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OhioEPA

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October 4, 1995

Re: Director's Final Findings & Orders
United States Department of Energy
Portsmouth Gaseous Diffusion Plant
Piketon, Ohio
Federal Facility Compliance Act of 1992
Site Treatment Plan

CERTIFIED MAIL

Mr. James C. Hall
Manager, Oak Ridge Operations Office
United States Department of Energy
P.O. Box 2001
Oak Ridge, Tennessee 37831

Dear Mr. Hall:

Transmitted herewith are Final Findings & Orders of the Director concerning the matter indicated.

Sincerely yours,

Thomas E. Crepeau

Thomas E. Crepeau, Manager
Data Management Section
Division of Hazardous Waste Management

TEC/dhs

cc: Mark Navarre, Legal Supervisor
Michael Savage, Asst. Chief, DHWM
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George V. Voinovich, Governor
Nancy P. Hollister, Lt. Governor
Donald R. Schregardus, Director

ATTACHMENT #1

DOE/OR/12-1204/V2&D5

Proposed Site Treatment Plan

for the
Mixed Wastes

at
Portsmouth Gaseous Diffusion Plant
Piketon, Ohio

RECEIVED
OHIO EPA
OCT 03 1995
DIV. OF HAZARDOUS WASTE MGT.

Volume II. Compliance Plan
(Amended)

September1995

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Prepared for
U.S. Department of Energy
Office of Environmental Restoration and Waste Management

LOCKHEED MARTIN ENERGY SYSTEMS, INC.
Environmental Restoration and Waste Management
P.O. Box 628 Piketon, Ohio 45661
Under Contract DE-AC05-76OR00001
to the
U.S. Department of Energy

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By: Mary Cavion Date 10-4-95

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1. PURPOSE AND SCOPE

This section of the PSTP has been moved to the "Background Volume" and is hereby incorporated as Appendix 1.

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2. IMPLEMENTATION OF THE SITE TREATMENT PLAN

This section of the PSTP has been moved to the "Background Volume" and is hereby incorporated as Appendix 2.

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3. MIXED LOW LEVEL WASTE STREAMS

The "Compliance Plan Volume" of the PSTP establishes overall schedules for achieving compliance with LDR requirements for mixed wastes at PORTS. The schedules include those activities required to bring existing waste treatment facilities or technologies into operation and those required to develop new facilities and capacity for treatment. The assumptions upon which individual schedules are dependent are contained in Sections 3 through 5 of the "Background Volume." The schedules may be affected if the underlying assumptions, such as funding, change. Dates provided in the "Compliance Plan Volume" schedules are enforceable through the procedure established in the implementing FFCAct Order.

3.1 MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS

PORTS has identified 12 Preferred Options for the treatment of characterized mixed low level waste streams in inventory. Only minor modifications of the Preferred Option, if any, are needed to treat the identified wastes. These Preferred Options and their respective waste streams are presented in Sections 3.1.1 through 3.1.12.

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3.1.1 Waste Streams for which Technology Exists
Preferred Option: Incineration at DOE Oak Ridge TSCA Facility

Project Name: TSCA Incineration Off-Site

The PORTS mixed waste streams for which the Preferred Option is identified as TSCA Incineration are listed in Table 3.1. Total volume of the waste stream to be treated at the TSCA Incinerator is 230 cubic meters. Treatment will be accomplished through the use of the TSCA incinerator at the K-25 Site located in Oak Ridge, Tennessee. Because the TSCA incinerator is located off-site, the continued availability of this incinerator to process PORTS waste is subject to state equity issues and other uncertainties such as the treatment allocation for PORTS waste. The FY 1996 allocation to PORTS is approximately 100,000 lbs. from current inventory.

The schedule for mixed waste listed in Table 3.1 is as follows:

<u>Current Off-Site TSCA Incineration</u>

<u>Receive site agreement</u>: The Site Agreement necessary for this project is in place.

<u>Initiate shipment of waste for treatment</u>: Shipments are ongoing.

<u>Complete shipment of the PORTS mixed waste inventory</u>:
September 30, 1999 - **TARGET**

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Table 3.1. Incineration off-site
(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W012 — **U Recovery Solvent Waste**

EPA ID Codes:	D002,D006,D008	Waste Category:	2000	
LDR Treatment Standard:	Incineration/detoxification/stabilization	Total Volume:	1.248	cu/m
		Total Weight:	1846	lbs.

MWIR Number: PO- W019 — **Waste Oil**

EPA ID Codes:	D001,D002,D004,D005,D006,D007,D008,D009,D010,D011,D018,D022,D029,D035,D038,D039,D040,F001,F002,F003,F004,F005	Waste Category:	2000	
LDR Treatment Standard:	Incineration/stabilization	Total Volume:	147.147	cu/m
		Total Weight:	246929	lbs.

MWIR Number: PO- W028 — **Lab Waste**

EPA ID Codes:	D001,D002,D022,F003	Waste Category:	2000	
LDR Treatment Standard:	Incineration,biological treatment,wet air oxidation/stabilization	Total Volume:	2.912	cu/m
		Total Weight:	5113	lbs.

MWIR Number: PO- W029 — **Waste Antifreeze**

EPA ID Codes:	D010	Waste Category:	2000	
LDR Treatment Standard:	Incineration,biological treatment,wet air oxidation/stabilization	Total Volume:	1.664	cu/m
		Total Weight:	2960	lbs.

MWIR Number: PO- W040 — **Acetone Still Bottoms/Solvents**

EPA ID Codes:	D001,F003	Waste Category:	2000	
LDR Treatment Standard:	Incineration,biological treatment,wet air oxidation/stabilization	Total Volume:	0.643	cu/m
		Total Weight:	237	lbs.

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Table 3.1. (continued)

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W041 — **Fuels or Oil/Water**

EPA ID Codes:	D008,D018	Waste Category:	2000	
LDR Treatment Standard:	Incineration, biological treatment, wet air oxidation/stabilization	Total Volume:	2,496	cu/m
		Total Weight:	4,800	lbs.

MWIR Number: PO- W048 — **Gas Analyzer Solutions**

EPA ID Codes:	D001,D002,F003	Waste Category:	2000	
LDR Treatment Standard:	Incineration, deactivation/stabilization	Total Volume:	9,831	cu/m
		Total Weight:	17,360	lbs.

MWIR Number: PO- W056 — **UF6 Analyzer Still Bottoms**

EPA ID Codes:	D001	Waste Category:	2000	
LDR Treatment Standard:	Incineration	Total Volume:	0.416	cu/m
		Total Weight:	777	lbs.

MWIR Number: PO- W057 — **Solvents**

EPA ID Codes:	D001,D002,D003,D004,D005,D006,D007,D008,D009,D010,D011,D012,D013,D014,D015,D016,D017,D018,D019,D021,D022,D026,D027,D028,D035,D037,D038,D040,D041,F001,F002,F003,F004,F005	Waste Category:	2000	
LDR Treatment Standard:	Incineration, biological treatment, wet air oxidation/stabilization	Total Volume:	53.952	cu/m
		Total Weight:	75,267	lbs.

MWIR Number: PO- W077 — **Neat TCE**

EPA ID Codes:	F001	Waste Category:	2000	
LDR Treatment Standard:	Incineration, biological treatment, wet air oxidation/stabilization	Total Volume:	3.442	cu/m
		Total Weight:	7,177	lbs.

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Table 3.1. (continued)

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W078 **Diesel Fuel, Gasoline, Kerosene**

EPA ID Codes:	D001,D002,D007,D008,D018,D021 [redacted]	Waste Category:	[redacted]
LDR Treatment Standard:	Incineration, biological treatment, wet air oxidation/stabilization [redacted]	Total Volume:	[redacted] cu/m
		Total Weight:	[redacted] lbs.

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3.1.2 Waste Streams for which Technology Exists Preferred Option: Groundwater Treatment

The PORTS mixed waste stream for which the Preferred Option is identified as Groundwater Treatment is MWIR PO-W050 (Table 3.2). Treatment of this waste stream is currently in process on-site in the existing groundwater treatment facilities, X-622, X-622T, X-623, and X-624. The current volume of this waste stream in storage is 38.6 cubic meters. Detailed information on these treatment facilities is located in Section 3.1.1 of the "Background Volume." These facilities currently operate on a continuous basis; therefore, an implementation schedule is not required to ensure operations of these facilities.

The schedule for mixed waste listed in Table 3.2 is as follows:

Groundwater Treatment (Aqueous Treatment)

Submit permit applications to the appropriate agencies: Not Applicable

Procure contract with vendor: Not Applicable

Initiate construction necessary for vendor operations: Not Applicable

Commence systems testing: Not applicable

Commence operations: Ongoing

Complete processing of mixed waste: December 31, 1999 - **TARGET**
Process ongoing to support groundwater treatment

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Table 3.2. On-site groundwater treatment
(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W050 **Groundwater and Related Water**

EPA ID Codes:	D002,D004,D006,D007,D008,D009,D010,D018,D029,D040,F001,F002	**Waste Category:**	1000
LDR Treatment Standard:	Biological or wet air oxidation and carbon adsorption	**Total Volume:**	38,632 cu/m
		Total Weight:	73,926 lbs.

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3.1.3 Waste Streams for which Technology Exists Preferred Option: Recycling Operations

The PORTS mixed waste streams for which the Preferred Option is identified as Recycling Operations are listed in Table 3.3. Current volume of waste identified for recycling is 117 cubic meters. Treatment will occur through the decontamination of exterior surfaces, proof of "no-radiation added," and recycling at a commercial facility. The contract necessary for this project is in place.

The intact fluorescent lights in waste stream MWIR PO-W004 are currently being decontaminated on the exterior surfaces to meet release criteria and recycled by an off-site commercial vendor. Broken lights will undergo crushing prior to treatment in the stabilization project.

The schedule for recycling of the fluorescent lights mixed waste stream listed in Table 3.3 is as follows:

Recycling Unbroken Light Bulbs Off-Site

Receive site agreements: The agreements necessary for this project are in place.

Initiate preparation of wastes for transport: May 1, 1995 - **COMPLETE**

Complete shipment of mixed wastes for off-site treatment:
September 30, 1996 - **MILESTONE**

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Table 3.3. Decontaminate/Recycle

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W004 — **Light Bulbs**

EPA ID Codes:	D008;D009	Waste Category:	5000
LDR Treatment Standard:	Acid leaching/chemical precipitation stabilization for Hg solids (<260 mg/kg)	Total Volume:	32,109 cu/m
		Total Weight:	273,331 lbs.

MWIR Number: PO- W020 — **Lead Solids**

EPA ID Codes:	D008	Waste Category:	5000
LDR Treatment Standard:	Stabilization	Total Volume:	58,315 cu/m
		Total Weight:	41,860 lbs.

MWIR Number: PO- W033 — **Batteries**

EPA ID Codes:	D002;D006;D007;D008;D009	Waste Category:	7000
LDR Treatment Standard:	Neutralization/venting for Pb acids and thermal recovery	Total Volume:	17,654 cu/m
		Total Weight:	1,222,464 lbs.

MWIR Number: PO- W068 — **Circuit Boards and Related Items**

EPA ID Codes:	D006;D008;D009;D011	Waste Category:	5000
LDR Treatment Standard:	Stabilization/metal recovery	Total Volume:	9,417 cu/m
		Total Weight:	9,088 lbs.

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3.1.3 Waste Streams for which Technology Exists
Preferred Option: Recycling Operations (Cont'd)

Waste streams MWIR PO-W020, Lead Solids; MWIR PO-W068, Circuit Boards and Related Items; and MWIR PO-W033, Batteries (Table 3.3) will also be treated by the Preferred Option, assuming that the administrative and technical issues with the "no-radiation added" policy will be resolved.

The schedule for mixed waste streams MWIR PO-W020, MWIR PO-W068, and MWIR PO-W033 listed in Table 3.3 is as follows:

Recycling Lead Containing Materials and Other Items

Receive site agreements: Dec. 31, 1998 - **TARGET**

Initiate shipment of wastes for treatment: June 30, 2003 - **TARGET**

Complete shipment of mixed wastes for off-site treatment:
March 31, 2005 - **TARGET**

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3.1.4 Waste Streams for which Technology Exists Preferred Option: Carbon Regeneration

The PORTS mixed waste streams for which the Preferred Option is identified as Carbon Regeneration are listed in Table 3.4. Current volume of this waste stream is 135.5 cubic meters. Treatment will occur through pretreatment followed by regeneration using a vendor-supplied mobile unit located at an on-site facility. Pretreatment that may be necessary for this waste stream includes draining and/or radio nuclide removal. An on-site location was chosen because of the concerns and costs associated with transporting such a large volume of mixed waste.

The schedule for mixed waste listed in Table 3.4 is as follows:

Carbon Regeneration On-site

Submit permit applications to the appropriate agencies: June 30, 1999 - **TARGET**

Procure contract with vendor: March 31, 2000 - **TARGET**

Initiate construction necessary for vendor operations: Sept. 30, 2000 - **TARGET**

Commence systems testing: Sept. 30, 2001 - **TARGET**

Commence operations: Dec. 31, 2001 - **TARGET**

Complete processing of mixed waste: Sept. 30, 2003 - **TARGET**, then process will be ongoing to support Groundwater Treatment

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Table 3.4. Pretreatment/Regeneration

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W058 **Carbon Sludge**

EPA ID Codes:	D006,D008,D010,D022,D028,D029,F001	Waste Category:	[redacted]	
LDR Treatment Standard:	[redacted]	Total Volume:	[redacted]	cu/m
		Total Weight:	[redacted]	lbs.

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3.1.5 Waste Streams for which Technology Exists Preferred Option: Cyanide Destruction at Y-12

The PORTS mixed waste streams for which the Preferred Option is identified as Cyanide Destruction are listed in Table 3.5. Current volume of this waste stream is 2.6 cubic meters. Treatment is by cyanide destruction at an existing facility at the Y-12 Plant in Oak Ridge, Tennessee. The schedule presented below reflects the preferred option for treatment at the Y-12 Facility and assumes that the state of Tennessee will allow shipment of the PORTS waste to the Y-12 facility. Because the state of Tennessee has recently raised concern about the State's acceptance of this waste for treatment at the Y-12 facility, PORTS is continuing to evaluate other treatment options, both on-site and off-site. If an option other than the Y-12 Facility is the final selection, an alternative schedule will be submitted to Ohio EPA.

The schedule for mixed waste listed Table 3.5 is as follows:

Physical Chemical Treatment Option (Cyanide Destruction at Y-12)

Receive Site Agreement: March 31, 1997 - **MILESTONE**

Initiate shipment of wastes for treatment: Sept. 30, 1998 - **MILESTONE**

Complete shipment of mixed wastes for off-site treatment: Dec. 31, 2000 - **TARGET**

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Table 3.5. CN destruction off-site

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W014 — **Waste Cyanide Plating Solutions**

EPA ID Codes:	D003 F007 [redacted]	Waste Category:	1000	
LDR Treatment Standard:	Alkaline chlorination/Cr reduction/precipitation/dewater sludge [redacted]	Total Volume:	2.080	cu/m
		Total Weight:	2368	lbs.

MWIR Number: PO- W076 — **Cyanide Bearing Solutions**

EPA ID Codes:	D001 D003 D008 D010 D038 F001 P098 [redacted]	Waste Category:	1000	
LDR Treatment Standard:	Alkaline chlorination [redacted]	Total Volume:	0.569	cu/m
		Total Weight:	1857	lbs.

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3.1.6 Waste Stream for which Technology Exists
Preferred Option: Mercury Processing at INEL

The PORTS mixed waste streams for which the Preferred Option is identified as Mercury Processing are listed in Table 3.6. Current volume of waste to be treated at Idaho National Environmental Laboratory (INEL) is 10.9 cubic meters. Treatment is by mercury processing at existing facilities at the DOE INEL. The Idaho facilities have the excess capacity and the ability to handle these relatively small waste streams.

The schedule for mixed waste listed in Table 3.6 is as follows:

Receive Site Agreement: March 31, 1997 - **MILESTONE**

Initiate shipment of wastes for treatment: Dec. 31, 1997 - **MILESTONE**

Complete shipment of mixed wastes for off-site treatment: Dec. 31, 1998 - **TARGET**

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Table 3.6. Off-site mercury process

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W006 **Waste Hg, Metallic**

EPA ID Codes:	D008 D009 U151	Waste Category:	7000	
LDR Treatment Standard:	Thermal desorption	Total Volume:	2.659	cu/m
		Total Weight:	10,938	lbs.

MWIR Number: PO- W061 **Mercury Solids**

EPA ID Codes:	D008 D009	Waste Category:	5000	
LDR Treatment Standard:	Acid leaching/chemical precipitation for Hg solids	Total Volume:	8.250	cu/m
		Total Weight:	13,263	lbs.

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3.1.7 Waste Streams for which Technology Exists Preferred Option: Stabilization On-site

The PORTS mixed waste streams for which the Preferred Option is identified as Stabilization are listed in Table 3.7. Current total volume of primary and secondary waste streams identified to be treated by stabilization is 7,555 cubic meters. Treatment is by stabilization of the waste stream and/or stabilization of secondary waste streams generated as a result of other treatment activities. Plans are to utilize a vendor-supplied mobile unit on-site. DOE is currently pursuing off-site commercial treatment for this waste.

The schedule for mixed waste listed in Table 3.7 is as follows:

Submit permit applications to appropriate agencies: Sept. 30, 2000 -**TARGET**

Procure contract with vendor: Dec. 31, 2000 - **TARGET**

Initiate construction necessary for vendor operations: March 31, 2001 - **TARGET**

Commence System testing: Sept. 30, 2001 - **TARGET**

Commence operations: Sept. 30, 2002 - **TARGET**

Complete processing of mixed waste: March 31, 2011 - **TARGET**

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Table 3.7. Stabilization

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W003 — **Glass Beads**

EPA ID Codes: D006,D008

LDR Treatment Standard: Vitrification/stabilization

Waste Category: 3000

Total Volume: 2,931 cu/m

Total Weight: 6,276 lbs.

MWIR Number: PO- W015 — **Heavy Metal Sludge**

EPA ID Codes: D001,D006,D008,D009,D018,F005, U154

LDR Treatment Standard: Acid leaching/precipitation, stabilization, metal recovery

Waste Category: 3000

Total Volume: 314.10 cu/m

Total Weight: 602,862 lbs.

MWIR Number: PO- W016 — **Microfiltration Sludge and Filters**

EPA ID Codes: D006,D007,D008

LDR Treatment Standard: Stabilization

Waste Category: 3000

Total Volume: 93.852 cu/m

Total Weight: 137,503 lbs.

MWIR Number: PO- W018 — **Ion Exchange Resin**

EPA ID Codes: D009,F001

LDR Treatment Standard: Acid leaching/precipitation, incineration

Waste Category: 3000

Total Volume: 70.942 cu/m

Total Weight: 123,372 lbs.

MWIR Number: PO- W025 — **HEPA Filters**

EPA ID Codes: D009,F001

LDR Treatment Standard: Acid leaching/chemical precipitation stabilization for Hg solids

Waste Category: 5000

Total Volume: 0.435 cu/m

Total Weight: 163 lbs.

MWIR Number: PO- W027 — **X-705A Incinerator Ash**

EPA ID Codes: D006,D007,D008,D009,F001

LDR Treatment Standard: Vitrification/stabilization

Waste Category: 3000

Total Volume: 1.712 cu/m

Total Weight: 2,376 lbs.

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Table 3.7. (continued)

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W039 **Soils**

EPA ID Codes: D002,D006,D007,D008,D009,D018,D040,F001,F002,F003,F005

LDR Treatment Standard: Thermal desorption/carbon adsorption

Waste Category: 4000

Total Volume: 4660.322 cu/m

Total Weight: 11,592,497 lbs.

MWIR Number: PO- W042 **Fluorine Generator Sludge and Solution**

EPA ID Codes: D002,D004

LDR Treatment Standard:

Waste Category: 3000

Total Volume: 14.768 cu/m

Total Weight: 36,681 lbs.

MWIR Number: PO- W043 **Filter Tank Gunk**

EPA ID Codes: D009

LDR Treatment Standard:

Waste Category: 3000

Total Volume: 27.824 cu/

Total Weight: 45,239 lbs

MWIR Number: PO- W046 **Cooling Tower Curtains**

EPA ID Codes: D007

LDR Treatment Standard: Chemical reduction/stabilization

Waste Category: 5000

Total Volume: 10.623 cu

Total Weight: 12,160 lb

MWIR Number: PO- W059 **Bag Filters**

EPA ID Codes: D006,D008,D009,D010,D011,D018

LDR Treatment Standard: Incineration/stabilization

Waste Category: 5000

Total Volume: 0.656 cu

Total Weight: 5,475 l

MWIR Number: PO- W063 **Chromium-Contaminated Soils**

EPA ID Codes: D007

LDR Treatment Standard: Chromium reduction/stabilization

Waste Category: 4000

Total Volume: 22.532 c

Total Weight: 62,341

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Table 3.7. (continued)

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W064 **Cement Dust**

EPA ID Codes: D007,D008,D010,D018,D026

Waste Category: 6000

LDR Treatment Standard:

Total Volume: 3952 cu/m

Total Weight: 7540 lbs.

MWIR Number: PO- W069 **Clean-Up and Spill Response Residues**

EPA ID Codes: D001,D002,D003,D004,D006,D007,D008,D009,D010,D011,D018,D019,D021,D022,D026,D027,D028,D033,D034,D036,D037,D040,D041,D042,D043,F001,F002,F003,F004,F005,U226

Waste Category: 4000

LDR Treatment Standard: Thermal desorption/carbon adsorption/chromium reduction/stabilization

Total Volume: 154,873 cu/m

Total Weight: 393,768 lbs.

MWIR Number: PO- W073 **Steam Plant PPE and Debris**

EPA ID Codes: D004

Waste Category: 5000

LDR Treatment Standard: Vitrification/stabilization

Total Volume: 3,120 cu/m

Total Weight: 1,212

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3.1.8 Waste Streams for which Technology Exists
Preferred Option: Repackage and Vendor Specified/Waste Specific

The PORTS mixed waste streams for which the Preferred Option is identified as repackaging followed by a vendor-specified treatment/disposal option are the out of specification gas cylinders (Table 3.8). Currently a contract is in place with a vendor to repackage identified gas cylinders (88 cylinders) by use of the vendor's supplied mobile unit located on-site. Repackaging efforts will include sampling, repackaging, and identifying the reusable inventory. The inventory identified as unusable will be treated and disposed as directed by the manufacturer or vendor.

Activities associated with treating and disposing the unusable inventory will be scheduled after the results of the repackaging efforts are available. The schedule for the repackaging of mixed waste listed in Table 3.8 is as follows:

Gas Cylinder Repackaging On-Site

Submit permit applications to appropriate agencies: Not Applicable

Procure contract with vendor: Complete, contract in place

Schedule for repackaging waste: September 30, 1996 - **MILESTONE**

Perform radiological evaluation of waste: December 31, 1996 - **MILESTONE**

Submit plan for treatment of mixed waste: March 31, 1997 - **MILESTONE**

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Table 3.8. Repackage on-site/TBD
(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W070 **Gas Cylinders**

EPA ID Codes:	P063 [redacted]	**Waste Category:**	[redacted] 6000	
LDR Treatment Standard:	Incineration electrolytic oxidation [redacted]	**Total Volume:**	[redacted] 0.208	cu/m
		Total Weight:	[redacted] 20	lbs.

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3.1.9 Waste Streams for which Technology Exists
Preferred Option: On-Site X-705 Micro Filtration System

The PORTS mixed waste stream for which the Preferred Option is identified as the on-site X-705 Micro Filtration System is in Table 3.9. Current volume of waste to be treated at the X-705 Micro Filtration system is 1.25 cubic meters. This waste stream was not included in the detailed waste stream discussions of the current PSTP because it was assumed that this waste stream had already been treated.

The schedule for mixed waste listed in Table 3.9 is as follows:

Submit permit applications to appropriate agencies: Not Applicable

Procure contract with vendor: Not Applicable

Initiate construction necessary for vendor operations: Not Applicable

Commence systems testing: Not Applicable

Commence operations: Dec. 31, 1997 - **MILESTONE**

Complete processing of mixed waste: March 31, 1998 - **MILESTONE**

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Table 3.9. X-705 On-site
(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W008 **Motor Cleaning Solutions**

EPA ID Codes:	D006,D008 [redacted]	**Waste Category:**	[redacted]
LDR Treatment Standard:	[redacted]	**Total Volume:**	[redacted] cu/m
		Total Weight:	[redacted] lbs.

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3.1.10 Waste Streams for which Technology Exists
Preferred Option: Deactivate Reactive Materials

The PORTS mixed waste stream for which the Preferred Option identified as Deactivate Reactive Materials are listed in Table 3.10. Total volume of this waste stream is .624 cubic meters. Deactivation can be accomplished by draining away the oil and methodically combining the sodium metal with water. This will be done through the use of a laboratory bench-scale unit on-site. The waste oil will be treated by incineration, and the aqueous portion will be treated by the on-site waste water treatment facilities or the vendor-supplied mobile unit.

The schedule for mixed waste listed in Table 3.10 is as follows:

Bench-scale Deactivation

Submit permit applications to appropriate agencies: Not Applicable

Procure contract with vendor: Sept. 30, 1996 - **MILESTONE**

Initiate construction necessary for vendor operations: March 31, 1997 - **MILESTONE**

Commence systems testing: Sept. 30, 1997 - **MILESTONE**

Commence operations: Dec. 31, 1997 - **MILESTONE**

Complete processing of mixed waste: June 30, 1998 - **MILESTONE**

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Table 3.10. Deactivate reactive materials
(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W074 **Waste Sodium**

EPA ID Codes:	D001	Waste Category:	6000
LDR Treatment Standard:	Deactivation	Total Volume:	0.624 cu/m
		Total Weight:	1,791 lbs.

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3.1.11 Waste Streams for which Technology Exists
Preferred Option: Puncture, Remove, and Container Disposal

The PORTS mixed waste streams for which the Preferred Option is identified as the Puncture, Remove, and Container Disposal option are in Table 3.11. Total volume of this waste stream is 7.7 cubic meters. At an offsite vendor, the contents can be removed by puncturing the cans using a drum-mounted, commercially available unit and draining the contents into the drum. Because the RCRA constituents are removed from the can with the contents, the can is no longer a RCRA waste. The contents will be incinerated.

The schedule for mixed waste listed in Table 3.11 is as follows:

Puncture, Remove, and Container Disposal Off-Site

Receive site agreements: Dec. 31, 2002 - **TARGET**

Initiate shipment of wastes for treatment: June 30, 2003 - **TARGET**

Complete shipment of mixed wastes for off-site treatment: Sept. 30, 2004 - **TARGET**

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Table 3.11. Decontaminate containers
(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W067 **Aerosol Cans**

EPA ID Codes:	D001,D007,D008,D018,D021,D022,D035,D039,D040,F005	**Waste Category:**	6000
LDR Treatment Standard:		**Total Volume:**	7.697 cu/m
		Total Weight:	4,581 lbs.

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3.1.12 Waste Streams for which Technology Exists
Preferred Option: Lab Pack Treatment

The PORTS mixed waste streams for which the Preferred Option is identified as Lab Pack Treatment are listed in Table 3.12. Total volume of identified lab packs to be treated is 29.4 cubic meters. After segregation and decontamination of the containers, a portion of the waste streams could be recycled. Other portions of the waste streams containing organic liquids could be incinerated, and the remaining portions of the waste streams will be crushed and stabilized. Specific treatment options will be based on the LDR BDAT.

The schedule for mixed waste listed in Table 3.12 is as follows:

Lab Pack Treatment

Receive site agreement: March 31, 2000 - **TARGET**

Initiate shipment of wastes for treatment: June 30, 2000 - **TARGET**

Complete shipment of the PORTS mixed waste inventory: Sept. 30, 2001 - **TARGET**

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Table 3.12. Lab packs treatment
(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W030 — **Unused Lab Chemicals with Metals**

EPA ID Codes:	D001,D002,D003,D004,D005,D006,D007,D008,D009,D010,D011,D038,F003,F007,P012,P015,P029,P030,P098,P104,P106,P119,P120, U011,U026,U044,U052,U056,U123,U151,U216,U217,U220	Waste Category:	6000
LDR Treatment Standard:	Deactivation/stabilization/metal recovery, RMERC for Hg	Total Volume:	9,020 cu/m
		Total Weight:	6,086 lbs.

MWIR Number: PO- W031 — **Unused Laboratory Chemicals without Metals**

EPA ID Codes:	D001,D002,D003,D008,D012,D013,D015,D017,D018,D020,D022,D030,D031,D032,D033,D034,D037,D038,D041,D042,F001,F003,F027,P004,P037,P051,P059,P071,P098,P103,P111,P123, U002,U012,U019,U021,U031,U036,U037,U048,U069,U071,U077,U088,U101,U102,U105,U127, U128,U129,U151,U154,U161,U162,U190,U196,U209,U211,U220,U226,U239	Waste Category:	6000
LDR Treatment Standard:	Incineration/destruction followed by stabilization	Total Volume:	7,332 cu/m
		Total Weight:	5,272 lbs.

MWIR Number: PO- W047 — **Non-Lab Off-Spec Chemicals**

EPA ID Codes:	D001,D002,D003,D004,D005,D006,D007,D008,D009,D011,D018,D035,P029,P063,P104,P106,P108, U036,U044,U069,U075,U077,U107,U151,U159,U211,U220,U228,U239,U240	Waste Category:	6000
LDR Treatment Standard:	Stabilization/metal recovery	Total Volume:	14,530 cu/m
		Total Weight:	10,749 lbs.

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3.2 MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS BUT NEEDS ADAPTATION

PORTS has identified four Preferred Options for the treatment of mixed low level waste streams in inventory that would require adaptation or additional information concerning the waste streams. The modification to the preferred option and/or additional information about the waste stream would be required to allow the identified waste stream to be treated using the selected technology.

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3.2.1 Mixed Waste Streams for which Technology Exists But Needs Adaptation Preferred Option: Metal Recovery

Stabilization is the Preferred Option for most of the waste streams in waste category 3000, but due to the concern that larger pieces of metal would not pass TCLP requirements in the stabilized form, metal recovery was selected as the preferred option for the waste streams listed in Table 3.13. Prior to implementing the preferred option, additional information is required. The actual metal recovery technology to be applied will vary depending on the metal to be recovered and the waste matrix. Current volume of waste identified to be treated by metal recovery is 62.3 cubic meters.

The schedule for mixed waste listed in Table 3.13 is as follows:

Metal Recovery

Determine adaptation needed for commercially available treatment technology: Dec. 31, 2000 - **TARGET**

Submittal of plan for treatment of mixed waste: Sept. 30, 2001 - **TARGET**

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Table 3.13. Metal recovery
(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W005 — **Waste Metal Turnings**

EPA ID Codes: D008,D011

LDR Treatment Standard: Stabilization,recovery/incineration

Waste Category: 3000

Total Volume: 2.383 cu/m

Total Weight: 2181 lbs.

MWIR Number: PO- W026 — **Metal Shavings and Scrap**

EPA ID Codes: D006,D008,D011

LDR Treatment Standard: Stabilization,recovery

Waste Category: 3000

Total Volume: 51.376 cu/m

Total Weight: 90,154 lbs.

MWIR Number: PO- W036 — **Seal Dismantling Scrap Metal**

EPA ID Codes: D008

LDR Treatment Standard: Stabilization,recovery

Waste Category: 3000

Total Volume: 1.248 cu/m

Total Weight: 2,354 lbs.

MWIR Number: PO- W037 — **Machine Grinding Sludge**

EPA ID Codes: D005,D006,D008

LDR Treatment Standard: Stabilization,recovery

Waste Category: 3000

Total Volume: 0.832 cu/m

Total Weight: 902 lbs.

MWIR Number: PO- W049 — **Silver Plating Compounds**

EPA ID Codes: D011

LDR Treatment Standard:

Waste Category: 3000

Total Volume: 0.208 cu/m

Total Weight: 57 lbs.

MWIR Number: PO- W051 — **Film/Microfilm/X-Ray**

EPA ID Codes: D011

LDR Treatment Standard:

Waste Category: 3000

Total Volume: 5.996 cu/

Total Weight: 5,203 lbs

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Table 3.13. Metal recovery
(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W075 **Waste Slag**

EPA ID Codes:	D011 [redacted]	**Waste Category:**	[redacted] 3000	
LDR Treatment Standard:	[redacted]	**Total Volume:**	[redacted] 0.208	cu/m
		Total Weight:	[redacted] 210	lbs.

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3.2.2 Mixed Waste Streams for which Technology Exists But Needs Adaptation Preferred Option: Future Incineration Off-Site

The PORTS mixed waste streams for which the Preferred Option is identified as the Future Incineration are listed in Table 3.14. The total volume of primary and secondary waste streams identified for future incineration is 1,908 cubic meters. Currently, technical capabilities exist to incinerate soft solids and non-aqueous waste streams, but there is not an on-site or offsite commercial facility available for treatment of the identified waste streams. The current facility being utilized for incineration does not have the capability for treatment of soft solids or non-aqueous waste streams.

The schedule for mixed waste listed in Table 3.14 is as follows:

Future Incineration Off-Site

Determine adaptation needed for commercially available treatment technology:
Dec. 31, 1999 - **TARGET**

Submittal of plan for treatment of mixed waste: Sept. 30, 2000 - **TARGET**

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Table 3.14. Future incineration off-site
(Preferred treatment technologies for various waste categorie

MWIR Number: PO- W001 — Treatment Filters

EPA ID Codes: D007,D010,D018,F001

LDR Treatment Standard: Incineration/stabilization of residues

Waste Category: 5000

Total Volume: 19,383 cu/m

Total Weight: 34,641 lbs.

MWIR Number: PO- W002 — Vapor Degreaser Sludge

EPA ID Codes: D018,F001

LDR Treatment Standard: Incineration/stabilization of residues

Waste Category: 3000

Total Volume: 0.16 cu/m

Total Weight: 438 lbs.

MWIR Number: PO- W013 — Chromic Acid Tank Closure Waste

EPA ID Codes: D001,D007,D008,D010,F006

LDR Treatment Standard: Stabilization

Waste Category: 5000

Total Volume: 95,064 cu/m

Total Weight: 163,356 lbs.

MWIR Number: PO- W017 — Paints and Thinners

EPA ID Codes: D001,D002,D005,D006,D007,D008,D010,D018,D035,F002,F003,F005

LDR Treatment Standard: Incineration/stabilization of residues

Waste Category: 3000

Total Volume: 37,050 cu/m

Total Weight: 95,387 lbs.

MWIR Number: PO- W021 — Fluorine Generator Scrap and Debris

EPA ID Codes: D004,D010

LDR Treatment Standard: Vitrification

Waste Category: 5000

Total Volume: 3,536 cu/m

Total Weight: 6,651 lbs.

MWIR Number: PO- W022 — Waste Decontamination Solids

EPA ID Codes: D004,D006,D007,D008,D009,D010,D018,D040,F001,F002

LDR Treatment Standard: Incineration/stabilization of residues

Waste Category: 3000

Total Volume: 12,787 cu/m

Total Weight: 18,367 lbs.

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Table 3.14. (continued)

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W024 — **Floor Sweepings**

EPA ID Codes:	D004,D006,D007,D008,D009,D010,D018,D039,D040	Waste Category:	5000
LDR Treatment Standard:	Stabilization/metal recovery	Total Volume:	120,766 cu/m
		Total Weight:	159,000 lbs.

MWIR Number: PO- W032 — **Paint Sludge and Solids**

EPA ID Codes:	D001,D006,D007,D008,D010,D035,F003,F005	Waste Category:	3000
LDR Treatment Standard:	Incineration/stabilization of residues	Total Volume:	2,932 cu/m
		Total Weight:	3,402 lbs.

MWIR Number: PO- W035 — **Oil and Grease Removal Unit Filter Cake**

EPA ID Codes:	D006,D007,D008,D018	Waste Category:	3000
LDR Treatment Standard:	Incineration/stabilization of residues	Total Volume:	48,642 cu/m
		Total Weight:	16,607 lbs.

MWIR Number: PO- W038 — **PPE and Miscellaneous Debris**

EPA ID Codes:	D008,D009,D010,D018,D039,D040,F001,F002	Waste Category:	5000
LDR Treatment Standard:	Incineration/stabilization of residues	Total Volume:	289,066 cu/m
		Total Weight:	328,819 lbs.

MWIR Number: PO- W045 — **Waste Oil/Filters**

EPA ID Codes:	D009,D018	Waste Category:	5000
LDR Treatment Standard:	Incineration and stabilization	Total Volume:	5,635 cu/m
		Total Weight:	5,838 lbs.

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Table 3.14. (continued)

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W052 — **Rags, Gloves, Wipes, Absorbent Material**

EPA ID Codes: D001,D002,D003,D004,D005,D006,D007,D008,D009,D010,D011,D012,D013,D014,D015,D016,D017,D018,D019,D020,D021,D022,D027,D028,D029,D030,D031,D034,D035,D036,D037,D038,D039,D040,D043,F001,F002,F003,F004,F005,U227

Waste Category: 5000

LDR Treatment Standard: Incineration/stabilization

Total Volume: 959,424 cu/m

Total Weight: 520,402 lbs.

MWIR Number: PO- W060 — **Hazardous Waste Unit Closure**

EPA ID Codes: D004,D006,D007,D008,D009,D010,D014,D018,D030,D032,D040,F001,F002,F005,F006

Waste Category: 5000

LDR Treatment Standard: Incineration/stabilization

Total Volume: 324,563 cu/m

Total Weight: 668,178 lbs.

MWIR Number: PO- W062 — **Filter Cloth and PPE**

EPA ID Codes: D007

Waste Category: 5000

LDR Treatment Standard: Chemical reduction/stabilization

Total Volume: 62,240

Total Weight: 4,316 lbs.

MWIR Number: PO- W065 — **Solid, Liquid Clean-Up of Storage Areas**

EPA ID Codes: D001,D002,D004,D006,D007,D008,D009,D010,D018,F001,F002,F003

Waste Category: 5000

LDR Treatment Standard: Incineration/stabilization/encapsulation

Total Volume: 87,563 cu/m

Total Weight: 9,639 lbs.

MWIR Number: PO- W066 — **Cleaning and Neutralization Tank Residue**

EPA ID Codes: F001

Waste Category: 3000

LDR Treatment Standard:

Total Volume: 8,112 cu/m

Total Weight: 19,024 lbs.

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Table 3.14. (continued)

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W067 **Aerosol Cans**

EPA ID Codes: D001,D007,D008,D018,D021,D022,D035,D039,D040,F005

Waste Category: 6000

Total Volume: 7,697 cu/m

LDR Treatment Standard:

Total Weight: 4,681 lbs.

MWIR Number: PO- W071 **Waste Oil and Debris**

EPA ID Codes: D018

Waste Category: 5000

Total Volume: 1,040 cu/m

LDR Treatment Standard: Incineration/stabilization of residues

Total Weight: 1,335 lbs.

MWIR Number: PO- W072 **Clean-Up Debris**

EPA ID Codes: F001

Waste Category: 5000

Total Volume: 2,496 cu/m

LDR Treatment Standard: Incineration/stabilization of residues

Total Weight: 2,657 lbs.

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3.2.3 Mixed Waste Streams for which Technology Exists But Needs Adaptation Preferred Option: Physical Chemical Treatment

The PORTS mixed waste streams for which the Preferred Option is identified as Physical Chemical Treatment are listed in Table 3.15. The total volume of waste identified for physical chemical treatment is 231 cubic meters. When the selected alternatives for the aqueous waste streams in Waste Category 1000, other than groundwater, are reviewed, it becomes apparent that a common physical chemical treatment system would be required for the identified waste streams. This system should be capable of demulsification, oil/water separation, chromium reduction, precipitation (with both hydroxide and sulfide), neutralization, chemical oxidation, sedimentation, filtration, ion exchange polishing, carbon adsorption polishing, solidification of precipitate sludges and other debris, and incineration of separated oils/solvents. Other physical chemical treatment systems identified to facilitate treatment of the mixed wastes listed in Table 3.15 are a crusher/shredder and a debris washer. These treatment systems will support the stabilization preferred option as a pre-treatment step.

The schedule for mixed wastes listed in Table 3.15 is as follows:

<u>Physical Chemical Treatment On-Site</u>

<u>Determine adaptation needed for commercially available treatment technology:</u> Dec. 31, 2000 - **TARGET**

<u>Submittal of plan for treatment of mixed waste</u>: Sept. 30, 2001 - **TARGET**

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Table 3.15. Physical chemical treatment
(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W009 — Spent Alkaline Solutions

EPA ID Codes:	D002,D006,D007,D008,D018	Waste Category:	1000	
LDR Treatment Standard:	Precipitation/neutralization/sludge dewater/liquid-liquid extract and carbon absorption	Total Volume:	0.1896	cu/m
		Total Weight:	241.79	lbs.

MWIR Number: PO- W010 — Nickel Stripping Solution

EPA ID Codes:	D002	Waste Category:	1000	
LDR Treatment Standard:	Neutralization	Total Volume:	0.644	cu/m
		Total Weight:	879	lbs.

MWIR Number: PO- W011 — Plating Solution

EPA ID Codes:	D001,D002,D008,D010	Waste Category:	1000	
LDR Treatment Standard:	Neutralization	Total Volume:	1.335	cu/m
		Total Weight:	1,660	lbs.

MWIR Number: PO- W023 — RCW/RHW System Waste

EPA ID Codes:	D007	Waste Category:	1000	
LDR Treatment Standard:		Total Volume:	5.276	cu/m
		Total Weight:	9,930	lbs.

MWIR Number: PO- W034 — Lead Solutions

EPA ID Codes:	D008	Waste Category:	1000	
LDR Treatment Standard:		Total Volume:	0.624	cu/m
		Total Weight:	767	lbs.

MWIR Number: PO- W044 — Booth Water

EPA ID Codes:	D035,F005	Waste Category:	1000	
LDR Treatment Standard:	Cr reduction/precipitation/dewater sludge/bio-treat or wet air/GAC	Total Volume:	0.208	cu/m
		Total Weight:	211	lbs.

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Table 3.15. (continued)

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W053 — Waste Acid/Bases

EPA ID Codes:	D001,D002,D003,D004,D005,D006,D007,D008,D009,D010,D011,D035,D038,F001,F002,F003,F005	Waste Category:	1000
LDR Treatment Standard:	Cr reduction/precipitation with sulfide/dewater sludge	Total Volume:	18,687 cu/m
		Total Weight:	53,085 lbs.

MWIR Number: PO- W055 — Decontamination Waste Solutions

EPA ID Codes:	D002,D004,D005,D006,D007,D008,D009,D010,D011,D018	Waste Category:	1000
LDR Treatment Standard:	Precipitation/neutralization/sludge dewater, liquid-liquid extract and carbon adsorption	Total Volume:	33,491 cu/m
		Total Weight:	68,778 lbs.

MWIR Number: PO- W069 — Clean-Up and Spill Response Residues

EPA ID Codes:	D001,D002,D003,D004,D006,D007,D008,D009,D010,D011,D018,D019,D021,D022,D026,D027,D028,D033,D034,D036,D037,D040,D041,D042,D043,F001,F002,F003,F004,F005,U226	Waste Category:	4000
LDR Treatment Standard:	Thermal desorption/carbon adsorption/chromium reduction/stabilization	Total Volume:	154,873
		Total Weight:	393,768 lbs.

MWIR Number: PO- W074 — Waste Sodium

EPA ID Codes:	D001	Waste Category:	6000
LDR Treatment Standard:	Deactivation	Total Volume:	0.624 cu/m
		Total Weight:	1,479 lbs.

MWIR Number: PO- W079 — Blueprint Solutions

EPA ID Codes:	D002	Waste Category:	1000
LDR Treatment Standard:	Neutralization	Total Volume:	0.332 cu/m
		Total Weight:	637 lbs.

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Table 3.15. (continued)

(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W080 **Flushing Solution**

EPA ID Codes: D002,D018

LDR Treatment Standard: Neutralization

Waste Category: 1000

Total Volume: 1325 cu/m

Total Weight: 1754 lbs.

MWIR Number: PO- W081 **Silver Solution**

EPA ID Codes: D011

LDR Treatment Standard: Precipitation

Waste Category: 1000

Total Volume: 4.237 cu/m

Total Weight: 3,004 lbs.

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3.3 Mixed Waste Streams Requiring Further Characterization or For Which Technology Assessment Has Not Been Done

The six waste streams, containing highly enriched uranium (HEU), referenced in DOE'S March 9, 1995 letter to the Director of Ohio EPA, are currently being characterized. The six HEU waste streams include Oil Leak Residue, Evaporator Tray Residue, X-710 Sample Residue, X-705 Decon Residues, Filter Ash, and Alumina. One MWIR number, MWIR PO-W082, has been assigned to these HEU waste streams (Table 3.16). When characterization data is available additional MWIR numbers may be assigned by grouping waste streams with similar RCRA constituents. Also, after characterization data is available, treatment technologies will be evaluated for each waste stream.

The schedule for mixed waste listed in Table 3.16 is as follows:

Complete characterization: Sept. 30, 1996 - **MILESTONE**

Submittal of plan to address treatment of mixed wastes: Dec. 31, 1998 - **TARGET**

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Table 3.16. Undetermined, needs further assessment
(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W082 **Highly Enriched Uranium Waste**

EPA ID Codes:	D006,D007,D008,D009	Waste Category:	6000	
LDR Treatment Standard:		Total Volume:	0.8485	cu/m
		Total Weight:	5121	lbs.

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4. TRU MIXED WASTE STREAMS

TRU waste is defined as waste containing alpha-emitting radionuclides with an atomic number greater than 92 and half-lives greater than 20 years at concentrations greater than 100 nCi/g. In accordance with this definition, there are no TRU or TRU mixed wastes currently stored at PORTS. Should TRU waste be generated in the future or through characterization TRU waste is identified, as discussed in greater detail of Section 4 the "Background Volume" of the STP, DOE plans to achieve compliance with the requirements of the FFCAct and the LDR for mixed TRU waste destined for the DOE Waste Isolation Pilot Project (WIPP) by using the no-migration petition approach in 40 CFR Section 268.6. Under this strategy, DOE intends to: continue interim storage of any such mixed TRU waste; prepare such wastes for shipment to WIPP; and then ship and dispose of such wastes in WIPP.

Currently, a small HEU waste stream, filter ash, has been identified as possibly containing TRU constituents in very small concentrations. This is a historical waste stream that is no longer generated. After completion of characterizing the HEU waste streams, DOE may assign a new MWIR number to this waste stream for ease of identification. Other HEU waste streams may be identified as containing small concentrations of TRU constituents.

If the HEU waste streams are identified as containing TRU constituents; or TRU waste is identified at PORTS, appropriate revisions to the STP will be initiated. Such revisions would include schedule changes, in accordance with the above strategy and any alternate plans, should the start-up of WIPP be delayed or a change in WIPP's waste acceptance criteria (WAC) occur that could impact PORTS. Then, during the next revision of the STP, management of these waste streams will be outlined to maintain safe, compliant storage, including waste characterization activities, and other activities to support the ultimate goal of shipment to and disposal at WIPP under a no-migration petition.

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5. HIGH-LEVEL MIXED WASTE

There is no high-level radioactive mixed waste generated, processed, or stored by facilities at PORTS.

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The schedule for mixed waste listed in Table 3.16 is as follows:

Complete characterization: Sept. 30, 1996 - **MILESTONE**

Submittal of plan to address treatment of mixed wastes: Dec. 31, 1998 - **TARGET**

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Table 3.16. Undetermined, needs further assessment
(Preferred treatment technologies for various waste categories)

MWIR Number: PO- W082 **Highly Enriched Uranium Waste**

EPA ID Codes:	D006,D007,D008,D009	Waste Category:	6000	
LDR Treatment Standard:		Total Volume:	0.348	cu/m
		Total Weight:	5121	lbs.

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5. HIGH-LEVEL MIXED WASTE

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Issue Date: October 4, 1995

Effective Date: October 4, 1995

BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY

In the Matter Of:

United States Department of Energy	:	**Director's Final**
Portsmouth Gaseous Diffusion Plant	:	**Findings and Orders**
P.O. Box 700	:	
Piketon, Ohio 45661-0700	:	

Respondent

It is hereby agreed by and among the parties hereto as follows:

I. JURISDICTION

These Director's Final Findings and Orders ("Orders") are issued to the United States Department of Energy ("Respondent" or "DOE") pursuant to the authority vested in the Director of Environmental Protection ("Director") under Chapters 3734. and 3745. of the Ohio Revised Code ("ORC").

II. PARTIES BOUND

These Orders shall apply to and be binding upon the Respondent, its assigns, and successors in interest. No change in ownership or operation of the Facility will in any way alter the Respondent's responsibilities under these Orders. Except as otherwise expressly provided herein, the Respondent's obligations under these Orders may be altered only by written approval of the Director.

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III. DEFINITIONS

Unless otherwise stated below, all terms used in these Orders shall have the same meaning as used in Chapter 3734. of the ORC and the regulations promulgated thereunder.

Milestone:

A "milestone" is a fixed, firm, and enforceable date as set forth in the approved STP. A milestone is a requirement and is enforceable. Milestones correspond to the categories of milestones set forth in Order 1.B.

Revision:

A "revision" is a change to the approved STP which requires, for those affected portions of the STP, public notice by the Ohio EPA of availability of the revised STP, and consultation by Ohio EPA with affected states and U.S. EPA, pursuant to these Orders and Section 105 of the Federal Facility Compliance Act, 42 U.S.C. Section 6939c(b)(4). A revision shall include: (a) the addition or deletion of a treatment facility or a treatment technology with respect to the approved STP; and (b) an extension of milestone for a period greater than sixty (60) days. However, changes in waste volume, the addition or deletion of wastes or waste types, extensions of milestones for a period less than or equal to sixty (60) days, or changes to target dates shall not, by themselves, constitute revisions.

Target Date:

A "target date" is an anticipated completion date for a task that has not been designated as a milestone and shall be a goal for accomplishing a designated task. A target date is not a requirement and is not enforceable. Target dates correspond to the categories of target dates set forth in Order 1.B.

Unavoidable Delay:

An event of "unavoidable delay" means any event beyond the control of DOE which prevents or delays performance of any obligation required by the approved STP and these Orders, and which could not be overcome by due

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diligence on the part of DOE.

Funding Availability or Available Funds:

"Funding Availability" or "Available Funds" means: (1) DOE's-Ports Waste Management (WM) budget allocation, for determinations with respect to milestones for the current FY; and (2) DOE's-Ports Environmental Management (EM) budget allocation (i.e. Environmental Restoration and WM budget allocation or EM target funding level for the Facility), for determinations with respect to other schedules (e.g. FY+1, FY+2 milestones).

IV. FINDINGS OF FACT

1. The United States Department of Energy ("Respondent") owns the Portsmouth Gaseous Diffusion Plant, a uranium enrichment facility, located in Pike County, Ohio, approximately twenty (20) miles north of the City of Portsmouth ("Facility").

2. Lockheed Martin Energy Systems, Inc. fka Martin Marietta Energy Systems, a Delaware corporation, licensed to do business in the State of Ohio on March 2, 1984, co-operates Respondent's hazardous and mixed waste management storage facilities and activities at the Facility. The United States Enrichment Corporation ("USEC") has, since July 1, 1993, leased and operated the uranium enrichment facilities and activities at the Facility.

3. The Respondent is a "person" as defined in Sections 1.59 and 3734.01 of the ORC and rule 3745-50-10 of the Ohio Administrative Code ("OAC").

4. At the Facility, the Respondent and USEC generate "hazardous waste" as that term is defined by Section 3734.01 of the ORC and rules 3745-50-10 and 3745-51-03 of the OAC.

5. Mixed waste is defined as waste containing both a hazardous waste subject to the Resource Conservation and Recovery Act of 1976, 42 U.S.C. Section 6901 et seq, as amended ("RCRA"), and a source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954, 42 U.S.C. Section 2011 et seq, as amended ("AEA").

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6. The Ohio EPA received final authorization from the U.S. Environmental Protection Agency to regulate the hazardous waste component of mixed waste on June 30, 1989 (54 FR 27173).

7. At the Facility, Respondent and USEC has generated, continues to generate, and Respondent is storing mixed wastes subject to OAC rules 3745-59-30 (solvent wastes), 3745-59-32 (California list wastes), 3745-59-33 (first third wastes), 3745-59-34 (second third wastes), and 3745-59-35 (third third wastes), hereinafter referred to as land disposal restricted ("LDR") mixed wastes. Further, Respondent also stores mixed wastes generated by USEC.

8. The Respondent has represented to the Ohio Environmental Protection Agency ("Ohio EPA") that the treatment capability or capacity for these LDR mixed wastes is presently inadequate or unavailable.

9. Subject to certain conditions specified therein, OAC rule 3745-59-50 prohibits the storage of LDR mixed wastes at the Facility for longer than one (1) year. See also 42 U.S.C. Section 6924(j) and 40 Code of Federal Regulations, Part 268.

10. Section 105 of the Federal Facility Compliance Act of 1992 ("FFCA"), 42 U.S.C. Section 6939c, enacted October 6, 1992, requires the Secretary of Energy to develop and submit to the Ohio EPA, for review and approval, approval with modifications, or disapproval, a plan for the development of treatment capacities and technologies to treat all of the mixed waste at the Facility. Section 105 of the FFCA further provides for the Ohio EPA to consider the need for regional treatment facilities, to consult with the Administrator of the United States Environmental Protection Agency ("U.S. EPA") and any other state in which a facility affected by the plan is located, and to consider public comments in making its determination on the plan. Section 105 of the FFCA further provides for the Ohio EPA to approve, approve with modifications, or disapprove the plan within six (6) months after receipt of the plan (hereinafter, "Site Treatment Plan" or "STP").

11. Section 102(a) of the FFCA, 42 U.S.C. Section 6961(a), provides that each department, agency, and instrumentality of the executive, legislative, and

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judicial branches of the Federal Government (1) having jurisdiction over any solid waste management facility or disposal site, or (2) engaged in any activity resulting, or which may result, in the disposal or management of solid waste or hazardous waste shall be subject to, and comply with, all Federal, State, interstate and local requirements, both substantive and procedural, respecting control and abatement of solid waste or hazardous waste disposal and management in the same manner, and to the same extent, as any person is subject to such requirements, including the payment of reasonable service charges. Section 102(a) also provides that the United States expressly waives any immunity otherwise applicable to the United States with respect to such substantive or procedural requirements.

Further, Section 102(c) of the FFCA provides that, until October 6, 1995, the waiver of sovereign immunity contained in Section 102(a) of the FFCA, with respect to civil, criminal, and administrative penalties and fines, shall not apply to departments, agencies, and instrumentalities of the executive branch of the Federal Government for violations of Section 3004(j) of the Solid Waste Disposal Act ("SWDA"), 42 U.S.C. Section 6924(j), involving storage of mixed waste that is not subject to an existing agreement, permit, or administrative or judicial order, so long as such waste is managed in compliance with all applicable requirements.

Section 102(c) of the FFCA further provides that, after October 6, 1995, the waiver of sovereign immunity contained in Section 102(a) of the FFCA, with respect to civil, criminal, and administrative penalties and fines, shall apply to departments, agencies, and instrumentalities of the executive branch of the Federal Government for violations of Section 3004(j) of the SWDA, 42 U.S.C. Section 6924(j), involving storage of mixed waste, except that such waiver of sovereign immunity shall not apply after October 6, 1995 for violations by the Respondent of Section 3004(j) of the SWDA, involving storage of mixed waste, so long as the Respondent is in compliance with both: a plan that has been submitted and approved pursuant to Section 105 of the FFCA, 42 U.S.C. Section 6939c, and which is in effect; and an order requiring compliance with such plan which has been issued pursuant to Section 105 of the FFCA, and which is in effect.

12. On April 6, 1993, Respondent published a *Federal Register* notice (58 FR

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17875) describing its proposed process for developing the Site Treatment Plan ("STP") in three phases: the conceptual site treatment plan ("CSTP"), the draft site treatment plan ("DSTP"), and a proposed site treatment plan ("PSTP").

13. On October 29, 1993 and September 1, 1994 the Respondent submitted to the Ohio EPA a CSTP and a DSTP, respectively.

14. By letter dated February 17, 1994, the Ohio EPA provided comments to Respondent on the CSTP.

15. By letters dated October 19, 1994 and October 25, 1994, the Ohio EPA provided comments to Respondent on the DSTP.

16. On April 4, 1995, Respondent submitted to Ohio EPA the PSTP for the Facility.

17. On April 27, 1995, the Ohio EPA published a notice of availability of the PSTP, and has made the PSTP available to the public upon request; on May 24, 1995 the Ohio EPA held a public hearing to take public comment on the PSTP for the Facility.

18. The Ohio EPA has reviewed the PSTP, has considered the need for regional treatment facilities, has consulted with U.S. EPA and states in which a facility affected by the PSTP is located, and has considered all public comments received by Ohio EPA regarding the PSTP. Based upon such review, consultation, and consideration, the Ohio EPA transmitted written comments on the PSTP to Respondent on July 6, 1995.

19. On October 2, 1995, the Respondent submitted an amended PSTP to Ohio EPA in an effort to address Ohio EPA's comments on the PSTP.

20. The Background Volumes of the PSTP and Amended PSTP contain background information and underlying assumptions regarding the schedules and treatment technologies proposed in the PSTP and amended PSTP.

21. The Ohio EPA has reviewed the Respondent's amended PSTP, has considered the need for regional treatment facilities, has consulted with U.S. EPA and other affected states, and has reconsidered public comments received regarding

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the Respondent's PSTP.

22. Pursuant to ORC Section 3734.02(G), the Director of Ohio EPA may by Order exempt any person generating, storing, treating, transporting or disposing of hazardous waste in such quantities or under such circumstances that, in the Director's determination, it is unlikely that public health or safety or the environment will be adversely affected thereby, from any requirement to obtain a permit or license or comply with the manifest system or other requirements of ORC Chapter 3734.

23. Pursuant to ORC Section 3734.02(G), the Director has determined that it is unlikely that public health or safety or the environment will be adversely affected by the Respondent's storage of LDR mixed waste at operation of the Facility provided that the Respondent complies with the requirements set forth in the following orders.

24. The Respondent's submittal of the PSTP and the amended PSTP, the Director's approval of the amended PSTP, and the Director's issuance of these Orders fulfill the requirement of section 105(b) of the FFCA, 42 U.S.C. Section 6939c(b) with respect to the Facility.

V. ORDERS

The Director hereby issues the following Orders:

1. The Compliance Plan Volume of the amended PSTP submitted to Ohio EPA on October 2,1995 (Attachment 1) is hereby approved, subject to the terms and conditions specified in these Orders. The Compliance Plan Volume of the amended PSTP will hereafter be referred to as the "approved STP". Respondent shall implement and comply with the approved STP, in accordance with the approved schedules contained therein, and shall comply with the following terms and conditions:

A. Covered Matters:

i. The approved STP and these Orders address storage and treatment of all

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mixed wastes at the Facility, (excluding wastes generated by USEC, except as provided in Order no. 2), which are not being stored in accordance with the LDR requirements of OAC rule 3745-59-50, whether such wastes were generated or accumulated in the past, are currently generated or accumulated, or will be generated or accumulated in the future.

ii. Notwithstanding Order 1.A.i, above, the approved STP and Order 1 of these Orders do not address the storage or treatment of wastes that are exempt under the provisions of 42 U.S.C. Section 6939c(b)(1)(A)(ii) from the requirement to prepare a STP, (unless otherwise agreed to by DOE and Ohio EPA). Exempted wastes include environmental restoration mixed wastes, derived from corrective action and remedial action activities, the treatment and storage of which, are governed by the Consent Decree entered by the U.S. District Court on September 1, 1989, in the State of Ohio v. United States Department of Energy, et al., Civil Action No. C2-89-732 and the Administrative Order by Consent, EPA Docket No. V-W-90-B-03, effective August 4, 1994, to which Ohio EPA is a party.

B. Compliance Schedules:

i. Establishment of Milestones and Target Dates:

Milestones shall be established for a three year rolling period consisting of the current federal fiscal year (FY) plus two additional federal fiscal years (FY+1 and FY+2). On the effective date of these Orders, enforceable milestones in the approved STP are established for the next three federal fiscal years: FY (October 1, 1995 - September 30, 1996); FY+1 (October 1, 1996 - September 30, 1997); and FY+2 (October 1, 1997 - September 30, 1998). After expiration of the current fiscal year, what were previously FY+1 milestones will become the current fiscal year (FY) milestones, what was previously FY+2 milestones will become FY+1 milestones. The planning schedule activities identified in the approved STP as FY+3 target dates shall be converted to FY+2 milestones. All conversions will be automatic and remain in effect, unless Respondent notifies Ohio EPA of any need to amend the

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milestones, pursuant to Order I.D.

Target dates shall be established for the out-years beyond the three year rolling milestone period. On the effective date of these Orders, non enforceable target dates in the approved STP are established for the out-years beyond FY+2.

In accordance with Section X, Funding, Ohio EPA will consider funding availability in reviewing DOE proposals for establishing and adjusting milestones and target dates pursuant to these Orders.

ii. Categories of Milestones and Target Dates:

The categories of activities for which milestones and target dates are established in the approved STP are listed in the following tables.

Depending upon the status of the facility or treatment options (e.g. operations under interim status or at differing stages of development), certain types of target dates or milestones may not be necessary, or an alternative activity that is more appropriate to the facility or treatment approach may be designated, as agreed to by the Parties.

Table 1. Typical schedule for treatment of wastes with existing treatment technologies

	Type of Activity Selected for Scheduling as a Target Date and Milestone
a)	submit permit applications [or other documentation] to the appropriate agency(ies)
b)	procure contract with vendor
c)	initiate construction of facilities necessary for vendor operations
d)	commence system testing
e)	commence operations
f)	submit for approval a treatment schedule for backlogged and currently generated mixed waste

Table 2. Typical schedule for treatment of mixed waste for which no existing treatment technology exists

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Type of Activity Selected for Scheduling as a Target Date and Milestone
a) identify funding requirements for identification and development of appropriate technology
b) identify and develop technology
c) submit treatability study exemption(s) application, where applicable
d) submit research and development permit application(s), where applicable
e) submit for approval a schedule for treatment in accordance with Table 2.1 of a new schedule for development of alternative treatment technologies in accordance with this section.

Table 3. Typical Schedule for separation of mixed wastes

Type of Activity Selected for Scheduling as a Target Date and Milestone:
a) complete an estimate of the volume of waste generated by each case of radionuclide separation
b) complete an estimate of the volume of waste that would exist or be generated without radionuclide separation
c) complete an estimate of the costs of waste treatment and disposal of radionuclide separation is used compared to the estimated costs if it is not used
d) provide the assumptions underlying such waste volume and cost estimates
e) submit a plan for treatment or management of residues, as appropriate, in accordance with this section

Table 4. Typical schedule for mixed wastes to be shipped off-site for treatment

Type of Activity Selected for Scheduling as a Target Date and Milestone
a) receive site agreements
b) initiate preparation of wastes for transport
c) complete shipment of mixed wastes for off-site treatment

iii. Notwithstanding the Tables of Order 1.B.ii, the provisions of Section 4 of the approved STP shall apply to Transuranic Waste (TRU) at the Facility.

iv. For newly identified mixed waste streams generated or stored at the Facility, the notification of a need to amend the approved STP need only identify the waste streams. If sufficient information on the newly identified mixed waste streams is not currently available to DOE, including those mixed waste streams that are not sufficiently characterized to allow

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By: Mary Carson Date 10-4-95

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identification of appropriate treatment in order to submit an amended STP within the timeframes set out in accordance with Order 1.D.iii of these Orders, DOE in its written notification may propose an alternative schedule for submitting the amended STP that addresses the proposed amendment, including a proposed schedule for characterization where necessary. The final milestone/target date of the characterization schedule will be the requirement for Respondent to identify the method and location for the treatment of such wastes and a proposed schedule for that to occur.

v. For mixed waste that need technology adaptation, the notification of a need to amend the approved STP, shall contain proposed schedules for identifying (1) the necessary treatment adaptation, and (2) the method and location for the treatment of such wastes and a proposed schedule for that to occur.

C. Annual Report:

On or before the 31st day of December, of each year these Orders remain in effect, DOE shall submit to Ohio EPA a written STP Annual Report for the previous federal fiscal year, and an updated STP which incorporates all approved amendments of the approved STP made during the previous fiscal year, for the Facility. The STP Annual Report shall include the following information: an accounting of the status of the projects described in the approved STP, an updated Table 3 - "Low-Level Mixed Waste Streams" from the Background Volume of DOE's amended PSTP; a statement regarding compliance with the milestones contained in the approved STP; a description of any projected difficulties in achieving compliance with future milestones and target dates; an index or chart that clearly indicates all pages of the approved STP affected by approved amendments of the approved STP a summary of new waste streams generated or identified within the previous fiscal year; and a summary of any additional waste characterization information regarding existing, new or projected waste streams. DOE may, at its option, delay submittal of its updated Table 3 - "Low-Level Mixed Waste Streams" from the Background Volume of DOE's amended PSTP-until the 31st day of March of each year following a federal fiscal year for which an STP Annual Report is required to be submitted pursuant to these Orders.

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D. Amendments:

i. If Respondent or Ohio EPA identifies a need for DOE to amend the approved STP, except for changes in volumes of wastes identified in the Background Volume of the amended PSTP, or in the approved STP, the Respondent or Ohio EPA shall provide written notification within 30 days of the identification of such need and the reasons therefor. The notification shall be of sufficient detail to fully explain the rationale for an amendment of the approved STP, including an accounting of the circumstances that justify an STP amendment. If sufficient information on the proposed amendment is not currently available to DOE in order to submit an amended STP within the timeframes set out in accordance with Order 1.D.iii. below; DOE in its written notification, may propose an alternative schedule for submitting the amended STP that addresses the proposed amendment.

ii. Ohio EPA agrees to consider, in its review, all reasons provided by DOE in its proposal to amend the approved STP.

iii. DOE shall submit an amended STP: a) within thirty (30) days from the date of the written notification to address a proposed extension of a milestone, or a proposed change of a treatment facility or treatment technology; b) within ninety (90) days from the date of the written notification to address a proposed change in target date, or any other aspect of the approved STP; and c) annually, (with the annual report pursuant to Order 1.C.) to address changes in volumes of wastes identified in the Background Volume of the amended PSTP or in the approved STP.

iv. If DOE disagrees with an Ohio EPA notification of the need to amend the approved STP, DOE shall, within 30 days, so notify the Ohio EPA, in writing of the reasons for such disagreement. If DOE and the Ohio EPA are unable to resolve their disagreement, either DOE or Ohio EPA may invoke the dispute resolution procedures of Section IX. During the pendency of the dispute resolution process as set forth in Section IX for a good faith dispute over the Ohio EPA notification of the need to amend the approved STP, the time period for completion of work affected by the dispute shall

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be extended for a period of time not to exceed the actual time taken to resolve any good faith dispute in accordance with Section IX.

v. The Ohio EPA will determine whether the Respondent's amended STP constitutes a "revision" of the approved STP, within the meaning of Section 105 of the FFCA, 42 U.S.C. Section 6939c(b)(4) and as further defined in Section III of these Orders. If the Ohio EPA determines that the amended STP constitutes a "revision" of the approved STP, within the meaning of Section 105 of the FFCA, 42 U.S.C. Section 6939c(b)(4) and as further defined in Section III of these Orders, the Ohio EPA will in a timely manner, 1) publish a notice of the proposed revision of the approved STP and 2) notify the Respondent in writing, of such determination.

vi. Based on the Ohio EPA's review of the proposed revision to the STP, the Ohio EPA's consideration of the need for regional treatment facilities, the Ohio EPA's consultation with U.S. EPA and other affected states, and the Ohio EPA's consideration of all public comments received by Ohio EPA regarding the revised STP, the Ohio EPA will approve, approve with modifications, or disapprove the revised STP, in a timely manner, and will notify Respondent accordingly.

vii. If the Ohio EPA determines that the Respondent's amended STP does not constitute a "revision" of the approved STP, within the meaning of Section 105 of the FFCA, 42 U.S.C. Section 6939c(b)(4) and as further defined in Section III of these Orders, the Ohio EPA will in a timely manner, provide written notification to Respondent of Ohio EPA's approval, approval with modifications, or disapproval of the proposed amended STP.

viii. Prior to approving with modifications or disapproving a proposed amendment to the approved STP, Ohio EPA will consult with DOE regarding the proposed amendment. DOE and Ohio EPA shall attempt to resolve any disagreement with respect to a proposed amendment, including a proposed extension of a milestone, pursuant to the provisions of Section IX, Dispute Resolution. Determinations by Ohio EPA to approve with modifications or to disapprove a proposed amendment will be accompanied by a written statement detailing the reasons for modifications or disapproval.

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E. Duty to Perform; Extensions

i. Except as expressly provided in these Orders, DOE shall cause all work to be performed in accordance with the milestones established in the approved STP.

ii. Pursuant to Order 1.D. of these Orders, DOE may request that a milestone be extended. Upon receipt of a proposed amendment to the approved STP that requests that a milestone be extended, the Ohio EPA will determine whether good cause for the requested milestone extension exists, and shall approve the proposed STP amendment if good cause for the requested milestone extension exists.

iii. For purposes of Order 1.E. of these Orders, good cause for an extension of a milestone may include a delay caused by, or likely to be caused by: (a) an event of unavoidable delay; (b) Ohio EPA's failure to timely take any action contemplated by these Orders; (c) the good faith invocation of dispute resolution or the initiation of administrative or judicial action; (d) the Ohio EPA's approval of a proposed STP amendment to extend another milestone; (e) additional work agreed to by DOE and Ohio EPA; (f) an inconsistency or conflict between such milestone and the requirements of any other existing agreement, order or permit to which DOE is a party; (g) the failure of an off-site treatment facility [identified as a preferred option in the approved STP] to accept or treat wastes subject to these Orders as scheduled in the approved STP; or (h) the failure of a mobile treatment facility [identified as a preferred option in the approved STP] to become available for treatment of wastes subject to these Orders as scheduled in the approved STP.

iv. The Ohio EPA's determination of whether good cause for extension of a milestone exists is necessarily a fact specific determination. The foregoing examples of circumstances that may constitute good cause for extension of a milestone shall not be construed to create a presumption that such circumstances will, in any particular instance, be determined by Ohio EPA to constitute good cause for extension of a milestone.

2. An exemption from the prohibition on storage of LDR mixed wastes, as set forth in OAC rule 3745-59-50, is hereby granted to Respondent and its contractor,

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LMES, to store at the Facility LDR mixed wastes generated by Respondent or USEC, at the Facility, provided that the Respondent complies with these Orders.

VI. LIMITATIONS OF DIRECTOR'S APPROVAL

These Orders shall not be construed as the Ohio EPA's authorization to Respondent to construct or operate facilities or to initiate treatment activities as proposed in the approved STP, unless otherwise expressly stated in Order number 1 or 2. Nothing in these Orders shall be construed as limiting applicable laws regarding the construction of facilities, operation of treatment facilities associated with the approved STP, or regarding approvals required for such construction of facilities, operation or treatment activities.

VII. NOTICE

All documents to be submitted pursuant to these Orders shall be submitted to the following persons at the following addresses:

Ohio EPA:

Ohio Environmental Protection Agency
Southeast District Office
Division of Hazardous Waste Management
2195 Front Street
Logan, Ohio 43138
Attn: RCRA Group Leader and Project Manager

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and

Ohio Environmental Protection Agency
Division of Hazardous Waste Management
Attn: Michael A. Savage, Assistant Chief
1800 WaterMark Drive
Columbus, Ohio 43216-1049

DOE:

U.S. DOE, Portsmouth Gaseous Diffusion Plant
P.O. Box 700
Piketon, Ohio 45661-0700
Attn: Portsmouth Site Manager and FFCA Project Manager

or to such persons and addresses as may hereafter be otherwise specified in writing.

VIII. PROJECT MANAGERS

Within ten (10) business days of the effective date of these Orders, Ohio EPA and DOE shall each designate a Project Manager. Each Party shall notify the other party in writing of the designated Project Manager. Either Party may change its designated Project Manager by notifying the other Party, in writing, ten (10) business days before the change, if possible.

Each Project Manager shall be the primary contact regarding the implementation of these Orders. Except as otherwise provided in Section VII of these Orders, communications between the Parties concerning these Orders shall be directed through the Project Manager, for further dissemination to the respective Project Manager's organization.

The Project Managers shall represent their respective organization regarding the implementation of these Orders, including changes to schedules and requirements, except as otherwise provided in Order 1.D. (Amendments), or Section IX (Dispute Resolution). The Project Managers shall meet periodically, as appropriate, to discuss

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progress and problems regarding the implementation of these Orders.

IX. DISPUTE RESOLUTION

A. If a dispute arises regarding the approved STP or these Orders, the procedures of this Section shall apply. For purposes of this Section, the term "Parties" means DOE and Ohio EPA.

B. Respondent and Ohio EPA shall make reasonable efforts to informally resolve any good faith dispute regarding these Orders at the Project Manager level, within thirty (30) days following the occurrence of the actions or circumstances giving rise to the dispute. If resolution cannot be achieved informally, the disputing party may elevate the dispute for resolution pursuant to this section. If Respondent does not submit a written notification of dispute to Ohio EPA within thirty (30) days following the occurrence of the actions or circumstances giving rise to the dispute, Respondent shall be deemed to have accepted the position of the Ohio EPA.

C. To initiate formal dispute resolution, the disputing party shall submit to the other party a written notification of any good faith dispute regarding these Orders. The written notification of dispute shall specify the nature of the dispute, the work affected by the dispute, the disputing party's position with respect to the dispute and the information the disputing party is relying upon to support its position. The Project Managers and designated representatives of the Parties shall attempt to resolve such dispute within thirty (30) days of written notification of the dispute. For DOE, the designated representatives shall include the DOE-Portsmouth Site Manager. For Ohio EPA, the designated representatives shall include the Chief of the Division of Hazardous Waste Management.

D. If the Project Managers and designated representatives of the Parties are unable to resolve such dispute, within thirty (30) days of written notification of the dispute, then either Party may submit a written statement of the dispute to the Ohio EPA's Deputy Director of Programs (the Director's designee, duly delegated with the authority to resolve disputes under this Section of these Orders). The Deputy Director may meet with the Project Managers and designated representatives of the Parties, and may request additional information regarding the nature of the dispute and the respective positions of the parties. Within

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thirty (30) days of receipt of the written statement of dispute, the Deputy Director will consult with the Manager of the DOE Oak Ridge Field Office (or the Manager's designee) and will notify the Project Managers and designated representatives of the Parties in writing of the Director's final decision regarding the dispute. The final decision shall be signed by the Director and shall be binding on the Parties, subject to administrative or judicial appeal or review according to applicable law.

E. Except as provided in this Section, the Respondent shall maintain compliance with these Orders. However, if the Parties agree that there is a good faith dispute, the time period for completion of work affected by dispute shall be extended for a period of time not to exceed the actual time taken to resolve such good faith dispute in accordance with this Section. The time periods designated in this Section of these Orders may be extended by mutual written agreement of the Parties. The Parties may consult with and invite the participation of U.S. EPA and other states affected by a dispute during the dispute resolution process, as appropriate.

F. Unless timely appeal is sought, DOE shall incorporate the resolution and final decision of the Ohio EPA into the appropriate plan, schedule or procedure and shall proceed with implementation in accordance with Order 1.D. (Amendments) and the amended plan, schedule or procedure, within thirty (30) days of such resolution and final decision.

X. FUNDING

DOE shall take all necessary steps to obtain sufficient funding to comply with the provisions of the approved STP and these Orders. DOE shall consult with the Ohio EPA in formulating its annual EM budget request as set forth in this section.

By March 31 of each year following issuance of these Orders, DOE shall provide Ohio EPA with information or a briefing on the proposed EM budget request for the Facility, including appropriate supporting documents. In the process of formulating its annual budget request, DOE may be subject to target funding guidance directed by the Office of Management and Budget (OMB). The information or briefing shall address the impacts of such OMB target funding guidance. The Ohio EPA agrees,

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subject to the Ohio Public Records Law, ORC Section 149.43, not to release confidential budget information to any other person or entity prior to submission by the President of his budget request to Congress unless required to do so by court order. DOE may seek to intervene in any proceeding brought to compel or enjoin release of this information. If allowed to intervene, DOE may assert its interest in, and the legal basis for, maintaining the confidentiality of this information.

DOE and Ohio EPA shall discuss work scope, priorities, milestones and target dates,, and Activity Data Sheet (ADS) funding levels required to comply with the approved STP and these Orders. These discussions shall be conducted before DOE Portsmouth submits its annual budget request and supporting ADS to DOE-OR. Ohio EPA will consider funding availability in reviewing DOE proposals for establishing and adjusting milestones and target dates pursuant to these Orders. Ohio EPA's comments to DOE may include those additional or accelerated activities recommended by Ohio EPA are believed by Ohio EPA to be outside of EM target funding levels for the Facility. DOE may revise its budget request and supporting documents to resolve the comments of Ohio EPA. DOE reserves the right to identify which activities it believes cannot be accomplished within the established EM target funding levels for the Facility. Nothing here in shall effect DOE's ultimate responsibility and authority to formulate and submit to the President appropriate budget requests and to allocate appropriate funds to serve DOE's missions.

XI. OTHER APPLICABLE LAWS

Nothing in these Orders shall be construed as waiving or compromising in any way the applicability and enforcement of any other statutes or regulations applicable to the Respondent's activities at the Facility. The Ohio EPA reserves all rights and privileges except as specified herein.

XII. RESERVATION OF RIGHTS

Nothing contained herein shall be construed to prevent the Ohio EPA from seeking legal or equitable relief to enforce the terms of these Orders or from taking other administrative, legal or equitable action as deemed appropriate and necessary, including seeking penalties against the Respondent for noncompliance with these

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Orders. Nothing contained herein shall be construed to prevent the Ohio EPA from exercising its lawful authority to require the Respondent to perform additional activities at the Facility pursuant to Chapter 3734. of the ORC or any other applicable law in the future. Nothing in these Orders shall be construed to limit the authority of the Ohio EPA to seek relief for violations not addressed in these Orders. Nothing herein shall restrict the right of the Respondent to raise any administrative, legal or equitable claim or defense with respect to such further actions which the Ohio EPA may seek to require of the Respondent. Nothing contained herein shall restrict the right of the Respondent to raise any administrative, legal or equitable claim or defense (including lack of authority) with respect to any administrative or judicial appeal or review of any Ohio EPA notification of need to amend the approved STP. The Director reserves the right to revoke these Orders upon a finding that such revocation is necessary to protect human health or safety or the environment. DOE reserves the right to seek administrative or judicial review of any such revocation.

It is the position of the Ohio EPA that the federal Anti-Deficiency Act, 31 U.S.C. Section 1341, as amended, does not apply to any obligations set forth in these Orders, and except as otherwise provided in these Orders, obligations hereunder are unaffected by the Respondent's failure to obtain adequate funds or appropriations from Congress. It is Respondent's position that the obligations set forth in these Orders are subject to the provision of the Anti-Deficiency Act and are subject to funding availability. The Parties agree that it is premature to raise and resolve the validity of such positions at this time.

XIII. MODIFICATION

Except as provided in Section XII - Reservation of Rights, regarding revocation of these Orders, these Orders may be modified only by mutual agreement of Respondent and Ohio EPA. Any modification of these Orders shall be in writing, shall be effective upon signature and issuance by the Director, and shall be incorporated into these Orders and be enforceable in the same manner as any requirement of these Orders.

In February of 1999, and periodically (e.g., every three (3) years) thereafter, as appropriate, unless DOE and Ohio EPA mutually agree that no modification of these Orders is warranted, DOE and Ohio EPA shall conduct a good faith dialogue to determine whether the compliance schedule and funding structure of these Orders should be modified. Such dialogue shall consider the experiences and perspectives of

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DOE and Ohio EPA regarding the implementation of these Orders during the previous three federal fiscal years, the most recent information on current and projected funding availability, and the status of major technical issues that are expected to affect the management of the Facility's mixed waste. If DOE and Ohio EPA agree that modification of these Orders is warranted, DOE and Ohio EPA shall endeavor to complete and implement such modifications within six (6) months of the initiation of such dialogue. Subject to the first paragraph of this Section, if DOE and Ohio EPA disagree as to whether modification of these Orders is warranted, or regarding the extent to which these Orders should be modified, either DOE or Ohio EPA may invoke formal dispute resolution, pursuant to Section IX to facilitate agreement.

XIV. TERMINATION

The Respondent's obligations under these Orders shall terminate when the Respondent demonstrates in writing and certifies to the satisfaction of the Ohio EPA that all obligations under these Orders have been performed or that all mixed wastes subject to these Orders are being stored and will continue to be stored in compliance with OAC Rule 3745-59-50, and the Ohio EPA Division of Hazardous Waste Management acknowledges, in writing, Ohio EPA's acceptance of this demonstration and certification.

XV. OTHER CLAIMS

Except as otherwise expressly provided in Order No. 2, nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a signatory to these Orders, for any liability arising out of or relating to the operation of the Respondent's facility.

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By: Mary Cavin Date 10-4-95

IT IS SO ORDERED:

Donald R. Schregardus, Director

October 4, 1995
Date

XVI. SIGNATORIES

Each undersigned representative of a party signatory to these Orders certifies that he or she is fully authorized to enter into the terms and conditions of these Orders and to legally bind such signatory to this document.

XVII. WAIVER

The Respondent agrees that these Orders are lawful and reasonable and that the times provided for compliance herein are reasonable. The Respondent, by acceptance of these Orders, agrees to comply with all conditions of these Orders and acknowledges that the Respondent's failure to do so may result in immediate revocation of these Orders and further legal action by Ohio EPA.

The Respondent hereby waives the right to appeal or otherwise challenge the issuance, of these Orders. Nothing in these Orders shall affect DOE's rights to seek administrative or judicial review of final decisions by the Ohio EPA Director pursuant to Section IX (Dispute Resolution), or final actions by the Director pursuant to ORC Section 3745.04 or other applicable law.

The Ohio EPA and the Respondent agree that in the event that these Orders are appealed by any other party to the Environmental Board of Review, or any court, the Respondent retains the right to intervene and participate in such appeal in support of these Findings and Orders. In such event, the Respondent shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated, or modified.

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By: Mary Cavin Date 10-4-95

IT IS SO AGREED:

United States Department of Energy

By: Jana C Hall

10/2/95
Date

Manager, Oak Ridge Operations
Title

Ohio Environmental Protection Agency

Donald R. Schregardus

Donald R. Schregardus, Director

October 4, 1995
Date

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