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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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September 4, 1998

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U.S. Department of Energy  
P.O. Box 550  
Richland, WA 99352

Michael Graham  
Bechtel Hanford  
P.O. Box 969  
Richland, WA 99352



**RECEIVED**

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**DOE-RL / DIS**

Dear Mr. Holten and Mr. Graham:

Re: Comments on the Groundwater/Vadose Zone Integration Project Specification, (DOE/RL-98-48, Draft A)

Ecology has completed our review of the Groundwater/Vadose Integration Project Specification. Our enclosed review indicates substantial change to the specification is required. Ecology believes the process used to develop the draft was not consistent with our request that stakeholders, Tribal Nations, and regulators be fully involved in the development of important documents such as this. Therefore Ecology believes that unless significant improvements are made in both the development process and the actual specification Ecology will not be able to stand behind and support the specification as it is currently written.

If you have any questions regarding our concern over the development process or the specific comments please contact me at (509) 736-3022.

Sincerely,

Casey Ruud  
Groundwater/Vadose Zone Coordinator  
Nuclear Waste Program

Enclosure



**Ecology's Review Comments of the Groundwater/Vadose Zone Integration Project Specification (DOE/RL-98-48 Draft A)**

**General Comments:**

1. This document does not reflect the quality that would have occurred if the regulators, stakeholders, and Tribal Nations had been allowed to participate in the development process. This was strongly recommended by Ecology in a letter dated April, 16, 1998. The process used to develop this document negatively impacts USDOE's credibility. We believe the current process should be abandoned and started again fully involving the stakeholders in developing a workable specification.
2. This entire project seems a disjointed patchwork. The connections between the various components are not clear. The workscope does not match the mission. None of the seven tenets that comprise the strategy for accomplishing the integration project missions (e.g. active integration, work control, decisional time frames, open process, etc.) clearly links with your defined mission vision statements defined in chapter one. In order to make sense of these project specification; several assumptions must be made. There is a danger for misunderstanding between the reader and the document authors if interpretations of the text are based on different sets of assumptions.
3. Specific project technical elements are not in line with the technical elements/technical elements and data needs identified by the National labs of the S&T road map process. For example, the groundwater element has identified a number of technical elements and data needs under several categories such as - conceptual model, source definition, plume geometry, recharge/discharge boundaries, hydrogeology, biogeochemistry and drilling and sampling. Similarly, a number of issues were identified under vadose zone and Columbia River. More than 50% of these issues are not covered in your present text. Also, no where in the text defines how the S& T road-map ties with the project technical elements/integration plan.
4. There are many references to the goal of establishing or enhancing credibility. It should be clearly stated in the document "with whom" does DOE want to establish credibility? The "whom" may vary from DOE management to regulators to tribes. The "whom" should be identified. The successful activities and mechanisms for establishing credibility for various interests will vary. It is important to understand that the stakeholders themselves can only define stakeholder credibility.
5. The budget seems to be the main driver of the prioritization of work scope while it should be other way. The prioritization should be done based on other defined criteria and appropriate budget should be there to address priority work.

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6. One of the project's vision is to establish trust among stakeholders, regulators and tribes. As we all know the project workscope has resulted in varying levels of misunderstanding and frustration on the part of all those involved. How are you going to address this in this document since it is one of the integral part of the integration's vision?
  7. This document does not address the need to perform a systems assessment capability that incorporates analyses of significant factors and uncertainty as tools for resource allocation. This is a major flaw.

### Specific Comments

1. ES-1 Par. 1: Currently the Integration Project is not part of the TPA and does not have regulatory authority to make remedial decisions to "*ensure* protection of human health and the environment...." This is an admirable goal for DOE, but the regulatory forum for decision-making resides primarily in the TPA and RCRA activities. We recommend this be changed to state that mission is to "*assess* the effectiveness of remedial decisions designed to protection of human health and the environment...."
2. ES-1, Par. 5 Bullet 1: A missing major recommendation which should be added is: Assess existing and future potential impacts to the Columbia River and its users caused by Hanford Site contaminants. This is significantly different than the first bullet.
3. ES-3, Par 7: Reference is made to project definition documents. What and where are these documents?
4. ES-4, Par 3: Prioritization of workscope decisions should include significance and uncertainty. While the bullets listed are important, there is no objective mechanism identified to evaluate the relative value of competing priorities. This should be done through a systems approach similar to that proposed in the CRCIA.
5. Page 1-1, 1-2, Chapter 1.1 and 1.2,: The mission and the vision sections needs to change based on our latest understanding/write up. Also see our general comments
6. Page 1-1, Section 1.1: "Concurrence" should be better defined. Previous definitions have ranged from "no expressed objections" to "written agreement." The argument that, because no stakeholders stated objections, implied that stakeholders agreed would be fallacious.
7. Page 1-1, Section 1.2: Elaborate on the term "defensible" in the mission statement. Defensibility begs the question of, "from whom?" It is critical that DOE clearly

understand their goal or goals of defensibility if this project is to succeed. The mechanisms that accomplish defensibility in the technical arena, fiscal arena, regulatory arena, and stakeholder arena will differ.

8. Page 1-4, Figure 1-2: The vapor extraction well does not go to the groundwater. It is supposed to end in the vadose zone. The figure specifically includes only two remedial options (e.g. pump and treat and in-situ fixation). What about other remedial measures? Modify the figure accordingly.
9. Page 1-5, Section 1.4, page 1-5: The title of 1.4 should be restated - suggest "Integration Project Hierarchy (IPH)". The "Project Specification (1.4.1) is a part of IPH.
10. Ecology believes "Tribal Government Consultation and Public Involvement Plan" is important and has been a priority from the beginning. This document should not at the lowest possible hierarchy.
11. Page 1-7, Section 1.4.4: Ecology concurs with the following statement from a Yakama Nation letter to John Wagoner, dated 8/20/98, concerning the Draft Tribal Government and Public Consultation Plan, "*The subject consultation plan misses entirely the credibility problem...*" and again, "*The 'design-for-credibility-through-meaningful-participation-concept' which must be defined in this document....*" The tribal and public involvement response by DOE for this project is broken. The bulleted objectives are commendable, but inadequate. Providing opportunity to receive information and even dialogue with project decision-makers is no guarantee that ones concerns are fairly considered or even truly *heard*. It is DOE's response and action to expressed values and concerns that measure effectiveness. There is no accountability mechanism in this stakeholder involvement plan that ensures stakeholders are heard and understood by DOE rather than merely tolerated. Incorporating project accountability in developing an attitude toward stakeholders that recognizes them as valuable resources that can enhance a project rather than something to be tolerated, convinced, or ignored.
12. Page 2-6, Section 2.3.2: Recognizing the CRCIA recommendations is commendable. It is recommended that this project adopt the CRCIA work as much as possible rather than reduplicate it. It is also recommended that DOE recognize and utilize the continuing CRCIA Team as much as possible.
13. Page 3-4 and 3-5, table 3.1: This table establishes a number of land use scenarios without any reference (to any document, order, agreement). Land use scenarios are still debated by many groups and yet to be finalized. Also see our comment no 15.
14. Page 4-1 through 4-10, Section 4.0: This section needs to include the technical information and data needs identified by various groups (e.g., groundwater, vadose, inventory, etc.) of the National Labs under the S&T program. For example, the

groundwater element has identified a number of technical elements and data needs under several categories such as - conceptual model, source definition, plume geometry, recharge/discharge boundaries, hydrogeology, biogeochemistry and drilling and sampling. Similarly, a number of issues were identified under vadose zone and Columbia River. More than 50% of these issues are not covered in your present text. Also, no where in the text defines how the S& T road-map ties with the project technical elements/integration plan.

15. Page 4-7, Section 4.7: Table 3-1 has made a number of land use decision without any reference to any document or order which is contradictory to your last statement in section 4.7 under "land use". The land use scenarios depicted under table 3-1 are not accepted by many parties.
16. Page 4-7, Section 4.8. One of the criteria that guide selection of remedial actions is technical feasibility. Remedial options can be grouped under technical information and data needs instead of control and constraints.
17. Page 4-5ff. Section 4.6: In order to adequately address expressed stakeholder and tribal values, this project should be planning toward an "impacts assessment" rather than a "risk assessment."
18. Page 4-5ff. Section 4.6: It is recommended that DOE "piggy-back" on the CRCIA Part I assessment work. Especially helpful as a starting point is the ecological impact assessment work.
19. Page 4-7, Section 4.8: The responsibility for designing and proposing remediation options resides in the operable units. This project can provide tools and be a resource for operable unit managers, but this project has no regulatory authority to make cleanup decisions. Since the regulators are not a part of the Integrated Project, DOE should not assume regulators would approve the project products. It is recommended that DOE open dialogue with the appropriate agencies before assuming any tools developed by this project are acceptable to regulators.
20. Page 5-2, Figure 5-1: The Long-Range Plan should be incorporated in the diagram.
21. Page A1 through A5, Appendix A: This Appendix is not clear. For example, almost all the sitewide groundwater protection and remediation goals are supposed be documented under this project specification in Chapter 3.2 . However Chapter 3.2 is very vague and does not contain any specifics. Please clarify.
22. Appendix B, Table B-2: The following two state regulations were omitted and should be added:
  - Water Quality Standards for Groundwater – WAC173-200
  - Sediment management Standards – WAC 173-204-340

23. Appendix E: The failure to provide the text of Appendix E for comment before the Rev.0 version is consistent with DOE's attitude of avoiding, ignoring or circumventing the work of the CRCIA Team. This specification is not an acceptable substitute for the CRCIA Part II proposal. Much time, money, and credibility could have been saved if DOE would have started with the CRCIA Requirements document and improved on it. It is recommended that DOE reconsider the methodology proposed in the CRCIA Requirements document and engage in dialogue with the Team rather than a select member or two before revisions are completed on this specification document. It is also recommended that the Team be given opportunity to review and approve Appendix E before Rev. 0 is printed.