

NEPA REVIEW SCREENING FORM

Document ID Number:

DOE/CX-00032 Rev. 1

I. Project Title:

CONSTRUCTION AND OPERATION OF A DILUENTS/FLUSH SYSTEM AND ASSOCIATED FACILITY, AND AN INSTRUMENTATION, CONTROL, AND ELECTRICAL FACILITY AT THE 241-AW AND 241-AY/AZ TANK FARMS

II. Project Description and Location (including Time Period over which proposed action will occur and Project Dimensions - e.g., acres displaced/disturbed, excavation length/depth, area/location/number of buildings, etc.):

Construct and operate a Diluents/Flush system (DFS) and associated facility, as well as an Instrumentation, Control, and Electrical (ICE) facility at the 241-AW and 241-AY/AZ Tank Farms. In addition to the work scope described in DOE/CX-00032 Revision 0, the following work scope will also be performed as part of, and in support of, the DFS and ICE work:

- For 241-AY-102, isolate, close, and removal/disposal of existing equipment and installation and/or replacement in-kind of new equipment. Types of equipment that will be removed, disposed, and/or installed are;
 1. Existing Equipment Removal/Disposal,
 2. Mixing Equipment,
 3. Transfer Equipment,
 4. Ancillary Equipment, and
 5. Monitor and Control System.
- Design/procurement, installation, and operation of new submersible mixer pumps (SMP).
- Design/procurement, installation, and operation of new generation transfer pump (NGTP) motor/pump units.
- Design and implement a WFD Small Scale Mixing Demonstration (SSMD) program; the primary purpose being to mitigate the technical risks associated with the ability of the tank farms feed delivery and certification systems to adequately mix and sample high level waste (HLW) feed in order to meet the WTP feed certification requirements. SSMD results are intended to provide the definition of a certification loop/sampling system and instrumentation required for the AY-102 full scale demonstration.
- Design, fabricate, install, and operate a Waste Feed Certification Instrument Flow Loop/Remote Sampler (CFL/RS) system that will be used to obtain mixed HLW slurry samples from DSTs by recirculating the tank waste through the system. The CFL/RS operations will include, but aren't limited to:
 1. Sample DST HLW slurry feed stream for laboratory analysis.
 2. Determine real-time CV measurement of the HLW slurry.
 3. Replicate HLW transfer using tank mixer and transfer pumps with an above grade, instrumented, flow loop that returns waste to the tank of origin.
 4. Maintain the flexibility to mobilize the sampling system to support WTP waste pre-qualification for multiple DSTs.
- Temporary staging, laydown, & support trailers may also be utilized.

All work activities will be performed in currently disturbed, industrial areas (no native habitat or vegetation), where all access routes and required infrastructure is already present and available. Most locations are culturally exempt (see PNL-7264 & Battelle 9405630), but additional cultural &/or ecological reviews will be obtained as needed.

III. Reviews (if applicable):

Biological Review Report #: N/A

Cultural Review Report #: PNL-7264, Battelle Letter 9405630, HCRC# 2003-200-044, & DOE/RL-97-56

Additional Attachments:

WRPS-NEPA-11-004/DOE/CX-00032 Revision 0, "CONSTRUCTION AND OPERATION OF A DILUENTS/FLUSH SYSTEM AND ASSOCIATED FACILITY, AND AN INSTRUMENTATION, CONTROL, AND ELECTRICAL..."

IV. Existing NEPA Documentation

Is the proposed action evaluated in a previous EA, EIS, or under CERCLA?

YES	NO
<input type="checkbox"/>	<input checked="" type="checkbox"/>

If "NO," proceed to Section V. If "YES," List EA, EIS, or CERCLA Document(s) Title and Number:

And then complete Section VI. Provide electronic copy of Initiator/ECO signed NRSF to DOE NCO for information only. DOE NCO signature is not required.

NEPA REVIEW SCREENING FORM (continued)

Document ID Number:

DOE/CX-00032 Rev. 1

V. Categorical Exclusion

	YES	NO
Does the proposed action fall within a class of actions that is listed in Appendixes A or B to Subpart D of 10 CFR Part 1021?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are there extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the proposal connected to other actions with potentially significant impacts or result in cumulatively significant impacts (not precluded by 40 CFR 1506.1 or 10 CFR 1021.211)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
List CX to be applied and complete Categorical Exclusion Integral Elements (where an action might fit within multiple CXs, use the CX that best fits the proposed action):		
B1.15, "Siting/construction/operation of support buildings/support structures"		

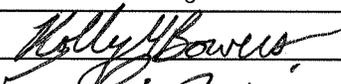
Categorical Exclusion Integral Elements

	YES	NO
Does the proposed action threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, or health, including DOE and/or Executive Orders?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the proposed action require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the proposed action disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the proposed action adversely affect environmentally sensitive resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the proposed action involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species such that the action is NOT contained or confined in a manner designed, operated, and conducted in accordance to applicable requirements to prevent unauthorized release into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If "NO" to all Categorical Exclusion Integral Elements questions above, complete Section VI, and provide to DOE NCO for final Approval/ Determination and signature in Section VII.

If "YES" to any of the Categorical Exclusion Integral Elements questions above, contact DOE NCO for additional NEPA Review.

VI. Responsible Contractor Signatures

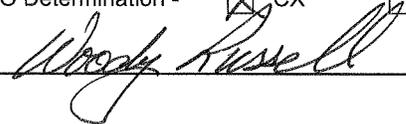
	Name (Printed)	Signature	Date
Initiator	Holly M. Bowers		6/14/12
Cognizant Environmental Compliance Officer	Felix R. Miera		6/14/12

VII. Approval/Determination

DOE NEPA Compliance Officer: Woody Russell

Based on my review of information conveyed to me and in my possession (or attached) concerning the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class of action:

NCO Determination - CX EA EIS

Signature: 

Date: 6/14/12

NEPA Screening Form Number
(e.g., WRPS-NEPA-01-002)

WRPS-NEPA- 11 - 004

TOC NEPA SCREENING FORM

For NEPA requirements, see TFC-ESHQ-ENV_AP-C-01
Answer questions YES, or NO, and list NUMBER, if applicable

Page 1 of 24

Work Item Title

CONSTRUCTION AND OPERATION OF A DILUENTS/FLUSH SYSTEM AND ASSOCIATED FACILITY, AND AN INSTRUMENTATION, CONTROL, AND ELECTRICAL FACILITY AT THE 241-AW AND 241-AY/AZ TANK FARMS

Work Package Number Multiple or ECN Number Multiple

(List any additional work packages, ECNs, and all attachments on page 2)

A. INTEGRAL ELEMENTS

- Yes No Will the proposed change affect existing/proposed permits?
- Yes No Will work involve construction/expansion of waste treatment, storage, disposal facilities?
- Yes No Will hazardous substances be disturbed?
- Yes No Are controls in place to prevent uncontrolled/unpermitted releases?
- Yes No Has Waste Minimization been considered during planning for this activity?

Go to B

B. ECOLOGICAL RESOURCES

- Yes No Will work affect Wetlands/Aquifers/ALE reserve?
 - Yes No Will work occur within 1/4 mile of Columbia River (Hanford Reach)?
 - Yes No Will wildlife or natural habitat be disturbed?
- If any answer is YES, identify Ecological Review Number _____

Go to C

C. CULTURAL RESOURCES

- Yes No Does the work require excavations or surface disturbing activities? Obtain permit if required?
 - Yes No Does this work require building or equipment modifications to listed historic structures?
- If any answer is YES, identify Cultural Review Number 9405630/7264/2003-200-044

Go to D

D. DOCUMENTATION OF NEPA REVIEW

- Yes No Has this activity been reviewed for NEPA Concerns? If so list document number below.
- CX No. DOE/CX-00032 SWCX No. _____ EA No. _____
 EIS No. _____ SA No. _____

Print form and sign.

Signature Form is not valid until any applicable Cultural/Ecological Resource Reviews are received and attached to this form.

Initiator: *Pruefa C. Lewis* Date: 4/21/2011 Phone: 509-438-1904
(Project Manager)

Concurrence: *Lucinda P. ...* Date: 4/26/11 Phone: 509-373-1060
(Environmental Compliance Officer, or Delegate)

ORP Concurrence: _____ Date: _____ Phone: _____
(ORP NEPA Representative)

DOE-RL Concurrence: *R.W. Russell* Date: 4/26/11 Phone: 373-5237
(DOE-RL Office of NEPA Compliance Officer)

WRPS-NEPA- 11 - 004

Project Description

The 241-AW and 241-AY/AZ tank farms require the construction and subsequent operation of electrical distribution systems and instrumentation and control raceways between new ICE facilities [AKA. Power Operations Center or POC] and locations within the 241-AW and 241-AY/AZ tank farms in support of future Waste Feed Delivery (WFD) operations that will be performed to support the Waste Treatment Plant (WTP).

The 241-AW and 241-AY/AZ tank farms also require the construction and operation of a Diluents/Flush system (DFS) which will provide WFD support by providing diluents (strained raw water, chemically treated water, heated water, etc.) to the various double-shell tanks (DSTs) and/ or to the transfer line system. The DFS will be used to support initiation of waste transfers (pre-heating transfer lines and starting transfer pumps), for dilution of waste during transfer, and for shutting down the transfer pumps and flushing the transfer system following a waste transfer. The system may also be used to flush mixer and transfer pump internals, and to provide water to the mixer pump sparge rings to facilitate starting of the mixer pumps.

For detailed project work scope and analyses of cultural and ecological impacts, please see DOE/CX-00032, "CATEGORICAL EXCLUSION FOR THE CONSTRUCTION AND OPERATION OF A DILUENTS/FLUSH SYSTEM AND ASSOCIATED FACILITY, AND AN INSTRUMENTATION, CONTROL, AND ELECTRICAL FACILITY AT THE 241-AW AND 241-AY/AZ TANK FARMS, 200 EAST AREA, HANFORD SITE, RICHLAND, WASHINGTON".

Additional Work Packages, ECNs, and Attachments

Number	Date	Initials	Number	Date	Initials
Attachments:					
A: DOE/CX-00032					
B: Battelle 9405630					
C: PNL-7264					
D: HCRC 2003-200-044					
E: NEPA Matrix					

**CATEGORICAL EXCLUSION FOR THE CONSTRUCTION AND OPERATION
OF A DILUENTS/FLUSH SYSTEM AND ASSOCIATED FACILITY, AND AN
INSTRUMENTATION, CONTROL, AND ELECTRICAL FACILITY AT THE 241-AW AND
241-AY/AZ TANK FARMS, 200 EAST AREA, HANFORD SITE, RICHLAND, WASHINGTON**

Proposed Action

The U.S. Department of Energy, (DOE) Office of River Protection (ORP) and the Richland Operations Office (RL) propose to construct and operate a Diluents/Flush system (DFS) and associated facility, as well as an Instrumentation, Control, and Electrical (ICE) facility at the 241-AW and 241-AY/AZ Tank Farms.

Location of Action

The work will take place within the 200 East Area, Hanford Site, Richland, Washington.

Description of Proposed Action

The 241-AW and 241-AY/AZ tank farms require the construction and subsequent operation of electrical distribution systems and instrumentation and control raceways between new ICE facilities [AKA. Power Operations Center or POC] and locations within the 241-AW and 241-AY/AZ tank farms in support of future Waste Feed Delivery (WFD) operations that will be performed to support the Waste Treatment Plant (WTP).

The 241-AW and 241-AY/AZ tank farms require the construction and subsequent operation of a DFS which will support WFD operations by providing diluents (strained, heated, chemically treated water) to the waste transfer line and to the DST's within the tank farm. The DFS will be used to support initiation of waste transfers (pre-heating transfer lines and starting the transfer pumps), to provide dilution of waste during transfer, to support shutting down the transfer pumps, and to flush the transfer system and transfer pump internals following a waste transfer. Additionally, the DFS will be used to provide water to the mixer pump sparge rings to facilitate starting of the mixer pumps and to flush the mixer pump internals.

The AW ICE facilities will be located just outside, but immediately adjacent to each tank farm and they will serve as the center for electrical service and control of the tank farm equipment (see Figure 1). The 241-AW ICE facility is proposed as a 30'x60' steel pre-engineered permanent structure built into the west embankment of the farms original excavation. The 241-AW Diluents/Flush facility will be constructed south of the ICE facility (see Figure 1). Parking will be constructed around the facilities as needed to support the required operations work force, and access to the locations will be via existing access routes. Any existing on-site structures (inactive wells, lighting, man-holes, above/below grade steam line, security fencing, etc.) will be designed around and/or removed if it restricts site functionality.

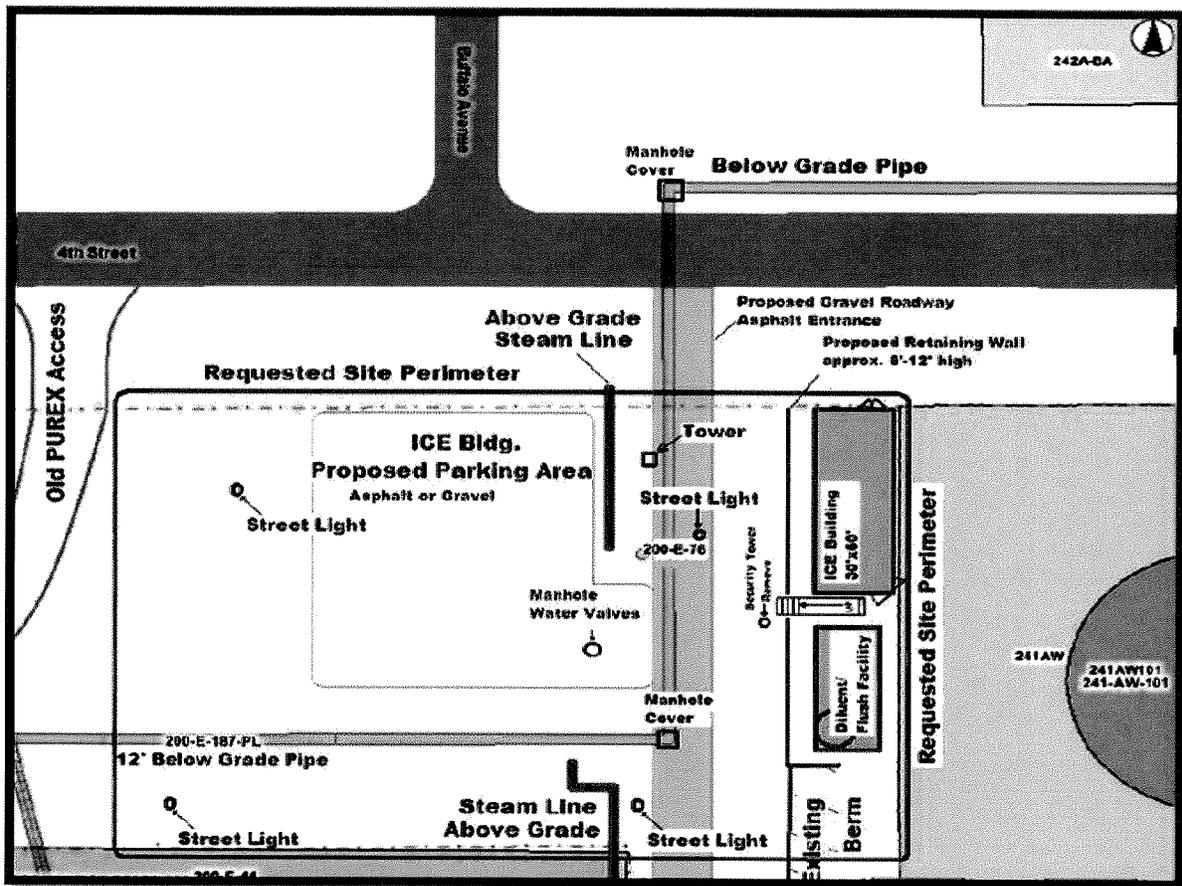


Figure 1. Site map showing the southwest corner of the 241-AW Tank Farm where the proposed ICE and Diluents/Flush facilities would be located.

The 241-AW and 241-AY/AZ DFS process piping facilities are primarily located in two areas; the Diluents/Flush pad located just outside the farm fence line and the Diluents/Flush valve pit located inside the fence. The Diluents/Flush pad is equipped with a roof structure to provide weather protection for the Diluents/Flush pad process piping equipment. The Diluents/Flush pad equipment includes a raw water supply, filtration, heaters, pumps, and a 17,000 gallon diluents storage tank. Also included is a chemical staging area to support the addition of Sodium Hydroxide or Sodium Nitrite as needed to adjust the diluents/flush water chemistry. The chemical staging area is located over a chemical sump with leak detection and adjacent to a safety shower and eyewash station supplied with potable water. The Diluents/Flush valve pits are below grade pits which will contain the jumper manifolds with double valve isolations (DVIs) providing a barrier to physically disconnect interfacing piping systems and limit potential leakage of waste. The valve pits will house the remote operated valves and will be provided with pit leak detection, a pit drain, and an at-grade pit cover.

The AY/AZ ICE facilities will be located north of 241-AY Tank Farm, west of the 241-AZ Tank Farm, and east of Buffalo Avenue in the 200E Area, and they will serve as the center for electrical service and control of the tank farm equipment (see Figure 2). The 241-AY/AZ ICE facilities are proposed as a 30' x 60' steel pre-engineered permanent structure built into the west embankment of the farms original

excavation. The 241-AY/AZ Diluents/Flush facility will be approximately 40' x 60'. Parking will be constructed around the facilities as needed to support the required operations work force, and access to the locations will be via existing access routes. Any existing on-site structures (inactive wells, lighting, man-holes, above/below grade steam line, security fencing, etc.) will be designed around and/or removed if they restrict site functionality.

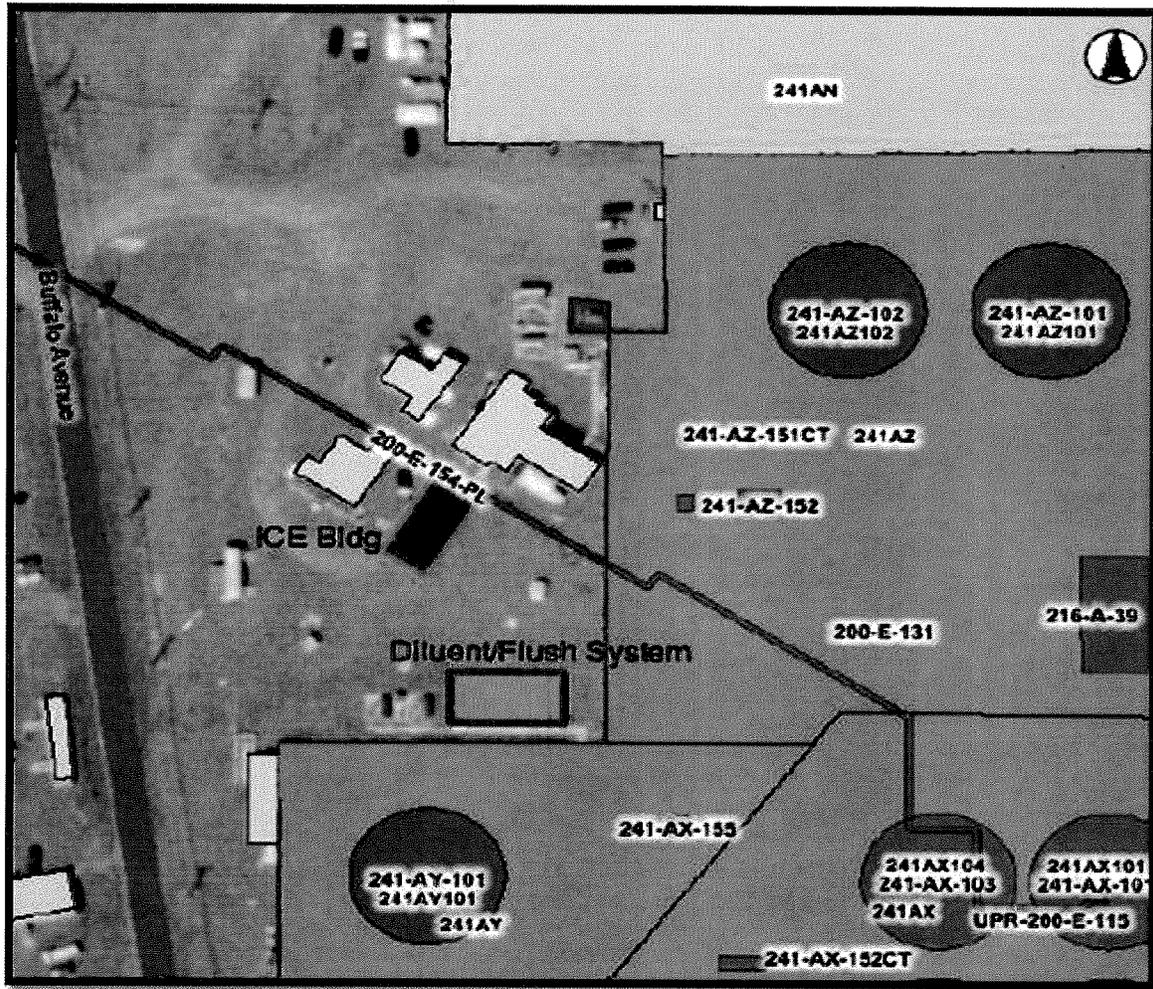


Figure 2. Aerial photograph showing the proposed locations of the new 241-AY/AZ ICE and Diluents/Flush facilities.

The existing 241-AW and 241-AY/AZ tank farm electrical distribution systems are currently inadequate for support of WFD loads and require various upgrades as needed to support WFD work scope, the new ICEs, and the new DFS. Upgrades are also needed to make the lines compliant with current regulations and safety requirements. These upgrades would include work like the replacement in-kind of various equipment and electrical lines, the installation of a new transformer which will be located outside of the tank farms, and new feeds to the transformers.

All electrical work will be done in accordance with manufacturer's requirements and governing electrical codes. All equipment used and installed as part of the project work scope will be listed or labeled by an organization currently recognized by Occupational Safety and Health Administration (OSHA) as a nationally recognized testing laboratory. All hazardous materials, equipment, and waste generated or disturbed during the work will be properly managed, recycled, or disposed of, as needed, in an appropriately licensed treatment, storage, and disposal facility.

No adverse cultural/historic impacts will occur. These areas are highly disturbed, long-term industrial zones that qualify as culturally exempt under PNL-7246, "*Archaeological Surveys of the 200 East and 200 West Areas, Hanford Site, Washington*", Battelle letter 9405630, "*Cultural Resources Exemption of the Tank Farm Areas*", and were, in addition, reviewed as part of cultural resource review HCRC#2003-200-044, "*Cultural Resources Review of Retrieval, Treatment and Disposal of Tank Waste and Closure of Single Shell Tanks (Tank Closure) Environmental Impact Statement (EIS) (HCRC# 2003-200-044)*".

No adverse ecological impacts will occur. All land within each tank farm is considered a long-term industrial area that is highly disturbed, primarily consisting of graveled and paved areas and structures. No vegetation or wildlife is allowed within the tank farms, and regular biological control work and prevention activities are performed by the Mission Support Alliance LLC (MSA) contractor to support this objective (i.e. MSA also contains, treats, manages, and removes biologicals when found). Most of the lands surrounding each tank farm is also highly disturbed industrial areas containing various structures, facilities, and utilities, and with limited open areas of land which have been regularly cleared, often leveled, and are typically graveled or paved. Most vegetation when present consists of noxious or industrial weeds with few native species other than the occasional native grass or forb. For those tank farms that do have vegetated areas adjacent to the farm in which activity is planned, an ecological compliance review will be obtained as needed prior to any work being performed to verify that there will be no adverse ecological impacts in accordance with the requirements of the NEPA Categorical Exclusion and 10 Code of Federal Regulations (CFR) 1021.410, Appendices A and B to Subpart D.

Categorical Exclusions to be Applied

The following categorical exclusions (CXs) are listed in 10 CFR 1021, "National Environmental Policy Act Implementing Procedure," Subpart D, Appendix B, published in the Tuesday, July 9, 1996, 61 Federal Register 36222:

B1.15 Siting, construction (or modification), and operation of support facilities and support structures (including, but not limited to, trailers and prefabricated facilities) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support facilities and structures include those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; employee health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (including security posts); fire protection; and similar support purposes, but excluding facilities for waste storage activities, except as provided in other parts of this appendix.

Eligibility Criteria

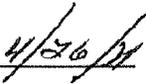
Since no extraordinary circumstances that may affect the significance of the environmental effects of the proposal have been identified, the proposed activity meets the eligibility criteria of 10 CFR 1021.410(b), as shown in the following table. The proposed activity is not “connected” to other actions with potentially significant impacts [40 CFR 1508.25(a)(1)], or with cumulatively significant impacts [40 CFR 1508.25(a)(2)], and is not precluded by 10 CFR 1021.211.

The “Integral Elements” of 10 CFR 1021 are satisfied as discussed below.

INTEGRAL ELEMENTS, 10 CFR 1021, SUBPART D, APPENDIX B	
Would the Proposed Action	Comment or Explanation
Threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, and health, including requirements of DOE and/or Executive Orders?	No applicable laws, regulations, or orders would be violated by the proposed actions.
Require siting and construction or major expansion of waste storage, disposal, recovery or treatment facilities (including incinerators)? The proposal may include categorically excluded waste storage, disposal, recovery or treatment actions.	Action does not require siting and construction of waste storage, disposal, recovery or treatment facilities.
Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases?	There will be no uncontrolled or unpermitted releases associated with the proposed actions.
Adversely affect environmentally sensitive resources including but not limited to: (i) Property (e.g., sites, buildings, structures, objects) of historic, archeological, or architectural significance designated by Federal, state, or local governments or property eligible for listing on the National Register of Historic Places. (ii) Federally-listed threatened or endangered species or their habitat (including critical habitat), Federally proposed or candidate species or their habitat or state-listed endangered or threatened species or their habitat. (iii) Wetlands regulated under the Clean Water Act (33 USC 1344) and floodplains. (iv) Federally- and state-designated wilderness areas, national parks, national natural landmarks, wild and scenic rivers, state and Federal wildlife refuges, and marine sanctuaries. (v) Prime agricultural lands. (vi) Special sources of water (such as sole-source aquifers, wellhead protection areas, and other water sources that are vital in a region. (vii) Tundra, coral reefs, or rainforests?	None of the environmentally sensitive resources listed (i through vii) will be adversely affected by the proposed actions. (i) Proposed action does not adversely affect historical/cultural resources (ii) Proposed action does not adversely affect ecological resources (iii) N/A (iv) N/A (v) N/A (vi) N/A (vii) N/A

Documentation for each use of the categorical exclusions would be maintained according to contractor procedures and DOE requirements.

Compliance Action: I have determined that the proposed action meets the requirements for the referenced Categorical Exclusions. Therefore, using the authority delegated to me by DOE Order 451.1B, Change 1, I have determined that the proposed activities may be categorically excluded from further NEPA review and documentation.

Signature/Date:  
R. W. Russell III
Hanford NEPA Compliance Officer



Battelle

Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509) 372-1791

9405630

August 16, 1994

No Known Cultural Resources

Mr. W. B. Bancroft
Westinghouse Hanford Company
Tank Waste Remediation Systems
P. O. Box 1970/T4-08
Richland, WA 99352

Dear Mr. Bancroft:

CULTURAL RESOURCES EXEMPTION OF THE TANK FARM AREAS

The Department of Energy, Richland Operations Office has approved the cultural resources exemption for the 18 tank farm areas on the Hanford Site, proposed by the Hanford Cultural Resources Laboratory (HCRL). The exemption is based on the extensive disturbance caused by the original installation of the 177 tanks contained in the tank farm areas.

The exemption includes all maintenance and new construction performed within and 150 meters outside of the 18 fenced tank farm areas. It also includes modifying, adding, and removing mobile trailers within the above areas. Individual cultural resources reviews are no longer required for projects involving these types of activities.

The exemption does not include removing existing tanks or modifying or demolishing any permanent structures (buildings, water towers, etc.) within or 150 meters outside of the tank farms. Individual cultural resources reviews are still required for projects involving these types of activities.

Thank you for your assistance with the exemption preparation. Please let me know if you have any questions or need additional information.

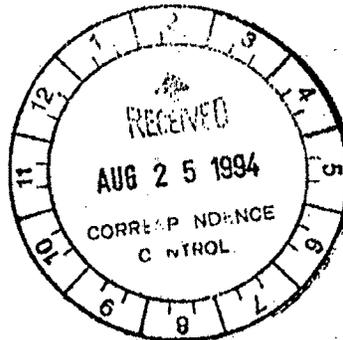
Very truly yours,

M. E. Crist
Technical Specialist
Cultural Resources Project

Concurrence:

P. R. Nickens, Project Manager
Cultural Resources Project

- cc: C. R. Pasternak, RL (3)
- M. P. Campbell
- T. L. Jennings
- J. W. Comer
- E. J. Austin Jr.
- R. S. Rodriguez
- J. A. Kimbrough
- H. P. Fox
- A. D. Olguin
- S. D. McMath
- K. J. Moss
- T. L. Clark
- R. H. Engelmann
- File/LB



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R. H. ENGELMAN

AUG 23 1994

ACTION:
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PNL-7264
UC-600

**Archaeological Survey of the
200 East and 200 West Areas,
Hanford Site, Washington**

J. C. Chatters
N. A. Cadoret

March 1990

Prepared for the U.S. Department of Energy
under Contract DE-AC06-76RLO 1830

Pacific Northwest Laboratory
Operated for the U.S. Department of Energy
by Battelle Memorial Institute



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A12	251-275	A25	576-600
A13	276-300	A99	601-Up
A14	301-325		

ARCHAEOLOGICAL SURVEY OF THE
200 EAST AND 200 WEST AREAS,
HANFORD SITE, WASHINGTON

J. C. Chatters
N. A. Cadoret

March 1990

Prepared for
the U.S. Department of Energy
under Contract DE-AC06-76-RLO 1830

Pacific Northwest Laboratory
Richland, Washington 99352

EXECUTIVE SUMMARY

Responding to a heavy demand for cultural resource reviews of excavation sites, the Westinghouse Hanford Company contracted with Pacific Northwest Laboratory^(a) to conduct a comprehensive archaeological resource review for the 200 Areas of the Hanford Site, Washington. This was accomplished through literature and records review and an intensive pedestrian survey of all undisturbed portions of the 200 East Area and a stratified random sample of the 200 West Area.

The survey, conducted by the Hanford Cultural Resources Laboratory in August and September 1988 followed the Secretary of the Interior's guidelines for the identification of historic properties. The result of the survey is a model of cultural resource distributions that has been used to create cultural resource zones with differing degrees of sensitivity. The outcome is that no further archaeological surveys will be needed in the 200 East Area and will be required in the 200 West Area only within 100 m of the historic White Bluffs Road. Facilities demolition and renovation are not covered by this clearance and will continue to require cultural resource reviews.

(a) Pacific Northwest Laboratory is operated for the U.S. Department of Energy by Battelle Memorial Institute.

August 28, 2003

*No adverse effect to historic properties
SHPO, Tribe and interested parties 30 day review required*

Charlotte Johnson
Science Applications International Corporation
3250 Port of Benton Boulevard
Richland, Washington 99352

Subject: Cultural Resources Review of Retrieval, Treatment and Disposal of Tank Waste and Closure of Single Shell Tanks (Tank Closure) Environmental Impact Statement (EIS) (HCRC# 2003-200-044).

Dear Ms. Johnson,

Project Description

DOE proposes to retrieve waste from the 149 Single Shell Tanks (SSTs) and 28 Double Shell Tanks Systems (DSTs) and close the SST tank farms in a manner that complies with Federal and Washington State requirements and protects the human environment. DOE also proposes to immobilize the retrieved waste in the WTP and through supplemental treatment technologies such as bulk vitrification, grout, steam reforming, and sulfate removal, and then package the immobilized waste for offsite shipment and disposal in licensed and/or permitted facilities or disposal onsite. The Environmental Impact Statement (EIS) is examining six alternatives, each of which contains a waste storage, retrieval, treatment and disposal component.

Most of the alternatives would require new facilities to be constructed and ground disturbance. All ground disturbing activities will be contained to the 200 West and 200 East Areas on the Hanford Site, as well as immediately east and west of the 200 East Areas (see Figure 1 and 2). Five of the six alternatives entail new construction within the fencelines of the 200 East Area, the 200 West Area and the Waste Treatment Plant (WTP) (Vitrification Plant), located east of the 200 East Area. Exceptions include a Waste Treatment Plant replacement to be located north of the current WTP, a Canister Storage Module (CSM) Area 2 to be located east of the current WTP, and an IHLW Preprocessing Facility and HLW Debris Storage Area to be located between the 200 East and West Areas. The proposed locations of these facilities are depicted in Figure 2.

The EIS is still in the conceptual stage and alternatives continue to evolve. Therefore, the project areas delineated in the attached maps are at this time general locations of project construction activities.

Notifications and Public Involvement

On August 12, 2003, a notification letter was sent to the following:

- Per 36 CFR 800, the State Historic Preservation Officer (SHPO) and Tribes were notified of this cultural resources review request and the Area of Potential Effect (APE). The APE was defined as

specific construction areas that are located both inside and outside of the 200 East and West Areas delineated in the attached map (Figure 2 and 3).

On August 12, 2003, the SHPO notified DOE that they concurred with the definition of the APE.

Identification of Historic Properties, Results of the Records Search and Literature Review

The Hanford Cultural Resources Laboratory (HCRL) conducted a records and literature search to identify historic properties in the APE of the project. The results indicate that most of the project area has been surveyed for cultural resources (HCRC# 88-200-046, 87-200-004, 87-200-012, 94-600-054, 88-200-038, 96-200-058, 92-200-007, 96-200-109, 97-200-002, 88-200-055, 88-200-015, 93-200-001, 94-200-097, 93-600-004) (Figure 4 and 5). Two historic isolated finds consisting of historic cans (HI-88-024, 88-025) have been recorded in the CSM project area in the southwest corner of the 200 East area. One prehistoric isolated find, a cryptocrystalline silica (CCS) base of a projectile point (HI-88-004) was located and collected in the CSM Area 2 (east of the 200 East Area). A small portion of one of the arc roads that makes up the Hanford Atmospheric Dispersion Test Facility (HT-99-007) is located within the HLW Processing area, west of the 200 East Area. HT-99-007 has been evaluated and was determined to be a contributing property within the Manhattan Project and Cold War Era Historic District recommended for individual documentation. A Historic Property Inventory Form (HPIF) was completed and numerous artifacts were identified as having interpretive or educational value in potential exhibits. A selected, representative number of artifacts were removed and curated into the Hanford Collection. According to 2002 aerial photographs, many of the unsurveyed areas of the APE appear to be highly disturbed by Hanford construction activities. Approximately 190 acres are undisturbed and have not been surveyed (Figure 6-9).

On August 25 and 26, 2003, HCRL staff and cultural resources staff of the Nez-Perce Tribe and the Yakama Nation conducted a cultural resources survey of these areas (Figure 6-9). HT-2003-018 consisting of a small military refuse pile of cans and coke bottles was located in the CSM 2 project area southwest of the Waste Treatment Plant and slightly north of Route 4 South. This site is likely to be associated with National Register eligible Anti-Aircraft Artillery Site (H3-417) located approximately 400 meters south of HT-2003-018, on the south side of Route 4 South. HT-2003-018 is considered to be a noncontributing feature associated with the AAA site located south of 4 South and is therefore not considered to be eligible to the Register. A portion of one of the arc roads associated with HT-99-007 was encountered by the survey.

No input has been provided by tribes on the identification or potential impacts to traditional cultural properties (TCPs) at this time.

Findings

HCRL has determined that project activities will have no adverse affect on HT-99-007 as all mitigation activities in the form of documentation and collection of artifacts has been completed. Depending on the alternative chosen, the project will impact HT-2003-018. Although not eligible to the National Register, HCRL recommends that the project avoid this site if possible.

The U.S. Department of Energy Cultural and Historic Resources Program will submit an official letter of documentation to the SHPO and Tribes of our findings. **Pursuant to 36CFR Section 800, SHPO, tribes have 30 days to respond in receipt of this letter. No project activities should begin until the SHPO has concurred with the findings stated above.**

All workers should be directed to watch for cultural materials (e.g. bones, artifacts) during all work activities. If any are encountered, work in the vicinity of the discovery must stop until an archaeologist has been

Charlotte Johnson
August 28, 2003
Page 3

The U.S. Department of Energy Cultural and Historic Resources Program will submit an official letter of documentation to the SHPO and Tribes of our findings. Pursuant to 36CFR Section 800, SHPO, tribes have 30 days to respond in receipt of this letter. No project activities should begin until the SHPO has concurred with the findings stated above.

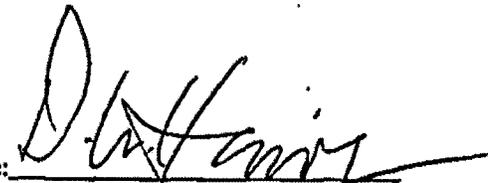
All workers should be directed to watch for cultural materials (e.g. bones, artifacts) during all work activities. If any are encountered, work in the vicinity of the discovery must stop until an archaeologist has been notified, assessed the significance of the find, and, if necessary arranged for mitigation of the impacts to the find. The SHPO must be notified if any changes to project location or scope are anticipated. If you have any questions, please call me at 376-4626. Please use the HCRC# above for any future correspondence concerning this project.

Very truly yours,



Ellen Prendergast-Kennedy, M. A.
Research Scientist/Anthropologist
Cultural Resources Project

Concurrence:


Ford C. Stapp, Project Manager
Cultural Resources Project

Concurrence:



Annabelle Rodriguez, Cultural and Historical Resources Program Manager
U. S. Department of Energy, Richland Operations Office

Attachments(s)

EPK: olk

cc: Annabelle Rodriguez (2) A5-15
Environmental Portal, A3-01
Mary Beth Burandt, H6-60
File/LB

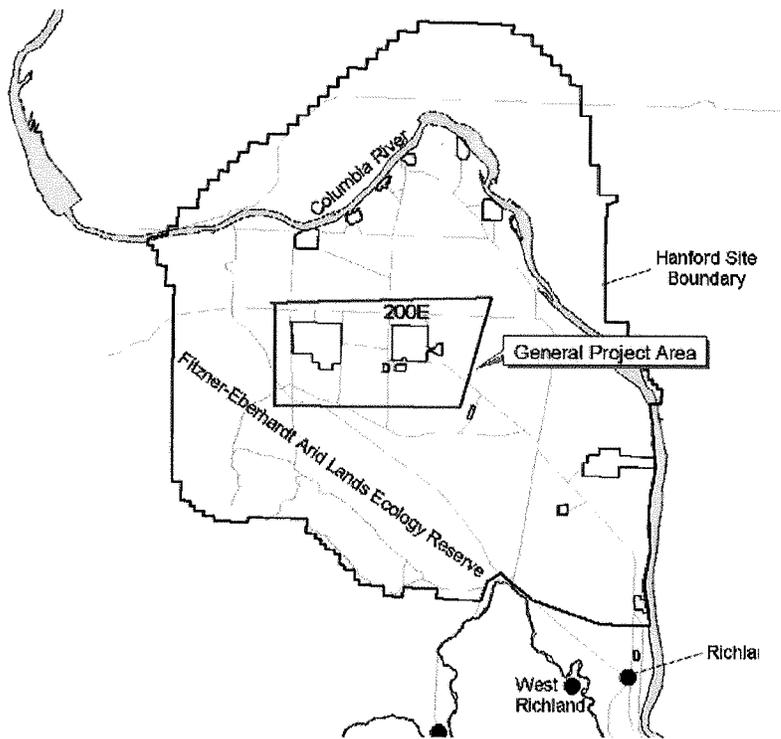


Figure 1. HCRC# 2003-200-044 Project location in relation to the Hanford Site.

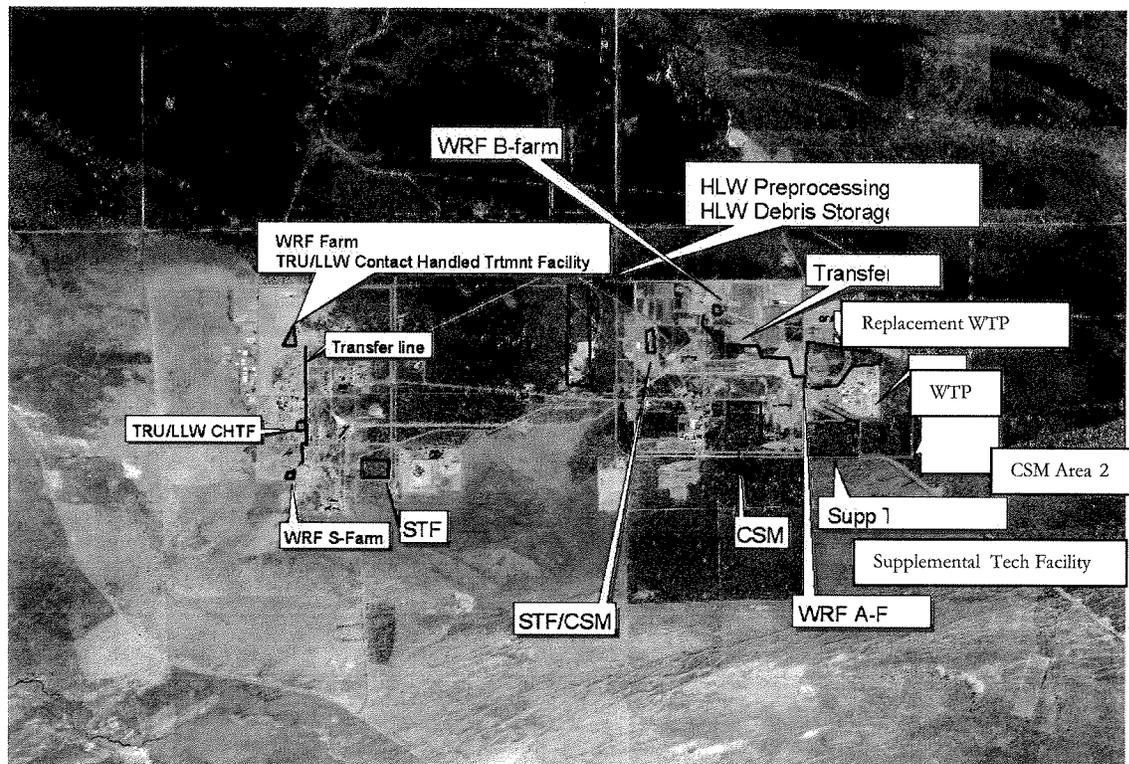


Figure 2. HCRC# 2003-200-044. Project Areas and APE overlaid on top of a 2002 aerial photograph.

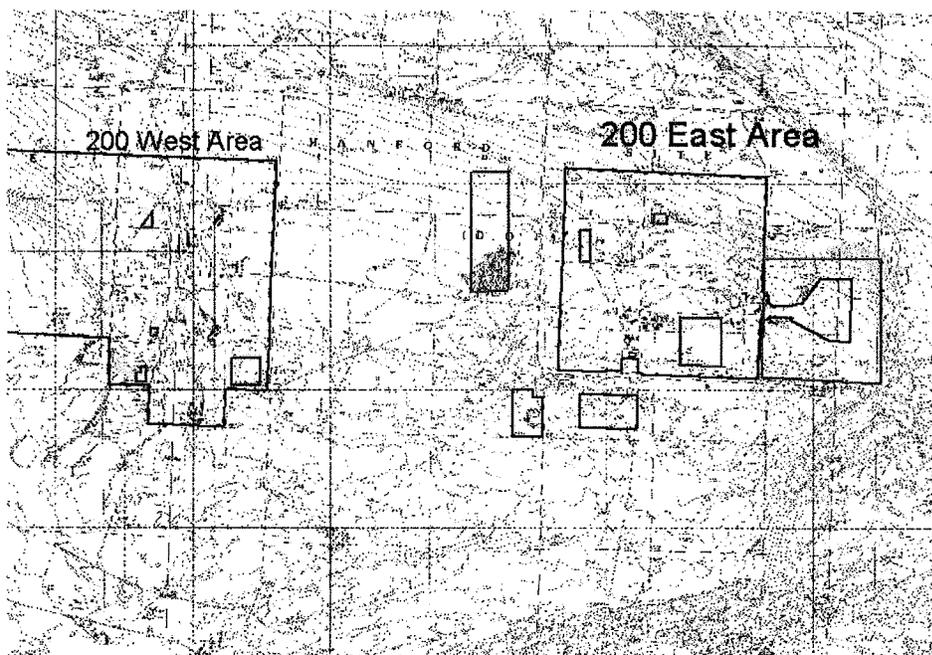


Figure 3. HCRC#2003-200-044 Project areas and APE on USGS Topography quadrangle maps.

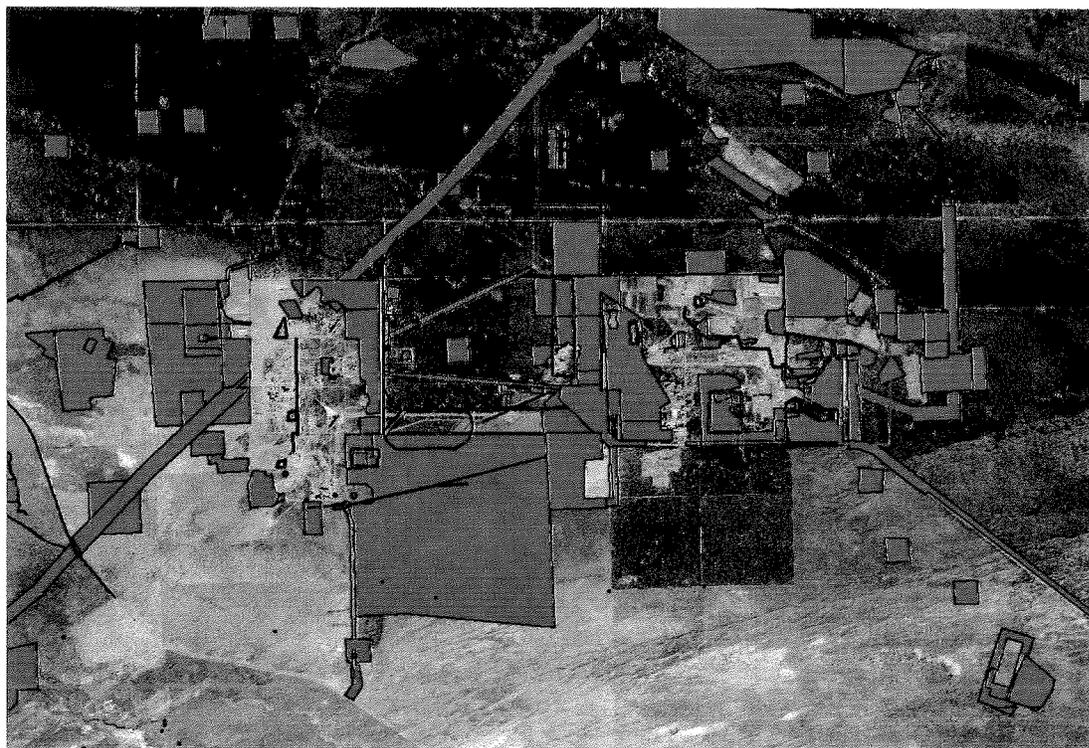


Figure 4. HCRC# 2003-200-044. Shaded/green areas depict areas previously surveyed for cultural resources in relation to project areas. Image also shows disturbance from 2002 aerial photographs.

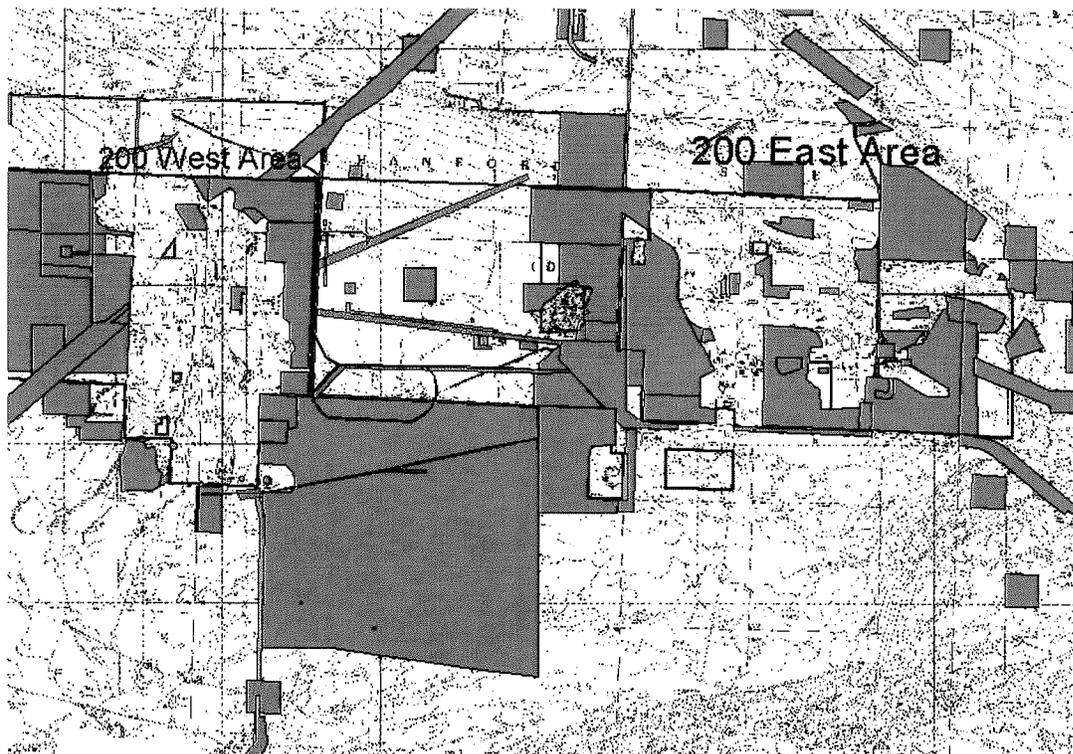


Figure 5. 2003-200-044. Shaded/green areas depict areas previously surveyed for cultural resources in relation to project areas on USGS Topography Quadrangle.

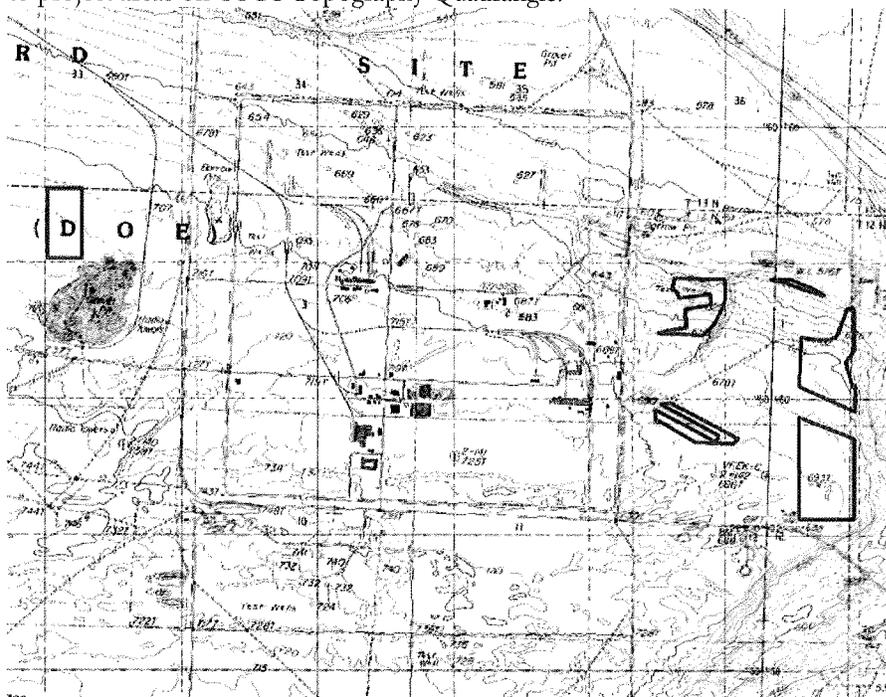


Figure 6. 2003-200-044. Red areas indicate areas surveyed on 8/25/03 and 8/26/03.

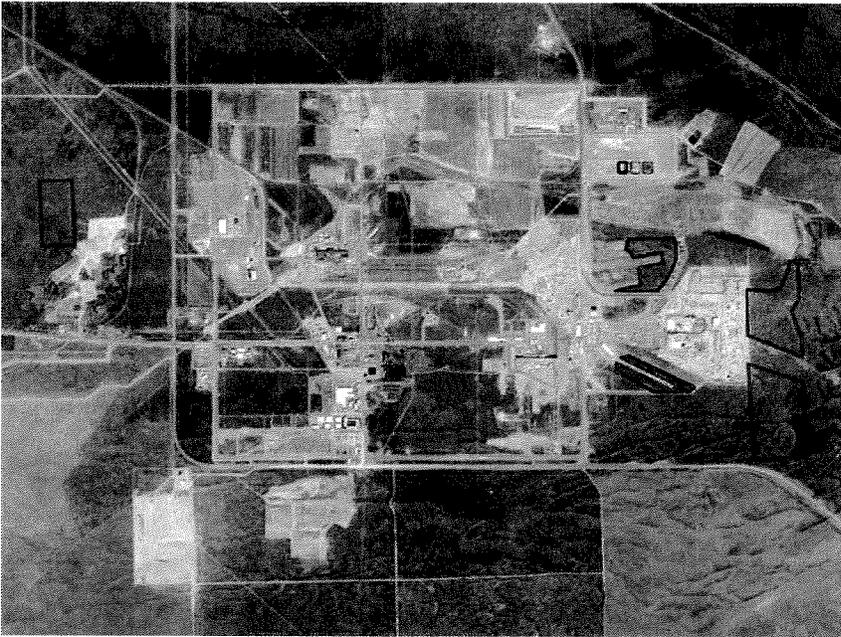


Figure 7. 2003-200-044. Red areas indicate areas surveyed on 8/25/03 and 8/26/03 (overlaid on 2002 aerial photograph).



Figure 8. 2003-200-044. Up close of areas surveyed on 8/25/03 and 8/26/03 west of 200 East Area (overlaid on 2002 aerial photograph).

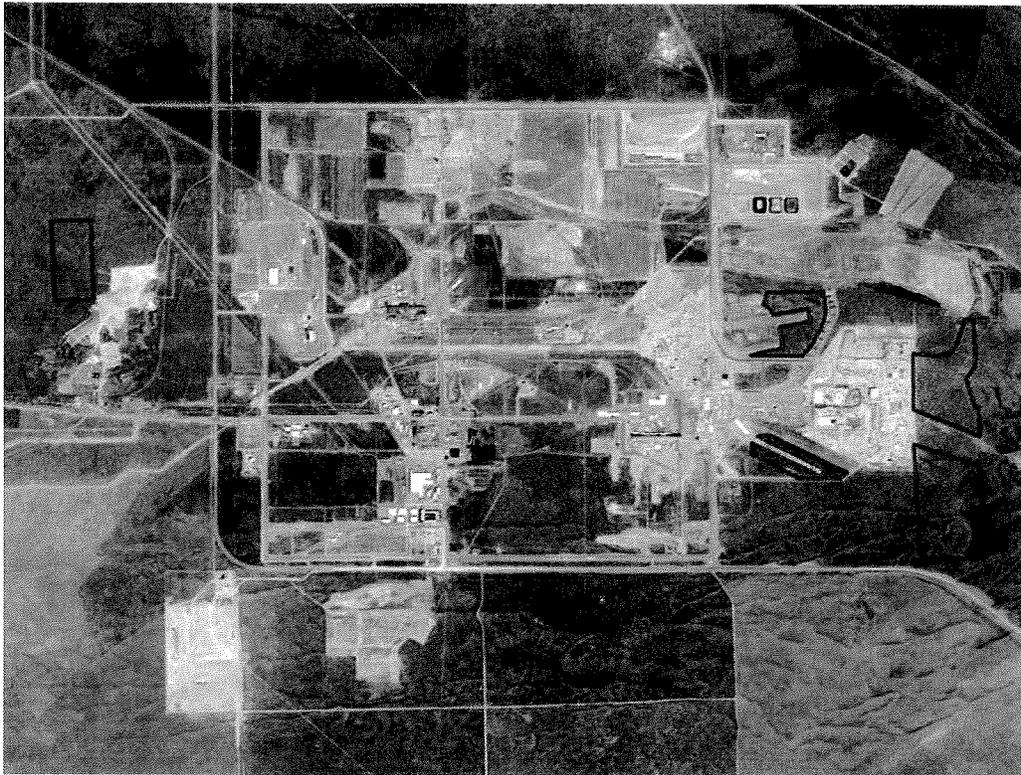


Figure 9. 2003-200-044. Up close of areas surveyed on 8/25/03 and 8/26/03 east of 200 East Area (overlaid on 2002 aerial photograph).

NEPA MATRIX

	Bounding Assumptions in Current NEPA Documentation for the RPP Project¹	Current Planning Assumptions for the Construction and Operation of a Diluents/Flush System and Associated Building, and an Instrumentation, Control, and Electrical Building at the 241-AW and 241-AY/AZ Tank Farms
<u>Resources</u>	\$27.2 Billion for Phased Implementation Alternative (PIA)	Project costs are expected to not exceed \$30 M (inflation not inclusive in cost estimate).
Cost/Expense	2.97E+08 for PIA	
Materials	3.76E+04 for PIA	Activities will follow established procedures to ensure applicable requirements are met. No use of exotic materials is anticipated. Any construction and excavation activities will follow established procedures to ensure applicable requirements are met.
Misc carbon steel (kg)	No rollup for PIA	
Misc stainless steel (kg)	No rollup for PIA	
Carbon steel pipe (m)	No rollup for PIA	
Stainless steel pipe (m)	1.16E+04 for PIA	
Electrical conduit (m)	No rollup for PIA	
Concrete (m ³)	No rollup for PIA	
Excavation (m ³)		
Backfill (m ³)	1.26E+09 for PIA	Project is expected to be completed within fifteen years.
Manpower (person hours)	2.1E+07 for PIA	
Water (m ³)		No new discharges are expected and water will be used primarily for dust control as needed.
<u>Geology/Soil</u>		
Disturbed Land Area (Including contaminated and uncontaminated land)	320 hectares temporary soil disturbance for PIA	~20 acres
Excavation/Mineral Resources	Project requirements included in Excavation and Backfill under <u>Resources</u>	
<u>Air Quality</u>		
Emissions (Including hazardous air pollutants, criteria pollutants, and radionuclides)	No exceedance of Federal or State air quality standards for PIA	This project is not expected to cause an exceedance of any Federal or State air quality standards. Air emission may include limited quantities of pollutants such as particulates which will be controlled as required under the ALARACTS and any applicable air permits.
<u>Water Quality</u>		
Discharges (Including point and non-point to ground and surface water)	No releases that would impact water quality; during construction it was assumed that water in limited quantities would be used for dust control	No release that would impact water quality including point and non-point to ground and surface water. Water will be used in limited quantities for dust control as needed.
<u>Ecological/Biological Resources</u>		
Affected Habitats and Species	220 hectares of shrub-steppe habitat disturbance for PIA	Project areas are primarily gravel or concrete, no native habitat. This project will not have any adverse ecological impacts to flora or fauna.

NEPA MATRIX (cont.)

	Bounding Assumptions in Current NEPA Documentation for the RPP Project1	Current Planning Assumptions for the Construction and Operation of a Diluents/Flush System and Associated Building, and an Instrumentation, Control, and Electrical Building at the 241-AW and 241-AY/AZ Tank Farms
<u>Cultural Resources</u>		
Archaeological and Historical	High potential for impacts at possible borrow sites (McGee Ranch and Vernita Quarry) for PIA; potentially high impacts to historically important waste storage tanks for PIA	Project will not have any cultural impacts – see Battelle Letter 9405630, PNL-7264, & HCRC #2003-200-044.
<u>Socioeconomic</u>		
Effects (Including employment, community and economy impacts)	6,700 additional workers at the Hanford Site during peak time for PIA	N/A
<u>Land Use</u>		
Commitments (Including temporary and permanent)	Approximately 330 hectares temporary land commitments and 49 hectares permanent for PIA	No additional land commitments are expected.
<u>Visual Resources</u>		
	Minor Impacts for PIA	N/A
<u>Noise</u>		
	Some potential for impacts during construction for PIA	No noise impacts are expected. Appropriate PPE will be utilized as needed and required.
<u>Health Effects</u>		
Worker (Including construction, operation and maintenance)	The estimated worker years, based on Manpower person-hours under <u>Resources</u> , were used for evaluation of health effects for PIA	No adverse impacts are expected. Appropriate PPE will be utilized as needed and required.
<u>Accidents</u>		
Occupational and Transportation	Construction accidents were analyzed as a function of PIA labor hours Potential accident scenarios were evaluated and determined to be bounded by the waste transfer accidents evaluated for the waste retrieval and transfer component of PIA	Minimal; job hazard analyses and appropriate PPE will be performed and utilized as required for all construction/operation/maintenance, and walkways/transportation zones will be clearly identified and enforced.

NEPA MATRIX (cont.)

Bounding Assumptions in Current NEPA Documentation for the RPP Project¹	Current Planning Assumptions for the Construction and Operation of a Diluents/Flush System and Associated Building, and an Instrumentation, Control, and Electrical Building at the 241-AW and 241-AY/AZ Tank Farms	
<u>Cumulative Impacts</u>	Resource data was included in the impact analysis and considered in cumulative impacts for PIA	N/A
<u>Environmental Justice</u>	Resource data was included in the impact analysis and considered in environmental justice analysis for PIA	N/A
<u>Permits, Licenses, and Approvals</u>	Potential permits and approval needed for alternatives was addressed in Section 6.2.1 of the TWRS EIS	Excavation and asbestos permits will be obtained as needed. Modifications to air, water/sewer/septic, and dangerous waste permits/approvals will be obtained as required.

¹ Assumptions and impacts for tank waste retrieval and disposal activities are addressed primarily in DOE/EIS-0189, DOE/EIS-0189-SA1, and DOE/EIS-0189-SA2. Resources, assumptions, and impacts noted for Project W-521 are based on conceptual design basis information current as of February 2000. Note: When the TC&WM EIS or other NEPA documents (e.g., EAs, Interim Actions) are issued the environmental impact parameters from those documents will need to be considered when preparing this matrix.



Contract:	00036437	00114	Contract Status:	ISSUED	12/21/2011	
Vendor:	109271	PACIFIC NORTHWEST NATIONAL LABORATORY				
Blanket:	<input checked="" type="checkbox"/>	Contract Value:	\$225,000.00	USD		
Requisition:	00242842	Original Value:	\$100,000.00	USD		
Type:	XCH2CPNF	Field Estimate:	\$100,000.00			
Title:	STATISTICAL SUPPORT FOR PHYSICAL PROPERTY STUDY					
Print:	<input type="checkbox"/>	Automatic Approval of Release:	<input type="checkbox"/>	NTX:	<input checked="" type="checkbox"/>	
Facility:	TOC	Signature:		Pricing Method:	XNA	
Facility Group:		Start Date:	01/03/2012	Internal Value:	<input type="checkbox"/>	
Company:	TC	End Date:	09/30/2012	Invoice Review Percent:		
Execution Date:	12/21/2011	Analyst:	H0076117	Work Complete Percent:		
Project:		Commodity:				
Reference:	OT	WRPS	Taxable:	<input checked="" type="checkbox"/>	Safety Code:	G
Work Location:		Cross Reference:		Priority:		
Security Event:		Image:				

Execute

Previous Release

Next Release (H)

Scope Details

Scope of Work: Scope Updated: H0076117 12/21/2011

Related Information

- Terms
- Materials
- Resources
- Milestones
- S/C and Insura.
- Communications
- Contacts
- Documents
- Change Request
- Amendment
- Performance
- Notes (0)
- Accounting
- Forecast
- Expenditure

V TIMN300 - CONTRACT PROFILE - [Asset Suite PROD]

File Edit Navigate Options View Help

Click OLE icon to view Contract scope.

Contract: 00036437 00104 Contract Status: ISSUED 09/19/2011
 Vendor: 109271 PACIFIC NORTHWEST NATIONAL LABORATORY
 Blanket: Contract Value: \$502,850.00 USD
 Requisition: 00239776 Original Value: \$91,000.00 USD
 Type: XCH2CPNF Field Estimate: \$91,000.00
 Title: PNNL TANK MIXING SUPPORT SERVICES **Execute**

Print: Automatic Approval of Release: NTX:
 Facility: Signature: Pricing Method: XNA **Previous Release**
 Facility Group: Start Date: 10/03/2011 Internal Value: **Next Release(H)**
 Company: TC End Date: 09/30/2012 Invoice Review Percent:
 Execution Date: 09/19/2011 Analyst: H0076117 Work Complete Percent:
 Project: Commodity:
 Reference: OT WRPS Taxable: Safety Code: G
 Work Location: Cross Reference: Priority:
 Security Event: Image:

Scope Details

Scope of Work: Scope Updated: H0076117 09/19/2011

Related Information

Terms	Materials	Resources	Milestones	S/C and Insura
Communications	Contacts	Documents	Change Request	Amendment
Performance	Notes(0)	Accounting	Forecast	Expenditure