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Agency

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March 3, 1993



Steve Wisness  
U.S. Department of Energy  
Tri-Party Agreement Manager  
P.O. Box 550 Mail Stop A5-15  
Richland, WA 99352

Subject: EPA Comments on Draft B of the Columbia River Impact  
Evaluation Plan.

Dear Mr. Wisness:

The U.S. Environmental Protection Agency (EPA) has reviewed the DOE document DOE/RL-92-28, Draft B, entitled "Columbia River Impact Evaluation Plan". Enclosed are our comments. If you have any questions, please contact me at (509) 376-9884.

Sincerely,

*Laurence E. Gadbois*  
Laurence E. Gadbois  
Environmental Scientist

Enclosure: EPA Comments on Draft B of DOE/RL-92-28  
Columbia River Impact Evaluation Plan

Copy: Eric Goller, DOE  
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Administrative Record, 100 Area Generic

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EPA Comments on Draft B of DOE/RL-92-28  
Columbia River Impact Evaluation Plan

**GENERAL COMMENTS:**

1) Chapter 5 vs the rest of the document.

First. This document has been written to fulfill the M-30-02 milestone. This milestone states that DOE is to "Submit a plan (primary document) to EPA and Ecology to determine cumulative health and environmental impacts to the Columbia River, incorporating results obtained under M-30-01". Chapter 5 of the CRIEP is that plan.

Second. For nearly two years the regulators have been working with DOE to develop an approach for doing risk assessments and determining contaminants of concern in connection with the "Hanford Site Baseline Risk Assessment Methodology" (HSBRAM). Through extensive negotiations with DOE, a mutually acceptable approach to conducting risk assessment and determining contaminants of concern has resulted. These negotiations were specifically for the HSBRAM which contains the risk assessment approaches for both baseline risk assessments, and qualitative risk assessments for the purposes of screening for interim remedial measures. Thus, the HSBRAM provides both intensive/thorough and cursory approaches to risk assessments.

Negotiations on HSBRAM has been a tremendous resource drain on the regulators that is now finally resulting in a usable approach acceptable to the three parties. All three parties understood that HSBRAM was written for the purpose of guiding 1) baseline risk assessments, and 2) qualitative risk assessments for IRMs. All three parties also realized how much effort it took to reach consensus on an approach for risk assessments.

Third. In the CRIEP, DOE attempts to conduct a preliminary risk assessment and determine contaminants of concern with available data. This proved an appropriate and productive approach to identifying additional data collection or interpretation needs. However, DOE choose an approach that differed from that outlined in HSBRAM. The differences prompted comments from the regulators during the review of draft A of the CRIEP. With all the efforts DOE and the regulators went through to arrive at an acceptable way to do risk assessments and determine contaminants of concern, it is unfortunate that DOE chose a different approach in CRIEP than that advocated in HSBRAM.

Fourth. EPA recognizes that an attempted preliminary risk assessment for the purposes of identifying data needs was productive and provides valuable rational for the resulting impact evaluation plan. We do not however condone the approach to risk assessment and identification of contaminants of concern used in this document. An attempted risk assessment and contaminant of concern identification according to HSBRAM may identify additional information needs not apparent using the CRIEP's approach. In light of the resources it took to reach consensus for HSBRAM, we felt it was not worth our effort to fight many of those same battles on this document. Draft A of the CRIEP was a DOE document. When the document is revised and

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approved by the regulators, it becomes a tri-party document. At that point, all three parties have reached consensus. The regulators have decided that chapters 1 through 4 of this document cannot be approved, DOE does not intend to modify them to meet regulator expectations, it would not be productive use of our resources to dispute DOE over these chapters, and chapter 5 is the core of what the milestone requires.

Fifth. EPA has chosen to ignore the first 4 chapters, has reviewed and will continue to work with DOE to develop an acceptable chapter 5, and ultimately plans to approve that chapter of the document to close out this milestone.

2) M-30-02 relative to the Columbia River scoping effort.

Review of draft B of this document come on the shirt tails of an oral agreement by DOE (on Feb 8, 1993) to pursue a scoping study of the Columbia River as a preface to an RI/FS on the River as an operable unit. The M-30-02 document was a 100 area effort and identified 100 area data needs. The scoping study will be a larger Hanford-Reach/down-river effort of which the M-30-02 recommendations would be a subset.

Data needs identified in this plan should not be put asunder while the tri-parties and the public re-review the data and come up with yet another set of data needs. Chapter 5 proposes activities and in the following, EPA comments on them. Activities of credence should be commenced as soon as feasible. The river has been initially evaluated, data gaps identified and a plan to fill those gaps presented. It would be inappropriate to now decide that rather than implement the plan, we will go back to do yet another study (such as the scoping agreed to on Feb 8). Again, a comprehensive scoping of the river is warranted, but that should not be used as an excuse for postponing the conduct of already identified activities.

#### SPECIFIC COMMENTS

1) Section 5.1

This section is information of a summary/introduction nature that restates conclusions from the earlier portion of the document. As stated in general comment #1, we do not condone the first 4 chapters, and therefore do not review this section.

2) Page 86, Section 5.2, 3rd from last paragraph, last line.

Change "contaminant releases from" to "contaminants within". As pointed out in discussions on draft A, this document addresses contaminants within the 100 area, not those that originated from the 100 area. Contaminants from the 100 area have clearly traveled the length of the Columbia River and out to sea. This document does not address contaminants throughout the downstream extent, but rather those contaminants still remaining in the 100 areas.

3) Page 87, Section 5.2, first line

Change "should be extended to McNary Dam" to "should be extended well downstream of Hanford". The exact boundary will be better defined within the context of the Columbia River scoping effort.

4) Page 87, Section 5.2, second line

"The Hanford Reach forms an ideal unit for any subsequent study, remediation...". Suggest changing ideal to accessible or definable -- something other an ideal. Hanford contaminant study is anything but ideal in the river. There are upstream sources, Hanford sources, sediments that sorb and desorb contaminants etc. In-river remediations will be anything but ideal to content with, with an ever present possibility of doing more harm than good.

5) Page 87, Section 5.2.1, 1st paragraph, 4th line.

Change "attributable to 100 Area operations" to "within the 100 Area of operations". See reasoning provided in specific comment #2.

6) Page 89, Section 5.2.1.2, 2nd sentence

DQOs need to be approved by the regulators. Also, ultra trace level analyses or unique media (with attendant analytical interferences) may require the use of analytical protocols different than those set forth in published standard methods. Perhaps replace the 2nd and 3rd sentences with: "Data quality objectives shall be approved by the tri parties."

7) Page 89, Section 5.2.1.3, 2nd paragraph, 2nd sentence.

It is fair to advise DOE that there are basically three comment ideas of greatest concern to us. This sentence is one of them, the other two are no identified deliverables for the tasks, and the lack of any completion dates for tasks. We will get to the second two in a bit.

This sentence addresses how the tasks identified in this document will be completed. It states "Specific details for this program are therefore deferred to any necessary additions to the existing environmental monitoring programs or to 100 Area operable unit work plans, as appropriate". Two points: A) The existing environmental monitoring programs are not conducted by the ER program. How the tasks identified in this ER product can be imposed on the env. monitoring program is not identified. Yes, and expansion of an existing program to fulfill identified needs seems an efficient approach to accomplishing the work, but because these are separate programs within DOE/RL, we have no certainty that the environmental monitoring program will accommodate this ER direction. The other alternative identified for accomplishing the work is by inclusion in operable unit work plans. The work plans for the groundwater and near-est shore operable units have already been scoped and approved. Recent experience has shown an incredible reluctance by DOE to do what they interpret as increased scope on even early draft work scope documents (the 100 area feasibility study, and the 100-HR-3 groundwater treatability test plan documents are examples). It

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is pretty obvious that if -- for example -- we were come along and say we want to modify the scope of all the groundwater operable unit work plans to include speciation of chromium as it moves from groundwater, through bank storage/mixing, and into the river, there would be overwhelming resistance from DOE that we are changing work scope on approved work plans.

The point I am getting to is that neither approach; a) expansion of existing environmental monitoring programs, or b) increasing the scope of existing approved work plans provides the regulators an effective means to ensure the work is done if DOE decides to resist conduct of the activities identified in the CRIEP.

Recommendation: Change the sentence to "The activities identified in this document shall be conducted via the most appropriate programmatic mechanism".

8) Page 90, Activity 1A-1

Comment The first paragraph is not needed and misleading. The second paragraph, first sentence is all that is needed.

Recommendation Drop the first paragraph.

9) Page 90, Activity 1A-1, 2nd paragraph, last line

Drop the word "groundwater". Non soluble contaminants won't show up in groundwater operable unit samples, yet may exist in the river as a result of discharges or flake release from the outfall pipes.

10) Page 91, 1st five lines.

This is exactly correct. This underscores the need for instrumentation in wells of several of the reactor areas under M-30-05 in order to quantify groundwater flow. The sentence "The groundwater investigations planned...should generate the data necessary...and magnitudes..." is only true if additional instrumentation in the 100 area is conducted.

11) Page 91, 1st full paragraph, last full line

Please clarify what "FI" means. (I think you mean "RFI".)

12) Page 91, 2nd full paragraph

Deficiency Time to address EPA's second major concern with chapter 5. What will be the deliverable for this activity? A WHC or DOE or PNL or ERMAC document? And EPA's third major concern: what will be the deliverable date? Based on past Hanford experience, for us to have any certainty that a work effort will be performed, and we receive a product, we need a milestone date and defined deliverable. Also, without that DOE headquarters has no incentive to fund these activities.

Recommendation Either in the body of the text and/or table 5-1, insert completion dates (that DOE will then commit to milestones), and deliverable (stand-alone primary/secondary document, part of another already planned document, etc.).

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13) Page 91, Activity 1A-3, 1st line  
Replace "relevant and appropriate" with "applicable".

14) Page 91, Activity 1A-3, 1st 2 paragraphs  
This first paragraph points out how, under MTCA, no dilution zones are allowed when demonstrating compliance with standards. In the second paragraph, this is somehow used as justification for the need to quantify a mixing zone to demonstrate compliance with water quality standards. This reasoning needs clarification.

15) Page 91, Activity 1A-3, last full paragraph, 4th line  
Change "contaminants of concern are generally below analytical detection limits" to "contaminants of concern are generally below routine (or standard) analytical detection limits".

16) Page 92, Activity 1A-4, 1st paragraph, 5th line  
Please clarify if "thermodynamically unstable under normal environmental conditions" refers to normal ground-, interstitial-, or surface-water. Because of the kinetics of this reaction, it does make a difference.

17) Page 92, Activity 1A-4  
Comment Hex Cr has a 24 hour maximum holding time. With the time we've seen required for a sample to navigate its way from the field to the analytical bench, it does not seem possible for this holding time to be met. In fact, DOE has historically recognized the implausibility of meeting this holding time and therefore has decided to simply measure all Cr as trivalent Cr. That DOE is now proposing to measure Cr in the hexavalent form needs to be clarified as to how the sample handling process has been modified to meet the 24 hour holding time.  
Request This is not a necessary change for the M-30-02 document, but in your comment response, please identify how this holding time can be met. If it can't be met, this whole speciation activity is for not.

18) Page 92, Activity 1A-4, 1st paragraph, last sentence.  
Suggest changing "could possibly show that the impact potential attributable to Cr is either far less or non-existent." to "could show a reduced impact potential attributable to Cr."

19) Page 93, Activity 1B-1  
Again, a deliverable and delivery date (via milestone) needs to be stated.

20) Page 93, last full paragraph  
Comment Perhaps this paragraph should be moved up to the previous section.

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21) Page 93-94, paragraph spanning page change.

This paragraph illustrates how groundwater flow and contaminant transport data are needed. So does this mean that a characterization effort (sampling) is going to be done? Are wells going to be punched through the Pasco side and North slope to identify groundwater flow from the agriculture regions? This paragraph illustrates a need for this sort of data but obligates no task to satisfy it.

22) Page 94, Activity 2-1, 3rd paragraph

A surface water sampling location downstream of the 100 areas, like at the Hanford Town Site should also be added. Without a sample location there, we can't identify the 100 area contribution relative to the 200/300/1100 area contributions. This document is supposed to be a 100 area impact evaluation plan, so data from just downstream of the 100 area is needed.

23) Page 96, 2nd full paragraph, third line

Typo Change "were also be considered for" to "were also considered for"

24) Page 98, last sentence.

May as well keep the record straight. The sediment sampling DOW was submitted in July (the 24th), not June.

25) Table 5-1

- \*) Add activity 4-4 (Data evaluation).
- \*) Add a completion date -- DOE to establish milestones.
- \*) Identify the deliverable.
- \*) Footnote all the field sampling activities to indicate that DOWs will be provided for regulator approval. (Note the comment and response to EPA's comment #105 on draft A.)

26) Page 102

Perhaps update reference DOE-RL, 1992c to Revision 2 of HSBRAM.

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Subject: EPA COMMENTS ON DRAFT B OF THE COLUMBIA RIVER IMPACT EVALUATION PLAN

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