EXPLANATION OF SIGNIFICANT DIFFERENCE FOR THE 100-HR-3 OPERABLE UNIT RECORD OF DECISION October 2002

SITE NAME AND LOCATION

USDOE Hanford 100 Area
100-HR-3 Operable Unit
Hanford Site
Benton County, Washington

INTRODUCTION TO THE SITE AND STATEMENT OF PURPOSE

The Washington State Department of Ecology (Ecology), the U.S. Environmental Protection Agency (EPA), and the U.S. Department of Energy (DOE) are jointly issuing this Explanation of Significant Difference (ESD) to provide notice of revisions to the project schedule and cost estimate associated with the In Situ Redox Manipulation (ISRM) groundwater remedial action at the Hanford Site's 100-HR-3 Operable Unit (Figure 1). The original schedule and cost estimate for the remedial action was defined in the October 1999 amendment to the 1996 Interim Remedial Action Record of Decision (ROD) for the 100-HR-3 Operable Unit.

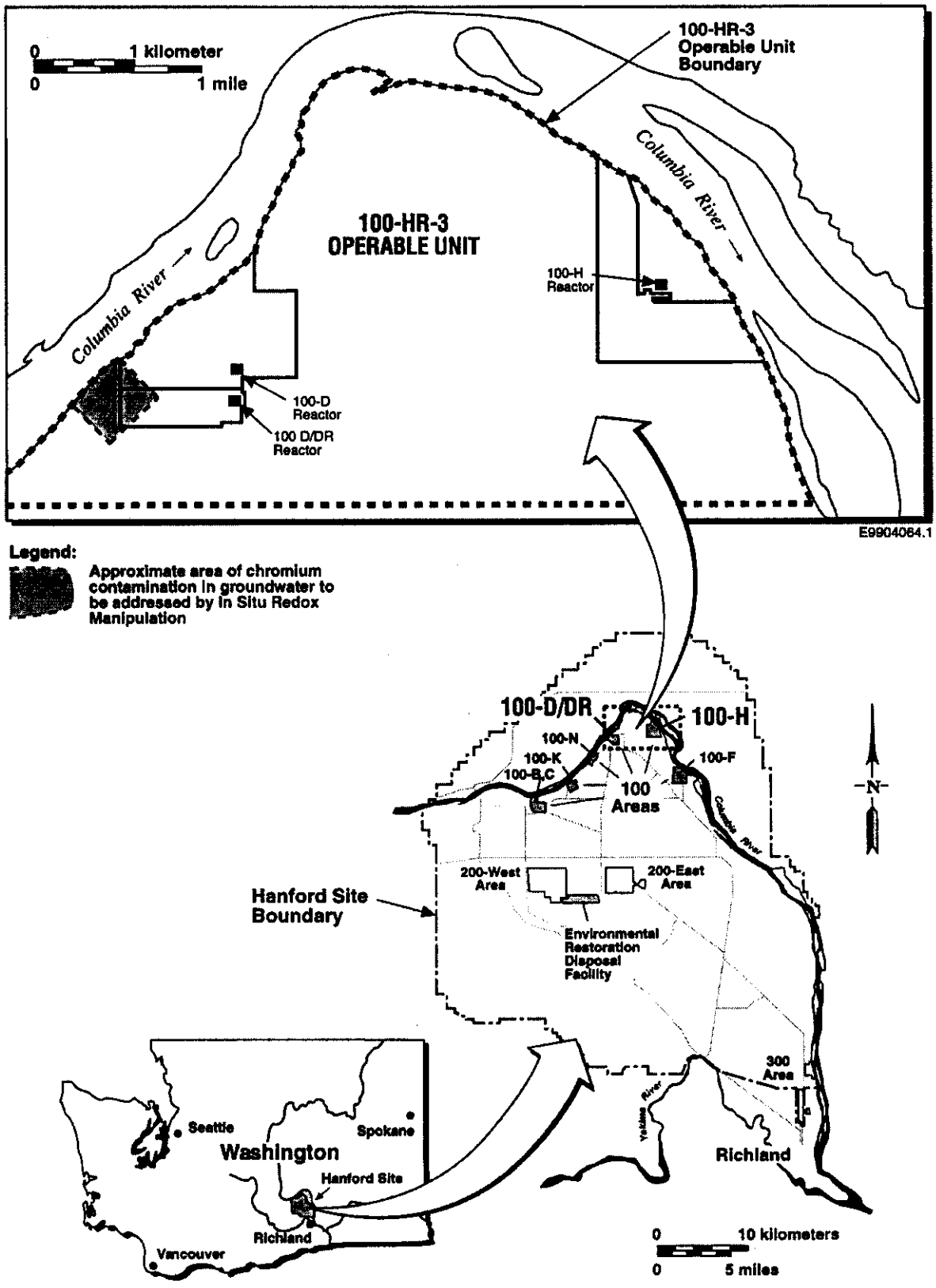
The EPA, Ecology, and DOE are issuing this ESD in accordance with Section 117(c) of the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) and Section 300.435(c)(2)(i) of the CERCLA National Contingency Plan. This ESD will become part of the Administrative Record for the cleanup decision for the Hanford Site. The Administrative Record is available for review at the following location:

Administrative Record
2440 Stevens Center Place, Room 1101
Richland, Washington 99352
509/376-2530
Attention: Debbi Isom

SITE HISTORY, CONTAMINATION, AND SELECTED REMEDY

The 100-HR-3 Operable Unit is located in the north-central part of the Hanford Site along the Columbia River. This operable unit includes the groundwater underlying the 100-D/DR and 100-H Areas and a portion of the 600 Area (Figure 1). The 100-D/DR Area is the site of two deactivated reactors: the 100-D Reactor, which operated from 1944 to 1967, and the 100-DR Reactor, which operated from 1950 to 1965. The 100-H Reactor operated from 1949 to 1965.

Figure 1. Location of the 100-HR-3 Operable Unit.



During operation, large volumes of treated Columbia River water were used as a coolant for these single-pass reactors. Sodium dichromate was added to the cooling water to inhibit corrosion of the piping. After passing through the reactor, the cooling water flowed through large-diameter underground piping to retention basins where it was held for a short period for thermal and radioactive cooling. From the retention basins, the cooling water was normally discharged into the main channel of the Columbia River via outfall pipes. During this process, both concentrated sodium dichromate and cooling water leaked to the soil, contaminating groundwater. Groundwater contaminated with chromium is present beneath the 100-D and 100-H Areas and is migrating toward, and discharging into, the Columbia River. The groundwater upwells into the river through the riverbed with minor contributions from riverbank seepage. The 1996 ROD selected the technology of pump-and-treat to intercept the hexavalent chromium plume under the 100-H and 100-D Areas and treat it using an ion-exchange treatment technology. Treated effluent is then returned to the aquifer using injection wells located upgradient of the existing 100-H Area chromium plume.

Between 1995 and 1997, high concentrations of hexavalent chromium were identified west of the 100-D/DR Reactor Area in groundwater well samples (Figure 1), local Columbia River pore water samples, and in near-river aquifer sampling tube groundwater samples. The DOE and Ecology, as the lead regulatory agency, determined a different remedial action than that selected in the 1996 ROD was appropriate for this plume. Therefore, an amendment to the remedial action was required. The 1999 ROD Amendment selected ISRM for remediation of this hexavalent chromium "hot spot" in the groundwater.

The 100-D Area ISRM process involves injecting chemicals into the aquifer through a series of wells parallel to the Columbia River shoreline to create a permeable treatment zone that the contaminated groundwater can flow through. The main chemical (sodium dithionite) reacts fairly rapidly with the naturally occurring iron in the soil creating a treatment zone that results in the conversion of hexavalent chromium into a less toxic and less mobile form of chromium (trivalent chromium). The majority of the remaining chemical reaction byproducts (predominately sulfate) are then pumped out of the treated portion of the aquifer and transferred to the ISRM Evaporation Pond. Groundwater contaminated with hexavalent chromium passing through the treatment zone is reduced to the less toxic and less mobile trivalent chromium.

BASIS FOR THE DOCUMENT

The ROD Amendment (October 1999) specifies that the installation of the treatment barrier shall be fully implemented by the end of fiscal year 2002, based on current knowledge of the plume and implementability of the treatment technology. Milestone completion dates (Phase I, II and III) were added to the Hanford Federal Facility Compliance Agreement (FFCA) to ensure implementation by that date. The ISRM remedy requires additional time to implement based on the optimized design identified in the *Remedial Design Report/Remedial Action Work Plan (RDR/RAWP) for the 100-HR-3 Groundwater Operable Unit In Situ Redox Manipulation* (ISRM) (DOE/RL-99-51, Rev. 1) and will be fully implemented by June 2003. The Hanford FFCA Phase III Milestone was modified in accordance with the additional time requirement. Although the schedule has changed, the implementation of this remedy remains consistent with the ROD Amendment remedial action objectives.

During the development of the ROD Amendment, several assumptions were used to develop a cost estimate based on data from small-scale treatability testing prior to obtaining characterization data. Design of the ISRM barrier was being conducted simultaneously with plume and aquifer characterization. Actual field conditions determined from the characterization data revealed a thicker than anticipated aquifer and a larger plume of chromium contamination. As a result, the cost estimate for the ISRM remedy presented in the ROD Amendment requires revision to reflect increases in costs associated with implementing the current optimized treatment design and the changes in actual field conditions. By making these changes to the system's design, a maximized zone of capture for the hexavalent chromium-contaminated plume can be created.

DESCRIPTION OF SIGNIFICANT DIFFERENCES

The changes in the design that resulted in increased costs are: an increase in barrier length (from 610 m [2,000 ft] to 680 m [2,230 ft]), a decrease in well spacing of the system (from 15-m [50-ft] to 10.7-m [35-ft]), and the design and construction of a local evaporation pond for the disposal of extracted groundwater. The increase in barrier length and decrease in well spacing required the construction of 59 wells. The original cost and schedule was based on the construction of 40 wells. Changes in field conditions and technology emplacement resulted in increased drilling costs and chemical procurement costs that have occurred since issuance of the ROD Amendment. These cost increases were reflected in the RDR/RAWP.

The additional chemicals required due to the thicker aquifer and greater number of injection/extraction wells have created a significant increase in the volume of purgewater generated during operations. The ROD Amendment cost estimate was based on releasing the majority of the purgewater to ground and therefore no cost estimate was included for waste management. However, due to the greater than anticipated volume of purgewater, and concerns with residual sulfate levels from such a high volume, a method for managing the purgewater was required. Several alternatives were evaluated and construction of an evaporation pond was determined to be most cost effective. The use of an evaporation pond is less than the cost to transport water to a disposal facility, minimizes disposal of extracted groundwater to ground surface, and allows multiple simultaneous well injections and withdrawals.

The Current Cost Projection provided in Table 1 of this ESD is based on actual project costs to date (Phase I and II) and an estimate of cost through the completion (Phase III) of the ISRM barrier. Table 1 compares the current cost projection to the cost presented in the ROD Amendment. The ROD Amendment was issued in October 1999 using the Proposed Plan capital estimate of approximately $3,920,000. The capital estimate for ISRM increased to approximately $8,729,000 to account for the changes noted previously. The annual operation and maintenance cost estimate has not changed.

Table A-1 in Appendix A presents the total project cost that includes capital and expense items. The total project cost for implementing ISRM is within 20% of the cost estimate provided in the RDR/RAWP once the design had been finalized ($10.7 million in the ESD, versus $9.7 million in the RDR/RAWP).

Phase II construction activities were completed within the projected cost estimate established at the completion of Phase I activities. Phase III activities are expected be consistent with the revised cost estimate.

In summary, a revision to the ISRM construction schedule extends the project completion date from September 2002 to June 2003. Revisions to ISRM cost estimates increase the capital cost of the remedy by approximately $4.8 million as compared to the cost listed in the ROD Amendment. Current projected costs versus those presented in the ROD Amendment are shown in Table 1. The capital cost of ISRM construction is presently projected to be approximately $8.7 million. Cost increases and uncertainties include, but are not limited to, plume concentrations and migration anomalies, waste management, and changing aquifer conditions encountered during the construction phases.

Table 1. ISRM System Cost Comparison.[a]

	ISRM per ROD Amendment[a]	ISRM Current Cost Projection
Capital $[b]	$ 3,920,000	$ 8,729,000
Annual Operation and Maintenance [c]	$ 50,000	$ 50,000
Net Present Value [d] (5-year period)	$ 4,136,000	$ 8,952,900
Net Present Value [d] (10-year period)	$ 4,330,000	$ 9,138,600
Net Present Value [d] (20-year period)	$ 4,612,000	$ 9,420,800

[a] Cost estimate +50% to –30%.

[b] Capital costs include: engineering, well construction, injection/extraction, and waste management (pond construction). No estimate was made for waste management in the ROD Amendment estimate.

[c] Estimate yearly operations and maintenance of the installed ISRM reactive treatment zone. Assumes ISRM barrier performance evaluation is incorporated into the existing 100-HR-3 Operable Unit reporting and management structure.

[d] Based on discount rate of 3.8% and inflation rate of 2.7% for out years.

NON-LEAD REGULATORY AGENCY COMMENTS

By issuance of this ESD, the non-lead regulatory agency, EPA, concurs with the decision to extend the completion date for the ISRM system and with the cost revisions to use the optimized ISRM system as the selected remedy for the 100-D Area hexavalent chromium-contaminated groundwater.

STATUTORY DETERMINATIONS

This modified remedy satisfies CERCLA Section 121. The ROD Amendment selected remedy, as modified by this ESD, will be protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to remedial

actions, is cost-effective, and uses permanent solutions and alternative treatment technologies to the maximum extent practicable. In addition, the remedy employs treatment that reduces the volume, toxicity, or mobility of hazardous wastes as their principal element as practicable for the waste sites plumes.

The response action selected by the ROD Amendment as modified in this ESD is necessary to protect the public health, welfare, or the environment from actual or threatened releases of hazardous substances into the environment. Such a release or threat of release may present an imminent and substantial endangerment to public health, welfare, or the environment.

PUBLIC PARTICIPATION COMPLIANCE

The public participation requirements set out in Section 300.435(c)(2)(i) of the National Contingency Plan are met through issuance of this ESD and advertisement in the local daily newspaper, the Tri-City Herald.

APPENDIX A: ISRM Total Construction Cost Estimate Projection

Table A-1 includes all project related expenses that were not included in Table 1 through the completion of the barrier, to provide a total cost for implementation of the ISRM project.

Table A-1. Detail of Current Cost Projection in Table 1.

	Item Estimated	Cost	Notes[a]
Capital Items	Engineering	$ 985,000	Costs include engineering for scaling up treatability study to full scale emplacement. This activity includes engineering for pond design, barrier design, engineering for well drilling, electric systems, utility enhancements, and support to cultural resources.
	Drilling	$ 2,773,000	Costs associated with constructing barrier and monitoring wells.
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	Evaporation Pond	$ 424,000	Construction of pond.
	Barrier Emplacement	$4,222,000	Costs include chemicals and labor associated with the injection/extraction wells.
	ISRM Capital Construction Cost	**$ 8,729,000**	Estimated capital construction cost to install the ISRM passive treatment zone.
Expense Costs associated with completing ISRM construction through Phase III			
Expense Items	Barrier Emplacement Monitoring	$ 285,000	Sampling and analysis of barrier wells during injection and extraction.
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	Water Level Monitoring	$ 59,000	Monitoring of water levels in D-Area to determine direction of plume movement.
	Project Specific Database	$ 132,000	Data loading and manipulation of project specific data.
	Pond Decommissioning	$ 686,000	Projected cost of decommissioning of pond when no longer needed.
	ISRM Expense Construction Cost	**$ 1,931,000**	
	Total Project ISRM Construction Cost	**$ 10,660,000**	

[a] The notes explain the cost components for the capital and expense items.

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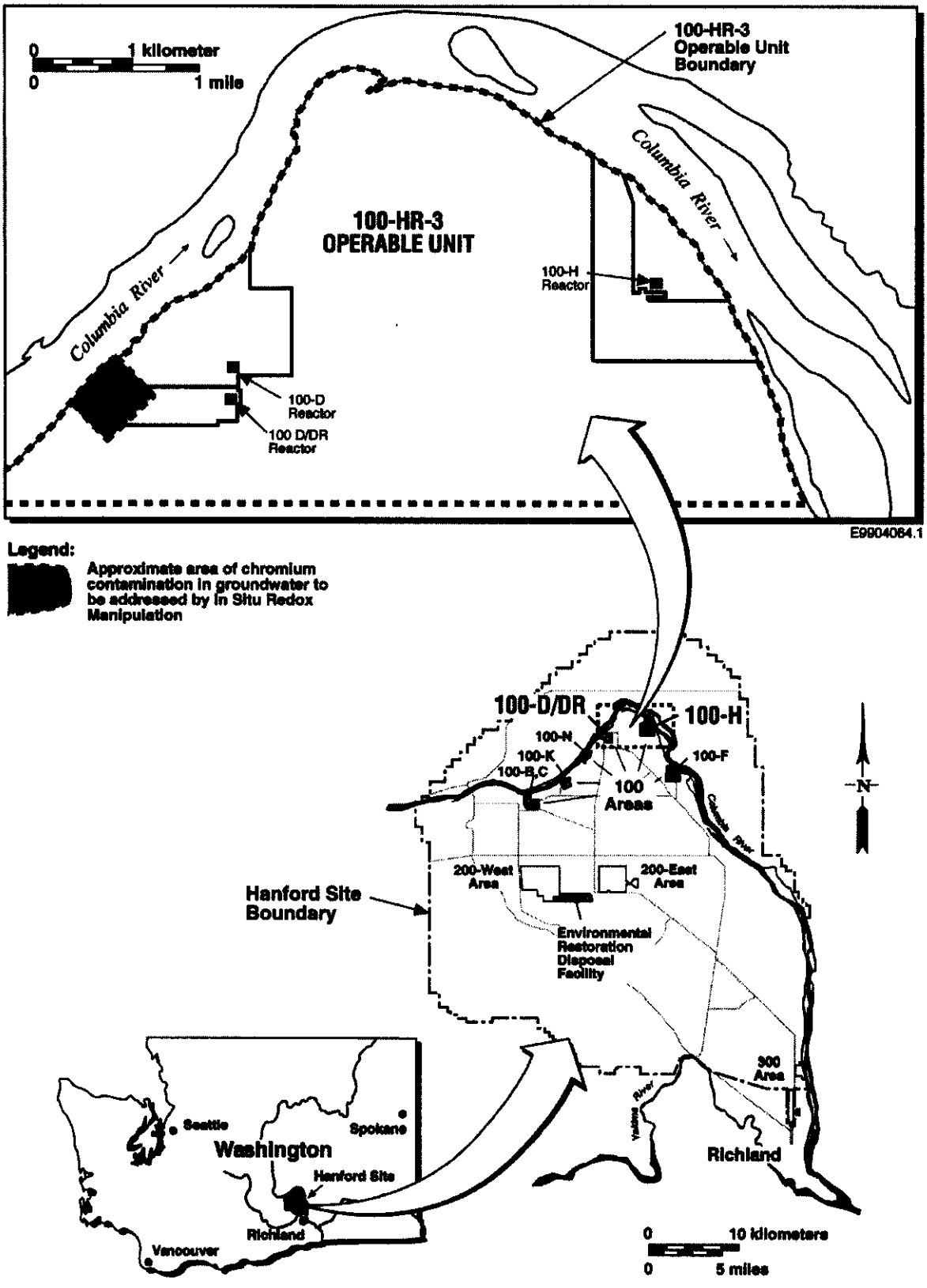

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Table A-1 in Appendix A presents the total project cost that includes capital and expense items. The total project cost for implementing ISRM is within 20% of the cost estimate provided in the RDR/RAWP once the design had been finalized ($10.7 million in the ESD, versus $9.7 million in the RDR/RAWP).

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NON-LEAD REGULATORY AGENCY COMMENTS

By issuance of this ESD, the non-lead regulatory agency, EPA, concurs with the decision to extend the completion date for the ISRM system and with the cost revisions to use the optimized ISRM system as the selected remedy for the 100-D Area hexavalent chromium-contaminated groundwater.

STATUTORY DETERMINATIONS

This modified remedy satisfies CERCLA Section 121. The ROD Amendment selected remedy, as modified by this ESD, will be protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to remedial

actions, is cost-effective, and uses permanent solutions and alternative treatment technologies to the maximum extent practicable. In addition, the remedy employs treatment that reduces the volume, toxicity, or mobility of hazardous wastes as their principal element as practicable for the waste sites plumes.

The response action selected by the ROD Amendment as modified in this ESD is necessary to protect the public health, welfare, or the environment from actual or threatened releases of hazardous substances into the environment. Such a release or threat of release may present an imminent and substantial endangerment to public health, welfare, or the environment.

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[a] The notes explain the cost components for the capital and expense items.

Response to EPA's comments on the "Explanation of Significant Difference for the 100-HR-3 Operable Unit Record of Decision", Dated June 2002.

Responses are underlined.

1) Page 3, 2nd paragraph.
I would rewrite the first part of the paragraph from:
"In 1995, high concentrations of hexavalent chromium were identified west of the 100-D/DR Reactor Area in groundwater well samples, local Columbia River pore water samples, and in near-river aquifer sampling tube groundwater samples. This "hot spot" was not within the established treatment zone for the 100-HR-3 interim remedial action, and therefore it was determined that an amendment to the remedial actions identified in the 1996 ROD would be required. The 1999 ROD Amendment selected deployment of the ISRM for remediation of this hexavalent chromium "hot spot" in the groundwater."
To
"In 1995, high concentrations of hexavalent chromium were identified west of the 100-D/DR Reactor Area in groundwater well samples, local Columbia River pore water samples, and in near-river aquifer sampling tube groundwater samples. The DOE and Ecology, as the lead regulatory agency, determined a different remedial action than that selected in the 1996 ROD would be appropriate for this plume. Therefore, an amendment to the remedial action would be required. The 1999 ROD Amendment selected ISRM for remediation of this hexavalent chromium "hot spot" in the groundwater." The rest of the paragraph "the ISRM technology involves." should be removed since it is redundant and less clear than the following paragraph.

Comment accepted, text revised to "Between 1995 and 1997, high concentrations..."

2) Page 3, 3rd paragraph. Please rewrite "The ISRM technology" as "The ISRM remedy".

Paragraph omitted

3) Page 3, 3rd paragraph, 5th line from the end. "presented" should be "present".

Paragraph omitted

4) Page 4, last paragraph before "Basis for the Document". The sentence "The majority of the remaining chemical reaction byproducts (predominately sulfate) is then pumped out of the treated portion of the aquifer and disposed" begs the question of how the waste is disposed. A few sentences about the evaporation pond would be appropriate.

Comment accepted. There is additional discussion about the evaporation pond in the second paragraph of the "Description of Significant Differences" section that provides more information about the pond.

5) Page 4, 1st paragraph of "Basis for the Document". This paragraph states: The Tri-Parties have determined that the ISRM system requires additional time to optimize implementation identified in the Remedial Design Report/Remedial Action Work Plan (RDR/RAWP) for the 100-HR-3 Groundwater Operable Unit In Situ Redox Manipulation (ISRM) (DOE/RL-99-51, Rev. 1). The extension of ISRM is largely due to the need to further evaluate barrier effectiveness in capturing hexavalent chromium, plume concentration and migration anomalies, and changing aquifer conditions encountered during the construction phase. The time change is consistent with the elements of the selected remedy identified in the ROD Amendment. This paragraph states that additional time for ISRM implementation is needed than identified in the RDR/RAWP. If that is the case, then revise the RDR/RAWP. This paragraph concludes by stating that this time change is consistent with the selected remedy in the ROD Amendment. I don't believe that is true. I believe there is a completion date in the ROD Amendment that the project is going to miss. In fact DOE and Ecology have already approved a TPA change package contrary to that date. Please note that this section is explaining why an ESD to the ROD Amendment is necessary - not why a revision to the RDR/RAWP is needed. Finally, I believe it is DOE's contractors in consultation with DOE and Ecology who "have determined that the ISRM system requires additional time". The EPA has not been sufficiently involved in this project to be in a position to determine if additional time is required.

It would be good to come right out and clearly state the basis for needing this ESD. I.e. "the contractors' cost for implementation of the selected remedy in the ROD Amendment has gone up 240 percent and it is taking longer to implement the remedy". Having said that clear truthful statement, continue with an additional statement such as "DOE and Ecology continue to believe ISRM satisfies the CERCLA 9 criteria".

The text of this section was modified to provide clarity for why the ESD is needed. Background information is provided regarding the FFCA milestones put in place for implementation.

6) Page 4, last paragraph. This paragraph needs a lot of work to be more truthful. The paragraph begins with the statement "the increases in ISRM costs also resulted from the design and construction of a local evaporation pond". This contradicts a later statement, 2nd last paragraph on page 5, which states that "an onsite evaporation pond provided a cost-effective alternative". One of these statements can't be true. Note that this cost-effective alternative statement also appears in table 1.

The text was modified significantly and includes better information regarding the need to contain more of the purge-water due to sulfate levels, rather than the original assumption that most of the purge-water could be released to ground. The unexpected thickness of the aquifer resulted in a greater volume of extraction water with sulfate concentrations that required containment.

7) Page 4, last paragraph. Regarding the evaporation pond, the document states this "reduces the need to transport water to a disposal facility". This sounds like a cost savings. So why is this part of the justification for higher costs?

Text edited to explain that costs of containing the purge-water were not included in original estimates because it was believed that the bulk of the water could go to ground. Constructing an evaporation pond was found to be more cost-effective than transporting the water to a disposal facility.

8) Page 4, last paragraph. This paragraph states that this evaporation pond "allows multiple simultaneous well injections and withdrawals". This is obviously a significant cost savings, both as a more efficient field process and because fieldwork can be completed more quickly (freeing workers to work elsewhere). It is confusing how this money and timesavings approach contributes to "increases in ISRM costs".

Refer to responses for comments # 6 & 7.

9) Page 4, last paragraph. This paragraph might be better replaced with a truthful table of actual cost savings and cost increases compared to the ROD Amendment. Table 1 is a little too general to tell the story.

This text and Table 1 were revised.

10) Page 5, first three paragraphs. This section needs to describe the basis for changes from the ROD Amendment. There are lots of references to the Proposed Plan, the RDR/RAWP, and pump-and-treat. These paragraphs are confusing as to how the ESD compares to the ROD Amendment. I can't tell why the pump-and-treat cost estimates are revised in this document because this ESD is about changes to the already selected remedy of ISRM. What makes this seem odd are untrue statements about the pump-and-treat remedy, which makes the purpose of updating the pump-and-treat cost estimates quizzical (see later comments).

Removed Pump & Treat comparison discussion as well as Table 2. Since this comparison is not required for an ESD, the information was removed. Revised text for clarity re: basis for changes from the ROD Amendment.

11) Page 5, third paragraph. This paragraph discusses some changes from the Proposed Plan to the ROD Amendment and states that "the length of the proposed barrier was extended to approximately 680 m (2,230 ft)". So if this is in fact the length used in the ROD Amendment, why is this same length stated as an "increased length" cost driver for this ESD?

The text was revised.

12) Page 6, 2nd paragraph. The last sentence identifies two costs, without stating which cost corresponds with which document. Also I can't tell which of these costs correspond to which entry in table 1.

Revised and edited for clarity.

13) Page 6, 3rd paragraph. The document states "the original cost estimate contained in the ROD Amendment accounted only for one extraction well and one re-injection well". In response to this comment, please identify where that was stated. I couldn't find it. I did find the following information in "Assessment of the Chromium Plume West of the 100-D/DR Reactors", BHI-00967 Rev. 1, dated July 1997 (page 23) "It is proposed that a total of four new wells be installed in an area defined by the triangle formed by well 199-D2-6, transects 51 and well 199-D4-1 (Figure 3-1). Three of these wells should be added upriver of the well 199-D4-1 to provide a capture area for the known chromium seeping into the river. These wells will not only provide for capture of the chromium plume, but will also provide information [sic] areal extent and contaminant levels within the aquifer southwest of well 199-D4-1. One additional well should be placed further inland to capture any chromium in the groundwater inland of the river and again provide information on areal extent and concentration levels of the chromium within the aquifer." Note this description is for installation of four new extraction wells - not one as stated in the draft ESD. Figure 3-1 in this same BHI document shows placement of the extraction wells over a 2000' span. This would provide a capture zone somewhat greater than 2000', which matches the anticipated final length of the ISRM barrier.

This text was in context of comparison to the Pump & Treat; this paragraph and the one following it were removed from the document (see comment response #19).

14) Table 1. The heading for column 2 is "Revised ISRM Cost Estimate". There have been lots of revisions to the cost estimate, including the earliest planning, the version in the proposed plan, the version in the ROD Amendment, the version in the RDR/RAWP, and a version for this ESD. Column three is clearly stated as the ROD Amendment. What is column 2? I'm guessing it is this ROD ESD. If so, say so.

Edited Table 1 to reflect comment

15) Table 1. The first two paragraphs in the notes begin with "the ROD estimate". I think you mean "the ROD Amendment estimate".

Edited Table 1 to reflect comment

16) Table 1. The first note states "the ROD [sic] estimate for injection wells was based on a 610-m (2,000-ft) treatment zone and well spacing on 15-m (50-ft) centers". The 15-m well spacing statement is not true. The ROD Amendment, remedy selected section, second bullet states "the initial injection well spacing is anticipated to be approximately 10.5 to 12.5 m apart". Factual errors about the basis for the cost increases undermine the credibility of a scope growth argument for this ESD. Isn't it more honest to say that:

(a) the barrier is 10 percent longer than anticipated (cost increase),
(b) an evaporation pond was added to the design for cost avoidance relative to initial design which required treatment of the water (cost avoidance), and
(c) the contractors' overall costs have gone up 240 percent due to cost growth rather than scope growth?

Table 1 has been revised.

17) Table 1. The evaporation pond entry in this table needs more explanation. It states that this $1,110,000 expense is a "cost effective alternative". Where in the ROD Amendment column is the not-cost-effective alternative that is being replaced by using the evaporation pond? Shouldn't there be an entry, with a figure greater than $1,110,000 in the ROD Amendment column for treatment/disposal of extraction water?

Please refer to response to comment #7.

18) Table 1, footnote b. This footnote applies to the ROD Amendment column, but it talks about costs from the Proposed Plan. This can confuse the reader. If this column is correctly headed, then I think this footnote should be removed. Supporting that proposal is more confusion introduced by the second sentence. It states "these cost differences did not exceed the estimated cost range for CERCLA action of +50% to -30%". I believe the +50% to -30% tolerance applies to the need for a ROD ESD, not for going from a proposed plan to its implementing decision document.

Agreed, removed footnote.

19) Table 2. If DOE decides to update pump-and-treat costs as part of this ROD ESD (I wouldn't, but it's not EPA's document), you need to provide the supporting documentation for this table. The numbers just appear in this ESD, with no hint that there is supporting information, and more importantly that supporting information is in the administrative record? (For that matter are the new detailed costs for the ISRM in the administrative record?) If DOE does this, it needs to be actual costs to implement this remedy. Note that there are plenty of wells, and an existing treatment system at 100-D area, so capital costs should be very low.

The pump & treat comparison information was completely removed from the ESD.

20) Page 9, first paragraph. Until this point, this ESD presents a 240 percent cost growth. But this paragraph opens the door to further cost growth. It states "cost increases and uncertainties included and not limited to.could cost another $2 million. So is the price tag on this ESD $10.5 million (a 240 percent increase) or $12.5 million (about 285 percent increase)?

Potential Mitigation Costs were removed from the document.

21) Page 9, Support Agency Comments This should be titled Non-Lead Regulatory Agency rather than Support Agency. And it should identify who the non-lead regulatory agency is (i.e. EPA). Perhaps rewrite the beginning of the paragraph something like "by issuance of this ESD, the EPA as the non-lead regulatory agency concurs with the decision to extend the completion date for the ISRM system."

Comment accepted, text modified.

21) Page 9, Statutory Determinations Please rewrite "The ROD Amendment selected remedy, as modified by this ESD, remains to be protective", to something like "The ROD Amendment selected remedy, as
modified by this ESD, will be protective".

Comment accepted, text modified.

22) Page 9, Public Participation Compliance The document states that "the public participation requirements set out in Section 300.435(c)(2)(i) of the National Contingency Plan are met through
issuance of this ESD". That is only half-right. 300.435(c)(2)(i)(B) has an additional requirement to "publish a notice that briefly summarizes the explanation of significant differences, including the
reasons for such differences, in a major local newspaper of general circulation".

Comment accepted, text modified to indicate that an ad would be placed in the Tri-City Herald.