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0092754

11-AMCP-0050

DEC 16 2010

Mr. D. A. Faulk, Program Manager
Office of Environmental Cleanup
Hanford Project Office
U.S. Environmental Protection Agency
309 Bradley Boulevard, Suite 115
Richland, Washington 99352

Dear Mr. Faulk:

ACTION MEMORANDUM FOR THE NON-TIME CRITICAL REMOVAL ACTION FOR THE 212-N, 212-P AND 212-R FACILITIES, ADDENDUM 1: DISPOSITION OF RAILCARS, DOE/RL-2008-80-ADD1, REVISION 0

This letter transmits the approved Action Memorandum for the Non-Time Critical Removal Action for the 212-N, 212-P, and 212-R Facilities, Addendum 1: Disposition of Railcars, DOE/RL-2008-80-ADD1, Revision 0.

The Action Memorandum was signed by the U.S. Department of Energy Richland Operations Office and the U.S. Environmental Protection Agency on December 6, 2010.

If you have any questions, please contact me, or your staff may contact Al Farabee, of my staff, on (509) 376-8089.

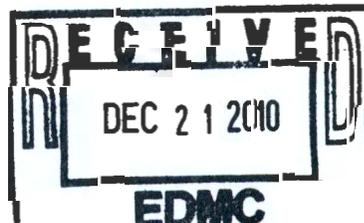
Sincerely,

Richard A. Holten, Acting Assistant Manager
for the Central Plateau

AMCP:FMR

Attachment

cc: See Page 2



Mr. D. A. Faulk
11-AMCP-0050

-2-

DEC 16 2010

cc w/attach:

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Environmental Portal

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Action Memorandum for the Non-Time Critical Removal Action for the 212-N, 212-P, and 212-R Facilities, Addendum 1: Disposition of Railcars

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management



U.S. DEPARTMENT OF
ENERGY

Richland Operations
Office

P.O. Box 550
Richland, Washington 99352

Approved for Public Release;
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Date Published
December 2010

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management



U.S. DEPARTMENT OF
ENERGY

Richland Operations
Office

P.O. Box 550
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Signature Sheet

Signature sheet for the Action Memorandum addendum for disposition of railcars at the U.S. Department of Energy's Hanford Site. This action is conducted by the U.S. Department of Energy with the approval of the U.S. Environmental Protection Agency.



Rich Holten
Acting Assistant Manager for the Central Plateau
U.S. Department of Energy Richland Operations Office

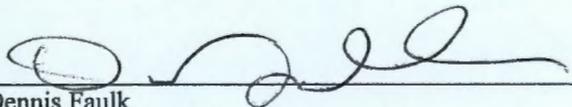
12/6/2010

Date

Signature Sheet

Signature sheet for the Action Memorandum addendum for disposition of railcars at the U.S. Department of Energy's Hanford Site. This action is conducted by the U.S. Department of Energy with the approval of the U.S. Environmental Protection Agency.

Having considered the extent to which the Action Memorandum addendum, DOE/RL-2008-80-ADD1, *Action Memorandum for the Non-Time-Critical Removal Action for the 212-N, -P and -R Facilities, Addendum 1: Disposition of Railcars*, could be inconsistent with *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* processes or could alter schedules set forth in Appendix D of the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement; Ecology et al., 1989a), the U.S. Environmental Protection Agency approves pursuant to Section 7.2.4 of the *Hanford Federal Facility Agreement and Consent Order Action Plan* (Tri-Party Agreement Action Plan; Ecology et al., 1989b).



Dennis Faulk
Hanford Program Manager
Region 10
U.S. Environmental Protection Agency

12/6/10

Date

Executive Summary

This Action Memorandum addendum documents the selected alternative to perform decontamination, deactivation, decommissioning, and disposal (D4) of 16 railcars that are staged in the 200 North Area of the Hanford Site. This Action Memorandum addendum was prepared in accordance with the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)*,¹ as amended by the *Superfund Amendments and Reauthorization Act of 1986*,² and in accordance with the "National Oil and Hazardous Substances Pollution Contingency Plan" (40 Code of Federal Regulations 300).³ This action is consistent with U.S. Department of Energy (DOE) and U.S. Environmental Protection Agency (EPA), 1995,⁴ which establishes the CERCLA non-time-critical removal action (NTCRA) process as an approach for D4. This approach satisfies environmental review requirements and provides for stakeholder involvement, while providing a framework for selecting the D4 alternative. An Administrative Record has been established to record information used to support the selected alternative and provide documentation of decisions and the progress of the removal action.

An engineering evaluation/cost analysis addendum was prepared and released for public comment on evaluation of alternatives to disposition the railcars (which includes 11 cask cars, 2 locomotives, 2 tank cars, and 1 flat car that are no longer needed). Comments received during the public comment period were considered and are included in Appendix A, "Public Comments Received during the Comment Period."

Completion of the NTCRA will place the identified railcars in a condition protective of human health and the environment. The hazardous substances that may be encountered that are likely to require cleanup during the implementation of the NTCRA include, but are not limited to, radionuclides, asbestos, heavy metals, and polychlorinated biphenyls.

¹ *Comprehensive Environmental Response, Compensation, and Liability Act of 1980*, 42 USC 9601, et seq., Pub. L. 107-377, December 31, 2002. Available at: <http://epw.senate.gov/cercla.pdf>.

² *Superfund Amendments and Reauthorization Act of 1986*, 42 USC 103, et seq. Available at: <http://www.epa.gov/superfund/policy/sara.htm>.

³ 40 CFR 300, "National Oil and Hazardous Substances Pollution Contingency Plan," *Code of Federal Regulations*. Available at: http://www.access.gpo.gov/nara/cfr/waisidx_10/40cfr300_10.html.

⁴ DOE and EPA, 1995, *Policy on Decommissioning of Department of Energy Facilities Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*, U.S. Department of Energy and U.S. Environmental Protection Agency, Washington, D.C. Available at: http://www.epa.gov/fedfac/pdf/decommissioning_doe.pdf.

Three alternatives were considered for the railcars: (1) No Action; (2) Continued Surveillance and Maintenance; with future Decontamination, Deactivation, Decommissioning, and Disposal of the Railcars; and (3) Near-Term Decontamination, Deactivation, Decommissioning, and Disposal of the Railcars. The selected removal action alternative is Alternative 3 (Near-Term Decontamination, Deactivation, Decommissioning, and Disposal of the Railcars).

Alternative 3 meets the proposed removal action objectives regarding long-term risk, minimizes short-term risk and radiation exposure, is cost-effective, meets applicable or relevant and appropriate requirements, and provides a safe and stable configuration that is environmentally sound. U.S. Department of Energy, Richland Operations Office also considers Alternative 3 to contribute to the efficient performance of the Hanford Site long-term remedial actions and promotes protection of ecological resources and restoration of the environment consistent with U.S. Department of Energy, Richland Operations Office, U.S. Environmental Protection Agency, and Washington State Department of Ecology goals.

For contaminated waste generated during the work, DOE and EPA agree that to facilitate cost-effective, environmentally protective and efficient disposal, the Environmental Restoration Disposal Facility (ERDF) will be the preferred disposal location for waste meeting the ERDF waste acceptance criteria. When the work involves generation of waste subject to regulation under the *Washington State Hazardous Waste Management Act of 1976*⁵/*Resource Conservation and Recovery Act of 1976*,⁶ this waste will be addressed pursuant to the substantive requirements of those regulations.

⁵ RCW 70.105, "Hazardous Waste Management," *Revised Code of Washington*, Olympia, Washington. Available at: <http://apps.leg.wa.gov/RCW/default.aspx?cite=70.105>.

⁶ *Resource Conservation and Recovery Act of 1976*, 42 USC 6901, et seq. Available at: <http://epw.senate.gov/rcra.pdf>.

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Terms

ACHP	Advisory Council on Historic Preservation
ARAR	applicable or relevant and appropriate requirement
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>
CRMP	Cultural Resources Management Plan
D4	decontamination, deactivation, decommissioning, and disposal
DOE	U.S. Department of Energy
DOE-RL	U.S. Department of Energy, Richland Operations Office
Ecology	Washington State Department of Ecology
EE/CA	engineering evaluation/cost analysis
EPA	U.S. Environmental Protection Agency
ERDF	Environmental Restoration and Disposal Facility
ETF	Effluent Treatment Facility
ID	Identification
LRA	Lead Regulatory Agency
NCP	“National Oil and Hazardous Substances Pollution Contingency Plan”
NEPA	<i>National Environmental Policy Act of 1969</i>
NHPA	<i>National Historic Preservation Act of 1966</i>
NTCRA	non-time-critical removal action
OMB	Office of Management and Budget
PCB	polychlorinated biphenyl
RACER	Remedial Action Cost Estimate Requirement
RAO	removal action objective
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
ROD	Record of Decision
S&M	surveillance and maintenance
SHPO	State Historic Preservation Officer
TPA	Tri-Party Agreement
TPA Action Plan	<i>Hanford Federal Facility Agreement and Consent Order Action Plan</i>

Tri-Parties	U.S. Department of Energy, Richland Operations Office, U.S. Environmental Protection Agency, Washington state Department of Ecology
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>
WIDS	Waste Information Data System

1 Purpose

This Action Memorandum addendum documents the selection of the recommended alternative (Alternative 3, Near-Term Decontamination, Deactivation, Decommissioning, and Disposal [D4] of the Railcars as identified in *212-N, 212-P, and 212-R Facilities Engineering Evaluation/Cost Analysis, Addendum 1: Disposition of Railcars* [EE/CA] [DOE/RL-2008-07-ADD1]). The Action Memorandum addendum has been prepared in accordance with the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA), as amended by the *Superfund Amendments and Reauthorization Act of 1986*, and the "National Oil and Hazardous Substances Pollution Contingency Plan" (NCP) (40 CFR 300). Although the railcars are not specifically addressed in previous records of decision (RODs) on the Hanford Site, this removal action is consistent with the remedial action objectives in EPA/ROD/R10-99/039, *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 Operable Units, Hanford Site, Benton County, Washington*, and supports the overall cleanup objectives established through the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al., 1989a).

This action is also consistent with the joint U.S. Department of Energy (DOE) and U.S. Environmental Protection Agency (EPA) *Policy on Decommissioning of Department of Energy Facilities Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)* (DOE and EPA, 1995), which establishes the CERCLA non-time-critical removal action (NTCRA) process as an approach for decommissioning. Under this policy, an NTCRA may be taken when DOE determines that the action will prevent, minimize, stabilize, or eliminate a risk to human health and/or the environment. When DOE determines that a CERCLA NTCRA is necessary, DOE is authorized to evaluate, select, and implement the removal action that DOE determines is most appropriate to address the potential risk posed by the release or threat of release. This policy states in part:

Although the full range of CERCLA response actions may be applicable to decommissioning activities, NTCRAs should be used for decommissioning, consistent with this Policy. The alternative approaches available to conduct decommissioning projects typically are clear and very limited. This often will eliminate the need for the more thorough analysis of alternatives required for remedial actions. NTCRA requirements provide greater flexibility to develop decommissioning plans that are appropriate for the circumstances presented. Statutory time and dollar limits on removal actions do not apply to removal actions conducted by DOE, which increases the scope of projects that may be addressed by DOE removal action. Most importantly, NTCRAs usually will provide benefits to worker safety, public health, and the environment more rapidly and cost effectively than remedial actions. For these reasons, DOE may exercise removal action authority to conduct decommissioning whenever such action is authorized by CERCLA, the NCP, and Executive Order 12580.

The typical classifications of waste likely to require disposal include, but are not limited to, solid waste, dangerous waste, low-level radioactive and/or mixed waste, asbestos waste, and polychlorinated biphenyl (PCB)-contaminated waste.

For contaminated waste generated during the work, U.S. Department of Energy, Richland Operations Office (DOE-RL), Washington State Department of Ecology (Ecology), and EPA (Tri-Parties) agree that to facilitate cost-effective, environmentally protective, and efficient disposal, the Environmental Restoration Disposal Facility (ERDF) is the preferred disposal location for waste meeting the ERDF

waste acceptance criteria. Alternatively, disposal of waste may take place at other facilities that are on the Hanford Site or that are offsite and have been authorized by their own EPA regional offices in accordance with the NCP (40 CFR 300.440, "Procedures for Planning and Implementing Off-Site Response Actions") as suitable to receive waste from CERCLA sites.

The potential exists for encountering contamination in surrounding soils during the implementation of the removal action. Soil that is found to be contaminated with hazardous substances that can be readily cleaned up will be removed for disposal during performance of the work, if practicable. Such excavation will be performed using an observational approach with visual inspections, radiological and chemical field screening, and focused judgmental sampling where appropriate. Depth of and completion of excavation in these situations will be determined by the on-scene coordinator in consultation with EPA. Alternatively, if the soil contamination is extensive or unusually complex, DOE will consult with the lead regulatory agency (LRA) and determine whether to address the contamination within the scope of this NTCRA, or implement temporary measures as part of this action and defer final action to the remedial investigation and remedy selection process by adding the site to the *Hanford Federal Facility Agreement and Consent Order Action Plan* (Tri-Party Agreement [TPA] Action Plan), Appendix C (Ecology et al., 1989b) in accordance with *Tri-Party Agreement Handbook Management Procedures*, Guideline Number TPA-MP-14, "Maintenance of the Waste Information Data System (WIDS)" (RL-TPA-90-0001).

Performance of this removal action will place the railcars in a configuration that is protective of human health and the environment. Without D4 of the railcars, a potential threat of release of hazardous substances exists, and, without action, adverse threats to human health and the environment eventually could occur. As the lead agency, DOE has determined that a removal action is an appropriate means to accomplish the final end state and achieve environmental review requirements. EPA concurs that a NTCRA is warranted to place these railcars in a configuration that is protective of human health and the environment. The removal activities under the scope of this NTCRA will, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action, as required by the NCP (40 CFR 300.415[d], "Removal Action").

2 Site Conditions and Background

This section provides summary background information and a description of the railcars and additional information relevant to the scope of this NTCRA. This section also provides a summary of the radiological and chemical hazardous substances that will be encountered while performing the work.

2.1 Site Description

The railcars are located in the 200 North Area of the Hanford Site. Highway 240 is located southwest of the 200 North Area, and the Columbia River is north-northwest (the highway and the river are each located less than 10 km [6 mi] from the railcars). Figure 1 identifies the location of the railcars within this geographical area.

2.1.1 Description of the Railcars

Sixteen radiologically and chemically contaminated railcars are staged on the 212-R rail spur immediately south of the former location of the 212-R Facility (Figure 2). All of the cask cars and both locomotives were acquired in the 1940s through 1960s; 11 of the railcars (that is, cask or well cars) supported the 212-N, -P, and -R Facilities interim storage mission by storing the fuel rods during transport between facilities. One flatcar, which is also staged on the 212-R rail spur, was used to transport miscellaneous equipment over the years and the two tank cars were used to transport radiologically contaminated liquid waste on the Hanford Site.

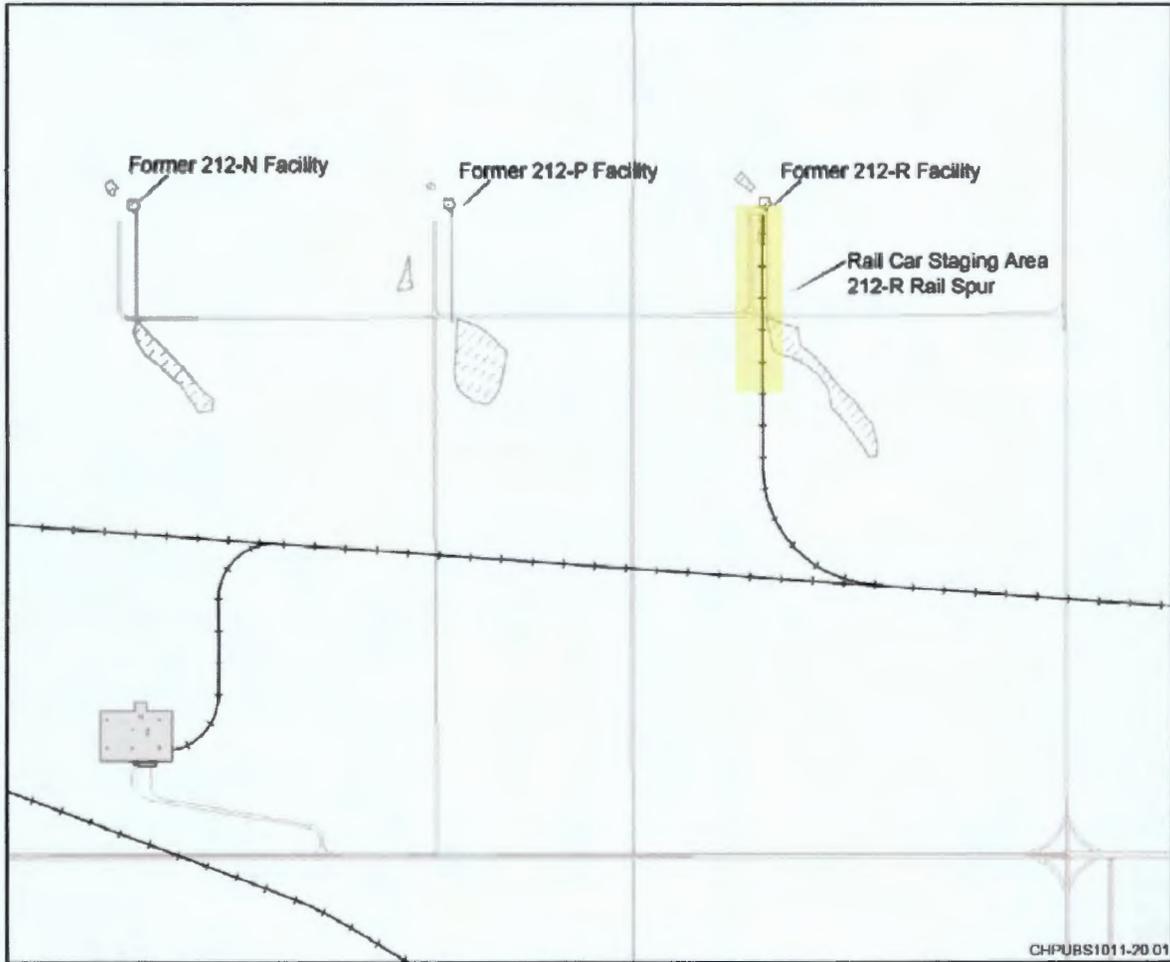


Figure 1. Location of Railcars within the 200 North Area



Figure 2. Railcars on 212-R Rail Spur

The railcars supported the Hanford Site work; some railcars were used for the interim storage of irradiated fuel rods at the 212-N, -P, and -R facilities by housing the fuel rods during transport. As cited in PNL-7008, *Resource Book – Decommissioning of Contaminated Facilities at Hanford*, fuel operations in the 200 North Area were terminated in 1952.

The Hanford Site railroad operations were suspended in 1997, and all remaining railcars were staged at selected locations around the Hanford Site. The main location for the storage of the railcars was the 212-R rail spur.

Table 1 provides the railcar identification (ID) number and railcar type, along with a photograph for the railcars.

2.2 Previous Closure/Cleanup Activities at the Hanford Site

Previous work nearby included D4 of the 212-N, -P, and -R Facilities and cleanup of related waste sites.

Table 1. Railcar Inventory

Railcar No.	Well Car ID	Railcar Type	Description	Photos
39-3731 (White)	31	Locomotive	Alco RS-1 Diesel Locomotive First-generation diesel electric locomotive. Manufactured in early 1948, the RS-1 is the first model in Alco's long series of railroad switchers.	
39-3729 (Orange)	29	Locomotive	Dimensions: 17 m (56 ft) long, 3 m (10 ft) wide; gross vehicle weight: 112,264 kg (247,500 lb). Currently stored between 212-R and the Railroad Road (north to south).	
HO-10B-3637 HO-10B-3643 HO-10B-5598 HO-10B-3640 HO-10B-3641 HO-10B-3636 HO-10B-3639	37 43 46 40 41 36 39	Three-position Well Car	"Well Car" or "Cask Car" Triple-well cars were acquired in 1944 from the Pacific Car & Foundry Company and modified at the Hanford Site for use in the transport of irradiated fuel. Bolted to a 15 m (50 ft) long, drop-centered railcar. Gross vehicle weight: 68,038 kg (150,000 lb). Currently stored between 212-R and the Railroad Road (north to south).	

Table 1. Railcar Inventory

Railcar No.	Well Car ID	Railcar Type	Description	Photos
HO-10B-19945	945	One-position Well Car	<p>“Tall Cask Car” or “Single-Well Cask Car”</p> <p>Single-well, cask-mounted on flatbed railcar manufactured by Milwaukee Railroad. Built in 1942, acquired in 1964 for irradiated fuel cask transport. Gross vehicle weight: 69,805 kg (154,000 lb).</p> <p>Currently stored between 212-R and the Railroad Road (north to south).</p>	
HO-10B-5599 HO-10B-3645 HO-10B-3642	47 45 42	Three-position Well Car	<p>“Well Car” or “Cask Car”</p> <p>Same as Well Car 3637 shown previously.</p> <p>Currently stored south of the Railroad Road.</p>	
HO-10H-3712		Small Tanker Car	<p>“Rail Tank Car”</p> <p>30,286 L (8,000 gal), single-wall construction rail tank car.</p> <p>Currently stored south of the Railroad Road.</p>	
HO-10H-3663	3663	Large Tanker Car	<p>“Rail Tank Car”</p> <p>75,708 L (20,000 gal), stainless steel, double-wall construction tank car with 142,881 kg (315,000 lb) load limit.</p> <p>Currently stored south of the Railroad Road.</p>	
HO-10A-3602	N/A	Flatbed Railcar	<p>“Flatbed Railcar”</p> <p>Steel flatbed railcar with 78,018 kg (172,000 lb) load limit.</p> <p>Currently stored on the 212-R rail spur.</p>	

3 Threat to Public Health, Welfare, and/or the Environment

40 CFR 300.415(b)(2) establishes factors to be considered in determining the appropriateness of a removal action. Those factors include the following:

- Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants, or contaminants
- Weather conditions that may cause hazardous substances, pollutants, or contaminants to migrate or be released
- Hazardous substances or pollutants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release

Conditions persist wherein threats to the public health or the environment exist. Hazardous substances, including radionuclides, are present or could be present within the railcars and railcar components. These substances pose an increasing threat of release to humans and ecological receptors as the railcars continue to deteriorate with age. Should contamination become exposed or structural integrity compromised, the potential increases for direct exposure of nearby personnel and the environment. The potential for exposure to the public through the airborne spread of radioactive contaminants would also increase. The potential for wind- or precipitation-related releases of hazardous substances also increases as the railcars continue to deteriorate with age. The external radiation, inhalation, and ingestion risks to the public and ecological receptors associated with potential releases of contamination justify a NTCRA.

Contaminant sources addressed by this NTCRA include both radioactive and chemical hazardous substances. The railcars are contaminated with hazardous substances used during Hanford Site operations. Based on process knowledge of the historic irradiated fuel activities at the Hanford Site, the primary hazardous substances for these railcars are radioactive materials. Key radionuclide contaminants include uranium-234, uranium-235, uranium-238, plutonium-239/240, americium-241, and mixed fission products such as strontium-90 and cesium-137. The majority of contaminants are normally found in the form of adherent films and residues encrusted in the irradiated fuel cask cars, including wells and casks, and residues and liquids inside the tank cars, and as surface contamination on the locomotives and the flatcar.

The railcars are also anticipated to contain one or more of the following materials:

- PCBs used in paint coatings and in the oil and grease associated with the rail wheel assemblies
- Lead paint
- Lead for shielding (inside the irradiated fuel cask cars)
- Asbestos in insulation and brake lining
- Used oil from motors, hydraulics, and pumps
- Lead-acid batteries, residual fuel, hydraulic oil, and antifreeze associated with locomotives

4 Endangerment Determination

Controls are currently in place to limit unauthorized entrance on the Hanford Site. Only authorized personnel are allowed entry into areas where hazardous substances exist. As long as DOE retains control of these areas, Hanford Site controls would prevent direct contact with and exposure to hazardous substances. However, Hanford Site controls will not prevent deterioration of the railcars or eliminate the threat of release of hazardous substances to the environment. Hazardous substances could be released directly to the environment via a breach or as the railcars age and deteriorate. Hazardous substances could

also be released to the environment through animal intrusion into contaminated railcar components. Historically, intrusion and spread of contamination by rodents, insects, birds, and other organisms has been difficult to prevent.

The potential exposure to human health, the environment, and wildlife, the potential threat of future releases, and the substantial risks associated with the hazardous substances at the railcars addressed by this Action Memorandum addendum justify use of CERCLA removal action authority in accordance with 40 CFR 300.415(b)(2).

5 Proposed Action

Section 5.2 discusses the alternatives evaluated in the engineering evaluation/cost analysis. The selected removal action alternative is Alternative 3: Near-Term Decontamination, Deactivation, Decommissioning, and Disposal of Railcars. The scope of Alternative 3 is intended to encompass dispositioning of the railcars. The types of waste likely to require disposal include, but are not limited to, solid waste, dangerous waste, low-level radioactive and/or mixed waste, asbestos waste, and PCB-contaminated waste.

For contaminated waste generated during the D4 of railcars, the ERDF is the preferred disposal location for waste meeting the ERDF waste acceptance criteria. Waste that does not meet the ERDF waste acceptance criteria will be dispositioned at appropriate Hanford Site or offsite waste disposal facilities, in accordance with the waste acceptance criteria of those facilities. Disposal of waste may take place at other facilities that are on the Hanford Site or that are offsite and have been authorized by their own EPA regional offices in accordance with 40 CFR 300.440 as suitable to receive waste from CERCLA sites.

The potential exists for encountering contamination in surrounding soils during performance of the work. Soil that is found to be contaminated with hazardous substances that can be readily cleaned up during the work will be removed for disposal during implementation, if practicable. Such excavation will be performed using an observational approach with visual inspections, radiological and chemical field screening, and focused judgmental sampling where appropriate. Depth of, and completion of, excavation in these situations will be determined by the on-scene coordinator in consultation with EPA. Alternatively, if the soil contamination is extensive or unusually complex, DOE will consult with the LRA and determine whether to address the contamination within the scope of this NTCRA, or implement temporary measures as part of this action and defer final action to the remedial investigation and remedy selection process by adding the site to the TPA Action Plan, Appendix C (Ecology et al., 1989b) in accordance with RL-TPA-90-0001.

Some railcars slated for disposition may be found to be unsuitable for inclusion within the NTCRA, or DOE may identify future uses for the railcars prior to or during performance of the work. In response to public comment, DOE is evaluating the possibility of preserving a locomotive, the tall well car, and a three-cask well car at the B Reactor. If this occurs and eliminating one or more of the railcars from the scope is appropriate, DOE will, with concurrence from EPA, place a TPA change notice in the Administrative Record for this NTCRA identifying the subject railcar(s) and explaining why removal from the scope of the NTCRA is appropriate.

The recommended alternative meets the proposed removal action objectives (RAOs) regarding long-term risk, minimizes short-term worker risk and radiation exposure, is cost-effective, meets applicable or relevant and appropriate requirements (ARARs), and provides a safe and stable configuration that is environmentally sound. DOE also considers Alternative 3 to contribute to the efficient performance of Hanford Site long-term remedial actions and promotes protection of ecological resources and restoration

of the environment consistent with Tri-Party goals. Issuance of this decision also supports DOE plans for use of *American Recovery and Reinvestment Act of 2009* funding.

5.1 Removal Action Objectives

The hazardous substances that may be encountered during D4 of the railcars include, but are not limited to, radionuclides, asbestos, heavy metals, and PCBs. The RAOs for this NTCRA are to disposition the railcars in a manner that will, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action at the Hanford Site. The RAOs include the following:

1. Reduce/eliminate the inventory of hazardous substances within the railcars.
2. Reduce or eliminate the potential for a release to the environment.
3. Safely manage (treat and/or dispose) waste streams generated through the removal action.
4. Be consistent with the future remediation plans for the 200 North Area.
5. Prevent adverse impacts to cultural and natural resources.
6. Reduce or eliminate the need for future surveillance and maintenance (S&M) activities.
7. Protect human health and the environment from physical, chemical, and radiological hazards posed by each railcar.

NOTE: The numbering of these listed RAOs is not intended to be a ranking or a prioritization.

5.2 Engineering Evaluation/Cost Analysis

DOE/RL-2008-07-ADD1 is available through the Administrative Record for the removal action. Three alternatives were considered for the disposition of railcars to be performed under the NTCRA: (1) No Action; (2) Continued Surveillance and Maintenance; with future Decontamination, Deactivation, Decommissioning, and Disposal of Railcars; and (3) Near-Term Decontamination, Deactivation, Decommissioning, and Disposal of Railcars. Alternative 3 consists of D4 of the railcars with associated waste disposal. Alternative 2 included a period of S&M for 25 years, followed by D4. Alternative 2 would have only delayed the start of D4 and would have required expenditures for the continued S&M over the interim.

5.2.1 Alternative 1—No Action

Alternative 1 assumed that the railcars were abandoned without any further actions. Surveillance, maintenance, and periodic inspection activities would be discontinued and degradation would continue indefinitely. Alternative 1 would not have eliminated, reduced, or controlled risks to human health and the environment because it would not meet the requirements of federal orders and substantive provisions of applicable or relevant and appropriate state and federal laws. Therefore, the No Action Alternative was not considered a viable alternative.

5.2.2 Alternative 2—Continued Surveillance and Maintenance; with Future Decontamination, Deactivation, Decommissioning, and Disposal of Railcars

Under Alternative 2, the railcars would have remained in the S&M program for 25 years followed by D4. The railcars would have been maintained in a quiescent state for a considerable duration while ongoing preventive measures would be implemented. These measures would include periodic monitoring for potential radiological, chemical, and industrial hazards, maintenance, and general visual inspections. Additionally, limited decontamination and application of fixatives would be used to control the spread of

contamination for the railcars. Initially, minimal waste would be generated with little or no need for treatment prior to disposal. Over time, railcar degradation and other factors would have resulted in an increased need for maintenance and possibly increased waste generation. Alternative 2 would have merely resulted in a delay for the start of D4 and would require expenditures for the continued S&M over the interim period. The cost analysis includes the period of S&M, followed by D4 of the railcars. For this alternative, data evaluation from surveys, inspection/observations, and future plans were factored into planning and implementing the continued S&M.

5.2.3 Alternative 3—Near-Term Decontamination, Deactivation, Decommissioning, and Disposal of Railcars

Alternative 3 consists of performing D4 of the railcars, including preparation and transport of the railcars and associated waste to the ERDF for treatment, as needed, and disposal. However, waste treatment and/or disposal may take place at other facilities that are on the Hanford Site or that are offsite and have been authorized by their own EPA regional offices in accordance with 40 CFR 300.440 as suitable to receive waste from CERCLA sites. Alternative 3 will ensure that any hazardous substances potentially within or on the railcars are placed in a protective and safe condition for the foreseeable future, without the need for ongoing preventative measures and inspections. This alternative will include the following primary elements:

- Decontamination of and/or application of fixative to the railcars, as needed.
- Physical modification, as required for shipment to and acceptance at the ERDF or other EPA-approved facility, such as removal of equipment protrusions on the railcars, and sealing of penetrations or openings.
- Treatment, as needed, to meet waste acceptance criteria (WCH-191, *Environmental Restoration Disposal Facility Waste Acceptance Criteria*) and disposal of railcars; the 11 cask cars will require macroencapsulation due to the lead-lined casks in each railcar in accordance with ARARs.
- Deactivation of railcars prior to D4 (for example, perform visual inspections and radiological surveys of internal surfaces, characterize liquids and waste for designation, drain or solidify liquids for treatment and disposal, remove hazardous substances, etc.) as appropriate for disposition purposes.
- Evaluation of recycling non-contaminated (or decontaminated) portions of the railcars and contents, as applicable.

Alternative 3 is the selected alternative by this Action Memorandum addendum.

5.3 Compliance with Environmental Regulations, Including Those that are Applicable or Relevant and Appropriate Requirements

Section 121 of CERCLA requires the CERCLA federal lead agency to ensure that substantive applicable or relevant and appropriate requirements from federal and state laws and regulations are incorporated into the agency's design and operation of its removal and remedial actions. DOE is the CERCLA lead agency for this NTCRA. Under the Tri-Party Agreement the lead regulatory agency must concur that the NTCRA decision documented in this Action Memorandum addendum will be protective of human health and the environment when the removal action has been completed. Through this process, the risks described in this document will be mitigated in a timely manner.

The disposition of the railcars addressed in this addendum will be performed in compliance with the approved ARARs in the existing Action Memorandum to which this document is an addendum. In addition, the substantive provisions of 40 CFR 761.60(a) through (c), "Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions," "Disposal Requirements"; 40 CFR 761.61, "PCB Remediation Waste"; 40 CFR 761.62, "Disposal of PCB Bulk Product Waste"; and 40 CFR 761.79, "Decontamination Standards and Procedures," as appropriate, will be followed for PCBs requiring disposal during the NTCRA.

5.4 Cultural and Ecological Resources

Section 106 of the *National Historic Preservation Act of 1966* (NHPA), as amended, requires agencies to consider the impact of undertakings on properties listed or eligible for listing in the National Register of Historic Places and to consult with the State Historic Preservation Officer (SHPO) and other interested parties when impacts are likely. It also requires federal agencies to invite the Advisory Council on Historic Preservation (ACHP) to participate in consultation when impacts may be adverse. The NHPA Section 106 process has been tailored to meet the unique needs of the Hanford Site. Section 110 of the NHPA directs federal agencies to establish programs to find, evaluate, and nominate eligible properties to the National Register of Historic Places, including previously unidentified historic properties that may be discovered during the implementation of a project (36 CFR 800, "Protection of Historic Properties"). In addition, the *Archaeological Resources Protection Act of 1979*, as amended, provides for the protection and management of archaeological resources on federal lands. Procedures and strategies to tailor these requirements to the unique needs of the Hanford Site are described in the *Hanford Cultural Resource Management Plan* (CRMP) (DOE/RL-98-10). The CRMP is implemented through a Programmatic Agreement among DOE, the SHPO, and the ACHP.

DOE is required to review as guidance the most current U.S. Fish and Wildlife Service list for threatened and endangered plant and animal species. DOE determined that the selected alternative will not impact any threatened and endangered species and also determined that formal consultation with the U.S. Fish and Wildlife Service is not required for this action.

5.5 Compliance with Disposal Facility Waste Acceptance Criteria

Wastes generated through implementation of Alternative 3 will be dispositioned at appropriate Hanford Site or offsite waste disposal facilities, in accordance with the waste acceptance criteria of those facilities. The ERDF will be the preferred disposal location for waste meeting the ERDF waste acceptance criteria. The ERDF is considered to be "onsite"¹ for management and/or disposal of waste from activities addressed in this document. The ERDF is engineered to meet appropriate *Resource Conservation and Recovery Act of 1976* (RCRA) technological requirements for landfills. Hazardous, mixed, low-level, asbestos, and *Toxic Substances Control Act of 1976* waste can be accepted for disposal at the ERDF (WCH-191). It is expected that most of the waste generated during D4 activities would be disposed onsite at the ERDF.

¹ CERCLA Section 104(d)(4) states that where two or more noncontiguous facilities are reasonably related on the basis of geography, or on the basis of the threat or potential threat to the public health or welfare or the environment, the facilities can be treated as one for purposes of CERCLA response actions. Consistent with this, the Hanford buildings/structures and ERDF would be considered to be "onsite" for purposes of Section 104 of CERCLA, and waste may be transferred between the facilities without requiring a permit. This determination will be made upon issuance of the Action Memorandum.

If aqueous waste is generated and determined to be low-level waste or designated as dangerous or mixed waste, it may be transported to the 200 Area Effluent Treatment Facility (ETF) for treatment, followed by discharge under the Washington State waste discharge program. The ETF is a RCRA-permitted unit authorized to treat aqueous waste streams generated on the Hanford Site and dispose of these streams at a designated state-approved land disposal site in accordance with applicable requirements.

If transuranic waste and/or spent nuclear fuel are found during the implementation of this NTCRA, they may be transported, as appropriate, to other facilities that are on the Hanford Site or that are offsite and have been authorized by their own EPA regional offices, in accordance with 40 CFR 300.440, as suitable to receive waste from CERCLA sites.

5.6 Other Considerations

This section identifies other considerations associated with the proposed removal action alternatives such as *National Environmental Policy Act of 1969* (NEPA) values.

In accordance with DOE O 451.1B Chg 2, *National Environmental Policy Act Compliance Program*, DOE CERCLA documents are required to incorporate NEPA values (for example, analysis of cumulative, offsite, ecological, and socioeconomic impacts) to the extent practicable.

Table 2 describes the NEPA values (that is, resource area and relevant NEPA considerations) most relevant to and potentially affected by the actions taken under this removal action.

Table 2. NEPA Values Evaluation

NEPA Values	Description	Evaluation
Transportation	Considers impacts of the proposed action on local traffic (that is, traffic at the Hanford Site) and traffic in the surrounding region.	Implementation of Alternative 3 is expected to produce short-term impacts on local traffic. A majority of the impact will be increased truck traffic associated with Alternative 3, when transporting waste to the ERDF. Transportation impacts associated with transport of contaminated material to the ERDF were considered in DOE/RL-93-99, <i>Remedial Investigation and Feasibility Study Report for the Environmental Restoration Disposal Facility</i> , as part of the evaluation of short-term effectiveness and implementability. NEPA values specifically associated with the ERDF were addressed in DOE/RL-94-41, <i>NEPA Roadmap for the Environmental Restoration Disposal Facility Regulatory Package</i> . See the discussion of cumulative impacts for a perspective of transportation to the ERDF.
Air Quality	Considers potential air quality concerns associated with emissions generated during the proposed action.	Airborne releases associated with Alternative 3 are expected to be minor with the use of appropriate work controls (for example, limiting certain work activities during unfavorable wind conditions, and use of fixatives). Airborne release of contaminants during this removal action will be controlled in accordance with DOE radiation control and air pollution control standards to minimize emissions of air pollutants at the Hanford Site and protect all communities outside the Hanford Site boundaries.

Table 2. NEPA Values Evaluation

NEPA Values	Description	Evaluation
		<p>Operation of trucks and other diesel-powered equipment for these alternatives is expected, in the short-term, to introduce quantities of sulfur dioxide, nitrogen dioxide, particulates, and other pollutants to the atmosphere, typical of similar-sized construction projects. These releases are not expected to cause any air quality standards to be exceeded and dust generated during removal activities will be minimized by watering or other dust-control measures, as necessary. Vehicular and equipment emissions will be controlled and mitigated in compliance with the substantive standards for air quality protection that apply to the Hanford Site.</p>
<p>Natural, Cultural, and Historical Resources</p>	<p>Considers impacts of the proposed action on wildlife, wildlife habitat, archeological sites and artifacts, and historically significant properties.</p>	<p>Impacts on ecological resources in the vicinity of the removal actions will continue to be mitigated in accordance with DOE/RL-96-32, <i>Hanford Site Biological Resources Management Plan</i>, and DOE/RL-96-88, <i>Hanford Site Biological Resources Mitigation Strategy</i>, and with the applicable standards of all relevant biological species protection regulations. Appropriate ecological reviews will be conducted before implementing field activities.</p> <p>Because these railcars and their location either have already been disturbed or minimal soil disturbance is expected, it is anticipated that only isolated artifacts may be encountered during project activities under the selected alternative. Implementation of CRMP and consultation with area Tribes will help ensure appropriate mitigation to avoid or minimize any adverse cultural or historical resource effects and address any relevant concerns.</p> <p>Potential impacts to cultural and historical resources that may be encountered during the short-term activities associated with implementing Alternative 3 of the removal action will be mitigated through compliance with the appropriate substantive requirements of the <i>National Historic Preservation Act of 1966</i> and other ARARs related to cultural preservation. As appropriate, cultural resource reviews will be conducted before implementing field activities (see Section 5.4).</p> <p>In response to public comment, DOE is evaluating the possibility of preserving a locomotive, the tall well car, and a three-cask well car at the B Reactor.</p>

Table 2. NEPA Values Evaluation

NEPA Values	Description	Evaluation
Socioeconomic Impacts	Considers impacts pertaining to employment, income, other services (for example, water and power utilities), and the effect of implementation of the proposed action on the availability of services and materials.	The selected action is within the scope of current DOE environmental restoration activities and is expected to have minimal impact on the current availability of services and materials. This work is expected to be accomplished largely using employees from the existing contractor workforce. Even if the removal activities create additional service sector jobs, the total expected increase in employment is expected to be less than 1 percent of the current employment levels. The socioeconomic impact of the project will contribute to the continuing overall positive employment and economic impacts on eastern Washington communities from Hanford Site cleanup operations.
Environmental Justice	Considers whether the proposed response action will have inappropriately or disproportionately high and adverse human health or environmental effects on minority or low-income populations.	Per Executive Order 12898, <i>Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations</i> , DOE seeks to ensure that no group of people bears a disproportionate share of negative environmental consequences resulting from federal actions. No impacts will be associated with proposed activities associated with the railcars that could reasonably be determined to affect any member of the public; therefore, they will not have the potential for high and disproportional adverse impacts on minority or low-income groups.
Cumulative Impacts (Direct and Indirect)	Considers whether the proposed action could have cumulative impacts on human health or the environment when considered together with other activities locally, at the Hanford Site, or in the region.	Because of the temporary nature of the activities and their remote location, cumulative impacts on air quality or noise with other Hanford Site or regional construction and cleanup projects will be minimal. When the railcars in this area are found to be contaminated with hazardous substances in concentrations presenting a material threat to human health and the environment, that threat will be mitigated. The net anticipated effect could be a positive contribution to cumulative environmental effects at the Hanford Site through removal, treatment, and disposal of such hazardous substances and contaminants of concern into a facility such as the ERDF that has been designed and legally authorized to safely contain such contaminants. The railcars removed under Alternative 3 will meet the ERDF waste acceptable criteria as described in WCH-191, <i>Environmental Restoration Disposal Waste Acceptance Criteria</i> . Wastes generated during the removal action activities will be manageable within the capacities of existing facilities. For perspective, the ERDF received more than 700,000 tons of waste in calendar year 2008 and more than 430,000 tons in calendar year 2007. Radiological contamination is expected to be within the acceptance criteria levels for ERDF disposal. The ERDF received approximately 22,500 Ci of radioisotopes in calendar year 2008 and approximately 13,000 Ci in calendar year 2007.

Table 2. NEPA Values Evaluation

NEPA Values	Description	Evaluation
Mitigation	Considers whether, if adverse impacts cannot be avoided, response action planning should minimize them to the extent practicable. This value identifies required mitigation activities.	It is expected that the total amount of waste that could be generated for disposal in the ERDF for this removal action is approximately 2,100 tons. This volume is still small when compared with the 700,000 tons disposed in the ERDF in calendar year 2008.
Irreversible and Irretrievable Commitment of Resources	Considers the use of nonrenewable resources for the proposed response action and the effects that resource consumption will have on future generations. (When a resource [for example, energy, minerals, water, wetland] is used or destroyed and cannot be replaced within a reasonable amount of time, its use is considered irreversible.)	For both Alternatives 2 and 3, normal usage of resources during S&M and D4 activities, such as fuel and water, will be irreversibly used.

6 Project Schedule

This removal action is expected to begin with the D4 of railcars upon issuance of this Action Memorandum addendum. The Removal Action Work Plan will include the project schedule.

7 Project Cost

Cost estimates were prepared for the alternatives evaluated in DOE/RL-2008-07-ADD1. The estimates were prepared in accordance with *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study* (EPA 540-R-00-002), along with DOE's *Cost Estimating Guide* (DOE G 430.1-1).

Table 3 shows the cost estimate for the selected alternative, starting from a present-day, non-discounted cost, also called constant dollars. Non-discounted costs are not affected by general price inflation (that is, they represent "units of stable purchasing power"); thus, the cost of a particular product or service would be the same in Year 0, Year 1, Year 2, and so forth. The non-discounted cost essentially assumes that the

work is performed today. Because non-discounted costs do not reflect the changing value of money over time, presentation of this information under CERCLA is for information purposes only, not for response action alternative selection purposes.

Table 3. Summary of Present Worth Cost Estimate

Alternative	Present-Worth Cost
Alternative 3: Near-Term Decontamination, Deactivation, Decommissioning, and Disposal (D4) of Railcars	\$6,422,000
Notes: Accuracy range of the cost estimate is expected to be -30 percent to +50 percent.	

Consistent with guidance from EPA and the U.S. Office of Management and Budget (OMB), present-worth analysis is used as the basis for comparing costs of cleanup alternatives under the CERCLA program (OMB Circular No. A-94, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs"). A discount rate (OMB Circular No. A-94) is applied for cost estimates that span multiple years, making it possible to evaluate expenditures associated with alternatives that occur during different periods (EPA 540-R-00-002). Because of the time-dependent value of money, future expenditures are not considered directly equivalent to current expenditures. The present-worth cost method shows the amount required at the initial point in time (for example, in the current year) to fund activities occurring over the life of the alternative. Present-worth analysis assumes that the funding set aside at the initial point in time increases in value as time goes on, similar to how money placed in a savings account gains in value because of interest paid on the account. Although the federal government typically does not set aside funds in this manner, the present-worth analysis is specified under CERCLA as the approach for establishing a common baseline to evaluate and compare alternatives that have costs occurring at different times, although actual costs could vary. While the funds might not actually be set aside, the present-worth costs were considered directly comparable for evaluating the costs of the alternative.

The information in the cost estimate is based on the best available information regarding the anticipated scope of the removal action alternatives. Changes in the cost elements are likely to occur because of new information and data collected during preparation and performance of the removal action. Consistent with EPA guidance, this is an order of magnitude engineering cost estimate that was developed to be within -30 percent to +50 percent of actual project cost.

The reported estimates are based on costs derived using Remedial Action Cost Estimate Requirement (RACER)TM 2010, Version 10.3 and actual pricing information obtained from historical experience, vendor quotes, CH2M HILL Plateau Remediation Company estimates, and standard commercial databases, such as RSMeans (*Building Construction Cost Data* [Means, 2010a]), Environmental Cost Handling Options Solution *Facility Construction Cost Data* (Means, 2001), and *Heavy Construction Cost Data* (Means, 2010b).

8 Expected Change Should Action be Delayed or Not Taken

The expected change to the D4 of railcars should action be delayed, or not taken, would be that the railcars would remain under administrative and Hanford Site controls, as they are today. However, as the railcars continue to age, the threat of substantial release of hazardous substances increases with time, and containing these materials and preventing them from being released to the environment becomes more

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difficult. The S&M activities required to confine the hazardous substances may increase the risk of potential exposure to personnel. If the action was delayed, continued expenditures for S&M costs would accrue during the time interval elapsed until final decommissioning activities are performed.

9 Statutory and Regulatory Authority

The proposed removal action is being undertaken by DOE, as the lead agency, pursuant to CERCLA, Section 104(a), and Executive Order 12580, *Superfund Implementation*, as recognized by Section 7.2.4 of the Tri-Party Agreement Action Plan (Ecology et al., 1989b). In accordance with 40 CFR 300.415(j) and DOE guidance, onsite removal actions conducted under the CERCLA are required to meet ARARs to the extent practicable considering the exigencies of the situation. The DOE will comply with the ARARs as set forth in Section 5.3.

10 Outstanding Policy Issues

There are no outstanding policy issues.

11 Enforcement

DOE is conducting this removal action as the lead agency under the authority of 40 CFR 300.5, "Definitions," and 40 CFR 300.415(b)(1).

12 Recommendation

This decision document represents the selected removal action alternative prepared in accordance with CERCLA, as amended by the *Superfund Amendments and Reauthorization Act of 1986*. The conditions of the railcars meet the criteria in the NCP (40 CFR 300.415[b][2]).

The recommended removal action alternative identified in the EE/CA addendum is Alternative 3, Near-Term Decontamination, Deactivation, Decommissioning, and Disposal of Railcars. This alternative has been selected for implementation because it meets the proposed RAOs regarding long-term risk, minimizes short-term risk and radiation exposure, is cost-effective, and provides a safe and stable configuration that is environmentally sound. DOE also considers Alternative 3 to be consistent with and contribute to the efficient performance of Hanford long-term remedial actions and promotes protection of human health and the environment consistent with Tri-Party goals.

13 Public Participation

The public participation period for DOE/RL-2008-07-ADD1 was from July 14, 2010, through August 13, 2010. A public notice was published in the Tri-City Herald newspaper on July 14, 2010. The notice was posted in public reading rooms in Richland, Seattle, and Spokane, Washington, and Portland, Oregon. An announcement was provided to the Hanford Advisory Board on July 14, 2010. The 14 letters regarding the EE/CA addendum were received during the comment period are included in Appendix A.

14 References

36 CFR 800, "Protection of Historic Properties," *Code of Federal Regulations*. Available at: http://www.access.gpo.gov/nara/cfr/waisidx_08/36cfr800_08.html.

40 CFR 300, "National Oil and Hazardous Substances Pollution Contingency Plan," *Code of Federal Regulations*.

300.5, "Definitions."

300.415, "Removal Action."

300.440, "Procedures for Planning and Implementing Off-Site Response Actions."

40 CFR 761, "Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions," *Code of Federal Regulations*. Available at:

http://www.access.gpo.gov/nara/cfr/waisidx_09/40cfr761_09.html.

761.60, "Disposal Requirements."

761.61, "PCB Remediation Waste."

761.62, "Disposal of PCB Bulk Product Waste."

761.79, "Decontamination Standards and Procedures."

American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, 123 Stat. 115, February 17, 2009.

Archaeological Resources Protection Act of 1979, 16 USC 470aa-mm. Available at:

http://www.nps.gov/history/local-law/fhpl_ArchRsrcsProt.pdf.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC 9601, et seq., Pub. L. 107-377, December 31, 2002. Available at: <http://epw.senate.gov/cercla.pdf>.

DOE and EPA, 1995, *Policy on Decommissioning of Department of Energy Facilities Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*, U.S. Department of Energy and U.S. Environmental Protection Agency, Washington, D.C. Available at: http://www.epa.gov/fedfac/pdf/decommissioning_doe.pdf.

DOE G 430.1-1, 1997, *Cost Estimating Guide*, U.S. Department of Energy, Washington, D.C.

DOE O 451.1B Chg 2, 2010, *National Environmental Policy Act Compliance Program*, U.S. Department of Energy, Washington, D.C. Available at: <https://www.directives.doe.gov/directives/current-directives/451.1-BOrder-bc2/view>.

DOE/RL-93-99, 1994, *Remedial Investigation and Feasibility Study Report for the Environmental Restoration Disposal Facility*, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: <http://www5.hanford.gov/arpir/?content=findpage&AKey=D196061256>.

DOE/RL-94-41, 1994, *NEPA Roadmap for the Environmental Restoration Disposal Facility Regulatory Package*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: <http://www5.hanford.gov/arpir/?content=findpage&AKey=D196074918>.

DOE/RL-96-32, 2001, *Hanford Site Biological Resources Management Plan*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: <http://www.pnl.gov/ecomon/docs/brmap/BRMaP.pdf>.

DOE/RL-96-88, 2003, *Hanford Site Biological Resources Mitigation Strategy*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: <http://www.pnl.gov/ecomon/Docs/BRMiS.pdf>.

DOE/RL-98-10, 2003, *Hanford Cultural Resources Management Plan*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2008-07-ADD1, 2010, *212-N, 212-P, and 212-R Facilities Engineering Evaluation/Cost Analysis, Addendum 1: Disposition of Railcars*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at:
<http://www2.hanford.gov/arpir/?content=findpage&AKey=1007130246>.

DOE/RL-2008-80-ADD1, 2010, *Action Memorandum for the Non-Time-Critical Removal Action for the 212-N, -P and -R Facilities, Addendum 1: Disposition of Railcars*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Ecology, EPA, and DOE, 1989a, *Hanford Federal Facility Agreement and Consent Order*, 2 vols., as amended, Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Olympia, Washington. Available at:
<http://www.hanford.gov/?page=81>.

Ecology, EPA, and DOE, 1989b, *Hanford Federal Facility Agreement and Consent Order Action Plan*, Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Olympia, Washington. Available at:
<http://www.hanford.gov/?page=82>.

EPA 540-R-00-002, 2000, *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*, OSWER 9355.0-75, Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, Washington, D.C. Available at:
<http://epa.gov/superfund/policy/remedy/sfremedy/rifs/costest.htm>.

EPA/ROD/R10-99/039, 1999, *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 Operable Units, Hanford Site, Benton County, Washington*, U.S. Department of Energy, Washington State Department of Ecology, and U.S. Environmental Protection Agency, Region 10, Seattle, Washington. Available at:
<http://www.epa.gov/superfund/sites/rods/fulltext/r1099039.pdf>.

Executive Order 12580, 1987, *Superfund Implementation*, Ronald W. Reagan, January 23. Available at:
<http://www.archives.gov/federal-register/codification/executive-order/12580.html>.

Executive Order 12898, 1994, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, William J. Clinton, February 11. Available at:
<http://www.epa.gov/fedrgstr/eo/eo12898.htm>.

Means, R.S., 2001, *Facility Construction Cost Data*, 17th Annual Edition, R.S. Means Company, Kingston, Massachusetts.

Means, R.S., 2010a, *Building Construction Cost Data*, 68th Annual Edition, R.S. Means, Company Inc., Kingston, Massachusetts.

Means, R.S., 2010b, *Heavy Construction Cost Data*, 24th Annual Edition, R.S. Means, Company Inc., Kingston, Massachusetts.

National Environmental Policy Act of 1969, 42 USC 4321, et seq. Available at:
<http://www.fhwa.dot.gov/environment/nepatxt.htm>.

National Historic Preservation Act of 1966, 16 USC 470, et seq. Available at:
<http://www.achp.gov/docs/nhpa%202008-final.pdf>.

- OMB Circular No. A-94, 2009, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs" (memorandum for Heads of Executive Departments and Establishments), Appendix C, "Discount Rates for Cost-Effectiveness, Lease Purchase, and Related Analyses," as revised, Office of Management and Budget, Washington, D.C. Available at: http://www.whitehouse.gov/omb/circulars_a094_a94_appx-c/.
- PNL-7008, 1991, *Resource Book – Decommissioning of Contaminated Facilities at Hanford*, Vols. 1 and 2, Pacific Northwest Laboratory, Richland, Washington. Available at: http://www.osti.gov/bridge/product.biblio.jsp?query_id=7&page=0&osti_id=5140523.
http://www.osti.gov/bridge/product.biblio.jsp?query_id=7&page=0&osti_id=5210343.
- RCW 70.105, "Hazardous Waste Management," *Revised Code of Washington*, Olympia, Washington. Available at: <http://apps.leg.wa.gov/RCW/default.aspx?cite=70.105>.
- Resource Conservation and Recovery Act of 1976*, 42 USC 6901, et seq. Available at: <http://epw.senate.gov/rcra.pdf>.
- RL-TPA-90-0001, 2007, *Tri-Party Agreement Handbook Management Procedures*, Guideline Number TPA-MP-14, "Maintenance of the Waste Information Data System (WIDS)," Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: <http://www.hanford.gov/files.cfm/TPA-MP14.pdf>.
- Superfund Amendments and Reauthorization Act of 1986*, 42 USC 103, et seq. Available at: <http://www.epa.gov/superfund/policy/sara.htm>.
- Toxic Substances Control Act of 1976*, 15 USC 2601, et seq. Available at: <http://frwebgate.access.gpo.gov/cgi-bin/usc.cgi?ACTION=BROWSE&TITLE=15USCC53>.
- WAC 246-247, "Radiation Protection—Air Emissions," *Washington Administrative Code*, Olympia, Washington. Available at: <http://apps.leg.wa.gov/WAC/default.aspx?cite=246-247>.
- 247-040, "General Standards."
- WCH-191, 2009, *Environmental Restoration Disposal Facility Waste Acceptance Criteria*, Rev. 1, Washington Closure Hanford, LLC, Richland, Washington.

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Appendix A

Public Comments Received During the Comment Period

A Responsiveness Summary

A1 Introduction

The purpose of this Responsiveness Summary is to summarize and respond to public comments on the *212-N, 212-P, and 212-R Facilities Engineering Evaluation/Cost Analysis, Addendum 1: Disposition of Rail Cars* (EE/CA addendum) (DOE/RL-2008-07-ADD1). The EE/CA addendum was provided for public comment on July 14, 2010.

The Department of Energy (DOE) announced the issuance of the EE/CA addendum in the Tri-City Herald and sent a notice to about 1,500 people on an electronic distribution list. A 30-day public comment period was held to allow the public the opportunity to read, review, and submit comments on the EE/CA. The document evaluates the removal action alternatives for 16 contaminated railcars in the 200 North Area of the Hanford Site. These activities are conducted under the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA).

A2 Public Involvement

A newspaper advertisement was placed in the Tri-City Herald on July 14, 2010, announcing the availability of the EE/CA addendum and the start of the public comment period. Approximately 2,250 copies of a fact sheet describing the EE/CA addendum were mailed out or sent electronically. A public comment period was held from July 14 through August 13, 2010. No requests were received for a public meeting. No public meeting was held.

A3 Comments and Responses

During the public comment period, 14 individuals provided written comments, 11 of which indicated that they would like the railcars to be restored and displayed for historical purposes. One commenter agreed with the preferred alternative but wanted to see an additional option for disposition, rather than only assuming macroencapsulation at the ERDF, and additional information on characterization of railcar contamination. Ultimately, that commenter supports decontaminating the railcars and placing the railcar(s) on display. Another commenter provided information regarding a structure for use in decontamination processes. The State of Washington Department of Health submitted a letter with several monitoring and regulatory-related questions and comments.

The U.S. Department of Energy, Richland Operations Office, U.S. Environmental Protection Agency, Washington state Department of Ecology (Tri-Parties) agencies selected the preferred removal action Alternative 3: Near-Term Decontamination, Deactivation, Decommissioning, and Disposal of the Railcars.

COMMENTER 1:

Mike Smith

Comment: Please do not bury or otherwise destroy any of the railroad equipment. This equipment is not only an important part of Hanford history, but an important part of railroad history as well. Equipment like this will never be built again, and pictures and descriptions will never adequately tell the story to future generations. There is no reason that the cars can't be decontaminated and put on display, either on the Hanford site or at railroad museums that have a place for them.

Response to Comment: Thank you for your comments. DOE agrees that the locomotives and cask cars are an important part of the Hanford Site's history and help tell the story of how plutonium was produced

here. We are looking at whether it would be possible to make a locomotive and one or more cask cars available for the public to view in the future, possibly in the vicinity of the B Reactor National Historic Landmark, which last year drew more than 6,000 visitors from around the country.

COMMENTER 2:

Jason Hill

Comment: My name is Jason Hill. I am a volunteer for the Mt Rainier Scenic Railroad, which is a railroad museum located in Mineral, Washington. I am contacting you in regards to an article I read in the tri-city Herald about the contaminated railroad equipment on the Hanford nuclear site. We are currently restoring a similar locomotive at our shops in mineral, an alco RSD-1 that we received as a donation some years ago. I would like to discuss with you about the possible purchase or donation of the locomotive air horns currently mounted on these two locomotives you guys are looking at getting rid of or scrapping. I'd like to clarify that I am not representing the Mt Rainier Scenic Railroad, but merely looking to front the cost and acquire these old pieces of history to restore and donate to the railroad for the restoration of our old RSD-1. Now I understand this is potentially hazardous equipment being contaminated and all but being a horn collector and having restored many air horns myself that there isn't much in one that could become contaminated. They are made mostly of alimunum (sic) and a bit of stainless steel or brass. But if they would need to be decontaminated I am hoping we can work something out to save these from the scrapper and return them to service in a museum.

Response to Comment: Thank you for your comments. DOE agrees that the locomotives and cask cars are an important part of the Hanford Site's history and help tell the story of how plutonium was produced here. We are looking at whether it would be possible to make a locomotive and one or more cask cars available for the public to view in the future, possibly in the vicinity of the B Reactor National Historic Landmark, which last year drew more than 6,000 visitors from around the country.

COMMENTER 3:

Tom Nesfeder

Comment: If any of the decontamination process requires additional safety measures by covering the cars, Universal Fabric Structures is able to provide a "decontamination area" by utilizing our PVC coated fabric—fabric structures. Our structures do not need any foundation for erection so the rail cars would not have to be moved to covered. The cars could be covered with our fabric structures (which negative pressure can be achieved to further contain the containments) in place with no relocating of the rail cars needed.

Response to Comment: Thank you for your continued interest in the Hanford Site cleanup. Additional information regarding your companies' products should be provided to the U.S. Department of Energy (DOE), Richland Operations Office (RL) in Richland, Washington, for further consideration.

COMMENTER 4:

Watson C. Warriner, Sr.
Wilmington, Delaware

Comment: With 16 of them (railcars) in storage there you can appreciate the vital role in delivering these radio-active slugs to the 221 buildings to separate the plutonium from the twenty plus other radio active elements also created in the reactors & sent to the 241 waste tanks!

(The) President of BRMA (B Reactor Museum Association) in a conversation with me stated they were very excited about this addition to B reactor and stated that he and his associates would gladly supervise the design of the exhibit and installation hopefully of one of the early cask cars—Of course I knew most of the engineers who designed and constructed B D & F Reactors & @ 93 are one of the few still alive—Your help will be appreciated by all of us to rescue one car for the exhibit before Alternative #3 destroys them!!

I just received the BRMA Summer 2010 Moderator and lo & behold Page 4 shows the caskcars and Locomotive #3731 of course a caskcar is a must for the exhibit but please include this Locomotive as it is a Fairbanks-Morse and named in my HEW train story "Journey To Destiny" published Aug 1995 Edition of TRAINS magazine commemorating the 50th Anniversary of the end of WWII—Its all about HEW and the only railroad story published on the Manhattan Projects -Impossible without our railroads!!! Most of the above addresses have a copy of the story! Yes i have been a railroad buff all my life and readily recognize the locomotive—a museum piece in its own right as they have not been manufactured for years—Thanks for your help!!

Response to Comment: Thank you for your comments. DOE agrees that the locomotives and cask cars are an important part of the Hanford Site's history and help tell the story of how plutonium was produced here. We are looking at whether it would be possible to make a locomotive and one or more cask cars available for the public to view in the future, possibly in the vicinity of the B Reactor National Historic Landmark, which last year drew more than 6,000 visitors from around the country.

COMMENTER 5:

State of Washington, Department of Health
Richland, WA

Comment: In looking at the scope of work there appears to be some uncertainty in the final disposition of some of the cars. There appears to be more than one locomotive in your inventory but the scope of work suggests that one could be decontaminated and moved near the B Reactor. The narrative states there are 16 cars in the program but only 11 require macroencapsulation. Even after adding in the locomotives, you appear to have a couple cars remaining. Is it possible that one (or more) of the heavy-weight flat cars could be decontaminated and put on display with the "clean" locomotive for interpretation purposes?

Response to Comment: Thank you for your comments. DOE agrees that the locomotives and cask cars are an important part of the Hanford Site's history and help tell the story of how plutonium was produced here. We are looking at whether it would be possible to make a locomotive and one or more cask cars available for the public to view in the future, possibly in the vicinity of the B Reactor National Historic Landmark, which last year drew more than 6,000 visitors from around the country.

COMMENTER 6:

Sue Evanson
Kasilod, Arkansas

Comment: I am contacting you to voice my support for Alternative #3. I do hope you consider BRMA's request to place a Cask Car and possibly a locomotive at the B-Reactor site.

It is such a monumental museum for all the history-altering events that took place on that ground. I was only a child when my father, who has since passed away, worked at Hanford for 20 years. I didn't know much at all about where he went to work every morning—it was a mystery—then and now.

So, to honor him and all other's whose lives were so impacted by the work that went on at Hanford and what it meant for our country, I believe it is only right to honor this request.

Response to Comment: Thank you for your comments. We appreciate your father's 20 years of hard work and contributions to the Hanford Site. DOE agrees that the locomotives and cask cars are an important part of the Hanford Site's history and help tell the story of how plutonium was produced here. We are looking at whether it would be possible to make a locomotive and one or more cask cars available for the public to view in the future, possibly in the vicinity of the B Reactor National Historic Landmark, which last year drew more than 6,000 visitors from around the country.

COMMENTER 7:

Glenda Phillips
Selah, WA

Comment: After review of the three alternatives, I favor Alternative 3, with a more defined description of what would happen to the locomotive that is sent to the museum. The alternative should have a requirement that an evaluation of the cost to make this locomotive "safe" for public viewing be done. If this cost exceeded more than \$100,000 beyond the cost of removal of the fuels and other fluids, plus the cost of moving it to the facility it should be sent with the other railcars for disposal. If the museum wants to pay for the added cost of adding it to its collection of other artifacts, then it should raise the money to pay for it. In this time of recession we can't afford the luxury of saving old radioactive locomotives to go to a museum. This is a poor use of taxpayer's monies.

Response to Comment: Thank you for your interest and participation in Hanford issues. Further evaluation, including an estimate of cost to decontaminate or otherwise put the railcar(s) in a safe configuration for historical display, is currently being performed by DOE to determine the feasibility of preserving one or more railcars. If recycling is determined to be feasible for any railcar(s) and/or parts of the railcars, then consideration will be given to options such as restoration and historical display.

COMMENTER 8:

Del Ballard

Comment: I urge you and DOE to select Alternative 3 relative to the disposition of the Hanford Railcars. One of the railcars and the locomotive should be preserved and parked near B Reactor.

Preservation of the history of the Manhattan project here at Hanford is and will be accomplished through the displays and artifacts at the B Reactor. That history would not be complete without the description of the all important equipment of the Hanford rail system. One of the railcars and the locomotive would be a precious element in the preservation of that history.

Response to Comment: Thank you for your comments. DOE agrees that the locomotives and cask cars are an important part of the Hanford Site's history and help tell the story of how plutonium was produced here. We are looking at whether it would be possible to make a locomotive and one or more cask cars available for the public to view in the future, possibly in the vicinity of the B Reactor National Historic Landmark, which last year drew more than 6,000 visitors from around the country.

COMMENTER 9:

Richard I. Smith

Comment 1: The appropriate set of alternatives was considered for this project, and I agree that D4 of the railway cars stored on the 212-R rail spur is the proper action. However, despite the extensive amount of material presented, several key items seem to be missing from this document, as discussed below.

It would seem appropriate to have examined several possible approaches for disposition of these railcars, rather than only assuming macroencapsulation at ERDF. It might be possible to decontaminate the cars sufficiently to permit recycle of much of the structural materials, with the nonreleasable material packaged for ERDF disposal. Because the lead shielding material is contained within a steel shell, the lead might be recyclable, avoiding placing all that lead in ERDF. If these approaches were considered and rejected for cause in the analyses for this document, that information should be included. If they were not considered and evaluated, probably they should be.

Response to Comment 1: Thank you for your comments. Although macroencapsulation at the ERDF is considered the most viable option for disposition of radiologically contaminated lead, the Removal Action Work Plan (RAWP) will allow for alternate disposition options, including treatment and/or disposal of waste at other facilities on the Hanford Site or that are offsite and have been authorized by their own EPA regional offices in accordance with 40 CFR 300.440 as suitable to receive waste from CERCLA sites. Furthermore, the RAWP will state that non-contaminated (or decontaminated) railcars or portions of the railcars and their contents may be evaluated for recycling or reuse.

Comment 2: There was no information provided on the characterization of the contamination on the railcars. It would seem difficult to select appropriate paths forward without knowledge of the contaminants present, their source strength, and the ease or difficulty of removal from the railcar surfaces.

Response to Comment 2: Thank you for your comments. Characterization has been performed on the railcars in the form of non-destructive assay, process knowledge, as well as ongoing routine radiological surveys. Based on this information, alternatives were chosen for evaluation in the EE/CA.

More rigorous characterization, including additional non-destructive assay, field radiological surveys, and laboratory analysis of samples collected from the railcars will be performed, as necessary, in conjunction with an approved RAWP and Sampling and Analysis Plan, to be developed subsequent to approval of the Action Memorandum. This characterization will support D4 activities and final disposition of the railcars.

Comment 3: Without a detailed analysis of the planned D4 actions, it would seem difficult to develop a reasonable cost estimate for the project. No detailed discussion of proposed D4 actions is presented in the document. As a result, the cost estimated presented in Tables 5.1 and 5.3 appear to be unsupported by any analyses.

Response to Comment 3: Thank you for your comments. The cost estimates were based on costs derived using Remedial Action Cost Estimate Requirement (RACER)[™] software and actual pricing information obtained from historical D4 experience on the Hanford Site, vendor quotes, and standard commercial databases, such as RS Means (*Building Construction Cost Data* [Means, 2010a], Environmental Cost Handling Options Solution [ECHOS] *Facilities Construction Cost Data* [Means, 2001], and *Heavy Construction Cost Data* [Means, 2010b]).

Comment 4: I am aware that you are required to provide cost estimates in terms of present-worth analyses, per OMB guidance. However, present-worth estimates are inappropriate for comparing the costs of projects when those project costs are incurred over significantly different time spans. DOE has no system for putting money for future expenses in a bank account where it can draw interest over the delay period.

Response to Comment 4: Thank you for your comments. The cost estimates presented in the EE/CA addendum were prepared consistent with EPA guidance and the U.S. Office of Management and Budget

[™] Remedial Action cost Estimate Requirement (RACER)[™] is a trademark of AECOM.

(OMB). Based on this guidance, present-worth analysis is used as the basis for comparing costs of cleanup alternatives under CERCLA programs. A discount rate is applied for cost estimates spanning multiple years, making it possible to evaluate expenditures associated with alternatives that occur during different periods. Present-worth analysis assumes that the funding set aside at the initial point in time increases in value as time goes on, similar to how money placed in a savings account gains in value because of interest paid on the account. Although the federal government typically does not set aside funds in this manner, the present-worth analysis is specified under CERCLA as the approach for establishing a common baseline to evaluate and compare alternatives that have costs occurring at different times, although actual costs could vary. While the funds might not actually be set aside, the present-worth costs are considered directly comparable for evaluating the costs of the alternative.

Comment 5: In my view, it would be more interesting to display one of the cask cars at B-Reactor instead of a locomotive. A cask car would be much more historically unique to the Manhattan Project than a locomotive.

Response to Comment 5: Thank you for your comments. DOE agrees that the locomotives and cask cars are an important part of the Hanford Site's history and help tell the story of how plutonium was produced here. We are looking at whether it would be possible to make a locomotive and one or more cask cars available for the public to view in the future, possibly in the vicinity of the B Reactor National Historic Landmark, which last year drew more than 6,000 visitors from around the country.

COMMENTER 10:

Maynard Plahuta
B Reactor Museum Association

Comment: Thank you for the opportunity to comment on the subject EE/CA. The B Reactor Museum Association (BRMA) partially supports Alternative 3. BRMA is extremely disappointed that none of the Alternatives provide for decontaminating and sending a cask railcar to the B Reactor museum. How discouraging! BRMA recognizes and supports DOE's responsibility to ensure all precautions are taken to guarantee public health and safety. Hopefully DOE will also recognize its responsibility to preserve this meaningful cask railcar artifact when making its safety evaluations.

BRMA fully supports recycling one of the locomotives to the B Reactor. However, a cask railcar should be included in Alternative 3 to ensure historical critical artifacts are preserved and not summarily discarded. This is necessary to make the museum more complete by portraying the full B Reactor process from start to finish.

It would be "penny wise and pound foolish" not to include a cask railcar as an essential artifact relevant to telling the full history of B Reactor to (sic) present and future generations. We all must work together to take advantage of this opportunity now to preserve a cask railcar—and not lose it.

In summary, we strongly request DOE to decontaminate as minimally necessary one of the cask railcars and transfer it to B Reactor museum. It would be absolutely abominable to now dismiss the only opportunity to ever have a cask railcar part of the Museum Project National Historic Park.

BRMA would welcome an opportunity to meet with appropriate DOE officials to explore this matter in more detail, including feasible/practical resolutions. As noted above this issue is of major concern for BRMA members, but also for others who have expressed an interest in being able to see a real Hanford cask railcar and obtain a more complete understanding of B Reactor operations.

Response to Comment: Thank you for your comments. DOE agrees that the locomotives and cask cars are an important part of the Hanford Site's history and help tell the story of how plutonium was produced here. We are looking at whether it would be possible to make a locomotive and one or more cask cars available for the public to view in the future, possibly in the vicinity of the B Reactor National Historic Landmark, which last year drew more than 6,000 visitors from around the country.

COMMENTS 11:

Mark Heisley
Lake Oswego, OR

Comment: In regards to the Oregonian Newspaper story date 07-25-2010 paper story Hanford Nuclear Reservation, in regards to the Manhattan Project, I would like to see all of the places that had to do with making (sic) of the A-bomb cleaned of all the nuclear contamination, including the contaminated locomotives (diesel) and rail cars and to be added to the display near the historic B Reactor. Hopefully the train engines and railcars can be decontaminated. After all this is a part of World War II history. As for the nuclear clean up will continue. It is time to destroy that nasty stuff lying around underground? Thank you for your time and interesting story.

Response to Comment: Thank you for your interest and participation in Hanford issues. Further evaluation will be performed to determine the feasibility of preserving one or more railcars. If any railcars and/or parts of the railcars are removed and determined to be recyclable, then consideration will be given to options such as restoration and display. Additional information regarding the cleanup of the Hanford site can be found at <http://www.hanford.gov>.

COMMENTS 12:

Arlen L. Sheldrake
Portland, OR

Comment: I appreciate that the USDOE is considering the preservation for public viewing a locomotive and maybe a railcar at the Hanford Site.

With 158 miles of railroad track at the Hanford Site, one must come to the conclusion that rail transportation was a very important part of the development as well as operation of this former nuclear facility. Preservation of at least a portion of this history is vital for future generations. It is my understanding that both RS-1 locomotives, 3729 and 3731, were purchased new and spent their entire working lives at the Hanford facility so preservation of one of these locomotives would be very appropriate. If possible/feasible, preservation of one of the Irradiated Fuel Cask Cars would also be appropriate.

Response to Comment: Thank you for your comments. DOE agrees that the locomotives and cask cars are an important part of the Hanford Site's history and help tell the story of how plutonium was produced here. We are looking at whether it would be possible to make a locomotive and one or more cask cars available for the public to view in the future, possibly in the vicinity of the B Reactor National Historic Landmark, which last year drew more than 6,000 visitors from around the country.

COMMENTS 13:

State of Washington, Department of Health
Richland, WA

Comment 1: Continuous monitoring of all radioactive air emissions is required for activities that have the potential-to-emit greater than 0.1 mrem/yr. This can be attained by use of containment, ventilation and monitoring of the ventilation stack, unless an approved alternative method is approved by RABS. In some activities, such as low-level soil excavation where the potential-to-emit may be below 0.1 mrem/yr, emissions can be calculated using soil sample data and a calculation method approved by the regulatory authority. Containment, ventilation, and stack air monitoring must be considered in a Best Available Radionuclide Control Technology (BARCT) analysis.

Response to Comment 1: Thank you for your comments. These aspects of the work to be done are included in the Applicable Relevant and Appropriate Requirements (ARARs) and will be considered during development of the associated RAWP.

Comment 2: The BARCT standard of WAC 246-247-040 requires an activity-based BARCT evaluation, as described in WAC 246-247-120. The regulatory authority is responsible to ensure a thorough and complete BARCT evaluation is addressed, at or near time of the performance of the activity.

Response to Comment 2: The BARCT standard of WAC 246-247-040, "Radiation Protection—Air Emissions," "General Standards," is ARAR to this removal action and will be considered during development of the associated RAWP.

Comment 3: The As Low as Reasonably Achievable (ALARA) emission standard (WAC 173-480-050). An activity-specific ALARA standard exists in WAC 246-247, by reference to WAC 173-480-050. It is not sufficient that the Hanford Site (sic) as a whole remain below 10 m/remyr (sic) standard of the Code of Federal Regulations (CFR) 61.92. Each activity should have an emission limit, to represent ALARA by the regulatory authority.

Response to Comment 3: The new actions taken for this work will invoke the substantive provisions of BARCT per WAC 246-247-040(3), which are more restrictive than the ALARACT ARAR for emission controls. The BARCT evaluation will identify all required ALARA-based controls for use in performing the work.

Comment 4: Provisions to demonstrate and record compliance with the ARARs cited. Substantive provisions for monitoring radioactive air emissions per WAC 246-247 requirements are a fundamental part of the state regulations. These requirements are necessary to determine the environmental impact of the cleanup activities on the Hanford Site. Although some of the requirements are administrative in nature, it is clearly in the public interest to ensure transparency in regard to radioactive air emissions during Hanford clean-up activities. Demonstration of monitoring radioactive air emissions and accessibility of records to RAES and the public should be covered in the requirements.

Response to Comment 4: Thank you for your comments. Appropriate substantive and administrative provisions for air emissions monitoring during this work, including related records, will be established in the RAWP.

COMMENTS 14:

Keith Smith

Comment: A puzzling aspect of that is the cost, which is notably less than doing the disposition near term. How can a protracted surveillance time, on top of the same type of disposition proposed in Alternative 3 be less expensive? Can you please elucidate this matter?

Response to Comment: Costs for both Alternative 2 and Alternative 3 were calculated using a present value analysis, which is the specified approach under CERCLA to establish a common baseline to

evaluate and compare alternatives that have costs occurring over different time periods. This standard methodology allows for cost comparisons of different alternatives on the basis of a single cost figure for each alternative. This single cost figure, referred to as present value, represents the amount of money needed to be set aside in the base year (i.e., the initial time work begins) to assure that funds will be available in the future as they are needed (assuming certain economic conditions). In contrast to the present value analysis, total non-discounted costs do not take into account the value of money over time. The non-discounted cost method displays the total costs occurring over the entire duration of an alternative, with no adjustment or discounting. Non-discounted costs do not reflect the changing value of funds over time. Consequently, the actual (non-discounted) cost calculated for Alternative 2 would be \$7,685,000, which is greater than the cost of \$6,422,000 for Alternative 3 as reflected in Table 5-1 of the Engineering Evaluation/Cost Analysis.

COMMENTS 15:

Nancy Matela
Portland, OR

Comment: Can you tell me where the railcars would be moved to?

Response to Comment: The selected alternative calls for near-term decontamination, deactivation, decommissioning, and disposal of the railcars. They will most likely be taken to the Environmental Restoration Disposal Facility, where they will be treated as necessary and disposed. DOE agrees that the locomotives and cask cars are an important part of Hanford's history and help tell the story of how plutonium was produced here. We are looking at whether it would be possible to make a locomotive and one or more cask cars available for the public to view in the future, possibly in the vicinity of the B Reactor National Historic Landmark, which last year drew more than 6,000 visitors from around the country.

Distribution

	<u>MS</u>	<u>Quantity</u>
<u>U.S. Department of Energy, Richland Operations Office</u>		
F.M. Roddy	A6-39	21
DOE Public Reading Room	H2-53	1
 <u>CH2M HILL Plateau Remediation Company</u>		
D.L. Norman	T1-41	10
Publications Technical Library	H3-21	1
 <u>Administrative Record</u>		
	H6-08	1
 <u>Document Clearance</u>		
	H6-08	1

