPSP	3-1-2018	
Process email and any attachments for submittal to Ecology	DOE-RL	3-1-2018 to 03-09-2018	
Submittal to Ecology	DOE-RL	03-09-2018	