ENGINEERING CHANGE NOTICE

Page 1 of 21. ECN **604664**Proj.
ECN

2. ECN Category (mark one) Supplemental ☐ Direct Revision ☒ Change ECN ☐ Temporary ☐ Standby ☐ Supersedure ☐ Cancel/Void ☐	3. Originator's Name, Organization, MSIN, and Telephone No. T. M. Greager, Solid Waste Systems Engineering, T3-01, 376-4344	3a. USQ Required? ☐ Yes ☒ No	4. Date May 7, 1996														
	5. Project Title/No./Work Order No. Interface Control Document Between Liquid Effluent Services and Solid Waste Disposal Division	6. Bldg./Sys./Fac. No. LES	7. Approval Designator N/A														
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) WHC-SD-WM-PICD-001, Rev. 0	9. Related ECN No(s). N/A	10. Related PD No. N/A														
11a. Modification Work ☐ Yes (fill out Blk. 11b) ☒ No (NA Blks. 11b, 11c, 11d)	11b. Work Package No. N/A	11c. Modification Work Complete N/A Cog. Engineer Signature & Date	11d. Restored to Original Condition (Temp. or Standby ECN only) N/A Cog. Engineer Signature & Date														
12. Description of Change The Liquid Effluent Services Interface Control Document (ICD) that was released on October 28, 1994 has undergone a significant revision to reflect volume changes identified in the 1996 through 2025 Waste Volume Forecast that was developed in July 1995. Also, the volume data is now presented in terms of cubic meters (m ³) rather than cubic feet (ft ³). This ICD will be revised and released later in 1996 to reflect changes from the 1997 through 2026 waste volume forecast.																	
13a. Justification (mark one) Criteria Change ☒ Design Improvement ☐ Environmental ☐ Facility Deactivation ☐ As-found ☐ Facilitate Const ☐ Const. Error/Omission ☐ Design Error/Omission ☐																	
13b. Justification Details																	
14. Distribution (include name, MSIN, and no. of copies) <table border="0"> <tr> <td>TM Greager T3-01 1</td> <td>KL Hladek T3-01 1</td> </tr> <tr> <td>RJ Giroir T4-05 1</td> <td>WH Hamilton T3-01 1</td> </tr> <tr> <td>PL Hapke T4-05 1</td> <td>SS Lowe H6-29 1</td> </tr> <tr> <td>AJ DiLiberto H6-10 1</td> <td></td> </tr> <tr> <td>DE McKenney T3-01 1</td> <td></td> </tr> <tr> <td>JG Riddelle T3-01 1</td> <td></td> </tr> <tr> <td>OJ Valero T3-01 1</td> <td></td> </tr> </table> <div style="text-align: right; margin-top: 20px;"> A3-88 18-04-Orig </div>				TM Greager T3-01 1	KL Hladek T3-01 1	RJ Giroir T4-05 1	WH Hamilton T3-01 1	PL Hapke T4-05 1	SS Lowe H6-29 1	AJ DiLiberto H6-10 1		DE McKenney T3-01 1		JG Riddelle T3-01 1		OJ Valero T3-01 1	
TM Greager T3-01 1	KL Hladek T3-01 1																
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AJ DiLiberto H6-10 1																	
DE McKenney T3-01 1																	
JG Riddelle T3-01 1																	
OJ Valero T3-01 1

ENGINEERING CHANGE NOTICE

Page 2 of 2

1. ECN (use no. from pg. 1)

604664

15. Design Verification Required

☐ Yes
☒ No

16. Cost Impact

ENGINEERING

Additional ☐ \$
Savings ☐ \$

CONSTRUCTION

Additional ☐ \$
Savings ☐ \$

17. Schedule Impact (days)

Improvement ☐
Delay ☐

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐	Tickler File	☐
Environmental Report	☐	Inspection Plan	☐	Solid Waste Technical Baseline	☒
Environmental Permit	☐	Inventory Adjustment Request	☐		☐

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision

Document Number/Revision

Document Number Revision

20. Approvals

Signature

Date

Signature

Date

OPERATIONS AND ENGINEERING

Cog. Eng. T. M. Greager *T. M. Greager* 5-7-96
Cog. Mgr. K. L. Hladek *K. L. Hladek* 5-8-96
QA _____
Safety _____
Environ. _____
Other _____
W. H. Hamilton Jr. *W. H. Hamilton Jr.* 5/22/96
A. J. DiLiberto *A. J. DiLiberto* 5-20-96
S. S. Lowe *S. S. Lowe* 5-9-96
J. D. Williams *J. D. Williams* 5-17-96
D. E. McKenney *D. E. McKenney* 5-22-96

ARCHITECT-ENGINEER

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QA _____
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Design _____
Environ. _____
Other _____

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

Interface Control Document Between Liquid Effluent Services and Solid Waste Disposal Division

T. M. Greager

Westinghouse Hanford Company, Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-87RL10930

EDT/ECN: 604664 UC: UC-510
Org Code: 87320 Charge Code: A1003
B&R Code: EW3130020 Total Pages: 63

Key Words: Interface Control Document, Solid Waste, Waste Volume Forecast, Liquid Effluent

Abstract: The interfacing responsibilities regarding solid waste management are described for the Solid Waste Disposal Division and Liquid Effluent Services.

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Release Approval

6/3/96
Date

Approved for Public Release

Document Title: LIQUID EFFLUENT SERVICES AND SOLID WASTE DISPOSAL
INTERFACE CONTROL DOCUMENT

Approved by:

5/24/96

A. J. DiLiberto, Director
Liquid Effluent Services

Approved by:

5/22/96

W. H. Hamilton, Jr., Director
Solid Waste Disposal

LIQUID EFFLUENT SERVICES AND SOLID WASTE DISPOSAL INTERFACE CONTROL DOCUMENT

1.0 PURPOSE

This interface control document (ICD) between Liquid Effluent Services (LES) and Solid Waste Disposal (SWD) establishes a baseline description of those wastes that will require management as part of the interface between the two divisions. Since Liquid Effluent Services and Solid Waste Disposal have distinct missions at the Hanford Site, it is important that each division has a clear understanding of the other division's expectations regarding the interfaces. This ICD deals with liquid wastes generated by the SWD and solid wastes generated by the LES. The baseline description of wastes includes waste volumes, characteristics and timing for use in planning the proper waste management capabilities.

This document satisfies the requirement for LES providing an annual 30-year forecast for solid waste generation as stated in the Hanford Site Solid Waste Acceptance Criteria (WHC-EP-0063-4, Section 1.3.2), and RLID 5820.2A (Radioactive Waste Management, 3.b.(2) and 3.c.(1)). The information presented in this document will be reevaluated at least annually or when significant changes to either program occur.

This ICD is reflected in the Solid Waste Program Technical Baseline Document (WHC-SD-WM-RPT-060) and can be changed only by use of an engineering change notice (ECN) approved by representatives of both Liquid Effluent Services and Solid Waste Disposal.

2.0 LIQUID EFFLUENTS GENERATED BY SOLID WASTE DISPOSAL REQUIRING MANAGEMENT BY LIQUID EFFLUENT SERVICES

Liquid Effluent Services will manage the liquid wastes generated by Solid Waste Disposal over the 30 year planning period covered in this ICD. These wastes include approximately 115 m³ (30,000 gallons) annually of T-Plant waste water and approximately 760 m³ (200,000 gallons) annually of leachate from the Low Level Mixed Waste trenches. Acceptance of unique or unusual wastes will be handled on a case by case basis. Quantities of unique or unusual wastes are expected to be minimal. Any changes to the information regarding these wastes will be updated in this document through formal revision requiring an ECN.

Liquid Effluent Services will not provide for the collection of any liquid waste generated by Solid Waste Disposal requiring treatment other than normal lag storage at Liquid Effluent Services operated treatment facilities. SWD will be responsible for collection of liquids at its facilities. Solid Waste will provide treatment systems to condition the waste as needed to make the waste compatible for treatment in Liquid Effluent Services facilities. Solid Waste Disposal will arrange for transportation of liquid waste to Liquid Effluent Services facilities. Liquid Effluent Services will provide treatment capacity to treat the quantity of liquid waste generated by Solid Waste Disposal providing that all permit conditions are met. Liquid Effluent Services will provide for the discharge of liquid effluents that have been treated.

Table 2. Waste Volume (In m³) Forecast of Solid Waste Generated by Liquid Effluent Services Requiring Treatment, Storage and Disposal for Fiscal Years 1996-2025

Waste Source/Category	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
200 Area ETF																
CH-LLMW-I	74.4	18.9	22.7	23.4	30.2	22.9	23.3	22.8	23	24.6	25	25	25	25	25	25.1
CH-LLMW-III	115	34.9	31	38.1	47.7	16.7	14.8	15.3	19.8	90.4	174	174	174	174	174	181
Hazardous	3.7	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
300 Area TEDF																
CH-LLW-I	159	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
340 Waste Handling Facility																
CH-LLMW-I	0.8	0.6	0.6	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0
CH-LLW-I	41	20	20	20	20	0	0	0	0	0	0	0	0	0	0	0
Waste Source/Category																
2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total	
200 Area ETF																
CH-LLMW-I	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	786.3
CH-LLMW-III	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	4045.2
Hazardous	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	148.7
300 Area TEDF																
CH-LLW-I	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	4509
340 Waste Handling Facility																
CH-LLMW-I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.2
CH-LLW-I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	121

Table 3. Waste Volume (In m³) Forecast of Solid Waste Generated by RCRA Monitoring
Requiring Treatment, Storage and Disposal for Fiscal Years 1996-2025

Waste Source/Category	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Well Drilling																
CH-LLW-I	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	
CH-LLMW-I	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
Hazardous	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	
Waste Source/Category	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Well Drilling																
CH-LLW-I	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	9000
CH-LLMW-I	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	810
Hazardous	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	9000

3.0 SOLID WASTE GENERATED BY LIQUID EFFLUENT SERVICES REQUIRING MANAGEMENT BY SOLID WASTE DISPOSAL

Solid Waste Disposal will manage the solid wastes generated by Liquid Effluents Services as identified in Appendix A. Acceptance of unique waste will be handled on a case by case basis. These quantities (unique wastes) are expected to be minimal. Annual solid waste forecasts will continue to be performed as required under DOE Order 5820.2A/RLID 5820.2A to update the information provided in this interface control document. Any changes to the information regarding these wastes will be updated in this document through formal revision requiring an ECN.

Solid wastes generated by Liquid Effluent Services will be accepted by Solid Waste Disposal provided the waste meets the established criteria as provided in the Hanford Site Solid Waste Acceptance Criteria (Reference 1). Solid Waste Disposal will provide storage, treatment and disposal as necessary for the solid waste generated by Liquid Effluent Services described in Appendix A.

Appendix A contains the baseline waste projections for solid waste generated by Liquid Effluent Services and the RCRA and Operations Monitoring Program requiring storage, treatment, and/or disposal. The waste volumes forecasted are for streams originating from the 200 Area Effluent Treatment Facility, 300 Area Treated Effluent Disposal Facility, and the 340 Waste Handling Facility. In addition, solid waste is generated by the decommissioning, remediation, and repair of groundwater and vadose monitoring wells, and occasionally through the installation of new monitoring wells on the Hanford Site. The estimated annual volumes generated are summarized in Tables 2 and 3. Figure 1 provides a graphic description of the solid waste streams generated by Liquid Effluent Services that will be managed by Solid Waste Disposal. Appendix B contains the 30-year Multi-Year Program Plan forecasts estimating the solid waste generated by Liquid Effluent Services.

REFERENCES

1. WHC-EP-0063-4, Hanford Site Solid Waste Acceptance Criteria, November 1993.
2. WHC-EP-0990, FY 1996 Solid Waste Integrated Life-Cycle Forecast Volume Summary, February 1996.

Figure 1. Interfaces Between Liquid Effluent Services and Solid Waste Disposal

APPENDIX A

SOLID WASTE GENERATED BY LIQUID EFFLUENT SERVICES

A.1 Introduction

Liquid Effluent Services, in conjunction with the RCRA and Operational Monitoring Program, is chartered to manage current and future Hanford Site low-level dilute liquid effluent streams and monitor the groundwater, air emissions, surface and subsurface for RCRA permitted TSD and operational facilities. Liquid Effluent Services provides the technical, managerial, and programmatic functions to ensure safe and proper disposition of liquid effluents and provides for continued operation of permitted facilities.

Liquid Effluent Services provides liquid effluent collection systems for liquid effluents, treatment for liquid effluents, and liquid effluent disposal systems. Liquid Effluent Services facilities and projects that are and/or will be generating solid waste in the future are:

- 200 Area Effluent Treatment Facility
- 300 Area Treated Effluent Disposal Facility including the 340 Waste Handling Facility

RCRA and operations monitoring is performed for the groundwater, air emissions, surface (including roads and tracks), and subsurface (vadose zone) in specified locations of the 100, 200 East, 200 West, 300, 400, 600, and 1100 Areas.

A.2 200 Area Effluent Treatment Facility

The 200 Area Effluent Treatment Facility (200 Area ETF) will provide treatment and disposal for the 242A Evaporator Condensate and may also be permitted in the future for other miscellaneous liquid effluents generated around the 200 Areas of the Hanford site. The 200 Area ETF began operations in November 1995. The facility operates continuously 24-hours per day.

The 200 Area ETF generates two primary contact-handled low-level mixed solid waste streams, ammonium sulfate dried powder and spent ion exchange resins. The 200 Area ETF also generates miscellaneous contact-handled low-level mixed waste streams and miscellaneous hazardous waste streams.

A.3 300 Area Treated Effluent Disposal Facility

The 300 Area Treated Effluent Disposal Facility (TEDF) will provide treatment and disposal for the 300 Area process sewer effluent. The 300 Area TEDF began operations in December 1994. The facility operates continuously 24-hours per day.

The 300 Area TEDF generates two primary solid waste streams, metal hydroxide sludge and spent ion exchange resins, and a miscellaneous stream. The metal hydroxide sludge is filter press "solids" from a ferric chloride/sodium hydroxide coprecipitation.

A.4 340 Waste Handling Facility

The 340 Waste Handling Facility consists of four buildings: 340, 340-A, and 340-B Buildings, and the 340 Waste Handling Facility office trailer (MO-036). The 340 Building contains a decontamination room, truck lock, control room, mechanical room, vault valve pit, and a vault containing two 56,781-L (15,000-gal) liquid waste storage tanks. The 340-A Building contains six 30,283-L (8,000-gal) aboveground storage tanks used for auxiliary liquid waste storage. 340-B Building contains a storage area and railcar loadout station. Piping associated with the aboveground storage tanks is located in this facility. MO-036 houses the 340 Facilities administrative offices.

The purpose of the 340 Waste Handling Facility is to collect radioactive liquid waste for shipment via railcar to storage in the 200 Area double-shell tanks. Sources of the waste handled in the 340 Waste Handling Facility are listed below:

- Drains from laboratories operated by Pacific Northwest Laboratories in the 324, 325, 326, 327, and 329 buildings
- Additions from barrels or tank trucks
- Waste from the Retention Process Sewer in the event it is diverted from its normal path because of radiation.

The radioactive liquid wastes accumulated in the 340 Waste Handling Facility vary in composition due to the variability of laboratory activities and other waste sources.

Solid waste is generated through operation and maintenance of the liquid waste collection and transfer systems in the 340 Waste Handling Facility. Low-level wastes are generated when materials are used in radiation zones. Low-level mixed waste is generated when materials come in contact with the liquid waste handled by the facility.

The 340 Waste Handling Facility will cease operation after FY 1998, and a new waste handling facility with storage and loadout capability will be provided for the 325 Building. Some waste generators will shut down and those which are still operating will use the replacement facility. The 340 Waste Handling Facility will be cleaned out and custody transferred to the Transition Projects Program for deactivation. A shut down plan for the 340 Waste Handling Facility is being developed and is planned for issuance in late FY 1996. Future waste volume projections will include the additional solid waste that will be generated by shutdown activities.

A.5 RCRA and Operational Monitoring

RCRA and Operational Monitoring manages specific environmental surveillance and monitoring activities, at the Hanford Site, in support of the Westinghouse Hanford Company (WHC) contract with the Department of Energy (DOE).

The program is focused on five specific goals, as follows:

- Establish, operate, maintain and close groundwater monitoring systems to satisfy Resource Conservation and Recovery Act (RCRA) regulations and DOE orders.
- Establish, operate, maintain and close operational effluent monitoring systems to satisfy Clean Air Act (CAA), Clean Water Act (CWA) and DOE orders.
- Compile, validate, interpret, and report data from RCRA and Operational Groundwater Monitoring and Operational "Near Field" Effluent Monitoring Systems.
- Maintain and operate Hanford and Eastern Washington seismic network and advanced geophysical logging capability. Monitor and maintain active cribs, ponds and ditches.
- Provide surface monitoring for worker access safety in accordance with DOE orders.

Solid waste is generated through performance of essential repairs, preventive maintenance and rehabilitation on more than 500 groundwater monitoring and observation wells in the 100, 200, 300, 400, 600 and 1100 Areas.

Wells that are no longer serviceable and have no further value are candidates for decommissioning, as required by WAC 173-160. There are currently in excess of 3000 wells of varying designs and configurations on the Hanford Site.

Occasionally the installation of a new monitoring well will intersect an existing contamination plume resulting in contaminated drill cutting (soils) that must be handled as solid waste.

Table A.2.1 Dry Particulate Solid Generated at the
200 Area Effluent Treatment Facility

STREAM DESCRIPTION	
Waste Class:	Contact-Handled Low-Level Mixed Category III (CH-LLMW-III)
Waste Stream Description:	Dry particulate solid produced from a thin-film dryer, used to dry liquid wastes from reverse osmosis (up to 99% by weight) and mixed bed ion exchange regeneration (1% by weight). Liquid from filter blowdown contributes a negligible amount.
Year(s) of Generation:	The stream will be generated in 1996. The stream will continue to be generated for at least 30 years.
CONTAINER DESCRIPTION	
Container Type:	208 Liter (55-gallon) drum
Container Dimensions:	
Container External Volume:	.26 m ³
Container Internal Volume:	
Percentage of Internal Volume Containing Waste:	100%
Number of Containers Generated Annually:	1996-442; 1997-134; 1998-119; 1999-147; 2000-184; 2001-65; 2002-57; 2003-59; 2004-76; 2005 - 348; 2006-2009 - 669; 2010-696; 2011-2025 - 704
PHYSICAL FORM DESCRIPTION	
Annual Volume (m ³) Generated:	1996-115; 1997-34.9; 1998-31; 1999-38.1; 2000-47.7; 2001-16.7; 2002-14.8; 2003-15.3; 2004 - 19.8; 2005-90.4; 2006-2009 - 174; 2010 - 181; 2011-2025 - 183
Physical Form:	Solid Process Residues - Salt Waste
Physical Composition:	See Appendix B
Physical Characteristics	
Description:	
The waste stream is dry powdered solids expected to be less than 200 Mesh (Tyler). Some particle agglomeration may occur due to the likely hygroscopic nature of the solids.	

Table A.2.1 Dry Particulate Solid Generated at the
200 Area Effluent Treatment Facility (Continued)

HAZARDOUS CONSTITUENTS DESCRIPTION

Hazardous Constituents and Content:

Waste codes associated with the 242-A Evaporator Condensate -

F001 1,1,1 Trichloroethane

F002 Methylene chloride

F003 Acetone, butyl alcohol, methyl isobutyl ketone

F004 Cresylic acid

F005 Methyl ethyl ketone; pyridine

D007 Chromium

D009 Mercury

WT02 Toxicity - Ammonia

Hazardous Characteristics Description:

Concentrations of toxic metals such as barium, cadmium, and mercury have not yet been verified or designated. Listed codes (F codes) are by the derived-from rule. Actual concentrations of the F code constituents is expected to be nondetectable.

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content: See Appendix B

Radiological Characteristics

Description: See Appendix B

REFERENCES: 1995 Solid Waste Forecast Request Form for 200 Area ETF

Table A.2.2 Drummed Miscellaneous Low-Level Mixed Waste
Generated at the 200 Area Effluent Treatment Facility**STREAM DESCRIPTION**

Waste Class: Contact-Handled Low-Level Mixed Category I (CH-LLMW-I)
 Waste Stream Description: Miscellaneous low-level waste is generated from infrequently-generated, small-amount secondary wastes such as filters, failed equipment, maintenance and operations waste, etc.
 Year(s) of Generation: The stream will be generated in 1996. The stream will continue to be generated for at least 30 years.

CONTAINER DESCRIPTION

Container Type: 208 Liter (55-gallon) drum
 Container Dimensions:
 Container External Volume: .26 m³
 Container Internal Volume:
 Percentage of Internal Volume Containing Waste: 100%
 Number of Containers Generated Annually: 1996-286; 1997-73; 1998-87; 1999-90; 2000-116; 2001-88; 2002-90; 2003-88; 2004-89; 2005-95; 2006-2009 - 96; 2010-97; 2011-2025 - 96

PHYSICAL FORM DESCRIPTION

Annual Volume (m³) Generated: 1996-74.4; 1997-18.9; 1998-22.7; 1999-23.4; 2000-30.2; 2001-22.9; 2002-23.3; 2003-22.8; 2004-23; 2005-24.6; 2006-2009 - 25; 2010-25.1; 2011-2025 - 25

Physical Form: Debris Waste
 Physical Composition: See Appendix B

Physical Characteristics

Description:
 Miscellaneous wastes will be packaged in accordance with requirements. The degree of segregation of physical forms will be based on regulatory compliance and cost benefit tradeoffs. Drummed waste may be completely segregated by waste form or completely mixed together.

Table A.2.2 Drummed Miscellaneous Low-Level Mixed Waste
Generated at the 200 Area Effluent Treatment Facility (Continued)

HAZARDOUS CONSTITUENTS DESCRIPTION

Hazardous Constituents and Content:

Waste codes associated with the 242-A Evaporator Condensate -

F001 1,1,1 Trichloroethane

F002 Methylene chloride

F003 Acetone, butyl alcohol, methyl isobutyl ketone

F004 Cresylic acid

F005 Methylene ketone; pyridine

WT02 Toxicity - Ammonia

Hazardous Characteristics Description:

Concentrations of toxic metals such as barium, cadmium, and mercury have not yet been verified or designated. Verification of these metal concentrations will occur during initial operation of the 200 Area ETF. Listed codes (F codes) are by the derived-from rule. Actual concentrations of the F code constituents is expected to be nondetectable.

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content: See Appendix B

Radiological Characteristics

Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for 200 Area ETF.

Table A.2.3 Drummed Miscellaneous Hazardous Waste
Generated at the 200 Area Effluent Treatment Facility

STREAM DESCRIPTION

Waste Class:	Nonradioactive Hazardous Waste
Waste Stream Description:	Miscellaneous hazardous waste is generated from maintenance and operations activities.
Year(s) of Generation:	The stream will be generated in 1996 and continue for at least 30 years.

CONTAINER DESCRIPTION

Container Type:	208 Liter (55-gallon) drum
Container Dimensions:	
Container External Volume:	.26 m ³
Container Internal Volume:	
Percentage of Internal Volume Containing Waste:	100%
Number of Containers Generated Annually:	1996 - 15; 1997-2025 - 20

PHYSICAL FORM DESCRIPTION

Annual Volume (m³) Generated: 1996 - 3.7; 1997-2025 - 5

Physical Form:	Debris Waste
Physical Composition:	See Appendix B

Physical Characteristics

Description:
To be determined.

HAZARDOUS CONSTITUENTS DESCRIPTION

Hazardous Constituents and Content:
Waste contaminated with Toxic Metals

Hazardous Characteristics Description:

Concentrations of toxic metals have not yet been verified or designated. Verification of these metal concentrations will occur during initial operation of the 200 Area ETF.

RADIOLOGICAL DESCRIPTION

Not Applicable.

REFERENCES: 1995 Solid Waste Forecast Request Form for 200 Area ETF.

Table A.3.1 300 Area Treated Effluent Disposal Facility

STREAM DESCRIPTION

Waste Class:	Contact-Handled Low-Level Category I (CH-LLW-I)
Waste Stream Description:	Absorbed liquid and sludge wastes
Year(s) of Generation:	The stream will be generated in 1996 and continue for at least 30 years.

CONTAINER DESCRIPTION

Container Type:	Bulk Dumping
Container Dimensions:	
Container External Volume:	No Container
Container Internal Volume:	
Percentage of Internal Volume Containing Waste:	100%
Number of Containers Generated Annually:	N/A

PHYSICAL FORM DESCRIPTION

Annual Volume (m ³) Generated:	1996 - 133.5; 1997-2025 - 126
--	-------------------------------

Physical Form:	Sludge Waste
Physical Composition:	To be determined.
Physical Characteristics Description:	To be determined.

HAZARDOUS CONSTITUENTS DESCRIPTION

Hazardous Constituents and Content:	None present.
-------------------------------------	---------------

Hazardous Characteristics Description:	None
--	------

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content:	See Appendix B
--	----------------

Radiological Characteristics Description:	
---	--

REFERENCES: 1995 Solid Waste Forecast Request Form for WHC-L045H, 300 Area ETF

Table A.4.1 340 Waste Handling Facility

STREAM DESCRIPTION

Waste Class: Contact-Handled Low-Level Mixed Category I (CH-LLMW-I)
 Waste Stream Description: The spent ion exchange resins results from a metals removal polishing step using a mercury specific resin. The ion exchange resin is "generated" at the end of its two-year expected service life.

Year(s) of Generation: The stream will be generated from 1996 through 2000.

CONTAINER DESCRIPTION

Container Type: 208 Liter (55-gallon) drum
 Container Dimensions:
 Container External Volume: .26 m³
 Container Internal Volume:
 Percentage of Internal Volume Containing Waste: 100%
 Number of Containers Generated Annually: 1996 - 20; 1997-2000 - 4; 2001-2025 - 0

PHYSICAL FORM DESCRIPTION

Annual Volume (m³) Generated: 1996 - 5; 1997-2000 - 1; 2001 -2025 - 0
 Annual Weight Generated: 4,250 kg₂ for Fiscal Year 1996 and 850 kg from 1997 through 2025
 Density: 850 kg/m³
 Physical Form: Solid Process Residues - Organic Particulate
 Physical Composition:
 Physical Characteristics: See Appendix B
 Description:
 Ion exchange resin is PUROLITE S-920, a cross-linked styrene-divinyl benzene polymer. Particle size ranges from 0.3 to 1.2 mm. The spent ion exchange resin is sluiced from the ion exchange column, drained, and packaged in 55-gallon drums.

HAZARDOUS CONSTITUENTS DESCRIPTION

Hazardous Constituents and Content: See Appendix B

Hazardous Characteristics

Description:
 Waste is contaminated with toxic metals including mercury (D009) and other Washington State regulated toxic waste (WT) constituents.

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content: See Appendix B

Radiological Characteristics

Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for WHC-1045H, 340 Waste Handling Facility

Table A.4.2 340 Waste Handling Facility

STREAM DESCRIPTION

Waste Class: Contact-Handled Low-Level Category I (CH-LLW-I)
 Waste Stream Description: Waste is generated through operation and maintenance of the liquid waste collection and transfer systems in the 340 Facility. Low-level wastes are generated when materials are used in radiation zones.

Year(s) of Generation: The stream will be generated from 1996 through 2000.

CONTAINER DESCRIPTION

Container Type: $1.5\text{m}^3 \times 1.5\text{m}^3 \times 2.7\text{m}^3$ (5'x 5'x 9') Metal Box
 Container Dimensions:
 Container External Volume: 6.4 m^3
 Container Internal Volume:
 Percentage of Internal Volume Containing Waste: 65%
 Number of Containers Generated Annually: 1996 - 4; 1997-2000 - 2

PHYSICAL FORM DESCRIPTION

Annual Volume (m^3) Generated: 1996 - 26; 1997-2000 - 13

Physical Form: Debris Waste
 Physical Composition: See Appendix B
 Physical Characteristics Description:

HAZARDOUS CONSTITUENTS DESCRIPTION

Not Applicable

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content: See Appendix B

Radiological Characteristics Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for the 340 Waste Handling Facility

Table A.4.3 340 Waste Handling Facility

STREAM DESCRIPTION

Waste Class: Contact-Handled Low-Level Category I (CH-LLW-I)
 Waste Stream Description: Waste is generated through operation and maintenance of the liquid waste collection and transfer systems in the 340 Facility. Low-level wastes are generated when materials are used in radiation zones.

Year(s) of Generation: The stream will be generated from 1996 through 2000.

CONTAINER DESCRIPTION

Container Type: $1.2\text{m}^3 \times 1.2\text{m}^3 \times 2.4\text{m}^3$ (4' X 4' X 8') Box Skid
 Container Dimensions:
 Container External Volume: 3.6 m^3
 Container Internal Volume:
 Percentage of Internal Volume Containing Waste: 35%
 Number of Containers Generated Annually: 1996 - 4; 1997-2000 - 2

PHYSICAL FORM DESCRIPTION

Annual Volume (m^3) Generated: 1996 - 14; 1997-2000 - 7

Physical Form: Debris Waste
 Physical Composition: See Appendix B
 Physical Characteristics Description:

HAZARDOUS CONSTITUENTS DESCRIPTION

Not Applicable

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content: See Appendix B

Radiological Characteristics Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for the 340 Waste Handling Facility

Table A.5.1 RCRA Monitoring - Well Drilling

STREAM DESCRIPTION

Waste Class: Contact-Handled Low-Level Category I (CH-LLW-I)
 Waste Stream Description: Waste is generated through construction/installation of groundwater monitoring wells. Low-level wastes are encountered during well installations in contaminated areas.
 Year(s) of Generation: The stream will be generated from 1996 through 2025.

CONTAINER DESCRIPTION

Container Type: 1.2m³ x 1.2m³ x 2.4m³ (4' X 4' X 8') Box Skid
 Container Dimensions:
 Container External Volume: 3.6 m³
 Container Internal Volume:
 Percentage of Internal Volume Containing Waste: 25%
 Number of Containers Generated Annually: 1996-2025 - 21

PHYSICAL FORM DESCRIPTION

Annual Volume (m³) Generated: 1996-2025 - 75

Physical Form: Debris Waste/Soils
 Physical Composition: See Appendix C
 Physical Characteristics Description:

HAZARDOUS CONSTITUENTS DESCRIPTION
Not Applicable**RADIOLOGICAL DESCRIPTION**

Radiological Constituents and Content: See Appendix C

Radiological Characteristics Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for RCRA Monitoring

Table A.5.2 RCRA Monitoring - Well Drilling

STREAM DESCRIPTION

Waste Class: Contact-Handled Low-Level Category I (CH-LLW-I)
Waste Stream Description: Waste is generated through construction/installation of groundwater monitoring wells. Low-level wastes are encountered during well installations in contaminated areas.

Year(s) of Generation: The stream will be generated from 1996 through 2025.

CONTAINER DESCRIPTION

Container Type: 208 Liter (55-gallon) drum
Container Dimensions:
Container External Volume: .26 m³
Container Internal Volume:
Percentage of Internal
Volume Containing Waste: 70%
Number of Containers
Generated Annually: 1996-2025 - 808

PHYSICAL FORM DESCRIPTION

Annual Volume (m³) Generated: 1996-2025 - 210

Physical Form: Debris Waste/Soils
Physical Composition: See Appendix C
Physical Characteristics
Description:

HAZARDOUS CONSTITUENTS DESCRIPTION

Not Applicable

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content: See Appendix C

Radiological Characteristics
Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for RCRA Monitoring

Table A.5.3 RCRA Monitoring - Well Drilling

STREAM DESCRIPTION

Waste Class: Contact-Handled Low-Level Category I (CH-LLW-I)
 Waste Stream Description: Waste is generated through construction/installation of groundwater monitoring wells. Low-level wastes are encountered during well installations in contaminated areas.

Year(s) of Generation: The stream will be generated from 1996 through 2025.

CONTAINER DESCRIPTION

Container Type: 322 Liter (85-gallon) drum
 Container Dimensions:
 Container External Volume: .4 m³
 Container Internal Volume:
 Percentage of Internal Volume Containing Waste: 5%
 Number of Containers Generated Annually: 1996-2025 - 38

PHYSICAL FORM DESCRIPTION

Annual Volume (m³) Generated: 1996-2025 - 15

Physical Form: Debris Waste/Soils
 Physical Composition: See Appendix C
 Physical Characteristics Description:

HAZARDOUS CONSTITUENTS DESCRIPTION

Not Applicable

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content: See Appendix C

Radiological Characteristics Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for RCRA Monitoring

Table A.5.4 RCRA Monitoring - Well Drilling

STREAM DESCRIPTION

Waste Class: Contact-Handled Low-Level Mixed Waste Category I (CH-LLW-I)
 Waste Stream Description: Waste is generated through construction/installation of groundwater monitoring wells. Low-level wastes are encountered during well installations in contaminated areas.

Year(s) of Generation: The stream will be generated from 1996 through 2025.

CONTAINER DESCRIPTION

Container Type: 1.2m³ x 1.2m³ x 2.4m³ (4' X 4' X 8') Box Skid
 Container Dimensions:
 Container External Volume: 3.6 m³
 Container Internal Volume:
 Percentage of Internal
 Volume Containing Waste: 15%
 Number of Containers
 Generated Annually: 1996-2025 - 2

PHYSICAL FORM DESCRIPTION

Annual Volume (m³) Generated: 1996-2025 - 4

Physical Form: Debris Waste
 Physical Composition: See Appendix C
 Physical Characteristics
 Description:

HAZARDOUS CONSTITUENTS DESCRIPTION

Not Applicable

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content: See Appendix C

Radiological Characteristics
 Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for RCRA Monitoring

Table A.5.5 RCRA Monitoring - Well Drilling

STREAM DESCRIPTION

Waste Class: Contact-Handled Low-Level Mixed Waste Category I (CH-LLW-I)
Waste Stream Description: Waste is generated through construction/installation of groundwater monitoring wells. Low-level wastes are encountered during well installations in contaminated areas.

Year(s) of Generation: The stream will be generated from 1996 through 2025.

CONTAINER DESCRIPTION

Container Type: 208 Liter (55 Gallon Drum)
Container Dimensions:
Container External Volume: .26 m³
Container Internal Volume:
Percentage of Internal
Volume Containing Waste: 80%
Number of Containers
Generated Annually: 1996-2025 - 83

PHYSICAL FORM DESCRIPTION

Annual Volume (m³) Generated: 1996-2025 - 21.6

Physical Form: Debris Waste
Physical Composition: See Appendix C
Physical Characteristics
Description:

HAZARDOUS CONSTITUENTS DESCRIPTION

Not Applicable

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content: See Appendix C

Radiological Characteristics
Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for RCRA Monitoring

Table A.5.6 RCRA Monitoring - Well Drilling

STREAM DESCRIPTION

Waste Class: Contact-Handled Low-Level Mixed Waste Category I (CH-LLW-I)
Waste Stream Description: Waste is generated through construction/installation of groundwater monitoring wells. Low-level wastes are encountered during well installations in contaminated areas.

Year(s) of Generation: The stream will be generated from 1996 through 2025.

CONTAINER DESCRIPTION

Container Type: 322 Liter (85 Gallon Drum)
Container Dimensions:
Container External Volume: .4 m³
Container Internal Volume:
Percentage of Internal
Volume Containing Waste: 5%
Number of Containers
Generated Annually: 1996-2025 - 4

PHYSICAL FORM DESCRIPTION

Annual Volume (m³) Generated: 1996-2025 - 1.4

Physical Form: Debris Waste
Physical Composition: See Appendix C
Physical Characteristics
Description:

HAZARDOUS CONSTITUENTS DESCRIPTION
Not Applicable

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content: See Appendix C

Radiological Characteristics
Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for RCRA Monitoring

Table A.5.7 RCRA Monitoring - Well Drilling

STREAM DESCRIPTION

Waste Class: Hazardous Waste
Waste Stream Description: Waste is generated through construction/installation of groundwater monitoring wells. Low-level wastes are encountered during well installations in contaminated areas.
Year(s) of Generation: The stream will be generated from 1996 through 2025.

CONTAINER DESCRIPTION

Container Type: 208 Liter (55 Gallon Drum)
Container Dimensions:
Container External Volume: .26 m³
Container Internal Volume:
Percentage of Internal Volume Containing Waste: 90%
Number of Containers Generated Annually: 1996-2025 - 1,039

PHYSICAL FORM DESCRIPTION

Annual Volume (m³) Generated: 1996-2025 - 270

Physical Form: Debris Waste/Soils
Physical Composition: See Appendix C
Physical Characteristics Description:

HAZARDOUS CONSTITUENTS DESCRIPTION
Not Applicable**RADIOLOGICAL DESCRIPTION**

Radiological Constituents and Content: See Appendix C

Radiological Characteristics Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for RCRA Monitoring

Table A.5.8 RCRA Monitoring - Well Drilling

STREAM DESCRIPTION

Waste Class: Hazardous Waste
 Waste Stream Description: Waste is generated through construction/installation of groundwater monitoring wells. Low-level wastes are encountered during well installations in contaminated areas.
 Year(s) of Generation: The stream will be generated from 1996 through 2025.

CONTAINER DESCRIPTION

Container Type: 114 Liter (30 Gallon Drum)
 Container Dimensions:
 Container External Volume: .12 m³
 Container Internal Volume:
 Percentage of Internal Volume Containing Waste: 7%
 Number of Containers Generated Annually: 1996-2025 - 175

PHYSICAL FORM DESCRIPTION

Annual Volume (m³) Generated: 1996-2025 - 21

Physical Form: Debris Waste/Soils
 Physical Composition: See Appendix C
 Physical Characteristics Description:

HAZARDOUS CONSTITUENTS DESCRIPTION

Not Applicable

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content: See Appendix C

Radiological Characteristics Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for RCRA Monitoring

Table A.5.9 RCRA Monitoring - Well Drilling

STREAM DESCRIPTION

Waste Class: Hazardous Waste
 Waste Stream Description: Waste is generated through construction/installation of groundwater monitoring wells. Low-level wastes are encountered during well installations in contaminated areas.
 Year(s) of Generation: The stream will be generated from 1996 through 2025.

CONTAINER DESCRIPTION

Container Type: 322 Liter (85 Gallon Drum)
 Container Dimensions:
 Container External Volume: .4 m³
 Container Internal Volume:
 Percentage of Internal Volume Containing Waste: 3%
 Number of Containers Generated Annually: 1996-2025 - 23

PHYSICAL FORM DESCRIPTION

Annual Volume (m³) Generated: 1996-2025 - 9

Physical Form: Debris Waste/Soils
 Physical Composition: See Appendix C
 Physical Characteristics Description:

HAZARDOUS CONSTITUENTS DESCRIPTION
 Not Applicable

RADIOLOGICAL DESCRIPTION

Radiological Constituents and Content: See Appendix C

Radiological Characteristics Description:

REFERENCES: 1995 Solid Waste Forecast Request Form for RCRA Monitoring

APPENDIX B

1995 SOLID WASTE FORECAST VOLUME (m³) INFORMATION FOR LIQUID EFFLUENTS

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast Volumes (m³) for the Liquid Effluents Program

Waste Generator	Waste Class	Data	1996	1997	1998	1999	2000	2001	2002	2003
WHC_200 ETF	CH_LLMW_I	VOL	74.4	18.9	22.7	23.4	30.2	22.9	23.3	22.8
		MINPCT	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
		MAXPCT	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
	CH_LLMW_III	VOL	114.6	34.9	31.0	38.1	47.7	16.7	14.8	15.3
		MINPCT	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
		MAXPCT	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
	HAZ	VOL	3.7	5.0	5.0	5.0	5.0	5.0	5.0	5.0
		MINPCT	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		MAXPCT	150.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
WHC_200 ETF Total Volume			192.7	58.8	58.7	66.5	82.9	44.6	43.1	43.1
WHC_300 TEDF	CH_LLW_I	VOL	159.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
		MINPCT	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
		MAXPCT	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
WHC_300 TEDF Total Volume			159.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
WHC_WASTE_NEUT	CH_LLMW_I	VOL	0.8	0.6	0.6	0.6	0.6	0.0	0.0	0.0
		MINPCT	5.0	20.0	20.0	20.0	20.0	0.0	0.0	0.0
		MAXPCT	200.0	750.0	750.0	750.0	750.0	0.0	0.0	0.0
	CH_LLW_I	VOL	41.0	20.0	20.0	20.0	20.0	0.0	0.0	0.0
		MINPCT	10.0	10.0	10.0	10.0	10.0	0.0	0.0	0.0
		MAXPCT	120.0	120.0	120.0	120.0	120.0	0.0	0.0	0.0
WHC_WASTE_NEUT Total Volume			41.8	20.6	20.6	20.6	20.6	0.0	0.0	0.0
Grand Total for Liquid Effluents			393.5	229.4	229.3	237.1	253.5	194.6	193.1	193.1

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast Volumes (m³) for the Liquid Effluents Program
(cont.)

Waste Generator	Waste Class	Data	2004	2005	2006	2007	2008	2009	2010	2011
WHC_200 ETF	CH_LLMW_I	VOL	23.0	24.6	25.0	25.0	25.0	25.0	25.1	25.0
		MINPCT	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
		MAXPCT	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
	CH_LLMW_III	VOL	19.8	90.4	174.0	174.0	174.0	174.0	180.9	183.0
		MINPCT	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
		MAXPCT	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
	HAZ	VOL	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
		MINPCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		MAXPCT	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
WHC_200 ETF Total Volume			47.8	120.0	204.0	204.0	204.0	204.0	211.0	213.0
WHC_300 TEDF	CH_LLW_I	VOL	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
		MINPCT	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
		MAXPCT	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
WHC_300 TEDF Total Volume			150.0	150.0	150.0	150.0	150.0	150.0	150.0	
WHC_WASTE_NEUT	CH_LLMW_I	VOL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		MINPCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		MAXPCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CH_LLW_I	VOL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		MINPCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		MAXPCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WHC_WASTE_NEUT Total Volume			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Grand Total for Liquid Effluents			197.8	270.0	354.0	354.0	354.0	354.0	361.0	363.0

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast Volumes (m³) for the Liquid Effluents Program
(cont.)

Waste Generator	Waste Class	Data	2012	2013	2014	2015	2016	2017	2018	2019
WHC_200 ETF	CH_LLMW_I	VOL	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
		MINPCT	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
		MAXPCT	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
	CH_LLMW_III	VOL	183.0	183.0	183.0	183.0	183.0	183.0	183.0	183.0
		MINPCT	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
		MAXPCT	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
	HAZ	VOL	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
		MINPCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		MAXPCT	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
WHC_200 ETF Total Volume			213.0	213.0	213.0	213.0	213.0	213.0	213.0	
WHC_300 TEDF	CH_LLW_I	VOL	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
		MINPCT	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
		MAXPCT	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
WHC_300 TEDF Total Volume			150.0	150.0	150.0	150.0	150.0	150.0	150.0	
WHC_WASTE_NEUT	CH_LLMW_I	VOL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		MINPCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		MAXPCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CH_LLW_I	VOL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		MINPCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		MAXPCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WHC_WASTE_NEUT Total Volume			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Grand Total for Liquid Effluents			363.0	363.0	363.0	363.0	363.0	363.0	363.0	

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast Volumes (m³) for the Liquid Effluents Program
(cont.)

Waste Generator	Waste Class	Data	2020	2021	2022	2023	2024	2025
WHC_200 ETF	CH_LLMW_I	VOL	25.0	25.0	25.0	25.0	25.0	25.0
		MINPCT	50.0	50.0	50.0	50.0	50.0	50.0
		MAXPCT	150.0	150.0	150.0	150.0	150.0	150.0
	CH_LLMW_III	VOL	183.0	183.0	183.0	183.0	183.0	183.0
		MINPCT	50.0	50.0	50.0	50.0	50.0	50.0
		MAXPCT	150.0	150.0	150.0	150.0	150.0	150.0
	HAZ	VOL	5.0	5.0	5.0	5.0	5.0	5.0
		MINPCT	0.0	0.0	0.0	0.0	0.0	0.0
		MAXPCT	100.0	100.0	100.0	100.0	100.0	100.0
WHC_200 ETF Total Volume			213.0	213.0	213.0	213.0	213.0	213.0
WHC_300 TEDF	CH_LLW_I	VOL	150.0	150.0	150.0	150.0	150.0	0.0
		MINPCT	10.0	10.0	10.0	10.0	10.0	0.0
		MAXPCT	120.0	120.0	120.0	120.0	120.0	0.0
WHC_300 TEDF Total Volume			150.0	150.0	150.0	150.0	150.0	0.0
WHC_WASTE_NEUT	CH_LLMW_I	VOL	0.0	0.0	0.0	0.0	0.0	0.0
		MINPCT	0.0	0.0	0.0	0.0	0.0	0.0
		MAXPCT	0.0	0.0	0.0	0.0	0.0	0.0
	CH_LLW_I	VOL	0.0	0.0	0.0	0.0	0.0	0.0
		MINPCT	0.0	0.0	0.0	0.0	0.0	0.0
		MAXPCT	0.0	0.0	0.0	0.0	0.0	0.0
WHC_WASTE_NEUT Total Volume			0.0	0.0	0.0	0.0	0.0	0.0
Grand Total for Liquid Effluents			363.0	363.0	363.0	363.0	363.0	213.0

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast Container Percentages for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>Percent</u>
WHC_200 ETF	CH_LLMW_I	55 GAL DRUM	100.0
			100.0
	CH_LLMW_III	55 GAL DRUM	100.0
			100.0
	HAZ	55 GAL DRUM	100.0
			100.0
WHC_300 TEDF	CH_LLW_I	BULK DUMPING	84.0
		4X4X8 BOX SKID	10.0
		55 GAL DRUM	2.0
		5X5X9 METAL	4.0
			100.0
WHC_WASTE_NEUT	CH_LLMW_I	55 GAL DRUM	100.0
			100.0
		CH_LLW_I	BULK DUMPING
		4X4X8 BOX SKID	84.0
		55 GAL DRUM	10.0
		5X5X9 METAL	2.0
			4.0
			100.0

1995 Solid Waste Forecast PWF Percentages for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>Percent</u>
WHC_200 ETF	CH_LLMW_I	55 GAL DRUM	AERO/CG	1.0
			BATTERIES	0.5
			D INORG	12.0
			D INORG NM	2.0
			D METAL	4.0
			D ORG	2.0
			D PLAS/RUB	18.0
			IN ABS LIQ/SLG	30.0
			IN PAINT WASTE	2.0
			LAB PACKS	8.0
			ORG ABS LIQ/SL	15.0
			ORG ABSORB	5.0
			ORG PART	0.5
				<hr/> 100.0
	CH_LLMW_III	55 GAL DRUM	D METAL	9.0
			D PLAS/RUB	8.0
			IN ABS LIQ/SLG	3.0
			IN SALT WASTE	79.5
			ORG ABS LIQ/SL	0.5
				<hr/> 100.0
HAZ		55 GAL DRUM	AERO/CG	7.4
			BATTERIES	1.8
			D INORG NM	2.0
			D METAL	4.5
			D ORG	5.8
			D PLAS/RUB	3.5
			IN ABS LIQ/SLG	17.7
			IN PAINT WASTE	4.2
			IN PART	7.0
			LAB PACKS	16.0
			LEAD	2.6
			ORG ABS LIQ/SL	14.0
			ORG ABSORB	12.0
			SOIL SOIL/GRAV	1.5
				<hr/> 100.0

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast PWF Percentages for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>Percent</u>
WHC_300_TEDF	CH_LLW_I	BULK DUMPING	IN ABS LIQ/SLG	100.0
				100.0
		4X4X8 BOX SKID	D HETEROG	10.0
			D INORG	20.0
			D INORG NM	5.0
			D METAL	15.0
			D PLAS/RUB	50.0
				100.0
		55 GAL DRUM	D HETEROG	15.0
			D INORG	20.0
			D METAL	20.0
			D PLAS/RUB	30.0
			IN ABS LIQ/SLG	5.0
			SOIL SOIL/GRAV	10.0
				100.0
		5X5X9 METAL	D HETEROG	10.0
			D INORG	20.0
			D INORG NM	20.0
			D METAL	20.0
			D PLAS/RUB	30.0
				100.0
WHC_WASTE_NEUT	CH_LLMW_I	55 GAL DRUM	D HETEROG	10.0
			D INORG	10.0
			D INORG NM	10.0
			D METAL	10.0
			D ORG	10.0
			D PLAS/RUB	30.0
			IN ABS LIQ/SLG	10.0
			SOIL SOIL/GRAV	10.0
				100.0
	CH_LLW_I	BULK DUMPING	IN ABS LIQ/SLG	100.0
				100.0

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast PWF Percentages for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>Percent</u>
WHC_WASTE_NEUT	CH_LLW_I	4X4X8 BOX SKID	D HETEROG	10.0
			D INORG	20.0
			D INORG NM	5.0
			D METAL	15.0
			D PLAS/RUB	50.0
				<hr/> 100.0
		55 GAL DRUM	D HETEROG	15.0
			D INORG	20.0
			D METAL	20.0
			D PLAS/RUB	30.0
			IN ABS LIQ/SLG	5.0
			SOIL SOIL/GRAV	10.0
				<hr/> 100.0
		5X5X9 METAL	D HETEROG	10.0
			D INORG	20.0
			D INORG NM	20.0
			D METAL	20.0
			D PLAS/RUB	30.0
				<hr/> 100.0

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast HCD Percentages for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>HCD</u>	<u>Percent</u>
WHC_200 ETF	CH_LLMW_I	55 GAL DRUM	AERO/CG	Corrosive	15.4
				Ignitable	29.1
				Metal	1.5
				Organic	38.8
				Reactive	1.0
				WT-WP-WC	14.2
					<hr/> 100.0
			BATTERIES	Corrosive	29.0
				Metal	45.0
				WT-WP-WC	26.0
					<hr/> 100.0
			D INORG	Corrosive	38.0
				Ignitable	8.0
				Metal	9.3
				Organic	12.6
				Reactive	2.5
				WT-WP-WC	29.6
					<hr/> 100.0
			D INORG NM	Corrosive	37.5
				Ignitable	7.3
				Metal	1.0
				WT-WP-WC	54.2
					<hr/> 100.0
			D METAL	Corrosive	39.0
				Organic	22.0
				WT-WP-WC	39.0
					<hr/> 100.0
			D ORG	Corrosive	31.0
				Metal	5.0
				Organic	45.8
				Reactive	1.0
				WT-WP-WC	17.2
					<hr/> 100.0

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast HCD Percentages for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>HCD</u>	<u>Percent</u>
WHC_200 ETF	CH_LLMW_I	55 GAL DRUM	D PLAS/RUB	Corrosive	21.5
				Ignitable	2.2
				Metal	6.0
				Organic	39.0
				Reactive	1.0
				WT-WP-WC	30.3
					<hr/> 100.0
			IN ABS LIQ/SLG	Corrosive	42.6
				Ignitable	14.5
				Metal	2.3
				Mtl Mercury	0.1
				Organic	24.2
				Reactive	0.2
				WT-WP-WC	16.1
					<hr/> 100.0
			IN PAINT WASTE	Corrosive	0.8
				Ignitable	27.4
				Metal	18.9
				Organic	6.2
				WT-WP-WC	46.7
					<hr/> 100.0
			LAB PACKS	Corrosive	28.5
				Ignitable	18.2
				Metal	2.6
				Organic	17.4
				Reactive	1.0
				WT-WP-WC	32.3
					<hr/> 100.0
			ORG ABS LIQ/SL	Corrosive	21.7
				Ignitable	14.5
				Metal	11.3
				Organic	28.0
				WT-WP-WC	24.5
					<hr/> 100.0

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast HCD Percentages for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>HCD</u>	<u>Percent</u>	
WHC_200 ETF	CH_LLMW_I	55 GAL DRUM	ORG ABSORB	Corrosive	12.8	
				Ignitable	15.4	
				Metal	1.2	
				Organic	40.8	
				Reactive	1.4	
				WT-WP-WC	28.4	
					100.0	
				ORG PART	Corrosive	1.5
					Ignitable	18.9
					Metal	6.7
					Organic	42.9
					WT-WP-WC	30.0
						100.0
CH_LLMW_III	55 GAL DRUM	D METAL	Corrosive		48.0	
			Metal	3.4		
			Organic	27.8		
			Reactive	1.0		
			WT-WP-WC	19.8		
				100.0		
			D PLAS/RUB	Corrosive	28.9	
				Ignitable	12.5	
				Metal	2.3	
				Organic	36.0	
				Reactive	1.0	
				WT-WP-WC	19.3	
					100.0	
IN ABS LIQ/SLG	Corrosive	19.3				
	Ignitable	8.8				
	Metal	0.7				
	Organic	41.2				
	Reactive	1.2				
	WT-WP-WC	28.8				
		100.0				

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast HCD Percentages for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>HCD</u>	<u>Percent</u>
WHC_200 ETF	CH_LLMW_III	55 GAL DRUM	IN SALT WASTE	Corrosive	80.0
				WT-WP-WC	20.0
					<hr/> 100.0
			ORG ABS LIQ/SL	Corrosive	57.9
				Organic	22.9
				Reactive	1.0
				WT-WP-WC	18.2
					<hr/> 100.0
	HAZ	55 GAL DRUM	AERO/CG	Corrosive	13.5
				Ignitable	27.8
				Metal	7.5
				Organic	18.3
				Reactive	4.3
				WT-WP-WC	28.6
					<hr/> 100.0
			BATTERIES	Corrosive	59.4
				Metal	17.5
				WT-WP-WC	23.1
					<hr/> 100.0
			D INORG NM	Corrosive	15.8
				Ignitable	14.9
				Metal	4.3
				Organic	27.5
				Reactive	1.0
				WT-WP-WC	36.5
					<hr/> 100.0
			D METAL	Corrosive	18.2
				Ignitable	4.0
				Organic	47.7
				Reactive	1.0
				WT-WP-WC	29.1
					<hr/> 100.0

1995 Solid Waste Forecast HCD Percentages for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>HCD</u>	<u>Percent</u>
WHC_200 ETF	HAZ	55 GAL DRUM	D ORG	Corrosive	18.9
				Ignitable	15.3
				Metal	4.2
				Organic	42.9
				Reactive	1.0
				WT-WP-WC	17.7
					<hr/> 100.0
			D PLAS/RUB	Corrosive	24.1
				Ignitable	12.6
				Metal	5.4
				Organic	33.8
				Reactive	0.8
				WT-WP-WC	23.3
					<hr/> 100.0
			IN ABS LIQ/SLG	Corrosive	32.2
				Ignitable	7.3
				Organic	28.5
				Reactive	1.0
				WT-WP-WC	31.0
					<hr/> 100.0
			IN PAINT WASTE	Corrosive	8.9
				Ignitable	29.5
				Metal	3.7
				Organic	8.8
				Reactive	1.0
				WT-WP-WC	48.1
					<hr/> 100.0
			IN PART	Corrosive	27.0
				Ignitable	11.8
				Metal	5.4
				Organic	37.1
				Reactive	1.0
				WT-WP-WC	17.7
					<hr/> 100.0

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast HCD Percentages for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>HCD</u>	<u>Percent</u>
WHC_200 ETF	HAZ	55 GAL DRUM	LAB PACKS	Corrosive	24.2
				Ignitable	20.5
				Metal	2.8
				Organic	18.3
				Reactive	0.2
				WT-WP-WC	34.0
					<hr/> 100.0
			LEAD	Metal	50.0
				WT-WP-WC	50.0
					<hr/> 100.0
			ORG ABS LIQ/SL	Corrosive	29.1
				Ignitable	10.7
				Metal	3.3
				Organic	27.4
				Reactive	1.0
				WT-WP-WC	28.5
					<hr/> 100.0
			ORG ABSORB	Corrosive	4.6
				Ignitable	13.5
				Metal	4.6
				Organic	47.3
				Reactive	1.0
				WT-WP-WC	29.0
			SOIL SOIL/GRAV		<hr/> 100.0
				Corrosive	32.7
				Ignitable	10.3
				Metal	2.6
				Organic	35.6
				Reactive	1.0
				WT-WP-WC	17.8
					<hr/> 100.0

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast HCD Percentages for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>HCD</u>	<u>Percent</u>
WHC_WASTE_NEUT	CH_LLMW_I	55 GAL DRUM	D HETEROG	Metal	5.0
				Organic	95.0
					<hr/> 100.0
			D INORG	Metal	50.0
				Organic	50.0
					<hr/> 100.0
			D INORG NM	Metal	5.0
				Organic	95.0
					<hr/> 100.0
			D METAL	Metal	5.0
				Organic	95.0
					<hr/> 100.0
			D ORG	Metal	5.0
				Organic	95.0
					<hr/> 100.0
			D PLAS/RUB	Metal	5.0
				Organic	95.0
					<hr/> 100.0
			IN ABS LIQ/SLG	DE	80.0
				Metal	5.0
				Organic	15.0
					<hr/> 100.0
			SOIL SOIL/GRAV	Metal	90.0
				Organic	10.0
					<hr/> 100.0

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast Radionuclide Concentrations for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>Radionuclide</u>	<u>Conc.</u>
WHC_200 ETF	CH_LLMW_I	55 GAL DRUM	AERO/CG	AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
			BATTERIES	AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
			D INORG	AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
			D INORG NM	AMERICIUM	2.12E-05
				CARBON14	1.78E-05

1995 Solid Waste Forecast Radionuclide Concentrations for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>Radionuclide</u>	<u>Conc.</u>
WHC_200 ETF	CH_LLMW_I	55 GAL DRUM	D INORG NM	CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
			D METAL	AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
			D ORG	AMERICIUM	2.12E-05
				CARBON14	1.00E-01
				CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
			D PLAS/RUB	AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-07
				IODINE129	3.96E-07

1995 Solid Waste Forecast Radionuclide Concentrations for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>Radionuclide</u>	<u>Conc.</u>
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
WHC_200 ETF	CH_LLMW_I	55 GAL DRUM	IN ABS LIQ/SLG	AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-03
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
			IN PAINT WASTE	AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-03
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
			LAB PACKS	AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05

1995 Solid Waste Forecast Radionuclide Concentrations for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>Radionuclide</u>	<u>Conc.</u>
WHC_200 ETF	CH_LLMW_I	55 GAL DRUM		SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
			ORG ABS LIQ/SL	AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
			ORG ABS LIQ/SL	PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
			ORG ABSORB	AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
			ORG PART	TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
				AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-03
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03

1995 Solid Waste Forecast Radionuclide Concentrations for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>Radionuclide</u>	<u>Conc.</u>
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
				AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
	CH_LLMW_III	55 GAL DRUM	D METAL	SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
				AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-07
				IODINE129	3.96E-07
	WHC_200 ETF	55 GAL DRUM	D PLAS/RUB	NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
				AMERICIUM	2.12E-05
				CARBON14	1.78E-05
			IN ABS LIQ/SLG	CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				AMERICIUM	2.12E-05

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast Radionuclide Concentrations for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>Radionuclide</u>	<u>Conc.</u>
				URANIUM238	2.12E-05
			IN SALT WASTE	AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
				SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
			ORG ABS LIQ/SL	AMERICIUM	2.12E-05
				CARBON14	1.78E-05
				CESIUM137	3.44E-07
				IODINE129	3.96E-07
				NEPTUNIUM237	2.12E-05
				PLUTONIUM	2.12E-05
WHC_200 ETF	CH_LLMW_III	55 GAL DRUM	ORG ABS LIQ/SL	SELENIUM79	1.69E-06
				STRONTIUM90	4.84E-03
				TECHNETIUM99	1.36E-06
				TRITIUM	3.20E-05
				URANIUM238	2.12E-05
WHC_300 TEDF	CH_LLW_I	BULK DUMPING	IN ABS LIQ/SLG	AMERICIUM	0.00E+00
				PLUTONIUM	0.00E+00
				STRONTIUM90	2.25E-07
				URANIUM238	0.00E+00
		4X4X8 BOX SKID	D HETEROG	AMERICIUM	4.20E-03
				CESIUM137	8.82E-03
				PLUTONIUM	3.64E-03
				STRONTIUM90	1.54E-03
			D INORG	AMERICIUM	4.20E-03
				CESIUM137	8.82E-03

1995 Solid Waste Forecast Radionuclide Concentrations for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>Radionuclide</u>	<u>Conc.</u>
				PLUTONIUM	3.64E-03
				STRONTIUM90	1.54E-03
			D INORG NM	AMERICIUM	4.20E-03
				CESIUM137	8.82E-03
				PLUTONIUM	3.64E-03
				STRONTIUM90	1.54E-03
			D METAL	AMERICIUM	4.20E-03
				CESIUM137	8.82E-03
				PLUTONIUM	3.64E-03
				STRONTIUM90	1.54E-03
			D PLAS/RUB	AMERICIUM	4.20E-03
				CESIUM137	8.82E-03
				PLUTONIUM	3.64E-03
				STRONTIUM90	1.54E-03
		55 GAL DRUM	D HETEROG	AMERICIUM	4.80E-04
				CESIUM137	1.01E-03
				PLUTONIUM	4.16E-04
				STRONTIUM90	1.76E-04

1995 Solid Waste Forecast Radionuclide Concentrations for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>Radionuclide</u>	<u>Conc.</u>
WHC_300_TEDF	CH_LLW_I	55 GAL DRUM	D INORG	AMERICIUM	4.80E-04
				CESIUM137	1.01E-03
				PLUTONIUM	4.16E-04
				STRONTIUM90	1.76E-04
			D METAL	AMERICIUM	9.00E-04
				CESIUM137	1.89E-03
				PLUTONIUM	7.80E-04
				STRONTIUM90	3.30E-04
			D PLAS/RUB	AMERICIUM	4.80E-04
				CESIUM137	1.01E-03
				PLUTONIUM	4.16E-04
				STRONTIUM90	1.76E-04
			IN ABS LIQ/SLG	AMERICIUM	9.00E-04
				CESIUM137	1.89E-03
				PLUTONIUM	7.80E-04
				STRONTIUM90	3.30E-04
			SOIL SOIL/GRAV	AMERICIUM	9.00E-04
				CESIUM137	1.89E-03
				PLUTONIUM	7.80E-04
				STRONTIUM90	3.30E-04
		5X5X9 METAL	D HETEROG	AMERICIUM	9.00E-04
				CESIUM137	1.89E-03
				PLUTONIUM	7.80E-04
				STRONTIUM90	3.30E-04
			D INORG	AMERICIUM	9.00E-04
				CESIUM137	1.89E-03
				PLUTONIUM	7.80E-04
				STRONTIUM90	3.30E-04
			D INORG NM	AMERICIUM	9.00E-04
				CESIUM137	1.89E-03
				PLUTONIUM	7.80E-04

WHC-SD-WM-PICD-001, REV 1

1995 Solid Waste Forecast Radionuclide Concentrations for the Liquid Effluents Program

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>PWF</u>	<u>Radionuclide</u>	<u>Conc.</u>
				STRONTIUM90	3.30E-04
WHC_300_TEDF	CH_LLW_I	5X5X9 METAL	D METAL	AMERICIUM	9.00E-04
				CESIUM137	1.89E-03
				PLUTONIUM	7.80E-04
				STRONTIUM90	3.30E-04
			D PLAS/RUB	AMERICIUM	9.00E-04
				CESIUM137	1.89E-03
				PLUTONIUM	7.80E-04
				STRONTIUM90	3.30E-04

APPENDIX C

**1995 SOLID WASTE FORECAST VOLUME (m³) INFORMATION FOR RCRA
MONITORING - WELL DRILLING**

WHC-SD-WM-PICD-001, REV 1

Solid Waste Forecast Volumes (m³) by Waste Class for Well Drilling

Waste Generator	Waste Class		1996	1997	1998	1999	2000	2001	2002	2003	2004
WHC_WELL_DRL	CH_LLMW_I	Volume	27	27	27	27	27	27	27	27	27
		Min. Pct.	50	50	50	50	50	50	50	50	50
		Max. Pct.	300	300	300	300	300	300	300	300	300
	CH_LLW_I	Volume	300	300	300	300	300	300	300	300	300
		Min. Pct.	30	30	30	30	30	30	30	30	30
		Max. Pct.	150	150	150	150	150	150	150	150	150
	HAZ	Volume	300	300	300	300	300	300	300	300	300
		Min. Pct.	50	50	50	50	50	50	50	50	50
		Max. Pct.	125	125	125	125	125	125	125	125	125
Total		627	627	627	627	627	627	627	627	627	

Waste Generator	Waste Class		2005	2006	2007	2008	2009	2010	2011	2012	2013
WHC_WELL_DRL	CH_LLMW_I	Volume	27	27	27	27	27	27	27	27	27
		Min. Pct.	50	50	50	50	50	50	50	50	50
		Max. Pct.	300	300	300	300	300	300	300	300	300
	CH_LLW_I	Volume	300	300	300	300	300	300	300	300	300
		Min. Pct.	30	30	30	30	30	30	30	30	30
		Max. Pct.	150	150	150	150	150	150	150	150	150
	HAZ	Volume	300	300	300	300	300	300	300	300	300
		Min. Pct.	50	50	50	50	50	50	50	50	50
		Max. Pct.	125	125	125	125	125	125	125	125	125
	Total		627	627	627	627	627	627	627	627	627

Waste Generator	Waste Class		2014	2015	2016	2017	2018	2019	2020	2021	2022
WHC_WELL_DRL	CH_LLMW_I	Volume	27	27	27	27	27	27	27	27	27
		Min. Pct.	50	50	50	50	50	50	50	50	50
		Max. Pct.	300	300	300	300	300	300	300	300	300
	CH_LLW_I	Volume	300	300	300	300	300	300	300	300	300
		Min. Pct.	30	30	30	30	30	30	30	30	30
		Max. Pct.	150	150	150	150	150	150	150	150	150
	HAZ	Volume	300	300	300	300	300	300	300	300	300
		Min. Pct.	50	50	50	50	50	50	50	50	50
		Max. Pct.	125	125	125	125	125	125	125	125	125
Total		627	627	627	627	627	627	627	627	627	

WHC-SD-WM-PICD-001, REV 1

**Solid Waste Forecast Volumes (m³) by Waste Class for Well Drilling
(cont.)**

Waste Generator	Waste Class		2023	2024	2025
WHC_WELL_DRL	CH_LLMW_I	Volume	27	27	27
		Min. Pct.	50	50	50
		Max. Pct.	300	300	300
	CH_LLW_I	Volume	300	300	300
		Min. Pct.	30	30	30
		Max. Pct.	150	150	150
	HAZ	Volume	300	300	300
		Min. Pct.	50	50	50
		Max. Pct.	125	125	125
Total			627	627	627

WHC-SD-WM-PICD-001, REV 1

Solid Waste Forecast Container Percentages by Waste Class for Well Drilling

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>Percent</u>
WHC_WELL_DRL	CH_LLMW_I	4X4X8 BOX SKID	15.0
		55 GAL DRUM	80.0
		85 GAL DRUM	5.0
			<hr/> 100.0
	CH_LLW_I	4X4X8 BOX SKID	25.0
		55 GAL DRUM	70.0
		85 GAL DRUM	5.0
			<hr/> 100.0
	HAZ	30 GAL DRUM	7.0
		55 GAL DRUM	90.0
		85 GAL DRUM	3.0
			<hr/> 100.0

WHC-SD-WM-PICD-001, REV 1

**Solid Waste Forecast Physical Waste Form Percentages by Container
Type and Waste Class for Well Drilling**

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>Physical Waste Form</u>	<u>Percent</u>
WHC_WELL_DRL	CH_LLMW_I	4X4X8 BOX SKID	D HETEROG	3.0
			D INORG	40.0
			D INORG NM	1.0
			D METAL	40.0
			D ORG	1.0
			D PLAS/RUB	15.0
				<hr/> 100.0
			55 GAL DRUM	
			D INORG NM	1.0
			D METAL	5.0
			D ORG	1.0
			D PLAS/RUB	3.0
			SOIL SOIL/GRAV	90.0
				<hr/> 100.0
			85 GAL DRUM	
			D INORG NM	1.0
			D METAL	5.0
			D ORG	1.0
			D PLAS/RUB	3.0
			SOIL SOIL/GRAV	90.0
				<hr/> 100.0
			CH_LLW_I	
			4X4X8 BOX SKID	
			D METAL	70.0
			D PLAS/RUB	20.0
			SOIL SOIL/GRAV	10.0
				<hr/> 100.0
			55 GAL DRUM	
			D METAL	5.0
			D PLAS/RUB	5.0
			SOIL SOIL/GRAV	90.0
				<hr/> 100.0
			85 GAL DRUM	
			D METAL	5.0
			D PLAS/RUB	5.0
			SOIL SOIL/GRAV	90.0
				<hr/> 100.0

WHC-SD-WM-PICD-001, REV 1

**Solid Waste Forecast Physical Waste Form Percentages by Container
Type and Waste Class for Well Drilling**

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>Physical Waste Form</u>	<u>Percent</u>
WHC_WELL_DRL	HAZ	30 GAL DRUM	D INORG NM	2.0
			D METAL	1.0
			D ORG	5.0
			D PLAS/RUB	4.0
			LAB PACKS	8.0
			SOIL SOIL/GRAV	80.0
				<hr/> 100.0
		55 GAL DRUM	D INORG NM	2.0
			D METAL	1.0
			D ORG	5.0
			D PLAS/RUB	4.0
			LAB PACKS	8.0
			SOIL SOIL/GRAV	80.0
				<hr/> 100.0
		85 GAL DRUM	D INORG NM	2.0
			D METAL	1.0
			D ORG	5.0
			D PLAS/RUB	4.0
			LAB PACKS	8.0
			SOIL SOIL/GRAV	80.0
				<hr/> 100.0

WHC-SD-WM-PICD-001, REV 1

**Solid Waste Forecast Hazardous Constituent Percentages by Physical Waste
Form, Container Type and Waste Class for Well Drilling**

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>Physical Waste Form</u>	<u>Hazardous Constituent</u>	<u>Percent</u>
WHC_WELL_DRL CH_LLMW_1	4X4X8 BOX SKID	D HETEROG	WT-WP-WC		100.0
					100.0
			WT-WP-WC		100.0
					100.0
			Organic WT-WP-WC		10.0
					90.0
					100.0
		D METAL	Organic WT-WP-WC		10.0
					90.0
					100.0
		D ORG	Organic WT-WP-WC		80.0
					20.0
					100.0
		D PLAS/RUB	Organic WT-WP-WC		20.0
					80.0
					100.0
	55 GAL DRUM	D INORG NM	WT-WP-WC		100.0
					100.0
		D METAL	Metal Organic PCB > = 50ppm WT-WP-WC		3.0
					5.0
					2.0
					90.0
					100.0
		D ORG	Organic WT-WP-WC		50.0
					50.0
					100.0
		D PLAS/RUB	Organic WT-WP-WC		50.0
					50.0
					100.0

WHC-SD-WM-PICD-001, REV 1

Solid Waste Forecast Hazardous Constituent Percentages by Physical Waste Form, Container Type and Waste Class for Well Drilling

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>Physical Waste Form</u>	<u>Hazardous Constituent</u>	<u>Percent</u>
					100.0
			SOIL SOIL/GRAV	Metal	3.0
				Organic	5.0
				PCB > = 50ppm	2.0
				WT-WP-WC	90.0
					100.0
		85 GAL DRUM	D INORG NM	WT-WP-WC	100.0
					100.0
			D METAL	Organic	30.0
				PCB > = 50ppm	2.0
				WT-WP-WC	68.0
					100.0
			D ORG	Organic	50.0
				WT-WP-WC	50.0
					100.0
			D PLAS/RUB	Organic	50.0
				WT-WP-WC	50.0
					100.0
			SOIL SOIL/GRAV	Metal	3.0
				Organic	10.0
				WT-WP-WC	87.0
					100.0
HAZ		30 GAL DRUM	D INORG NM	Organic	10.0
				WT-WP-WC	90.0
					100.0
			D METAL	Organic	95.0
				PCB > = 50ppm	5.0
					100.0

WHC-SD-WM-PICD-001, REV 1

Solid Waste Forecast Hazardous Constituent Percentages by Physical Waste Form, Container Type and Waste Class for Well Drilling

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>Physical Waste Form</u>	<u>Hazardous Constituent</u>	<u>Percent</u>
WHC_WELL_DRL HAZ		30 GAL DRUM	D ORG	ABC	75.0
				Organic	25.0
					100.0
			D PLAS/RUB	WT-WP-WC	100.0
					100.0
			LAB PACKS	ABC	50.0
				Organic	50.0
					100.0
			SOIL SOIL/GRAV	Metal	5.0
				Organic	15.0
				WT-WP-WC	80.0
					100.0
		55 GAL DRUM	D INORG NM	Organic	10.0
				WT-WP-WC	90.0
					100.0
			D METAL	Organic	95.0
				PCB > = 50ppm	5.0
					100.0
			D ORG	ABC	75.0
				Organic	25.0
					100.0
			D PLAS/RUB	WT-WP-WC	100.0
					100.0
			LAB PACKS	ABC	50.0
				Organic	50.0
					100.0
			SOIL SOIL/GRAV	Metal	5.0
				Organic	15.0

WHC-SD-WM-PICD-001, REV 1

Solid Waste Forecast Hazardous Constituent Percentages by Physical Waste Form, Container Type and Waste Class for Well Drilling

<u>Waste Generator</u>	<u>Waste Class</u>	<u>Container</u>	<u>Physical Waste Form</u>	<u>Hazardous Constituent</u>	<u>Percent</u>
WHC_WELL_DRL HAZ		85 GAL DRUM	D INORG NM	WT-WP-WC	80.0
					100.0
				Organic	10.0
				WT-WP-WC	90.0
					100.0
			D METAL	Organic	95.0
				PCB > = 50ppm	5.0
					100.0
			D ORG	ABC	75.0
				Organic	25.0
					100.0
			D PLAS/RUB	WT-WP-WC	100.0
					100.0
			LAB PACKS	ABC	50.0
				Organic	50.0
					100.0
			SOIL SOIL/GRAV	Metal	5.0
				Organic	15.0
				WT-WP-WC	80.0
					100.0