

ADMINISTRATIVE DOCUMENT PROCESSING AND APPROVAL

5

DOCUMENT TITLE: Waste Control Plan for the BC Cribs and Trenches Area in the 200-BC-1 OU	OWNING ORGANIZATION/FACILITY: S&GRP
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Document Number:	Revision/Change Number: 2
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 Description Document
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 Revision
 Cancellation

RESPONSIBLE CONTACTS	
Name	Phone Number
Author: MW Benecke	376-0002
Manager: JG Riddelle	372-1684

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("Yes" requires information clearance review in accordance with HNF-PRO-184)

DOCUMENT REVISION SUMMARY

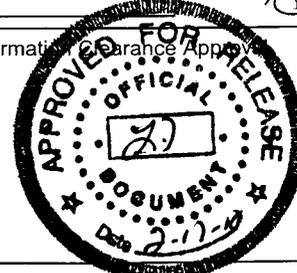
NOTE: Provide a brief description or summary of the changes for the document listed.

Describes waste planning for the Soil Desiccation Pilot Test that will be located in the BC Cribs and Trenches Area

REVIEWERS		Others
Name (print)		Organization
RW Oldham	<i>[Signature]</i> 1/14/10	Environmental Field Services
D Todak	<i>[Signature]</i> 1-19-09	S&GRP, Sample & Data Planning
WR Thackaberry SL HUGGINS	<i>[Signature]</i> 1/15/2010	S&GRP, Operations Assurance

APPROVAL SIGNATURES

Author:	<i>[Signature]</i>	1/19/10	RELEASE / ISSUE DATE: <i>4</i> STA: <i>4</i> HANFORD RELEASE FEB 17 2010 ID: <i>2</i>
Name: (Print) MW Benecke		Date	
Responsible Manager:	<i>[Signature]</i>	1/19/10	
Name: (Print) JG Riddelle		Date	
Other:			
Name: (Print)		Date	

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I. Reviewers Yes Print Signature Public Y/N (If N, complete J)	<table border="0" style="width:100%;"> <tr> <td style="width:15%;">General Counsel</td> <td style="width:5%;"><input checked="" type="checkbox"/></td> <td style="width:25%;"><u>RT Swenson</u></td> <td style="width:30%;"><u>see attached email</u></td> <td style="width:25%;"><input checked="" type="radio"/> Y / N</td> </tr> <tr> <td>Office of External Affairs</td> <td><input type="checkbox"/></td> <td>_____</td> <td>_____</td> <td>Y / N</td> </tr> <tr> <td>DOE-RL</td> <td><input type="checkbox"/></td> <td>_____</td> <td>_____</td> <td>Y / N</td> </tr> <tr> <td>Other <u>/ouo</u></td> <td><input checked="" type="checkbox"/></td> <td><u>D.B. Erb</u></td> <td><u>D.B. Erb</u></td> <td><input checked="" type="radio"/> Y / N</td> </tr> <tr> <td>Other <u>/clearance</u></td> <td><input type="checkbox"/></td> <td><u>GF. Bratton</u></td> <td>_____</td> <td><input checked="" type="radio"/> Y / N</td> </tr> </table>	General Counsel	<input checked="" type="checkbox"/>	<u>RT Swenson</u>	<u>see attached email</u>	<input checked="" type="radio"/> Y / N	Office of External Affairs	<input type="checkbox"/>	_____	_____	Y / N	DOE-RL	<input type="checkbox"/>	_____	_____	Y / N	Other <u>/ouo</u>	<input checked="" type="checkbox"/>	<u>D.B. Erb</u>	<u>D.B. Erb</u>	<input checked="" type="radio"/> Y / N	Other <u>/clearance</u>	<input type="checkbox"/>	<u>GF. Bratton</u>	_____	<input checked="" type="radio"/> Y / N
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J. Comments																										
Information Clearance Approval 																										
If Additional Comments, Please Attach Separate Sheet																										

284

From: Swenson, Raymond T
Sent: Wednesday, January 20, 2010 11:42 AM
To: Benecke, Mark W
Cc: Swenson, Raymond T
Subject: RE: Review request

Mark: I read the revised document and it completely satisfies my recommendations. The current version has no remaining legal issues and is approved for release.

Raymond Takashi Swenson
Environmental Legal Counsel
CH2M Hill Plateau Remediation Company
Raymond_T_Swenson@rl.gov
509-376-3511 Office

From: Benecke, Mark W
Sent: Wednesday, January 20, 2010 6:40 AM
To: Swenson, Raymond T
Subject: RE: Review request
Importance: High

Ray,
Did I interpret your comments correctly? See attached file. If so, please provide email confirmation of your review and approval.
Thanks,
Mark

From: Swenson, Raymond T
Sent: Tuesday, January 19, 2010 6:44 PM
To: Benecke, Mark W
Cc: Swenson, Raymond T; Bensussen, Stanley J; Ruck, Fred A III
Subject: RE: Review request

On page 9 it says:

In addition, if any waste needs to be transported to the Central Waste Complex, the EPA will be contacted to make an offsite determination before the waste is shipped.

On page 13 it says:

Non-radiologically contaminated dangerous waste may be shipped onsite to ERDF or to an offsite facility, contingent upon the waste meeting the offsite RCRA disposal facility's waste acceptance criteria and offsite determination of acceptability by the U.S. Environmental Protection Agency.

Offsite determination of acceptability for waste selected for long-term storage at CWC will be obtained from the U.S. Environmental Protection Agency. In addition, if any waste needs to be transported to the Central Waste Complex, the EPA will be contacted to make any offsite determination before the waste is shipped.

The second statement is generally correct, but it should be clarified as follows:

394

Non-radiologically contaminated dangerous waste may be shipped onsite to ERDF or to an offsite facility, contingent upon the waste meeting the offsite RCRA disposal facility's waste acceptance criteria and offsite determination of acceptability by the U.S. Environmental Protection Agency regional office for the state where the disposal facility is located, in accordance with the National Contingency Plan, 40 CFR Section 300.440(a)(4).

The other two statements quoted above should be deleted from the document. The Central Waste Complex has been operating to accept CERCLA waste generated on the Hanford Site on a continuous basis for years. The purpose of the offsite acceptability requirement is to ensure that a RCRA TSD unit receiving CERCLA waste will not become a new CERCLA release site through improper waste management. The CWC is not the source of releases of hazardous waste, and has been de facto found acceptable to receive CERCLA waste for years. The offsite acceptability determination by each EPA regional office is specific to the TSD unit, NOT to the waste, and once it has been made for the TSD unit, it cannot be revoked except with a formal process that involves appeals and takes some months. The EPA regions do NOT give authorization for individual shipments of waste, or individual waste streams. If EPA Region 10 decides to reclassify CWC as unacceptable to receive CERCLA waste, it can do so by initiating that process. Until such time as it does so, there is no reason to believe that CWC cannot receive CERCLA waste generated on Hanford.

Thus, the statements:

In addition, if any waste needs to be transported to the Central Waste Complex, the EPA will be contacted to make an offsite determination before the waste is shipped.

And

Offsite determination of acceptability for waste selected for long-term storage at CWC will be obtained from the U.S. Environmental Protection Agency. In addition, if any waste needs to be transported to the Central Waste Complex, the EPA will be contacted to make any offsite determination before the waste is shipped.

Are legally incorrect. The NCP does NOT require, or authorize, EPA to give permission to individual shipments or waste streams. It authorizes a TSD unit to receive hazardous waste from CERCLA sites, and that authorization is valid until it is revoked through a formal process. The two statements should be deleted in their entirety.

Raymond Takashi Swenson
Senior Counsel

CH2M Hill Plateau Remediation Company
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From: Benecke, Mark W
Sent: Tuesday, January 19, 2010 10:55 AM
To: Swenson, Raymond T
Subject: Review request

4 of 4

Importance: High

Ray,

Would you please review the attached revision of a Waste Control Plan from a legal perspective? This document will signed by RL and EPA prior to formal release and then be placed in the Administrative Record. Both RL and EPA personnel have informally reviewed this and are ready to sign.

Thanks,
Mark

Waste Control Plan for the BC Cribs and Trenches Area in the 200-BC-1 OU

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

Contractor for the U.S. Department of Energy
under Contract DE-AC06-08RL14788



CH2MHILL
Plateau Remediation Company

P.O. Box 1600
Richland, Washington 99352

Approved for Public Release;
Further Dissemination Unlimited

Waste Control Plan for the BC Cribs and Trenches Area in the 200-BC-1 OU

Program/Project: S&GWR

M. W. Benecke
CH2M HILL Plateau Remediation Company

Date Published
December 2009

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

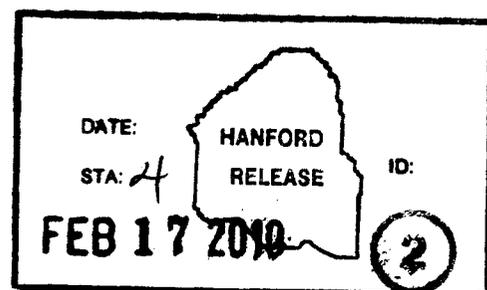
Contractor for the U.S. Department of Energy
under Contract DE-AC06-08RL14788



P.O. Box 1600
Richland, Washington

YEFH
Release Approval

2-17-2010
Date



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WASTE CONTROL PLAN

Work Scope Description:

Install and conduct the Soil Desiccation Pilot Test (SDPT) in the 200-BC-1 Operable Unit (OU) in the BC Cribs and Trenches Area. The SDPT will be located in the cribs region of the OU where two screened wells and five instrumented boreholes have already been installed to support the SDPT. Another twenty shallow boreholes are planned for the purpose of supporting in situ instrumentation and geophysical logging to monitor desiccation progress during the period of active desiccation, and provide monitoring capability afterward. During the period of active desiccation, condensate will be periodically collected and analyzed for radiological and non-radiological contaminants of concern. Geophysical logging will also be conducted. Following the period of active desiccation, up to fifteen additional boreholes are planned to "ground-truth" the data collected and evaluate rewetting behavior over a period of at least five years. The "ground-truthing" activity will involve the collection of sediment samples for subsequent physical and chemical analysis. Additionally, decommissioning of the boreholes and some existing wells will be performed as deemed necessary in future years.

List Contaminants of Concern:

Contaminants of concern at the 200-BC-1 OU include radionuclides, metals, anions, and volatile and semi-volatile organic compounds. See SGW-34278, *Data Quality Objective Summary Report for the Designation of Investigation-Derived Wastes in the 200-BC-1 Operable Unit*.

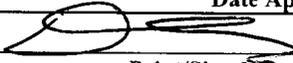
Site Description:

Waste sites in the 200-BC-1 OU include the BC Cribs and Trenches south of the 200 East Area of the Hanford Site in southeastern Washington State. The OU includes 24 waste sites that were formerly in the 200-TW-1 OU and 4 that were in the 200-LW-1 OU. The OU includes 6 cribs, 20 trenches, a siphon tank, and a pipeline. Figure 1 shows the location of these waste sites as well as the locations of the planned boreholes. Additional information on these sites is presented in DOE/RL-2000-38, DOE/RL-2003-44, and DOE/RL-2006-66.

References:

- DOE/RL-2000-38, *200-TW-1 Scavenged Waste Group Operable Unit and 200-TW-2 Tank Waste Group Operable Unit RI/FS Work Plan, Rev. 0 Addendum Draft A*
- DOE/RL-2003-44, *BC Cribs and Trenches 200-TW-1 Operable Unit Borehole Sampling and Analysis Plan, Rev. 0*
- DOE/RL-2004-66, *Focused Feasibility Study for the BC Cribs and Trenches Area Waste Sites, Draft A*
- DOE/RL-2007-13, *Draft A, Sampling and Analysis Plan for High-Resolution Resistivity Correlation for the BC Cribs and Trenches Area*
- D&D-31659, *Geophysical Investigations by High Resolution Resistivity for the BC Cribs and Trenches Area, 2004-2006, Rev. 0*
- DOE/RL-2008-67, *Sampling and Analysis Plan for Characterization of the Soil Desiccation Pilot Test Site, 2008*

Date Approved December 2009

Preparer: <u>David Todak</u>  Date <u>1-19-10</u> <div style="text-align: center; margin-top: 5px;">Print/Sign Name</div>	Impact Level N/A
Project Task Lead: <u>G. B. Chronister</u>  IDW Coordinator: <u>B. D. Madsen</u> 	
Planned Drilling Start and Finish Dates: From: December 2009 To: March 2010 <div style="text-align: right; margin-top: 5px;">July mws 2/16/10</div>	
Waste Storage Facility ID Number(s) N/A	

WASTE CONTROL PLAN

Field Screening Methods				
Method	Frequency	Reference	Detection Limit or Range	Analyst
Alpha/beta-gamma detector	Continuous	DOE/RL-2007-13, Rev. 0	100 d/min alpha 1921 d/min gamma-beta	RCT
Dose rate, gamma	Continuous	DOE/RL-2007-13, Rev. 0	0.5 mR/h	RCT
Photo ionization detector, 11.7, and 11.8 eV lamp for organics	As required in the Health and Safety Plan	DOE/RL-2007-13, Rev. 0	0 to 1,000 ppmv	SSO
Spectral gamma logging	Section 1.4.3 Sections B3.4 & B3.5	DOE/RL-2007-14, Rev. 0	Table 2-1 Table A-13	Contracted borehole logger

Laboratory Methods (Contaminants of concern)				
Method	Frequency	Reference	Detection Range	Analyst
Tables 1-5 and 3-8	Section 3.2	DOE/RL-2007-13, Rev. 0	Table 1-5	On or off site Laboratory
Table 2-2	Section 1.4.3	DOE/RL-2007-14, Rev. 0	Table 2-2	On or off site Laboratory
Table A-13	Section B3.4 Section B3.5	DOE/RL-2007-15, Rev. 0	Table A-13	On or off site Laboratory

200-BC-1 OU Drill Site Location: Multiple locations have been identified for installation of boreholes as shown in Figure 1.

Decommissioning: No wells are currently identified for decommissioning in this OU. If any wells are identified for decommissioning, approval will be sought and granted through discussion at the Unit Manager's Meeting (UMM) and recorded in the UMM minutes.

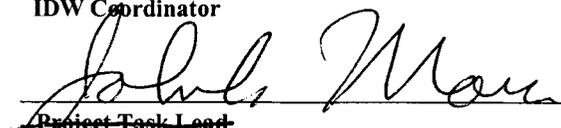
Waste Container Storage Area(s) Coordinate Location(s): One waste container storage areas will be established in the BC Cribs and Trenches Area to manage the investigation-derived wastes generated by the proposed drilling, sampling and decommissioning activities. If these locations need to be moved to accommodate future work, such changes will be approved in Unit Manager's Meetings.

Requirements for Spoils Pile Sampling (if any): Not applicable -All drill cuttings/spoils will be containerized.

Non-regulated Material Disposal Location(s): An off-site Subtitle "D" landfill can be used for disposal of non-regulated miscellaneous solid waste that has been surveyed for radiological release in accordance with PRC-PRO-RP-40026, "Standard Radiological Release Survey for Material and Equipment." Non-regulated soil waste may be returned to the ground at or near the point of excavation in accordance with GRP-EE-02-14.5: *Returning Vadose Zone Drill Cuttings/Soils to the Environment*, the location of which will be documented in the field logbook. Liquid wastes (e.g. purgewater, decontamination fluids) will be collected and taken to the Purgewater Storage and Treatment Facility (PSTF) or the Effluent Treatment Facility (ETF).

200-BC-1 OU Sketch of Work Site: Figure 1 identifies the borehole locations and waste container storage area at the BC Cribs and Trenches Area.

APPROVALS (Print/Sign Name and Date)

 Lead Regulatory Agency Representative	 IDW Coordinator
JOHN G. MORSE, ACTING DOE-RL Project Task Lead	 Project Task Lead m/w Benches for 9 Character

ATTACHMENT 1

DESCRIPTION OF WORK

CONTENTS

1.0 DESCRIPTION OF WORK1
1.1 WASTE STREAMS2
1.2 WASTE GENERATION AND MANAGEMENT2
 1.2.1 Miscellaneous Solid Waste.....3
 1.2.2 Vadose Zone Drill Cuttings3
 1.2.3 Condensate.....3
 1.2.4 Decontamination Fluids4
 1.2.5 Equipment and Construction Materials4
 1.2.6 Non-dangerous/No-Radiation-Added Solid Waste.....4
 1.2.7 Unplanned Release.....5
1.3 MANAGEMENT OF WASTE CONTAINERS5
1.4 STORAGE AND FINAL DISPOSAL.....5
 1.4.1 Material Handling and Transportation.....6
1.5 RECORDS7
1.6 ESTIMATE OF INVESTIGATION-DERIVED WASTE QUANTITIES7
1.7 IDENTIFICATION OF WELLS7

2.0 REFERENCES10

FIGURES

Figure 1. 200-BC-1 Location Map and Waste Container Storage Areas 8

TABLES

Table 1. Estimate of Investigation-Derived Waste Quantities..... 8
Table 2. 200-BC-1 Borehole Well List..... 9

TERMS

CERCLA	<i>Comprehensive Environmental Response, Compensation and Liability Act of 1980</i>
ERDF	Environmental Restoration Disposal Facility
ID	identification
IDW	investigation-derived waste
MSW	miscellaneous solid waste
OU	operable unit
PPE	personal protective equipment
PUREX	Plutonium-Uranium Extraction (Plant)
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
RCT	radiological control technician
REDOX	Reduction-Oxidation (Plant)
TRU	transuranic (waste materials contaminated with 100 nCi/g of transuranic materials having half-lives longer than 20 years)
TSD	treatment, storage, and disposal
WAC	<i>Washington Administrative Code</i>
WESF	Waste Encapsulation and Storage Facility
WMS	waste management specialist

1.0 DESCRIPTION OF WORK

This waste control plan (WCP) governs the management of investigation-derived waste (IDW) generated at the BC Cribs and Trenches (Figure 1) under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). This revision incorporates applicable elements of TPA Change Notices issued since issuance of Revision 1 of this document, but it does not incorporate those elements that addressed activities that have been completed or no longer planned. The planned work scope includes activities detailed in *Field Test Plan for the Soil Desiccation Pilot Test* (DOE/RL-2010-04). This treatability test will assess the suitability of vadose zone desiccation to slow the transport of mobile contamination toward groundwater. The field test plan is derived from DOE/RL-2007-56, *Deep Vadose Zone Treatability Test Plan for the Hanford Central Plateau*, which outlined activities to be conducted to satisfy requirements of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and is applicable to the entire central plateau. The soil desiccation treatability test site is located within the BC Cribs and Trenches Area that is defined by the 200-BC-1 Operable Unit (OU). The 200-BC-1 OU draft A focused feasibility study (DOE/RL-2004-66) recognized the deep vadose zone Tc-99 contamination and the potential need for in situ treatment to protect groundwater. The 200-BC-1 OU was created by the TPA following the recommendation of regulators to remove the BC Cribs and Trenches waste sites from the 200-TW-1 OU and address them separately as a geographically-based OU. Initial characterization of the BC Cribs and Trenches Area waste sites was guided by DOE/RL-2000-38, *200-TW-1 Scavenged Waste Group Operable Unit and 200 TW-2 Tank Waste Group Operable Unit RI/FS Work Plan*.

The work activities currently planned include the near-term drilling of twenty boreholes in the vicinity of the 216-B-17 and 216-B-19 Cribs. Each will be located outside of individual waste site boundaries in locations where Tc-99, nitrate, and other mobile contaminants may be expected. The boreholes are part of the Soil Desiccation Pilot Test (SDPT) and will be used to monitor test progress. Some of the holes will be instrumented and others will be devoted to geophysical logging. These boreholes will eventually be decommissioned. Although these are the only boreholes currently slated for decommissioning, there may be other wells in the 200-BC-1 OU that do not meet modern construction criteria and which will be similarly decommissioned. Waste generated from the SDPT and from decommissioning activities is IDW and will be designated based on sample data and/or surrounding waste site characterization data. Following completion of the active period of soil desiccation, up to another fifteen boreholes will be installed to ground-truth the geophysical data and monitor rewetting over a period of at least five years. Focus of the SDPT is to collect data to support consideration of soil desiccation as a remedy to protect groundwater.

All wastes generated during this project will be managed in accordance with this waste control plan and state and Federal regulations. An overview of the waste management strategy for the 200 Areas waste sites is presented in Appendix E of DOE/RL-98-28, *200 Areas Remedial Investigation/Feasibility Study Implementation Plan – Environmental Restoration Program*. Every effort will be used to minimize waste generated during this project.

1.1 WASTE STREAMS

One or all of the below waste streams are anticipated and may fall into any combination of the following categories: transuranic (TRU), radioactive, mixed, hazardous, dangerous, suspect radioactive, suspect dangerous, suspect mixed, and nonregulated:

Miscellaneous solid waste (e.g., rubber, glass, paper, personal protective equipment, cloth, plastic, metal)

Drill cuttings, soils, and slurries

Condensate/entrained pore water that is partitioned from the extracted soil gas

Decontamination fluids

Equipment and construction materials (e.g., well casing, drill string, drive barrel, construction equipment and materials, sampling equipment, decommissioning materials, wooden pallets)

Nondangerous/no-radiation-added (nonradioactive) solid waste (e.g., paper, wood, construction debris, metal, plastic, glass)

Unplanned release and associated cleanup material

Well decommissioning waste (e.g. miscellaneous solid waste (MSW), drill cuttings, soils & slurry, decontamination fluids and purgewater, equipment and construction debris).

1.2 WASTE GENERATION AND MANAGEMENT

All solid waste generated will be recorded in the geologist and/or buyer technical representative logbook, with such details as the location and type of waste, depth of sample, date of initial placement into container, date the container was sealed, and Package Identification Number. Condensate waste generation will be similarly documented. Marking, labeling, segregation, and staging of waste containers will be performed in accordance with a waste packaging and labeling instruction (WPLIS) or as directed by the waste management specialist (WMS). Waste will be stored at the site-specific waste container storage area as shown in Figure 1. Future well decommissioning activities may require additional site-specific waste container storage areas, which will be approved in the Unit Manager's Meeting (UMM) and recorded in the UMM minutes. The IDW will be stored at these areas until analytical data are evaluated for proper waste designation and will be disposed of at the Environmental Restoration Disposal Facility (ERDF) if it meets the waste acceptance criteria specified in WCH-191, *Environmental Restoration Disposal Facility Waste Acceptance Criteria*. If TRU waste is encountered, it will be sent to the Hanford Site Central Waste Complex for storage. Any waste transported to the Central Waste Complex for storage must be dispositioned in accordance with the work plan required by TPA Milestone M-016-93 for TRU waste generated by CERCLA cleanup actions of the Hanford Site, and the final M-016 Cleanup Schedule.

If, after characterization and designation of the waste is completed, the waste must be stored for longer than six months at the Waste Container Storage Area, the U.S. Department of Energy, Richland Operations Office (RL) will obtain concurrence from the lead regulatory agency on the current storage, treatment, and disposal options and schedule for disposition of the waste.

Details on the types and management of expected wastes are provided in the following subsections.

1.2.1 Miscellaneous Solid Waste

Well decommissioning wastes are to be treated as suspect dangerous or suspect mixed waste based on process knowledge and representative waste site characterization sample results. Refer to the specific data quality objective for process knowledge and representative analytical data. Some waste associated with decommissioning may be considered environmentally controlled material or nondangerous/no-radiation-added solid waste based on process knowledge and representative analytical data. Decommissioning waste shall be containerized, marked, segregated, staged and dispositioned as stated below.

Miscellaneous solid waste (MSW) that has contacted suspect dangerous or suspect mixed waste will be treated as such. Field screening will be used to segregate radioactive IDW from no-radiation-added (non-radioactive) IDW. The MSW will be placed in a plastic bag, taped closed, marked to indicate the associated borehole footage interval, and placed in container(s) specific to each area of potential contamination. Container(s) will be properly marked and labeled. The containers will be segregated from other materials, based on field screening results and location, and then staged at the designated site-specific waste container storage area. The containers of MSW will be dispositioned using analytical results obtained from the soil contacted.

1.2.2 Vadose Zone Drill Cuttings

Vadose zone drill cuttings are to be treated as suspect radioactive, dangerous, or mixed waste, based on process knowledge and field screening results. Drill cuttings shall be containerized in properly labeled mid-performance coated drums with 10-mil reinforced plastic liners to mitigate the spread of contaminants to the environment. Containers will be properly marked and labeled. Mark the container lid with the date, well name, start and close date, start depth and ending depth, gross weight, and sampling date. CHPRC may elect to package drill cuttings in roll-on/roll-off containers (ERDF cans) instead of drums. If so, those containers will be marked and labeled and transported to the ERDF.

If screening levels indicate that the cuttings may be characterized as TRU waste, the cuttings containers also will have approved vented lids. The containers will be segregated from other materials, based on field screening results and location, and then staged at the designated site-specific waste container storage area. The containers of drill cuttings will be dispositioned using analytical results associated with the contaminated media contacted.

Miscellaneous solid waste (MSW) that has contacted suspect dangerous or suspect mixed waste will be treated and marked as such. Field screening will be used to segregate radioactive from no-radiation-added (non-radioactive) waste. Containers will be properly marked and labeled. The containers will be segregated from other materials, based on field screening results and location, and then staged at the designated site-specific waste container storage area. The containers of MSW will be dispositioned using analytical results obtained from the soil contacted.

1.2.3 Condensate

Condensate (and entrained soil pore water) that is partitioned from the extracted soil gas will be contained, sampled, transported, and discharged at the 200 Area Effluent Treatment Facility, or

at the Hanford Site 600 Area Purgewater Storage and Treatment Facility (ModuTanks)¹ in accordance with Appendix F of the *Hanford Federal Facility Agreement and Consent Order* (Ecology et al. 1989). If necessary, decontamination fluids can be containerized and stored at the designated site-specific waste container storage area.

1.2.4 Decontamination Fluids

Decontamination fluids (water and/or non-dangerous cleaning solutions) generated from cleaning equipment and tools in the OU will be contained, transported, and discharged at the 200 Area Effluent Treatment Facility, or at the Hanford Site 600 Area Purgewater Storage and Treatment Facility (ModuTanks)² in accordance with Appendix F of the *Hanford Federal Facility Agreement and Consent Order* (Ecology et al. 1989). If necessary, decontamination fluids can be containerized and stored at the designated site-specific waste container storage area.

Additional chemical decontamination of sample equipment may be conducted at the Waste Sampling and Characterization Facility (WSCF), because decontamination and containment systems already are established at this location. The waste generated at the WSCF is not considered IDW and will be managed in accordance with applicable regulations and requirements.

1.2.5 Equipment and Construction Materials

Equipment and construction materials in contact with suspect dangerous and suspect mixed waste will be decontaminated with a three-bucket wash or a high-temperature and high-pressure wash (180 °F and >1000 lbf/in.²) within a wash basin capable of retaining rinsate, or it will be treated as MSW. Steam cleaning may be used if other methods are ineffective. All water used for decontamination activities shall be potable (i.e., Hanford Site potable water or City of Richland water). Rinsate shall be managed as described in Section 1.2.3. All sampling equipment shall be cleaned and decontaminated for chemical contamination after radiological release by a radiological control technician (RCT). If contamination is determined to be fixed for any equipment or materials, the radiological control technician and task manager will make the decision to remove the contamination using more aggressive methods or to dispose of the equipment. If necessary, equipment and construction materials can be containerized and stored at the designated site-specific waste container storage area.

1.2.6 Non-dangerous/No-Radiation-Added Solid Waste

All non-dangerous/no-radiation-added (non-radioactive) solid waste that is radiologically released will be disposed to an offsite solid-waste landfill. This waste will not have contacted any suspect dangerous or mixed waste and will be free of any liquids. Items in this category include paper, wood, construction debris, metals, plastic, food waste, glass, etc. A radiological release certification form and/or the well identification number and date of generation should be attached and visible from outside the trash bag. If necessary, non-dangerous/no-radiation-added solid waste can be containerized, segregated, and stored at the designated site-specific waste container storage area.

¹ ModuTank is a trademark of ModuTank Inc., Long Island City, New York.

² ModuTank is a trademark of ModuTank Inc., Long Island City, New York.

1.2.7 Unplanned Release

The initial response to emergency and non-emergency events and conditions shall follow the direction provided in the individual work location Health and Safety Plan (HASP). Once the initial assessment is completed and appropriate measures have been taken to curtail and contain the spill or release, the WMS will ensure that compatible waste container(s) are properly marked, labeled, and segregated from other materials based on process knowledge, field screening results, and location and then will be staged at a designated site-specific waste container storage area. The containers will be dispositioned using analytical results or process knowledge. These actions will be conducted in accordance with the requirements of WAC 173-303, "Dangerous Waste Regulations," and 40 *Code of Federal Regulations* (CFR) 302, "Designation, Reportable Quantities, and Notification."

1.3 MANAGEMENT OF WASTE CONTAINERS

All containers of IDW will be managed in accordance with the applicable substantive federal and/or state requirements including labels which define the known major risks, dangerous waste codes, and if awaiting analysis, wording which states "waste pending analysis" with the date of initial sampling. The containers will be stored inside the applicable site-specific waste container storage area. The waste container storage areas shown in Figure 1 may be relocated within or adjacent to the identified waste sites to accommodate changes in the field operations. If a waste container storage area is relocated, the lead regulatory agency will be notified before the change and relocation of the waste container storage area. Containers awaiting analytical results will be marked and labeled "Waste Pending Analysis," as prescribed in the preceding sections. Containers of hazardous waste or waste pending analysis will received weekly inspections to document the integrity of containers/packages; proper marking or labeling; physical container and package placement; storage area boundaries, identification, warning signs; and spill control. Containers and packages showing signs of deterioration will be identified on the container inspection form and immediately over packed or repackaged. Other waste containers will be inspected monthly.

Spills or releases will be reported as stated above. In the event of a spill or release, appropriate immediate action will be taken to protect human health and the environment.

1.4 STORAGE AND FINAL DISPOSAL

It is anticipated that all IDW will be stored at the site-specific waste container storage area until the waste samples are returned and the proper waste shipping papers are completed. In the event that samples returns are delayed, the majority of waste containers may be shipped for disposal, provided that sufficient, appropriate containers remain in the waste container storage area for packaging of samples upon their return. The process to develop proper waste shipping papers includes the following: receipt of analytical results, designation, profiling, and proper disposition of paperwork. The designation process ensures that the waste will be profiled for the proper disposal facility. Waste profiling provides information concerning each waste stream. The designation and profiling are conducted in accordance with dangerous waste regulation requirements (WAC 173-303-070, "Designation of Dangerous Waste" through 173-303-100). Dangerous waste will be evaluated for applicable land disposal restrictions in accordance with WAC 173-303-140, "Land Disposal Restrictions." The presence of polychlorinated biphenyls will be evaluated in accordance with the *Toxic Substances Control Act of 1976* and WAC 173-303-9904, "Dangerous Sources List." Radiological wastes will be determined to be

acceptable for near surface (onsite) disposal if the all ERDF waste acceptance criteria are satisfied.

The IDW that does not meet the ERDF waste acceptance criteria will remain at the designated site-specific waste container storage area pending storage at CWC or disposal at an appropriate location. A case-by-case disposal determination will be made in instances where IDW exceeds the ERDF waste acceptance criteria. Any IDW requiring treatment before disposal, and/or disposal at an off site facility, requires approval by the lead regulatory agency.

Wastes that cannot be radiologically released that do meet the ERDF waste acceptance criteria will be transported to the ERDF for disposal (ERDF is an "onsite" approved waste disposal facility).

If TRU levels of contamination are encountered, the suspect waste will be placed within engineered segregated boundaries of the designated storage area and posted according to radiological posting requirements. After representative samples are analyzed and the material is designated/characterized, the proper disposal facility will be selected. If the Central Waste Complex (CWC) is selected for long-term storage, soil sample(s) designated as TRU waste will be returned and placed back into the stored waste drum associated with the interval from which the sample was taken before it is shipped. Non-radiologically contaminated dangerous waste may be shipped to ERDF or to an offsite facility, contingent upon the waste meeting the offsite RCRA disposal facility's waste acceptance criteria and offsite determination of acceptability by the U.S. Environmental Protection Agency regional office for the state where the disposal facility is located, in accordance with the National Contingency Plan, 40 CFR Section 300.440(a)(4). Any waste transported to the Central Waste Complex must be dispositioned in accordance with the work plan required by TPA milestone M-016-93 for TRU waste generated by CERCLA cleanup actions at the Hanford Site and in accordance with the final M-016 cleanup schedule.

Miscellaneous solid waste identified as non-dangerous/no-radiation-added solid waste that does not require disposal at ERDF and meets the Hanford Site free-release criteria may be disposed of in an appropriate solid waste disposal facility (Subtitle "D" landfill).

1.4.1 Material Handling and Transportation

All contaminated materials, including drill cuttings, condensate, disposable protective clothing, and trash, will be properly packaged, handled, and transported in accordance with this Waste Control Plan. Contaminated bulk materials will be hauled in the standard ERDF open-top, hinged-gate roll-off boxes that are designed for a maximum payload of approximately 18.1 metric tonnes (20 tons) or an approved alternative. The bulk containers will be transported on roll-on/roll-off trailers with hydraulic dumping capabilities that are towed by conventional tractor units. Containers will be transported from the BC Cribs and Trenches Area to the ERDF over existing Hanford Site roadways. Each shipment transported to ERDF will be referenced to a waste profile that is intended to bound the levels of hazardous constituents in the material found at the waste site. The waste profile is in effect unless until the characteristics of the excavation site change significantly. Empty bulk containers returning from the ERDF will be removed from the ERDF tractor trailers in the CERCLA Waste Management Area and rolled on to project haul trucks for refilling.

Containers and ERDF haul trucks being released from radiologically-controlled areas will meet exterior contamination limits for staging and transport.

1.5 RECORDS

Original copies of all waste inventory documentation will be forwarded to the assigned WMS to be included in the waste file and to initiate waste tracking in the *Solid Waste Information Tracking System*, if required. The completed waste files will be included in the project file following final waste disposition in accordance with applicable records management processes.

1.6 ESTIMATE OF INVESTIGATION-DERIVED WASTE QUANTITIES

Estimates of the amount of waste that will be generated during this field investigation are given in Table 1. These quantities are based on IDW generated during previous 200 Areas drilling and excavation activities.

1.7 IDENTIFICATION OF WELLS

Table 2 identifies the wells planned.

Figure 1. 200-BC-1 Location Map and Waste Container Storage Area

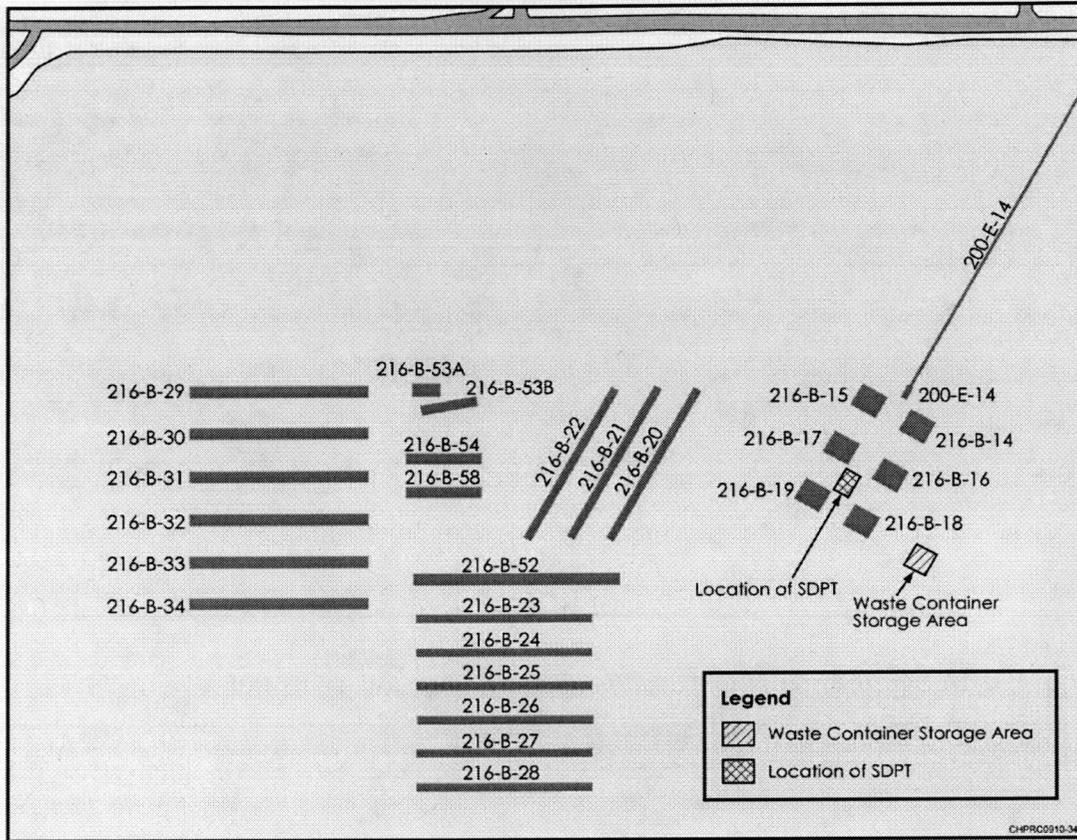


Table 1. Estimate of Investigation-Derived Waste Quantities.

Operable Unit	Method	Liquid Wastes	Soil Wastes	Miscellaneous Solid Waste	
		Purgewater and decon fluids (drums ^a)	Drill Cuttings (drums ^a /Containers ^b)	PPE/Trash	Disposable Equipment
200-BC-1	Drilling	10	30 drums ^a or 1 ERDF box	10 drums ^a	1000 linear feet drill casing
200-BC-1	Decommissioning	N/A	N/A	TBD	TBD
200-BC-1	SDPT operation	15 ^c	N/A	4 drums ^a	TBD

^a 208-L (55-gal) drums.

^b ERDF roll-off container maximum payload: 18.1 MT (20 tons).

PPE = personal protective equipment.

^c assume pore water entrapment for up to 30 days

Table 2. 200-BC-1 Borehole Well List.

Area	Operable Unit	Waste Site Code	Site Type	Hanford Well ID	Function
200 East	200-BC-1	216-B-16/17	Crib	299-E13-62/C5923 ^a	Injection well
200 East	200-BC-1	216-B-16/17	Crib	299-E13-65/C7047 ^a	Extraction well
200 East	200-BC-1	216-B-16/17	Crib	C57051 ^a	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7052 ^a	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7053 ^a	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7054 ^a	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7055 ^a	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7522	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7523	L ^c
200 East	200-BC-1	216-B-16/17	Crib	C7524	I ^a
200 East	200-BC-1	216-B-16/17	Crib	C7525	L ^c
200 East	200-BC-1	216-B-16/17	Crib	C7526	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7527	L ^c
200 East	200-BC-1	216-B-16/17	Crib	C7528	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7529	L ^c
200 East	200-BC-1	216-B-16/17	Crib	C7530	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7531	L ^c
200 East	200-BC-1	216-B-16/17	Crib	C7532	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7533	L ^c
200 East	200-BC-1	216-B-16/17	Crib	C7534	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7535	L ^c
200 East	200-BC-1	216-B-16/17	Crib	C7536	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7537	L ^c
200 East	200-BC-1	216-B-16/17	Crib	C7538	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7539	L ^c
200 East	200-BC-1	216-B-16/17	Crib	C7540	I ^b
200 East	200-BC-1	216-B-16/17	Crib	C7541	L ^c
200 East	200-BC-1	216-B-16/17	Crib	15 wells, C7793 – C7807	Ground-truthing

^a already installed^b Instrumented monitoring borehole^c Logging borehole

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