



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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April 29, 2015

15-NWP-080

Ms. Stacy L. Charboneau, Manager
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: A7-50
Richland, Washington 99352

Dear Ms. Charboneau:

Re: Completion of Milestone M-036-01E – 2015 Hanford Lifecycle Scope, Schedule and Cost Report – *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement)

The Department of Ecology (Ecology) appreciates the timely receipt of the 2015 Hanford Lifecycle Scope, Schedule and Cost Report (DOE/RL-2014-11, Rev. 0). The 2015 Lifecycle Report meets the requirements of M-036-01E.

Ecology appreciates several features of the report:

- listing the Tri-Party Agreement Milestones applicable to every Project Baseline Summary
- providing graphic schedules for two of the major divisions in the report (Central Plateau Remediation, River Corridor Closure)
- showing tables for near-term and project duration estimates of costs

We have enclosed our detailed comments on the 2015 Lifecycle Report. Our comments include specific requests for the contents of the 2016 Lifecycle Report, based upon what we found in need of correction in the 2015 Lifecycle Report text and tables.

We also request that the Office of River Protection provide information supporting compliant use of funding for capital projects that the U. S. Congress appropriates (e.g., direct feed law activity waste treatment). Whether the Office of River Protection has an approved baseline that supersedes Revision 4 of the System Plan by August 31, 2015 or not, receipt of capital funding for design, engineering and construction should appear by Project Baseline Summary by year when Congress makes the appropriations. We assume that the Office of River Protection will comply with Congressional direction, regardless of baseline approvals within the United States Department of Energy.

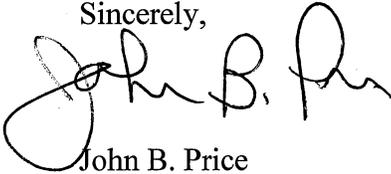


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If you have any questions, please contact Melinda J. Brown, Nuclear Waste Program Specialist,
at melinda.brown@ecy.wa.gov or (509) 732-7886.

Sincerely,



John B. Price
Tri-Party Agreement Section Manager
Nuclear Waste Program

tkb
Enclosure

cc electronic w/enc:

Dennis Faulk, EPA
Dave Einan, EPA
Kevin Smith, USDOE-ORP
Stephen Korenkiewicz, USDOE-RL
Dru Butler, MSA
Jon Perry, MSA
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Melinda Brown, Ecology
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Jane Hedges, Ecology
John Price, Ecology
Ron Skinnarland, Ecology
Cheryl Whalen, Ecology
Environmental Portal
Hanford Facility Operating Record
USDOE-ORP Correspondence Control
USDOE-RL Correspondence Control

cc w/enc:

Steve Hudson, HAB
Administrative Record: Milestone M-036-01E
NWP Central File

cc w/o enc:

Rod Skeen, CTUIR
Gabriel Bohnee, NPT
Russell Jim, YN
NWP Reader File

REVIEW COMMENT RECORD (RCR)	1. Date 04-29-2015	2. Review No. 1
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5. Document Number(s)/Title(s) DOE/RL-2014-11 Revision 0, 2015 Hanford Lifecycle Scope, Schedule and Cost Report	6. Program/Project/Building Number	7. Reviewers Melinda J. Brown	8. Organization/Group Ecology/Nuclear Waste Program	9. Location/Phone 3100 Port of Benton Blvd, Richland, WA/(509) 372-7886
17. Comment Submittal Approval: _____ Organization Manager (Optional)	10. Agreement with indicated comment disposition(s) _____ Date _____ Author/Originator	11. CLOSED _____ Reviewer/Point of Contact _____ Date _____ Author/Originator		

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted.)	16. Status
1	<p>GENERAL:</p> <p>The reasons for significant changes in specific cost estimates from Fiscal Year (FY) 2014 to FY 2015 are not always self-evident. Provide more specific explanations, free of jargon, in the FY 2016 report.</p> <p>For example:</p> <p>p. 4-15 shows the increase in funding necessary to begin decontamination and decommissioning at the Fast Flux Test Facility (FFTF) slips from 2019 (in the FY 2014 report) to 2021. Elevated costs continue for two years beyond the schedule in the FY 2014 report (2035 v. 2033).</p> <p>In the FY 2015 report, costs reach almost \$120 million (M) in 2029, in contrast to a peak of less than \$90M for 2029 in the FY 2014 report.</p>			

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	<p>In section 1.5.1, the explanation of the cost increase of \$240 M at FFTF is “a revision of risk posture” and redistribution of Site-wide Services between two Hanford Project Baseline Summary (PBS) accounts RL-0042 FFTF and RL-0040 Infrastructure and Services.</p> <p>In the FY 2016 report, define the term “risk posture” and provide more information about why costs increased.</p> <p>In another example, explanations for significant increases in costs are inadequate.</p> <ul style="list-style-type: none"> • Section 1.5.1, p. 1-8, contains scant information about what are significant increases in the costs for Safeguards and Security (S&S). Increases in costs and changes in schedules are attributable to “refined estimates.” An increase of \$470 M should be presented in more specific terms. In the FY 2016 report, add clarifying information about the “refinements.” • In another example, p. 4-13, Figure 4-5 Central Plateau Remediation Remaining Estimated Cleanup Costs contains a different cost profile than Figure 4-9 showed in the FY 2014 report. Two distinct spikes in funding in FYs 2023 through 2024 and 2042 through 2044 appear to support Zone Environmental Remediation. The description does not reveal what causes the two funding peaks that are approximately 20 years apart. Add a brief description for the two peaks to the FY 2016 report. 			

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	<ul style="list-style-type: none"> • In another instance, there is no substantive explanation for the increase in cost for Groundwater/Vadose Zone (PBS RL-0030) to \$8.9 billion from \$8.6 billion in the FY 2014 report. In the FY 2016 report, provide substantive information about the increase in costs remaining. <p>In some instances, details of costs for a PBS are absent or inadequate.</p> <ul style="list-style-type: none"> • The most egregious example is S&S. Table C-11 provides no level 2 or 3 information. Instead, the title PBS RL-0020 appears alone. In the FY 2016 report, insert tables in Appendix C that show more detail of S&S Level 2 and Level 3 costs by work scope. <p>In another instance, there is no correlation between cleanup activities and increases in funding for a support activity.</p> <ul style="list-style-type: none"> • In the S&S funding profiles in Figure 6-1, the peaks funding do not parallel the peaks in planned work in the 200 Areas. For example, the second peak in funding for the Central Plateau Remediation is in 2043, well after the S&S peak in 2037. In the FY 2016 report, add the assumptions that formed the bases for the S&S remaining estimated costs. • S&S funds peak in 2037. In contrast, the peak costs for radioactive liquid tank disposition occur between 2035 and 2040. In the 2016 report, evaluate the impact on tank disposition if S&S support for work force increases lags the increase in tank disposition activities. 			

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	<p>In a different instance, S&S cost increases appear to rise in opposition to overall decreases in cleanup work:</p> <p>In the FY 2015 report, Long-term Stewardship begins in 2060, one year after S&S cost peak at ~\$120 M. Long-term stewardship will include “management after completion of Hanford cleanup actions” (p. 6-5, sec. 6.4, paragraph 1).</p> <p>The FY 2015 report provides no explanation for a peak in S&S funds at the same time as the end in cleanup appears in the FY 2015 report. Add an explanation for the late increase in S&S funding at the end cleanup to the FY 2016 report.</p> <p>In other instances in the FY 2015 report, projects appear for which there are no schedules or costs.</p> <p>For example:</p> <p>In the FY 2015 report, on p. C-44 in Table C-24 of is a Level 3 work element called Sodium Reaction Facility that appeared in the FY 2014 report. Tables C-25 Level 2 and Table C-26 near term costs show only a total for FFTF Cleanup. No detail is available about the Sodium Reaction Facility cost or schedule.</p> <p>In the FY 2016 report, include any project costs for preliminary design work (funded by expense) and a schedule for the project.</p>			
2	<p>p. 1-5, paragraph 2, sentence 6, states that the 300 Area, north of Richland, Washington contained fuel fabrication facilities, nuclear research and development facilities, and associated solid and liquid waste sites that have contaminated soil and</p>			

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	<p>groundwater.</p> <p>As of August 31, 2014, the United States Department of Energy (USDOE) had not declared the cleanup in the 300 Area was complete. In the FY 2016 report, modify or expand the text to explain that some of the most challenging waste sites (e. g. 300-296) remain to be remediated. (See http://www.hanford.gov/page.cfm/300Area description.)</p>			
3	<p>p. 1-6, paragraph 1, sentence 2, and p. 4-1, sec. 4.0, paragraph 2, states that about 73 square miles of contaminated groundwater are present on the Hanford Site.</p> <p>The FY 2014 report referred to 59 square miles of contaminated groundwater. The FY 2015 report does not explain why the area increased from 59 to 73 square miles within one year.</p> <p>In the FY 2016 report, include an explanation of any increases or decreases in the area of contaminated groundwater, compared with the FY 2015 report.</p>			
4	<p>pp. 1-8 and 1-9, sec. 1.5.1 Incorporated changes: Ecology appreciates the summary of cost increases and decreases that appears with each PBS title. That information is the first notice of cost changes that the rest of the report discusses in greater detail. Continue to provide that information in that format in the FY 2016 report.</p>			
5	<p>p 1-9 Richland Operations Office- Long-term Stewardship attributes a \$570 M decrease to "liquid waste efficiencies." The term is meaningless without context; please provide one in the FY 2016 report.</p>			

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6	<p>Page 1-9, bullet 3, contains the statement that the FFTF increase of \$ 240 M in costs for FFTF that arose “due to a revision in risk posture and redistribution of Site-wide Services between RL-0042 and RL-0040 Infrastructure and Services.”</p> <p>As above, the term “risk posture” is meaningless without context. In the FY 2016 report, define the term “risk posture” and explain what caused the “revision” in it.</p>			
7	<p>p. 1-9, sec. 1.5.2, repeats the announcement of the release of the 300 Area Record of Decision (ROD), the first of six RODs that will be based on analysis in the Tank Closure Waste Management Environmental Impact Statement (TC & WM EIS). The release first appeared in the FY 2014 report. Ecology sees no need to repeat the release again in the FY 2016 report.</p>			
8	<p>p. 1-9 explains that a \$2.8 billion decrease in RL-0040 is attributable to a revised estimate for infrastructure services “over the cleanup lifecycle” and redistribution of Site-wide Services between RL-0040 and RL-0013C (waste management). Revise the text in the FY 2016 report to itemize what part of the change is due to reduced costs and what part is due to redistribution.</p>			
9	<p>EDITORIAL: p. 2-1, sec. 2.1, last sentence: Insert “where” between “chapter/section” and “each PBS” in the FY 2016 report.</p>			

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10	<p>p. 2-2, sec. 2.2, paragraph 2, sentence 2, states that Mission Support activities align with cleanup through 2060. That is a three-year reduction from the 2063 date in the FY 2014 report. In the FY 2016 report, provide the bases for changes in duration for Mission Support activities.</p>			
11	<p>On pp. 3-3 and 3-4, Table 3-3 Nuclear Facility Decontamination & Decommissioning Level 2 Scope Washington Closure Hanford (WCH) Indirect Costs, listed in Table 3-2 in the FY 2014 report, are missing in Table 3-3 in the FY 2015 report. Those costs are not listed in Table C-21 or enumerated in Table C-22.</p> <p>In the FY 2016 report, ensure that the WCH contractor indirect costs include performance and incentive fees. Ensure that contractor indirect costs are included in Site-wide Services and Other Distributed Costs.</p>			
12	<p>In the FY 2016 report, ensure that the performance and incentive fees for the Central Plateau Remediation Contractor are included in PBS-0040 Site-wide Services and Other Distributed Costs.</p> <p>Ensure that the performance and incentive fees for Washington River Protection Solutions are included in the Office of River Protection (ORP) PBS ORP0014 costs.</p> <p>Continue to report the fees for Bechtel National, Inc. in the PBS ORP-0060 Table C-20.</p>			
13	<p>p. 3-6, sec. 3.2, lists major cleanup objectives for Spent Nuclear Fuel Stabilization and Disposition. Figure 3-5 provides estimated cleanup costs from 2015 through 2018.</p> <p>In the FY 2014 report, funding ended in FY 2017.</p>			

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	<p>Extension of the project schedule by one year from FY 2017 to FY 2018 and an increase in the total estimated cost of Sludge Treatment Project from \$280,588,000 to \$336,330,000 (20%) in the FY 2015 report are significant (see Table C-6 on p. C-7).</p> <p>In the FY 2016 report, if the funding plans change again, add information that explains why the schedule and costs change significantly.</p>			
14	<p>On p. 3-7 in the FY 2015 report, Figure 3-5 shows costs for Spent Nuclear Fuel Stabilization and Disposition (RL-0012) in 2016 and 2017 exceed \$150M.</p> <p>In the FY 2014 report, Figure 3-7 shows totals for 2016 and 2017 of less than \$150 M each. No explanation of the reasons for the increase appears in Sec. 3.2. Section 1.5.1 states only that RL-0012 increased \$113 M due to increased operations costs and schedule.</p> <p>In the FY 2016 report, add specific information about increased operations.</p>			
15	<p>p. 4-3, the Milestone M-015-38B compliance date is listed as 10/30/2015. Change package M-15-14-01 RL submitted on 7/7/2014 changed the compliance date to "Revised due date to be identified by 10/30/2015."</p> <p>Ecology approved the change request on 7/7/2014 and EPA approved it on 7/17/2014. Change the statement on the compliance date in the FY 2016 report.</p>			
16	<p>p. 4-12, paragraph 5, states that the work scope for Central Plateau Remediation Project is organized into three primary Level 2 work elements but four work elements appear in Table 4-4.</p>			

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	<p>In the FY 2016 report, state that Site-wide Services and Other Distributed Cost is not a <u>work</u> element. Add a footnote to every Level 2 table that so states.</p>			
17	<p>In the FY 2015 report, specific cost estimates appear on p. C-25 through C-28 in Table C-14 for near-term costs (Level 3) entitled “Groundwater Monitoring and Performance Assessments.”</p> <p>Within that scope are several tasks, including Geophysical Sciences and Logging, Groundwater Lab Analysis & Data Management, etc. Estimated costs for those activities appear from 2015 through 2020.</p> <p>In contrast, in the FY 2014 report, specific costs for some categories (e.g., geophysical sciences and logging) first appear in 2019. No text explains why the schedule for the activity changed. Add the explanation to the FY 2016 report.</p> <p>In addition, the FY 2014 report, p. C-31, Table C-14, categories are different from those in the FY 2015 report. No explanation of the need for a change appears in the text. In the FY 2016 report, when categories change, add an explanation for the change.</p> <p>In the FY 2016 report, explain what compliance requirement led Richland Operations Office to reorganize the work and change the schedule.</p>			
18	<p>p. 4-8, Groundwater Monitoring & Performance Assessments Level 3 work element: Geophysical Sciences and Borehole Logging receives a total of \$10.992 M from 2015 through 2020 (see Table C-14).</p> <p>Table C-14 shows that costs rise to \$3.4 M in 2018, fall to \$150,000 in 2019. They rise to \$752,000 in 2020. In the FY 2016 report, explain what work the \$752,000 will fund.</p>			

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19	<p>p. 4-14, sec. 4.4, paragraph 3, sentence 3, states that the regulatory decision for the FFTF containment building final closure will be determined based upon the appropriate environmental analysis process.</p> <p>In the TC & WM EIS Record of Decision (ROD), the USDOE preferred alternative is entombment. In the ROD, USDOE chose to implement Alternative 2, Entombment.</p> <p>In the FY 2016 report, revise the text to reflect USDOE's decision to entomb FFTF.</p>			
20	<p>p. 4-16, sec. 4.5, Solid Waste stabilization bullet 1, states that cesium and strontium capsules will be transferred to dry storage and/or permanent disposal.</p> <p>Revise the FY 2016 report to address the cesium-strontium storage onsite/offsite in the "deep dive" Ecology requested on 04/09/2015.</p>			
21	<p>p. 4-20, sec. 4.6, paragraph 3, assumption for FFTF states that beginning in <u>2019</u>, FFTF budget levels are reflect optimal ramp up to complete sodium residuals cleaning, bulk sodium processing, and D&D work scope.</p> <p>Table C-25 "FFTF Remaining Lifecycle Schedule and Costs" shows funding ramp up beginning in <u>2021</u>, peaking in 2029, and then dropping to \$11,420,000 in 2035.</p> <p>In the FY 2016 report, correct the text to designate 2021 as the beginning of the funding ramp up.</p>			
22	<p>p. 5-2, Figure 5-1: in the FY 2016 report, update the figure and incorporate Direct Feed Low Activity Waste (LAW) process. Remove Supplemental CH-TRU.</p>			

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23	p. 5-9, Figure 5-6. Assuming that the Congress releases funds for the direct feed LAW system in 2016, add that activity with a schedule to Figure 5-6 and show changes in funding in Figure 5-5 and Table C-34 or Table C-35.			
24	p. 6-7, Figure 6-6: In the FY 2016 report, correct the title of Infrastructure to reflect Table 6-4 Work Element "Infrastructure and Waste Management" that appears in the FY 2015 report.			
25	Appendix C contained no Level 2 or Level 3 tables for S&S. Add the tables to the FY 2016 report.			
26	p. C-19, As was true in the FY 2014 report, Table C.1.9 shows the design, construction, and turnover to operations of a new Sodium Reaction Facility. Neither the FY 2014 report nor the FY 2015 report showed a schedule for that facility. In the FY 2016 report, revise the information to show when USDOE will provide funds for the facility.			
27	p. B-15, Table B-3, CP-17 Central Plateau -- Disposition Fast Flux Test Facility (p. B-14), Range of Plausible Alternatives, bullet 1 includes the statement "convert caustic sodium hydroxide solution onsite or at INL". Ecology requests that RL ensure that treatment at Idaho National Laboratory is still an option. If it is not, revise the text in the FY 2016 report.			
28	p. C-29, Zone Environmental Remediation no longer lists Zone 7, CSB Zone; Zone 9, ETF; Semiworks; Zone 21, IDF Zone; Zone 22, NRDWL/BC Control Zone. Zone 400 Area Surveillance & Maintenance appears in the FY 2015 report for the first time.			

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	In the FY 2016 report, when such changes occur, add single line explanations.			
29	<p>p. C-32, Zone Environmental Remediation shows very large increases in costs in 2042, 2043, and 2044 (e.g. up to \$875,184,000 in 2043 from \$258,221,000 in 2014). Nothing in the FY 2015 report explains why the costs increase so greatly.</p> <p>In the FY 2016 report, add an explanation when funds increase so significantly. Include information about updates in approved baselines and changes in milestone dates.</p>			
30	p. C-33: In the FY 2016 report, explain what actions/direction resulted in the significant reduction in funds planned for zone environmental remediation (e.g., from \$307.5 M in 2017 in the FY 2014 report to \$72.7 M in the FY 2015 report).			
31	<p>p. C-42: Table C-23 shows funds earmarked for Field Remediation in the 600 Area totaling \$199,924,000. There are no milestones listed that focus on the 600 Area Remediation in the list of Field Remediation Closures (see p. C-42).</p> <p>In the FY 2016 report, add a reference to the Tri-Party Agreement Milestone or other compliance mechanism that requires Field Remediation of the 600 Areas.</p>			
32	p. C-49: make the same correction to the title in Table C-30 in the FY 2016 report.			