

**START**

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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February 20, 1992

Mr. Dennis Faulk, 100-BC-1 Operable Unit Manager  
Environmental Protection Agency  
Hanford Project Office  
712 Swift Blvd., Suite 5  
Richland, WA 99352

Re: 100-BC-1 Chapter 1 and Chapter 5 Inadequacies

Dear Mr. Faulk:

Thank you for addressing the majority of Ecology's concerns in last weeks 100-BC-1 comment disposition meeting. As agreed to, in our February 19, 1992, telephone conversation, are additional comments on problems that were identified after the February 10, 1992, meeting.

Chapter 1 and 5 were handed out to the regulators during the meeting and I stated in the meeting that Ecology would need to review those chapters in detail. We understand the need for the tight schedule that EPA is imposing on USDOE. It is important to remember that USDOE had planned to make the 100-DR-1 Work Plan the model for all 100 area work plans. If possible, Ecology recommends that all language in the work plans be consistent.

Should EPA decide not to incorporate these comments, Ecology will pick them up on the next work plan review. Also, Section 3.3 comments are not enclosed. Mr. Steve Cross will deliver those comments directly to Mr. James Goodenough (USDOE) to fulfill a agreement between Ecology and USDOE.

Thank you for considering these comments. If you would like to discuss them further call me at (206) 493-9367.

Sincerely;

Richard B. Hibbard, P.E.  
100-BC-1 Operable Unit Manager  
Nuclear and Mixed Waste  
Management Program

Enclosure

cc: Darcy Teel  
Larry Goldstein

0001595

## COMMENTS ON THE FEBRUARY 10, 1992

## VERSION OF THE 100-BC-1 OPERABLE

## UNIT WORK PLAN

*See 1.1.2  
p. 1*  
1. Section 1.1. Page 1-2:

Deficiency: This section does not identify the purpose of the Remedial Investigation/Feasibility Study.

Recommendation: Move the introduction from Section 1.1.2 (10) Page 1-6 to this Section.

*Insert  
Flow Chart  
Fig 1-4*  
2. Section 1.1.1. Page 1-2, first paragraph:

Deficiency: This Section is confusing and vague. How could a member of the public identify the decision points?

Recommendation: Include the flow chart developed by Charramonte.

*1.1.1*  
3. Section 1.1.2. Page 1-4:

Deficiency: This Section is full of problems. It does not present the proper sequence of reports, it does not discuss why we are doing the investigations different at Hanford, and it does not state the differences or the similarities between the investigation strategy at Hanford and other hazardous waste sites within Region 10.

Recommendation: Revise this Section to explain the agreements the three parties reached, that led us to this modified investigation strategy. Discuss the similarities and differences between Hanford's - investigations and a typical hazardous waste site investigation.

4. Section 1.1.2. Page 1-4 to 1-8:

Deficiency: This Section should discuss the RI/FS process in chronological order. It should also identify the correct document names, level of regulatory review of the proposed documents, and if public involvement is invited.

Recommendation: Revise the chapters to address the following deficiencies;

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**Deficiency:** The first chapter should be the 100-BC-1 Work Plan.

**Recommendation:** Change this chapter to the numeral "1". Discuss that it is a primary document and that it will be sent out for public comment.

**Deficiency:** The second chapter should be the High Priority Sites Limited Field Investigations (LFI).

**Recommendation:** Change this chapter to numeral "2". Discuss the process for selecting high priority sites. Include a discussion of DOW's and how they are used to implement limited field investigations. Include a discussion of what happens if the LFI's results do not support an IRM to remove contaminants. State that these subunits will be managed as part of the 100-BC-1 RI/FS and ROD. State that this is not a primary document, but the regulatory agencies will be involved in the investigations and that no public comment will be solicited.

**Deficiency:** The third chapter should describe the LFI Report.

**Recommendation:** Change this chapter to numeral "3". This chapter should state that this report will discuss the results of the LFI's. Discuss that this report is a secondary document and that public involvement is not solicited.

**Deficiency:** The fourth chapter should describe the 100 Area Feasibility Study.

**Recommendation:** Change this chapter to numeral "4". Discuss that is a primary document and that public involvement is solicited.

**Deficiency:** The fifth chapter should describe the 100 Area Aggregate Studies.

**Recommendation:** Change this chapter to numeral "5". Discuss that these documents are secondary and that public involvement will not be solicited.

**Deficiency:** The sixth chapter should describe the 100-BC-1 Focused Feasibility Study.

**Recommendation:** Change the title of this chapter to, "100-BC-1 Focused Feasibility Study" and change this chapter to numeral "6". Discuss that this is a primary document and that public involvement will be solicited.

**Deficiency:** The seventh chapter should describe the 100-BC-1 IRM Proposed Plans.

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Recommendation: Delete this chapter and incorporate the text in to the chapter on RI or FS reports as necessary.

Deficiency: The thirteenth chapter should describe the 100-BC-1 Proposed Plan.

Recommendation: Change the title of this chapter to the "100-BC-1 Proposed Plan" and change this chapter to numeral "13". Discuss that this proposed plan will be a primary document and that public involvement will be solicited.

Deficiency: The fourteenth chapter should describe the 100-BC-1 Operable Unit ROD.

Recommendation: Change the title of this chapter to, "100-BC-1 Operable Unit ROD".

Deficiency: The fifteenth chapter should describe the 100-BC-1 Operable Unit Design Report.

Recommendation: Change the title of this chapter to, "100-BC-1 Operable Unit Design Report". State that it is a primary report and why this document does not require public involvement.

Deficiency: The sixteenth chapter should describe the 100-BC-1 Operable Unit Remedial Action Implementation".

Recommendation: Change the title of this chapter to, "100-BC-1 Operable Unit Remedial Action Implementation".

Deficiency: The seventeenth chapter should describe the 100 Area NPL Site Proposed Plan.

Recommendation: Include the title of this chapter as the "100 Area NPL Proposed Plan" and number it numeral "17". Discuss that it is a primary document and will be subject to public review.

Deficiency: The eighteenth chapter should describe the 100 Area NPL Record of Decision.

Recommendation: Change this chapter to numeral "18" and state that this ROD will not be issued until all the operable unit RODs are complete.

Deficiency: This process is so complex that a flow chart should be attached.

Recommendation: Attach the enclosed flow chart "Chapter 1 Flow Chart", to help clarify this section.

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5. Section 5.1.7, Page 5-12: Air Invest.

Comment: Who's comment changed this section? Why was this originally in this section?

6. Section 5.2, Page 5-18: FS not LFI

Deficiency: The title of this section is misleading and should be changed.

Recommendation: Change the title of this section to the "Feasibility Study Tasks".

7. Section 5.2.1, Page 5-18, second paragraph:

Deficiency: This section should include data compilation.

Recommendation: Add compilation and summarization of existing data as number 1 in this section. Renumber the remaining tasks.

8. Section 5.2.2, Page 5-19, second paragraph:

Deficiency: This section does not identify all of the reports that must be addressed in the 100-BC-1 Focused Feasibility Study.

Recommendation: Revise the title of this section to the "100-BC-1 Focused Feasibility Study". Add bullets that require a section discussing soil disposal options, further clarification of ARARS, summary of the 100 Area reports, and treatability tests.

9. Section 5.2.2.1, Page 5-19:

Deficiency: This section is unnecessary and does not represent a new report.

Recommendation: Delete this entire section.

10. Section 5.2.2.1, Page 5-19 and 5-20:

Deficiency: The analysis of IRM alternatives is part of the 100-BC-1 Focused Feasibility Study.

Recommendation: Revise the numbering to "5.2.2.1" to show that it is part of the 100-BC-1 Focused Feasibility Study. Also, revise the order of the nine criteria to be consistent with CERCLA guidance. It is important to list the criteria in order of importance because alternatives that do not pass the first level of the screening process may not be viable options for remediation. The order of importance is as follows:

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- |                                  |  |
|----------------------------------|--|
| Threshold<br>Criteria            | <ul style="list-style-type: none"> <li>• Overall Protection of Human Health and the Environment</li> <li>• Compliance with ARARs</li> </ul>  |
| Primary<br>Balancing<br>Criteria | <ul style="list-style-type: none"> <li>• Long Term Effectiveness and Permanence</li> <li>• Reduction in Toxicity, Mobility, or Volume Through Treatment</li> <li>• Short Term Effectiveness</li> <li>• Implementability</li> <li>• Cost</li> </ul> |
| Modifying<br>Criteria            | <ul style="list-style-type: none"> <li>• State Acceptance</li> <li>• Community Acceptance</li> </ul>   |

Deficiency: "Overall Protection of Human Health and the Environment" should be the first subsection.

Recommendation: Revise this section to be "5.2.2.1.1". Also include a discussion of the required No Action Alternative.

Deficiency: "Compliance with ARARs" should be the second subsection.

Recommendation: Revise this section to be "5.2.2.1.2". This should include a discussion of compliance with chemical specific, action specific, location specific, and other criteria such as advisories and guidance documents (To Be Considered ARARs). Note that, any remedial alternative that does not pass the threshold criteria cannot be discussed further in the evaluation.

Deficiency: "Long Term Effectiveness and Permanence" should be the third subsection.

Recommendation: Revise this section to be "5.2.2.1.3".

Deficiency: "Reduction in Toxicity, Mobility, or Volume Through Treatment" should be the fourth subsection.

Recommendation: Revise this section to be "5.2.2.1.4".

Deficiency: "Short Term Effectiveness" should be the fifth subsection.

Recommendation: Revise this section to be "5.2.2.1.5".

Deficiency: "Implementability" should be the sixth subsection. This section should include the following:

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- The ability to construct and operate the technology
- Reliability of the technology
- Ease of undertaking additional remedial actions if necessary
- Ability to monitor effectiveness of remedy
- Ability to obtain approval from other agencies
- Coordination with other agencies
- Availability of off site treatment, storage, and disposal services and capabilities
- Availability of prospective technologies

Recommendation: Revise this section to be "5.2.2.1.6".

Deficiency: "Cost" should be the seventh subsection.

Recommendation: Revise this section to be "5.2.2.1.7". The cost section should include a discussion of capital costs, operating and maintenance cost, and present worth cost. The discussion of cost benefit analysis should be deleted.

Deficiency: "State Acceptance" should be the eighth subsection.

Recommendation: Revise this section to be "5.1.2.2.8". This section should include a discussion of the alternatives the state supports, the alternatives that the state has concerns with, and alternatives that the state opposes. Language about the role of the lead or support regulatory agency should be included.

Deficiency: "Community Acceptance" should be the ninth subsection.

Recommendation: Revise this section to be "5.2.2.1.9". This section should include a discussion of the alternatives the community supports, alternatives that the community has concerns with, and alternatives that the community opposes.

11. Section 5.2.2.3, Page 5-22, first paragraph; -

Deficiency: This section is incorrectly referenced and titled.

Recommendation: Revise the section to be numbered "5.2.2.2". It is part of the 100-BC-1 Focused Feasibility Report. Delete the last sentence in the first paragraph "Overall protection and . . . not be met".

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Recommendation: Add the word "nine" in front of criteria and delete "listed in section 5.2.3 of this work plan with emphasis on implementing effectiveness, human health and environment, cost, state acceptance, and public acceptance. The final FS will be documented in the Final FS Report".

19. Page 5-24:

Deficiency: The text does not include the 100-BC-1 Proposed Plan.

Recommendation: Include as a new section "5.2.2.9", the "100-BC-1 Proposed Plan".

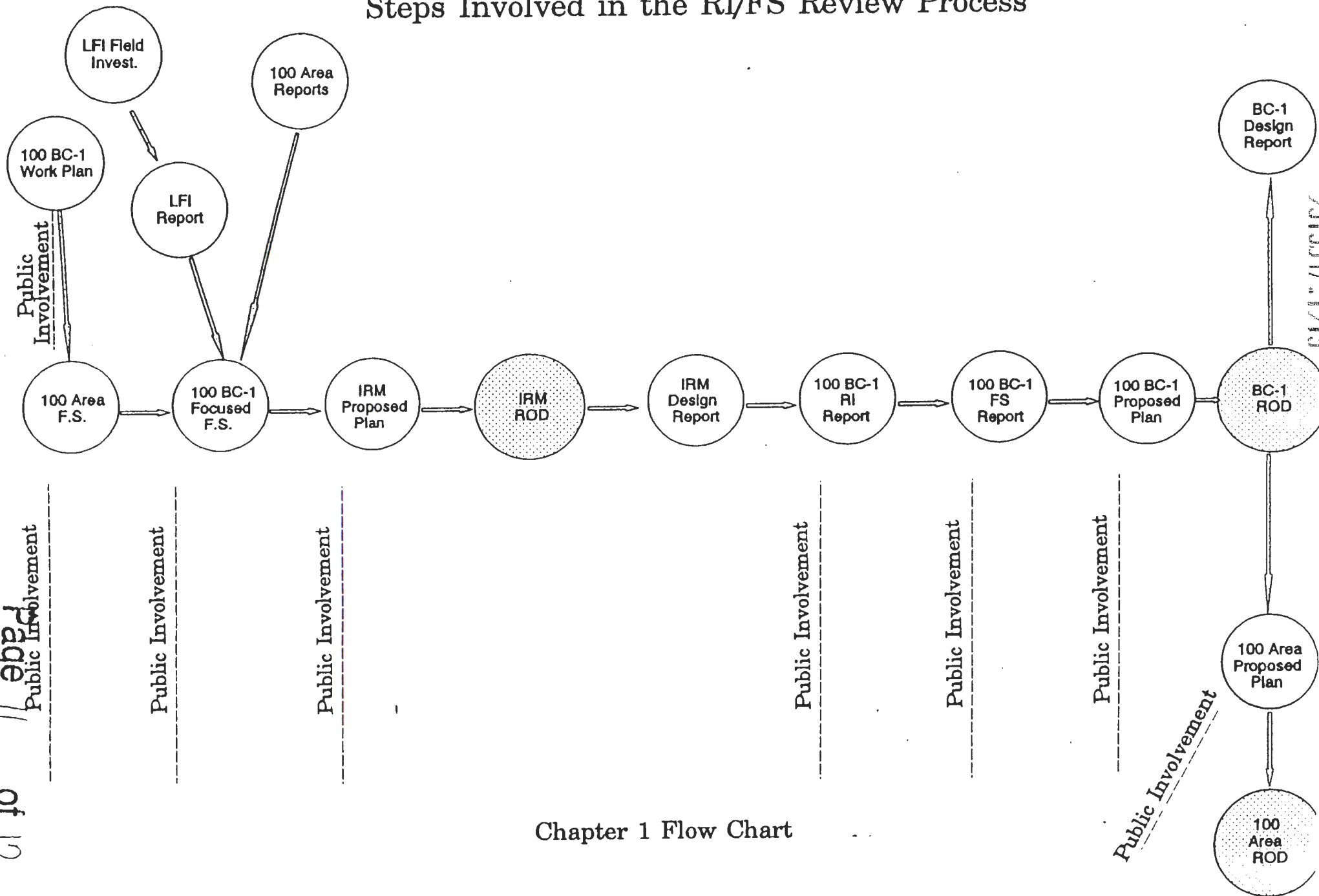
20. Page 5-24:

Deficiency: This section is complex and hard to follow.

Recommendation: Attach the enclosed figure entitled "Chapter 5 Flow Chart".



# Steps Involved in the RI/FS Review Process



Chapter 1 Flow Chart

# Feasibility Study Steps

