

5569

**CLEAN CLOSURE OF THE DRUMMED HYDROFLUORIC (HF)
RESIDUE/ASSOCIATED STORAGE AREA NORHTWEST OF PLANT 4 (HWMU
7) AND DRUMMED HYDROFLUORIC RESIDUE/ASSOCIATED STORAGE AREA
SOUTH OF THE COOLING TOWERS (HWMU 8)**

05/02/94

DOE-1596-94
DOE-FN OEPA
47
LETTER



Department of Energy
Fernald Environmental Management Project
 P.O. Box 398705
 Cincinnati, Ohio 45239-8705

MAY 0 2 1994

DOE-1596-94

Mr. Paul Pardi, Group Leader
 Southwest District Office
 Division of Hazardous Waste Management
 Ohio Environmental Protection Agency
 40 South Main Street
 Dayton, Ohio 45202-2086

Dear Mr. Pardi:

CLEAN CLOSURE OF THE DRUMMED HYDROFLUORIC (HF) RESIDUE/ASSOCIATED STORAGE AREA NORTHWEST OF PLANT 4 (HAZARDOUS WASTE MANAGEMENT UNIT 7) AND DRUMMED HYDROFLUORIC RESIDUE/ASSOCIATED STORAGE AREA SOUTH OF THE COOLING TOWERS (HAZARDOUS WASTE MANAGEMENT UNIT 8)

- Reference: (1) Letter, DOE-0376-93, W.D. Adams to J. Saric and D.R. Schregardus, "Transmittal of Closure Plan Information and Data for Drummed Hydrofluoric Residue/Associated Storage Area Northwest of Plant 4," dated November 19, 1992
- (2) Letter, DOE-2307-93, R.J. Hansen to T. Crepeau, "Drummed Hydrofluoric Residue/Associated Storage Area Northwest of Plant 4 Closure Plan Information and Data Notice of Deficiencies," dated June 24, 1993

During November and December, 1993, representatives of the Fernald Environmental Restoration Management Corporation (FERMCO) and the Department of Energy, Fernald Field Office (DOE-FN) met with the Ohio Environmental Protection Agency (OEPA) to discuss the clean closure of two hazardous waste management units (HWMUs). The HWMUs include the Hydrofluoric (HF) Drummed Residue/Associated Storage Area Northwest of Plant 4 (HWMU 7) and the HF Drummed Residue/Associated Storage Area South of the Cooling Towers (HWMU 8). As discussed during the meeting, enclosed is information the Fernald Environmental Management Project (FEMP) committed to provide to the OEPA in support of clean closure for the two HWMUs. Enclosure A is a fact sheet providing information on the three white metal boxes and one overpack drum that were stored at the two HWMU sites.

The overpack drum and white metal boxes are no longer stored in the storage areas northwest of Plant 4 and south of the water cooling towers. No other hazardous wastes have been stored at either location. Neither of these areas will be used for future storage of hazardous wastes. Inspection logs and the spill/release report tracking system indicate there have been no spills or releases in the HWMU areas during the times the overpack and boxes were stored in those locations.

Enclosure B provides a random pulling of inspection logs and a blank example (blank example is provided since no releases occurred) of a spill report. An examination of the white metal boxes and overpack drum on November 16 and 17, 1993, indicated that there is no obvious physical evidence of past releases from any of the containers at the cited locations.

In December 1993, representatives of OEPA visually examined the condition of the white metal boxes and the overpack during a site inspection. In January 1994, a visual inspection conducted by FERMCO Engineering and Quality Control verified that the white metal boxes and overpack container were never breached by corrosion nor mechanical means. Enclosure C includes a copy of the inspection report.

Enclosure D provides photographs of the containers taken on November 16 and 17, 1993. Based on photographic and inspection information, both the white metal boxes and the 85-gallon overpack have maintained their structural integrity.

Based on the information presented in this letter and enclosures, the FEMP is seeking the concurrence of Ohio to withdraw its previous transmittals of Closure Plan Information and Data (References 1 and 2) and to declare HWMUs 7 and 8 as clean closed.

If you should have any questions concerning this matter or require additional information, please contact John M. Sattler at 513/648-3145.

Sincerely,



Walter J. Quaid
Acting Deputy Manager

FN:Sattler

Enclosures: As Stated

cc w/enc:

RCRA Operating Record, FERMCO

cc w/o enc:

J. Saric, USEPA-Region V
D. Schregardus, OEPA-Columbus
T. Schneider, OEPA-Dayton
J. Van Kley, Ohio AGO
M. McDermonntt, DOJ
K. Chaney, EM-424/TREV
K. Alkema, FERMCO/65-2
J. Curtis, FERMCO/8
J. Theising, FERMCO/2
J. Reising, DOE-FN

ENCLOSURE A

FACT SHEET FOR THE DRUMMED HF RESIDUE/ASSOCIATED STORAGE AREAS
NORTHWEST OF PLANT 4 (HWMU 7) AND SOUTH OF THE COOLING TOWERS (HWMU 8)

In 1988, three anhydrous hydrofluoric acid (AHF) tanks located in the old Plant 4 (the Hydrofluorination Plant) tank farm were emptied. The AHF contained in these tanks was used as a raw material in the process to convert uranium trioxide (UO_3) to uranium tetrafluoride (UF_4) in Plant 4.

The AHF tanks were emptied via a pneumatic drop. The tanks were then filled with water, and emptied through the tank end drain. The water was sent to the Tank Farm Sump for neutralization. Lime was added to the residue remaining in the tank through the topside manhole. The end of the tank was then burned off. The residue remaining in the tank was transferred into nineteen poly-lined 55-gallon drums. According to an operations employee, the consistency of the tank residue which was transferred to the drums was wet and moist, but had no apparent drippage of liquids (Enclosure E provides a copy of the conversation report).

Since their generation, the 55-gallon drums have been located in eight separate areas: the Tank Farm area, interior of Plant 4, Pilot Plant warehouse, graveled storage area northwest of Plant 4, graveled area south of the cooling towers, Plant 9 area, the Plant 1 pad, and the pad outside building 65.

Initially, the drums were stored in the Tank Farm area awaiting RCRA determination. However, around February 1989, the drums appeared to be weather deteriorating and were transferred to the interior of Plant 4. During October 1989, the nineteen 55-gallon drums were sampled and repacked into three white metal boxes and one 85-gallon overpack drum due to the corrosive nature of the material. Lime was packaged around the drums in the white metal boxes. The white metal boxes were constructed of 12 gauge panels and lids.

The containers were then transported to the Pilot Plant Warehouse (an approved RCRA hazardous waste storage area) on October 19, 1989, for storage pending analytical results. Based on a determination that the materials were not hazardous wastes (analytical data indicates the material to have a pH of 2.2 to 2.6), the containers were then transferred from the Pilot Plant Warehouse to Plant 4 for storage. Next, the containers were placed in a graveled area northwest of Plant 4 where they remained until approximately August 1990. The containers were then moved to a location south of the cooling towers, where they remained until approximately June 1991. In June 1991, the containers were moved to the Plant 9 Area for storage. During September 1991, the containers were moved from the Plant 9 Area to the Plant 1 Pad where they remained until August 10, 1993. In August 1993, the containers were moved to the pad outside of Building 65 due to the Plant 1 Pad upgrade project. In November 1993, the containers were moved to their present location in Tension Structure 5 on the Plant 1 Pad.

In 1991, an investigation of potential HWMU's at the FEMP found that the HF, discarded as commercial chemical product, were listed hazardous wastes (U134) per OAC 3745-51-33. Consequently, the residues of the AHF storage tanks became hazardous wastes when they were removed from the tanks. Additionally, the HF Drummed Residue/Associated Storage Areas Northwest of Plant 4 (HWMU 7) and South

5569

of the Cooling Towers (HWMU 8) were classified as HWMUs in accordance with OAC 3745-51-33 and OAC 3745-52-34 because of storage hazardous wastes (U134) in excess of 90 days.

As stated above, an initial characterization declared the waste to be non-hazardous. Subsequently, a Material Evaluation Form (MEF), the vehicle for documenting waste characterizations, was completed on November 23, 1993, and a copy is included as Enclosure F. A re-characterization of the material was started in 1991 when the HWMU study found the containers to hold a listed waste, but was not completed until 1993. Thus, the wastes were not labelled as hazardous while stored on the Plant 1 Pad, and were moved off the pad to accommodate the upgrade project. When the mislabelling was discovered, the containers were moved back to the Plant 1 Pad. However, while in storage on the Plant 1 Pad and the pad outside of Building 65, the containers were inspected daily in accordance with the FEMP Drum Management Plan. No releases of wastes have been documented.

Enclosure B

Examples of Inspection Logs and
Spill Reporting Form

5569

RELEASE EVALUATION & REPORTING - RELEASE REPORT AND CHECKLIST

Distribution Form

RER Log No.: _____

Followup Action Required: _____

Action Item No.:

Responsible

Individual:

Distribute To:

RELEASE EVALUATION & REPORTING - RELEASE REPORT AND CHECKLIST

RER Log No.: _____ Preliminary/Final Report: _____

PART I. RELEASE REPORTING INFORMATION

- 1. Name/title of individual reporting event: _____
- 2. Time/date first reported to RER: _____
- 3. RER personnel taking report: _____
- 4. AEDO Event Log No.: _____

PART II. DESCRIPTION OF EVENT

- 1. Time/date of release: _____
- 2. Location of release (building, area, etc.): _____
- 3. Time/date of discovery: _____
- 4. Personnel making discovery: _____
- 5. Material released:
 - a. Chemical name: _____
 - b. Physical state (gas, solid, liquid): _____
 - c. Drum/container markings (include FEMP Lot Markings): _____
 - d. Material Source/Origin: _____
- 6. Is event a spill or continuous release?: _____
- 7. Amount released (lbs., gallons, etc.): _____
- 8. How was amount determined (estimated, weighed or otherwise measured?): _____
- 9. Where was material released?:
 Indoors _____ Environment _____

PART IV. REGULATORY REPORTING DETERMINATION

- 1. Regulated material (name/EPA ID#/% Enr., etc).: _____

- 2. Reportable quantity (RQ): _____

- 3. Amount Released: _____

- 4. Does release exceed RQ? _____

- 5. Is event reportable and under what regulations? _____

- 6. If a hazardous waste is involved, should RCRA Contingency Plan be implemented? Reasons? _____

9

5569

7. Recommended actions (advise AEDO to report, etc.): _____

8. Justification for recommendations: _____

PART V. FOLLOWUP ACTIONS

1. Notifications made (attach OROC report/other) & within the prescribed timeframe? _____

2. Remaining issues/actions required: _____

3. Attachment List : _____

Report By: _____ Report Date: _____

Reviewed By: _____ Review Date: _____

10

5569

RELEASE EVALUATION & REPORTING - RELEASE REPORT AND CHECKLIST

Notifications Made

11

Inspector's Name: <i>Milton B. Giney</i>				Date: <i>2/23/93</i>	Time: <i>840am</i>
Facility Owner's Signature: <i>RW Bischoff</i> <i>OK</i>				Date: <i>2-24-93</i>	Time: <i>0800</i>
Item No.	Item Description	Acceptable	Unacceptable	Observations/Corrective Actions To Be Completed	Date Action Completed
1	Signs: Danger-Authorized Personnel Only	✓			
2	No Smoking or Open Flame	✓			
3	Emergency & Prior To Entry Contact	✓			
4	Boundary Markers (Chain, Rope, etc.)	✓			
6	Area Condition	✓			
7	Safety Equipment	✓			

Comments: _____

Distribution:
 Facility Owner; Facility owner reviews, signs and distributes log to:
 RCRA Field Implementation

RCRA Field Implementation Signature: <i>Susan Chokani</i>	Date: <i>3/1/93</i>
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5569

HWMU 8
Drummed HF Storage Area (S. Of C-Towers)

Inactive
Container Storage

Inspector's Name: [Redacted]		1306	Date: 5-25-93	Time: 10:00	
Facility Owner's Signature: <i>[Signature]</i>		m80	Date: 5-25-93	Time: 14:50	
Item No.	Item Description	Acceptable	Unacceptable	Observations/Corrective Actions To Be Completed	Date Action Complete
1	Signs: Danger-Authorized Personnel Only	✓			
2	No Smoking or Open Flame	✓			
3	Emergency & Prior To Entry Contact	✓			
4	Boundary Markers (Chain, Rope, etc.)	✓			
6	Area Condition	✓			
7	Safety Equipment	✓			

Comments: _____

Distribution:
 Facility Owner; Facility owner reviews, signs and distributes log to:
 RCRA Field Implementation

RCRA Field Implementation Signature: <i>[Signature]</i>	Date: 6/11/93
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13

5569

HWMU 8
Drummed HF Storage Area (S. Of C-Towers)

Inactive
Container Storage

Inspector's Name:		[Redacted]		Date:	7-13-93	Time:	
Facility Owner's Signature:		<i>R. W. Bischoff</i>		Date:	7-13-93	Time:	143
Item No.	Item Description	Acceptable	Unacceptable	Observations/Corrective Actions To Be Completed	Date Action Complete		
1	Signs: Danger-Authorized Personnel Only	✓					
2	No Smoking or Open Flame	✓					
3	Emergency & Prior To Entry Contact	✓					
4	Boundary Markers (Chain, Rope, etc.)	✓					
6	Area Condition	✓					
7	Safety Equipment	-					

Comments: _____

Distribution:
Facility Owner: Facility owner reviews, signs and distributes log to:
RCRA Field Implementation

RCRA Field Implementation Signature: <i>[Signature]</i>	Date: 7/15/93
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14

5569
Inactive
Cooling Storage

**HWMU 8
Drummed HF Storage Area (S. Of C-Towers)**

Inspector's Name: <i>Chris Palmer</i>				Date: <i>9-28-93</i>	Time: <i>1:30</i>
Facility Owner's Signature: <i>E. Bischoff</i>				Date: <i>9/28/93</i>	Time: <i>14:15</i>
Item No.	Item Description	Acceptable	Unacceptable	Observations/Corrective Actions To Be Completed	Date Action Complete
1	Signs: Danger-Authorized Personnel Only	✓			
2	No Smoking or Open Flame	✓			
3	Emergency & Prior To Entry Contact	✓			
4	Boundary Markers (Chain, Rope, etc.)	✓			
6	Area Condition	✓			
7	Safety Equipment	✓			

ments: _____

Distribution:
 Facility Owner: Facility owner reviews, signs and distributes log to:
 RCRA Field Implementation

RCRA Field Implementation Signature: <i>Susan Jackson</i>	Date: <i>10/12/93</i>
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55-69

HWMU 8
Drummed HF Storage Area (S. Of C-Towers)

Inactive
Container Storage

Inspector's Name		3369		Date:	11-16-93	Time:	11:13
Facility Owner		Dorinda S. Perkins		Date:	11/16/93	Time:	12:00
Item No.	Item Description	Acceptable	Unacceptable	Observations/Corrective Actions To Be Completed	Date Action Complete		
1	Signs: Danger-Authorized Personnel Only	✓					
2	No Smoking or Open Flame	✓					
3	Emergency & Prior To Entry Contact	✓					
4	Boundary Markers (Chain, Rope, etc.)	✓					
6	Area Condition	✓					
7	Safety Equipment	✓					

Comments: _____

Distribution:
 Facility Owner: Facility owner reviews, signs and distributes log to:
 RCRA Field Implementation

RCRA Field Implementation Signature:	<i>Susan Hoskin</i>	Date:	11/23/93
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5569

HWMU 8
Drummed HF Storage Area (S. Of C-Towers)

Inact:
Container Store

Inspector's Name: <i>David A Ebel</i>				Date: <i>11-23-93</i>	Time: <i>0:</i>
Facility Owner's Signature: <i>Brenda S. Perkins</i>				Date: <i>11/23/93</i>	Time: <i>15</i>
Item No.	Item Description	Acceptable	Unacceptable	Observations/Corrective Actions To Be Completed	Date Acti-Comp
1	Signs: Danger-Authorized Personnel Only	/			
2	No Smoking or Open Flame	/			
3	Emergency & Prior To Entry Contact	/			
4	Boundary Markers (Chain, Rope, etc.)	/			
6	Area Condition	/			
7	Safety Equipment	/			

Comments: _____

Distribution:
 Facility Owner: Facility owner reviews, signs and distributes log to:
 RCRA Field Implementation

RCRA Field Implementation Signature: <i>Susan Huskin</i>	Date: <i>12/13/93</i>
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HWMU 7
Drummed HF Storage Area (NW Of Pit 4)

Inactive
Container Storage

Inspector's Name: <i>Bennett M. Russell</i>				Date: <i>23/11/93</i>	Time: <i>1600</i>
Facility Owner's Signature: <i>R. W. Bischoff</i>				Date: <i>5.24.93</i>	Time: <i>1603</i>
Item No.	Item Description	Acceptable	Unacceptable	Observations/Corrective Actions To Be Completed	Date Action Complete
1	Signs: Danger-Authorized Personnel Only	✓			
2	No Smoking or Open Flame	✓			
3	Emergency & Prior To Entry Contact	✓			
4	Boundary Markers (Chain, Rope, etc.)	✓			
6	Area Condition	✓			
7	Safety Equipment	✓			

Comments: _____

Distribution:
 Facility Owner: Facility owner reviews, signs and distributes log to:
 RCRA Field Implementation

RCRA Field Implementation Signature: <i>C.L.E. for Susan Heston</i>	Date: <i>11/11/93</i>
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HWMU 7
 DRUMMED HF STORAGE AREA (NW Of Pit 4)
 Figure 8

HWMU 7
Drummed HF Storage Area (NW Of Plt 4)

Inactive
Container Storage

Inspector's Name		[Redacted]		306	Date: 8-24-93	Time: 015
Facility Owner's Signature:		<i>RW Bischoff</i>		DK	Date: 8/24/93	Time: 1400
Item No.	Item Description	Acceptable	Unacceptable	Observations/Corrective Actions To Be Completed	Date Action Complete	
1	Signs: Danger-Authorized Personnel Only	✓				
2	No Smoking or Open Flame	✓				
3	Emergency & Prior To Entry Contact	✓				
4	Boundary Markers (Chain, Rope, etc.)	✓				
6	Area Condition	✓				
7	Safety Equipment	✓				

Comments: _____

Distribution:
 Facility Owner: Facility owner reviews, signs and distributes log to:
 RCRA Field Implementation

RCRA Field Implementation Signature: <i>Susan Haskin</i>	Date: 9/14/93
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55691

HWMU 7
Drummed HF Storage Area (NW of P1t 4)

Inactive
Container Storage

Inspector's Name		[Redacted]		Date:	Time:
Facility Owner's Signature:		[Signature]		Date:	Time:
Item No.	Item Description	Acceptable	Unacceptable	Observations/Corrective Actions To Be Completed	Date Action Complete
1	Signs: Danger-Authorized Personnel Only	✓			
2	No Smoking or Open Flame	✓			
3	Emergency & Prior To Entry Contact	✓			
4	Boundary Markers (Chain, Rope, etc.)	✓			
6	Area Condition	✓			
7	Safety Equipment	✓			

Comments: _____

Distribution:
 Facility Owner; Facility owner reviews, signs and distributes log to:
 RCRA Field Implementation

RCRA Field Implementation Signature: <i>Juan Hernandez</i>	Date: 6/11/93
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20

5569

HWMU 7
Drummed HF Storage Area (NW Of Plt 4)

Inactive
Container Storage

Inspector's Name: <i>David A Edel</i>					Date: <i>11-23-93</i>	Time: <i>094</i>
Facility Owner's Signature: <i>Brenda S. Perkins</i>					Date: <i>11/23/93</i>	Time: <i>15.</i>
Item No.	Item Description	Acceptable	Unacceptable	Observations/Corrective Actions To Be Completed	Date Action Complete	
1	Signs: Danger-Authorized Personnel Only	✓				
2	No Smoking or Open Flame	✓				
3	Emergency & Prior To Entry Contact	✓				
4	Boundary Markers (Chain, Rope, etc.)	✓				
6	Area Condition	✓				
7	Safety Equipment	✓				

Comments: _____

Distribution:
Facility Owner: Facility owner reviews, signs and distributes log to:
RCRA Field Implementation

RCRA Field Implementation Signature: <i>Susan Hoskin</i>	Date: <i>12/3/93</i>
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5569

Enclosure C

Memo Regarding Integrity of
White Metal Boxes



REGULATORY
COMPLIANCE SECTION
FERNALD, OHIO

JAN 13 9 21 AM '94

INTEROFFICE MEMORANDUM

To:	K. L. Alkema	Date:	January 12, 1994
Location:	MS 65-2	Reference:	
From:	W. L. Romine <i>WLR</i>	FERMCO #:	M:RSO:(FE):94-038
Location:	MS 71-3	Client:	DOE DE-AC05-92OR21972
Extension:	6535	Subject:	White Metal Boxes

c: File Record Storage Copy 106.4.10.01
 Bob Becker
 Shelby Blankenship
 Jerry McGuire
 Mike Townsend
 Thomas Walsh

Friday January 7, I went to Tension Support number five to evaluate three white metal boxes and one 55 gallon drum containing HF residue. Box numbers INV 14787, INV 14788, INV 14789 and drum number INV 14786 were examined on their entire exterior. The examination proved that the boxes and drum were never breached by corrosion nor mechanical means. The conclusion is that the contents of these boxes and drum remained secure to date. The FEMP QC department also inspected the boxes and drum to verified that the boxes and drum did not leak. Attached please find a copy of the FEMP QC report.

WLR:vaw
 Attachment
 File:94-105

QUALITY ENGINEERING INSPECTION PLANNING
QIP No. _____

Rev. _____

f:\qip\hfbox

1. Source ___ 2. Receiving ___ 3. Maintenance X 4. Production ___ 5. Quality Level I

Item/Title/description: VERIFICATION OF CONTAINER INTEGRITY

HYDROGEN FLOURIDE

Work Order No. NONE Dwg./Spec. No. ACCEPTANCE CRITERIA PER*

9. P/O ___ Subcontract ___ MJR ___ Job ___ EA ___ W.O.# NONE Rev

10. Prepared By: S.M. HURLEY Date: _____ 11. Reviewed By: F.B. THOMPSON Date 1-7-

12. Approved By: W.L. ROMINE Date: 1/7/94 *PROJECT ENGINEER

13. Char No.	14. Inspection Characteristic	15. Inspec Status	16. General Remarks
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1. Verify the following containers' integrity is not breached in accordance with the Project Engineer's acceptance criteria:

ACCEPTANCE CRITERIA

NO LEAKS

NO RESIDUE ON THE OUTSIDE OF CONTAINERS

NO RESIDUE ON THE FLOOR AROUND THE CONTAINERS

NO HOLES OF ANY SIZE

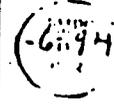
NO BULGES

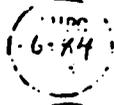
NO INDENTIONS OF 1/4 INCH DEPTH AND/OR 6 INCH LENGTH

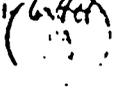
CONTAINERS TO BE VERIFIED:
(Inventory Numbers)

- INV 14786 (55 GALLON DRUM)
- INV 14787 (WMB*)
- INV 14788 (WMB*)
- INV 14789 (WMB*)

*WHITE METAL BOX





17. Inspection Reviewed/Completed

18. Final Quality Engineering Review/Approval

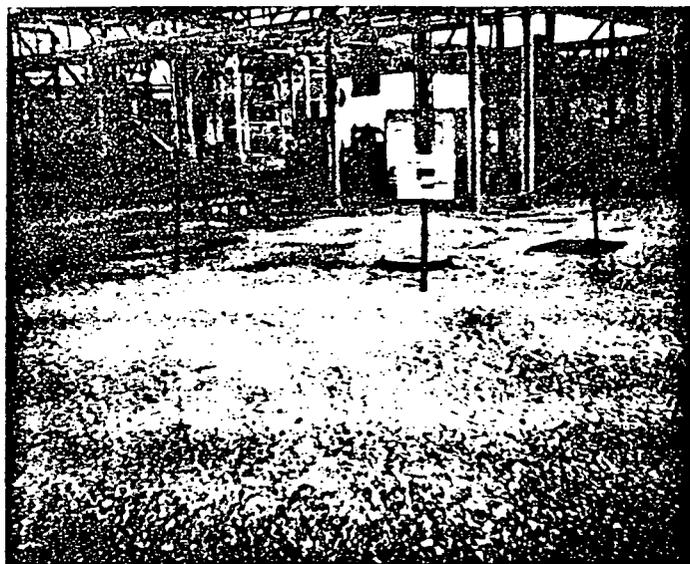
Steve Hurley
Quality Field Engineer

Date: 1-7-94

Fred Thompson Date: 1-7-
Quality Engineer

ATTACHMENT D

**Photographs of the Drummed HF Residue
Taken November 16 and 17, 1993**



11/17/93

#7

HAZARDOUS WASTE MANAGEMENT UNIT #7

DRUMMED HF RESIDUE/ASSOCIATED STORAGE
AREAS NORTHWEST OF PLANT 4

DATE OF PHOTO: 11/17/93



11/17/93

#7

HAZARDOUS WASTE MANAGEMENT UNIT #7

DRUMMED HF RESIDUE/ASSOCIATED STORAGE
AREAS NORTHWEST OF PLANT 4

DATE OF PHOTO: 11/17/93



11/16/93

HWMU #
8

HAZARDOUS WASTE MANAGEMENT UNIT #8

DRUMMED HF RESIDUE/ASSOCIATED STORAGE
AREAS SOUTH OF COOLING TOWERS

DATE OF PHOTO: 11/16/93



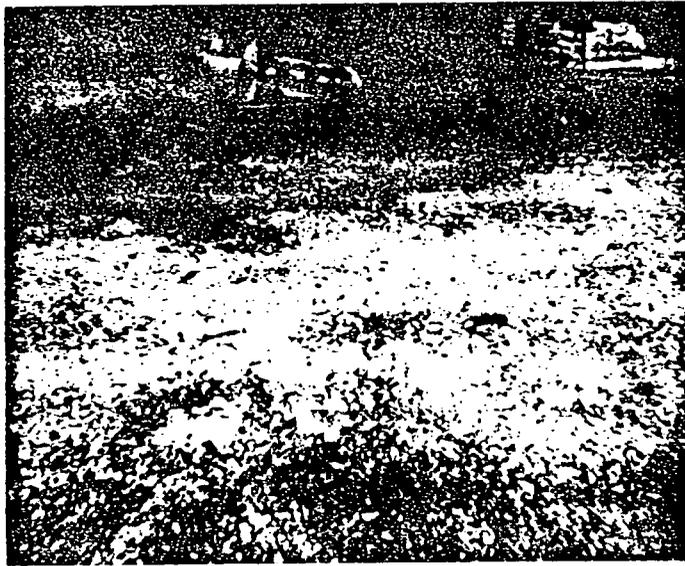
11/17/93

#3

HAZARDOUS WASTE MANAGEMENT UNIT 13

DRUMMED HF RESIDUE/ASSOCIATED STORAGE
AREAS SOUTH OF COOLING TOWERS

DATE OF PHOTO: 11/17/93



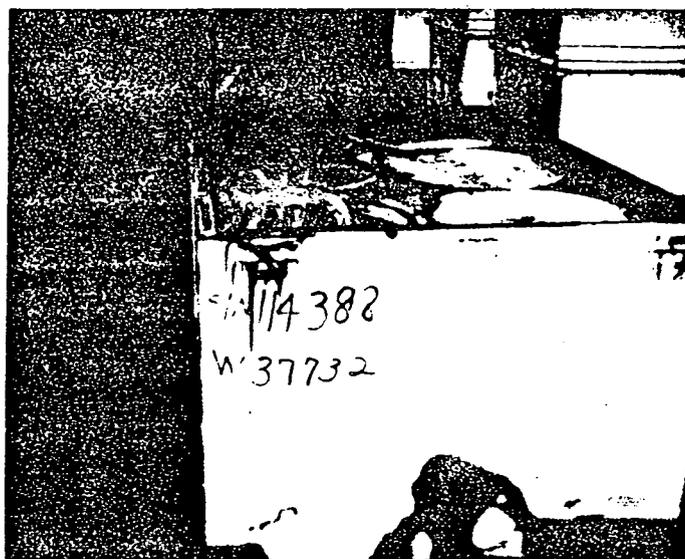
11/17/93

#8

HAZARDOUS WASTE MANAGEMENT UNIT #8

DRUMMED HF RESIDUE/ASSOCIATED STORAGE
AREAS SOUTH OF COOLING TOWERS

DATE OF PHOTO: 11/17/93



INVENTORY #
W 37732

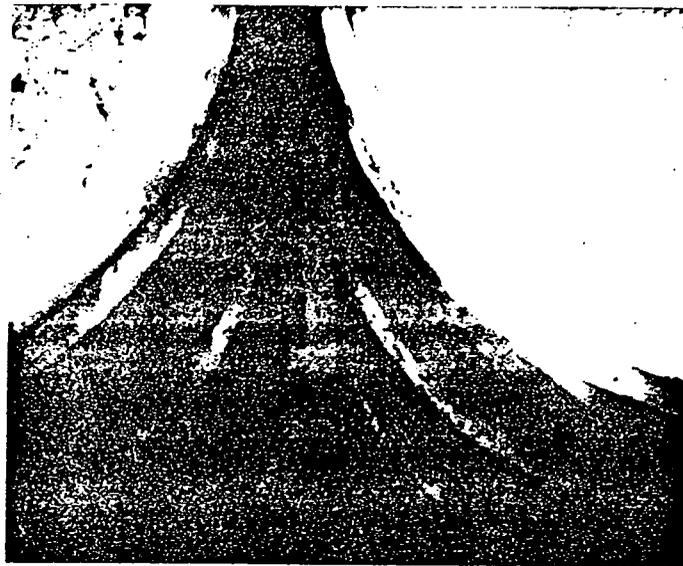
11/16/93

VIEW OF WHITE METAL BOX CONTAINING
DRUMMED HF RESIDUE

INVENTORY #: W37732

DATE OF PHOTO: 11/16/93

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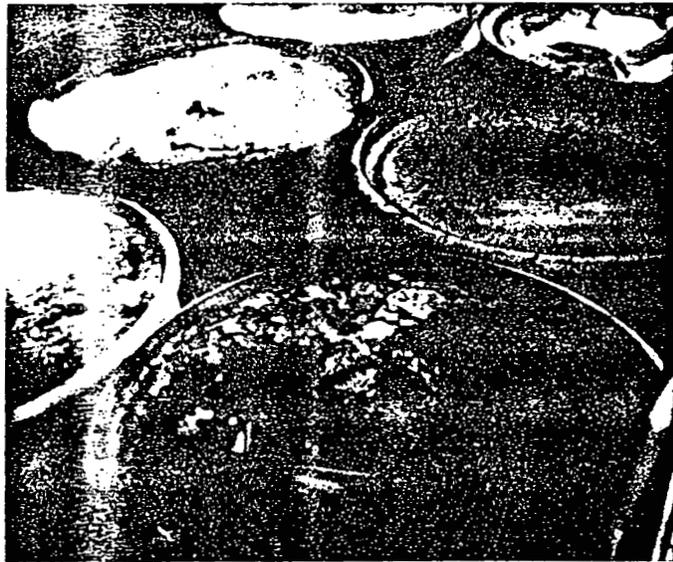


HF
W3732

VIEW OF DRUMMED HF RESIDUE INSIDE WHITE
METAL BOX

INVENTORY #: W37732

DATE OF PHOTO: 11/16/93



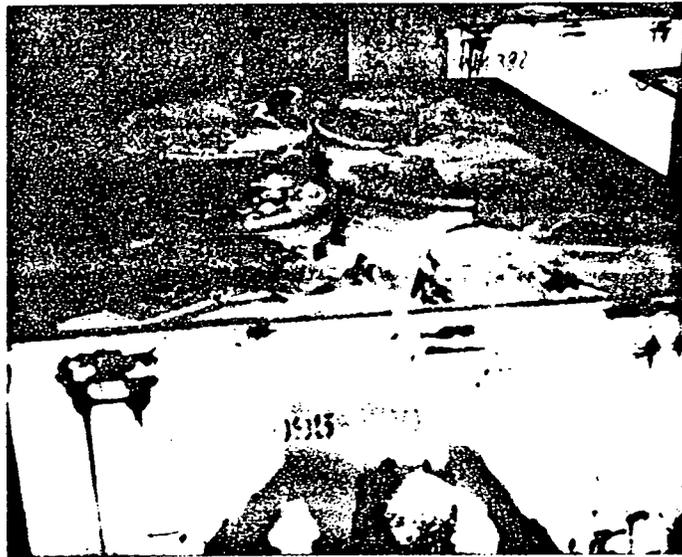
INVENTORY #
W3732

11/16/93

VIEW OF DRUMMED HF RESIDUAL INSIDE WHITE
METAL BOX

INVENTORY #: W37732

DATE OF PHOTO: 11/16/93



Inventory #
W37734

11/16/93

VIEW OF DRUMMED HF RESIDUE INSIDE WHITE
METAL BOX

INVENTORY #: W37734

DATE OF PHOTO: 11/16/93

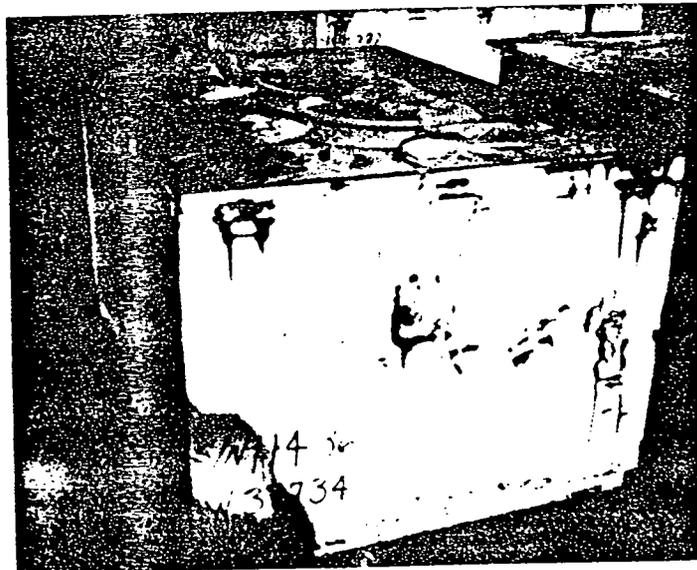


Inventory #
W37734

VIEW OF DRUMS OF HF RESIDUE INSIDE WHITE
METAL BOX

INVENTORY #: W37734

DATE OF PHOTO: 11/16/93

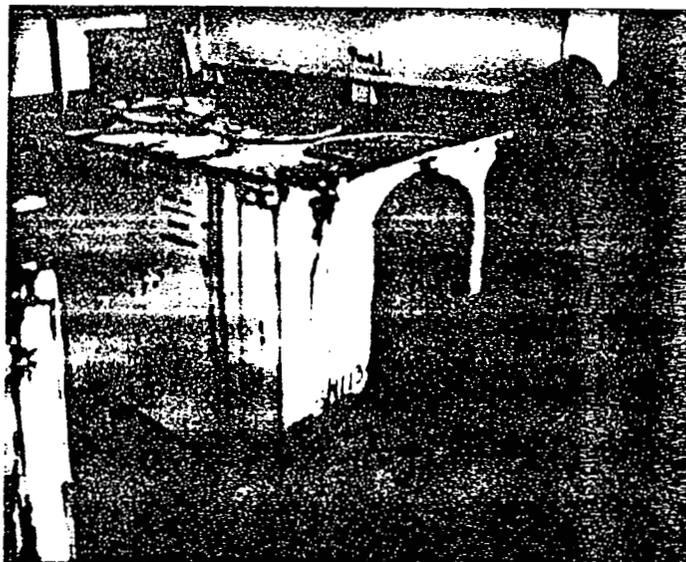


Inventory #
W3734

VIEW OF WHITE METAL BOX CONTAINING
DRUMMED HF RESIDUE

INVENTORY #: W37/34

DATE OF PHOTO: 11/16/93



Inv # W37735

11/16/93

VIEW OF WHITE METAL BOX CONTAINING
DRUMMED HF RESIDUE

INVENTORY #: W37735

DATE OF PHOTO: 11/16/93

5569



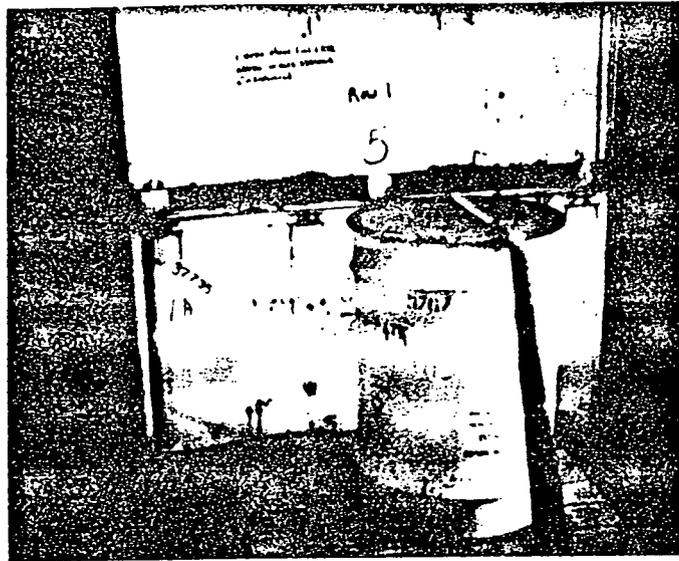
W 37735

11/16/93

VIEW OF CONTAINERS OF HF RESIDUE INSIDE
WHITE METAL BOX

INVENTORY #: W37735

DATE OF PHOTO: 11/16/93



W 3773

W 3773

85-GALLON OVERPACKED DRUM OF HF RESIDUE

INVENTORY #: W37736

DATE OF PHOTO: 11/16/93

5569

Enclosure E

Conversation Report

CONVERSATION REPORT

Date: 12/13/93
Subject: Consistency of Drummed HF Residues
Author: Tom J. Walsh *DFE/TJW*

On December 13, 1993, Tom J. Walsh contacted Ev Henry, operations employee, to verify the consistency of the residue from the AHF tanks as it was being transferred into the nineteen poly-lined drums. Ev Henry stated that he was present at the time the tanks were emptied and lime was added and when the residues were transferred into the nineteen drums. He observed the tank residue to be wet and moist, but to have no apparent drippage of liquids.

Enclosure F

Material Evaluation Form (MEF)
#1906 and Analytical Data

MATERIAL EVALUATION FORM

MEF NO.: 1
MEF REV. NO.: 1

SECTION I - MATERIAL GENERATOR

1. FEMP SRC: 460 MTC: 003 2. PLANT AND/OR BULDING NO.: Plant 4 Tank Farm 3. PROCESS AREA: Plant 4 Tank Farm

4. EQUIPMENT NAME(S): AHF Tanks 5. MEF NO. DATE: 11/23/93 MEF REV. DATE: 2/24/94 6. MATERIAL PHYSICAL STATE:
 Liquid Gas
 Wet Solid (Sludge) Dry Sol

7. APPROXIMATE NET WEIGHT OF FULL CONTAINER?
 <100 lbs. 100 to 1000 lbs. >1000 lbs. 8. DOES MATERIAL CONSIST OF MORE THAN ONE SUBSTANCE?
 YES NO

9. IS MATERIAL A WASTE? YES NO 10. COMMON NAMES: AHF + Lime 11. CHEMICAL NAMES: AHF
 Lime

12. COMMON/CHEMICAL NAME SOURCE: Process Information MSDS Container Label FEMP Lot Code OTHER: 13. SIMILAR MATERIAL NAME: 14. SIMILAR MATERIAL LOT CODE(S):

15. SUBSTANCES SUSPECTED:
 Aerosols Cresol Endrine Methylene Chloride TBP/Kerosene
 Arsenic m-Cresol Heptachlor Motor/Engine Oil Tetrachloroethyler
 Barium o-Cresol Hexachlorobenzene Nitrobenzene 1,1,1-Trichlorethar
 Benzene p-Cresol Hexachloroethane Other Organics 2,4,5-TP (Silvex)
 Cadmium 2,4-D Hexachloro-1,3-butadiene Paint Stripper 2,4,5-Trichlorophe
 Carbon Tetrachloride Degreaser Hydraulic Oil Paint Thinner/Mineral Spirits 2,4,6-Trichlorophe
 Chloroane 1,4-Dichlorobenzene Ink Pentachlorophenol Toxaphene
 Chlorobenzene 1,2-Dichloroethane Lead Perchloroethylene Trichloroethylene
 Chloroform 1,1-Dichloroethylene Lindane Pyridine Unknown
 Chromium 2,4-Dinitrotoluene Mercury Selenium Vinyl Chloride
 Coolants Enamel Methoxychlor Silver Xylene
 Methyl ethyl ketone Synthetic oil Oil

16. a. REASON FOR SUSPECTING ALL SUBSTANCES AND QUANTITY: _____
 16. b. SOURCE FOR REASON AND QUANTITY: (Attach MSDS if Available)
 Personnel Interviews AEDO Log MSDS Prior Evaluation of Similar Material
 Historical Records Physical Evidence Container Label
 FEMP Lot Code Process Information Sump Report
 Spill Database SRC: _____ MTC: _____
 What Material: _____
 16. c. HEALTH AND SAFETY CONCERNS/ REQUIREMENTS _____ 16. d. SIGNATURE AND DATE: _____

17. HAS THE "FINGERPRINT" VISUAL INSPECTION BEEN COMPLETED? YES NO 18. NUMBER OF PHASES: Var. 19. pH (IF KNOWN): (Attach Lab Results) NA 20. FLASH POINT (IF KNOWN): (Attach Lab Results) NI

21. HAS A PAINT FILTER TEST BEEN COMPLETED? YES NO

22. IS IT REACTIVE? EXPLAIN: YES NO AHF, lime, and debris is not reactive

23. IS IT IGNITABLE? EXPLAIN: YES NO AHF, lime, and debris is not ignitable

24. OTHER INFORMATION: (Example: Is the Material a Product or Waste?)

25. ADDITIONAL SOURCES OF INFORMATION:

26. PRIMARY CONTACT INDIVIDUAL: Lance Dilworth EXTENSION: 8974 DATE COMPLETED: 2/24/94

NOTE: Form shall be completed using ink or a typewriter.
NOTE: Only WEMCO employees shall sign this form.

(Continued on Reverse)

Fernald Site
MATERIAL EVALUATION FORM
(Continued)

MEF NO.: 190

MEF REV. NO.: 1

SECTION II - FACILITY AND MATERIALS EVALUATION

1. IS MATERIAL A WASTE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	2. IS IT EXCLUDED UNDER 261.4(a)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	3. IS IT EXCLUDED UNDER 261.4 (b)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	4. DOES IT CONTAIN A LISTED WASTE AS PER 261 <input type="checkbox"/> k <input type="checkbox"/> l <input type="checkbox"/> p <input checked="" type="checkbox"/> u <input type="checkbox"/> v
5. DOES IT EXHIBIT ANY CHARACTERISTICS AS PER 261 SUBPART C? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO EXPLAIN: Sol. d. Therefore no D002 ca 884			6. IS IT A RO HAZARDOUS SUBSTANCE? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
7. CLASSIFICATION AS A WASTE: <input checked="" type="checkbox"/> RCRA Hazardous Waste <input type="checkbox"/> Source Exempt <input type="checkbox"/> Non-RCRA Waste <input type="checkbox"/> Radioactive <input type="checkbox"/> Needs Further Action (ie sampling) EXPLAIN: _____		8. PRIMARY BASIS FOR CLASSIFICATION: <input checked="" type="checkbox"/> Generator Information <input type="checkbox"/> Prior material evaluation WHAT MATERIAL? _____ LOT NUMBER: _____	
9. IS IT SUBJECT TO LAND BAN RESTRICTIONS? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES Effective Date: _____			

10. DISTRIBUTE PER SECTION IV, ITEM 9.

11. OTHER INFORMATION SOURCES USED: Reports

12. PRIMARY CONTACT INDIVIDUAL: L. O. Worthe EXTENSION: 8974 DATE COMPLETED: 2/24/94

13. IS SAMPLING REQUIRED? YES NO 14. IS TRANSFER TO CONTROLLED HOLDING AREA REQUIRED? YES NO DATE: 2/24/94 15. INFORMATION ACTION COMPLETION DATE: NA

16. HEALTH AND SAFETY CONCERNS REQUIREMENTS: NA 16. b. SIGNATURE AND DATE: [Signature] 2/24/94

SECTION III - ENVIRONMENTAL ENGINEERING

1. RECOMMENDED STORAGE CONTAINER MATERIAL: Carbon Steel Stainless Steel Polyethylene Other: _____

2. APPLICABLE REACTIVITY GROUP CODES: A B C E F G
 Does not apply

3. OTHER INFORMATION SOURCES USED: Jim Stoffer

4. PRIMARY CONTACT INDIVIDUAL: L. O. Worthe EXTENSION: 8974 DATE COMPLETED: 2/24/94

SECTION IV - TOXIC AND SOLID WASTE PROGRAMS

1. PROPER D.O.T. SHIPPING NAME: Assigned at shipment

2. D.O.T. HAZARD CLASS: _____ 3. REQUIRED LABELS: _____

4. D.O.T. IDENTIFICATION NO.: _____ SUFFIX: UN NA UN NA

5. EPA WASTE NO.: _____

6. APPLICABLE REACTIVITY GROUP CODES: (COPY FROM SECTION III, ITEM 2)

7. FEMP SRC AND MTC (COPY FROM SECTION I, ITEM 1) SRC: _____ MTC: _____

8. IS A REVISION TO MEF REQUIRED? YES NO

9. DISTRIBUTION:	MATERIAL GENERATOR:	DATE:
	ENVIRONMENTAL ENGINEERING: J. Stoffer	DATE:
	ENVIRONMENTAL MONITORING:	DATE:
	MC&A: H. J. Knue	DATE:
	IRS&T: R. L. Kruchan	DATE:
	FACILITIES AND WAREHOUSING: B. S. Perkins	DATE:
	F&ME: L. L. Honigford	DATE:
CONTROLLED HOLDING AREA: C. J. Stafford	DATE:	

10. PRIMARY CONTACT INDIVIDUAL: _____ EXTENSION: _____ DATE COMPLETED: 4/3

5569

WESTINGHOUSE MATERIALS COMPANY OF OHIO
 FMPC LABORATORIES
 RESULTS OF ANALYSES

Customer Name: PLT.4 Chain of Custody: Y
 Customer Sample Number: DR#-1 Lab Sample Number: 891012-009
 Date Sample Received: 12-OCT-1989 Date Sample Completed: 4-DEC-1989
 Date Sampled: 12-OCT-1989 Sampled By: NB
 Material Description: MISCELLANEOUS SAMPLES Req. Number:

Activity Number	Preparation Procedure No.	Analysis Procedure No.	Analysis	Result	Units	Analyst	Date Completed
1055	1054	1055	Ag - GFAA AnL INORG	<1.0	mg/L	LA WALLER	1-DEC-1989
1056	1054	1056	As - GFAA AnL INORG	<1.0	mg/L	AF VOLESKY	14-NOV-1989
1059	1054	1059	Hg - Cold Vapor AA AnL INORG	<0.1	mg/L	JE REILMAN	9-NOV-1989
1061	1054	1061	Se - GFAA AnL INORGB	<0.1	mg/L	AF VOLESKY	30-NOV-1989
1065	1054	1065	Ba - ICP AnL INORG	<25	mg/L	GJ KUNZE	9-NOV-1989
	1054	1065	Cd - ICP AnL INORG	<0.2	mg/L	GJ KUNZE	9-NOV-1989
	1054	1065	Cr - ICP AnL INORG	<1.0	mg/L	GJ KUNZE	9-NOV-1989
1091	1054	1091	Pb - GFAA AnL INORG	<1.0	mg/L	AF VOLESKY	1-NOV-1989

WESTINGHOUSE MATERIALS COMPANY OF OHIO
 FMPC LABORATORIES
 RESULTS OF ANALYSES

Customer Name: PLT.4 Chain of Custody: Y
 Customer Sample Number: DR#-1 Lab Sample Number: 891012-009
 Date Sample Received: 12-OCT-1989 Date Sample Completed:
 Date Sampled: 12-OCT-1989 Sampled By: NB
 Material Description: MISCELLANEOUS SAMPLES Req. Number:

Activity Number	Preparation Procedure No.	Analysis Procedure No.	Analysis	Result	Units	Analyst	Date Completed
3033		3033	pH - Electrode AnL EC	2.2	pH	JJ STOECKEL	12-OCT-1989

44

WESTINGHOUSE MATERIALS COMPANY OF OHIO
 FMPC LABORATORIES
 RESULTS OF ANALYSES

Customer Name: PLT.4 Chain of Custody: Y
 Customer Sample Number: DR#-7 Lab Sample Number: 891012-010
 Date Sample Received: 12-OCT-1989 Date Sample Completed: 4-DEC-1989
 Date Sampled: 12-OCT-1989 Sampled By: NB
 Material Description: MISCELLANEOUS SAMPLES Req. Number:

Activity Number	Preparation Procedure No.	Analysis Procedure No.	Analysis	Result	Units	Analyst	Date Completed
1055	1054	1055	Ag - GFAA AnL INORG	<1.0	mg/L	LA WALLER	1-DEC-1989
1056	1054	1056	As - GFAA AnL INORG	<1.0	mg/L	AF VOLESKY	14-NOV-1989
1059	1054	1059	Hg - Cold Vapor AA AnL INORG	<0.1	mg/L	JE REILMAN	9-NOV-1989
1061	1054	1061	Se - GFAA AnL INORGB	<0.1	mg/L	AF VOLESKY	30-NOV-1989
1065	1054	1065	Ba - ICP AnL INORG	<25	mg/L	GJ KUNZE	9-NOV-1989
	1054	1065	Cd - ICP AnL INORG	<0.2	mg/L	GJ KUNZE	9-NOV-1989
	1054	1065	Cr - ICP AnL INORG	1.0	mg/L	GJ KUNZE	9-NOV-1989
1091	1054	1091	Pb - GFAA AnL INORG	<1.0	mg/L	AF VOLESKY	1-NOV-1989

WESTINGHOUSE MATERIALS COMPANY OF OHIO
 FMPC LABORATORIES
 RESULTS OF ANALYSES

Customer Name: PLT.4 Chain of Custody: Y
 Customer Sample Number: DR#-7 Lab Sample Number: 891012-010
 Date Sample Received: 12-OCT-1989 Date Sample Completed: 18 OCT-1989
 Date Sampled: 12-OCT-1989 Sampled By: NB
 Material Description: MISCELLANEOUS SAMPLES Req. Number:

Activity Number	Preparation Procedure No.	Analysis Procedure No.	Analysis	Result	Units	Analyst	Date Completed
3033		3033	pH - Electrode AnL PC	2.5	pH	JJ STOCHEL	17-OCT-1989

55691

WESTINGHOUSE MATERIALS COMPANY OF OHIO
 FMPC LABORATORIES
 RESULTS OF ANALYSES

Customer Name: PLT.4 Chain of Custody: Y
 Customer Sample Number: DR#-11 Lab Sample Number: 891012-011
 Date Sample Received: 12-OCT-1989 Date Sample Completed: 4-DEC-1989
 Date Sampled: 12-OCT-1989 Sampled By: NB
 Material Description: MISCELLANEOUS SAMPLES Req. Number:

Activity Number	Preparation Procedure No.	Analysis Procedure No.	Analysis	Result	Units	Analyst	Date Completed
1055	1054	1055	Ag - GFAA AnL INORG	<1.0	mg/L	LA WALLER	1-DEC-1989
1056	1054	1056	As - GFAA AnL INORG	<1.0	mg/L	AF VOLESKY	14-NOV-1989
1059	1054	1059	Hg - Cold Vapor AA AnL INORG	<0.1	mg/L	JE REILMAN	9-NOV-1989
1061	1054	1061	Se - GFAA AnL INORGB	<0.1	mg/L	AF VOLESKY	30-NOV-1989
1065	1054	1065	Ba - ICP AnL INORG	<25	mg/L	GJ KUNZE	13-NOV-1989
	1054	1065	Cd - ICP AnL INORG	<0.2	mg/L	GJ KUNZE	13-NOV-1989
	1054	1065	Cr - ICP AnL INORG	<1.0	mg/L	GJ KUNZE	13-NOV-1989
1091	1054	1091	Pb - GFAA AnL INORG	<1.0	mg/L	AF VOLESKY	1-NOV-1989

WESTINGHOUSE MATERIALS COMPANY OF OHIO
 FMPC LABORATORIES
 RESULTS OF ANALYSES

Customer Name: PLT.4 Chain of Custody: Y
 Customer Sample Number: DR#-11 Lab Sample Number: 891012-011
 Date Sample Received: 12-OCT-1989 Date Sample Completed:
 Date Sampled: 12-OCT-1989 Sampled By: NB
 Material Description: MISCELLANEOUS SAMPLES Req. Number:

Activity Number	Preparation Procedure No.	Analysis Procedure No.	Analysis	Result	Units	Analyst	Date Completed
3033		3033	pH - Electrode AnL PC	2.6	pH	JJ STOBENFL	17-OCT-1989

WESTINGHOUSE MATERIALS COMPANY OF OHIO
FMPC LABORATORIES
RESULTS OF ANALYSES

Customer Name: PLT.4 Chain of Custody: Y
Customer Sample Number: DR#-20 Lab Sample Number: 891012-012
Date Sample Received: 12-OCT-1989 Date Sample Completed: 4-DEC-1989
Date Sampled: 12-OCT-1989 Sampled By: NB
Material Description: MISCELLANEOUS SAMPLES Req. Number:

Activity Number	Preparation Procedure No.	Analysis Procedure No.	Analysis	Result	Units	Analyst	Date Completed
1055	1054	1055	Ag - GFAA AnL INORG	<1.0	mg/L	LA WALLER	1-DEC-1989
1056	1054	1056	As - GFAA AnL INORG	<1.0	mg/L	AF VOLESKY	14-NOV-1989
1059	1054	1059	Hg - Cold Vapor AA AnL INORG	<0.1	mg/L	JE REILMAN	9-NOV-1989
1061	1054	1061	Se - GFAA AnL INORGB	<0.1	mg/L	AF VOLESKY	30-NOV-1989
1065	1054	1065	Ba - ICP AnL INORG	<25	mg/L	GJ KUNZE	9-NOV-1989
	1054	1065	Cd - ICP AnL INORG	<0.2	mg/L	GJ KUNZE	9-NOV-1989
	1054	1065	Cr - ICP AnL INORG	<1.0	mg/L	GJ KUNZE	9-NOV-1989
1091	1054	1091	Pb - GFAA AnL INORG	<1.0	mg/L	AF VOLESKY	1-NOV-1989

WESTINGHOUSE MATERIALS COMPANY OF OHIO
FMPC LABORATORIES
RESULTS OF ANALYSES

Customer Name: PLT.4 Chain of Custody: Y
Customer Sample Number: DR#-20 Lab Sample Number: 891012-012
Date Sample Received: 12-OCT-1989 Date Sample Completed:
Date Sampled: 12-OCT-1989 Sampled By: NB
Material Description: MISCELLANEOUS SAMPLES Req. Number:

Activity Number	Preparation Procedure No.	Analysis Procedure No.	Analysis	Result	Units	Analyst	Date Completed
3033		3033	pH - Electrode AnL PC	2.5	pH	JJ STOECHEL	17-OCT-1989