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Richland Operations Office  
P.O. Box 550  
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05-AMCP-0010

NOV 22 2004

Mr. Ken Niles, Assistant Director  
Nuclear Safety Division  
Oregon Department of Energy  
625 Marion Street NE, Suite 1  
Salem, Oregon 97301

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EDMC

Dear Mr. Niles:

COMMENTS ON THE "200-UR-1 UNPLANNED RELEASE WASTE GROUP OPERABLE UNIT REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORK PLAN AND ENGINEERING EVALUATION/COST ANALYSIS," (RI/FS WP AND EE/CA), DRAFT A, REISSUE

62127

This is in response to your letter to Matt McCormick, same subject as above, dated August 24, 2004. The U.S. Department of Energy, Richland Operations Office (RL) wishes to thank you for your comments. RL has reviewed and evaluated the comments and the resolutions to your comments are attached.

If you have questions, please contact me, or your staff may contact Matt McCormick, Assistant Manager for the Central Plateau, on (509) 373-9971, or Joel Hebdon, Director, Office of Environmental Services, on (509) 376-6657.

Sincerely,

Keith A. Klein  
Manager

AMCP:SLB

Attachment

cc w/attach:

N. Ceto, EPA

J. A. Hedges, Ecology

Administrative Record (200-UR-1)

Document Number(s)/Title(s)	Program/Project/ Building Number	Reviewer	Organization/Group	Location/Phone
200 UR-1 OU RI/FS Work Plan and EECA	NA	Dirk Dunning	State of Oregon	(503)378-3187

Item	Comment	Disposition
1.	Table A-2. We support the no action decision for thirty-one of the waste sites, with the modifications noted below for the remainder. We recommend changing the disposition of many of the waste sites in Table A-2 and recommend several for additional ecological sampling before decisions are finalized.	Comment Generally Accepted. Waste sites will be further evaluated for proper placement in tables A-2, A-3 and A-4. The need for ecological sampling will be assessed on a case-by-case basis.
2.	Based on the text discussion and the table entries, eight waste sites (200-E-54, 200-W-54, UPR-200-E-22, 200-W-91, 200-E-63, UPR-200-E-97, UPR-200-W-117 and UPR-W-165) should be moved to Table A-3 and analyzed with other waste sites (as noted in the text discussions in the document).	<p>A series of meetings were held with the State of Washington Department of Ecology (Ecology) to review the proposed actions for a number of sites listed on Table A-2. Ecology provided concurrence or requested additional information as part of the review process for these waste sites per the process for maintaining the Hanford Waste Site Identification Data Base (WIDS) outlined in Tri-Party Agreement process MP-14. The current status of the waste sites identified in this comment is provided below:</p> <p>200-E-54 – Approved for consolidation into 200-E-103.</p> <p>200-W-54 – This waste site had previously been designated for consolidation into 200-W-96. Reevaluation of the site's size and location resulted in a new determination to keep the waste site separate. Therefore, 200-W-54 will become a candidate for RTD and will be included in the EE/CA presented in section 5. The Revision 0 work plan will reflect these changes in modifications to the text and tables.</p> <p>UPR-200-E-22 – Approved for consolidation into 200-E-103.</p> <p>200-W-91 – Approved for consolidation into 200-W-95.</p> <p>200-E-63 (should be UPR-200-E-63) – Approved for consolidation into</p>

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		<p>UPR-200-E-83.  UPR-200-E-97 – Approved for consolidation into 200-E-103.  UPR-200-W-117 – Listed in Table A-3 in Work Plan, which designates this site for inclusion in the U Plant remediation.  UPR-W-165 (Should be UPR-200-W-165) – Ecology requires additional radiological surveys/confirmatory sampling prior to acceptance as No Action.</p>
3.	<p>As noted in the table description, the 200-W-42 waste site should be moved to Table A-4, as a remove, treat and dispose site, or to Table A-3 and regrouped with an appropriate operable unit.</p>	<p>There is no waste site 200-W-42. Waste site UPR-200-W-42 was accepted as consolidated with UPR-200-W-41 by Ecology per the T per the process for maintaining the Hanford Waste Site Identification Data Base (WIDS) outlined in Tri-Party Agreement process MP-14.</p>
4.	<p>We recommend ecological sampling to verify the proposed decisions are protective for these five waste sites: 200-E-42, 200-W-73, UPR-200-E-141, 600-260 and UPR-200-E-90.</p>	<p>A series of meetings were held with Ecology to review the proposed actions for a number of sites listed on Table A-2. Ecology provided concurrence or requested additional information as part of the review process for these waste sites per Tri-Party Agreement process MP-14. The current status of the waste sites identified in this comment is provided below:  200-E-42 – Approved for No Action by Ecology  200-W-73 – Approved for No Action by Ecology  UPR-200-E-141 – Approved as rejected by Ecology  600-260 – Approved for No Action by Ecology  UPR-200-E-90 – Approved as rejected by Ecology.</p>
5.	<p>High ambient radiation levels prevent local determination of whether UPR-200-E-90 is a surface contamination site. Accordingly, we recommend that soil samples be taken at the waste site for laboratory analysis to remove interference from the high radiation fields emanating from the stack filters. Alternately, this waste site could be moved to Table A-3 for</p>	<p>A series of meetings were held with Ecology to review the proposed actions for a number of sites listed on Table A-2. Ecology approved UPR-200-E-90 for reclassification as rejected.</p>

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	analysis along with the stack and filters.	
6.	We recommend that you retain UPR-200-E-114 as a lost waste site with no specific action until it is found.	UPR-200-E-114 has been approved for the rejected classification by Ecology.
7.	Table A-3. We agree with and support the decision to combine the thirty-four waste sites listed in the table with other operable unit remediation work.	Comment Accepted
8.	Table A-4. We agree with and support the decision to remove treat and dispose of the sixty-five waste sites listed in the table.	Comment Accepted
9.	Five sites (200-E-42, 200-W-73, UPR-200-E-141, 600-260 and UPR-200-E-90) may have some residual contamination. For these sites, we recommend additional confirmatory ecological testing to verify they are clean with no further action.	Please refer to the response to Comment 4
10.	DOE noted in the recent Hanford Solid Waste EIS that the existing sites will be cleaned up to protect groundwater. The proposal to use MNA conflicts with this decision. No regulations exist to direct how MNA is performed or assessed. We do not support 130 years as being a reasonable period for MNA. Based on stakeholder comments at Hanford end-state meetings, we recommend that if MNA is proposed as part of a remedial action strategy, that the remedial actions meet performance goals before the end of the 50-year land use plan. Sites such as EPR-200-W-23 where long-lived alpha contamination is the principle hazard are not suitable for MNA.	<p>Comment Accepted. Cleanup requirements will be in accordance with the selected land-use inside and outside the Core Zone. Additional discussion will be added describing the reasons why the UPR waste sites would not contribute to groundwater contamination:</p> <ol style="list-style-type: none"> <li>1. Results of transport modeling for the volume of a liquid release that would be required to be able to potentially reach ground water will be presented.</li> <li>2. Justification for the MESC/ICMNA remedy for selected sites is presented on Table 5-6. As noted in the table, sampling and analysis will be conducted to confirm which radionuclides are present and their concentrations. Results will be assessed to determine if the site would meet remediation goals.</li> </ol> <p>Historical records indicate that in 1953, the location associated with</p>

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		UPR-200-W-23, was covered with blacktop. The site cannot be located.
11.	<p>Table 2-2 on page 2-20 identifies all of the waste sites in Table A-4 as being planned to be removed, treated and disposed. Table 5-6 on page 5-27 contradicts this and proposes 13 waste sites for institutional control and MNA. We do not support the proposal to use MNA without further justification, and unless it is able to meet remedial action goals in the near term.</p>	<p>This is a keen observation. The apparent contradiction exists because of the shift from candidate RTD site presentation to the EE/CA presentation. As discussed in the text that follows, there is no contradiction:</p> <p>Table 2-2 identifies the sites that were identified as candidates for RTD through the site sorting process. The sorting criteria for the candidate RTD sites are discussed in section 4.1.4. The next step in the process for remedy assessment is completion of an EE/CA (presented in Section 5). Because an EE/CA requires a comparison of alternative remedies, and because of a precedent established for the U Plant Regional Closure Project, MESC/IC/MNA was considered as an alternative. It was identified as the preferred remedy for 13 of the original 65 candidate RTD sites. The identification of sites and preferred remedies is presented on Table 5-6, with accompanying justifications. Additional supporting information is provided on Table 5-7.</p>
12.	<p>It is not appropriate to include the cost of covers installed as temporary actions since 1989 in comparing cleanup alternatives. These costs are needed to plan work, but should be excluded in the alternatives analysis and comparison. We recommend that the costs of removing the existing stabilization covers be specifically excluded from this analysis, as they may inappropriately bias these and future actions toward the use of such covers in lieu of analysis and proper action.</p>	<p>Cost analyses are based on estimates to complete the selected remedy and must be based on existing site conditions. This includes removal and analysis of the soil stabilization cover. (per 40 CFR 300.430(f)(i)(6)(D))</p>
13.	<p>Section B3.6.1.2 on page B-63 proposes a method for establishing site specific backgrounds. The Hanford Site background has been previously identified in DOE/RL-96-12</p>	<p>The referenced documents provide the chemical and radiological background values for the Hanford Site. The discussion provided in section B3.6.1.2 (page B-23) pertains to site-specific background</p>

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	and DOE/RL-92-24. Section B3.6.1.2 should be deleted and the appropriate references made to the Hanford Site background reports and tables.	determinations necessary during radiological surveys with field instruments. The quoted text does not attempt to replace the referenced documents and is correct as shown.
14.	Figure B-18 on page B-58 proposes a conceptual model for large spill sites. This model has not been verified and appropriate caution should be applied to detect potential lateral transport of contaminants.	Comment Accepted. Appropriate caution will be used when evaluating site conceptual models
15.	Implicit in the use of caps and covers is the assumption that the subsurface movement of water and moisture is well understood. We are concerned that there is a reasonable likelihood based on Hanford field studies that water may move laterally on old surficial boundaries in the subsurface. This may allow moisture to interact with waste. Without site specific vadose zone testing and monitoring, DOE should not assume that caps or covers are protective of human health and the environment.	This is a global technical issue that is beyond the scope of this document. All proposed remedies including caps and covers will be evaluated through the Comprehensive Environmental Response, Compensation and Liability Act process to determine protectiveness of human health and the environment.
16.	Table B-3 on page B-45 details a set of decision rules for unplanned release sites. These rules rely on the RESRAD numerical model. Data from the 200-PW-2 and 200-PW-4 Operable Units does not conform with the predicted movement based on RESRAD. Accordingly, when RESRAD is used, an evaluation should be performed to assess whether RESRAD can reasonably be expected to provide valid and bounding predictions of the contaminants and conditions at each site. Lacking such an assessment, RESRAD should not be used for decision making.	This comment appears to be based on the understanding that the waste site conceptual site model (CSM) is based on RESRAD modeling. It should be noted that the CSM was developed by geologists without any RESRAD modeling input. RESRAD is a dose model used to estimate human exposure based on hypothetical or empirical radiological activity in waste site soil and will be used as stated in Table B-3.
17.	The decision rules reference using the DOE Biological Concentration Guides (BCG) for Ecological Protection. For	The decision rules do not reference the BCGs. However, the decision rules will be revised to include use of RESRAD-Biota to evaluate dose

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	<p>three nuclides, cesium-137, strontium-90 and technetium-99, the ecological protection standards are tighter than the human exposure standards. The BCG are not sufficient in our opinion for protection of the ecology and should not be relied on as the sole means of assuring such protection. We are aware of no literature available that correlates impacts to ecological resources in units of BCG levels to validate assertions that particular BCG levels are protective.</p>	<p>to biotic receptors. BCGs will not be used as cleanup values and will be deleted from Table B-4. The only use of BCGs in this workplan is to compare analytical detection requirements with ranges of potential cleanup values.</p>
18.	<p>We encourage the Tri-Parties to use established EPA metrics for ecological assessment rather than BCGs, to guide data collection and evaluation early, and to include the sampling needed to fulfill all of the agencies' responsibilities under CERCLA and other regulations.</p>	<p>Comment Noted. Please refer to the response to comment 17</p>
19.	<p>Assessment of the potential natural resource injury is needed prior to application of the decision rules and should form the basis of an additional rule directing that sites be cleaned up, rather than closed out with contamination. The decision rules need to consider the potential impacts that may remain as natural resource injuries. These may result in natural resource damage values that are more costly than deciding to remove, treat and dispose of the wastes.</p>	<p>Comment Noted. See the response to comment 17. This is a programmatic issue that is being addressed in the Ecological Risk Assessment in conjunction with the Hanford Advisory Board, HNRTC and tribal participants. The decision rules are correctly stated as shown.</p>
20.	<p>The analytical method proposed for arsenic in table B-7 may be inadequate to detect contamination at levels required to meet the cleanup levels.</p>	<p>The Method B Residential value for Arsenic in Table B-7 is erroneous and will be changed to the default state background value of 20 mg/kg in the Rev 0 work plan. The detection limit of 1 mg/kg is adequate for Arsenic with the action level of 20 mg/kg.</p>
21.	<p>The analytical limits and methods proposed in table B-18 for methanol, 2,4,5-T, 2,4,5-TP, dinitro-o-sec butyl phenol and all 20 of the listed pesticides are inadequate to meet the "Waste</p>	<p>Comment Accepted. Analytical methods will be evaluated for appropriateness</p>

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	Designation Action Levels" identified in the table.	
22.	Table D-1 should include the Atomic Energy Act and the definition for transuranic waste as an applicable requirement.	Comment will be considered.
23.	Land use for the central plateau is asserted to be industrial. No zoning exists for the central plateau area, as Benton County is precluded by DOE's ownership from setting zoning. DOE did establish a 50-year plan for industrial use of this area in their Comprehensive Land Use Plan. No zoning or land use is established after this time.	Comment will be considered.
24.	Many of the alternatives considered envision leaving the soil and groundwater contaminated. We recommend that the natural resource injuries be identified, quantified and costs assessed, along with long term stewardship costs to provide the decision makers with a comprehensive view of the full range of costs and impacts flowing from the alternatives and resulting decisions. This is particularly important for evaluation of impacts and costs associated with monitored natural attenuation, and cap and cover proposals that will likely be considered in the Feasibility Study.	Comment Noted.
25.	When net-present-valuation methods are used, we recommend that the cost be developed in a manner compliant with OMB Circular-97. Without an analysis of maintenance, monitoring, and compensation costs it will be difficult for decision makers and stakeholders to make well informed remedial decisions.	Cost modeling will be developed/conducted using appropriate requirements and/or guidance.