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January 9, 2020 20-NWP-005

Mark French, Federal Project Director
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: H5-20
Richland, Washington 99352

Re: Removal Action Work Plan and Sampling and Analysis Plan for the 224B Plutonium Concentration Facility

References: See page 2

Dear Mark French:

The Department of Ecology (Ecology) received Letters 20-PFD-0002 (Reference 1) and 19-PFD-0037 (Reference 2) from the United States Department of Energy Richland Operations Office (USDOE-RL). These letters submitted a Removal Action Work Plan (RAWP) and Sampling and Analysis Plan (SAP) respectively for the 224B Plutonium Concentration Facility. The RAWP was submitted to Ecology to satisfy the Hanford Federal Facility Agreement and Consent Order Milestone M-085-72.

The enclosed Review Comment Record details our review of both the RAWP and SAP. We look forward to working with you through the resolution of our comments.

If you have any questions please contact Brigitte Weese, B Plant Project Lead, at (509) 372-7936 or brigitte.weese@ecy.wa.gov or John Temple, Project Manager, at (509) 372-7929 or john.temple@ecy.wa.gov.

Sincerely,

Theresa Howell
Waste Management Section Manager
Nuclear Waste Program

bw/jlg
Enclosure

cc: See Page 2

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References:

1. Letter 20-PFD-0002, dated October 29, 2019, from Mark French, USDOE-RL, to Alexandra Smith, Ecology and Craig Cameron, EPA, "Sampling and Analysis Plan for the 224B Plutonium Concentration Facility, DOE/RL-2017-34, Draft A"
2. Letter 19-PFD-0037, dated September 19, 2019, from William F. Hamel, USDOE-RL, to Alexandra Smith, Ecology, "Removal Action Work Plan for the 224B Plutonium Concentration Facility, DOE/RL-2017-33, Draft A"

cc electronic w/enc:
Craig Cameron, EPA
David R. Einan, EPA
Patty Ensign, USDOE-RL
Al Farabee, USDOE-RL
Robert Long, USDOE-RL
Robert Cathel, CHPRC
Deborah Singleton, CHPRC
Theresa Howell, Ecology
John Temple, Ecology
Brigitte Weese, Ecology
ERWM Program, YN
Ken Niles, ODOE
Environmental Portal
Hanford Facility Operating Record
CHPRC Correspondence Control
MSA Correspondence Control
USDOE-RL Correspondence Control
USEPA Region 10 Hanford Field Office Correspondence Control

cc w/enc:
Susan Leckband, HAB
Hanford Administrative Record
NWP Central File

cc w/o enc:
Mason Murphy, CTUIR
Jack Bell, NPT
Rex Buck, Jr., Wanapum
Laurene Contreras, YN

Comment Record	Washington State Department of Ecology Nuclear Waste Program	Date: 12/05/2019 Page 1 of 12

Document Title(s)/Number(s):

Removal Action Work Plan for the 224B Plutonium Concentration Facility, DOE/RL-2017-33, Draft A RAWP

Document Manager	Telephone Number	Project Manager	Telephone Number	Facility Site ID	Cleanup Site ID
Brigitte Weese	(509) 372-7936	John Temple	(509) 372-7929		

Item No.	Pg. # Sec. # Para./Sent.	Comment or Question	Modification Needed	Basis/Justification	Permittee Response	Ecology Response	Open/ Close	Reviewer Initials
1.	General	Why is this RAWP not a revision of the RAWP that was originally sent to EPA? The original RAWP was not reference in the current RAWP either.	Please reference or include this document as a revision of the original.					ECY/EPA
2.	General	Neither the SAP or the RAWP state that the SAP is a part of the RAWP. This needs to be stated in the RAWP or the SAP needs to be physically added to the RAWP.	See comment					ECY/EPA
3.	General	The Action Memorandum for 224B was published by DOE in 2004 and still includes references to EPA as the lead regulatory agency. The AM should be updated to include Ecology as the lead regulatory agency for this RAWP.	See comment					ECY/EPA
4.	General	The 224-B Action Memorandum (DOE/RL-2004-36) was signed June 2, 2004. A 30-day public comment and review period was held from December 15, 2003 through January 16, 2004. The extraordinary 15-year gap between that comment period and removal actions indicate the need to plan additional public notice and public participation opportunities. We also remind USDOE of the requirement to identify and make available an action-specific "administrative record file" in accordance with 40 CFR 300.415(n)(3)(iii). That can be done by creating an index of relevant documents that are already in the Hanford ARPIR.	See comment					ECY/EPA
5.	General	When the 224B RAWP is submitted to Ecology, will DOE submit a milestone change package that adds any milestones to drive progress on the removal action? If new milestones will be proposed, how will they be integrated with the larger milestone negotiation effort that will begin early next year?	See comment					ECY/EPA

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6.		Milestones related to worked performed for this RAWP need to be included for reference in the document. Milestone M-085-72 needs to be referenced in the RAWP, along with the milestone language: "Submit to Ecology as a primary document a Removal Action Work Plan to implement the approved Action Memorandum for 224-B (DOE/RL-2004-36)".	See Comment					ECY
7.	General	Will portable generator engines (or in theory turbines) be required to support stripping and demolition work (powering tools, providing lighting, etc.)? If so, is there the potential that they will be in place for 12+ months, becoming stationary non-fugitive sources? Generator engines which become stationary are likely to exceed de minimis standards of WAC 173-460-150 and would potentially be sources subject to permitting under WAC 173-400 and WAC 173-401. Such engines would also trigger the requirements of NSPS Subpart IIII or JJJJ.	Address whether portable generators will be used and if so whether residence time will be tracked and recorded to ensure they do not become stationary sources. If there is the potential that such engines will become stationary, address how this will be handled.	General site permitting requirements. WAC 173-400-110, WAC 173-401-300, WAC 173-460				ECY
8.	Page 2, Line 10	Revise the sentence to state "Removal Action Manager or On Scene Coordinator..."	See Comment					ECY
9.	Pg. 21, Sec. 2.2.4.1	Wet stripping methods, proper packaging, and disposal are not addressed for ACM.	In addition to the statement that Subpart M standards will be met, demonstrate how these standards will be met during stripping and waste disposal.	40 CFR §61.145(c)(2)(i), §61.145(c)(3), §61.145(c)(4)-(7); §61.150(a)(1)				ECY
10	Pg. 21, Sec. 2.2.4.1	If ACM cannot be reasonably stripped because it is encased in concrete or otherwise inaccessible, will it be adequately wetted during demolition? Pipe penetrations or runs within walls would be likely examples.	Please address the possibility of friable or potentially damaged ACM which cannot be stripped.	40 CFR §61.145(c)(1)(ii)				ECY
11	Pg. 21, Sec. 2.2.4.1	If ACM is not discovered prior to the onset of demolition and can/is not removed due to safety concerns, will contaminated debris be treated as ACM and propertly handled?	Please address material handling.	40 CFR §61.145(c)(1)(iii)				ECY

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12	Pg. 21, Sec. 2.2.4.1	Will ACM and facility component contain, are covered in, or are coated in ACM be lowered carefully to the ground to avoid damaging or disturbing ACM? If ACM is stripped more than 50 feet above ground level, will leak-tight chutes or containers be used to transport material to the ground? This would be most likely for Transite siding and roofing materials on the exterior of the building.	Please address material handling.	40 CFR §61.145(c)(2), (c)(6)				ECY
13	Pg. 21, Sec. 2.2.4.1	Will a trained supervisor be present on site while any RACM is stripped, removed, or otherwise handled or disturbed? There will be the possibility of handling/disturbing activities throughout stripping and demolition.	Address asbestos training for site workers.	40 CFR §61.145(c)(8)				ECY
14	Pg. 21, Sec. 2.2.4.1	Will the standard of no visible emissions from ACM and ACM waste be maintained? Please note EPA guidance and case history establishes this standard significantly more stringently than visible emissions for non-asbestos particulate matter.	Address visible emission ARAR.	40 CFR §61.150(a); *"Common Questions On the Asbestos NESHAP"*, EPA 340/1-90-021, December 1990; *"Corrective Action Plan for Office of the Inspector General Report No. 12-P-0125, Use of Unapproved Asbestos Demolition Methods May threaten Public Health, December 14, 2011"* EPA, Feberuary 28, 2012; Various court cases and settlements				ECY
15	Page 25, Lines 30-34	Provide a legal/statutory citation to support this sentence.	See Comment					ECY
16	Page 27, Lines 30-32	"Removal actions will be performed in compliance with the substantive portions of the identified ARARs to the extent practicable."	Revise this sentence to state, "The ARARs for this removal action are identified in the Action Memorandum, DOE/RL-2004-36					ECY
17	Page 27, Line 34	"ARARs for the removal action are identified in Appendix A of the 224B AM (DOE/RL-2004-36)".	Please provide clarification. There is not an Appendix A in the 224B AM.					ECY
18	Page 32, Table 4	The ARAR Citation for WAC 246-247-040 and WAC 246-247-075 does not specifiy whether it is an ARAR or TBC.	Please specify ARAR or TBC					ECY

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19	Page 33. Table 4	The Action Memorandum included an ARAR for Occupational Radiation Protection (10 CFR 835) and states that "This regulation established occupational dose limits for adults and the regulation is applicable to the removal action."	Include this ARAR into the RAWP or provide to Ecology Justification for not including this ARAR.					ECY
20	Page 34, Section 4.3.1	Please provide PTE calculations	See comment					ECY
21	Page 40, Line 21	"... those soils will be excavated and disposed at ERDF or other EPA-approved facilities."	Add to the end of the sentence: "... in accordance with the waste acceptance criteria for the facility."					ECY
22	Page 40, Lines 33-35	"Alternatively, post-removal contaminated soil sites may be identified by DOE as new WIDS sites under the Tri-Party Agreement (Ecology et al., 1989a) with concurrence from Ecology and EPA."	Clarify whether both Ecology and EPA need to approve or only Ecology.					ECY
23	Page 38, Line 33-36	The cost estimate laid out in the Action Memorandum published in 2004 for Alternative Three is approximately $16,490,000. The cost listed in the RAWP is $11,600,000. This cost estimate is not consistent and Ecology assumes that the cost has significantly increased since the Action Memorandum was published in 2004.	Provide Ecology with Justification for the cost estimate contained in the RAWP. What models did DOE use to obtain this cost?					ECY/EPA

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24	Page 38-39, Section 5.2 Schedule	Ecology has concerns with the lack of information contained in Section 5.2 Schedule. What is the phased approach and how will DOE determine the phased approach? In addition with the lack of information contained in this Section, disposal of D4 waste in the Environmental Restoration Disposal Facility (ERDF) requires concurrent disposal of contaminated soil to obtain the required 1:1 mix between D4 debris and contaminated soil. USDOE's only current soil excavation is for 100-K Area remedial actions, and that soil is needed to mix with D4 debris from 100-K. USDOE has previously placed uncontaminated soil in ERDF to obtain the 1:1 ratio, and USEPA informed USDOE that the use of clean backfill for extended periods of time is unacceptable because it wastes ERDF capacity and may lead to unnecessary expansion of ERDF. USDOE should develop a multi-year strategic plan that synchronizes D4 actions with remedial actions that generate contaminated soil. Absent such a plan the 224-B removal, the 224-T removal (reference M-85-100 due 09/30/2020), and the proposed FFTF removal (reference 20-AMRP-0003) will not be implementable within the next several years.	DOE needs to provide Ecology with a schedule of the phased approach for the RAWP of the 224B Building to ensure the 1:1 ratio are not an issue moving forward.					ECY/EPA

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25	B-2, B2.1, Airborne Source Information (line 17)	The dose per unit release factors in DOE/RL-2006-29 are not intended for non-chronic releases	Please provide CAP88 modeling information specific to demolition work & exhausters for evaluation by WDOH.	WAC 173-480-040, DOE/RL-2006-29 3.4.2 **Nonchronic Releases** Potential-to-emit calculations are usually performed for chronic release scenarios in which emissions are nearly continuous and the emission rate is relatively constant over an extended period of time. For purposes of this document, a chronic release is defined as nearly continuous for a period of at least 3 months. However, some of the release scenarios at the Hanford Site may occur over a relatively short period of time (i.e., less than 3 months), may be intermittent, and/or have variable emission rates. These types of releases are not considered chronic releases, which could make use of the dose-perunit-release factors in Section 4 inappropriate				DOH
26	B-2, B2.1, Airborne Source Information (lines 20-25)	DOE/RL-2006-29 dose conversion factors were used to calculate potential to emit (PTE) . The unabated PTE is estimated at 1.17 mrem/yr. to the offsite MEI & 1.35 mrem/yr. to the onsite MEI	Please provide a scenario-specific CAP88 run	WAC 173-480-040, DOE/RL-2006-29 3.4.3 **Estimated Doses Near 0.1 mrem/yr** When estimated doses are within an order of magnitude of 0.10 mrem/yr (i.e., 0.01 to 1.0 mrem/yr), a scenario-specific CAP88-PC run may be warranted to eliminate excess conservatism from the dose calculation.				DOH

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27	B-2 B 2.2.1 Point Source Controls	Point source controls including abatement technology, operational parameters & monitoring should be evaluated.	Please provide more specific information on abatement technology, operational parameters & monitoring. This in combination with the CAP88 run would determine whether a temporary exhauster agreement detailing monitoring & abatement could be a recommendation.	WAC 246-247-040, WAC 246-247-075				DOH
28	Pg B-2, Sec. B2.2.1; Entire Work Plan	Emissions other than those directly from a portable exhauster are described as diffuse and fugitive throughout the work plan. Section B2.2.1 states "There is no active ventilation system for the 224B Building; thus, the majority of radiological air emissions will be diffuse and fugitive." This is inconsistent with the definition in WAC 173-400-030. Fugitive emissions are defined as those which could not reasonably pass through a stack, vent, or other functionally equivalent structure. Failure to pass such emissions through a stack does not make emissions fugitive. The building is currently intact and emissions from initial stripping and prep work would appear to be passed through the roof vents with reasonable modifications. Proposed use of portable exhausters also demonstrates that it is reasonable to pass emissions through a structure which is functionally equivalent to a stack.	Determine which stripping/prep emissions cannot be reasonably passed through a stack and provide a justification as to why they are fugitive. Review any determinations which may be based based upon classification of emissions as fugitive vs. non-fugitive and revise as necessary. Provide more detail on the portable exhauster design(s), volumetric airflow, HEPA filter/control train, where they will be set up, what activities they will be used to control, etc.	WAC 173-400-030; EPA Memo "Interpretation of the Definition of Fugitive Emissions in Parts 70 and 71", February 10, 1999; 40 CFR §52.01; 40 CFR §70.2				ECY

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29	Page B-4, Section B2.2.2, First bullet point on page	The statement that waste containers will remain closed, except during packaging and waste inspection activities could be interpreted in a manner that is inconsistent with requirements for packaging/handling of ACM waste. The general standard for ACM is sealed leak-tight packaging (minimum one bag, typically double bagged, and airtight wrapping for anything too large to bag), but adequately wet demolition waste can potentially be handled and loaded for transport to a disposal site without bagging or wrapping. Clarification that opened/inspected containers would not contain dry ACM, or that water would be added as needed based upon these inspections, would support compliance with ARARs.	Add an additional bullet point specific to handling of ACM waste or clarification of noted bullet point to describe activities for ACM waste. It may be useful to note that the different requirements for non-friable ACM which is not damaged by demolition [40 CFR §61.150(a)(5)]	40 CFR §61.150(a)(1), 40 CFR §61.150(a)(3)				ECY

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30	Pg B-7, Sec. B3.1	The statement that emissions will not exceed the de minimis thresholds of WAC 173-460-150 is not supported. ECF-Hanford-17-0042, Rev. 0 states: *"It is recognized that several process chemicals, arsenic, cadmium, chromium, and beryllium have low de minimis values. As stated in Chapter 2, the process tanks, chemical scale tanks, and piping in 224B were rinsed, flushed, and drained during past decontamination and deactivation activities. Only minimal dried residuals remain in the process equipment. Because the process equipment will not be handled in a manner to create emissions, no emissions in excess of the de minimis emission values are anticipated."* It appears that the assumption that de minimis values will not be exceeded is entirely based upon this statement. There may be sources of emissions in the stripping and demolition activities which will generate toxic air pollutant emissions which are not related to the removed waste. One clear example is asbestos, which has a de minimis value of 0.000153 pounds per year. Other potential sources might be grinding/cutting/abrading of cadmium-plated iron/steel, lead pipes, and lead paint which may be in the building; fuel or solvent storage on site; and any necessary welding activities (welding electrodes commonly contain cadmium, hexavalent chromium, lead, and other HAPs).	Estimate TAP emissions to determine if thresholds of WAC 173-460-150 will be exceeded by stripping and demolition activities. If so, address additional ARARs such as use of Best Available Control Technology.	WAC 173-460				ECY
31	Pg B-8, Sec. B3.2	There is no description of warning labels and documentation for ACM waste to prevent accidental release to the environment or improper disposal. This includes transport vehicles during loading and unloading.	Address whether proper OSHA labels will be used. If an off-site disposal facility might be used, this would also include generator name and location where the waste was generated as well as records specified in 40 CFR §61.150(d)	40 CFR §61.150(a)(1)(iv) and (v), 40 CFR §61.150(c), 40 CFR §61.150(d)				ECY
32	Pg. B-8, Sec. B3.2	Will ACM waste be transported to ERDF (or another approved site) as soon as practical?	See comment	40 CFR §61.150(b)				ECY

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Ecology's and EPA Comments on the Sampling and Analysis Plan for the 224B Plutonium Concentration Facility: DOE/RL-2017-34 Draft A								
1.	General	Neither the SAP or the RAWP state that the SAP is a part of the RAWP. This needs to be stated in the RAWP or the SAP needs to be physically added to the RAWP.	See Comment					
2.	Section 1.1, page 1-2, line 1.	Why is "guidance" used? The SAP should be providing more than "guidance" to the sampling. Suggest deleting the word.	See Comment					
3.	Pg. 1-1, last paragraph	SAP states, *"If contaminated soil is identified, it may be excavated or sampled, as determined by the U.S. Department of Energy, Richland Operations Office (DOE-RL) Removal Action Manager."* The language, "*may*" is subjective, the use of this subjective language gives DOE-RL the ability to determine if they want to excavate, sample, or do nothing. Change to "will" and it becomes a choice of excavate or sample.	See Comment					
4.	Section 1.2, page 1-2, lines 21-23	This is necessary language, but note that as this facility is basically a mini-canyon it is quite robust and a removal action is not urgent.	See Comment					
5.	Section 1.2, pages 1-2 and 1-3	We appreciate that one of the objectives of the sampling is to provide information that can be used by a future remedial action. It is also good to see an account of the Laydown Yard and minor building D&D and closeout that occurred when EPA was the regulatory lead. It might be helpful to reference the TPA change package that swapped lead regulatory agency roles for 224B and 224T (to consolidate single regulator roles in East and West areas).	See Comment					
6.	Section 1.2.2.1, page 1-12, lines 5-8	This information should be updated as the quarterly milestone review indicates the building was downgraded to not being a beryllium contaminated facility. Believe it is wise to keep beryllium in the analyte list, however.	See Comment					
7.	Pg. 1-19, Sect. 1.4	*"Table 1-7 includes the final radionuclide and chemical COCs for the 224B Building for which laboratory analysis may be conducted, as appropriate."* Remove subjective language and replace with a reference to Table 3-1, Sampling Table Summary; this table gives actual location and number of samples. There is no need to be vague.	See Comment					

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18	Pg. 3-20, Sect. 3.6.3, Line 8	*Samplers should note any anomalies with the samples. If anomalies are found, samplers should inform the SMR group so...* Replace "should" with "will".	See Comment					

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8.	Section 1.5, page 1-19	This section is meaningless without any information on schedule to go by.	See Comment					
9.	Pg. 2-9, Sect. 2.1.5	*"Field personnel typically will have completed the following training before starting work:"* The language "typically" insinuates that field personnel can be working without completing training, this needs to be corrected.	See Comment					
10	Table 2-6, page 2-17, "Note" in footnotes	As with other recent SAPs, this language should be removed. The title of the table says "Requirements" and the EPA approves the SAP. Alternatively, it could be said that the requirements in the table are not taken verbatim from EPA guidance but are approved by EPA as requirements for Quality Control for this SAP.	See Comment					
11	Pg. 2-22, Sect. 2.2.5	*Collection, measurement, and testing equipment should meet applicable standards...* Replace "should" with "will".	See Comment					
12	Table 3-1, page 3-2	The title of the first column and using "All sites" is a generic thing that is better suited to actual waste sites and not building D&D. Might consider making the table more specific to the action.	See Comment					
13	Pg. 3-4, Sect 3.1.3, Line 3	Replace "should" with "will".	See Comment					
14	Pg. 3-5, Sect. 3.1.4	*"For example, volumetric samples may be collected in areas with evidence of staining or that have a history of repeated spills of contaminated liquids."* Delete the word "*repeated*", the potential for residual contamination can occur from any spill not just repeated spills.	See Comment					
15	Section 3.1.8, page 3-6	Just a reminder to make sure that use of spreadsheets is carefully examined. The problem at 233-S with NDA was due to errors in the spreadsheet and resulted in material having to be excavated, reshot, and removed from ERDF.	See Comment					
16	Table 3-2, page 3-10, entry #16	Why aren't PCBs being analyzed for in subsurface soil samples, especially where drains were?	See Comment					
17	Pg. 3-11, Sect. 3.3.1, Line 5	Replace "should" with "will".	See Comment					