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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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November 5, 2015

15-NWP-198

Mr. Ray J. Corey  
Richland Operations Office  
United States Department of Energy  
PO Box 550, MSIN: A5-11  
Richland, Washington 99352

Re: 277-T Outdoor Storage Area Closure Plan review comments

Dear Mr. Corey:

The Department of Ecology (Ecology) has reviewed the following Closure Plan, which was transmitted to Ecology for review on July 28, 2015. The plan is for clean closure of the unit.

- T-2-7 • T-Plant Complex Operating Unit Group, 277-T Outdoor Storage Area Dangerous Waste Management Unit (DWMU) Closure Plan

This is an unauthorized DWMU identified in the Consent Agreement and Final Order (RCRA-10-2013-0113) the Environmental Protection Agency issued against the United States Department of Energy (USDOE) in June, 2013. Ecology included this DWMU in the Agreed Order and Stipulated Penalty (No. DE 10156) with USDOE and CH2M Hill Plateau Remediation Company (CHPRC) dated January 24, 2014. The Agreed Order requires USDOE to submit to Ecology a Class 3 permit modification request to incorporate this and other DWMUs into the Hanford Dangerous Waste Permit.

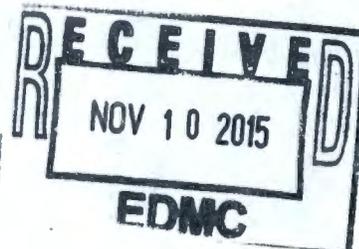
Please find our comments in the file enclosed with this letter. We look forward to working with the United States Department of Energy to resolve our comments on this document.

If you have any questions, please contact me at [deborah.singleton@ecy.wa.gov](mailto:deborah.singleton@ecy.wa.gov) or (509) 372-7923 or Stuart Luttrell at [stuart.luttrell@ecy.wa.gov](mailto:stuart.luttrell@ecy.wa.gov) or (509) 372-7883.

Sincerely,

Deborah Singleton  
Waste Management Section Project Manager  
Nuclear Waste Program

Enclosure  
cc see page 2



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cc electronic: w/enc:

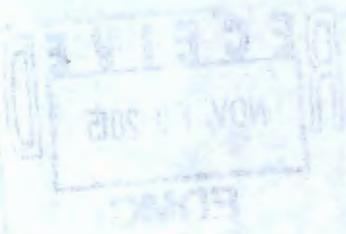
Dave Bartus, USEPA  
Cliff Clark, USDOE  
Mike Collins, USDOE  
Tony McKarns, USDOE  
Sarah Horn, CHPRC  
Stephanie Johansen, CHPRC  
Ken Niles, ODOE  
Debra Alexander, Ecology  
Stuart Luttrell, Ecology  
Deborah Singleton, Ecology  
Ron Skinnerland, Ecology  
John Temple, Ecology  
Environmental Portal  
Hanford Operating Record  
Correspondence Control, USDOE-RL  
Correspondence Control, CHPRC

cc w/enc:

Rod Skeen, CTUIR  
Gabriel Bohnee, NPT  
Rex Buck, Wanapum  
Russell Jim, YN  
D. Rowland, YN  
Steve Hudson, HAB  
Administrative Record  
NWP Central Files

cc w/o enc:

NWP Reader File



# Review Comment Record

## Washington State Department of Ecology Nuclear Waste Program

Date: October 29, 2015

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Document Title(s)/Number(s)

277-T Outdoor Storage Area – Closure Plan

Document Manager

Project Manager

Facility Site

Cleanup Site ID

Stuart Luttrell

Deborah Singleton

T Plant

Item No.	Pg. # Sec. # (Line.)	Comment or Question	Suggestion/Modification Needed	Basis/Justification	U.S.D.O.E. Response	Ecology Response	Open/Close	Reviewer Initials
1	Pg. 1, Section E1.1, (17)	The dimensions of the site appear to be incorrect.	Correct the dimensions if they are not correct.					
2	Pg. 1, Section E1.1, (26-28)	This states the 277-T OSA was used as a <90 Day and satellite storage area, but lacks information on when the wastes may have been stored at the unit.	Provide information when the wastes were stored or state that it is not known.					
3	Pg. 18, Figure E-3	Figure is out of place?	Suggest moving Figure E-3 (or similar site map) from pg. 18 ahead in the document to pg. 3.					
4	Pg. 1, Section E1.1, (19)	Reference to the photographs in the discussion of site dimensions is not appropriate.	Refer to these pictures separately and specifically. Provide a site map in the discussion of dimensions.					
5	N/A							
6	Pg. 3, Section E3, (23-26)	This reads somewhat confusing, and does not clearly state what actions are proposed.	Remove the first sentence and the first few words (Based on these reviews) of the second sentence. State the unit will be clean closed.					
7	Pg. 3, Section E3, (26-27)	Some clarification is needed?	Grammatical error in line 26 – correct this. Insert the word “design” after the word “Sampling.”					
8	Pg. 4, Section E3.1	Provide additional information as needed.	See comments and revisions to the 277-T Building Plan, as appropriate.					
9	Pg. 5, Section E3.2, (5-9)	The following sentence is unclear, “The 277-T Outdoor Storage Area will be maintained in accordance with WAC 173-303-610 in a manner that demonstrates that all steps have been taken and will continue to be taken to prevent threats to human health and the environment from the unclosed but not operating DWMU, including compliance with all applicable permit requirements.”	After clean closure, what requirements of 303-610 would be used as a basis to maintain the OSA? Should this say, “The 277-T OSA will be <u>closed</u> in accordance with 303-610 in a manner that ... to human health and the environment.” The remainder of the sentence doesn’t make sense if the entire DWMU will be closed. Suggest you delete this to avoid confusion.					
10	Pg. 6, Section E3.2, (1-2)	Contaminated concrete or asphalt would not be managed as environmental media.	Please clarify this statement to read, “contaminated concrete/asphalt will be managed as newly generated waste in accordance with Section E3.8”					
11	Pg. 6, Section E3.3, (8-9, 24)	Be consistent in the name given to the DWMU.	Remove the word “container” in some places where the DWMU is named.					
13	Pg. 7, Table E-2	The footnote indicates “A container of Insulkote was leaking.” The inspection checklist indicates this leak occurred in the 271-T cage.	Add clarification that the leaking container was in the 271-Cage, not the 277-T OSA.					

## Review Comment Record

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14	Pg. 7, Section E3.5	Heading "Inspection of Units Before Decontamination" is not entirely correct.	The heading implies inspection occurs before decontamination, but the text says inspection occurs "until the clean-closure certification is..." Please correct the heading.					
15	Pg. 7, Section E3.5, (7)	There is no authority or process in the regulations for Ecology to "approve" a closure certification.	Revise this to "accepted by" Ecology.					
16	Pg. 7-8, Section E3.6	Unclear as to what areas would be decontaminated. Guidance 94-111 has a section on contaminated asphalt (Section 5.8). It is porous and hard to decontaminate. Contaminated asphalt should be removed and disposed, and the substrate sampled.	Review the guidance related to asphalt, and if appropriate, revise this section to clarify decontamination would only be for concrete surfaces.					
17	Pg. 8, Section E3.6, (7-9)	These methods may require water to control dust generated during decontamination.	Add a paragraph that was included in the 277-T Building plan regarding use of water if blasting, grinding, etc.					
18	Pg. 8, Section E3.7, (12)	The acronyms MLLW and TSCA-PCB LLW are used here, but are not in section E3.10.2 on pg. 9.	Correct if necessary to make the terms and use of acronyms consistent.					
19	Pg. 8, Section E3.7, (17-18)	The process to change this plan is not adequately described.	After the phrase, "the nature and extent of contamination will be evaluated," add: "by modification of the permit (Section H-B3.10.14)."					
20	Pg. 8, Section E3.7, (21,22)	The text states the "approved closure plan SAP." What approval does this indicate? Ecology reviews but does not "approve" the SAP.	Remove the word "approved" or replace it with "reviewed." If this indicates some approval other than Ecology, please clarify.					
21	Pg. 9, Section E3.9, (14)	Section E.7 does not discuss removal of contaminated concrete and asphalt.	Change Section E3.7 to E3.8.					
22	Section 3.10	Please provide a summary of the procedures used for sampling.	Provide more information on sampling approach and procedures. Additions made to the 277-T Building Plan are needed in this plan.					
23	Pg. 11, Section E3.10.5, (6)	Be consistent with the names or titles of the unit.	Remove OUG from this sentence.					
24	Pg. 13-15	Pages missing?	Re-number pages.					
25	Pg. 16, Table E-4	The 277-T Building is incorrectly identified in the 4 <sup>th</sup> row.	Correct this to the 277-T Outdoor Storage Area.					
26	Pg. 17, Section E3.10.5, (12)	The reference to "cracks in the flooring" is incorrect; this is not in a building.	Correct this to concrete surface (or whatever is correct).					
27	Pg. 20, Section E3.10.7	Add a statement about PQLs and non-detect or <PQL values relative to clean closure levels.	Suggest the following if appropriate: If the PQL exceeds the clean closure level, non-detect values at or below the PQL will document clean closure.					
28	Pg. 20, Table E-5	The method used for low level arsenic is missing.	Include EPA method 6020 for low level arsenic.					
29	Pg. 20, Section E3.10.8	Quality control. What are the consequences of analyses that are not within required QC thresholds?	How are these evaluated, and what decisions would be made based on out-of-control results?					
30	Pg. 20, Section E3.10.8, (21)	This refers to Section E3.10.8 – this section. I don't see any "specific requirements" in Sections 3.10.8 and 3.10.9.	Clarify or correct.					
31	Pg. 23, Table E-6	Revise the table as done for the 277-T Building plan.	Review and correct, as appropriate.					

**Review Comment Record**

**Washington State Department of Ecology  
Nuclear Waste Program**

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Item No.	Pg. # Sec. # (Line.)	Comment or Question	Suggestion/Modification Needed	Basis/Justification	U.S.D.O.E. Response	Ecology Response	Open/Close	Reviewer Initials
32	Pg. 24, Table E-7	Method for arsenic needs to be changed.	Change method to 6020 and PQL= 0.2 mg/kg.					
33	Pg. 24, Table E-7	Cadmium and chromium carcinogen values are needed, with associated footnotes.	Update this table with the relevant changes that you made to the 277-T Building plan.					
34	Pg. 27, Section E3.10.11	Is this title correct (gravel/soil)?						
35	Pg. 27, Section E3.10.12, (30-32)	The following sentence "Comparison of the maximum data value for each analyte to the clean closure standards..." is discussing individual values.	Remove this sentence or clarify if it is meant to explain something other than statistical evaluation.					
36	Pg. 27, Section E3.10.13, (36-37)	The sentence on version control is incorrect. The permit provides the version control.	Delete the sentence. Also, delete the phrase, "affecting the data needs" from the next sentence. (line 37).					
37	Pg. 29, Section E4, (29-30)	Add details to the schedule.	Review the additional information in the 277-T Building plan, and add to this plan as appropriate.					
38	Pg. 30, Table E-8	Check the number of days for each activity.	Revise as necessary.					