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Hanford Site Annual Dangerous Waste Report

Volume 5
Supplement
Waste Minimization Report

Calendar Year 1993

United States
Department of Energy
P.O. Box 550
Richland, Washington 99352

MASTER

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87B

United States Government

Department of Energy

memorandum

Richland Field Office

DATE: DEC '16 1992
REPLY TO:
ATTN OF: EAP:EBD 93-RPA-071

SUBJECT: DELEGATION OF SIGNATURE AUTHORITY FOR THE ANNUAL DANGEROUS WASTE REPORT

TO: James D. Bauer, Acting Program Manager
Office of Environmental Assurance,
Permits, and Policy

I hereby delegate signature authority for the Annual Dangerous Waste Report to the Program Manager, Office of Environmental Assurance, Permits, and Policy.

Pursuant to the Hazardous Waste Reporting Forms Packet for Calendar Year 1991, Part I, Form 4, Generator Annual Dangerous Waste Report, Section 11, signature authority may be delegated to the manager's authorized representative. This memorandum constitutes formal delegation of such authority to the Program Manager, Office of Environmental Assurance, Permits, and Policy.

Pursuant to the Hazardous Waste Reporting Forms Packet for Calendar Year 1991, Part III, Form 5, Waste Management Facility Annual Dangerous Waste Report, Section 12, signature authority may be delegated to the manager's authorized representative. This memorandum constitutes formal delegation of such authority to the Program Manager, Office of Environmental Assurance, Permits, and Policy.

John D. Wagoner
Manager

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: U.S. Department of Energy
Hanford SiteEPA ID NO: WA17 890 008 967 U.S. ENVIRONMENTAL
PROTECTION AGENCY

1993 Waste Minimization Report

FORM
ICIDENTIFICATION AND
CERTIFICATION

INSTRUCTIONS: Read the detailed instructions beginning on page 7 of the 1993 Waste Minimization Report booklet before completing this form.

Sec. I

Site name and location address. Complete A through H. Check the box ☐ in items A, C, E, F, G, and H if same as label; if different, enter corrections. If label is absent, enter information. Instruction page 8.

A. EPA ID No.

Same as label ☐ or WA17 890 008 967

B. County

Benton, Franklin, Grant and Adams

C. Site/company name

Same as label ☐ or U.S. Department of Energy
Hanford Site

D. Has the site name associated with this EPA ID changed since 1981?

☐ 1 Yes☒ 2 No

E. Street name and number. If not applicable, enter industrial park, building name, or other physical location description.

Same as label ☐ or 825 Jadwin Avenue, P.O. Box 550

F. City, town, village, etc.

Same as label ☐ or Richland

G. State

Same as label ☐ or WA

H. Zip Code

Same as label ☐ or 99352

Sec. II

Mailing address of site. Instruction page 8.

A. Is the mailing address the same as the location address?

☒ 1 Yes (SKIP TO SEC. III)☐ 2 No (GO TO BOX B)

B. Number and street name of mailing address

C. City, town, village, etc.

D. State

E. Zip Code

Sec. III

Name, title, and telephone number of the person who should be contacted if questions arise regarding this Report. Instruction page 8.

A. Please print: Last Name

First Name

M.I.

B. Title

C. Telephone

DaganEllenB.Program Manager509 376 3811Extension

Sec. IV

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties under Section 300B of the Resource Conservation and Recovery Act for submitting false information, including the possibility of fine and imprisonment for knowing violations."

A. Please print: Last Name

First Name

M.I.

B. Title

BauerJamesD.Program Manager

C. Signature

D. Date of signature

Dec 24 1994
MO. DAY YR.

Sec.V - Waste Minimization Activity during 1992 or 1993. Instruction page 8.

A. Did this site begin or expand a source reduction activity during 1992 or 1993? Page 9.☒ 1 Yes
☐ 2 NoB. Did this site begin or expand a recycling activity during 1992 or 1993? Page 9.☒ 1 Yes
☐ 2 NoC. Did this site systematically investigate opportunities for source reduction or recycling during 1992 or 1993? Page 10.☒ 1 Yes
☐ 2 NoD. Did any of the factors listed below delay or limit this site's ability to initiate new or additional source reduction activities in 1992 or 1993? Page 10.
(CHECK YES OR NO FOR EACH ITEM)

Yes	No	
☒ 1	☐ 2	a. Insufficient capital to install new source reduction equipment or implement new source reduction practices
☒ 1	☐ 2	b. Lack of technical information on source reduction techniques applicable to the specific production processes
☒ 1	☐ 2	c. Source reduction is not economically feasible: cost savings in waste management or production will not recover the capital investment
☒ 1	☐ 2	d. Concern that product quality may decline as a result of source reduction
☒ 1	☐ 2	e. Technical limitations of the production processes
☒ 1	☐ 2	f. Permitting burdens
☒ 1	☐ 2	g. Source reduction previously implemented - additional reduction does not appear to be technically feasible
☒ 1	☐ 2	h. Source reduction previously implemented - additional reduction does not appear to be economically feasible
☒ 1	☐ 2	i. Source reduction previously implemented - additional reduction does not appear to be feasible due to permitting requirements
☒ 1	☐ 2	j. Other (SPECIFY COMMENTS IN BOX BELOW)

E. Did any of the factors listed below delay or limit the site's ability to initiate new or additional on-site or off-site recycling activities during 1992 or 1993? Page 10.
(CHECK YES OR NO FOR EACH ITEM)

Yes	No		Yes	No	
☒ 1	☐ 2	a. Insufficient capital to install new recycling equipment or implement new recycling practices	☒ 1	☐ 2	g. Technical limitations of production processes inhibit shipments off-site for recycling
☒ 1	☐ 2	b. Lack of technical information on recycling techniques applicable to this site's specific production process	☒ 1	☐ 2	h. Technical limitations of production processes inhibit on-site recycling
☒ 1	☐ 2	c. Recycling is not economically feasible: cost savings in waste management will not recover the capital investment	☒ 1	☐ 2	i. Permitting burdens inhibit recycling
☒ 1	☐ 2	d. Concern that product quality may decline as a result of recycling	☒ 1	☐ 2	j. Lack of permitted off-site recycling facilities
☒ 1	☐ 2	e. Requirements to manifest wastes inhibit shipments off-site for recycling	☒ 1	☐ 2	k. Unable to identify a market for recycled materials
☒ 1	☐ 2	f. Financial liability provisions inhibit shipments off-site for recycling	☒ 1	☐ 2	l. Recycling previously implemented - additional recycling does not appear to be technically feasible
			☒ 1	☐ 2	m. Recycling previously implemented - additional recycling does not appear to be economically feasible
			☒ 1	☐ 2	n. Recycling previously implemented - additional recycling does not appear to be feasible due to permitting requirements
			☒ 1	☐ 2	o. Other (SPECIFY COMMENTS IN BOX BELOW)

Comments:

Section V. Part D. - Radiological protection/contamination concerns.

Section V. Part E. - Radiation contamination concerns prevented some recycling activities.

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:

SITE NAME: U.S. Department of Energy
Hanford Site

EPA ID NO: WA7 890 008 967

U.S. ENVIRONMENTAL
PROTECTION AGENCY

1993 Waste Minimization Report

FORM
WM

WASTE
MINIMIZATION

INSTRUCTIONS: Read the detailed instructions beginning on page 11 of the 1993 Waste Minimization Report booklet before completing this form.

Sec. I A. Waste description - Instruction Page 13. <u>Corrosive, Nitric acid from vacuum vent tank</u>					
B. EPA hazardous waste code Page 14. <u>D002</u> <u>N.A.</u>			C. State hazardous waste code Page 14. <u>WT01</u> <u>N.A.</u>		
D. SIC code Page 14. <u>9999</u>	E. Origin code Page 14. System Type <u>M</u> <u>N.A.</u>	F. Source Code Page 15. <u>A53</u>	G. Point of measurement Page 15. <u>1</u>	H. Form code Page 15. <u>B105</u>	I. RCRA - radioactive mixed Page 16. <u>1</u>

Sec. II A. Quantity generated in 1992 Instruction Page 16. <u>102.0</u>		B. Quantity generated in 1993 Page 16. <u>N.A.</u>		C. UOM Page 16. <u>3</u>	Density <u>1.03</u> ☐ 1 lbs/gal ☒ 2 sg	D. Was this waste recycled in 1993? Page 17. ☐ Yes (CONTINUE TO BOX E) ☒ No (SKIP TO SEC. III)
E. On-site recycling Page 17. Quantity recycled on site in 1993 <u>N.A.</u>		F. Off-site recycling Page 17. Quantity recycled off site in 1993 <u>N.A.</u>				

Sec. III A. Activity Page 17. <u>W52</u> <u>WNA</u> <u>WNA</u> <u>WNA</u>	B. Other effects Page 17. ☐ 1 Yes ☒ 2 No	C. Quantity recycled in 1993 due to new activities Page 17. <u>N.A.</u>	D. Activity/production index Page 18. <u>1.0</u>	E. 1993 source reduction quantity Page 19. <u>102.0</u>
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Comments: Sec. II, Box B: Modifications to vent tank and filling procedure eliminated this waste source.

Reference: PRF1/vacuum vent tank

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:

SITE NAME: U.S. Department of Energy
Hanford Site
EPA ID NO: W,A,7 8,9,0 0,0,8 9,6,7

U.S. ENVIRONMENTAL
PROTECTION AGENCY

1993 Waste Minimization Report

FORM
WM

WASTE
MINIMIZATION

INSTRUCTIONS: Read the detailed instructions beginning on page 11 of the 1993 Waste Minimization Report booklet before completing this form.

<p>Sec. I A. Waste description - Instruction Page 13. Corrosive, nitric acid from solvent extraction surge tank.</p>					
<p>B. EPA hazardous waste code Page 14. <u>D,0,0,2</u> <u>N,A</u> <u>N,A</u> <u>N,A</u> <u>N,A</u></p>			<p>C. State hazardous waste code Page 14. <u>W,T,0,1</u> <u>N,A</u></p>		
<p>D. SIC code Page 14. <u>9,9,9,9</u></p>	<p>E. Origin code Page 14. <u>1</u> System Type <u>M,N,A</u></p>	<p>F. Source Code Page 15. <u>A,5,6</u></p>	<p>G. Point of measurement Page 15. <u>1</u></p>	<p>H. Form code Page 15. <u>B,1,0,5</u></p>	<p>I. RCRA - radioactive mixed Page 16. <u>1</u></p>

<p>Sec. II A. Quantity generated in 1992 Instruction Page 16. <u>2,0,5,0</u></p>	<p>B. Quantity generated in 1993 Page 16. <u>N,A</u></p>	<p>C. UOM Page 16. <u>3</u> Density <u>1,0,3</u> ☐ 1 lbs/gal ☒ 2 sg</p>	<p>D. Was this waste recycled in 1993? Page 17. ☐ Yes (CONTINUE TO BOX E) ☒ No (SKIP TO SEC. III)</p>
<p>E. On-site recycling Page 17. Quantity recycled on site in 1993 <u>N,A</u></p>		<p>F. Off-site recycling Page 17. Quantity recycled off site in 1993 <u>N,A</u></p>	

<p>Sec. III A. Activity Page 17. <u>W,5,2</u> <u>W,N,A</u> <u>W,N,A</u> <u>W,N,A</u></p>	<p>B. Other effects Page 17. ☐ 1 Yes ☒ 2 No</p>	<p>C. Quantity recycled in 1993 due to new activities Page 17. <u>N,A</u></p>	<p>D. Activity/production index Page 18. <u>1,0</u></p>	<p>E. 1993 source reduction quantity Page 19. <u>2,0,5,0</u></p>
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Comments: Sec. II, Box B: Process modification eliminated the need for this surge tank thereby eliminating the waste source.

Reference: PRF2/SX surge tank

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:

SITE NAME: U.S. Department of Energy

Hanford Site

EPA ID NO: WA7 890 008 967

U.S. ENVIRONMENTAL
PROTECTION AGENCY

1993 Waste Minimization Report

FORM
WM

WASTE
MINIMIZATION

INSTRUCTIONS: Read the detailed instructions beginning on page 11 of the 1993 Waste Minimization Report booklet before completing this form.

Sec. I	A. Waste description - Instruction Page 13. Carbon Tetrachloride from solvent extraction lost to atmosphere and liquid waste.					
B. EPA hazardous waste code Page 14.		C. State hazardous waste code Page 14.				
<u>D,0,1,9</u> <u>N,A</u>		<u>W,C,0,1</u> <u>N,A</u>				
<u>N,A</u> <u>N,A</u> <u>N,A</u>		D. SIC code Page 14.		E. Origin code Page 14. System Type	F. Source Code Page 15.	
<u>9,9,9,9</u>		<u>M</u> <u>N,A</u>		<u>A,3,4</u>	G. Point of measurement Page 15.	
				<u>1</u>	H. Form code Page 15.	
				<u>B,2,0,2</u>	I. RCRA - radioactive mixed Page 18.	
				<u>1</u>		

Sec. II	A. Quantity generated in 1992 Instruction Page 18.	B. Quantity generated in 1993 Page 18.	C. UOM Page 16.	Density	D. Was this waste recycled in 1993? Page 17.
	<u>N,A</u>	<u>6,0,0,0</u>	<u>3</u>	<u>1.5</u>	☐ Yes (CONTINUE TO BOX E)
				☐ 1 lbs/gal ☒ 2 sq	☒ No (SKIP TO SEC. III)
E. On-site recycling Page 17. Quantity recycled on site in 1993			F. Off-site recycling Page 17. Quantity recycled off site in 1993		
<u>N,A</u>			<u>N,A</u>		

Sec. III	A. Activity Page 17.	B. Other effects Page 17.	C. Quantity recycled in 1993 due to new activities Page 17.	D. Activity/production index Page 18.	E. 1993 source reduction quantity Page 19.
	<u>W,5,2</u> <u>W,N,A</u> <u>W,N,A</u> <u>W,N,A</u>	☐ 1 Yes ☒ 2 No	<u>N,A</u>	<u>1.0</u>	<u>3,0,0,0</u>

Comments: Sec. II, Box A: The process was not operated during 1992.
Sec. II, Box B: Process modifications reduced emissions to the atmosphere by 33% based on historical operating losses. Without these modifications, 900 kilograms would have been used and lost during the processing period instead of only 600. Thus, 300 kilograms of CCl₄ losses mainly to the atmosphere were avoided.

Reference: PRF3/CC14

U.S. ENVIRONMENTAL
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1993 Waste Minimization Report

FORM
WMWASTE
MINIMIZATIONBEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:SITE NAME: U.S. Department of EnergyHanford SiteEPA ID NO: WA7 890 008 967

INSTRUCTIONS: Read the detailed instructions beginning on page 11 of the 1993 Waste Minimization Report booklet before completing this form.

Sec. I A. Waste description - Instruction Page 13. Failed process equipment contaminated with nitric acid, carbon tetrachloride, and radioactive materials.					
B. EPA hazardous waste code Page 14. <u>D,0,0,2</u> <u>D,0,1,9</u> <u>N,A</u> <u>N,A</u> <u>N,A</u>			C. State hazardous waste code Page 14. <u>WC,0,1</u> <u>N,A</u>		
D. SIC code Page 14. <u>9,9,9,9</u>	E. Origin code Page 14. System Type <u>M</u> <u>N,A</u>	F. Source Code Page 15. <u>A,5,6</u>	G. Point of measurement Page 15. <u>1</u>	H. Form code Page 15. <u>B,3,1,9</u>	I. RCRA - radioactive mixed Page 16. <u>1</u>

Sec. II A. Quantity generated in 1992 Instruction Page 16. <u>SEE BELOW</u>		B. Quantity generated in 1993 Page 16. <u>COMMENTS</u>		C. UOM Page 16. <u>3</u>	Density <u>N,A</u> ☐ 1 lbs/gal ☐ 2 sg	D. Was this waste recycled in 1993? Page 17. ☐ Yes (CONTINUE TO BOX E) ☒ No (SKIP TO SEC. III)
E. On-site recycling Page 17. Quantity recycled on site in 1993 <u>N,A</u>		F. Off-site recycling Page 17. Quantity recycled off site in 1993 <u>N,A</u>				

Sec. III A. Activity Page 17. <u>W,5,2</u> <u>W,N,A</u> <u>W,N,A</u> <u>W,N,A</u>		B. Other effects Page 17. ☐ 1 Yes ☒ 2 No	C. Quantity recycled in 1993 due to new activities Page 17. <u>N,A</u>	D. Activity/production index Page 18. <u>1.0</u>	E. 1993 source reduction quantity Page 19. <u>6,0,0,0</u>
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Comments: Sec. I, Box A: Hazardous material retained in failed pumps are HN03 and CC14
 Sec. I, Box H: Failed pumps
 Sec. II, Box A: Total waste associated with these pumps was not tracked in 1992
 Sec. II, Box B: Total waste associated with these pumps was not tracked in 1993
 Sec. III, Box E: Original pumps would fail after approximately 3 months of continuous use. Replacement pumps will last for 2 to 2 1/2 years based on actual process testing. The 600 kilograms is an estimate of waste avoided after replacing some pumps during the calendar year.
 Reference: PRF4/failed equip.

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:SITE NAME: U.S. Department of EnergyHanford SiteEPA ID NO: WA7 890 008 967 U.S. ENVIRONMENTAL
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1993 Waste Minimization Report

FORM
WMWASTE
MINIMIZATION

INSTRUCTIONS: Read the detailed instructions beginning on page 11 of the 1993 Waste Minimization Report booklet before completing this form.

Sec. I A. Waste description - Instruction Page 13.

Lead in paint waste from remediation activitiesB. EPA hazardous waste code
Page 14.0008 N.A.N.A. N.A. N.A.C. State hazardous waste code
Page 14.WT02 N.A.D. SIC code
Page 14.9999E. Origin code
Page 14.
System TypeM N.A.F. Source Code
Page 15.A93G. Point of measurement
Page 15.1H. Form code
Page 15.B319I. RCRA - radioactive mixed
Page 16.1

Sec. II

A. Quantity generated in 1992
Instruction Page 16.0.0B. Quantity generated in 1993
Page 16.See BelowC. UOM
Page 16.3

Density

N.A.☐ 1 lbs/gal ☐ 2 sqD. Was this waste recycled in 1993?
Page 17.☐ Yes (CONTINUE TO BOX E)☒ No (SKIP TO SEC. III)E. On-site recycling
Page 17.

Quantity recycled on site in 1993

N.A.F. Off-site recycling
Page 17.

Quantity recycled off site in 1993

N.A.

Sec. III

A. Activity
Page 17.W99
WNAWNA
WNAB. Other effects
Page 17.☐ 1 Yes☒ 2 NoC. Quantity recycled in 1993 due to new
activities
Page 17.N.A.D. Activity/production
index
Page 18.N.A.E. 1993 source reduction quantity
Page 19.110.0

Comments:

Sec. I, Box A: Radioactively contaminated hazardous paint was removed from item using CO2 pellets to reduce the quantity of mixed waste requiring treatment and disposal.

Sec. I, Box H: Paint chips and particles that resulted from removal of paint from metal surface.

Sec. II, Box B: Quantity of paint collected from the testing of this process was small but not weighed. Probably less than 1 kilogram.

Sec. III, Box A: Removal of radioactively contaminated lead based paint to reduce quantity of waste requiring treatment.

Sec. III, Box E: Activity avoided disposal of painted item as mixed waste

Reference: PRF5/paint waste

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:

SITE NAME: U.S. Department of Energy
Hanford Site

EPA ID NO: WA7 890 008 967

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PROTECTION AGENCY

1993 Waste Minimization Report

FORM
WM

WASTE
MINIMIZATION

INSTRUCTIONS: Read the detailed instructions beginning on page 11 of the 1993 Waste Minimization Report booklet before completing this form.

Sec. I	A. Waste description - Instruction Page 13. Ignitable, corrosive SST simulants for testing prototype equipment. Simulant (by weight) 81.8% sodium nitrate, 7.5% sodium aluminate, 5% water, others.				
	B. EPA hazardous waste code Page 14. <u>D001</u> <u>D002</u> <u>NA</u> <u>NA</u> <u>NA</u>		C. State hazardous waste code Page 14. <u>WT01</u> <u>NA</u>		
D. SIC code Page 14. <u>9999</u>	E. Origin code Page 14. System Type <u>M</u> <u>NA</u>	F. Source Code Page 15. <u>A99</u>	G. Point of measurement Page 15. <u>1</u>	H. Form code Page 15. <u>B319</u>	I. RCRA - radioactive mixed Page 16. <u>2</u>

Sec. II	A. Quantity generated in 1992 Instruction Page 16. <u>0.0</u>	B. Quantity generated in 1993 Page 16. <u>408.0</u>	C. UOM Page 16. <u>3</u>	Density <u>NA</u> ☐ 1 lbs/gal ☐ 2 sg	D. Was this waste recycled in 1993? Page 17. ☒ Yes (CONTINUE TO BOX E) ☐ No (SKIP TO SEC. III)
	E. On-site recycling Page 17. Quantity recycled on site in 1993 <u>408.0</u>		F. Off-site recycling Page 17. Quantity recycled off site in 1993 <u>NA</u>		

Sec. III	A. Activity Page 17. <u>W01</u> <u>WNA</u> <u>WNA</u> <u>WNA</u>	B. Other effects Page 17. ☐ 1 Yes ☒ 2 No	C. Quantity recycled in 1993 due to new activities Page 17. <u>408.0</u>	D. Activity/production index Page 18. <u>NA</u>	E. 1993 source reduction quantity Page 19. <u>NA</u>
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Comments: Section I, Box H.: Solids containing (by weight) 81.8% sodium nitrate, 7.5% sodium aluminate, 5% water, 1.7% sodium hydroxide, and others.

Reference: 305/300 Area, SST Simulant

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:

SITE NAME: U.S. Department of Energy
Hanford Site
EPA ID NO: WA7 890 008 967

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1993 Waste Minimization Report

FORM
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MINIMIZATION

INSTRUCTIONS: Read the detailed instructions beginning on page 11 of the 1993 Waste Minimization Report booklet before completing this form.

Sec. I A. Waste description - Instruction Page 13.

Spent solid, mixed-waste regenerate cartridges for ion exchange columns.

B. EPA hazardous waste code Page 14. <u>D002</u> <u>N/A</u> <u>N/A</u> <u>N/A</u> <u>N/A</u>		C. State hazardous waste code Page 14. <u>N/A</u> <u>N/A</u>	
D. SIC code Page 14. <u>9999</u>	E. Origin code Page 14. System Type <u>M</u> <u>N/A</u>	F. Source Code Page 15. <u>A99</u>	G. Point of measurement Page 15. <u>2</u>
H. Form code Page 15. <u>B104</u>		I. RCRA - radioactive mixed Page 16. <u>1</u>	

Sec. II	A. Quantity generated in 1992 Instruction Page 16. <u>SEE BELOW</u>	B. Quantity generated in 1993 Page 16. <u>COMMENT</u>	C. UOM Page 16. <u>7</u>	Density <u>5.5</u> ☐ 1 lbs/gal ☒ 2 sg	D. Was this waste recycled in 1993? Page 17. ☐ Yes (CONTINUE TO BOX E) ☒ No (SKIP TO SEC. III)
E. On-site recycling Page 17. Quantity recycled on site in 1993 <u>N/A</u>			F. Off-site recycling Page 17. Quantity recycled off site in 1993 <u>N/A</u>		

Sec. III	A. Activity Page 17. <u>W58</u> <u>WNA</u> <u>WNA</u> <u>WNA</u>	B. Other effects Page 17. ☐ 1 Yes ☒ 2 No	C. Quantity recycled in 1993 due to new activities Page 17. <u>N/A</u>	D. Activity/production index Page 18. <u>N/A</u>	E. 1993 source reduction quantity Page 19. <u>0.2</u>
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Comments: Sec. II, Box A: Total waste associated with these columns was not tracked in 1992.
Sec. II, Box B: Total waste associated with these columns was not tracked in 1993.
Sec. III, Box A: Replaced regenerate cartridges for ion exchange columns with electronic regeneration process.
Sec. III, Box E: The quantity listed is the amount of space that it takes to package the spent regeneration cartridges for disposal.

Reference: PUREX/Regeneration cartridges ion exchange columns

U.S. ENVIRONMENTAL
PROTECTION AGENCY

1993 Waste Minimization Report

WASTE
MINIMIZATIONBEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:SITE NAME: U.S. Department of Energy
Hanford SiteEPA ID NO: WA7 890 008 967 FORM
WM

INSTRUCTIONS: Read the detailed instructions beginning on page 11 of the 1993 Waste Minimization Report booklet before completing this form.

Sec. I A. Waste description - Instruction Page 13.

Corrosive, sulfuric acid from regeneration of ion-exchange columns.

B. EPA hazardous waste code
Page 14.D002 NA
NA NA NAC. State hazardous waste code
Page 14.NA NAD. SIC code
Page 14.9999E. Origin code
Page 14.
System TypeM NAF. Source Code
Page 15.A37G. Point of measurement
Page 15.2H. Form code
Page 15.B104I. RCRA - radioactive mixed
Page 16.1Sec. II A. Quantity generated in 1992
Instruction Page 16.SEE BELOWB. Quantity generated in 1993
Page 16.COMMENTSC. UOM
Page 16.5

Density

1.84☐ 1 lbs/gal☒ 2 sgD. Was this waste recycled in 1993?
Page 17.☐ Yes (CONTINUE TO BOX E)☒ No (SKIP TO SEC. III)E. On-site recycling
Page 17.

Quantity recycled on site in 1993

NAF. Off-site recycling
Page 17.

Quantity recycled off site in 1993

NASec. III A. Activity
Page 17.W58 WNA
WNA WNAB. Other effects
Page 17.☐ 1 Yes☒ 2 NoC. Quantity recycled in 1993 due to new
activities
Page 17.NAD. Activity/production
index
Page 18.NAE. 1993 source reduction quantity
Page 19.100

Comments: Sec. II, Box A.: The total waste associated with these columns was not tracked in 1992.

Sec. II, Box B.: The total waste associated with these columns was not tracked in 1993.

Sec. III, Box A.: Changed process that required periodic flushing for regeneration to electronic (cathode and anodes) regeneration process.

Sec. III, Box E.: The 10 gallons of sulfuric acid is the amount that was used in the ion exchange columns during flushing to rejuvenate the columns.

Reference: PUREX/Sulfuric Acid

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:

SITE NAME: U.S. Department of Energy

Hanford Site

EPA ID NO: W,A,7, 8,9,0, 0,0,8, 9,6,7,

U.S. ENVIRONMENTAL
PROTECTION AGENCY

1993 Waste Minimization Report

FORM
WM

WASTE
MINIMIZATION

INSTRUCTIONS: Read the detailed instructions beginning on page 11 of the 1993 Waste Minimization Report booklet before completing this form.

Sec. I A. Waste description - Instruction Page 13.

Spent halogenated and non-halogenated solvents, plating bath residues

B. EPA hazardous waste code
Page 14.

F,0,0,1, F,0,0,2,
F,0,0,3, F,0,0,4, F,0,0,5,

C. State hazardous waste code
Page 14.

 N,A N,A

D. SIC code
Page 14.

9,9,9,9,

E. Origin code
Page 14.
System Type

M, N,A,

F. Source Code
Page 15.

A,0,4,

G. Point of measurement
Page 15.

1,

H. Form code
Page 15.

B,2,0,4,

I. RCRA - radioactive mixed
Page 16.

1,

Sec. II A. Quantity generated in 1992
Instruction Page 16.

S,E,E, B,E,L,O,W.,

B. Quantity generated in 1993
Page 16.

C,O,M,M,E,N,T.,S,

C. UOM
Page 16.

5,

Density

1.0,2,

☐ 1 lbs/gal ☒ 2 sg

D. Was this waste recycled in 1993?
Page 17.

☐ Yes (CONTINUE TO BOX E)
☒ No (SKIP TO SEC. III)

E. On-site recycling
Page 17.

Quantity recycled on site in 1993

 N,A.,

F. Off-site recycling
Page 17.

Quantity recycled off site in 1993

 N,A.,

Sec. III A. Activity
Page 17.

W,1,9, W,N,A,
W,N,A, W,N,A,

B. Other effects
Page 17.

☐ 1 Yes

☒ 2 No

C. Quantity recycled in 1993 due to new
activities
Page 17.

 N,A.,

D. Activity/production
index
Page 18.

N,A.,

E. 1993 source reduction quantity
Page 19.

 2,0,0,0.,

Comments:

Sec. I, Box B.: Also, D008

Sec. II, Box A.: The total waste associated with this tank was not tracked in 1992.

Sec. II, Box B.: The total waste associated with this tank was not tracked in 1993.

Sec. III, Box A.: Part A permit revised to allow longer tank waste accumulation, reducing flush solution used.

Sec. III, Box E.: Source reduction based on process knowledge.

Reference: T Plant/tank rinsate flush

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:

SITE NAME: U.S. Department of Energy

Hanford Site

EPA ID NO: WA7 890 008 967

U.S. ENVIRONMENTAL
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WASTE
MINIMIZATION

INSTRUCTIONS: Read the detailed instructions beginning on page 11 of the 1993 Waste Minimization Report booklet before completing this form.

Sec. I A. Waste description - Instruction Page 13.

Spent halogenated and non-halogenated solvents in tank system wastewater

B. EPA hazardous waste code
Page 14.

F001 F002
F003 F004 F005

C. State hazardous waste code
Page 14.

NA NA

D. SIC code
Page 14.

9999

E. Origin code
Page 14.
System Type

M NA

F. Source Code
Page 15.

A99

G. Point of measurement
Page 15.

1

H. Form code
Page 15.

B219

I. RCRA - radioactive mixed
Page 16.

1

Sec. II

A. Quantity generated in 1992
Instruction Page 16.

100000

B. Quantity generated in 1993
Page 16.

NA

C. UOM
Page 16.

5

Density

1.00

☐ 1 lbs/gal ☒ 2 sg

D. Was this waste recycled in 1993?
Page 17.

☐ Yes (CONTINUE TO BOX E)

☒ No (SKIP TO SEC. III)

E. On-site recycling
Page 17.

Quantity recycled on site in 1993

NA

F. Off-site recycling
Page 17.

Quantity recycled off site in 1993

NA

Sec. III

A. Activity
Page 17.

W19 WNA
WNA WNA

B. Other effects
Page 17.

☐ 1 Yes

☒ 2 No

C. Quantity recycled in 1993 due to new
activities
Page 17.

NA

D. Activity/production
index
Page 18.

NA

E. 1993 source reduction quantity
Page 19.

100000

Comments: Sec. I, Box B.: Also, D008
Sec. I, Box H.: Rain water mixed with halogenated/non-halogenated solvents
in wastewater tank
Sec. III, Box A.: Altered slope of the asphalt around 2706-T Building
drainage system, precluding rainwater from entering tank system.

Reference: T Plant, 2706-T/ Precipitation

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL
OR ENTER:

SITE NAME: U.S. Department of Energy

Hanford Site

EPA ID NO: W1A7 890 008 967

U.S. ENVIRONMENTAL
PROTECTION AGENCY

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WASTE
MINIMIZATION

INSTRUCTIONS: Read the detailed instructions beginning on page 11 of the 1993 Waste Minimization Report booklet before completing this form.

Sec. I	A. Waste description - Instruction Page 13. Corrosive saltcake: sodium hydroxide, sodium nitrate, calcium nitrate, ferric nitrate, manganese (II) nitrate, and other salts				
B. EPA hazardous waste code Page 14. <u>D,0,0,2</u> <u>N,A</u> <u>N,A</u> <u>N,A</u> <u>N,A</u>		C. State hazardous waste code Page 14. <u>N,A</u> <u>N,A</u>			
D. SIC code Page 14. <u>9,9,9,9</u>	E. Origin code Page 14. System Type <u>M</u> <u>N,A</u>	F. Source Code Page 15. <u>A,9,4</u>	G. Point of measurement Page 15. <u>1</u>	H. Form code Page 15. <u>B,3,1,9</u>	I. RCRA - radioactive mixed Page 16. <u>2</u>

Sec. II	A. Quantity generated in 1992 Instruction Page 16. <u>0</u> <u>0</u>	B. Quantity generated in 1993 Page 16. <u>3,0,0</u> <u>0</u>	C. UOM Page 16. <u>1</u>	Density <u>N,A</u> ☐ 1 lbs/gal ☐ 2 sg	D. Was this waste recycled in 1993? Page 17. ☒ Yes (CONTINUE TO BOX E) ☐ No (SKIP TO SEC. III)
E. On-site recycling Page 17. Quantity recycled on site in 1993 <u>3,0,0</u> <u>0</u>			F. Off-site recycling Page 17. Quantity recycled off site in 1993 <u>N,A</u>		

Sec. III	A. Activity Page 17. <u>W,0,1</u> <u>W,N,A</u> <u>W,N,A</u> <u>W,N,A</u>	B. Other effects Page 17. ☐ 1 Yes ☒ 2 No	C. Quantity recycled in 1993 due to new activities Page 17. <u>3,0,0</u> <u>0</u>	D. Activity/production index Page 18. <u>N,A</u>	E. 1993 source reduction quantity Page 19. <u>N,A</u>
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Comments: Sec. I, Box H.: Specially formulated saltcake to support core drilling safety effort.
Sec. III, Box A.: The saltcake was recycled for other laboratory tests.

Reference: 2703-E/Synthetic saltcake

DATE

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6 / 23 / 94

END