



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 HANFORD PROJECT OFFICE
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Chris Smith
Project Manager
U.S. Department of Energy
Richland Operations Office
P.O. Box 50, H0-12
Richland, WA 99352

RE: EPA and Ecology Comments on the Remedial Design Report/Remedial Action Workplan
DOE/RL-96-17, Rev. 3; 100 Area Remedial Action Sampling and Analysis Plan,
DOE/RL-96-22, Rev 3; and 100 Area Burial Grounds Remedial Action Sampling and
Analysis Plan, DOE/RL-2001-35

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Dear Mr. Smith:

Enclosed are comments from the Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA) on the subject documents.

In addition to our specific comments, Ecology and EPA are proposing to add a milestone to the Remedial Design Report to complete the 100 Area B/C Baseline Risk Assessment Pilot Project. We look forward to discussing this with the U.S. Department of Energy.

If you have any questions, feel free to contact either of us.

Sincerely,

John Price
Ecology Cleanup Project Manager

Dennis Faulk
EPA Project Manager

Enclosures: 3

cc: Jeff James, BHI
John Ludowise, CHI
Admin. Record - 100 Area General

Enclosure 1: EPA and Ecology Comments on Remedial Design Report/Remedial Action Workplan for the 100 Area, DOE/RL-96-17, Rev. 3

1. Page 1-25, Table 1-5.
Please add the 1706-KE Facility to the table.
2. Page 1-27, Table 1-6.
Why is the column on Demolition Waste projected at zero? Please clarify.
3. Page 2-1, Section 2.1.1, 1st paragraph.
Add 1995 before ROD. This comment is applicable throughout the document.
4. Page 2-1, Section 2.1.1, 3rd paragraph.
This paragraph was written in 1995. It should be updated to reflect the current status of the NRC regulations or a footnote should be added to clarify the current status. This comment is applicable throughout the document, i.e., page 2-3 and elsewhere.
5. Page 2-1, Section 1, line 29.
Add the clause *or to the bottom of the engineered structure if deeper than 15 ft.*
6. Page 2-1, First indent numbered para.
Remedial action objectives specifically identify ecological receptors, but discussion doesn't specifically describe how RAO shall be met. Following citations can be added either in this section or in Section 2.1.6. (including Section 2.1.6.4).
 - Add a reference to "DOE Technical Standard, "A Graded Approach for Evaluating Radiation Doses to Aquatic and Terrestrial Biota" (Project ENVR-0011)," as a To Be Considered (TBC) information.
 - Please cite as a TBC: "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments (ERAGS, EPA 540-R-97-006)." OSWER Directive #9285.7-25, June 1997.
Please cite as an applicable regulation (for protecting ecological receptors) the Amendments to the MTCA rule that were adopted on February 12, 2001 and became effective on August 15, 2001.
7. Section 2
Look-up values (Tables 2-1 to 2-7) could be modified to incorporate values from Tables 7.1 – 7.3 of "DOE Technical Standard, "A Graded Approach for Evaluating Radiation Doses to Aquatic and Terrestrial Biota" (Project ENVR-0011).
8. Page 2-4, 3rd bullet.
The institutional controls are required to be in place currently, as well as when DOE relinquishes control. Please update this bullet.
9. Page 2-6, First paragraph.
Specify that RESRAD version 6.1 will be used.
10. Page 2-14, 1st paragraph.

Citation of MTCA as an ARAR is missing a specific reference to the terrestrial ecological evaluation procedures of MTCA (WAC 173-340-7490) and protection of the environment (WAC 173-340-357(4))

11. Page 2-17, Section 2.1.6.4, 3rd paragraph.

Add a sentence to the land use Record of Decision to state the 100 Area cleanup scenario is consistent with the land use plan.

12. Page 2-17, Section 2.1.7, Alternative Description.

Again, this section references the ROD, but fails to clarify this is the 1995 ROD. In addition, it is recommended that a discussion be added to describe the other ROD's Alternative Description.

13. Page 2-18, Section 2.1.7, 1st bullet.

Add the ERDF Amendment and that, per the amendment, treatment may also occur at ERDF.

14. Page 2-21, Section 2.2.7, 1st paragraph.

This section discusses that remedial actions will occur in a least two reactor areas. Is this still accurate? Please clarify.

15. Table 2-1

For Chromium (VI), take out the Hanford Site-Specific Background Concentration. Leave blank or NA.

16. Page 2-23/2-24, Figure 2-1.

Figure doesn't show how ecological receptors are protected.

17. Page 2-27, Table 2-2.

The proposed change in the remedial action goal for protection of the Columbia River is 15 pCi/L for alpha emitters. For the radionuclides ²³⁸Pu, ²³⁹Pu and ²⁴¹Am, consumption of water at this level (2L/day) will result in a dose of approximately 38 mrem/year. This is above the CERCLA risk range of 10⁻⁴ – 10⁻⁶. The concentration based on 4 mrem/y should be retained.

The term **Minimum Detectable Concentration** should be used instead of **Minimum Detectable Activity**.

The footnote on the MDA for Technetium-99 does not make sense. Please clarify.

18. Page 2-28

The MCL of ¹³⁷Cs is 200, not 60.

The reference to MCL should be SDWA 40CFR141, not NBSMPC.

The remedial action goal for uranium is listed as 30 µg/L. The measurement technique is alpha spectroscopy. What conversion ratio will be used to convert the activity measurements to mass?

19. Page 3-1, Section 3.1.2, 1st paragraph.
Add the burial grounds SAP to this section.
20. Page 3-7, Section 3.2.2.
The long-range plan is not an acceptable reference for the schedule. A schedule must be added to show the current workscope committed to, as well as the associated milestones.
21. Page 3-6, Section 3.2.
The description of Project Schedule and Cost cites a BHI procedure. DOE is planning to solicit and award a replacement contractor to BHI sometime after Dec. 2002. Therefore, this section may need to be revised after that award.
Accordingly, it might be appropriate to amend some other sections describing the BHI role.
 - Section 3.3, Project Team.
Section 3.3.3, Environmental Restoration Contractor (may want to amend to state that BHI, CH2M Hill Hanford & Eberline Services Hanford Inc. make up the current (August 2001) ERC Team).
22. Page 3-17, Section 3.6.7, 1st paragraph.
In the second sentence, add the word **contaminant** after the word **maximum**.
23. Page 4-3, Section 4.1.2.
This section discusses waste designation methods. This is the responsibility of the generator. Please add a sentence that says this is presented for information purposes only and the generator is responsible for proper waste designation.
24. Page 4-7, Section 4.5, 2nd paragraph.
What is the rationale for deleting the AOC methodology and replacing with soil piles?
Please clarify.
25. Page B-8, Table B-1.
The fish consumption number should be updated to use the MTCA number of 9.85 kg/yr for fish consumption.
26. Page F-1, Appendix F.
This appendix needs to be updated to describe the public involvement that has been conducted for all the RODs.
27. Page G-2, Section G.1.3, 1st paragraph.
On the new sentence addition, add the words "and the environment."
28. Page G-3
It mentions that if any COPC is detected in the cleanup verification samples, it is included in site assessment. How do contaminants get added that were not on the COPC list, if they are detected in any of the sampling? In the past, laboratories have only been asked to report results that were listed as COPCs. There was no mechanism to add contents not originally listed.

29. Page G-4, Section G.3.2, 2nd paragraph.

This paragraph states that the exposure scenario is for a lifetime. It is actually calculated at 30 years. Please change the text.

30. Page G-8, Section G.4.4.

Add a sentence to clarify that the burial grounds SAP does not require variance sampling.

31. Page G-12, Section G.5.2.1, 2nd paragraph.

The Parties have agreed to use negative values instead of zero. Please correct.

Enclosure II: EPA and Ecology Comments on 100 Area Remedial Action Sampling and Analysis Plan, DOE/RL-96-22, Rev. 3

1. Page I-17, I-5
Add the 1706-KE facility to the table. In addition, 100-K-1 & 116-KE-1 needs to be added to Appendix C of the TPA during the next TPA update.
2. Page I-22, Lines 25-26.
List the water quality regulations that apply.
3. Page I-26, Line 14. Take out “or less”.
4. Page I-24, Table I-7
A PQL of 400 pCi/g for tritium is excessively high. Given the potential error in counting, it is doubtful with a PQL of 400 that we can be assured residual soils meet the cleanup values. Suggest a lower PQL level be established for tritium.
5. Pages I-28 – I-35. Tables. See previous comment. It is unclear why certain contaminants are not sampled for at specific waste sites. Please explain the rationale for exclusion.
6. Page II-11, Specification 2.
Discussion item: what is the basis of a 20% false-negative value?
7. Page I-26, Line 14.
Take out “or less.”
8. Page I-27
⁹⁹Tc is mentioned as a principal contaminant of several sites, but on this page is excluded because it will not be present in detectable quantities. Please clarify.

Enclosure III: EPA and Ecology Comments on the 100 Area Burial Grounds Remedial Action Sampling and Analysis Plan, DOE/RL-2001-35, Draft A

1. General Comment
The scope of this document encompasses both waste designations and cleanup verification sampling. Waste designation is the responsibility of the generator. Add text to indicate that waste designation information is presented for information purposes only and that designation is the responsibility of the generator.
2. Page I-3, Section I.1.3, Second paragraph.
Add regulator request to the list of adding COC's.
3. Page I-4, Table I-1
It is not clear why asbestos has been eliminated from consideration in WFM #1. It is unclear why PCBs are not included in WFM #4, and it is not clear why RCRA metals are not considered in WFM #9. Please clarify. This comment is also applicable to Table I-3.
4. Page I-10, Table I-4
The proposed change in the remedial action goal for protection of the Columbia River is 15 pCi/L for alpha emitters. For the radionuclides ^{238}Pu , ^{239}Pu and ^{241}Am , consumption of water at this level (2L/day) will result in a dose of approximately 38 mrem/year. This is above the CERCLA risk range of $10^{-4} - 10^{-6}$. The concentration based on 4 mrem/yr should be retained.
5. Page I-11, Table I-5, DR-1
Change the word **negotiate** to **discuss**.
6. Page I-15
Add a statement that biased sampling will be reported in the Cleanup Verification Package.
7. Page II-8, Table II-2
Chrome VI number should be 2.0 instead of 2.2. Also, it is unclear how the waste designation action level relates to LDR requirements. Please clarify.
8. Page II-13, Section II.3.1.3
Define what is meant by each lift.
9. Page II-19, Section II.4.2.
Reports to management should be provided to DOE and the regulators prior to being issued to management. Please change text to reflect this.
10. Page II-17, Section II.3.10
A sentence should be added to indicate this data will also be reported in the Cleanup Verification Package.

11. Page D-1. Are all laboratories certified through Ecology? Please clarify.

12. Page III-3, Table III-1

What is the difference between excavation guidance and waste designation? Please clarify.