



9308137

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

7601 W. Clearwater, Suite 102 • Kennewick, Washington 99336 • (509) 546-2990

October 4, 1993

Mr. Lee Michael
Westinghouse Hanford Company
740 Stevens Center #MS H6-08
P.O. Box 1970
Richland, WA 99352

Dear Mr. Michael:

Re: Entry of Site Visit Report to Administrative Record
224-T TRUSAF (S-2-2, M-20-23)

This letter transmits the Washington State Department of Ecology's request to enter the above referenced document to the 224-T Transuranic Waste Storage and Assay Facility Unit, Resource Conservation & Recovery Act (RCRA) Administrative Record. Enclosed is a copy of the report. If you are unable to enter the document to the administrative record, please notify me, and I will pursue the entry effort at the unit managers' meeting.

If you or your staff have any questions concerning this request, please contact me at (509) 736-3034.

Sincerely,

Alisa D. Huckaby
Nuclear and Mixed Waste Management Program

AH:sl
Enclosure: 324-T TRUSAF Site Visit Report

cc: (without enclosures)
Cliff Clark, DOE
Dan Saueressig, WHC
Dan Duncan, EPA
Doug Sherwood, EPA



2000-10-04 16:16

bcc: Dave Nylander, Ecology
Tom Tebb, Ecology
Moses Jaraysi, Ecology

9413093-0003

224-T Transuranic Waste Storage and Assay Facility (TRUSAF)
(Group # S-2-2, Milestone M-20-23)
September 14, 1993, Site Visit Report by Alisa D. Huckaby

On September 14, 1993, Washington State Department of Ecology (Ecology) representatives Jerry Hensley, Jeanne Wallace, Casey Ruud, and myself toured the 224-T TRUSAF unit. During the tour, Ecology representatives were accompanied by Nancy Shoemaker (WHC), Matt LaBarge (WHC), Jerry Todd (WHC), Kent McDonald (WHC), Roger Szelmeczka (USDOE), and Kevin Kline (USDOE). Primarily, Nancy Shoemaker conducted the tour, but Kent McDonald provided information regarding the Part B Permit Application, Matt LaBarge provided information about the Backlog Wastes, and Jerry Todd provided information on operations.

Ecology representatives "WRAMed" (Westinghouse Radiation Area Management system for gaining access to the facility) in from approximately 12:30 - 12:55 p.m. at a WRAM station located in trailer number 271 in the 200 West Area. Ecology representatives then drove to the 224-T TRUSAF unit, donned hard hats and safety glasses, and entered the first floor of the building at the far northwest entrance. The group (including WHC and DOE representatives) progressed south past the elevator and proceeded to the south entrance of the building. This area, shown as "transuranic mixed waste initial storage" and "receiving area" on Figure 2-3 (attached) is used to unload, receive, and initially "store" newly received waste. At this time, there were approximately 70 drums stored in this area, about 50 of which were Backlog Waste drums. Shoemaker and LaBarge explained to Ecology representatives that a pilot project with the Backlog Waste drums was being conducted to develop a waste analysis work plan for which Real Time Radiography (RTR) and assaying techniques would be utilized. It was also explained that the pilot project consisted of "assaying" approximately 1400 Backlog Waste drums within the next year. It was described that an average time period of one to seven days represented the time required to assay and x-ray a Backlog Waste drum from the receipt to the return of the drum. While in this area, the attached photographs, numbered 1, 2, 3, and 4, were taken.

The group proceeded north to the area housing the real-time radiography x-ray system, (shown on attached Figure 2-3). While in this area, photographs numbered 5 and 6 were taken. While in this area, Shoemaker explained that in the future, there will not be drums located in this area due to the x-ray equipment. Shoemaker further explained that the drums were located in this area temporarily while floor sealants were being tested in one of the storage arrays. While in the x-ray radiography room, two continuous airborne monitors (CAMs) were noted. Shoemaker explained that one of the CAMs was an alpha CAM and the other was a beta CAM. Shoemaker further explained that the alpha CAM was for the transuranic wastes and the beta CAM was for the backlog wastes.

From the x-ray radiography room, the group proceeded north to the transuranic waste assayer (TWA) room shown on attached figure 2-3. While in this room, photographs numbered 7, 8, and 9 were taken. While in this room a circular pattern (approximately two feet in diameter) was noted in the concrete (see photograph number 8). A second circular pattern (approximately six inches in diameter) was also noted in this room located near the corner of a rectangular pattern which appeared to be slightly lower than the surrounding concrete (see photo number 9).

The group then proceeded to the northern-most end of the building where several storage modules were noted (shown as modules numbered 2, 3 and 4 on attached Figure 2-3). Within this area, 1989 waste accumulation dates were noted on some of the hazardous waste labels. Shoemaker explained that the facility contained drums which were shipped to 224-T TRUSAF of which could not be accepted or certified because of limitations related to the x-ray radiographic techniques utilized and the certification criteria imposed by the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico, where the waste is proposed to be disposed. LaBarge further explained that since the drums were over 90 days old, they could not be shipped back to the generator.

The group then proceeded to the second floor at the south end of the building. The area is shown on Figure 2-4 as the shaded area designated for "transuranic mixed waste as designated by supervisor." Within this area, one area, approximately 20' X 20' and marked with a line of tape, was labelled "oxidizers" (see attached photograph number 11). Directly adjacent, was an area labelled "satellite accumulation" (see attached photograph number 12). In this same room, there were areas with signs stating "acids, return to generator," etc. Photograph number 13 was taken of drums stored in one such open array module. While in this area, it was noted by Ruud, that one drum located in a "return to generator acids" module was not labelled with a hazardous waste label, although it had a "corrosive" label facing the wall. Photograph number 15 was taken of this drum and Ruud requested a copy of the documentation for this drum which was in a plastic envelope on top of the drum. Shoemaker provided a copy (copy attached). Also while in this area, a rectangular shaped patch was noted beneath the satellite accumulation drum (see photograph number 12). Shoemaker and McDonald explained that a sealant was being "tested." Shoemaker further explained that the sealant selected for upgrading the secondary containment would be grey in color rather than the brown color sealant tested in the satellite accumulation area. Also while in this room, Hensley and Wallace noted ceiling cracks which appeared to be discolored as though indicating leakage (see attached photograph number 14).

The group then proceeded north to the next room (shown on Figure 2-4 as unshaded portion with open array modules numbered 2-1 through 2-9). While in this room, additional discolored ceiling cracks were noted. Photographs numbered 16, 17, 18, 19, and 20 were taken in this room. The storage arrays (2-1 and 2-2) at the northern-most end of the building contained drums with higher radiation readings.

9413093.0005

Shoemaker explained that many of the drums in this area were listed as awaiting shipment to WIPP in New Mexico.

The group then proceeded to the third floor. Photographs 21, 22, 23, and 24 were taken in this area. On the northern wall, south of the elevator, photographs numbered 23 and 24 were taken of which show peeling paint and associated discoloration. While in this area, Shoemaker explained that a new roof had been put on the facility approximately two years ago. When asked about roof repairs, Shoemaker further explained that she was aware of three leaks since the new roof was put in place, but that each leak had been repaired immediately upon identification.

The group returned to the first floor where the elevator which is utilized to transport drums to the different floors was noted. Photograph number 25 was taken of the elevator.

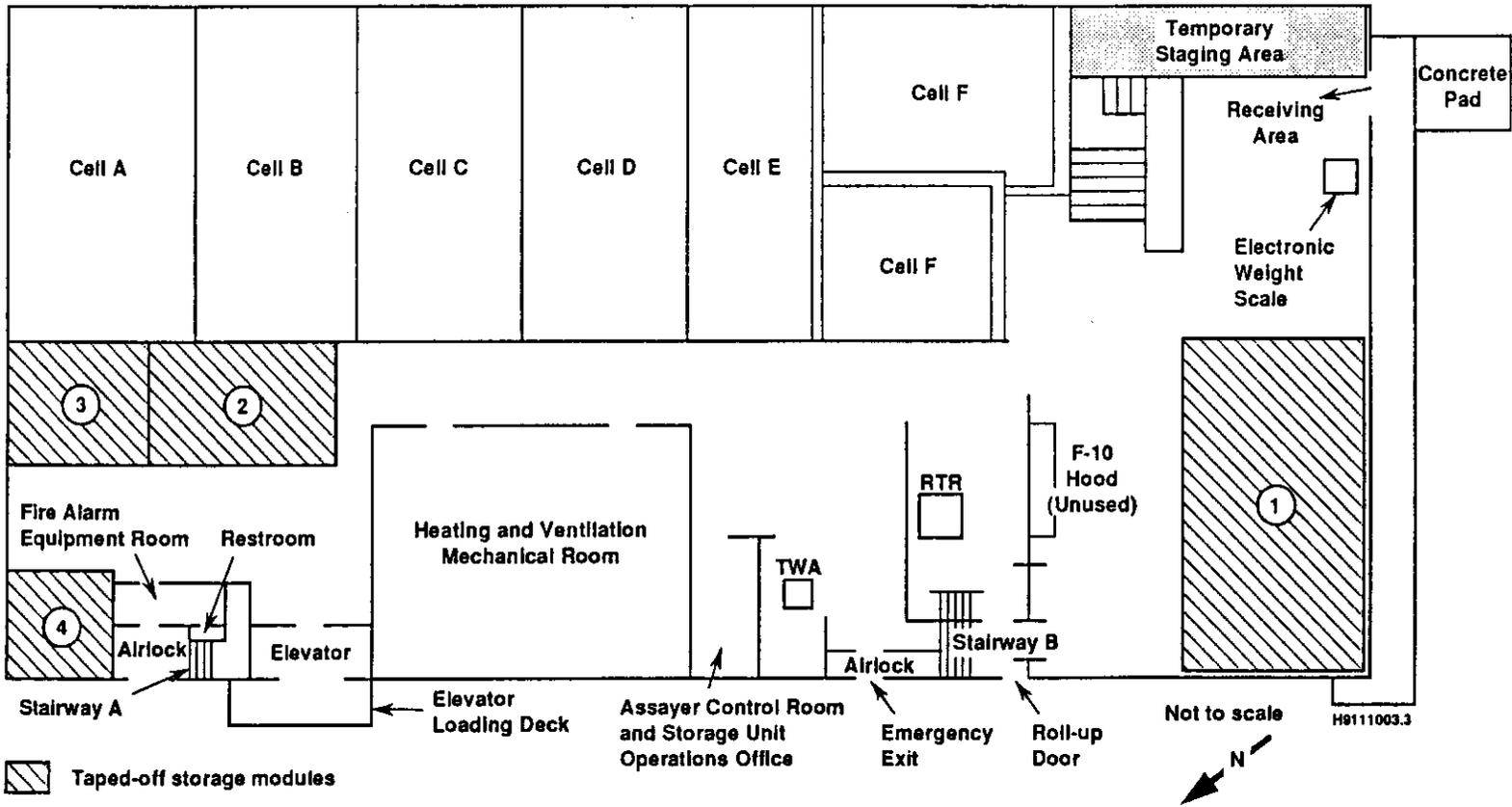
Prior to being radiologically "surveyed out," McDonald explained that plans were progressing to enter the radiologically contaminated process cells B and F (shown on attached Figure 2-3) on September 28 or 29, 1993. Ecology representatives left the facility at approximately 2:00 p.m.

Enclosures: Photographs Numbered 1 Through 25
Photograph Log
Figures 2-3, 2-4, and 2-5
Documentation For Drum # 89-234

1
2

Figure 2-3. 224-T Transuranic Waste Storage and Assay Facility First Floor Plan.

F2-3



Taped-off storage modules

TWA = transuranic waste assayer.

RTR = real-time radiography x-ray system.

Notes: Storage modules are not enclosed rooms.

Refer to Drawing H-2-71704 in Appendix 4A for detailed building layout.

Storage modules (flexible in size):

① Transuranic mixed waste initial storage

② Transuranic waste to go upstairs

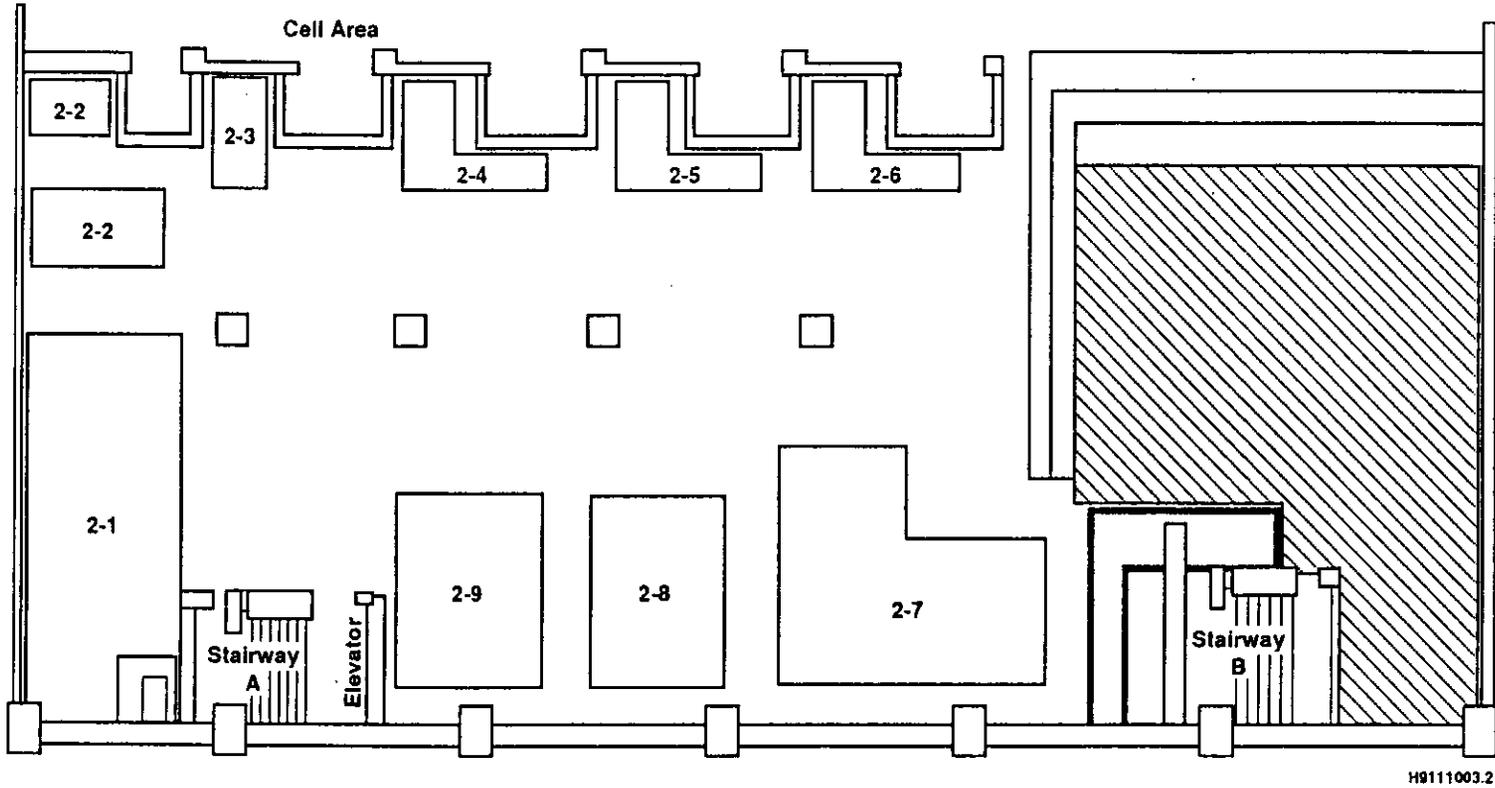
③ Low-level waste

④ Return to offsite generator or onsite generating unit

1
2

Figure 2-4. 224-T Transuranic Waste Storage and Assay Facility Second Floor Plan.

F2-4



Storage Modules

Modules 2-1, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8, and 2-9 are presently for transuranic waste.

Modules 2-2 are for transuranic mixed waste (acids).

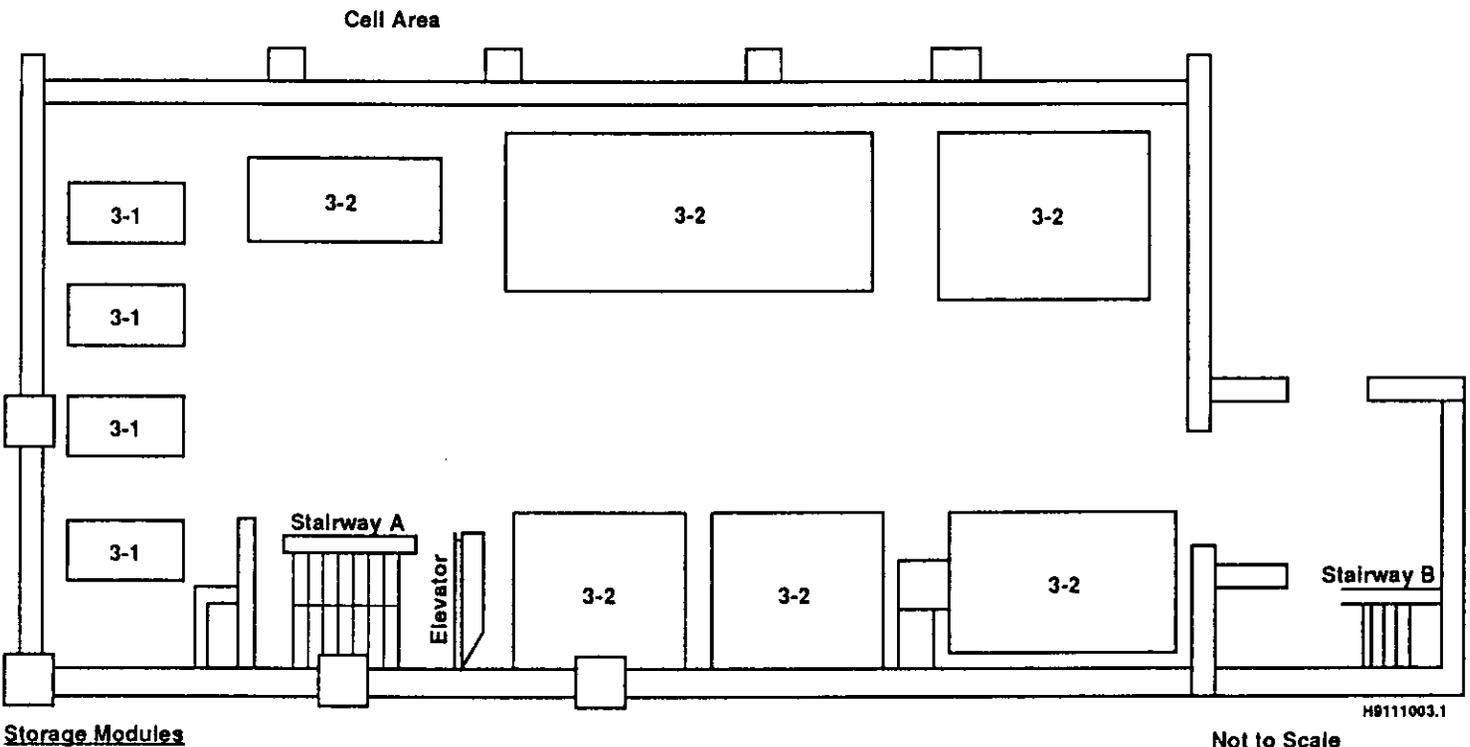
 Transuranic mixed waste as designated by supervisor.

Note: Storage module locations are adjusted as necessary.

Not to Scale



H9111003.2



Storage Modules

Modules 3-1 are for transuranic mixed waste (caustic and others).

Modules 3-2 are presently for transuranic waste.

Note: Storage module locations are adjusted as necessary.

1
2
Figure 2-5. 224-T Transuranic Waste Storage and Assay Facility
Third Floor Plan.

NUCLEAR AND MIXED WASTE MANAGEMENT PROGRAM
HANFORD PROJECT

224-T TRUSAF SITE VISIT REPORT

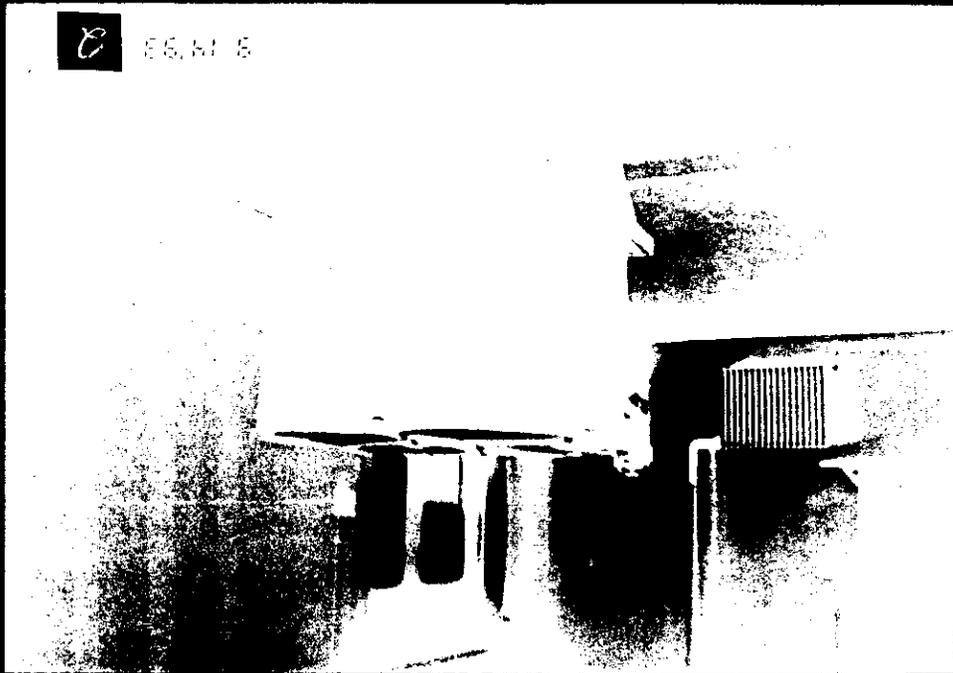
PHOTOGRAPH LOG

PHOTOGRAPHS TAKEN ON SEPTEMBER 14, 1993 BY CASEY RUUD

NUMBER	COMMENTS:
1	Hazardous waste drums (Backlog Waste) in first floor storage module number 1 (transuranic mixed waste initial storage) of attached Figure 2-3. Photo taken facing west.
2	Hazardous waste drums (Backlog Waste) in receiving area of first floor (see area identified on attached Figure 2-3) on portable secondary containment system. Photo taken facing southeast.
3	Close-up photo of label on one hazardous waste drum (Backlog Waste) in first floor storage module number 1 (transuranic mixed waste initial storage) of attached Figure 2-3.
4	Photo of hazardous waste drum showing label of photo number 3 in first floor initial storage module number 1 of attached Figure 2-3.
5	Drums in real-time radiography (RTR) x-ray room (see "RTR" room of attached Figure 2-3). Photo taken facing west.
6	Real-time radiography (RTR) x-ray system (shown as "RTR" on attached Figure 2-3). Photo taken facing north.
7	Transuranic waste assayer system (shown as "TWA" on attached Figure 2-3). Photo taken facing northwest.
8	Photo of circular area which appears to have been cemented over. Photo taken in transuranic waste assayer room (shown as "TWA" on attached Figure 2-3).
9	Photo of small circular area which appears to have been cemented over. Not easily seen in photo, but small circular area is located near the corner of a rectangular shaped crack. The cement on the inside of the rectangular shaped crack appeared to be lower than the surrounding floor. Photo taken in transuranic waste assayer room (shown as "TWA" on attached Figure 2-3).
10	Hazardous waste drums stored on second floor in southern corner of building. Area is shown on attached Figure 2-4 and is designated "transuranic mixed waste as designated by supervisor." Photo taken facing south.
11	Hazardous waste area labelled as "Oxidizer Failed X-Ray." Area located in southwestern corner of second floor.
12	Satellite accumulation area located just outside of taped-off area of photo number 11.

13	Corrosive hazardous waste drums in shaded area shown on attached Figure 2-4 and designated "transuranic mixed waste as designated by supervisor."
14	Ceiling crack and associated staining. Photo taken from second floor on southern end of building in shaded area shown on attached Figure 2-4 and designated "transuranic mixed waste as designated by supervisor."
15	Photo of drum on southern end (second floor) of building in shaded area shown on attached Figure 2-4. Drum has no hazardous waste label.
16	Photo of extremely hazardous waste drum on second floor.
17	Close-up of label on drum shown in photo number 16.
18	Photo of radioactive mixed waste drums on second floor near northwestern end of building.
19	Aisle photo taken from northern end of second floor of building facing south.
20	Caustic drum storage module. Dates of storage on several drums indicated storage since 1989.
21	Lead waste drums located on third floor near column labelled "D-4."
22	"Other mixed waste" shown at northern end of third floor. Of attached Figure 2-5, a portion of storage modules numbered 3-1 are shown.
23	Photo of scaling and chipping paint on western wall of third floor of building.
24	Close-up photo of the scaling and chipping paint of photo number 23.
25	Photo of stained floor of elevator.

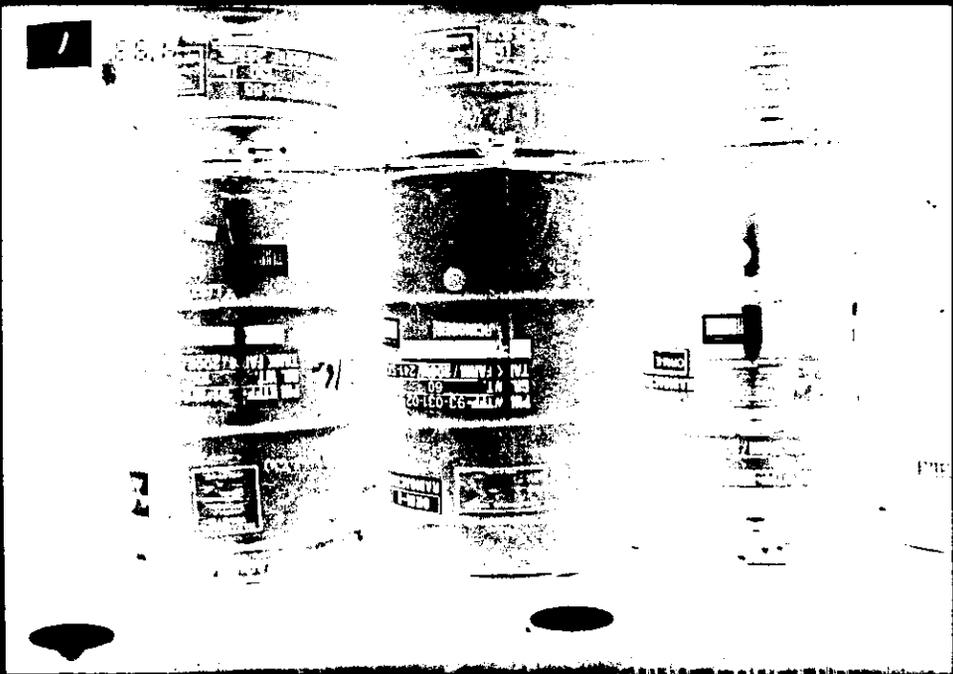
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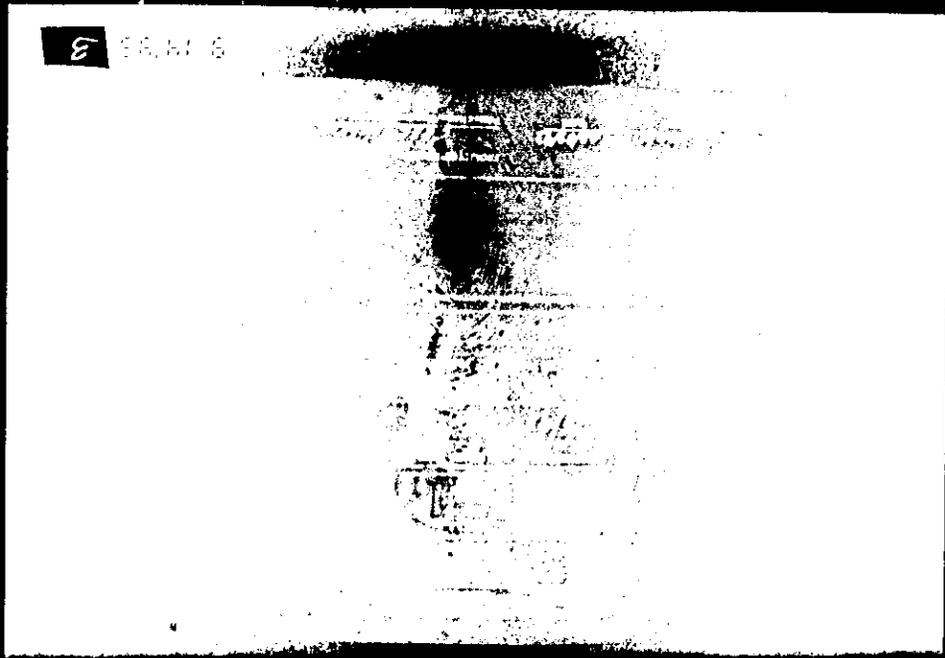
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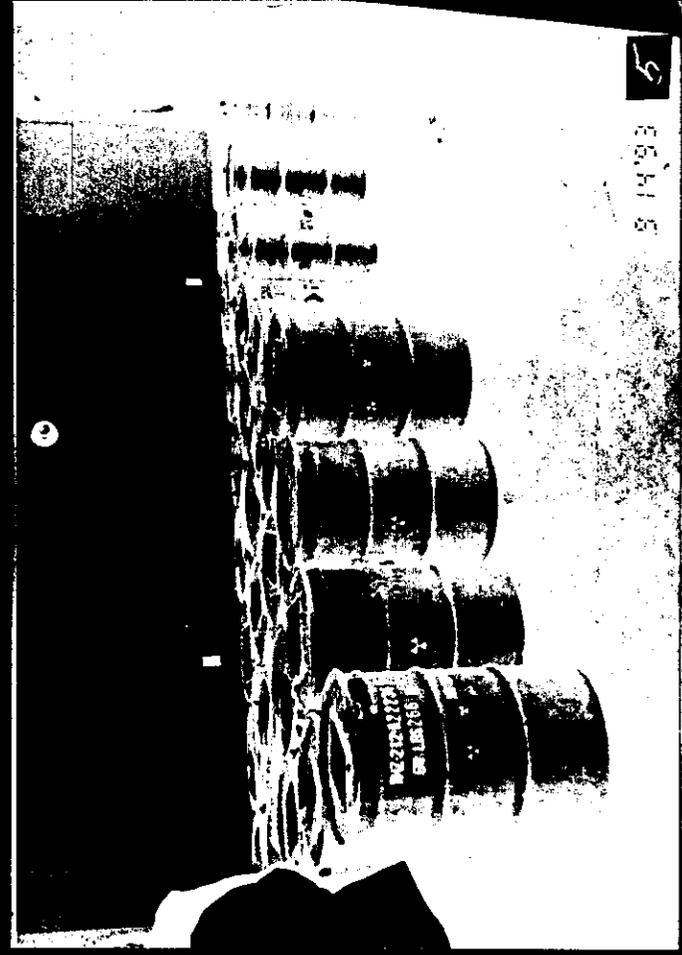


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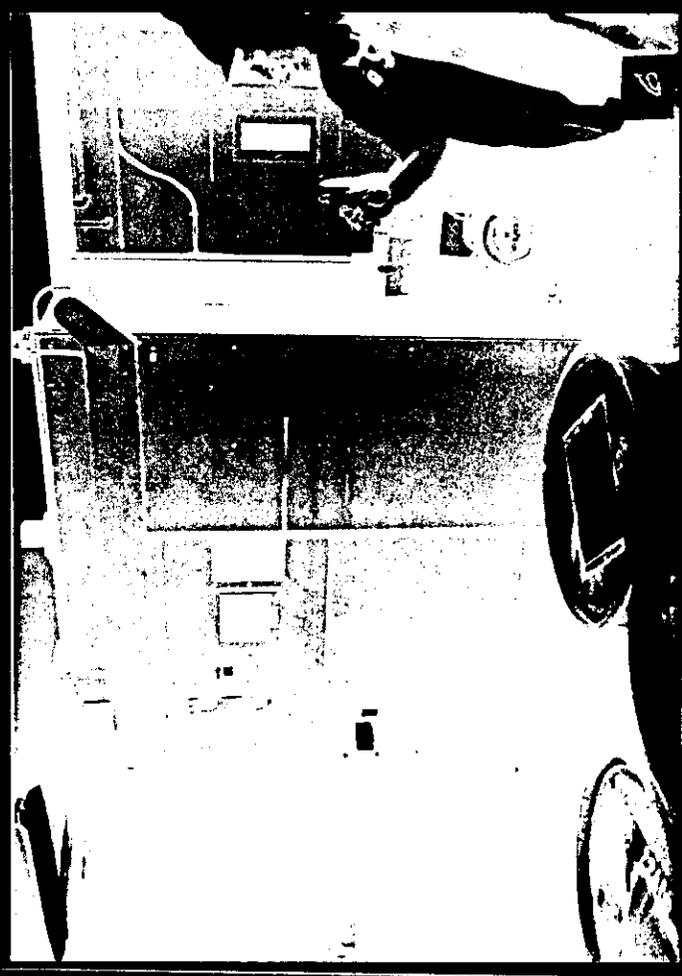
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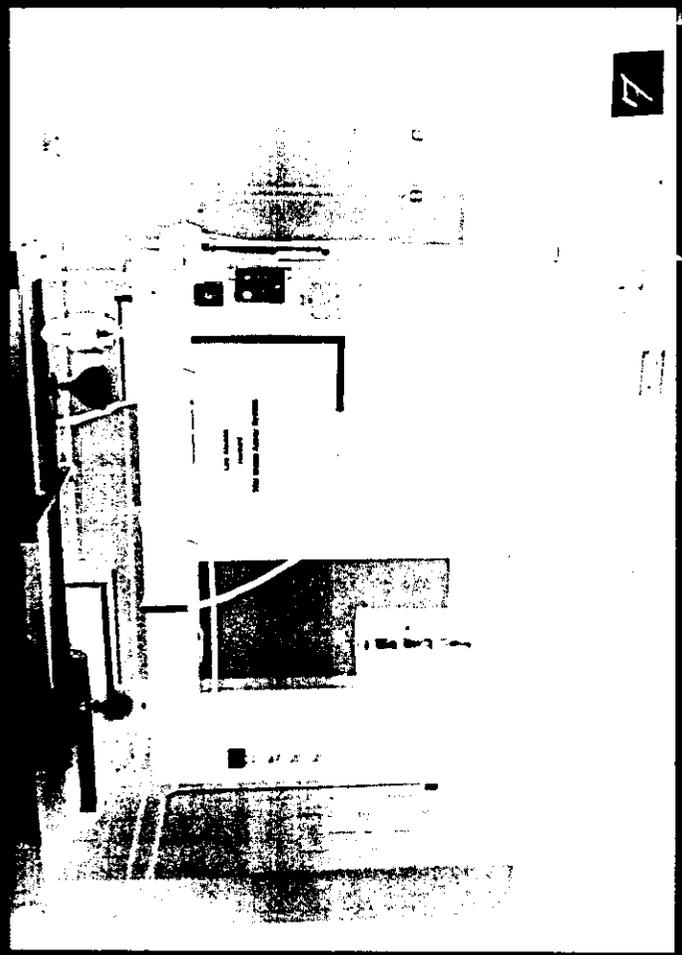


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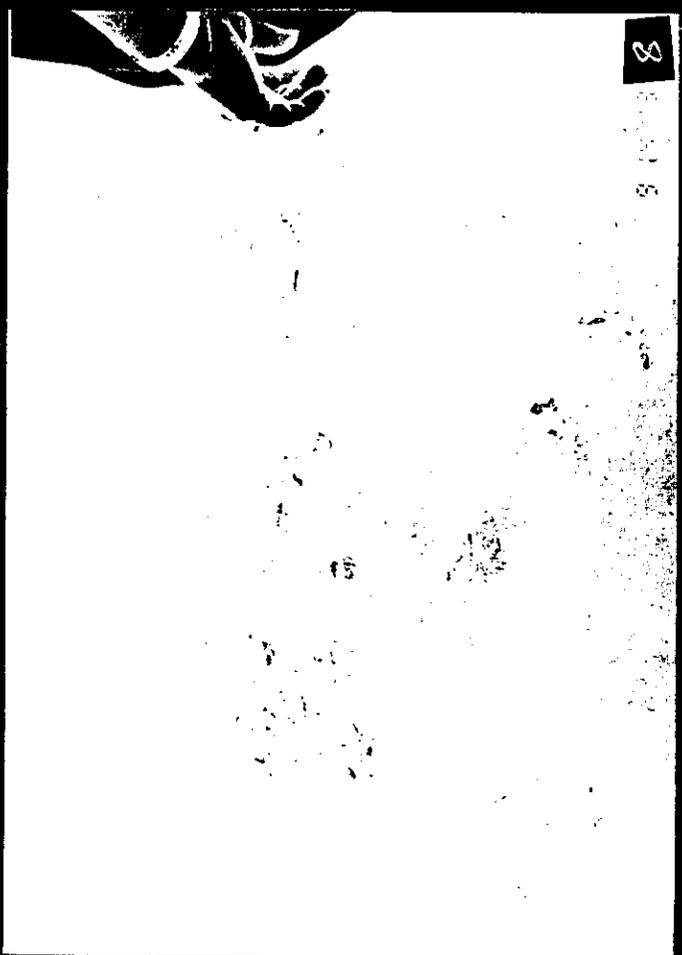
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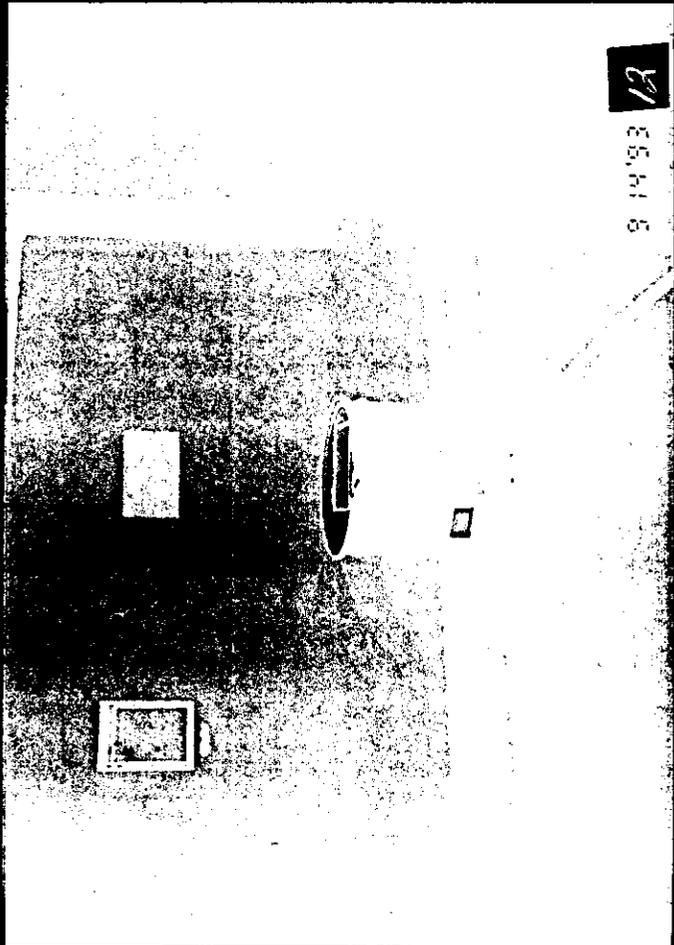
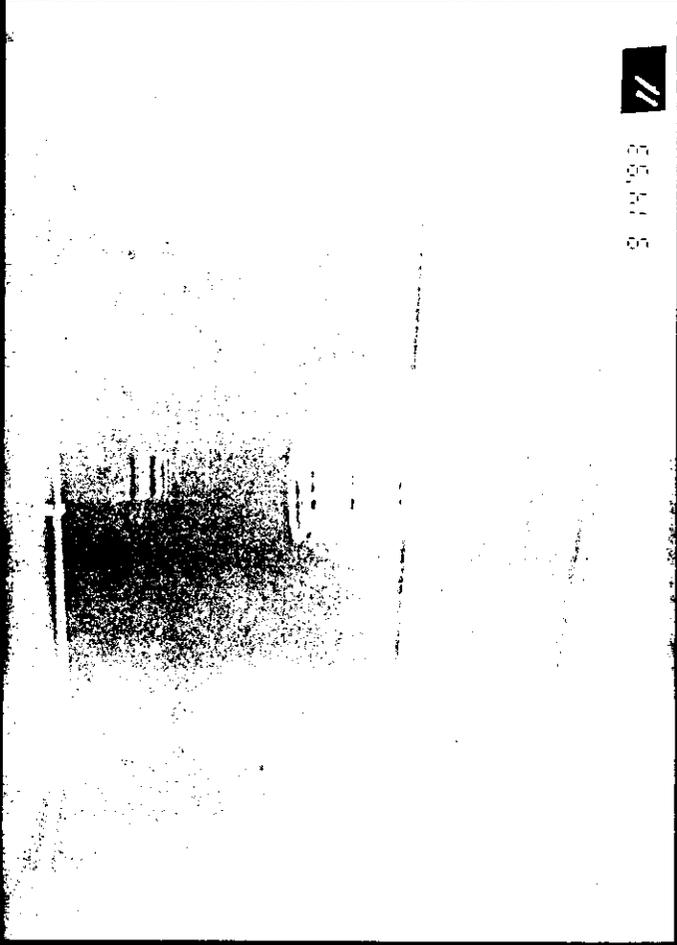
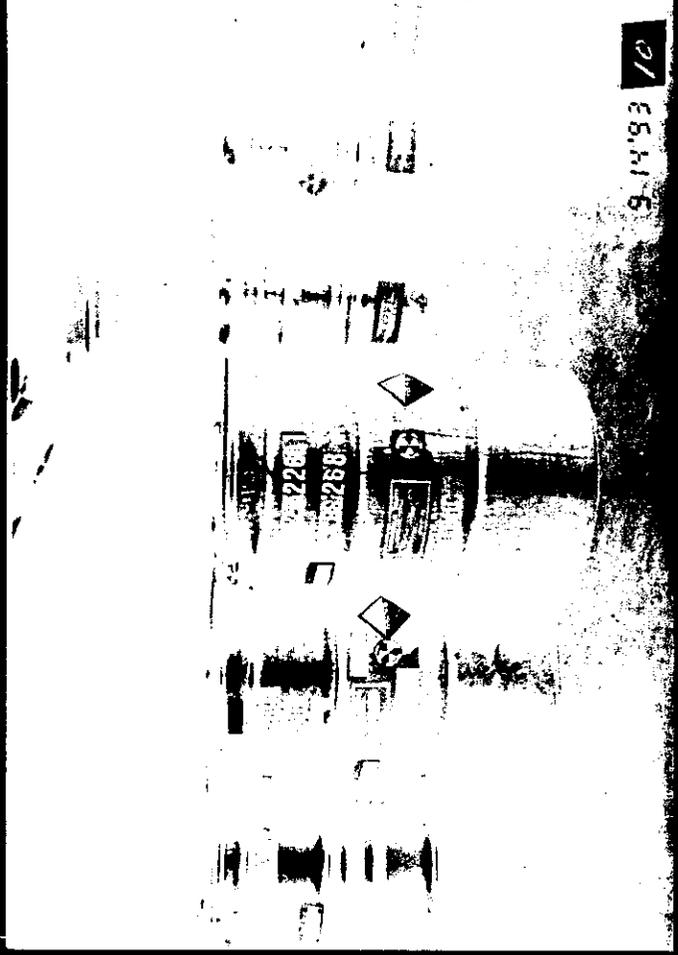
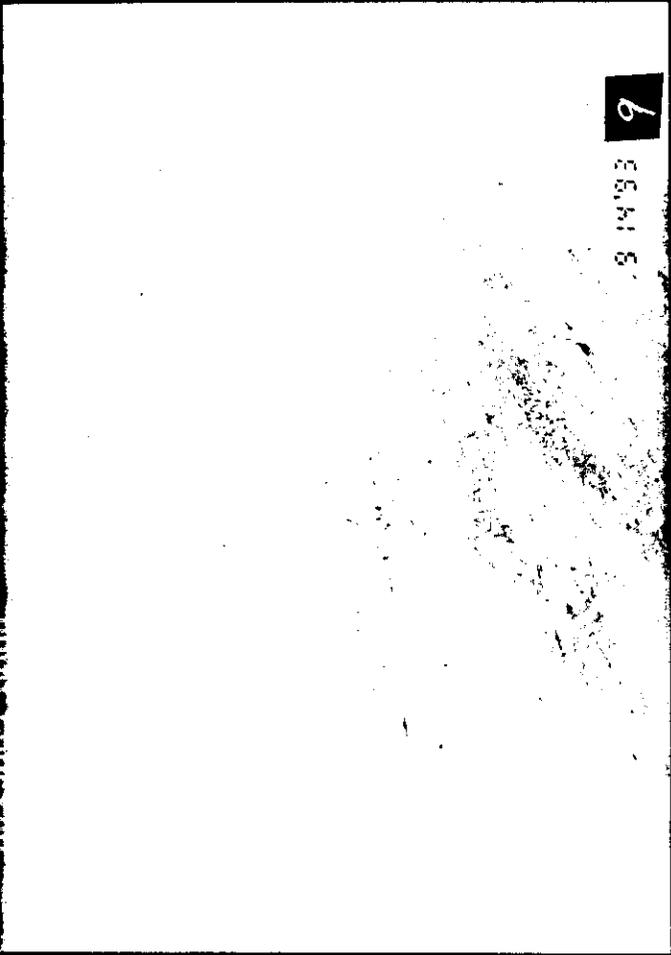
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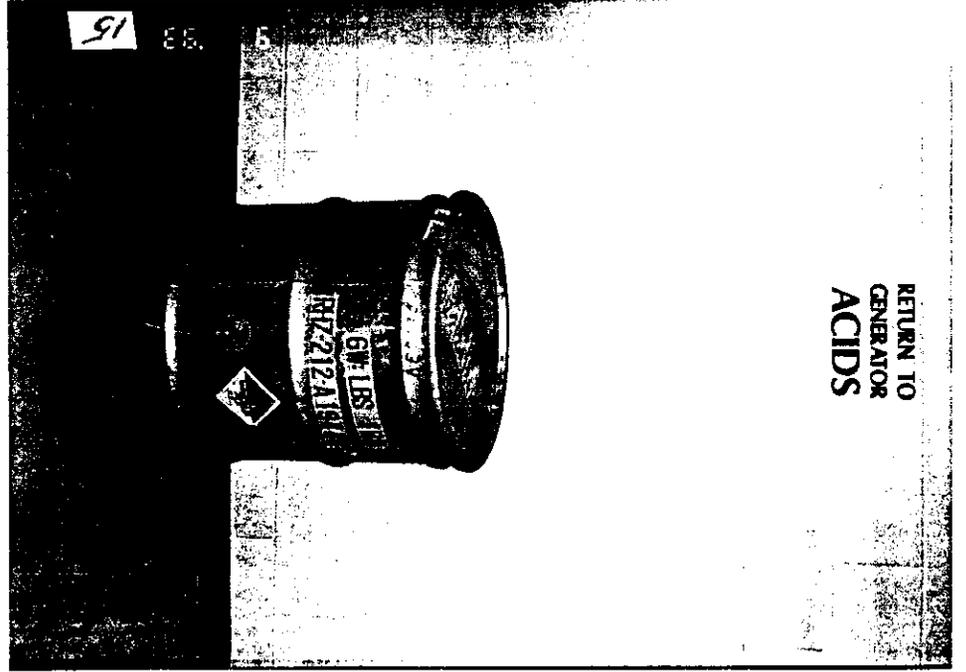
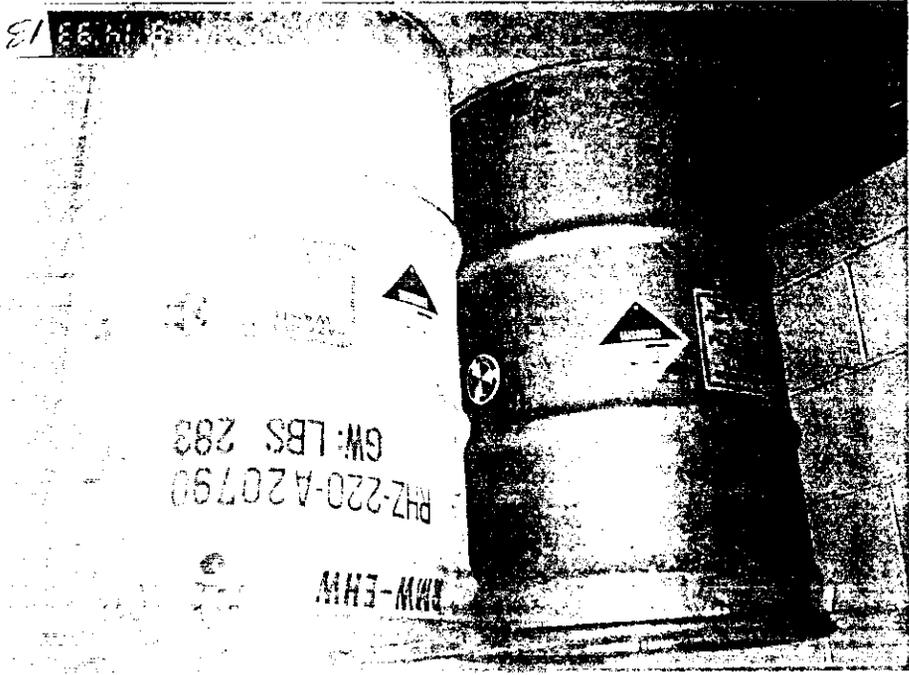
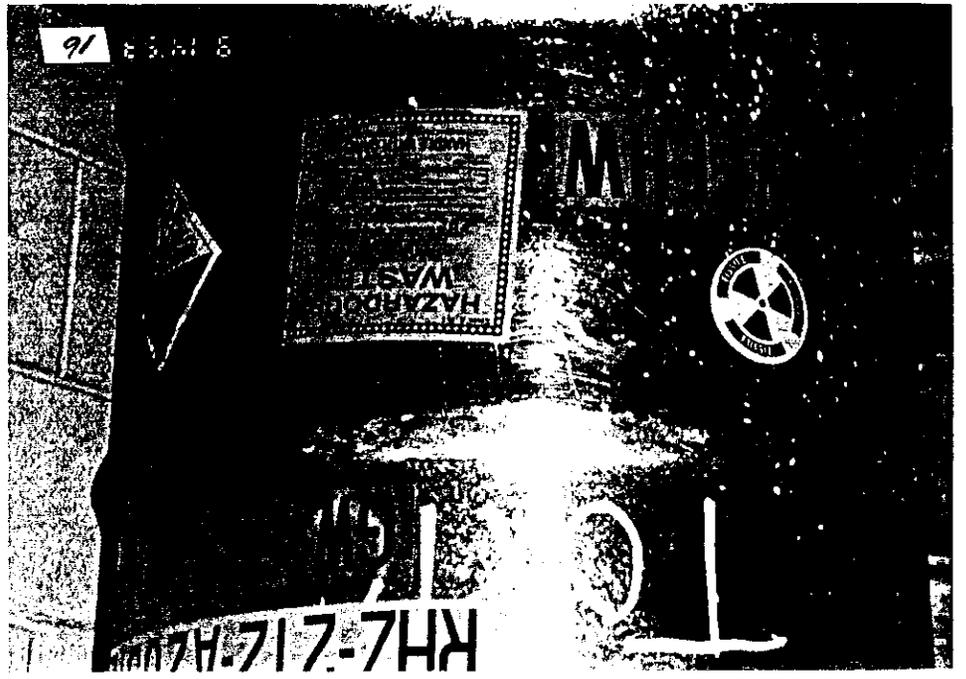
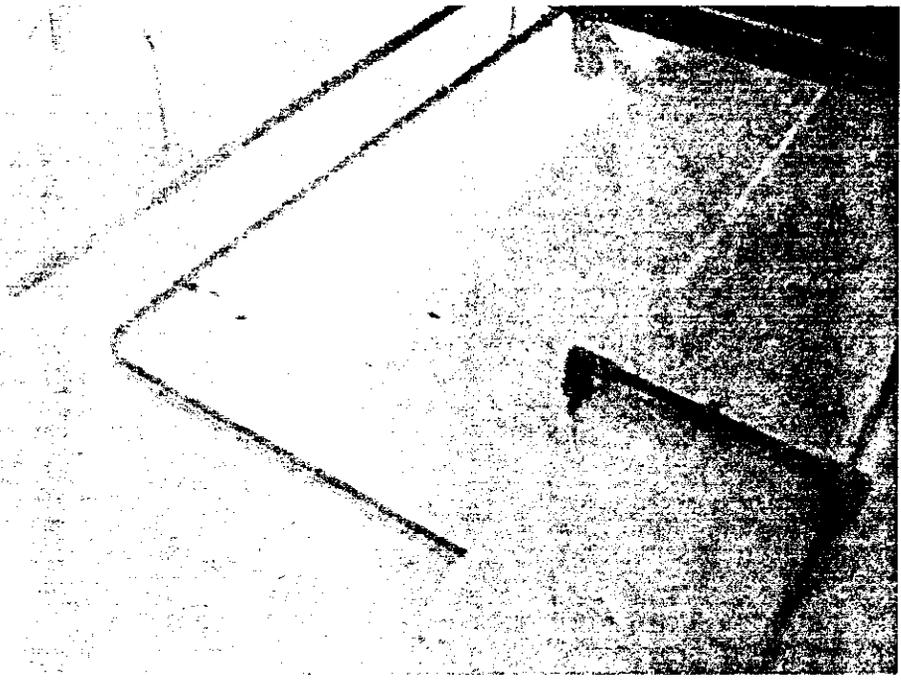


7



8





9413098-005

Photo 17

9/14/93

224-T TRUSAF, 200 West Area

Hanford Site, DOE

WA7890008967

Photo taken by Casey Ruud

3413093, 0097

Photo 19

9/14/93

224-T TRUSAF, 200 West Area

Hanford Site, DOE

WA7890008967

Photo taken by Casey Ruud

Photo 18

9/14/93

224-T TRUSAF, 200 West Area

Hanford Site, DOE

WA7890008967

Photo taken by Casey Ruud

Photo 20

9/14/93

224-T TRUSAF, 200 West Area

Hanford Site, DOE

WA7890008967

Photo taken by Casey Ruud

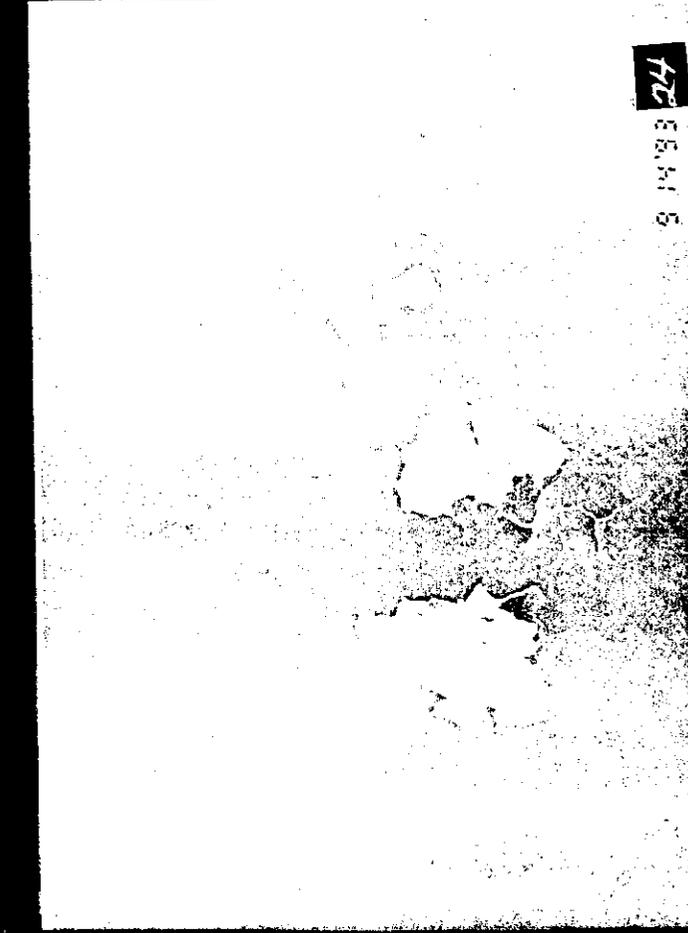
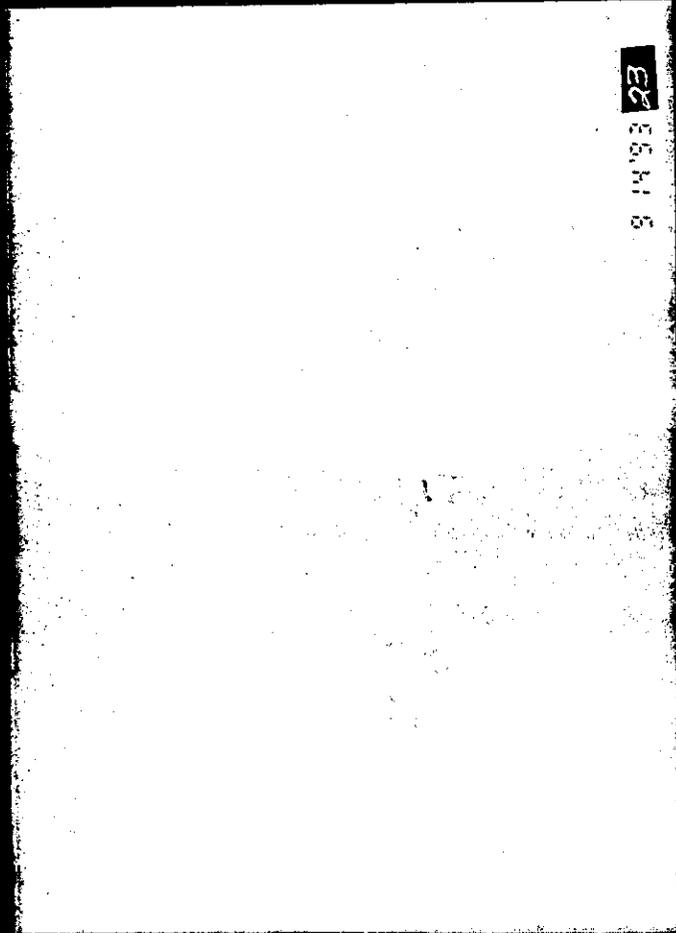
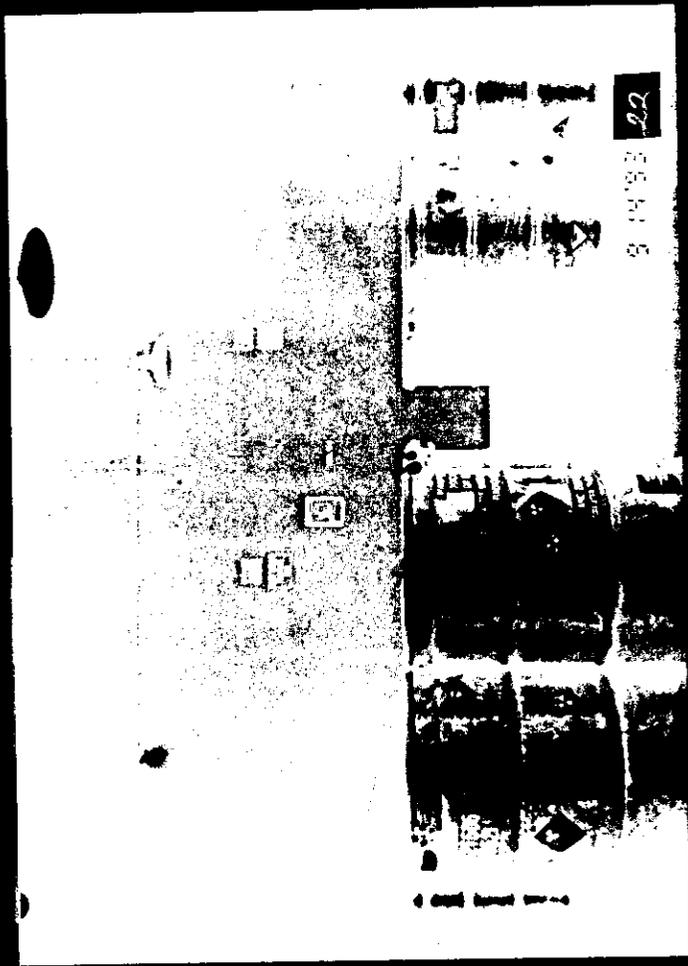
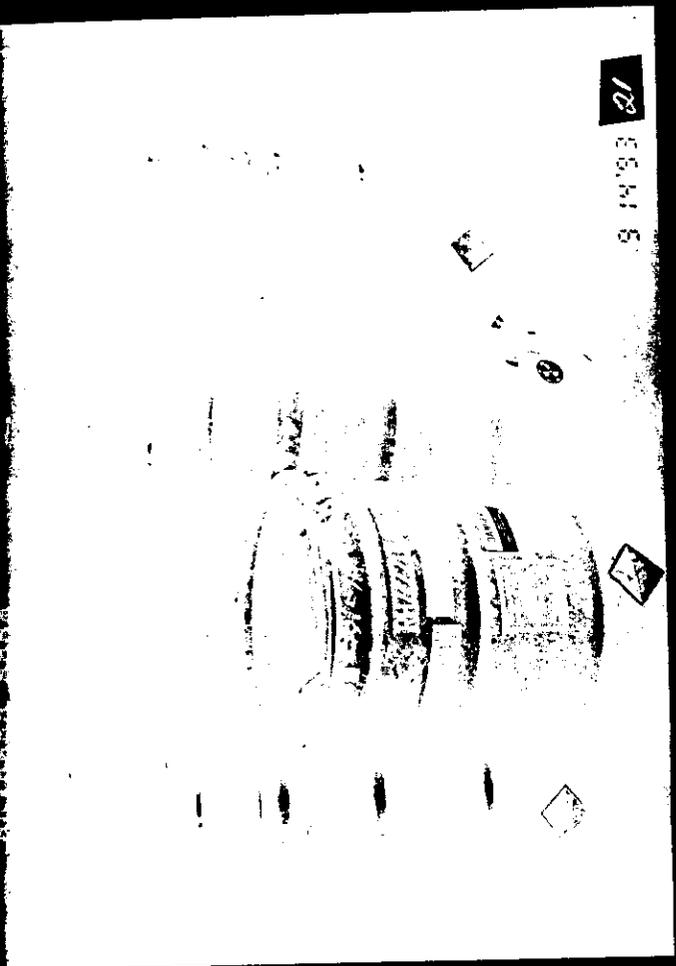


Photo 21

9/14/93

224-T TRUSAF, 200 West Area

Hanford Site, DOE

WA7890008967

Photo taken by Casey Rued

9413093.0099

Photo 23

9/14/93

224-T TRUSAF, 200 West Area

Hanford Site, DOE

WA7890008967

Photo taken by Casey Rued

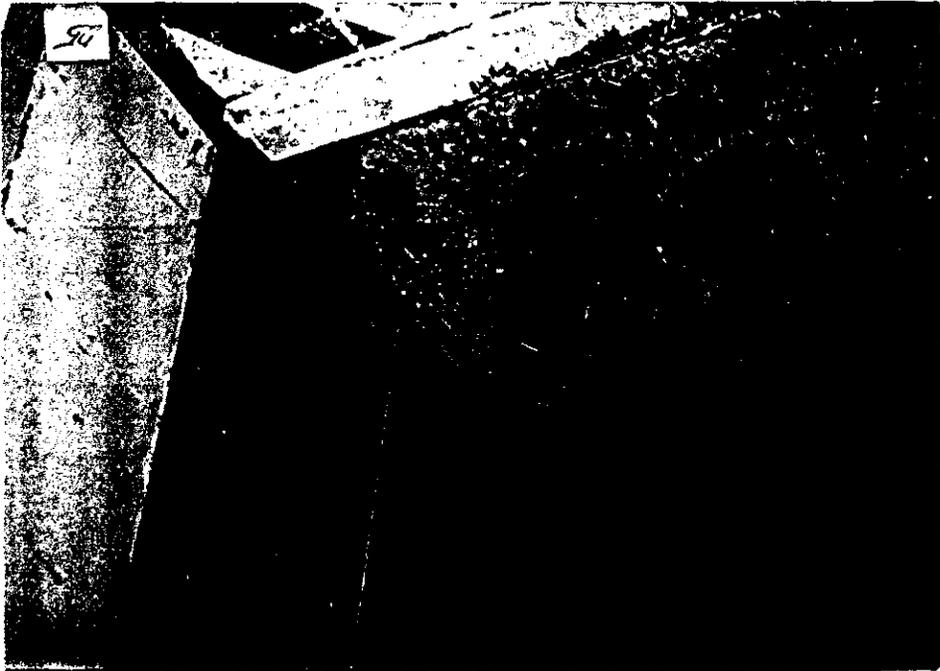


Photo 24

9/14/93

224-T TRUSAF, 200 West Area

Hanford Site, DOE

WA7890008967

Photo taken by Casey Rued

9413093.0100

Trace# 89-234

✓

Westinghouse Hanford Company **SOLID WASTE STORAGE /DISPOSAL RECORD** Page 1 of 1

Waste Designation TRU LLW MW Classified **SWSDR No. (Do Not Write In This Space)**

STORAGE/DISPOSAL SITE (This portion to be completed by WHC at storage/disposal site.) **WASTE GENERATOR** WHC

I certify that a physical inspection of the waste packages to the extent possible and a cross check of the applicable documentation have been performed in accordance with approved Westinghouse Hanford Procedures
 Charge Code **K6-Z** DOE Authorization No. (WRM) **None**

Signature-Acceptance *[Signature]* Date **5-1-89** Name of Contact **E.C. MINCEY**

Temporary Storage Location **224-T** Check here if acceptance copy of this form is sent to SSWESU Address/Phone **234-5Z 200 West 3-4160**

Disposition of Waste Pad/trench storage Building Storage Disposal Compaction

Area _____ Facility _____ Unit _____ Tier _____
 Beginning Coordinates _____ Ending Coordinates _____
 N _____ W _____ N _____ W _____

Signature *[Signature]* Date **3/24/89**

Signature-Storage/Disposal _____ Date _____ SDAR Approval No. **1-1B-2D-3** Uniform Haz. Waste Manifest No. **None**

Comments **ZB-89-04-21**

WASTE PACKAGE INFORMATION		SWSDR ()		WASTE CONTENTS DESCRIPTION					
PIN RHZ-212-A19448	CONTAINER 55 gal. drum	CONTAINER VOL. <input type="checkbox"/> FT ³ <input checked="" type="checkbox"/> M ³ Seal#W 40959 .21	LxWxH N/A	WASTE CATEGORIES	WASTE DESCRIPTION	WT. (kg.)	COMBUSTIBLE VOL%	NON-COMB. VOL%	
POINT OF ORIGIN 234-5Z 200 West	GROSS WEIGHT 89ks	DOSE RATE AT 1 cm. = < 1 mrem/hr.	AT 1 m. = _____ mrem/hr.						<input type="checkbox"/> BW
DOE/NRC 741 NO. HUD-VUC-215	PROPERTY DISPOSAL REQ. NO. None	PHYSICAL DESCRIPTION Individual packages, double wrapped w/dia. earth	THERMAL POWER (W/FT ³) 0.1 watts or less. vented w/catalyst pack.	<input type="checkbox"/> CE	Cloth	1.5	6		
ORGANIC MATL. WT. (kg.) 10.58	ORGANIC MTL. VOL. % 32			<input type="checkbox"/> DD	Rubber	2.32	4		
				<input checked="" type="checkbox"/> DS	Metal	25.5		36	
				<input type="checkbox"/> SS	Cement / Glass	15 / 7		20 / 12	
				<input type="checkbox"/> NC	Dia. Earth	1		≤ 1	
				TOTALS		58	32	68	

HAZARDOUS CONSTITUENTS			RADIOACTIVE MATERIAL CONTENT				TRU only		
WASTE NO.	ITEM DESCRIPTION	WT. (kg.)	ELEMENT	DISTRIBUTION (wt%)	WT.-CI	PU 239-FGE	PE-CI	ALPHA CI	
N/A	None	0	pu 239	94	28 / 14	28	14	14	
			pu 240	6	2 / 1	21	1	1	
TOTALS		0			30 / 15	28	15	15	

Distribution: White - Site Solid Waste Engineering Support Unit, 2750E, R1-51 Canary - Tank Farms Scheduler, 272WA, T4-01 Goldenrod - Acceptance Copy - Send to Site Solid Waste Engineering Support Unit, 2750E, R1-51 54-6000-226 (08-88)

CONTENTS INVENTORY SHEET

(1) Page 1 of 2

(2) Waste Generator/Location WHC 236-Z Corr 14

Trace no 89-234
 SEAL # - WHC 145959
 Container No. (3) 242-212 A1E448
 Container Type (4) 55gal Drum

Initials	Initials	Article Description	Content Code	Mass of Organics (Kgs)	Volume of Organics <input type="checkbox"/> Ft3 <input checked="" type="checkbox"/> M3	Hazardous Material		Radioactive Content	
						Name	Qty. Kgs.	TRU Isotopes	Grams
(5)	(5)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
AS	SD	2 Paper Wrench 15% 1 Rubber Screen (Rods) 3% Bottle 5% Sample Bottle 10% Tubing Tygon 1/2" 53% Wrench 5% Tubing 1/2" PTFE 72%	(7)	40 lbs 2	<input type="checkbox"/> Ft3 <input checked="" type="checkbox"/> M3 .01	None	0	Pu 239 94%	13 gram
AS	SD	Plastic 25% Wrench 5 Zipper 10 Stainless Steel 20 Kitty Litter 30		10 lbs 1	.005	NO. 1-6-89			5 18
Q	QE	Bottle Ring 90% Plastic Outer Ring 90% Plastic		.25 .25	.0025 .0025				0 18 0 18
TW	RM	Stainless steel piping and 75% Cloth tape and pipe cutter - 10% Plastic - 15%		.5	.005				11 29
Q	TW	1 Glass Window 80% 10% Paper 10% Plastic		.5	.0025				0 29
PB	MS	1 Glass window 80% 10% Paper 10% Plastic		.5	.0025				0 29
PB	MS	1 Glass window 80% 10% Paper 10% Plastic		.5	.0025				0 29
R	TW	1 Glass window 80% 10% Paper 10% Plastic 10% D.E.		2	1.005				0 29
		Page Total	(14)	7.5 Kgs	(16) 0.325				(20) 29 g
		Total (all pages)	(15)	10.5 Kgs	(17) 0.585				(21) 35 g

(22) RP Olen 3/3/89
 Plant Operations Authority, Signature/Date

(23) Ed Sprucey 3/24/89
 Independent Reviewer, Signature/Date

(24) Other Radioactive Content None

(25) Gr wt Kgs 88 lbs. 188

CONTENTS INVENTORY SHEET

(1) Page 2 of 2

Trace 87-234

Container No. (3) RIE-212A19448

(2) Waste Generator/Location WHC 2345 1st East

SEAL # - WHC 40959

Container Type (4) 55 Gal Drum

Initials	Initials	Article Description	Content Code	Mass of Organics (Kgs)	Volume of Organics <input type="checkbox"/> Ft3 <input checked="" type="checkbox"/> M3	Hazardous Material		Radioactive Content	
						Name	Qty. Kgs.	TRU Isotopes	Grams
(5) Q	(5) WRC	(6) 3 SS Ball valves 15% 4 SS couplings 1" 10% Paper Ice Cream Cartons 55% Plastic Bags 23% 1 nut driver 7/16" 2%	(7) N/A	(8) 1	(9) .005	(10) NONIZ	(11) 0	(12) Pu 239 94%	(13) Total 1 30
ERS	MM	4 Poly jars cemented NITRIC CRYSTALS 80% 20% plastic		.5	.005				0 30
ERS	MM	4 Poly jars cemented Nitric Crystals plastic-20%		.5	.005				0 30
Q	RLS	1/2" SS Tubing Several pieces "24" Long. 2-SS Valves Paper - Plastic Diat. earth 27% 87% 29%		1.0	.005				3 33
WRC	WRC	1 EMV 80% Plastic 15% Diat Earth 5%			.001	HO-2-3-89			2 35
		Page Total		(14) 3 Kgs	(16) .021			(18) 0	(20) 6 g
		Total (all pages)		(15) 10.5 Kgs	(17) .0585			(19) 0 Kgs	(21) 35 g

(22) R.P. Orr 3/3/89
Plant Operations Authority, Signature/Date

(24) Other Radioactive Content None

(23) J. J. [Signature] 3/24/89
Independent Reviewer, Signature/Date

(25) Gr. wt. Kgs 88 HSE

TRAVELER CHECKLIST

- STORAGE AREA #1
- STORAGE AREA #2

DRUM ID. RH2-212-119448

ASSAY

- 1. NORMAL RUN ✓ OK*
- 2. ABSORBER INDEX <15 ✓ OK HOLD
- 3. DETECTORS AGREE ✓ OK*
- 4. ASSAY + +/- >100 nCi/g ✓ TRU
- 5. ASSAY + +/- >100 nCi/g (ROOM WASTE ONLY) RETURN TO GENERATOR
- 6. ASSAY + +/- ≤100 nCi/g LOW-LEVEL
- 7. IF ACTIVE ASSAY IS >141 GRAMS, BUT <287 GRAMS, NOTIFY SUPERVISION AND SEGREGATE DRUM IN DESIGNATED 3rd FLOOR STORAGE AREA.

 TIME SUPERVISION NOTIFIED

- 8. IF ACTIVE ASSAY IS >287 GRAMS, STOP ALL OPERATIONS AND NOTIFY SUPERVISION. DO NOT REMOVE DRUM FROM ASSAYER.

 TIME SUPERVISION NOTIFIED

9. PRELIMINARY ASSIGNMENT:

✓ TRU (CERTIFIED) TRU (STORAGE PADS)
 LOW-LEVEL HOLD RETURN TO GENERATOR

OPERATOR'S INITIALS BDW BARBERS DATE 5-2-89

APPROVAL, ANALYTICAL LAB REP. Deh DATE 5-9-89

*IF "OK" CANNOT BE CHECKED, NOTIFY SUPERVISION OR LABORATORY REP.

RTR LOG 1428

X-RAY

- 1. TAPE NUMBER 179 FOOTAGE 621
- 2. DETERMINED TO X PASS FAIL BE ON HOLD
- 3. REMARKS:

SIGNATURE W.H. Neber DATE 5-8-89

DESTINATION Return to PEP TRUSAF MANAGER M.D. Goble 512-89
Nitric Crystals listed SIGNATURE/DATE

*on CPS,
mixed waste.*

Document No.	Rev/Mod	Page
TO-100-020	D-3	35

Hold - contains Nitric Crystals.
 need better definition
 of mixed waste
 5-9-89

EQU-0602146

PROGRAM INCDL OF 09-09-87 REVOLUTION FOR WESTINGHOUSE HEAD-END CONTAINER
 LOCAL PARAMETERS REPORT

MASS CORRECTION AND MASS REPORT

ANOMALY INDEX 4.8792
 NUMERICAL INDEX 13053
 CORRECTOR CORRECTION FACTOR 1.3352
 PUSHER CORRECTION FACTOR 1.0000
 ALPHA CORRECTION FACTOR 1.3332
 250 USEC COINC CORR FACTOR 1.2511
 750 USEC COINC CORR FACTOR 1.2559
 SHIELDED RATE CORR FACTOR 1.1502
 SYSTEM RATE CORR FACTOR 1.0000
 ACTIVE ISOTOPIC CORR FACTOR 1.0000
 PASSIVE ISOTOPIC CORR FACTOR 1.0000
 ISOTOPIC INCL% FACTOR .80750E-01

ACTIVE MASS (GRAMS) 20.232 +/- 2.5656
 PASSIVE MASS (GRAMS) 22.903 +/- 3.2253

NOV 08 1987

SUMMARY REPORT

RUN NUMBER 11 DISK ID 050289 CONTENT CODE 95
 PRIMARY TO 419448 SECONDARY TO
 TIME AND DATE OF ACTIVE 11:25:07 5/ 2/89
 TIME AND DATE OF PASSIVE 11:28:20 5/ 2/89
 PASSIVE COUNT TIME(S) 200.13 NO OF ACTIVE PULSES 10000

SYSTEM TOTALS RATE 1993.7 +/- 2.6577
 SHIELDED TOTALS 867.65 +/- 1.2063
 750 USEC COINC RATE .74248 +/- .13701
 250 USEC COINC RATE 14.053 +/- 2.0636
 SHIELDED ACTIVE SIGNAL 51902.
 SHIELDED ACTIVE BACKGRD 5234.0
 FLUX MONITOR 17000.
 BARREL FLUX MONITOR 3697.4

PERCENT PU-039 94.00 CONTAINER WEIGHT (KG)
 PASSIVE MASS(B) 22.903 +/- 3.2253
 ACTIVE MASS(B) 20.232 +/- 2.5656
 U/L/B 27246.4 +/- 3182.5
 TOTAL ALPHA ACT (CL) 2.2548
 THERMAL POWER (WATT) .55049E-01
 THERMAL POWER DEN (WATT/FTS) .91215E-02

10.10

ACTIVE NEUTRON INTERROGATION REPORT
REPORT OF W-68-17-VERSION FOR WESTHOUSEF SANFORD COMPANY
RUN 11 DRUM A19448 11774135 3/ 7/39

RAW DATA

SHUT DOWN TOTALS(70, 270)	51902.
SHUT DOWN TOTALS(570,1570)	6284.
FLUX MONITOR(70, 270)	17001.
FLUX MONITOR(570,1570)	3.
210 FLUX MONITOR(70, 270)	3492.
210 FLUX MONITOR(570,1570)	23.

9413093.0105

ANALYSIS OF 05-12-77 - MEASUREMENT FOR WESTINGHOUSE HANFORD COMPANY

RUN 11 PROG 019663 11:23:50 5/ 2/89

COUNTING GATE LENGTHS .354272E-04 (SHORT GATES) .051018E-03 (LONG GATES)
CORRECTING DATA HAS BEEN BACKGROUND CORRECTED BY BACKLOG 9:51: 7 5/ 1/89
END 101

COUNTING TIME IS 200.13 SECONDS

DETECTOR	COUNT	RATE	DETECTOR	COUNT	RATE
BARRE DOOR	47075.	235.22	SHLD DOOR	11297.	56.45
BARRE RIGHT	45757.	228.63	SHLD RIGHT	11235.	56.14
BARRE BACK	43395.	217.83	SHLD BACK	11352.	56.72
BARRE LEFT	43810.	218.91	SHLD LEFT	11395.	56.94
BARRE TOP	19514.	97.60	SHLD TOP	4418.	22.04
BARRE BOTM	21921.	109.53	SHLD BOTM	7532.	37.63
FLUX MONITOR	85.	.42	END FLUX MONITOR	160.	.79
SYSTEM TOTALS RATE	1395.73		SHLDEI TOTALS RATE	297.65	(FROM PARTS)
NEUTRON COINCIDENCE					

SHIELDED TOTALS	57928. +/-	240.63
SYSTEM TOTALS	281229. +/-	536.31
1ST N LONG GATES	206170.	
1ST N SHORT GATES	57139.	
10 KHZ CLOCK PULSES	2301345.	
1 KHZ CLOCK PULSES	260134.	
1ST N GATED SHORT TOTALS	733.	
1 KHZ CLOCK GATED WITH SHORT	2024017.	
1ST,N GATED LONG TOTALS	74224.	
10KHZ CLOCK GATED WITH LONG	51757360.	

LONG GATE LIVE TIME 148.38 SEC

SHORT GATE LIVE TIME 178.11 SEC

NET COINCIDENT NEUTRONS/LONG GATE .10644E-01 +/- .14646E-02

NET COINCIDENT NEUTRONS/SHORT GATE .25739E-02 +/- .47574E-03

SYSTEM TOTALS RATE 1396.7 +/- 2.6577

SHIELDED TOTALS RATE 297.65 +/- 1.2063

NET COINCIDENT LONG GATE NEUTRONS/LIVE TIME 14.653 +/- 2.0536

NET COINCIDENT SHORT GATE NEUTRONS/LIVE TIME .74248 +/- .13721

9413093.0006

ITEM ID TAG HERE
19448
READER NUMBER
IN PRINTED

ITEM COUNT STARTED AT 10.9144 HOURS ON DAY 55 OF 1989
BY: E KAUER

PU GROSS COUNT	11430	FP GROSS COUNT	791
-PU BKG COUNT	874	-FP BKG COUNT	519
PU NET COUNT	10556	FP NET COUNT	272

CALIBRATION CURVE USED: LOW DENSITY COMBUSTIBLE DRUM

ITEM WEIGHT = 85.4546 KGS (188 POUNDS)

PLUTONIUM CONTENT = 23.2784 GRAMS
SEND DRUM TO 2736Z8 FOR REMEASUREMENT

FISSION PRODUCT COUNT WITHIN ACCEPTABLE LIMITS

*Measurement invalid
no Bkg/Std after.
RAH 2-27-89*

200-606146

IDENTIFY THIS CONTAINER: ? RHZ-212-A19448

INPUT YOUR LAST NAME? KING

ESTIMATE WT % PU-240: 6

MULTIPLE SCANS? N

START 2736-ZB LARGE TABLE ROTATION

ITEM ID #: RHZ-212-A19448

PASS 1 OF 1 DONE AT 12:33:15 ON 09-MAR-89

USING 2736-ZB LARGE TABLE GEOMETRY # 1

SEG #	TRANSMISSION	CORR FACTOR	CORR COUNTS
1	0.051	2.809	16.2
2	0.024	3.405	35.8
3	0.110	2.258	35.3
4	0.232	1.776	31.5
5	0.281	1.662	24.9
6	0.175	1.952	23.1
7	0.075	2.524	23.1
8	0.049	2.841	20.2
9	8.99817E-03	4.205	16.2
10	0.198	1.874	6.0
11	0.188	1.907	7.0
12	0.271	1.683	5.5
13	0.242	1.751	3.0
14	0.203	1.858	5.9
15	0.410	1.449	3.6
16	0.353	1.532	4.2
17	0.333	1.564	2.9
18	0.620	1.236	2.9
19	0.690	1.184	0.9
20	0.765	1.136	0.1
21	0.236	1.765	0.3

TOTAL GRAMS PU239 = 27.8 +- 0.7 (2.4 % UNCERTAINTY @ 95% CL)
TOTAL GRAMS PU = 29.8 +- 0.7 GMS

WRITING RESULTS TO SGSAS.DAT FILE RECORD # 72 , 928 RECORDS LEFT,

PUSH RED BUTTON TO STOP ROTATION

** ASSAY ITEM READY FOR UNLOADING **

INSPECTION SHEET
FOR TRU WASTE DRUM OR LARD CAN

A. EMPTY CONTAINER

50-lb Lard Can

55-Gal Drum

89-234 Drum Trace Number

Instructions: Fill in blanks. Use check mark to indicate satisfactory condition. If damage is observed, describe damage. If item does not apply, record N/A.

DOT 17C stamped on bottom
 Surface integrity (no dents, scratches, holes, cracks)
 Lid, gasket, roundness
 Lockring, bolt
 Rivets on handle (lard can only) N/A
 Trace number applied

Accepted Rejected _____

Operator's Signature M.R. Peterson Date 12-13-88

QC Signature  E. Jeffrey Date 12-13-88

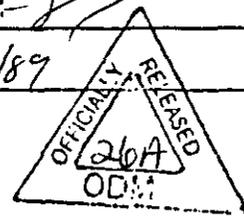
B. FILLED, SEALED DRUM

Instructions: Note any damage observed. Use check mark to indicate satisfactory condition. Enter Drum No., Seal No., signatures and dates.

Lid
 Gasket
 Drilled bolt
 Vent Clip installed
 Catalyst packet in place
 Bolt properly torqued Brute 2-17-89 
 Locknut tightened against threaded by
 Exterior surface undamaged
 Drum number applied _____ Drum No. RP2-212-A19448
 Gross weight applied _____ Gross Wt. 188 lbs 88 KGS
 Rockwell package label completed, signed, affixed
 Security seal applied TLW Seal No. WHL 40959
 Contents Inventory Sheet attached

Operator's Signature [Signature] Date 3-3-89

Reviewer's Signature [Signature] Date 3/3/89



6400-083.2

TRACE # 89-234
Seal # W 40959

WIPP CERTIFICATION CHECKLIST

CONTAINER NUMBER RHZ-212A19448

DATE CONTAINER SEALED 3-3-89

YES NO

WASTE ACCEPTANCE CRITERIA

- DOT Type A Container.
- Heavy or bulky items are blocked to prevent shifting.
- Container is free of defects.
- Waste contains less than 1% by weight powders.
- Waste does not contain any free liquids.
- Waste does not contain any explosives or compressed gases.
- Waste does not contain any organic peroxides, oxidizers, flammable solids or metal fines.
- Waste does not contain any sludges with pH \leq 4.0.
- Waste contents will not react with each other or with container.
- Surface contamination is \leq 50 pCi (100 dpm) / 100 sq cm alpha and \leq 450 pCi (1000 dpm) / 100 sq cm beta-gamma.
- Proper labeling has been applied.
- Hazardous and corrosive co-contaminants are identified on Contents Inventory Sheet.
- Gross weight is less than qualified DOT Type A limit (658 kg)
- Pu-239 Fissile Gram Equivalent content is less than WIPP specified limit (200 g)
- Pu-239 equivalent TRU activity (PE-Ci) is less than the WIPP specified limit of 1000 PE-Ci.
- Surface dose rate is \leq 200 mrem/hr (beta, gamma and neutron) at any point.
- Neutron dose rate contribution is \leq ²⁰~~50~~ mrem/hr

DUPLICATE

The waste package described above is unclassified and meets all WIPP Waste Acceptance Criteria

- With no exceptions
- With the following exceptions:

12P Olson 3/3/89

Plant Operations Authority
signature and date

[Signature] 3/24/89

Independent Reviewer
signature and date

Document Review Only [Signature] 4/21/89

