



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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October 2, 1998

Mr. Bryan Foley
U.S. Department of Energy
Richland Operations Office
P.O. Box 550, MSIN: H4-83
Richland, WA 99352



Dear Mr. Foley:

Re: Ecology Comments on *200 Area Remedial Investigation/Feasibility Study Implementation Plan-Environmental Restoration Program (DOE/RL-98-28, Draft A)*

49646

The Washington State Department of Ecology (Ecology) has completed its review of the subject document. Enclosed are Ecology's comments for your review.

During the review, Ecology discovered a few major discrepancies that require modification before approval of the document is given. Additionally, public comment on this document should not occur until these items are resolved.

Ecology's technical staff are extremely disappointed that the Quality Assurance/Quality Control Plan (Appendix A) of the document continues to not reflect discussions that have been on going for nearly four (4) months. Ecology is aware that schedules have conflicted and have hindered communications. However, Ecology is committed to working with the U.S. Department of Energy (USDOE) to develop a mutually agreed to plan during the comment resolution period.

Overall, the document is educational and should be a valuable resource for the public as well as for Hanford staff as investigations in the 200 Area proceed.

If you have any questions, please contact me at (509) 736-3013.

Mr. Bryan Foley
October 2, 1998
Page 2

Sincerely,

A handwritten signature in black ink, appearing to read "Jack W. Donnelly". The signature is written in a cursive style with a long horizontal stroke extending to the right.

Jack W. Donnelly, Cleanup Project Manager
Nuclear Waste Program

JD:al
Enclosure

Cc: Dennis Faulk, EPA
Tom Post, EPA
Linda Bauer, USDOE
Mary Lou Blazek, OOE
Administrative Record: 200 Aggregate Area

**WASHINGTON STATE DEPARTMENT OF ECOLOGY
COMMENTS ON
DOE/RL-98-28 TITLED *200 AREA REMEDIAL INVESTIGATION
FEASIBILITY STUDY IMPLEMENTATION PLAN FOR THE
ENVIRONMENTAL RESTORATION PROGRAM***

SPECIFIC COMMENTS/ISSUES

1. Page ES-1, last sentence: Modify the sentence to delete the word “permitting” and insert the words “corrective action”, and insert the words “RCRA closure of” before the word “treatment.”
2. Page ES-2, 1st full paragraph, 6th sentence: Modify the sentence to indicate that sampling of individual waste sites shall occur either before the remedial design or after. The text as written contradicts statements made in latter parts of the document that clearly state that sampling shall occur at the other non-representative sites to verify the proper group placement.
3. Page ES-3, 1st paragraph, 3rd sentence: Delete the sentence.
4. Page ES-3, 2nd paragraph, last sentence: Delete the sentence or delete the words “mutually agreed.”
5. Page 1-1, 2nd paragraph, 1st sentence: Modify the sentence to clearly articulate that the Implementation Plan (IP) is not addressing remediation, but the IP establishes the framework for eventual remediation, discusses concepts, and discusses potential strategies. As written, it is implied that this document is making remediation decisions.
6. Page 1-1, 2nd paragraph, 5th sentence: Delete the sentence. However, it is appropriate to coordinate any activities required with the operable unit work.
7. Page 1-2, Section 1.1, 3rd paragraph: Ecology disagrees that land-use will ultimately effect or influence characterization requirements. Ecology shall characterize representative sites for the purpose of characterizing the nature and extent of contamination for use in making remedial decisions for the entire group. The other factors listed are appropriate and may influence characterization. Delete the land use reference and clearly state that it “may” influence characterization requirements.
8. Page 1-3, 1st paragraph, line 5: Replace the word “sampling” with the word “analytical.” The data discussed here are the result of analysis of samples, not of the sampling. (Note that in line 5 the text should read “these data” not “this data.” “Data” is a plural.)

9. Page 1-6, Section 1.2.5, 5th bullet: See comment number 7 above.
10. Page 1-10, Figure 1.2: Modify Step 3 text; the meaning of “design data” is not clear. After Step 6 (or in step 6), the analysis of samples needs to be included. After Step 13 (or in step 13), analysis of samples needs to be included. Revise Step 15 text to include analysis. Revise Step 17 text to include the RCRA permit modification that is needed if a post closure plan or an engineer’s closure certification is submitted.
11. Page 2-2, Section 2.1.2, 2nd group of bullets: The text describing the differences in the programs needs more work to more clearly state the difference, such as level of information available for public review under the two regulations, additional RCRA administrative requirements, timelines for cleanup, enforceable schedules, permit conditions, and RCRA cleanup include ancillary equipment to include piping, etc. This section needs to be much stronger.
12. Page 2-2, Section 2.1.2, 2nd group of bullets: The fact that RCRA requires permits is misleading. RCRA provisions do exist to state permit conditions to meet the requirements of permitting if necessary without drafting a permit. The same is true for CERCLA; while permits are not administratively required, the ARAR’s must be complied with that would meet the requirements contained in a permit. Ecology suggests deleting this bullet, and explain this item further in a later section of the document.
13. Page 2-5, 2nd bullet listing TSD closure requirements: “Standard practice for 200 Area TSD units closed under the 200 Area Strategy will be to address all hazardous substances.” Please modify the sentence as follows, “200 Area TSD units in this Plan will be closed with the intention of addressing all hazardous substances.”
14. Page 2-6, Section 2.2.2, 1st sentence: Clarify that RPP waste site falls under state corrective action, and spell out SWMU.
15. Page 2-7, Section 2.2.2, 3rd paragraph: Modify the 1st sentence to clearly state that corrective action as well as remedial actions will address waste sites and associated contamination. Also, clarify the reason for using the words “corrective measures,” this is confusing.
16. Page 2-9, Section 2.4.1, 1st paragraph: Add a 9th item (9) to include a Quality Assurance/Quality Control Plan that is contained within the Sampling and Analysis Plan (SAP).
17. Page 2-9, Section 2.4.1, 3rd paragraph: Delete the reference to 1989. The reference needs to be to the methods as promulgated under the RCRA regulations.

18. Page 2-11, bullet "RCRA Post-Closure Plan": Revise the parenthetical phrase in lines 1-2 as follows: "(e.g., a modified closure or a landfill)" and sub-bullet 3 needs to read as follows: "any area that cannot be cleaned up to meet clean closure standards, . . ." ***This information is no longer in a bulleted list, but now appears on page 2-14 in the paragraph at the top of the page, line 7. The inclusion of the word "clean" still needs to be done.***
19. Page 2-12, 1st paragraph: Include WAC 173-303 as a reference to developing the list of chemical constituents to be considered.
20. Page 2-12, 1st paragraph: Modify the paragraph to state that the SAP must be approved by the lead regulatory agency and is available for public review and comment during the RCRA permitting activities.
21. Page 2-12, 1st bullet: Ecology does not recognize a pre-closure SAP, although this term is used within USDOE's Facility Transition Program. Modify the bullet to state a SAP. This may need a global search throughout the document.
22. Page 2-12, last paragraph: There is a later version of the Tri-Party Agreement Handbook Guideline. Reference the latest version.
23. Page 2-13, Section 2.4.2, 1st paragraph: The term "pre closure and post-closure verification" is unclear and the terminology needs to be changed and clarified. Verification is not a post closure activity. Verification is required to verify closure performance standards are achieved.
24. Page 2-13, 2nd paragraph: Modify the text to reflect that because components of the closure plan will be included in the documents, all documents that are for work-groups which include a TSD unit must be subject to public review and comment. The public comment must be considered in revising the TSD unit portions of the document. A responsiveness summary also will be needed.
25. Page 2-13, Section 2.4.2, 2nd paragraph, lines 1 & 2: Modify the text to reflect that the closure plan only needs to identify a single closure option if it has already been decided that the option will be the one used . If the decision has not been made then all contingent closure activities/paths must be included. A closure activity is not to be performed unless it has been included in the plan.
26. Page 2-13, Section 2.4.2, bullets: This list is not comprehensive and needs to include additional information. Refer to Ecology's "Guidance for Clean Closure of Dangerous Waste Facilities, Publication 94-11."

27. Page 2-14, 1st paragraph: Modify the text to read as follows, “any area that cannot be cleaned up to meet **clean** closure standards, . . .” Note that a post-closure plan and permit are required in every situation other than a clean closure.
28. Page 2-14, 2nd paragraph: Modify the text to describe that the closure plan and/or the post-closure plan and any modifications follow this path.
29. Page 2-15, 3rd paragraph through entire Section 2.4.2: The text describing the integrated approach needs to be revised to be more specific. When incorporating information from the group-specific work plan by reference, the closure plan must be able to give specific reference to the text that is applicable to the TSD unit, i.e., by page and line number. (That need should be added to the section on writing the group-specific work plan, the feasibility study, etc.) Also include if additional groundwater monitoring data have been obtained since the group-specific work plan was written, the additional data need to be presented and evaluated in the closure plan. The closure performance standards for the TSD unit need to be specified in the closure plan, not referenced to the feasibility study (replace item 3 in the list in the text). The closure strategy and closure activities need to be specific. If detail is deferred to the remedial design, then the closure plan (appendix) needs to be specific about what will appear in the remedial design and where it will appear. The remedial design will need to be subject to public comment and all permitting activities because it will represent a modification to the permit. Delete the phrase “pre-closure” from item 1 in the list and replace it with the word “characterization.” Delete the phrase “post-closure” from item 6 because verification must occur before closure.
30. Page 2-15, 4th closure plan line item: Add specific detail of closure activities/requirements that may or have been deferred to remedial design.
31. Page 2-16, Section 2.4.3, line 4: Delete the word “typically.” Modify the text to reflect that the TSD closure schedule is required to be submitted as part of the closure plan or the TSD unit must complete closure within the 180 days.
32. Page 2-17, 1st paragraph, line 5: Delete the phrase “decision is made” and replace with “. . . the permit is issued.”
33. Page 2-17, 3rd paragraph, lines 8 through 12: Modify the text to distinguish that ARAR waivers to not apply to TSD units in the group.
34. Page 2-19, Section 2.3.3, 2nd bullet: Modify the last sentence to describe that TSD units already clean closed will not require additional characterization for the dangerous wastes managed; however, they will require characterization for radionuclides and hazardous constituents that were not managed by the TSD units. Describe that in some cases, samples taken for characterization of the TSD units or verification of the clean closure, were analyzed for radionuclides and other

parameters to provide information to the CERCLA program. These data are available in the Administrative Record or in summary form in data evaluation reports that were prepared to present data for the TSD unit closure.

35. Page 2-20, 3rd paragraph: RPP sites will also require verification SAP and this needs to be included.
36. Page 2-20, Section 2.4.5, 3rd paragraph: Modify the text to include that the post-closure plan will need to be reviewed in light of any new information to ensure that it is still protective of the TSD unit and groundwater. If any modification to the post-closure plan is necessary, a permit modification needs to be completed prior to implementation.
37. Page 2-24, Section 2.5.1, last sentence: Delete the sentence or clarify the intent.
38. Page 2-25, Section 2.5.3, 2nd paragraph: Confirmation sampling of sites for plug-in must be approved by the lead agency in the ROD and remedial design. This clarification needs to be added.
39. Page 2-26, Section 2.5.4: Ecology does not support the focus package concept, although the detail contained in a focus package would be the information used for the Explanation of Significant Difference (ESD) under the CERCLA process. Either delete the section or modify the paragraph to reflect the CERCLA requirements for moving a waste site from one group to another.
40. Section 2.5.6: This entire section is confusing and the benefit is unclear. Delete the paragraph or modify.
41. Page 2-33, Table 2-1, attachments section: A new attachment (Number 40) has been added into the Hanford Federal Facility RCRA Permit. Modify the text to reflect there are 40 attachments, and attachment 40 relates to acceptable laboratory methods.
42. Page 3-10 (top of page) and 3-11 (top of page), conflicting sentences: page 3-10 states that liquid waste with small quantities of radionuclides were discharged to cribs and reverse wells, while page 3-11 states the opposite by saying "generally higher concentrations of radionuclides. . . was disposed to. . . cribs, reverse wells." Modify the sentences to indicate that page 3-10 has the correct statement.
43. Page 3-11, bullets: Terms are used such as lower bounds, cutoff quantities, and minimum cutoff of inventory. Define the terms and explain the effect on characterization.

44. Page 3-16, last paragraph, last sentence: Modify the sentence to state that Ecology, USDOE, and EPA will annually review group prioritization. Also, any modification requires approval of the lead regulatory agency.
45. Page 3-20 and 3-21, bullets: Include the caliche layer within the existing bullets.
46. Page 4-4 through 4-20, Table 4-1: Delete the column Applicable, Relevant and Appropriate, or To Be Considered. The determination of whether a regulation is Applicable or Relevant and Appropriate occurs during the Proposed Plan.
47. Page 5-1, Section 5.1, 1st sentence: Characterization needs are not based on land use. See comment number 7.
48. Page 5-1, Section 5.1, 3rd sentence: Land use HAS NOT been designated for the 200 Areas by the Tri-Parties. Delete this sentence. It is fair to say that opinions have been expressed that industrial land use is likely in the exclusion zone and outside the exclusion it is expected that the rural residential scenario will likely be the land use. This has also been discussed in the Hanford ER committee.
49. Page 5-2, 1st paragraph, 1st sentence: Delete the state agencies reference or clarify which state agencies. The Department of Ecology has not proposed future land use alternatives for Hanford, and it should be stated as such.
50. Page 5-2, 3rd paragraph, last sentence: This statement is contrary to Ecology's goal of using a rural residential scenario for waste site outside the exclusion zone. Delete the sentence.
51. Page 5-4, 3rd bullet: Modify this preliminary remedial action objective (RAO) to state "Prevent or mitigate the migration of contaminants to groundwater that exceed ARAR's." Since this plan will not address groundwater cleanup actions, stating that our RAO's will also protect against groundwater from migrating to the Columbia River not to exceed ARAR's or a risk range of 10-4 to 10-6 is inappropriate.
52. Page 5-5, 2nd paragraph: The purpose of this paragraph is unclear. These types of elements would be discussed as part of the future Proposed Plans. Delete the paragraph. Furthermore, the 200-CW-3 Operable Unit is currently proposed to meet the 15 mrem/year standard as stated in the Proposed Plan for the 100 Area Remaining Sites.
53. Page 5-5, 4th paragraph, 1st sentence: The reference to the Columbia River is unclear. Delete the words (and the Columbia River) and see comment number 51.
54. Page 5-5, 4th paragraph: The **Implementation Plan DOES NOT SET THE POINT OF COMPLIANCE for any waste site or waste group.** Examples of

points of compliance used on Hanford to date would be appropriate for this section. Modify the discussion to reflect this point or delete the points of compliance from the section. The lead regulatory agency establishes the points of compliance in the ROD, remedial design, and verification SAP's.

55. Page 5-8, Section 5.5.1.2, 3rd paragraph: This section needs to be modified that achieving a MTCA risk range applies to non-radioactive contaminants, and Ecology is using the EPA 15 mrem/year above background as the radionuclide cleanup standard.
56. Page 5-9, last paragraph: This paragraph should be moved to Section 1.3 and/or Section 7.3.
57. Page 6-1, 4th bullet: A post-closure monitoring plan for closure of a RCRA TSD is misleading. A post-closure plan is a separate plan included as part of a complete closure plan. Modify for clarification. Also include this applies for RPP sites.
58. Page 6-3, Section 6.2, 1st bullet: Add TSD's to the bullet.
59. Page 6-3, Section 6.2.1, Number 1 line item: Add TSD's to the line item.
60. Page 6-4, 3rd paragraph, lines 4 & 5: Delete the last sentence and modify to state that in the 200 Area, RCRA TSD units that were clean closed generally were not evaluated for radionuclides because USDOE committed that radionuclides would be addressed by CERCLA. Additionally, hazardous substances/constituents that were attributed to the operable unit rather than to waste management conducted by the TSD unit were also left in place for CERCLA.
61. Page 6-6 and 6-7, Section 6.2.4: Modify the text to include a discussion of verification sampling for RCRA closure.
62. Page 7-1, Section 7.1: This section must be modified to state that the Detailed Work Plan (DWP) is not a driver, but only a tool. The TPA milestones are the driver and the DWP must reflect the TPA schedule and commitment.
63. Page 7-5, Section 7.2.6: Modify this section stating that there are other quality assurance documents and guidelines that can be consulted and referred to. This would capture the fact that Ecology has quality assurance requirements that also must be met.
64. Page 7-9, Section 7.4, 1st paragraph, 1st sentence: Delete the word "conceptual."
65. Page 7-9, Section 7.4, 4th paragraph: Modify the last two sentences to indicate that reducing the number of workplans, consolidating Proposed Plans, and

consolidating ROD's requires regulator approval. Also delete the focus package reference, see comment number 21.

66. Page 7-13, Figure 7-3: Add a footnote to indicate the TPA milestone symbol.
67. Appendix A is not sufficient as a QA Project Plan. At the most, it might be entitled as a QA program plan. The idea was to provide a complete, adequate plan as an appendix to the Implementation Plan so that the Work Plans would address the very specific information. I recommend deleting this text and mark Appendix A as "Reserved" for a QA Project Plan that will be prepared and reviewed during the response period.
68. Appendix D: This appendix is being presented as a Phase I and II Feasibility Study (FS). This section must be qualified because an FS is typically preformed in parallel with a Phase I and II Remedial Investigation (RI). Add text to describe the intent of this section to minimize stakeholders from viewing this as narrowing remedial decisions.

GRAMMAR OR MINOR EDIT COMMENTS

1. Page 1-7, last paragraph, 2nd sentence: Change it's to its.
2. Acronym list: PCB – This should be the singular, polychlorinated biphenyl. *The document uses "PCBs" for the plural.* Add QAPP – Define it as Quality Assurance Program Plan. *The acronym for quality assurance project plan was changed to QAPP, which is inappropriate; it should be QAPjP. Both of these acronyms are in common use with the definitions stated in these comments.* Additionally, DOE and RL are used throughout the document; modify to be consistent.
3. Page 1-2, Section 1.1, 1st paragraph, line 2: Add the word "analysis" after "sampling."
4. Page 2-4, 2nd paragraph, lines 5/6: Delete the work "either" and add "and/."
5. Page 2-4, 2nd paragraph, line 14: Add the phrase "as of fall, 1998" to the sentence.
6. Page 6-1, 1st bullet, line 1: Delete the word "either" and revise the sentence as necessary for clarity.
7. Page 6-5, Section 6.2.2, bullet, line 4/5: Replace the word "facility" with the word "site" or "structure."