Date: February 1987

To: D. A. Isom

[2 REVISIONS] 1 of 2

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Title: HANFORD FACILITY DANGEROUS WASTE PART A PERMIT APPLICATION

Revision Release No.: Revision 16

Section Number and Title		Remove			Insert		
		Page(s)	Rev.	Date	Page(s)	Rev.	Date
Volume 1							
Contents		1-3	15	08/96	1-3	16	10/96
2.0	Resource Conservation and Recovery Act Permitting Status	1-6	15	08/96	1-6	16	10/96
3.0	Form 1-FDH				1-4		10/01/96
4.1.1.2	105-DR Large Sodium Fire Facility	1-7	2	11/16/87	1-10	3	10/01/96
4.1.1.3	1706-KE Waste Treatment System	1-14	2	11/16/87	1-14	3	10/01/96
4.2.1.1	221-T Containment Systems Test Facility	1-7	2	11/16/87	1-7	3	10/01/96
4.2.1.4	242-A Evaporator	1-12	6	01/25/95	1-11	7	10/01/96
4.2.1.5	Grout Treatment Facility	1-14	4	07/22/92	1-15	5	10/01/96
4.2.1.6	T Plant Complex	1-27	5	12/19/95	1-27	6	10/01/96
4.2.1.7	241-Z Treatment and Storage Tanks	1-8	3	06/24/92	1-8	4	10/01/96
4.2.1.8	B Plant Complex	1-25	4	05/17/96	1-27	5	10/01/96
4.2.1.9	222-S Laboratory Complex	1-15	3	11/04/94	1-16	4	10/01/96
4.2.1.10	204-AR Waste Unloading Station	1-10	3	11/04/94	1-9	4	10/01/96
4.2.1.11	PUREX Plant	1-21	7	05/17/96	1-21	8	10/01/96
4.2.1.12	Hanford Waste Vitrification Plant	1-10	4	09/30/91	1-10	5	10/01/96
4.2.1.13	200 Area Effluent Treatment Facility	1-9	1	08/25/93	1-9	2	10/01/96
4.2.1.14	Waste Receiving and Processing 1	1-29	0	01/25/95	1-20	1	10/01/96
Volume 2							
Contents		1-3	15	08/96	1-3	16	10/96
4.2.2.2	Double-Shell Tank System	1-48	7	11/04/94	1-36	8	10/01/96
4.2.2.4	2727-WA SRE Sodium Storage Building	1-9	0	11/25/87	1-9	1	10/01/96
4.2.2.5	PUREX Storage Tunnels	1-9	4	05/17/96	1-9	5	10/01/96
4.2.2.6	224-T Transuranic Waste Storage and Assay Facility	1-16	5	02/09/96	1-16	6	10/01/96
4.2.2.7	Central Waste Complex	1-37	3	01/25/95	1-27	4	10/01/96
4.2.2.8	Single-Shell Tank System	1-40	3	12/22/93	1-43	4	10/01/96
4.2.2.9	207-A South Retention Basin	1-7	1	08/23/93	1-7	2	10/01/96
4.2.2.10	Liquid Effluent Retention Facility	1-7	4	02/09/96	1-7	5	10/01/96
4.2.3.1	Low-Level Burial Grounds	1-31	7	11/04/94	1-21	8	10/01/96
4.2.3.6	216-B-63 Trench	1-7	2	11/16/87	1-7	3	10/01/96
Volume 3							
Contents		1-3	15	08/96	1-3	16	10/96
4.3.1.1	3718-F Alkali Metal Treatment and Storage Area	1-7	3	12/20/91	1-7	4	10/01/96
4.3.1.5	300 Area Waste Acid Treatment System	1-20	4	03/13/96	1-20	5	10/01/96
4.3.1.6	303-M Oxide Facility	1-8	0	05/19/88	1-8	1	10/01/96
4.3.2.2	303-K Storage Unit	1-9	4	12/16/93	1-8	5	10/01/96
4.4.1.1	437-MASF	1-7	2	11/16/87	1-7	3	10/01/96
4.4.2.1	4843 Alkali Metal Storage Facility	1-11	2	05/31/91	1-11	3	10/01/96
4.4.2.2	Sodium Storage Facility and Sodium Reaction Facility	1-9	0	05/01/95	1-9	1	10/01/96
4.5.2.1	616 Nonradioactive Dangerous Waste Storage Facility	1-25	5	09/08/93	1-14	6	10/01/96
4.5.2.2	600 Area Purgewater Storage and Treatment Facility	1-7	1	07/21/95	1-7	2	10/01/96

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Name: DA Isom

Date: 2/24/97

Hazardous Waste Services
L4-97

9713532.0351

Date: February 1997

To: D. A. Isom

[2 REVISIONS] 2 of 2

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Title: HANFORD FACILITY DANGEROUS WASTE PART A PERMIT APPLICATION

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Section Number and Title		Remove			Insert		
		Page(s)	Rev.	Date	Page(s)	Rev.	Date
Volume 1							
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3.0	Form 1-FDH				1-4		10/01/96
4.1.1.2	105-DR Large Sodium Fire Facility	1-7	2	11/16/87	1-10	3	10/01/96
4.1.1.3	1706-KE Waste Treatment System	1-14	2	11/16/87	1-14	3	10/01/96
4.2.1.1	221-T Containment Systems Test Facility	1-7	2	11/16/87	1-7	3	10/01/96
4.2.1.4	242-A Evaporator	1-12	6	01/25/95	1-11	7	10/01/96
4.2.1.5	Grout Treatment Facility	1-14	4	07/22/92	1-15	5	10/01/96
4.2.1.6	T Plant Complex	1-27	5	12/19/95	1-27	6	10/01/96
4.2.1.7	241-Z Treatment and Storage Tanks	1-8	3	06/24/92	1-8	4	10/01/96
4.2.1.8	B Plant Complex	1-25	4	05/17/96	1-27	5	10/01/96
4.2.1.9	222-S Laboratory Complex	1-15	3	11/04/94	1-16	4	10/01/96
4.2.1.10	204-AR Waste Unloading Station	1-10	3	11/04/94	1-9	4	10/01/96
4.2.1.11	PUREX Plant	1-21	7	05/17/96	1-21	8	10/01/96
4.2.1.12	Hanford Waste Vitrification Plant	1-10	4	09/30/91	1-10	5	10/01/96
4.2.1.13	200 Area Effluent Treatment Facility	1-9	1	08/25/93	1-9	2	10/01/96
4.2.1.14	Waste Receiving and Processing 1	1-29	0	01/25/95	1-20	1	10/01/96
Volume 2							
Contents		1-3	15	08/96	1-3	16	10/96
4.2.2.2	Double-Shell Tank System	1-48	7	11/04/94	1-36	8	10/01/96
4.2.2.4	2727-WA SRE Sodium Storage Building	1-9	0	11/25/87	1-9	1	10/01/96
4.2.2.5	PUREX Storage Tunnels	1-9	4	05/17/96	1-9	5	10/01/96
4.2.2.6	224-T Transuranic Waste Storage and Assay Facility	1-16	5	02/09/96	1-16	6	10/01/96
4.2.2.7	Central Waste Complex	1-37	3	01/25/95	1-27	4	10/01/96
4.2.2.8	Single-Shell Tank System	1-40	3	12/22/93	1-43	4	10/01/96
4.2.2.9	207-A South Retention Basin	1-7	1	08/23/93	1-7	2	10/01/96
4.2.2.10	Liquid Effluent Retention Facility	1-7	4	02/09/96	1-7	5	10/01/96
4.2.3.1	Low-Level Burial Grounds	1-31	7	11/04/94	1-21	8	10/01/96
4.2.3.6	216-B-63 Trench	1-7	2	11/16/87	1-7	3	10/01/96
Volume 3							
Contents		1-3	15	08/96	1-3	16	10/96
4.3.1.1	3718-F Alkali Metal Treatment and Storage Area	1-7	3	12/20/91	1-7	4	10/01/96
4.3.1.5	300 Area Waste Acid Treatment System	1-20	4	03/13/96	1-20	5	10/01/96
4.3.1.6	303-M Oxide Facility	1-8	0	05/19/88	1-8	1	10/01/96
4.3.2.2	303-K Storage Unit	1-9	4	12/16/93	1-8	5	10/01/96
4.4.1.1	437-MASF	1-7	2	11/16/87	1-7	3	10/01/96
4.4.2.1	4843 Alkali Metal Storage Facility	1-11	2	05/31/91	1-11	3	10/01/96
4.4.2.2	Sodium Storage Facility and Sodium Reaction Facility	1-9	0	05/01/95	1-9	1	10/01/96
4.5.2.1	616 Nonradioactive Dangerous Waste Storage Facility	1-25	5	09/08/93	1-14	6	10/01/96
4.5.2.2	600 Area Purgewater Storage and Treatment Facility	1-7	1	07/21/95	1-7	2	10/01/96

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Hazardous Waste Services
L4-97

HANFORD FACILITY DANGEROUS WASTE PART A PERMIT APPLICATION

CONTENTS

		Revision
1.0	INTRODUCTION	
2.0	PERMITTING STATUS FOR DANGEROUS WASTE TREATMENT, STORAGE, AND/OR DISPOSAL UNITS	♦
3.0	FORM 1 - DANGEROUS WASTE PERMIT APPLICATION	♦
4.0	FORM 3 - DANGEROUS WASTE PERMIT APPLICATION	
4.1	100 AREA FACILITIES	
4.1.1	Treatment Facilities	
4.1.1.1	1324-N Surface Impoundment	3
4.1.1.2	105-DR Sodium Fire Facility	3 ♦
4.1.1.3	1706-KE Waste Treatment System	3 ♦
4.1.1.4	183-H Solar Evaporation Basins	4
4.1.2	Disposal Facilities	
4.1.2.1	1301-N Liquid Waste Disposal Facility	5
4.1.2.2	1325-N Liquid Waste Disposal Facility	5
4.1.2.3	1324-NA Percolation Pond	3
4.1.2.4	100-D Ponds	4
4.2	200 AREA FACILITIES	
4.2.1	Treatment Facilities	
4.2.1.1	221-T Containment Systems Test Facility	3 ♦
4.2.1.2	200 West Area Ash Pit Demolition Site *CLOSED 10/26/95*	4
4.2.1.3	218-E-8 Borrow Pit Demolition Site *CLOSED 10/26/95*	4
4.2.1.4	242-A Evaporator	7 ♦
4.2.1.5	Grout Treatment Facility	5 ♦
4.2.1.6	T Plant Complex	6 ♦
4.2.1.7	241-Z Treatment and Storage Tanks	4 ♦
4.2.1.8	B Plant Complex	5 ♦
4.2.1.9	222-S Laboratory Complex	4 ♦
4.2.1.10	204-AR Waste Unloading Station	4 ♦
4.2.1.11	PUREX Plant	8 ♦
4.2.1.12	Hanford Waste Vitrification Plant	5 ♦
4.2.1.13	200 Area Effluent Treatment Facility	2 ♦
4.2.1.14	Waste Receiving and Processing	1 ♦

VOLUME 1 OF 3

♦ = Revised this issue.

CONTENTS (cont)

		Revision	
4.2.2	Storage Facilities		
4.2.2.1	2727-S Storage Facility *CLOSED 06/27/95*	2	
4.2.2.2	Double-Shell Tank System	8 ♦	
4.2.2.3	Hexone Storage and Treatment Facility	3	
4.2.2.4	2727-WA SRE Sodium Storage Building	1 ♦	V
4.2.2.5	PUREX Storage Tunnels	5 ♦	O
4.2.2.6	224-T Transuranic Waste Storage and Assay Facility	6 ♦	L U
4.2.2.7	Central Waste Complex	4 ♦	M
4.2.2.8	Single-Shell Tank System	4 ♦	E
4.2.2.9	207-A South Retention Basin	2 ♦	
4.2.2.10	Liquid Effluent Retention Facility	5 ♦	2
4.2.2.11	241-CX Tank System	3	
4.2.3	Disposal Facilities		O
4.2.3.1	Low-Level Burial Grounds	8 ♦	F
4.2.3.2	216-S-10 Pond and Ditch	3	
4.2.3.3	2101-M Pond *CLOSED 10/26/95*	2	3
4.2.3.4	216-A-29 Ditch	3	
4.2.3.5	216-B-3 Main Pond	5	
4.2.3.6	216-B-63 Trench	3 ♦	
4.2.3.7	216-A-10 Crib	3	
4.2.3.8	216-U-12 Crib	3	
4.2.3.9	216-A-36B Crib	1	
4.2.3.10	216-A-37-1 Crib	2	
4.2.3.11	216-B-3 Expansion Ponds *CLOSED 06/27/95*	0	

4.3 300 AREA FACILITIES

4.3.1	Treatment Facilities		V
4.3.1.1	3718-F Alkali Metal Treatment and Storage Area	4 ♦	O L
4.3.1.2	324 Pilot Plant	3	U
4.3.1.3	304 Concretion Facility *CLOSED 11/30/95*	4	M E
4.3.1.4	300 Area Solvent Evaporator *CLOSED 06/27/95*	4	3
4.3.1.5	300 Area Waste Acid Treatment System	5 ♦	
4.3.1.6	303-M Oxide Facility	1 ♦	O
4.3.1.7	325 Hazardous Waste Treatment Units	3	F
4.3.1.8	Biological Treatment Test Facilities	0	3

♦ = Revised this issue.

CONTENTS (cont)

		Revision
4.3.1.9	Physical and Chemical Treatment Test Facilities *CLOSED 05/13/96*	1
4.3.1.10	Thermal Treatment Test Facilities *CLOSED 05/13/96*	0
4.3.2	Storage Facilities	
4.3.2.1	311 Tanks (incorporated into 300 Area Waste Acid Treatment System, Rev. 3)	1
4.3.2.2	303-K Storage Unit	5 ♦
4.3.2.3	305-B Storage Facility	1
4.3.2.4	332 Storage Facility	0
4.3.3	Disposal Facilities	
4.3.3.1	300 Area Process Trenches	4
4.4	400 AREA FACILITIES	
4.4.1	Treatment Facilities	
4.4.1.1	437-MASF	3 ♦
4.4.2	Storage Facilities	
4.4.2.1	4843 Alkali Metal Storage Facility	3 ♦
4.4.2.2	Sodium Storage Facility and Sodium Reaction Facility	1 ♦
4.5	600 AREA FACILITIES	
4.5.1	Treatment Facilities	
4.5.1.1	Hanford Patrol Academy Demolition Sites *CLOSED 10/26/95*	4
4.5.2	Storage Facilities	
4.5.2.1	616 Nonradioactive Dangerous Waste Storage Facility	6 ♦
4.5.2.2	600 Area Purgewater Storage and Treatment Facility	2 ♦
4.5.3	Disposal Facility	
4.5.3.1	Nonradioactive Dangerous Waste Landfill	4
4.6	1100 AREA FACILITIES	
4.6.1	Treatment Facilities	
4.6.1.1	Simulated High-Level Waste Slurry Treatment/Storage *CLOSED 09/06/95*	2

VOLUME 3 OF 3

♦ = Revised this issue.

9713532.0355

2.0 PERMITTING STATUS FOR DANGEROUS WASTE TREATMENT, STORAGE, AND/OR DISPOSAL UNITS

This section contains a permitting status table and an explanation of the contents of the table.

PERMITTING STATUS TABLE

UNIT	CO-OP	AREA	PERMIT	UNIT TYPE	PART A INITIAL	PART A LATEST	PART A REV	PART B	CLOSURE	REV	DATE CLOSED	COMMENT	CLASS
1324-N SURFACE IMPOUNDMENT	BHI	100	A/C	T	08/01/86	06/30/94	3	11/01/86		0		C	M
105-DR SODIUM FIRE FACILITY	FDH	100	A/C	TS	11/01/85	10/01/96	3	11/01/85	06/28/93	1		C	M
1706-KE WASTE TREATMENT SYSTEM	FDH	100	A	TS	08/01/86	10/01/96	3	04/01/87		0		P/C	M
183-H SOLAR EVAPORATION BASINS	BHI	100	A/C	TS	11/01/85	06/30/94	4		06/19/91	3		C	M
1301-N LIQUID WASTE DISPOSAL FACILITY	BHI	100	A/C	D	08/01/86	07/21/95	5		04/01/87	0		C	M
1325-N LIQUID WASTE DISPOSAL FACILITY	BHI	100	A/C	D	02/01/87	07/21/95	5		06/01/87	0		C	M
1324-NA PERCOLATION POND	BHI	100	A/C	TD	08/01/86	06/30/94	3		04/24/87	0		C	M
100-D PONDS	BHI	100	A/C	TD	08/01/86	06/30/94	4		03/01/93	0		C	D
221-T CONTAINMENT SYSTEMS TEST FACILITY	FDH	200W	A	T	11/01/85	10/01/96	3	11/01/85		0		P/C	D
200 WEST AREA ASH PIT DEMOLITION SITE	WHC	200W	A/C	T	11/01/85	11/04/94	4	11/01/85	10/06/94	1	10/26/95	CL	D
218-E-8 BORROW PIT DEMOLITION SITE	WHC	200E	A/C	T	11/01/85	11/04/94	4	11/01/85	10/21/94	1	10/26/95	CL	D
242-A EVAPORATOR	FDH	200E	A/B	TS	09/01/87	10/01/96	7	04/13/93				A	M
GROUT TREATMENT FACILITY	FDH	200E	A/B	TSD	09/01/87	10/01/96	5	07/24/92		2		S	M
T PLANT COMPLEX	FDH	200W	A/B	TS	12/01/87	10/01/96	6	12/19/95		0		A	M
241-Z TREATMENT AND STORAGE TANKS	FDH	200W	A/B	TS	12/01/87	10/01/96	4					A	M
B PLANT COMPLEX	FDH	200E	A/B	TS	12/01/87	10/01/96	5					A	M
222-S LABORATORY COMPLEX	FDH	200W	A/B	TS	12/01/87	10/01/96	4	12/21/91		0		A	M
204-AR WASTE UNLOADING STATION	FDH	200E	A/B	T	12/01/87	10/01/96	4					A	M
PUREX PLANT	FDH	200E	A/C	TS	12/01/87	10/01/96	8					A,C	M
HANFORD WASTE VITRIFICATION PLANT	FDH	200E	A/B	TS	05/01/88	10/01/96	5	10/01/91		2		S	M
200 AREA EFFLUENT TREATMENT FACILITY	FDH	200E	A/B	TS	06/26/91	10/01/96	2	08/31/93		0		A	M
WASTE RECEIVING AND PROCESSING 1	FDH	200W	A/B	TS	01/25/95	10/01/96	1	10/31/91		0		A	M
2727-S STORAGE FACILITY	FDH	200W	A/C	S	11/01/85	10/01/96	3		10/07/92	3A	06/27/95	CL	D
DOUBLE-SHELL TANK SYSTEM	FDH	200EW	A/B	TS	09/01/87	10/01/96	8	06/28/91		0		A	M
HEXONE STORAGE AND TREATMENT FACILITY	BHI	200W	A/C	TS	12/01/87	06/30/94	3		11/24/92	0		C	M

PERMITTING STATUS TABLE

UNIT	CO-OP	AREA	PERMIT	UNIT TYPE	PART A INITIAL	PART A LATEST	PART A REV	PART B	CLOSURE	REV	DATE CLOSED	COMMENT	CLASS
2727-WA SRE SODIUM STORAGE BUILDING	FDH	200W	A	S	12/01/87	10/01/96	1					P/C	M
PUREX STORAGE TUNNELS	FDH	200E	A/B	S	12/01/87	10/01/96	5	07/26/96		3		A	M
224-T TRANSURANIC WASTE STORAGE AND ASSAY FACILITY	FDH	200W	A/B	S	12/01/87	10/01/96	6	06/30/92		0		A	M
CENTRAL WASTE COMPLEX	FDH	200W	A/B	TS	05/01/88	10/01/96	4	10/31/91		0		A	M
SINGLE-SHELL TANK SYSTEM	FDH	200W	A/C	TS	02/01/88	10/01/96	4		09/30/89	Draft		A,C	M
207-A SOUTH RETENTION BASIN	FDH	200E	A/C	S	02/26/90	10/01/96	2					C	M
LIQUID EFFLUENT RETENTION FACILITY	FDH	200E	A/B	S	02/26/90	10/01/96	5	06/26/91		0		A	M
241-CX TANK SYSTEM	BHI	200E	A/C	S	07/10/90	06/30/94	3					C	M
LOW-LEVEL BURIAL GROUNDS	FDH	200EW	A/B	D	11/01/85	10/01/96	8	12/29/89		0		A	M
216-S-10 POND AND DITCH	BHI	200W	A/C	D	02/01/87	06/30/94	3		06/01/87	0		C	M
2101-M POND	WHC	200E	A/C	D	08/01/86	11/16/87	2		07/01/94	2A	10/26/95	CL	D
216-A-29 DITCH	BHI	200E	A/C	TD	08/01/86	06/30/94	3		04/01/87	0		C	M
216-B-3 MAIN POND	BHI	200E	A/C	TD	08/01/86	06/30/94	5					C	M
216-B-63 TRENCH	FDH	200E	A/C	TD	08/01/86	10/01/96	3		04/01/87	0		C	M
216-A-10 CRIB	BHI	200E	A/C	D	08/01/87	06/30/94	3					C	M
216-U-12 CRIB	BHI	200W	A/C	D	08/01/87	06/30/94	3					C	M
216-A-36B CRIB	BHI	200E	A/C	D	02/01/88	06/30/94	1		02/01/88	0		C	M
216-A-37-1 CRIB	BHI	200E	A/C	D	02/26/90	06/30/94	2					C	M
216-B-3 EXPANSION PONDS	WHC	200E	A/C	TD	12/16/93	12/16/93	0		10/31/94	2	06/27/95	CL	M
3718-F ALKALI METAL TREATMENT AND STORAGE AREA	FDH	300	A/C	TS	11/01/85	10/01/96	4	11/06/85	11/10/92	1		C	M
324 PILOT PLANT	PNNL	300	A	T	11/01/85	05/19/88	3	11/01/85		0		P/C	M
304 CONCRETION FACILITY	WHC	300	A/C	TS	08/01/86	06/21/90	4		11/30/93	2	11/30/95	CL	M
300 AREA SOLVENT EVAPORATOR	WHC	300	A/C	TS	11/01/85	03/27/90	4		09/24/92	3B	06/27/95	CL	M
300 AREA WASTE ACID TREATMENT SYSTEM	FDH	300	A/C	TS	09/01/87	10/01/96	5		06/29/90	0		C	M
303-M OXIDE FACILITY	FDH	300	A/C	T	05/01/88	10/01/96	1					C	M
325 HAZARDOUS WASTE TREATMENT UNITS	PNNL	300	A/B	TS	05/01/88	12/02/94	3	06/24/92		0		A	M

PERMITTING STATUS TABLE

UNIT	CO-OP	AREA	PERMIT	UNIT TYPE	PART A INITIAL	PART A LATEST	PART A REV	PART B	CLOSURE	REV	DATE CLOSED	COMMENT	CLASS
BIOLOGICAL TREATMENT TEST FACILITIES	PNNL	300	A	T	05/01/88	05/19/88	0					P/C	M
PHYSICAL & CHEMICAL TREATMENT TEST FACILITIES	PNNL	300	A	TS	05/01/88	06/14/91	1				05/13/96	P/C	M
THERMAL TREATMENT TEST FACILITIES	PNNL	300	A	T	05/01/88	05/19/88	0				05/13/96	P/C	M
311 TANKS (INCORPORATED INTO 300 AREA WASTE ACID TREATMENT SYSTEM, REV. 3)	WHC	300											
303-K STORAGE UNIT	FDH	300	A/C	S	08/01/87	10/01/96	5		12/17/93	2		C	M
305-B STORAGE FACILITY	PNNL	300	A/B	S	05/01/88	12/20/90	1	04/03/92		2		A	M
332 STORAGE FACILITY	PNNL	300	A	S	05/01/88	05/19/88	0					P/C	M
300 AREA PROCESS TRENCHES	BHI	300	A/PC	D	11/01/85	05/25/95	4		11/06/85	0		C	M
437-MASF	FDH	400	A	T	11/01/85	10/01/96	3	11/01/85		0		P/C	M
4843 ALKALI METAL STORAGE FACILITY	FDH	400	A/C	S	09/01/87	10/01/96	3		06/29/91	0		C	M
SODIUM STORAGE FACILITY AND SODIUM REACTION FACILITY	FDH	400	A/B	TS	05/01/95	10/01/96	1					A	M
HANFORD PATROL ACADEMY DEMOLITION SITES	WHC	600	A/C	T	11/01/85	12/15/94	4	11/01/85	12/15/94	1	10/26/95	CL	D
616 NONRADIOACTIVE DANGEROUS WASTE STORAGE FACILITY	FDH	600	A/B	S	11/01/85	10/01/96	6	10/31/91		2		A	D
600 AREA PURGEWATER STORAGE AND TREATMENT FACILITY	FDH	600	A/B	TS	02/20/90	10/01/96	2					A	M
NONRADIOACTIVE DANGEROUS WASTE LANDFILL	BHI	600	A/C	D	11/01/85	06/30/94	4	11/06/85	09/30/90	0		C	D
SIMULATED HIGH-LEVEL WASTE SLURRY TREATMENT/STORAGE	PNNL	3000	A/C	TS	05/01/88	08/12/94	2		11/07/94	6A	09/06/95	CL	M

EXPLANATION OF PERMITTING STATUS TABLE

UNIT — Name of treatment, storage, and/or disposal (TSD) unit that is designated for permitting as part of the Hanford Facility (EPA/State Identification Number WA7890008967).

CO-OP — Co-operator with the U.S. Department of Energy, Richland Operations Office:

- BHI -- Bechtel Hanford, Inc.
- FDH -- Fluor Daniel Hanford, Inc.
- PNNL -- Pacific Northwest Laboratory.
- WHC -- Westinghouse Hanford Company.

AREA — The area of the Hanford Facility in which the unit is located:

- 100 -- 100 Area
- 200E -- 200 East Area
- 200W -- 200 West Area
- 200EW -- Parts of a TSD unit are located in both the 200 East and the 200 West Areas
- 300 -- 300 Area
- 400 -- 400 Area
- 500 -- Unused designation
- 600 -- 600 Area
- 3000 -- 3000 Area

PERMIT — Type of permit application that is required to obtain the desired type of permit:

- A -- Part A
- B -- Part B
- C -- Closure plan
- PC -- Postclosure plan.

UNIT TYPE

- T -- Treatment
- S -- Storage
- D -- Disposal.

EXPLANATION OF PERMITTING STATUS TABLE (cont)

INITIAL	Date the initial Part A permit application was submitted to the Washington State Department of Ecology: 08/01/88 -- month/day/year.
LATEST	Date the latest Part A permit application was submitted to the Washington State Department of Ecology:
REV	Last revision of the Part A permit application.
PART B	Date the last Part B permit application was submitted to the Washington State Department of Ecology: 08/01/88 -- month/day/year.
CLOSURE	Date the last closure or postclosure plan permit application was submitted to the Washington State Department of Ecology: 08/01/88 -- month/day/year.
REV	Revision of Part B or closure plan.
COMMENTS	A Active TSD unit. C TSD unit closing under interim status. CL Unit is closed. S Standby. P/C Procedural closure.
CLASS	M Mixed waste TSD unit. D Dangerous waste TSD unit.

9713532.0361

3.0 FORM 1 - DANGEROUS WASTE PERMIT APPLICATION

This section contains Form 1s of the Dangerous Waste Permit Application.

9713532.0362

Remove Form 1 for Westinghouse Hanford Company.

9713532.0363

WA7890008967

DOE/RL-88-21
Form 1-FDH
10/01/96

FORM 1	State of Washington Department of Ecology	WASHINGTON STATE DANGEROUS WASTE PERMIT GENERAL INFORMATION (Read "Form 1 Instructions" before starting)	I. EPA/STATE I.D. NUMBER WA7890008967

II. NAME OF FACILITY

US DEPARTMENT OF ENERGY - HANFORD FACILITY

III. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
WAGONER, JOHN D., MANAGER	509 376 7395

IV. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX	B. CITY OR TOWN	C. STATE	D. ZIP CODE
P.O. BOX 550	RICHLAND	WA	99352

V. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	B. COUNTY NAME	C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
HANFORD SITE	BENTON	RICHLAND	WA	99352	005

IV. SIC CODES *(4-digit, in order of priority)*

A. FIRST		B. SECOND	
9999	(specify) NONCLASSIFIABLE	4953	(specify) REFUSE SYSTEMS
C. THIRD		**D. FOURTH**	
9511	(specify) AIR AND WATER RESOURCE AND SOLID WASTE MANAGEMENT	8733	(specify) RESEARCH, NONCOMMERCIAL

VII. OPERATOR INFORMATION

A. NAME: DEPARTMENT OF ENERGY, RICHLAND OPERATIONS
FLUOR DANIEL HANFORD, INC, (FDH)

B. Is the name listed in Item VII-A also the owner? [X] YES [ ] NO **

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)
F = FEDERAL, S = STATE, P = PRIVATE, M = PUBLIC (other than federal or state), O = OTHER (specify)
F (specify)

D. PHONE (area code & no.): * 509 376 7395
** 509 372 2886

E. STREET OR P.O. BOX	F. CITY OR TOWN	G. STATE	H. ZIP CODE
* P.O. BOX 550 (DOE-RL) ** P.O. BOX 1000 (FDH)	RICHLAND	WA	99352

VIII. INDIAN LAND

Is the facility located on Indian lands? [ ] YES [X] NO

* DOE-RL: OWNER/OPERATOR **FDH: CO-OPERATOR FOR CERTAIN UNITS ON THE HANFORD SITE.

COMPLETE BACK PAGE

ECY 030-31

IX. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids undergound. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

X. NATURE OF BUSINESS *(provide a brief description)*

- NONCLASSIFIABLE - GENERAL
- REFUSE SYSTEMS
- AIR AND WATER RESOURCE AND SOLID WASTE MANAGEMENT
- RESEARCH, NONCOMMERCIAL

XI. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
SEE ATTACHMENT		

FORM 1

DANGEROUS WASTE PERMIT GENERAL INFORMATION

XI. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

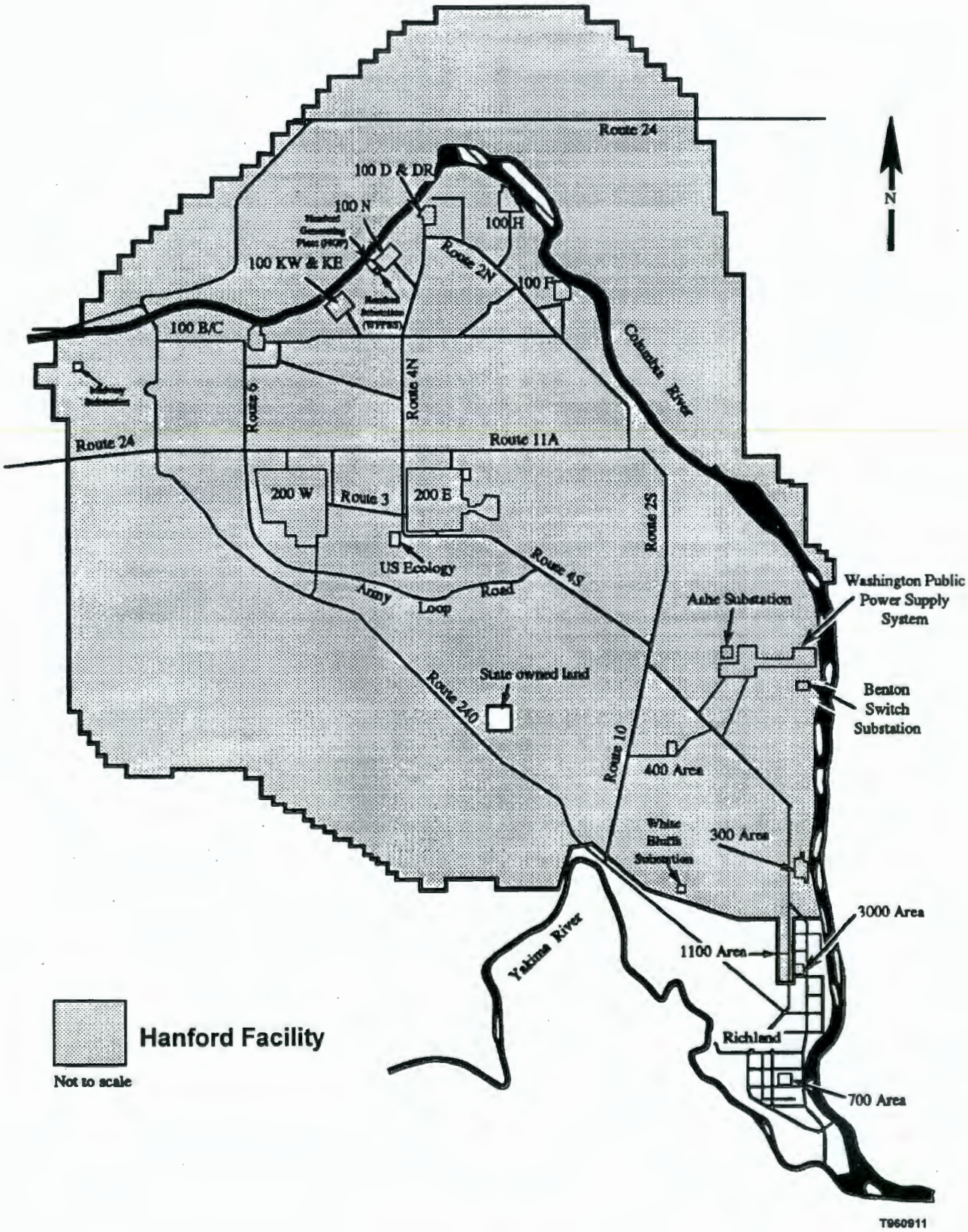
John D. Wagoner

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/13/96
Date



Hanford Facility

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

*FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	20,000	L		7				
2	T 0 4	100	V		8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

Refer to the following page.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*included with above*

 CONTINUE ON PAGE 3

FORM 3 DANGEROUS WASTE PERMIT APPLICATION
U.S. ENVIRONMENTAL PROTECTION AGENCY/STATE IDENTIFICATION NUMBER WA7890008967

Section III.C., Description of Process Codes Listed in Section III.A.

The 105-DR Large Sodium Fire Facility (105-DR), which began waste management operations in 1972, was a research laboratory located in the 105-DR Reactor Building in the 100-D Area. The unit was used to conduct experiments for studying the behavior of molten alkali metals and alkali metal fires. This unit also had been used for the storage and treatment of alkali metal dangerous waste. The 105-DR operated between 1972 and 1986. In 1995, closure activities were initiated at the unit for Areas 1, 3, and 7, as defined in Part V, Chapter 10, of the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit (Permit Number WA7890008967).

In 1996, Ecology (Letter, M. W. Wilson, Ecology to J. E. Rasmussen, U.S. Department of Energy, and E. F. Loika, Westinghouse Hanford Company, dated July 16, 1996) accepted clean closure of Areas 1, 3, and 7 and released these areas from the requirements of RCRA and Washington Administrative Code (WAC) 173-303 Dangerous Waste Regulations. Also, the letter identified that Area 6, as defined by Part V, Chapter 10 of the Hanford Facility RCRA Permit, is believed not to have received dangerous waste and is considered closed for the purposes of WAC 173-303. Areas 2, 4, and 5, as defined by Part V, Chapter 10 of the Hanford Facility RCRA Permit, remain regulated by RCRA and WAC 173-303. Closure of these areas is expected to occur during decommissioning and decontamination of the 105-DR Reactor.

S01/T04

Treatment of alkali metal dangerous waste consisted of heating the waste to the point of oxidation. Any offgases from treatment were processed through an offgas system that used portions of the 105-DR Reactor exhaust system.

The maximum storage process design capacity was 20,000 liters (5,284 gallons). The maximum treatment process design capacity was 100 liters per day (26 gallons per day).

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D001	20,000	K	S01	T04			Storage-Tank/Treatment-Other
2	D003		↓	↓	↓			(Thermal Treatment)
3	WSC2		↓	↓	↓			Included With Above
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The 105-DR was used for the storage and treatment of alkali metal dangerous waste with the associated dangerous waste characteristics of ignitibility (D001), reactivity (D003), and corrosivity (WSC2 state-only, corrosive, dangerous waste). The waste consisted of metallic sodium, lithium, and sodium-potassium alloy. Approximately 20,000 kilograms (44,100 pounds) were managed at this unit each year.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner

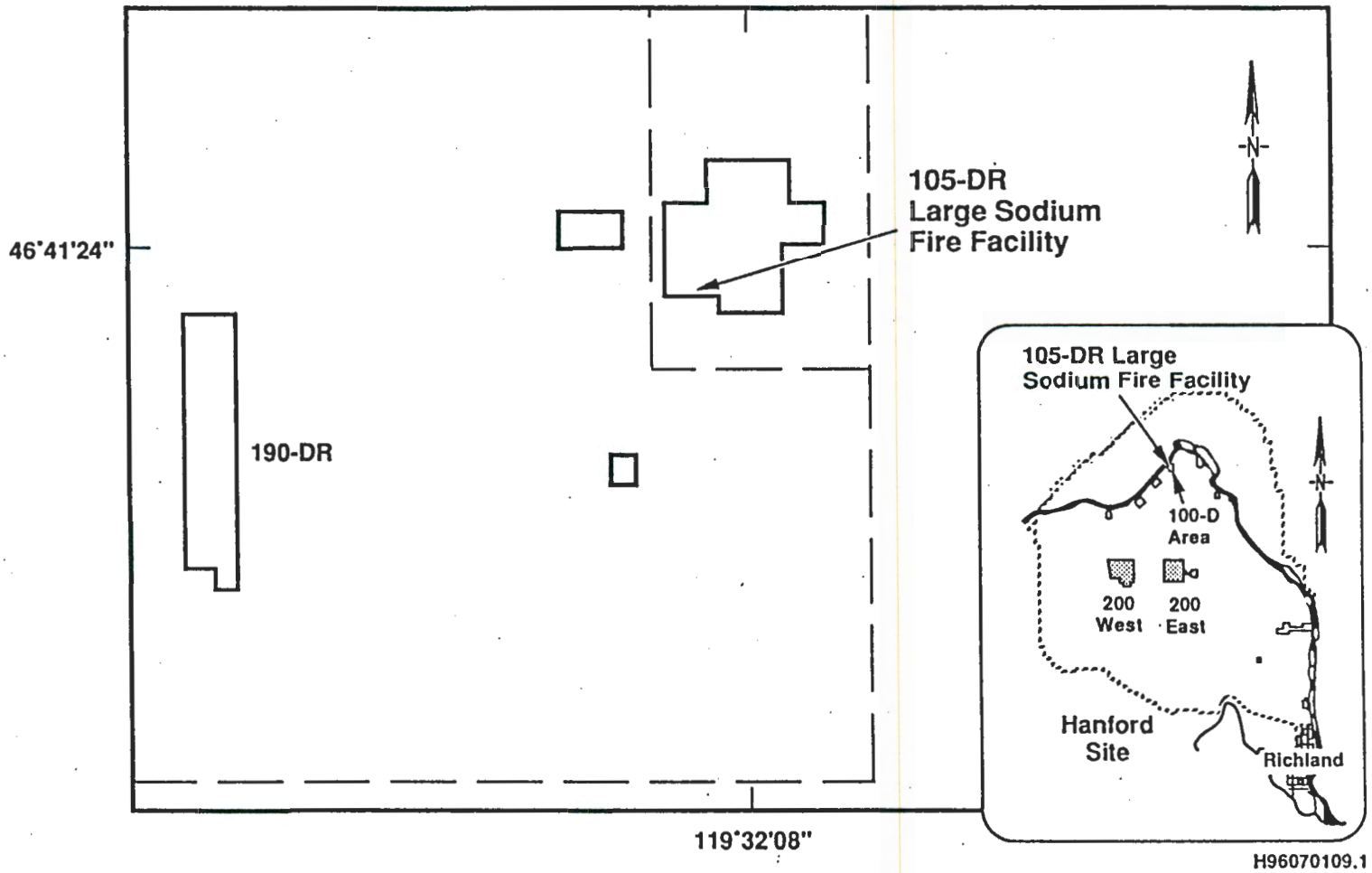
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

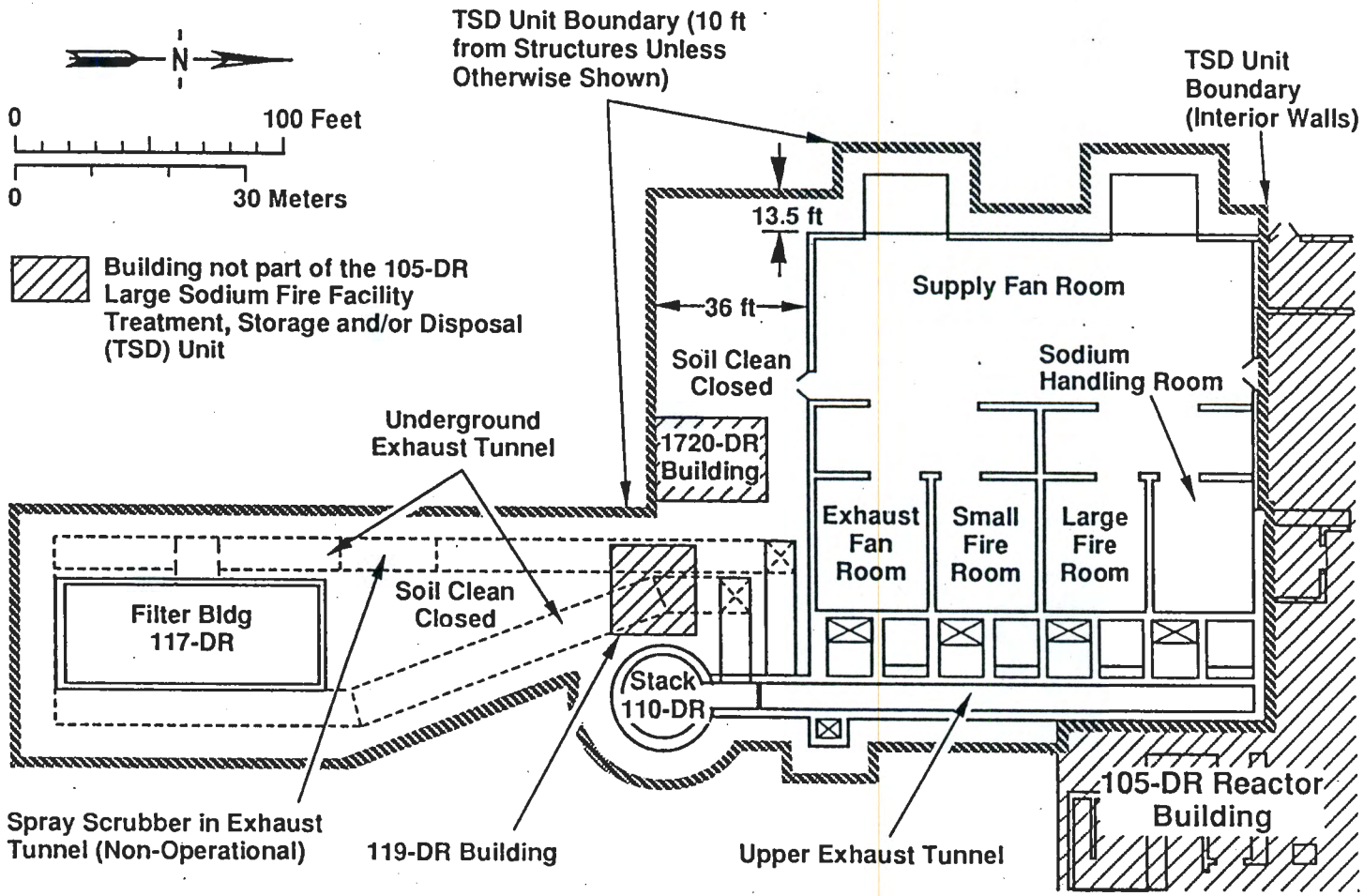
Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/13/96
Date

105-DR Large Sodium Fire Facility Site Plan



105-DR Large Sodium Fire Facility TSD Unit Boundary

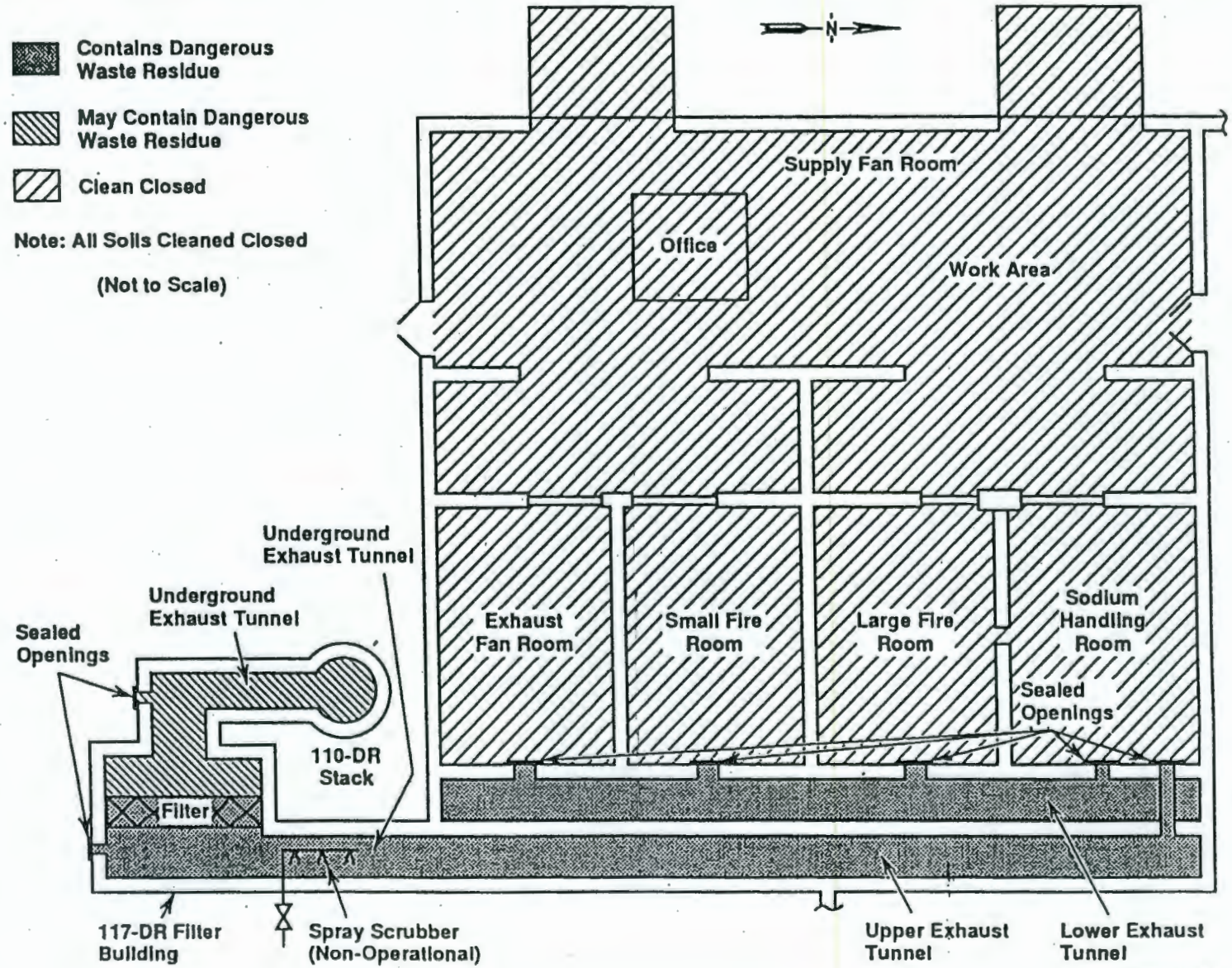


(For conversion, apply the following: feet to meters - multiply by 0.3048)

WA7890008967

9713532.0374

Schematic of the 105-DR Large Sodium Fire Facility Identifying Clean Closed Structures and Structures Containing Dangerous Waste Residues



105-DR LARGE SODIUM FIRE FACILITY

46°41'24"
119°32'08"

96070232-02CN
(PHOTO TAKEN 1996)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 *FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 2	2,461	L		7				
2	T 0 4	5,678	V		8				
3					9				
4					10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

S02, T04

The 1706-KE Waste Treatment System (1706-KE) intended to begin waste management operations in July of 1986. This unit was intended to treat mixed waste generated in the laboratories of the 1706-KE Building. The 1706-KE consisted of a 2,082-liter (550-gallon) waste accumulation tank, a 0.14-cubic meter (5-cubic foot) mixed-bed resin ion exchange column, a 114-liter (30-gallon) evaporation unit, and a 363-liter (96-gallon) condensate collection tank.

Waste generated in the 1706-KE Building was to have been transferred from the waste accumulation tank to the ion exchange column and then continuously recirculated to remove the ionic constituents from the waste stream. The waste would then have been transferred to the evaporation unit. The evaporation unit would have heated and boiled the liquid waste to steam. The steam would then have been condensed and collected in the 363-liter (96-gallon) condensate collection tank with the exhaust from the evaporation unit being passed through a HEPA filter prior to discharge.

The 1706-KE never managed mixed waste and a procedural closure under interim status is being pursued. The maximum process design capacity for tank storage is 2,461 liters (650 gallons). The maximum process design capacity for tank treatment is 5,678 liters (1,500 gallons) per day.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*Included with above*

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D002	6,804	K	S02	T04			Storage-Tank/Treatment-Tank
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
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25								
26								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The 1706-KE Building was intended to treat a wide variety of laboratory waste. The majority of this waste was expected to be acidic or caustic solutions (D002, characteristic, corrosive, dangerous waste). Approximately 6,804 kilograms (15,000 pounds) of waste could have been treated in the 1706-KE per year.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

Date

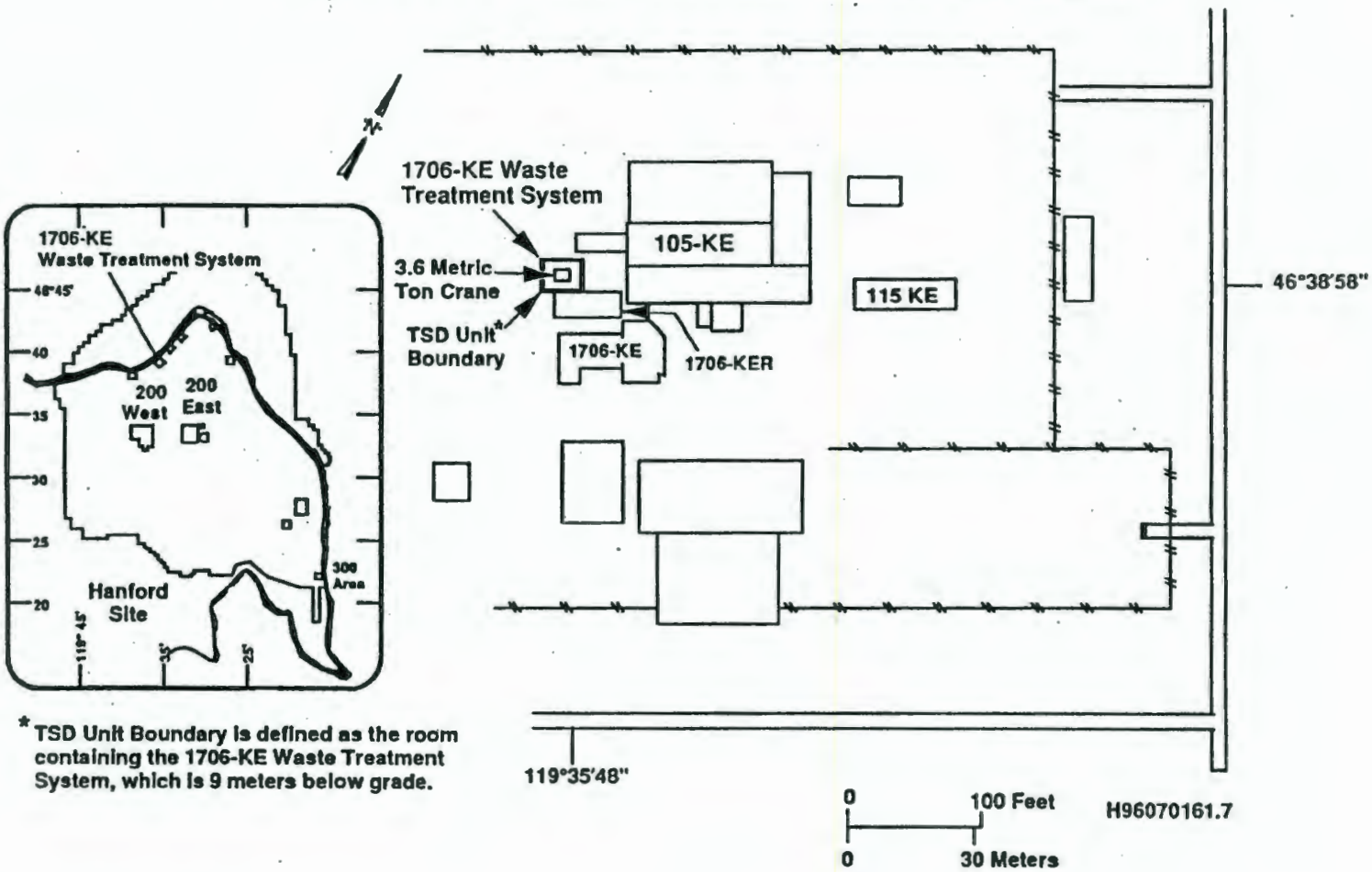
9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

Date

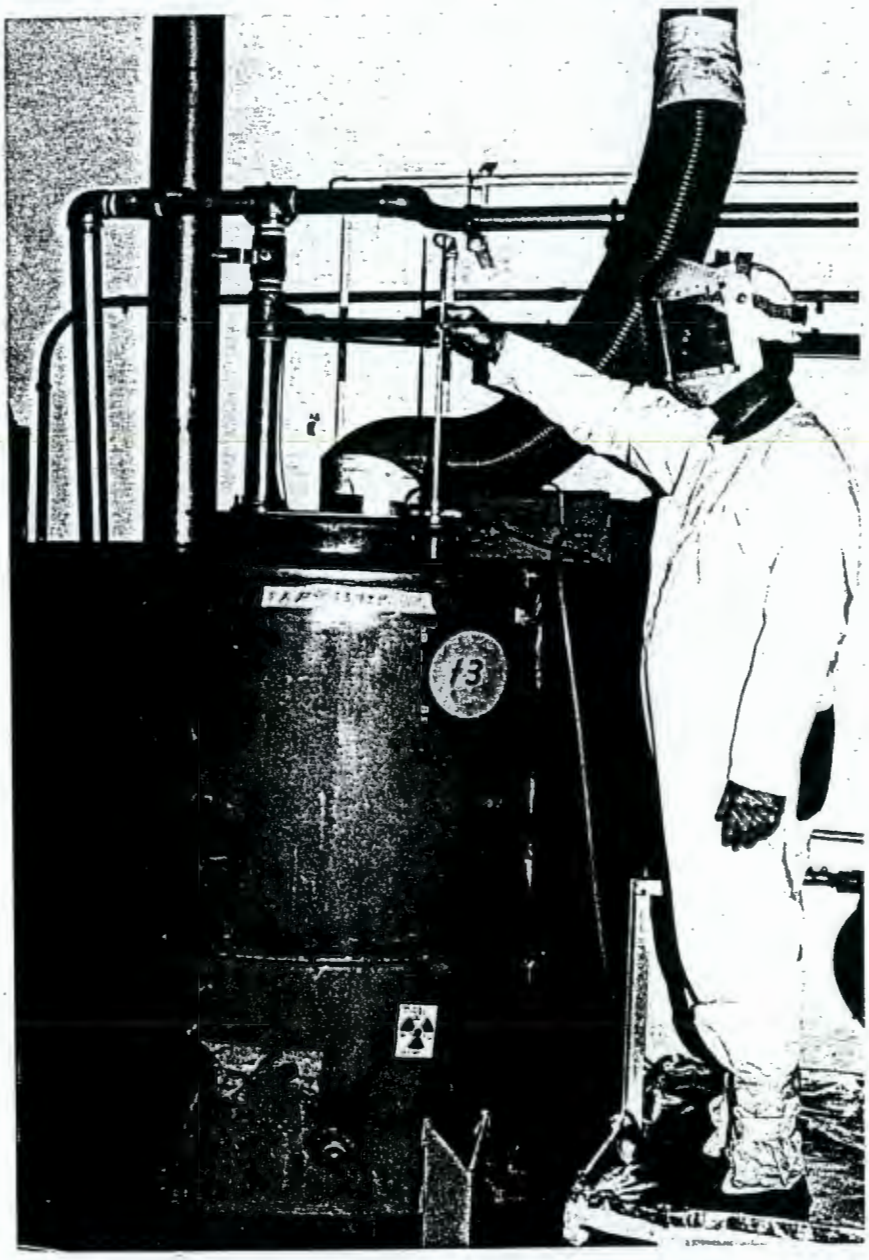
9713532.0382

1706-KE Waste Treatment System



* TSD Unit Boundary is defined as the room containing the 1706-KE Waste Treatment System, which is 9 meters below grade.

1706-KE WASTE TREATMENT SYSTEM

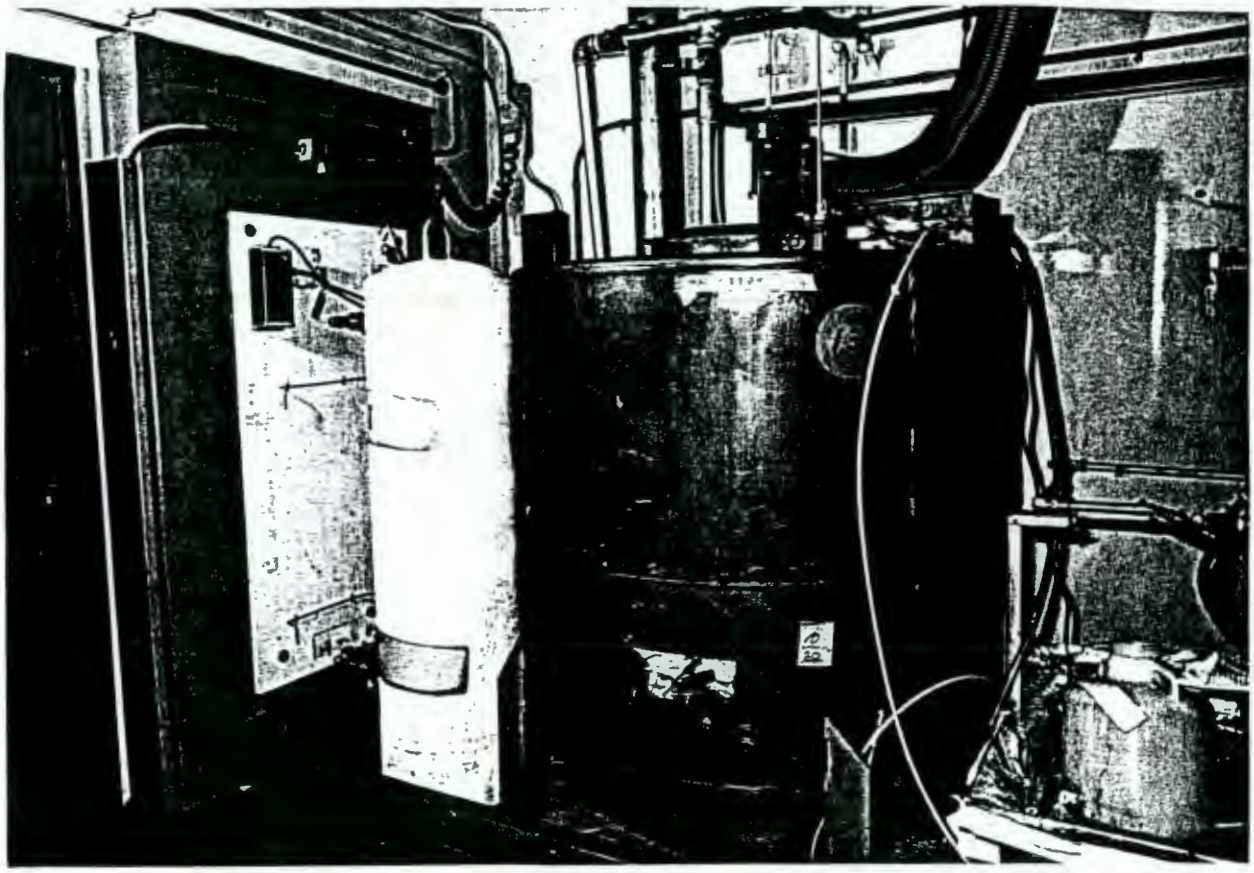


WASTE STORAGE TANK WITH HEPA VACUUM FILTER SYSTEM INCLUDING WASTE FEED SHUTOFF

46°38'58"
119°35'48"

132285-1CN

1706-KE WASTE TREATMENT SYSTEM

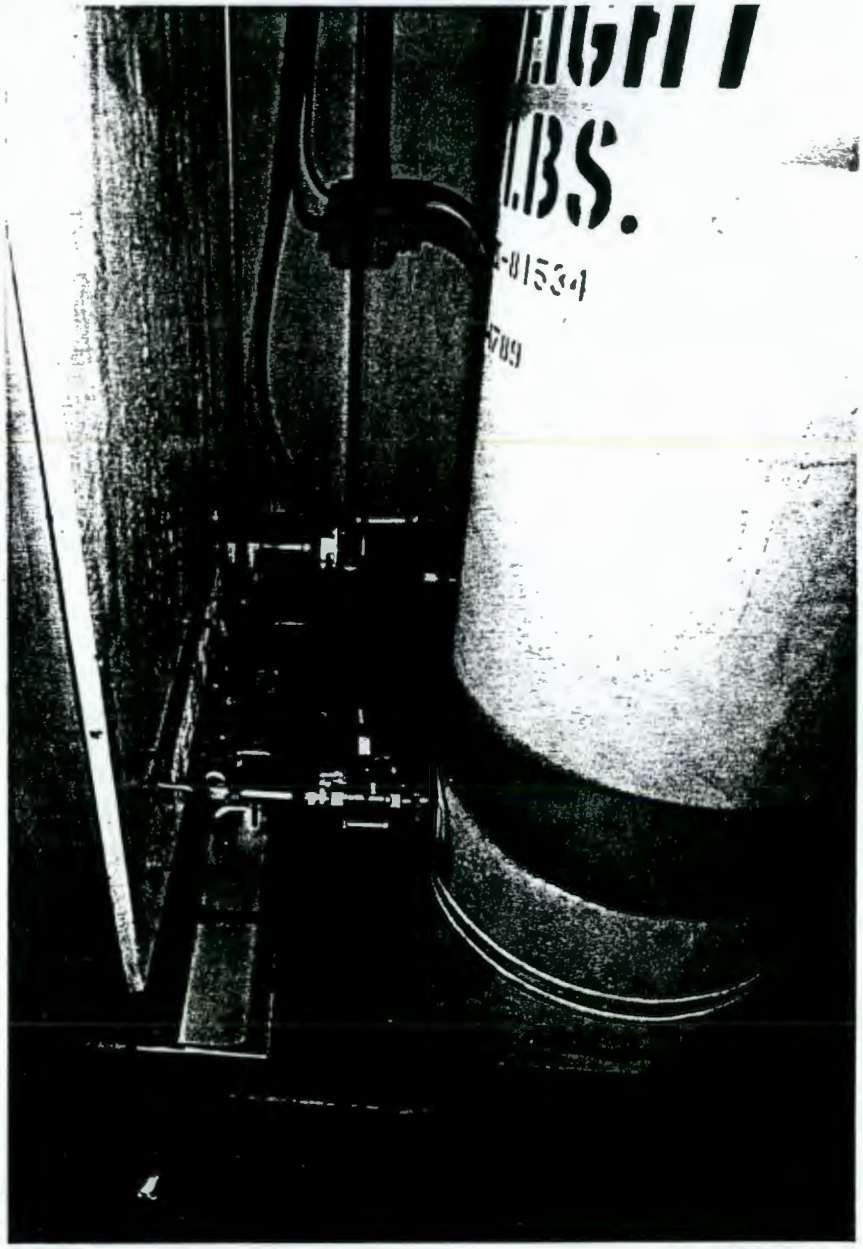


ION EXCHANGE COLUMN AND WASTE ACCUMULATION TANK

46°38'58"
119°35'48"

8700734-1CN
(PHOTO TAKEN 1987)

1706-KE WASTE TREATMENT SYSTEM

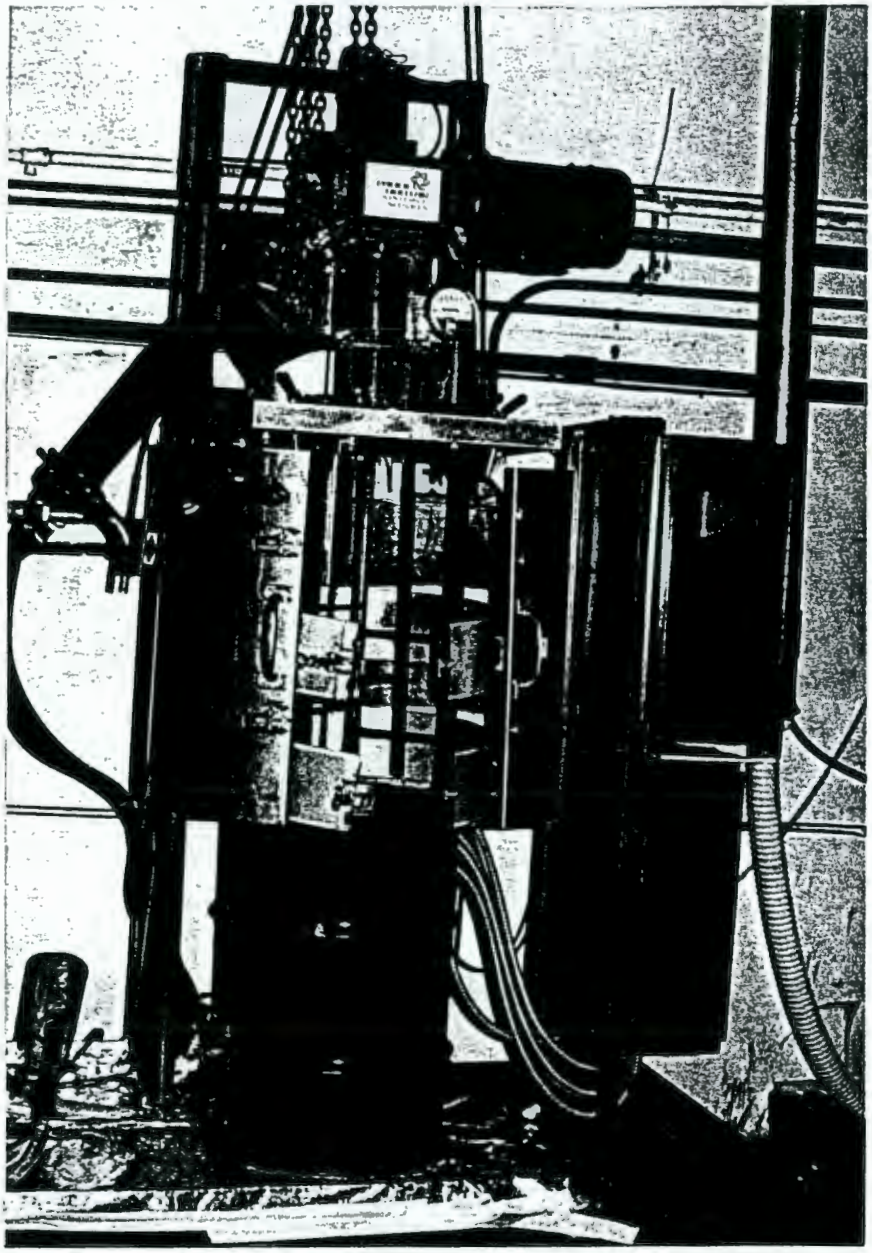


ION EXCHANGE COLUMN AND
ASSOCIATED PIPING

46°38'58"
119°35'48"

8700734-3CN
(PHOTO TAKEN 1987)

1706-KE WASTE TREATMENT SYSTEM

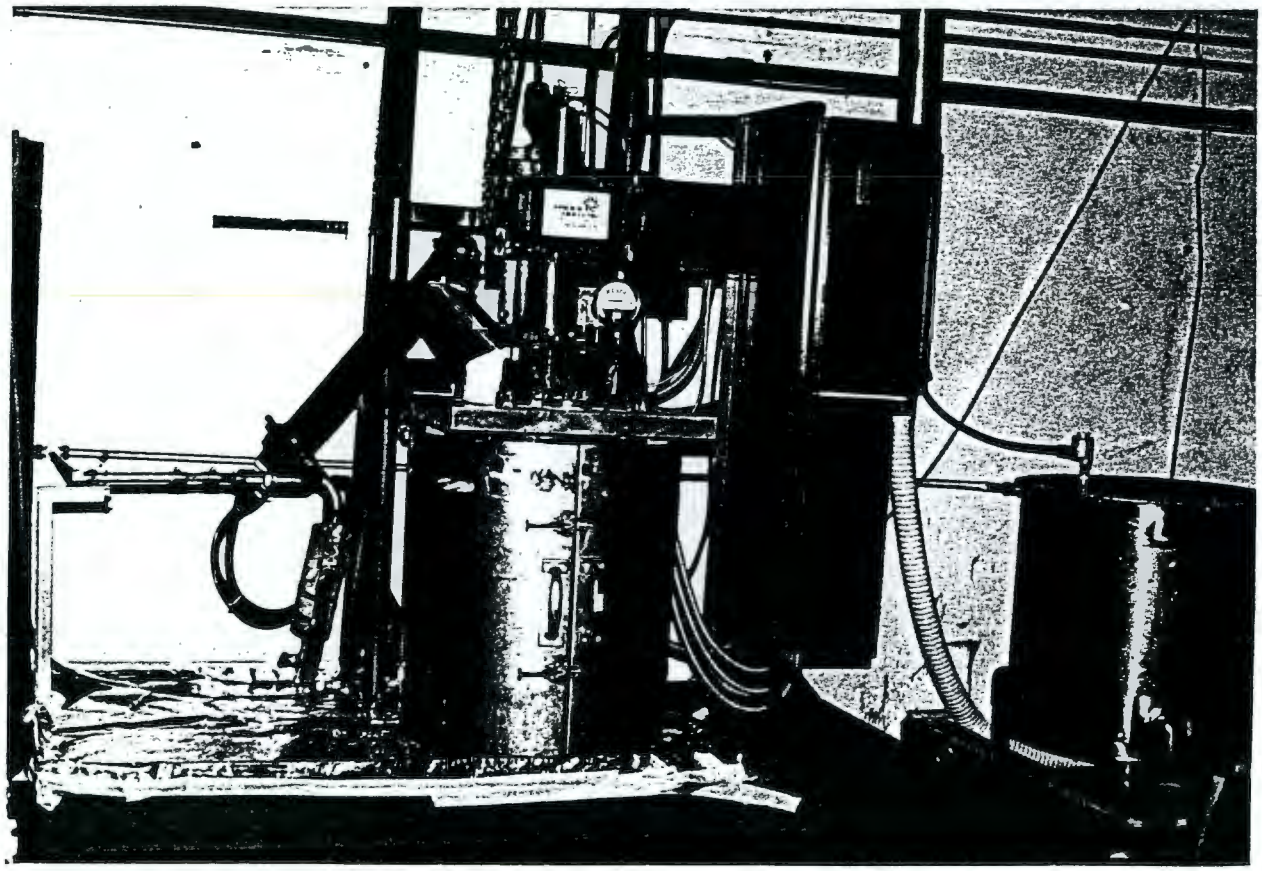


SOLIDIFICATION UNIT SHOWN IN UP POSITION

46°38'58"
119°35'48"

132285-6CN
(PHOTO TAKEN 1986)

1706-KE WASTE TREATMENT SYSTEM



SHOWN IN DOWN POSITION EVAPORATING WASTE

46°38'58"
119°35'48"

8700734-8CN
(PHOTO TAKEN 1986)

1706-KE WASTE TREATMENT SYSTEM

SYSTEM CONTROL PANEL

46°38'58"
119°35'48"

132285-2CN
(PHOTO TAKEN 1986)

1706-KE WASTE TREATMENT SYSTEM

CONDENSATE TANK

46°38'58"
119°35'48"

132285-3CN
(PHOTO TAKEN 1986)

1706-KE WASTE TREATMENT SYSTEM

EXHAUST FILTER SYSTEM

46°38'58"
119°35'48"

8700734-6CN
(PHOTO TAKEN 1987)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

* FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☐ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	T 0 4	100	V		7				
2					8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T04

The 221-T Containment Systems Test Facility (221-T) was a research laboratory intended to perform experiments with alkali metal compounds. It was anticipated that operations were to begin in 1977. This unit also was intended to treat dangerous alkali metal waste by heating the waste in a treatment tank equipped with an offgas system.

The 221-T never managed dangerous waste and a procedural closure under interim status is being pursued for this unit. The maximum process design capacity for tank treatment was intended to be 100 liters (26.4 gallons) per day.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*Included with above*

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	11,340	K	T04	Treatment-Other (Thermal)
2	D003		↓	↓	↓
3	WSC2		↓	↓	Included With Above
4					
5					
6					
7					
8					
9					
10					
11					
12					
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26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The 221-T was intended for use as a alkali metal waste treatment unit. The waste intended to be managed would have consisted of sodium, lithium, and sodium-potassium alloys. This waste would have been considered ignitable (D001), reactive (D003), and state-only, corrosive, dangerous waste (WSC2). The 221-T had the capability to handle small quantities of reactive laboratory waste. Approximately 11,340 kilograms (25,000 pounds) could have been treated at the 221-T per year.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

 CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner

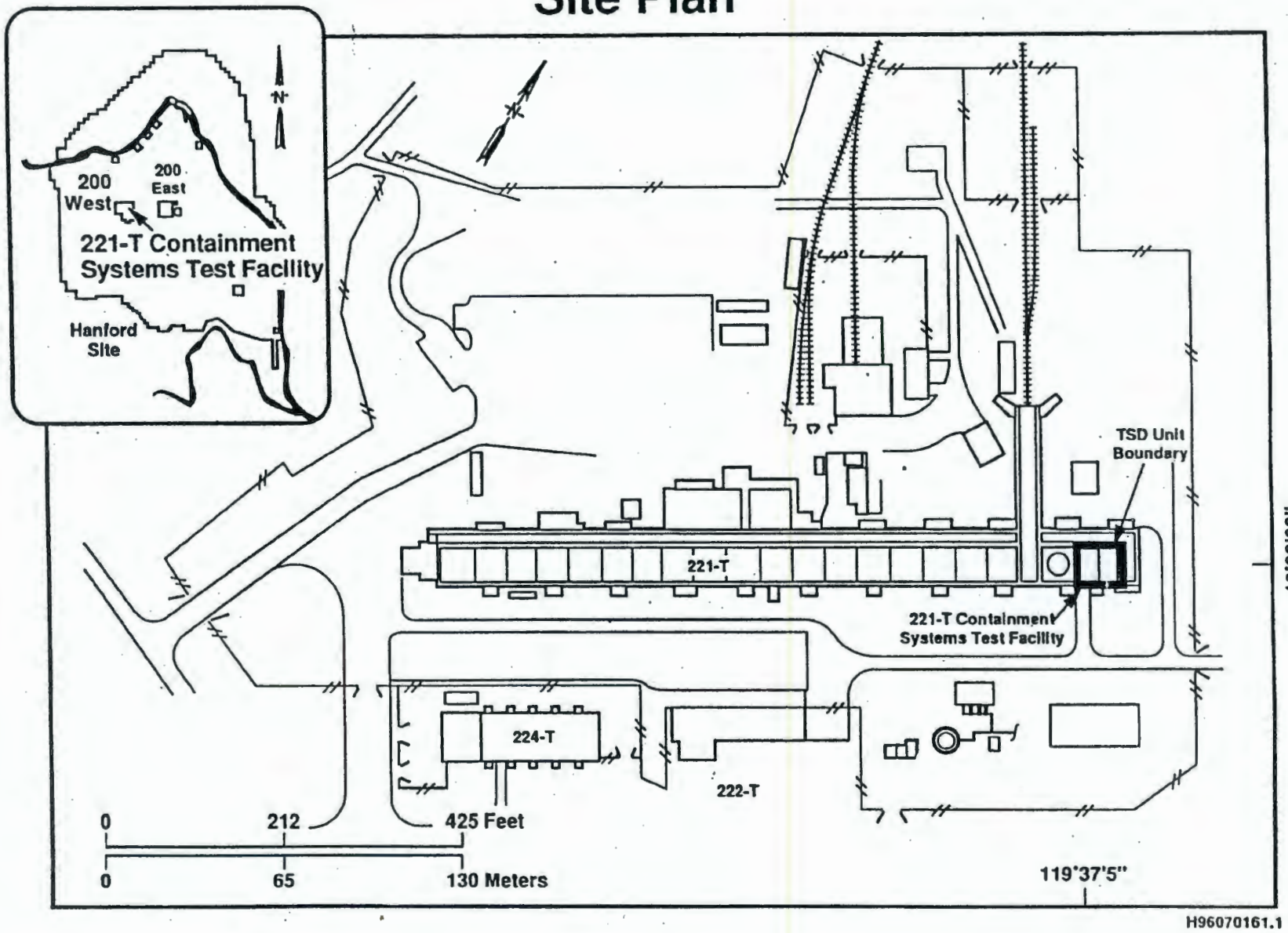
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

Co-Operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/18/96
Date

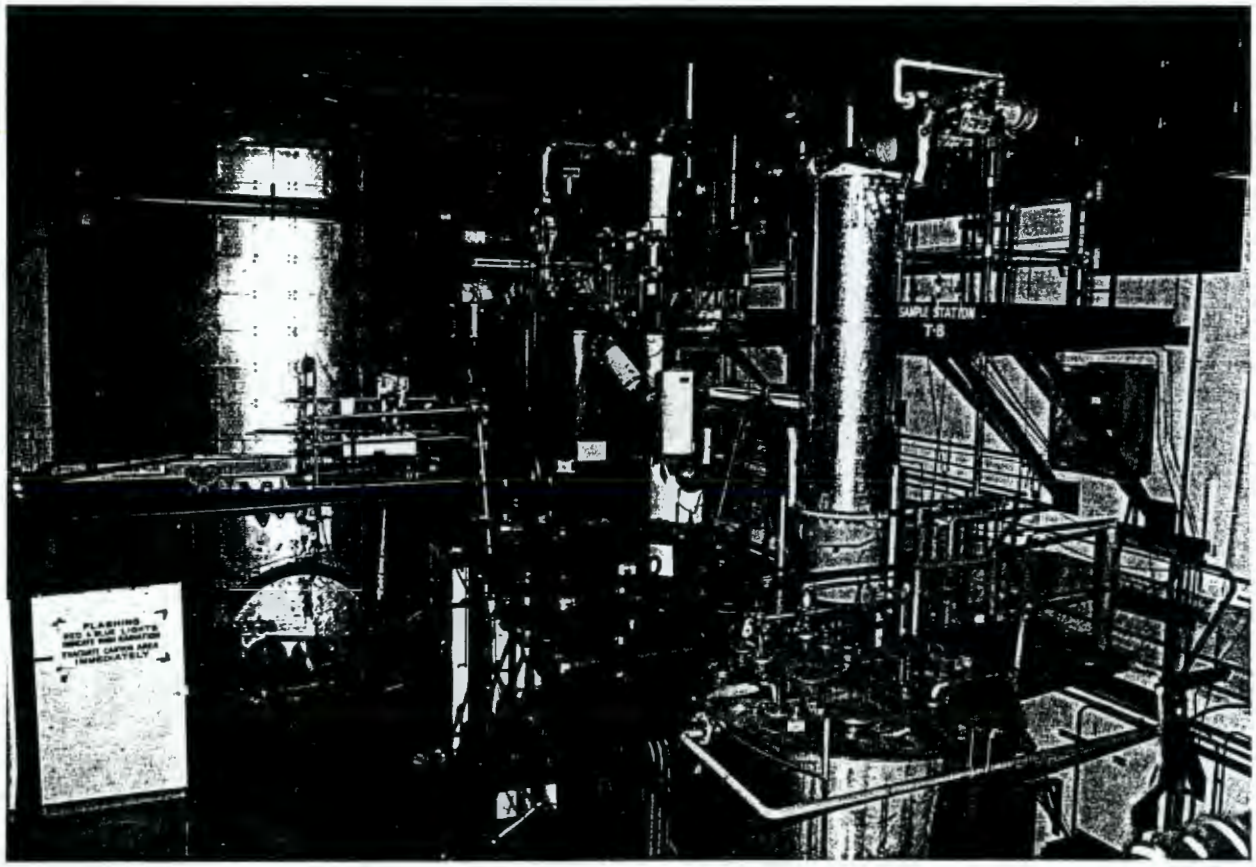
221-T Containment Systems Test Facility
Site Plan



WA7890008967

9713532.0396

CONTAINMENT SYSTEMS TEST FACILITY 221-T/200-W AREA



46°33'33"
119°37'05"

96090094-6CN
(PHOTO TAKEN 1996)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM **3**

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 3	4 3

FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)* *

*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr.)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	T 0 4	870,642	V		7				
2	S 0 2	170,597	L		8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T04 The 242-A Evaporator began waste management operations in March of 1977. The 242-A Evaporator is located in the 200 East Area and is used to treat mixed waste from the Double-Shell Tank (DST) System by removing water and most volatile organics. Two waste streams leave the 242-A Evaporator following the treatment process. The first waste stream, the concentrated slurry (approximately 40 to 60 percent of the water is removed during evaporation along with a portion of the volatile organics), is pumped back into the DST System. The second waste stream, process condensate (containing a portion of the volatile organics removed from the mixed waste during the evaporation process), is routed through condensate filters before release to a retention basin (Liquid Effluent Retention Facility). Offgasses from the process are routed through a de-entrainment unit, a prefilter, and high-efficiency particulate air filters before being discharged to the environment. The 242-A Evaporator is used to treat up to 870,642 liters (230,000 gallons) of mixed waste per day.

S02 Tank C-100, a 4.3-meter (14-foot) diameter and 5.9-meter (19-foot) high tank with a maximum design capacity of 67,380 liters (17,800 gallons), is located in the condenser room. Process condensate from the primary, inter-, and after-condensers drain by gravity to tank C-100, which is constructed of stainless steel. In addition, tank C-100 receives potentially contaminated drainage from the vessel vent system via a 102-liter (27-gallon) seal pot.

Tank C-A-1 is located in the evaporator room and consists of two sections: the lower (liquid) section, a 4.3-meter (14-foot) diameter stainless steel shell, and the upper (vapor) section, a 3.5-meter (11.6-foot) diameter stainless steel shell, containing two wire-mesh de-entrainment pads for the removal of liquids and solids that could be carried into the vapor header. Process slurry from the reboiler discharges to the evaporator vessel (tank C-A-1). Concentrated process slurry exits the lower section of tank C-A-1 via the 28-inch recirculation line. Vapor flows out of tank C-A-1 through a 42-inch vapor line at the top. The maximum design capacity of tank C-A-1 is 103,217 liters (27,267 gallons).

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 800 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*Included with above*

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	635,029,318	K	T04	Treatment - Evaporation
2	through				
3	D011				
4	D018				
5	D019				
6	D022				
7	D028				
8	through				
9	D030				
10	D033				
11	through				
12	D036				
13	D038				
14	through				
15	D041				
16	D043				
17	WT01				
18	WT02				
19	WP01				
20	WP02				
21	F001				
22	through				
23	F005				
24	F039				Included With Above
25					
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	D001	348,241	K	S02	Storage - Tank
2	through				
3	D011				
4	D018				
5	D019				
6	D022				
7	D028				
8	through				
9	D030				
10	D033				
11	through				
12	D036				
13	D038				
14	through				
15	D041				
16	D043				
17	WT01				
18	WT02				
19	WP01				
20	WP02				
21	F001				
22	through				
23	F005				
24	F039				Included With Above
25					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The 242-A Evaporator is used to treat and store mixed waste from the DST System. Two waste streams leave the 242-A Evaporator following the treatment process: a concentrated slurry waste stream that is routed to the DST System and a process condensate waste stream that is routed to the Liquid Effluent Retention Facility.

The waste fed to the 242-A Evaporator is regulated as a mixed waste with the same waste constituents as waste in the DST System. The concentrated slurry is a characteristic waste (D001, D002 and D003), toxic waste (D004 through D011, D018, D019, D022, D028 through D030, D033 through D036, D038 through D041, and D043), nonspecific source waste (F001 through F005 and F039), and state-only characteristic waste (WT01, WT02, WP01, WP02). Multi-souce leachate (F039) is included as a waste derived from nonspecific source wastes F001 through F005.

The process condensate is regulated as a mixed waste due to the toxicity of ammonia (WT02) and because it is derived from waste with nonspecific waste sources F001 through F005. Multi-source leachate (F039) is included as a waste derived from nonspecific source wastes F001 through F005.

The list of dangerous constituents under Section IV.A. includes constituents that have not been detected in the waste; however, knowledge of the processes providing waste to the 242-A Evaporator indicates the strong possibility that these constituents are present in the waste or there is potential for treating these constituents in the future. The annual waste quantity listed under Section IV.B. was calculated using an operating schedule of 365 days per year and a specific gravity of 2.0 for the waste. This calculation was done to provide a maximum estimate of annual waste quantity.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 6 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

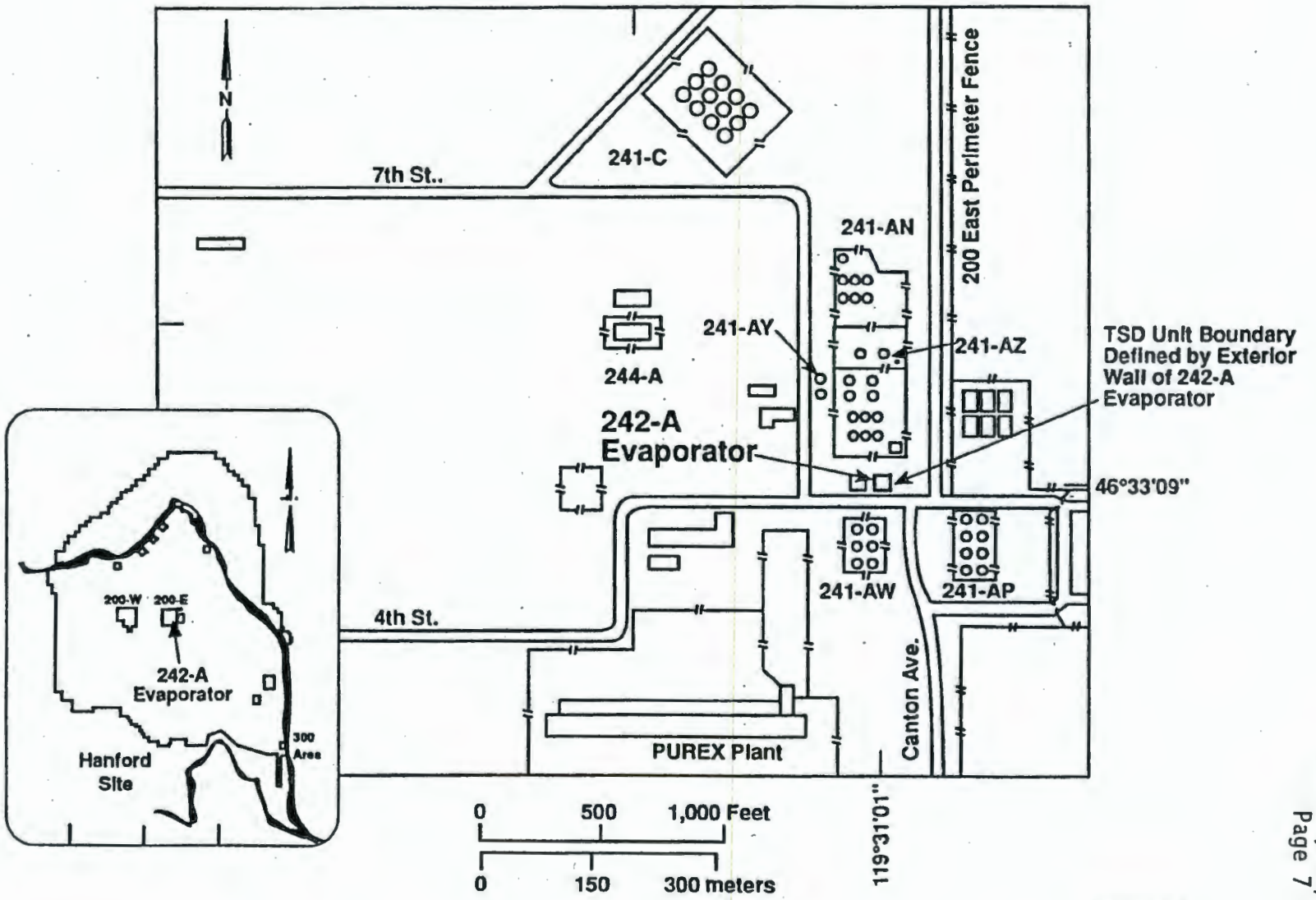
Date

9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

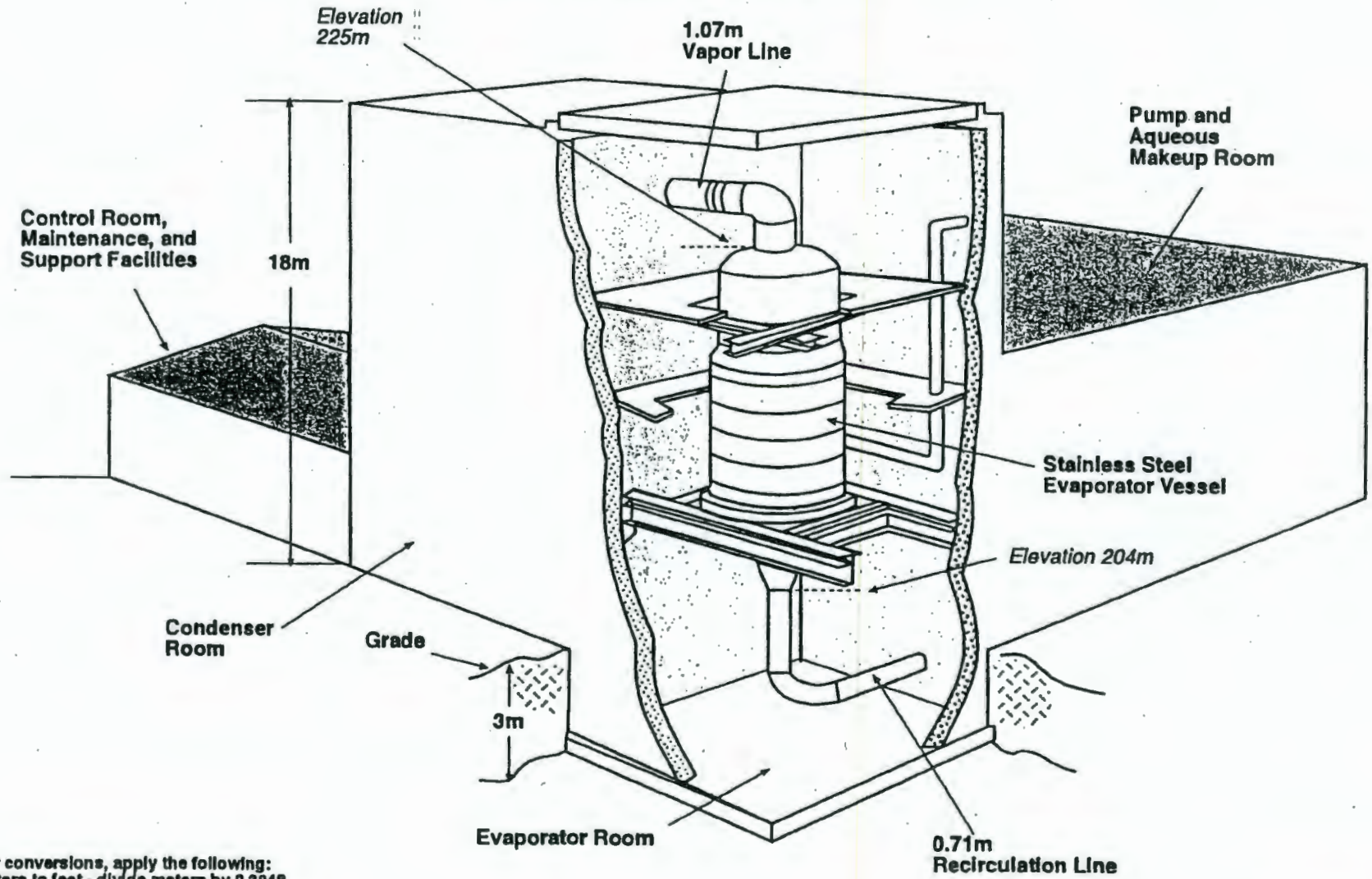
Date

242-A Evaporator Site Plan



39208044.8

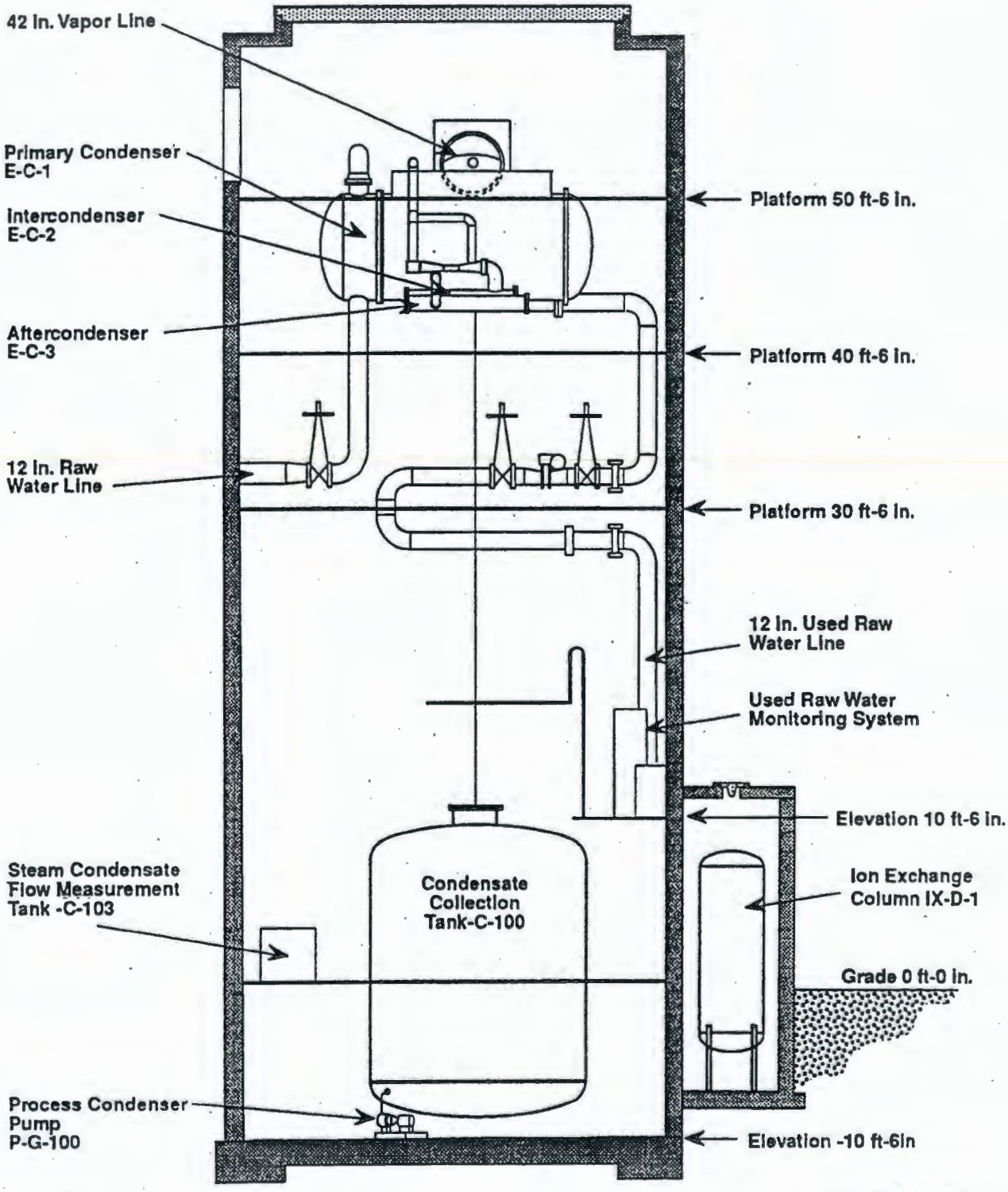
242-A Evaporator



For conversions, apply the following:
Meters to feet - divide meters by 0.3048

39211048.1a

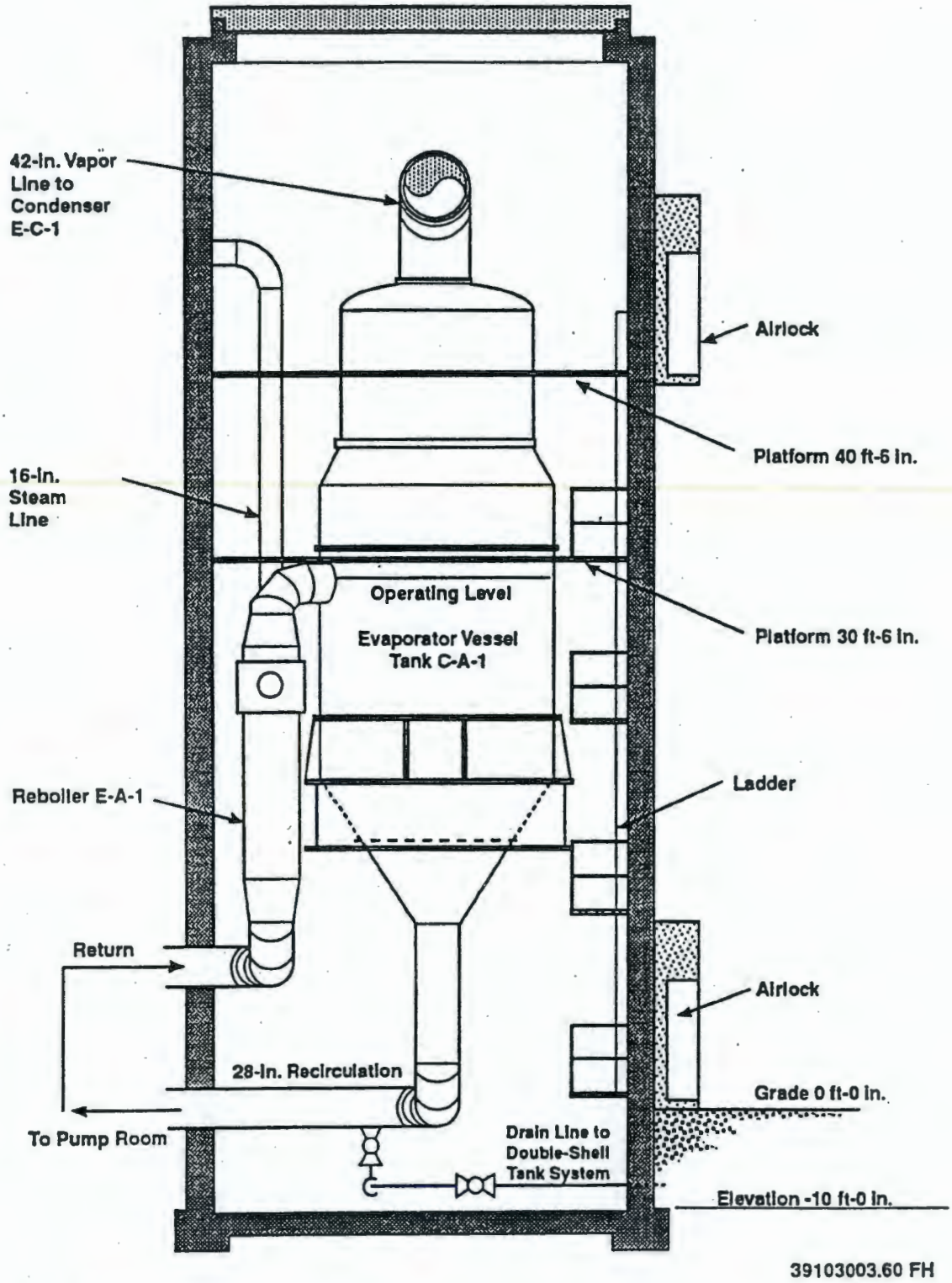
Tank C-100



39103003.61 FH

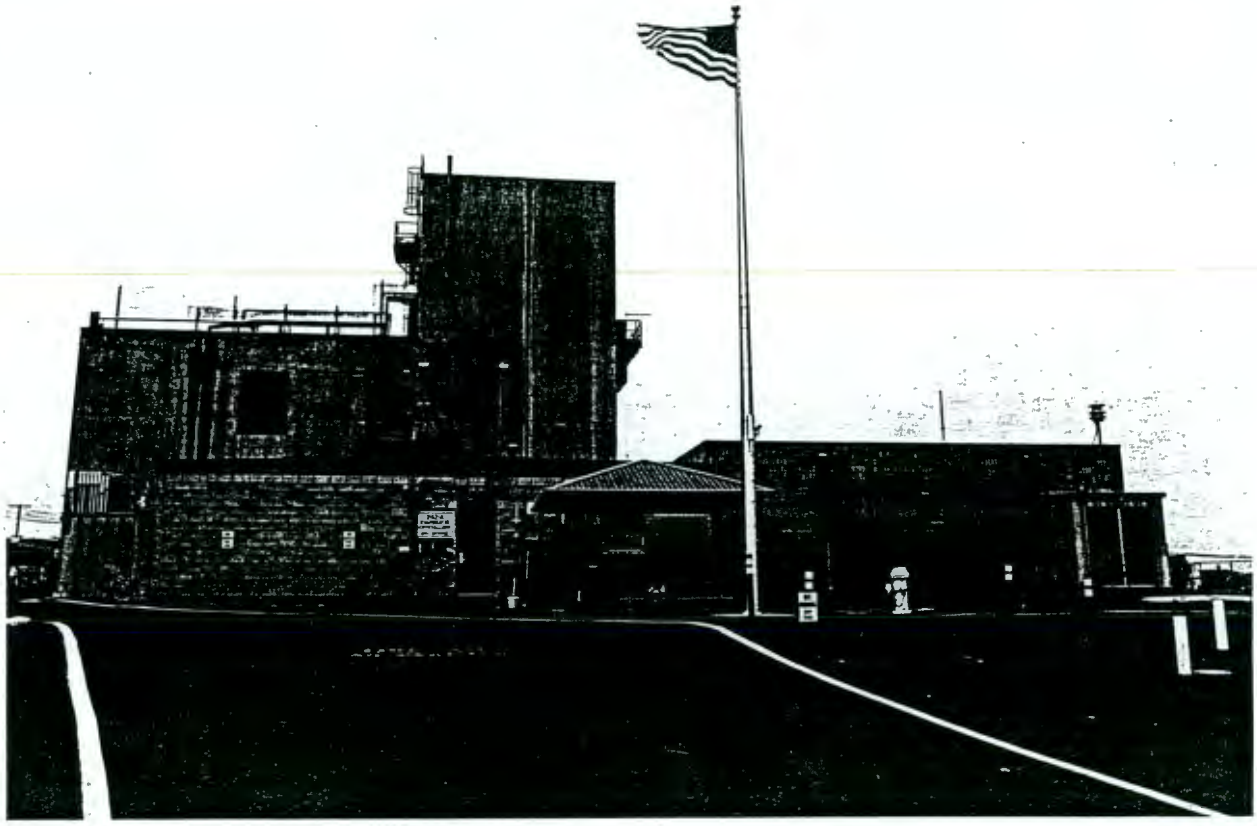
Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

Tank C-A-1



Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

242-A EVAPORATOR



46°33'09"
119°31'01"

96080579-19CN
(PHOTO TAKEN 1996)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

* FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		6	D 8 1	22.8	F	
X-2	T 0 3	20	E		6				
1	T 0 4	382,325	V		7				
2	T 0 2	382,325	V		8				
3	S 0 2	3,028	L		9				
4	T 0 1	4,978	V		10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

Refer to the following page.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*Included with above*

 CONTINUE ON PAGE 3

FORM 3 DANGEROUS WASTE PERMIT APPLICATION
U.S. ENVIRONMENTAL PROTECTION AGENCY/STATE IDENTIFICATION NUMBER WA7890008967

Section III.C, Description of Process Codes Listed in Section III.A

T04, T02, S02, T01, D81

The Grout Treatment Facility (GTF) began waste management operation in August 1988. The GTF is designed to treat mixed waste by mixing the liquid waste with grout-forming solids in an in-line mixer (T04), which is part of a unit called the Grout Processing Facility. This process forms a slurry that is pumped to a concrete disposal vault. The vault is operated as a surface impoundment (T02) while the grouted waste slurry hardens. When the slurry material has hardened, the vault is sealed and closed.

The GTF has a total production capacity for treatment of approximately 382,325 liters (101,000 gallons) per day (24-hour period) (T04, T02). Treatment consists of mixing liquid waste with dry cementitious materials. The specific formulation of the dry materials is predicated upon the specific constituents resident in the liquid waste stream.

The Liquid Collection Tank (LCT) stores potential mixed waste from any spill or leakage collected in the sumps, spent flush and decontamination solutions from internal and external system cleanups, and excess liquid and leachate pumped back from the vaults (S02). The LCT has a design capacity of 3,028 liters (800 gallons). The dangerous waste is treated in the LCT to make the waste more amenable for storage in the Double-Shell Tank (DST) System (T01). The LCT is capable of treating approximately 4,978 liters (1,315 gallons) per day of dangerous waste.

The GTF vaults have a total design capacity of approximately 22.8 hectare-meters (185 acre-feet) consisting of 17.9 hectare-meters (145 acre-feet) of waste and 4.9 hectare-meters (40 acre-feet) of grout material (D81). The GTF could have a total of 43 individual vaults with each individual vault having a storage capacity of 0.53 hectare-meters (4.3 acre-feet) [5,299,560 liters (1,400,000 gallons)] of mixed waste.

The technology and process operation of the GTF was demonstrated from August 1988 through July 1989 with the treatment of 3,785,400 liters (1,000,000 gallons) of nondangerous waste. Processing of this waste generated leachate that was a corrosive mixed waste that was stored at the GTF and transferred to the DST System. Per Amendment Four of the Hanford Federal Facility Agreement and Consent Order, the GTF has been placed in a standby mode until other alternatives for processing DST System waste are studied.

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)* WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	D002	45,359,237	K	T04 T02 S02 T01	Treatment - Other Solidification/ Treatment - Surface Impoundment/ Storage - Tank/Treatment - Tank
2	D006				
3	D007				
4	D008				
5	D011				
6	D029				
7	D036				
8	D040				
9	F001				
10	F002				
11	F003				
12	F005				
13	WT01				Included With Above
14	WT02	45,359,237	K	D81	Disposal - Landfill
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The dangerous waste proposed to be treated by the GTF has been determined to have the waste characteristic of corrosivity (D002, pH greater than or equal to 12.5). The list of dangerous waste under Section IV.A. has been added because of the potential of this waste being treated and stored at the GTF. This dangerous waste consists of toxic constituents cadmium (D006), chromium (D007), lead (D008), silver (D011), 1,1-dichlorethylene (D029), nitrobenzene (D036), trichlorethylene (D040), spent nonhalogenated solvents (F001, F002, F003, and F005), and state-only toxic extremely hazardous waste (WT01) in accordance with the Washington Administrative Code (WAC) 173-303-084 "Dangerous Waste Mixtures." Following the treatment (deactivation and solidification) of the waste for corrosivity, the waste is disposed in vaults and is considered a state-only dangerous waste (WT02) due to toxic characteristics of the waste.

Dangerous waste constituents cadmium (D006) and silver (D011), which are considered toxic characteristic waste, have not been detected in the waste. Process knowledge of the waste being sent to the GTF indicates a strong possibility that these constituents will be in the waste. Chromium (D007) and lead (D008) have been detected in the waste based on actual analytical data.

The Estimated Annual Quantity of Dangerous Waste of 45,359,237 kilograms (100,000,000 pounds) per year is based on approximately 31,986,630 liters (8,450,000 gallons) of waste, or approximately six vaults. The total filling time of these vaults is estimated to be 84 days per year at a maximum pouring rate of 382,325 liters (101,000 gallons) per day.

If the GTF is activated in the future, a Part A, Form 3, permit application revision could be pursued as required by WAC 173-303 to revise the dangerous waste number(s) and the estimated annual quantity of waste.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 6 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

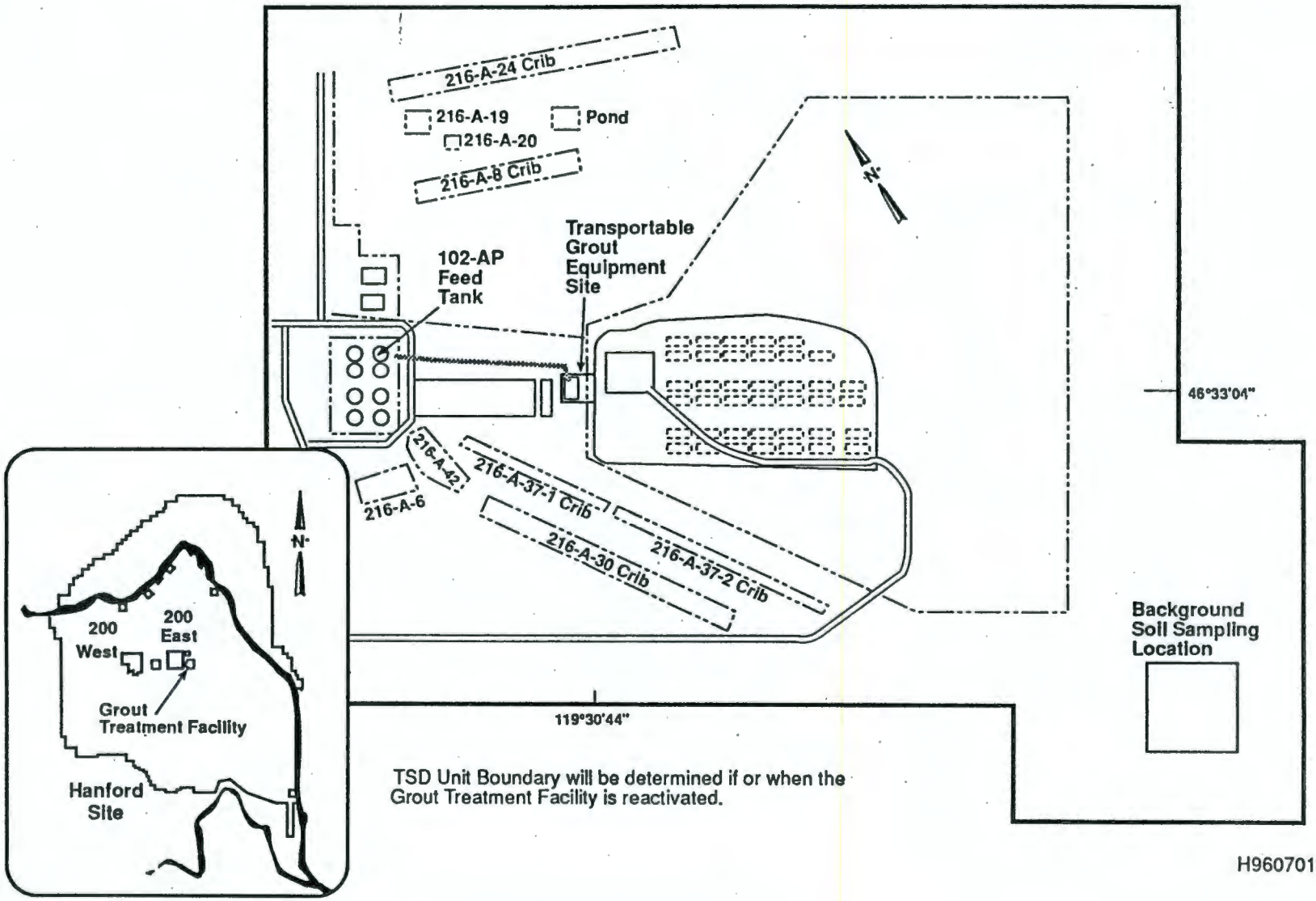
Date

9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

Date

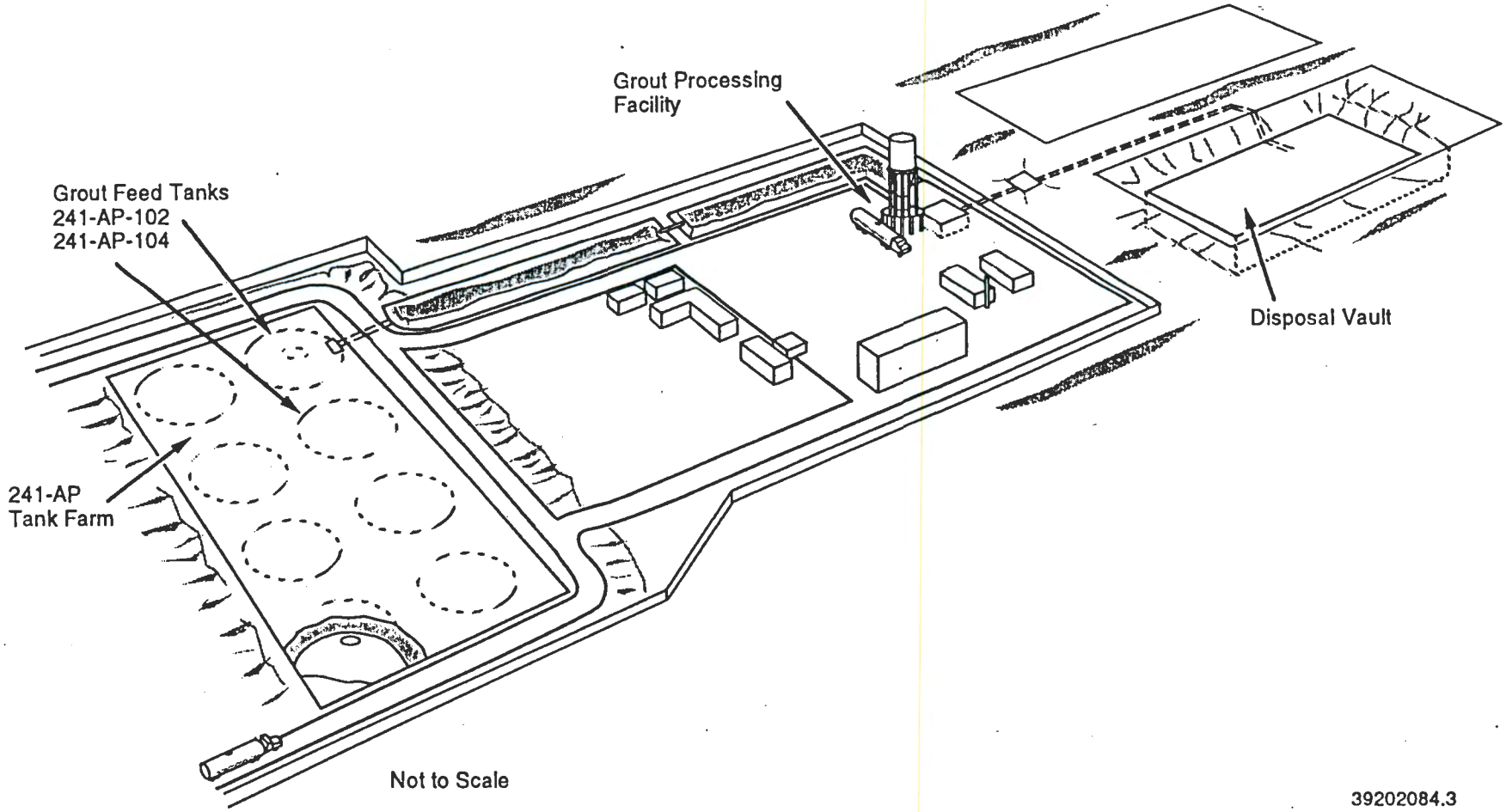
Grout Treatment Facility
Site Plan



TSD Unit Boundary will be determined if or when the Grout Treatment Facility is reactivated.

H96070161.9

Grout Treatment Facility Layout



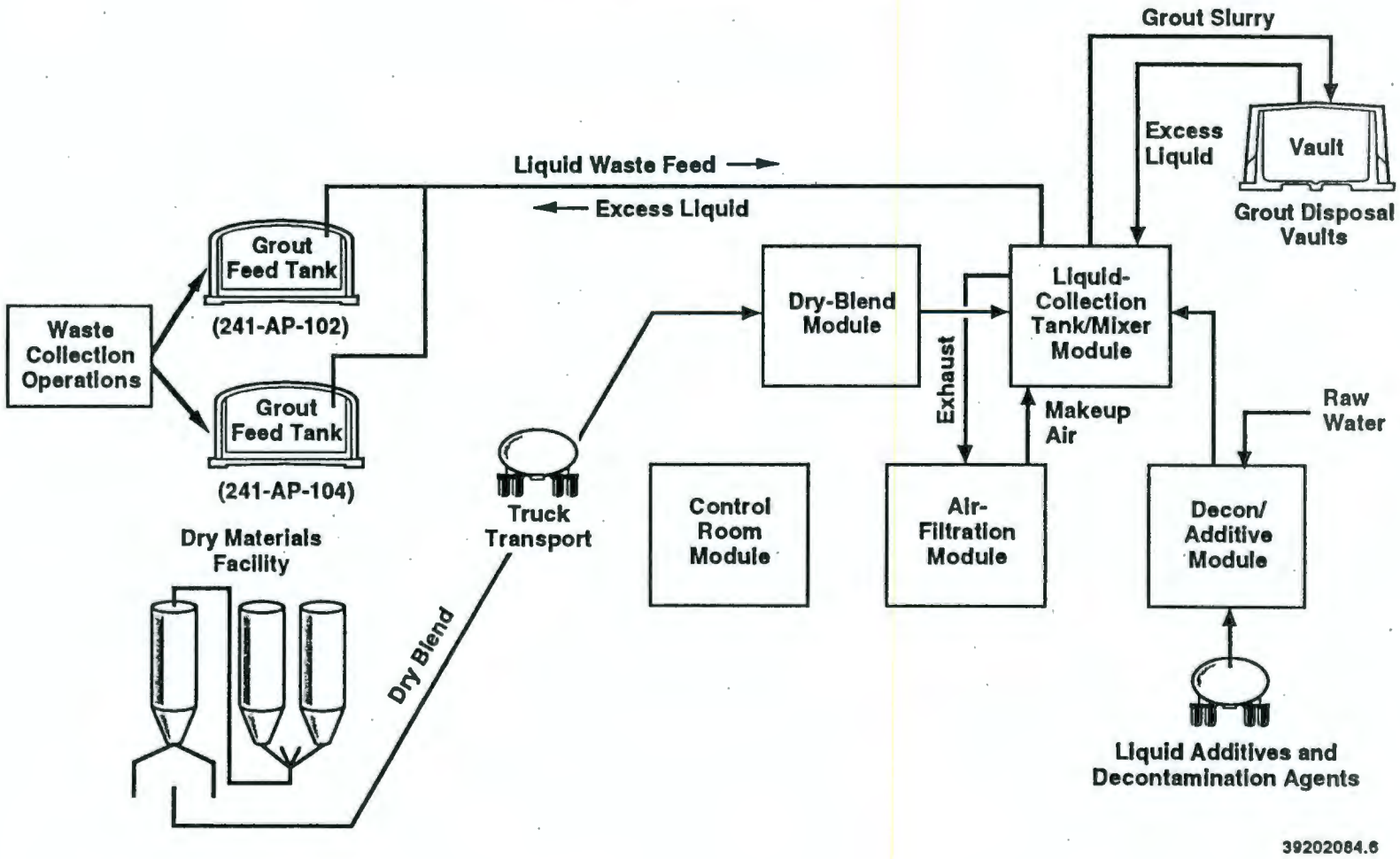
39202084.3

9713532.0416

9713532.0417

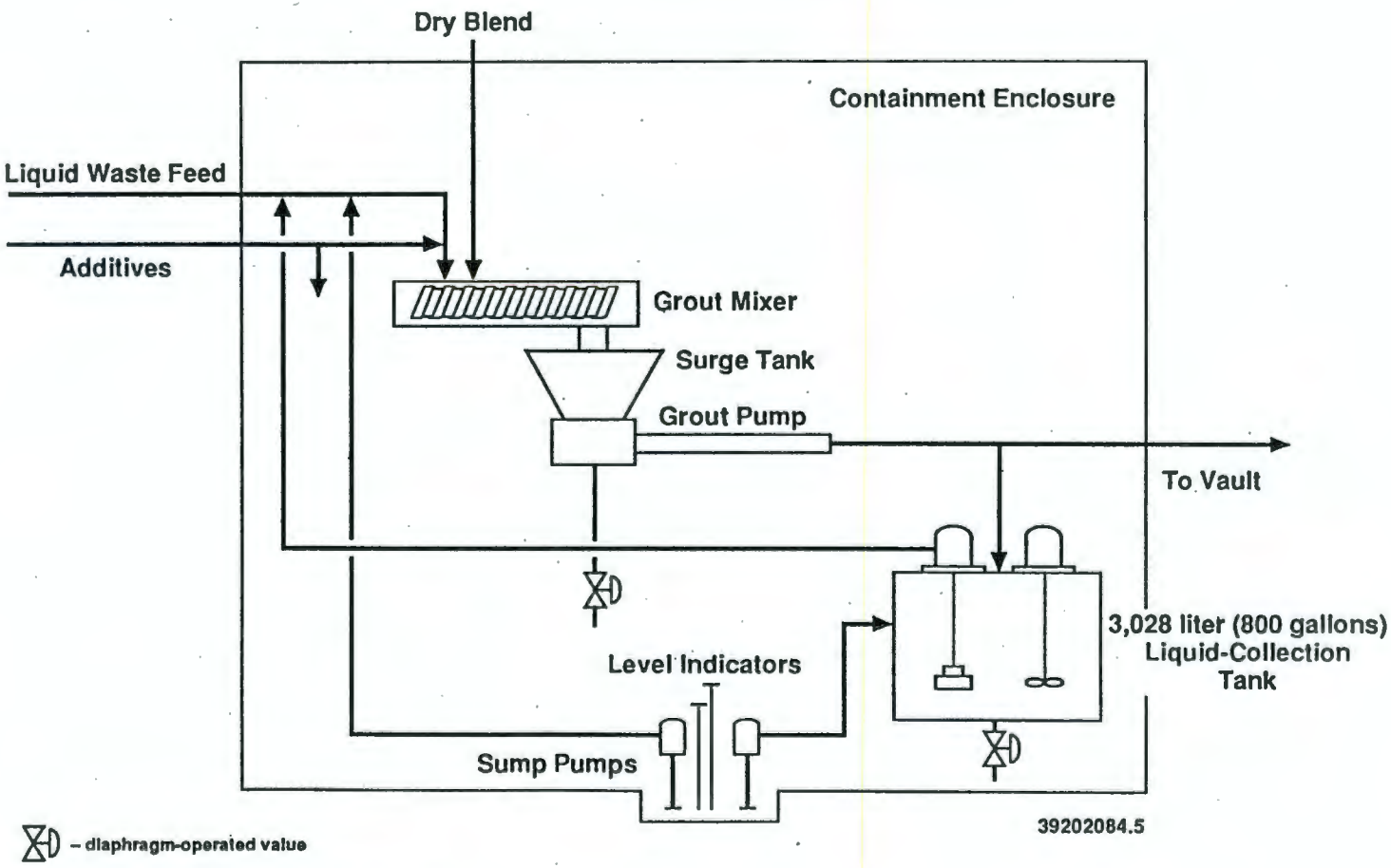
Grout Treatment Facility

Material Flow Diagram



Grout Treatment Facility

Liquid-Collection Tank/Mixer Module

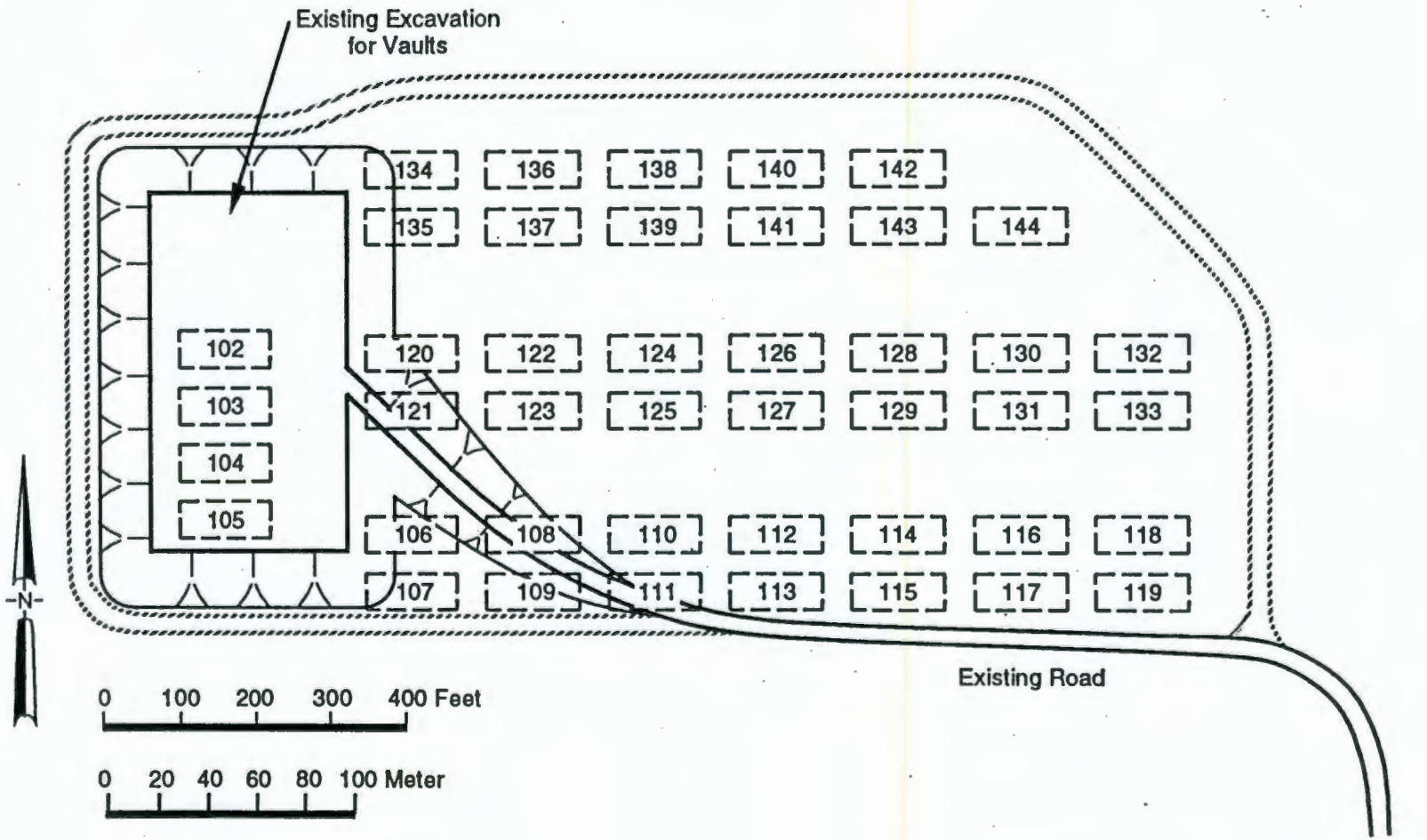


– diaphragm-operated value

Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

Grout Treatment Facility

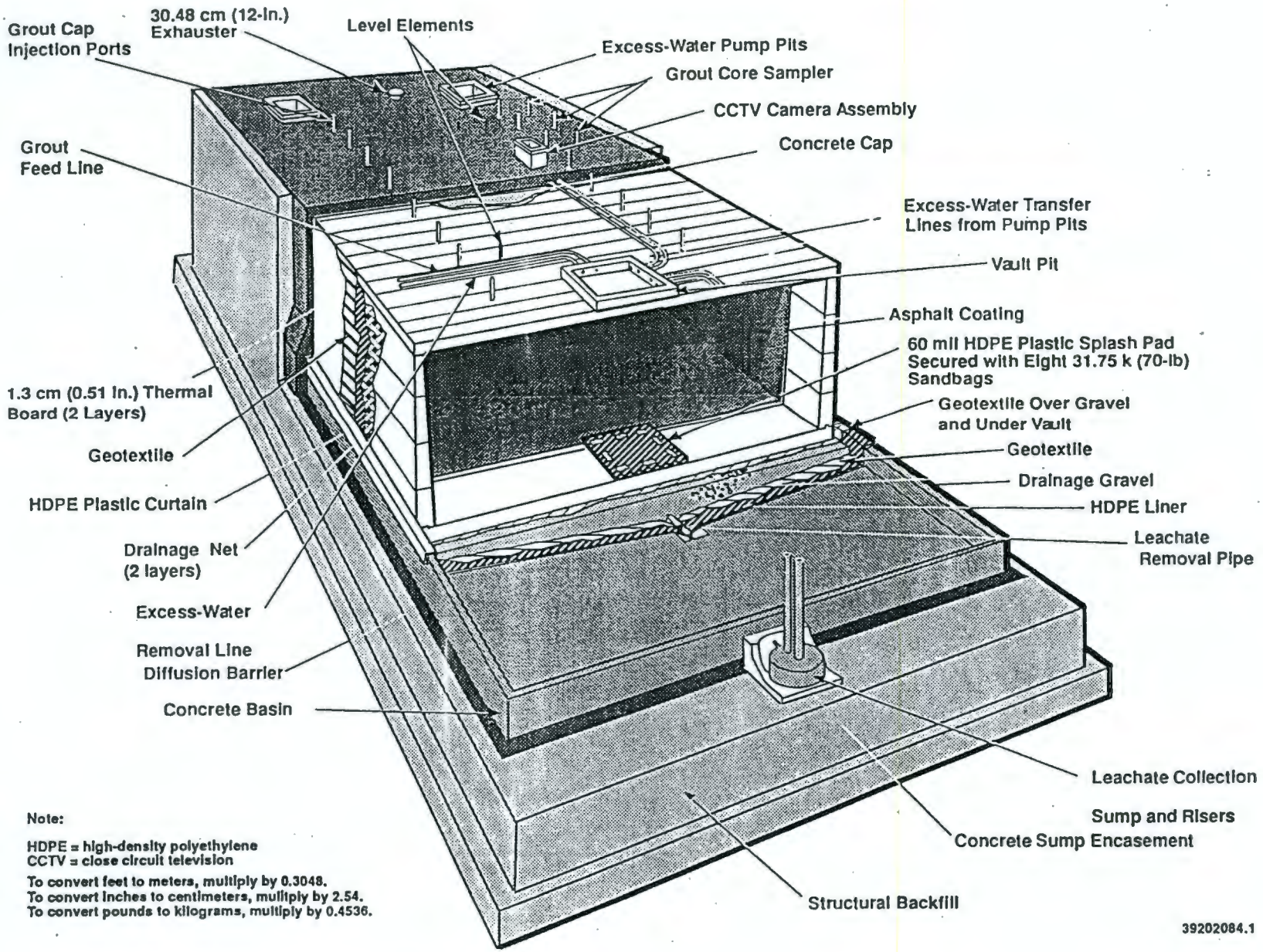
Vault Arrangement



39202084.4

9713532.0419

9713532.0420

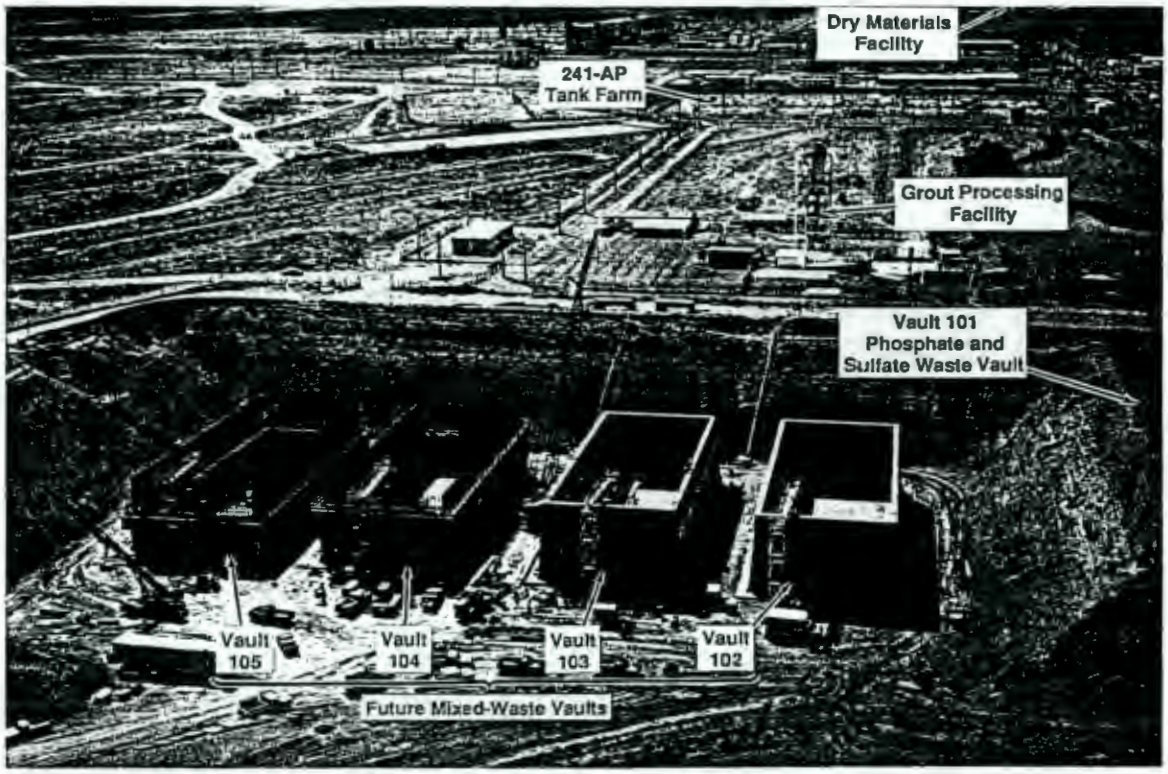


Note:

HDPE = high-density polyethylene
CCTV = close circuit television

To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.
To convert pounds to kilograms, multiply by 0.4536.

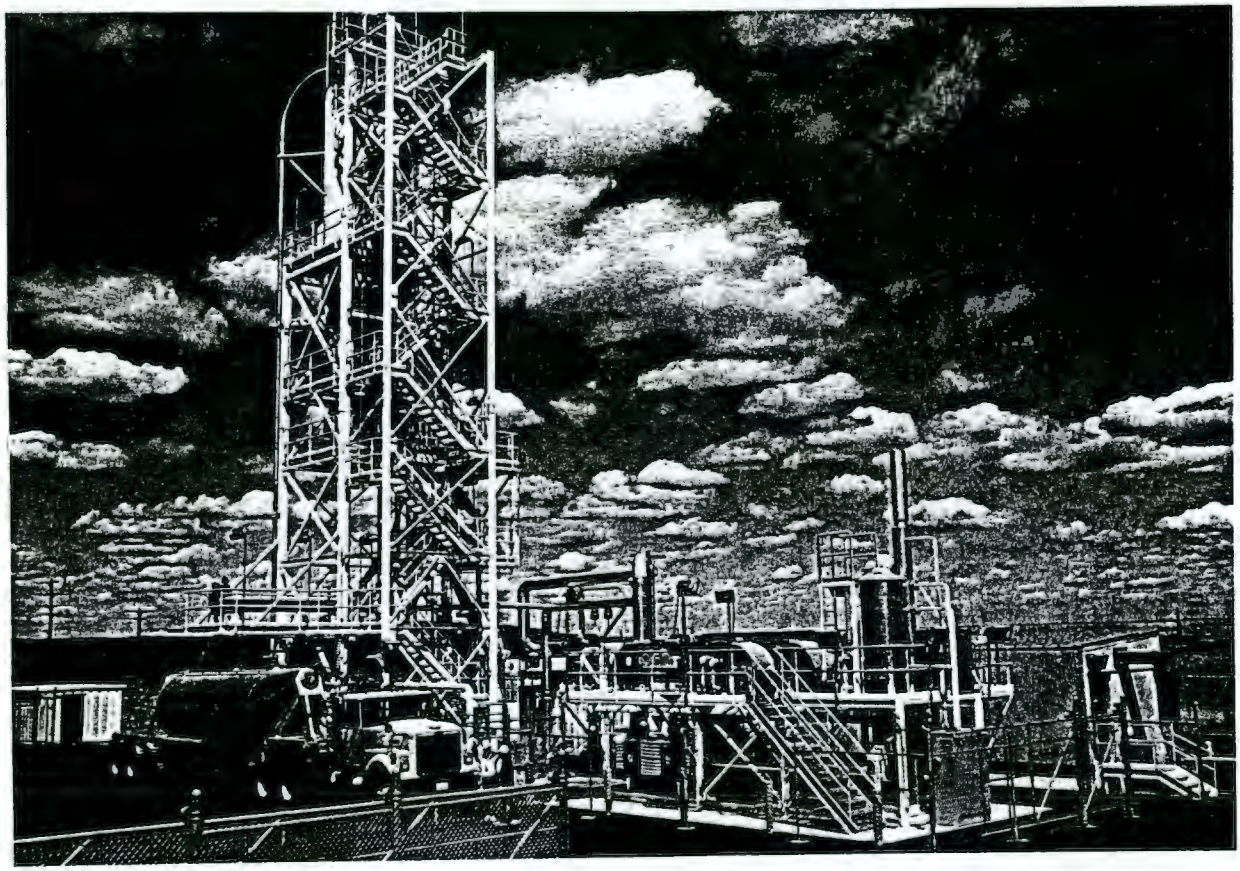
GROUT TREATMENT FACILITY AERIAL VIEW



46°33'04"
119°30'44"

39202084.2
(PHOTO TAKEN 1991)

GROUT TREATMENT FACILITY

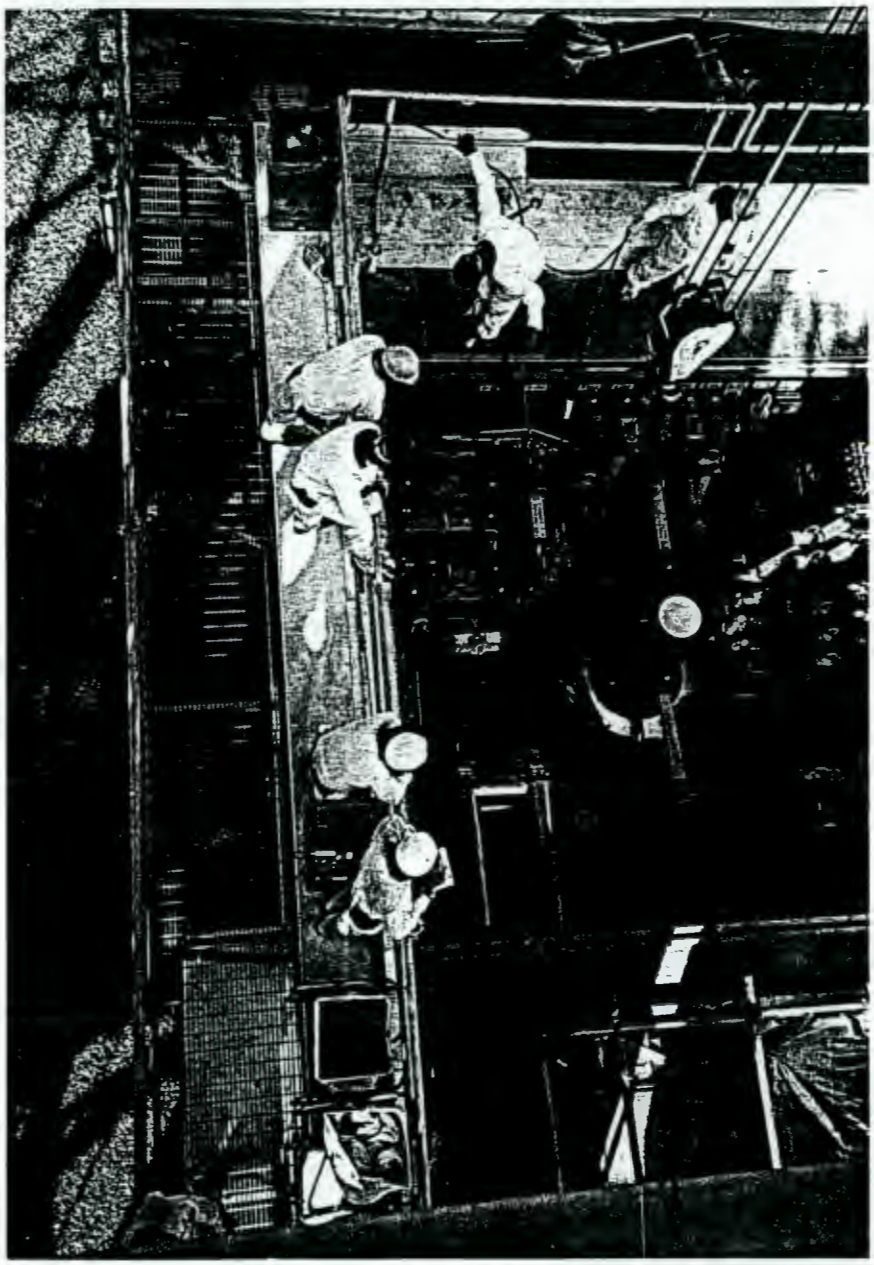


GROUT PROCESSING FACILITY

46°33'04"
119°30'44"

8802516-9CN
(PHOTO TAKEN 1988)

GROUT TREATMENT FACILITY



LIQUID COLLECTION TANK

46°33'04"
119°30'44"

89101636-13CN
(PHOTO TAKEN 1989)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 DAY 2 2 YR. 4 3 *FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. DAY YR. FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		6	T 0 4	3,785	V	
X-2	T 0 3	20	E		6	S 0 6	35,170	C	
1	S 0 2	292,990	L		7				
2	T 0 1	52,996	V		8				
3	T 0 4	1.8	W		9				
4	S 0 1	757,082	L		10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

Refer to the following pages.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T03 D80	
X-2	D 0 0 2	400	P	T03 D80	
X-3	D 0 0 1	100	P	T03 D80	
X-4	D 0 0 2			T03 D80	Included with above

 CONTINUE ON PAGE 3

FORM 3 DANGEROUS WASTE PERMIT APPLICATION
U.S. ENVIRONMENTAL PROTECTION AGENCY/STATE IDENTIFICATION NUMBER WA7890008967

Section III.C., Description of Process Codes Listed in Section III.A.

The T Plant Complex (T Plant) began waste management operations in January of 1957. This unit is located in the 200 West Area of the Hanford Facility and consists of two main structures: the 221-T Building (221-T) and the 2706-T Building and 2706-TA Building (2706-T). Various support structures and storage units also are found within T Plant. The 221-T and 2706-T buildings are used for the storage (tank, container, and miscellaneous equipment) and treatment (tank, container, and decontamination activities) of mixed and/or dangerous waste before transfer to an onsite treatment, storage, and/or disposal (TSD) unit or offsite TSD facility. The various support structures and storage units are used for storage, sampling, and treatment of mixed and/or dangerous waste. The T Plant boundary is defined by the chain link fence enclosing the complex.

The following are the storage and treatment processes for T Plant.

S02

Liquid mixed waste from decontamination and treatment activities within T Plant enters the T Plant tank system and is stored until transferred to a TSD unit that is capable of managing this waste.

The liquid mixed waste from 2706-T decontamination activities currently is stored in the railroad pit sump [23,000 liters (6,100 gallons)] located in 2706-T. The liquid mixed waste is transferred by underground piping from 2706-T to the 211-T collection sump (211-T sump) [15,000 liters (3,900 gallons)], located on the east side of 2706-T, and is transferred to the 221-T tank system. The liquid mixed waste automatically is pumped to the 221-T tank system when the waste reaches a designated level in the 211-T sump. The maximum tank storage design capacity that is maintained for the railroad pit sump and 211-T sump is 38,000 liters (10,000 gallons).

Liquid mixed waste from 2706-T and 221-T decontamination and treatment activities currently is stored in the 221-T tank system. The 221-T tank system consists of six stainless steel storage tanks: tank 5-6 [17,400-liter (4,600-gallon) design capacity], tank 5-7 [38,000-liter (10,000-gallon) design capacity], tank 5-9 [18,200-liter (4,800-gallon) design capacity], tank 6-1 [76,000-liter (20,000-gallon) design capacity], tank 11-R [53,000-liter (14,000-gallon) design capacity], and tank 15-1 [53,000-liter (14,000-gallon) design capacity]. The tanks are located in reinforced concrete cells within 221-T. The maximum tank storage design capacity of the six storage tanks is 255,600 liters (67,400 gallons).

In a future process, the liquid mixed waste from 2706-T decontamination activities will be transferred and stored in proposed tanks located outside of 2706-T. The addition of these proposed storage tanks will eliminate the need for storage in the railroad pit and 211-T sumps. With the addition of the proposed storage tanks, liquid mixed waste would no longer be transferred to the 221-T tank system but could be transported to an onsite TSD unit or offsite TSD facility that is capable of managing this waste. It is anticipated that the new tanks will have a total design capacity of 114,000 liters (30,000 gallons).

Section III.C., Description of Process Codes Listed in Section III.A. (Continued)

The maximum volume of liquid mixed waste (Process Design Capacity) that will be stored at T Plant in existing tanks at any time is 292,990 liters (77,400 gallons). The T Plant tank systems will be managed in a manner that ensures that the Process Design Capacity is not exceeded.

T01

Liquid mixed waste that is stored in the T Plant tank system is transferred to a TSD unit that is capable of managing this waste. If the liquid mixed waste is transferred by underground pipelines, railroad tank cars, or other transportation means, the T Plant tank system might be used to treat the waste before transfer. This treatment process makes the liquid mixed waste more amenable for transfer and/or storage. The maximum tank treatment process design capacity for tank 15-1 is 52,996 liters (14,000 gallons) per day.

T04

Decontamination and treatment activities occur in the 221-T canyon, 2706-T, and in other support facilities and units located within T Plant. Decontamination and treatment methods could incorporate a variety of technologies to remove contamination. The technologies include, but are not limited to, immersion treatment; spray batch treatment; and steam, water, ice, carbon dioxide, chemical, or abrasive blasting. Some equipment, discarded materials, or solid waste generated by decontamination processes might meet the definition of "debris" and could be treated by methods such as immobilization, encapsulation, or others (40 CFR 268.45). Items might be recycled or disposed on the Hanford Facility.

The 2706-T is used to decontaminate various types of equipment (e.g., tools, railroad equipment, buses, trucks, automobiles, cranes, earth moving equipment, and other large and small pieces of process equipment) by using steam, water, chemicals, abrasive blasting (e.g., ice, carbon dioxide) and/or other methods to remove the contamination. The decontamination activities in 2706-T occur over railroad and automotive pits. The railroad pit is 16.9 meters (55 feet) long by 5.2 meters (17 feet) wide by 1.8 meters (6 feet) deep. The automotive pit is 9.1 meters (30 feet) long by 1.2 meters (4 feet) wide by 1.8 meters (6 feet) deep. The liquid waste generated by this process currently is collected in the railroad pit sump, transferred to the 211-T sump, and transferred to the 221-T tank system.

Decontamination and treatment activities occur in 221-T in stainless steel immersion tanks (e.g., thimbles and troughs), immersion or spray batch treatment systems, enclosed abrasive blasting modules, designated areas on the canyon deck, or designated areas within the railroad tunnel. The activities consist of decontaminating and treating process equipment (i.e., pipelines, jumpers), other pieces of equipment (e.g., pumps, motors, damaged tools), and discarded materials. The process consists of placing the contaminated items in the immersion tanks, batch containment systems, treatment modules, or designated areas on the canyon deck and using steam, water, chemicals, abrasive blasting (e.g., ice, carbon dioxide) and/or other methods to remove contamination. Liquid mixed waste generated by this process

Section III.C., Description of Process Codes Listed in Section III.A. (Continued)

is transferred to the 221-T tank system and then to a TSD unit that is capable of managing this waste. Some equipment, discarded materials, or solid waste could be immobilized or encapsulated before leaving T Plant.

The treatment capacity for waste that is decontaminated is based on the weight of the waste. The maximum treatment process design capacity within T Plant is 1.8 metric tons (2 tons) per hour.

S01, T04

Storage and treatment of dry and liquid mixed and dangerous waste in various sized containers, including railroad cars, could take place in the 221-T canyon, 221-T railroad tunnel, 2706-T, 214-T storage building, and in other support structures and storage units located within the boundaries of T Plant. Container storage and treatment capability at T Plant is required to: (1) complete laboratory analysis and characterization of mixed and/or dangerous waste samples before transferring the waste to an approved onsite or offsite TSD unit; or (2) absorb, neutralize, immobilize, encapsulate, or otherwise stabilize the contents of some containers before transfer.

In some cases, other types of treatment could be required to make the waste more amenable for storage and/or disposal. Other types of treatments that could be implemented include those identified in WAC 173-303-380. Modular building(s) could be setup within T Plant for treating waste in containers. This modular building(s) could support treatment of particular waste type or could be used for several treatment activities for containerized waste.

The maximum container storage process design capacity is 757,082 liters (200,000 gallons); and the maximum container treatment process design capacity is 3,785 liters (1,000 gallons) per day.

S06

The designation S06 (containment building/storage) indicates that solid mixed waste is stored on the canyon deck, in the 221-T railroad tunnel, and in various cells in the 221-T canyon and 2706-T. This waste is considered to be stored in a containment building subject to the requirements of 40 CFR 265, Subpart DD rather than a waste pile subject to the requirements of 40 CFR 265, Subpart L. The solid mixed waste consists of process equipment, jumpers, and various other items awaiting decontamination, treatment, or repackaging prior to final disposition.

The maximum storage miscellaneous process design capacity in 221-T and 2706-T is 35,170 cubic meters (46,000 cubic yards).

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008987

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D001	126,552,271	K	S02 T01 T04	Storage-Tank/Treatment-Tank-Other
2	through				(Decontamination Activities)
3	D011				
4	D018				
5	D019				
6	D022				
7	D028				
8	through				
9	D030				
10	D033				
11	through				
12	D036				
13	D038				
14	through				
15	D041				
16	D043				
17	WT01				
18	WT02				
19	WP01				
20	WP02				
21	F001				
22	through				
23	F005				
24	F039				Included With Above
25					
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)* WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D001	907.185	K	S01 T04	Storage-Container/Treatment-Other
2	through				
3	D043				
4	WT01				
5	WT02				
6	WP01				
7	through				
8	WP03				
9	W001				
10	WSC2				
11	F001				
12	through				
13	F005				
14	F020				
15	through				
16	F023				
17	F026				
18	through				
19	F028				
20	F039				
21	U001				
22	through				
23	U012				
24	U014				
25	through				
26	U039				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	U041		K	S01 T04	Storage-Container/Treatment-Other
2	through				(Continued)
3	U053				
4	U055				
5	through				
6	U064				
7	U066				
8	through				
9	U099				
10	U101				
11	through				
12	U103				
13	U105				
14	through				
15	U174				
16	U176				
17	through				
18	U194				
19	U196				
20	U197				
21	U200				
22	through				
23	U223				
24	U225				
25	through				
26	U228				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	U232		K	S01	T04			Storage-Container/Treatment-Other
2	through							(Continued)
3	U240							
4	U243							
5	through							
6	U249							
7	U328							
8	U353							
9	U359							
10	P001							
11	through							
12	P018							
13	P020							
14	through							
15	P024							
16	P026							
17	through							
18	P028							
19	P030							
20	P031							
21	P033							
22	P034							
23	P036							
24	through							
25	P051							
26	P054							

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)* WA7890089967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	P056		K	S01	T04			Storage-Container/Treatment-Other
2	through							(Continued)
3	P060							
4	P062							
5	through							
6	P078							
7	P081							
8	P082							
9	P084							
10	P085							
11	P087							
12	through							
13	P089							
14	P092							
15	through							
16	P099							
17	P101							
18	through							
19	P116							
20	P118							
21	through							
22	P123							Included With Above
23	D001	4,535,924	K	S06				Containment Building/Storage
24	through							
25	D011							
26	D018							

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)* WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D019		K	S06	Containment Building/Storage
2	D022				(Continued)
3	D028				
4	through				
5	D030				
6	D033				
7	through				
8	D036				
9	D038				
10	through				
11	D041				
12	D043				
13	WT01				
14	WT02				
15	WP01				
16	WP02				
17	F001				
18	through				
19	F005				
20	F039				
21	WSC2				Included With Above
22					
23					
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The T Plant is used for the treatment and storage of mixed waste and/or dangerous waste.

The dangerous waste numbers identified in Section IV.A. are associated with mixed and/or dangerous waste that could be stored and/or treated at T Plant. The mixed and/or dangerous waste consists of listed waste, characteristic waste, waste from nonspecific sources, toxicity characteristic waste, and state-only waste (extremely hazardous and dangerous waste). Multi-source leachate (F039) is included as a waste derived from nonspecific source waste numbers F001 through F005.

The estimated annual quantities of mixed waste listed for S01, S02, S06, T01, and T04 and dangerous waste for S01 and T04 represent the quantities of dry and liquid waste that are planned to be stored and treated at T Plant. Future operations could necessitate an increase in excess of these estimates and a revision could be pursued as required by WAC 173-303.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner

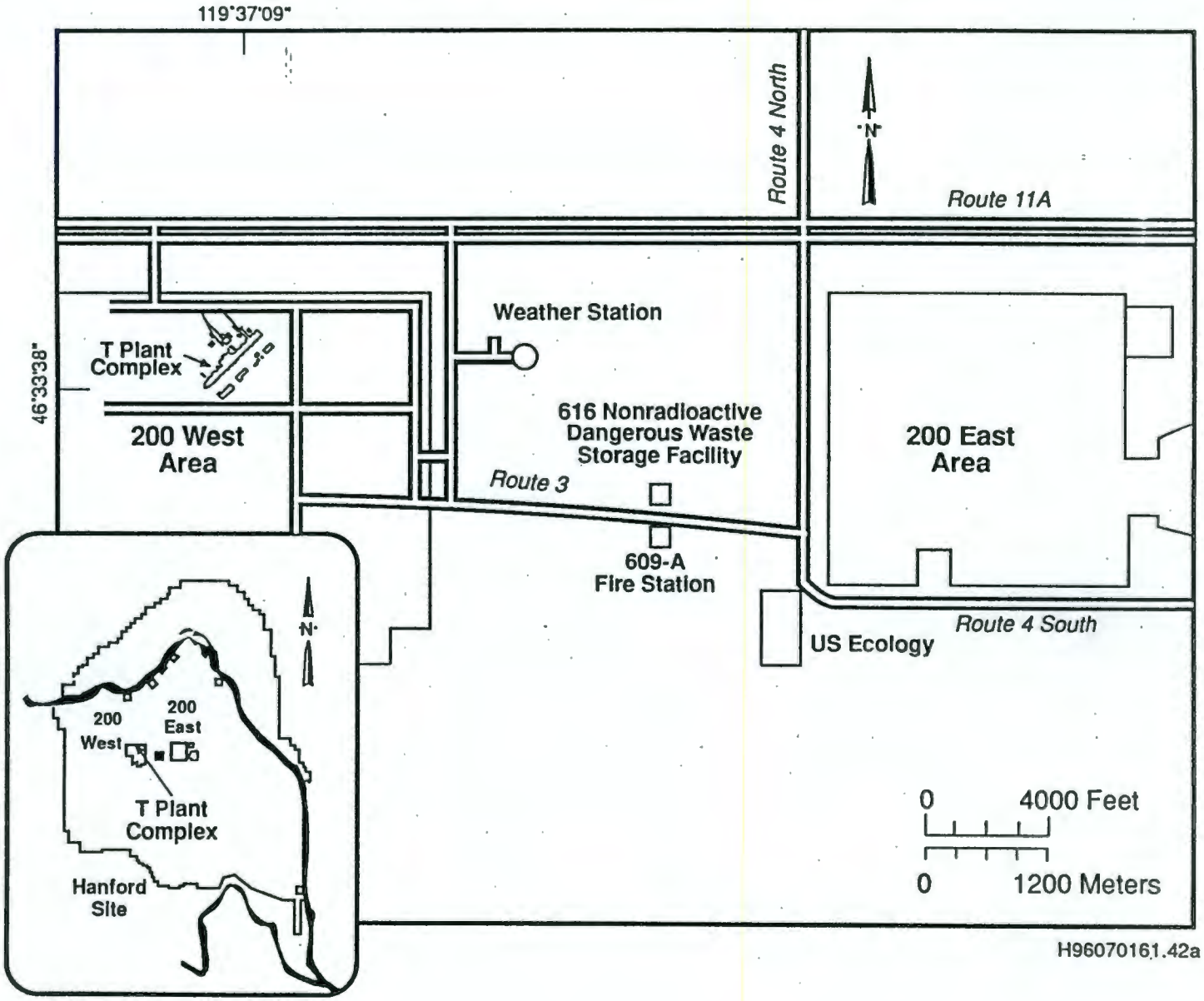
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

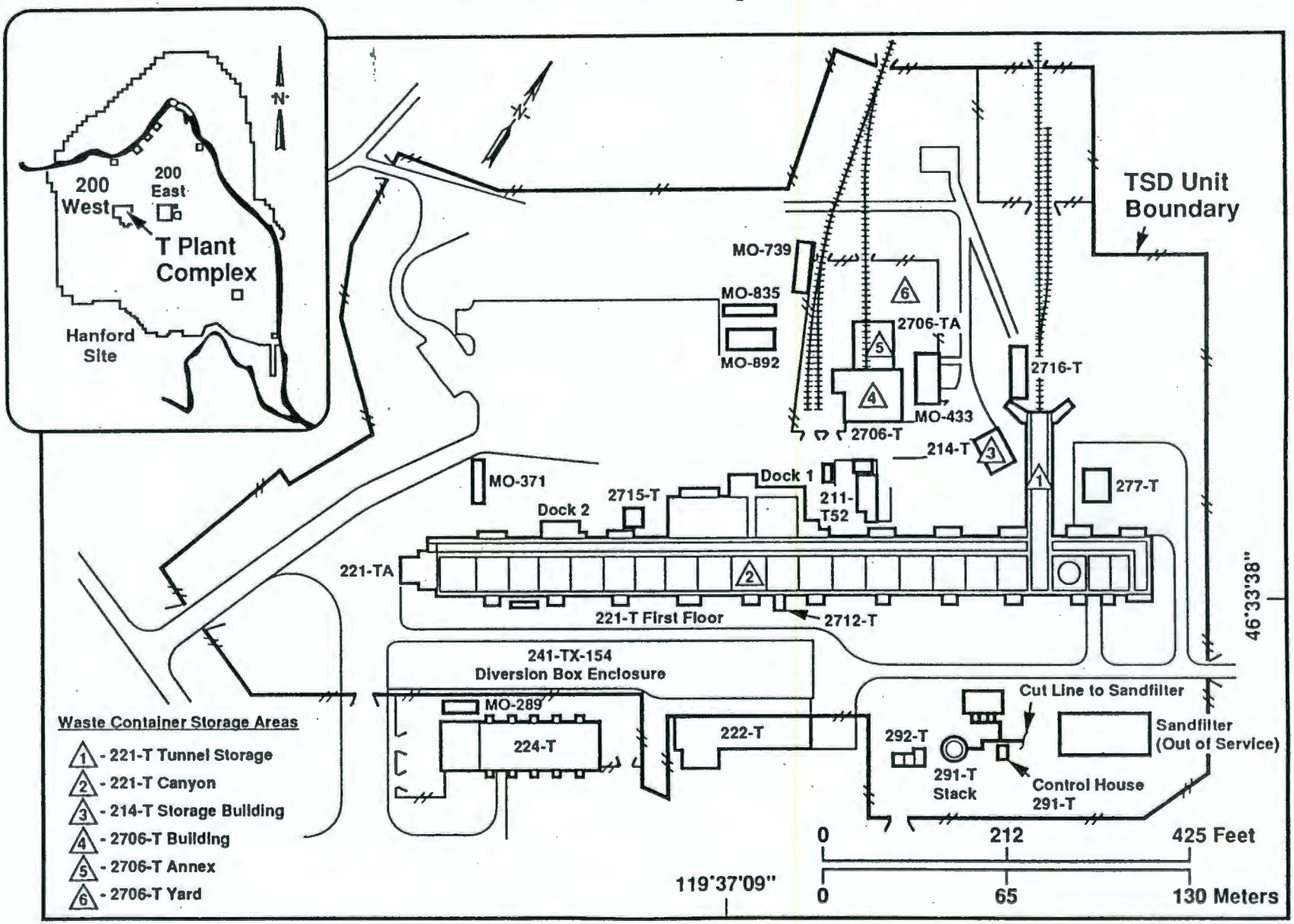
9/13/96
Date

T Plant Complex Location



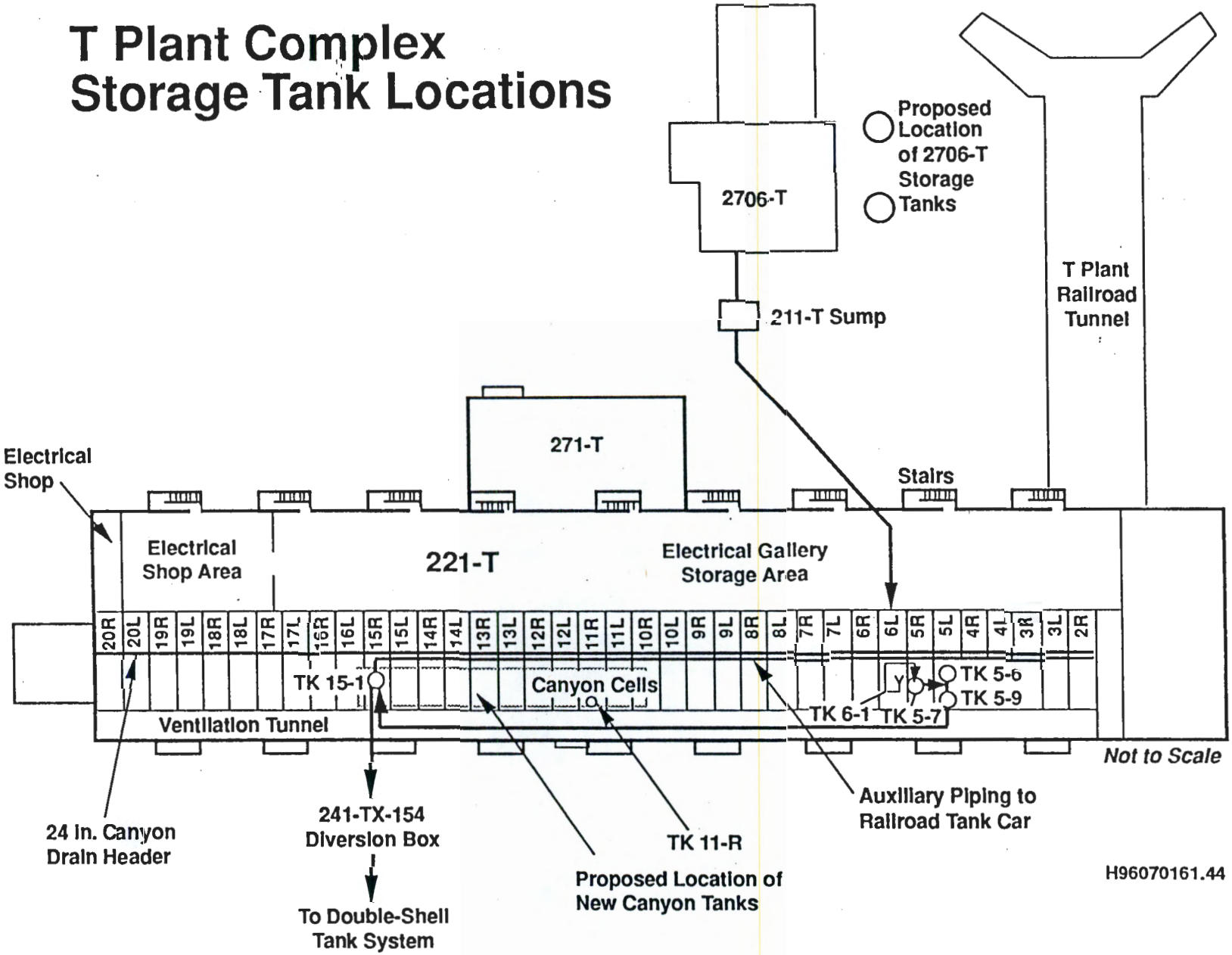
9713532.0437

T Plant Complex Site Plan



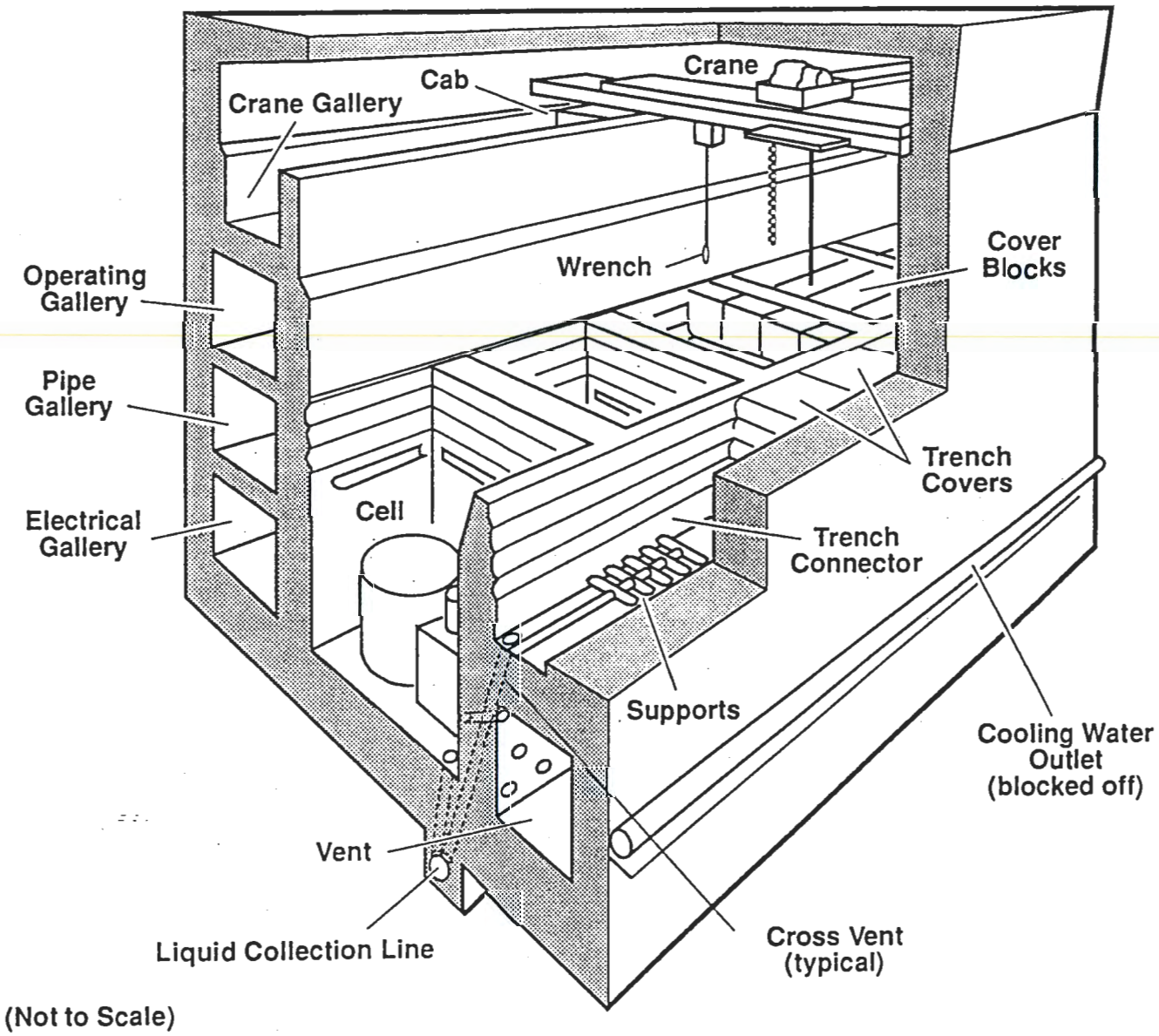
9713532.0438

T Plant Complex Storage Tank Locations



9713532.0439

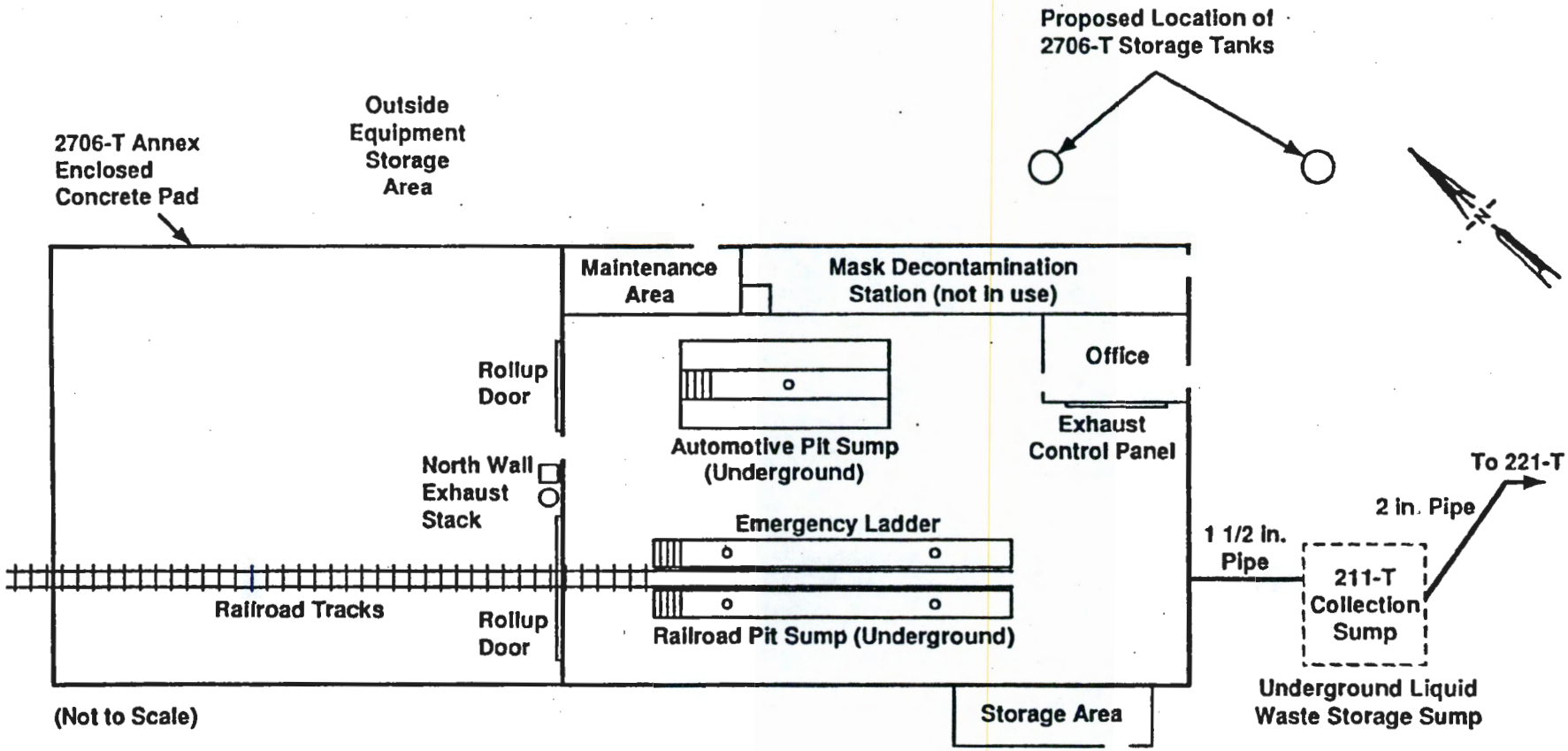
T PLANT COMPLEX - 221-T CUTAWAY



(Not to Scale)

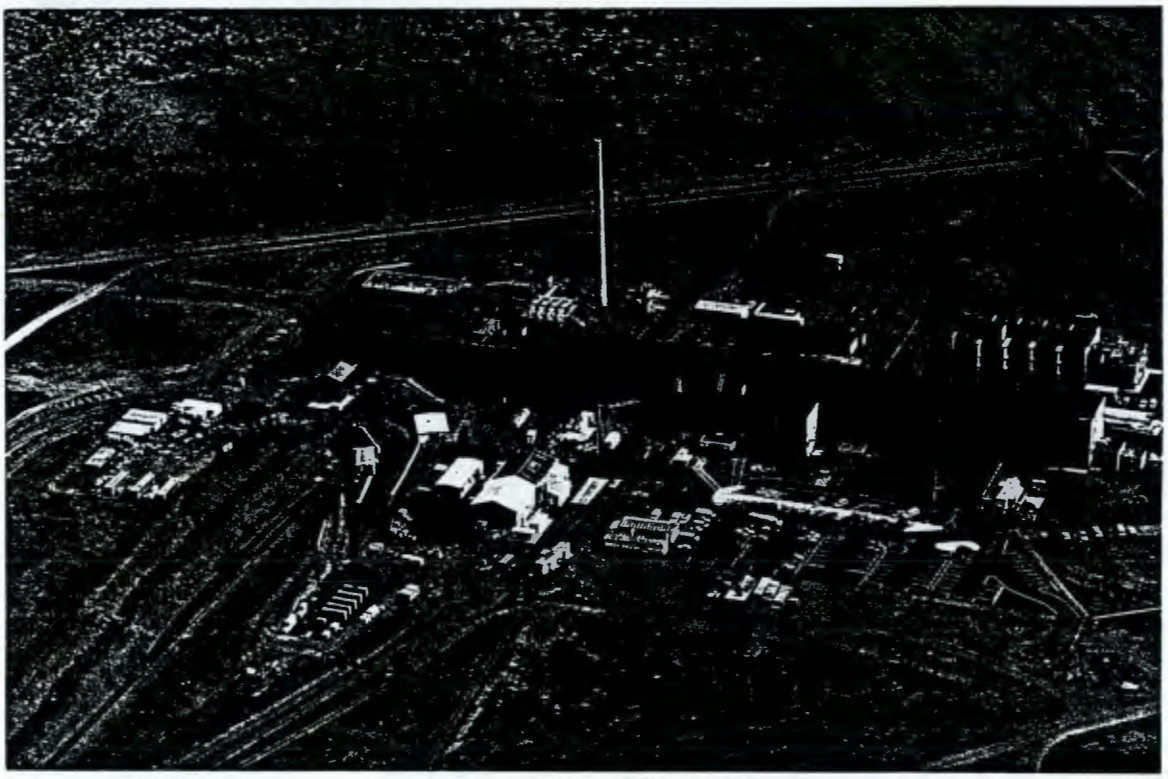
39503051.1

T Plant Complex - 2706-T Site Plan



9713532.0441

T PLANT COMPLEX AERIAL VIEW

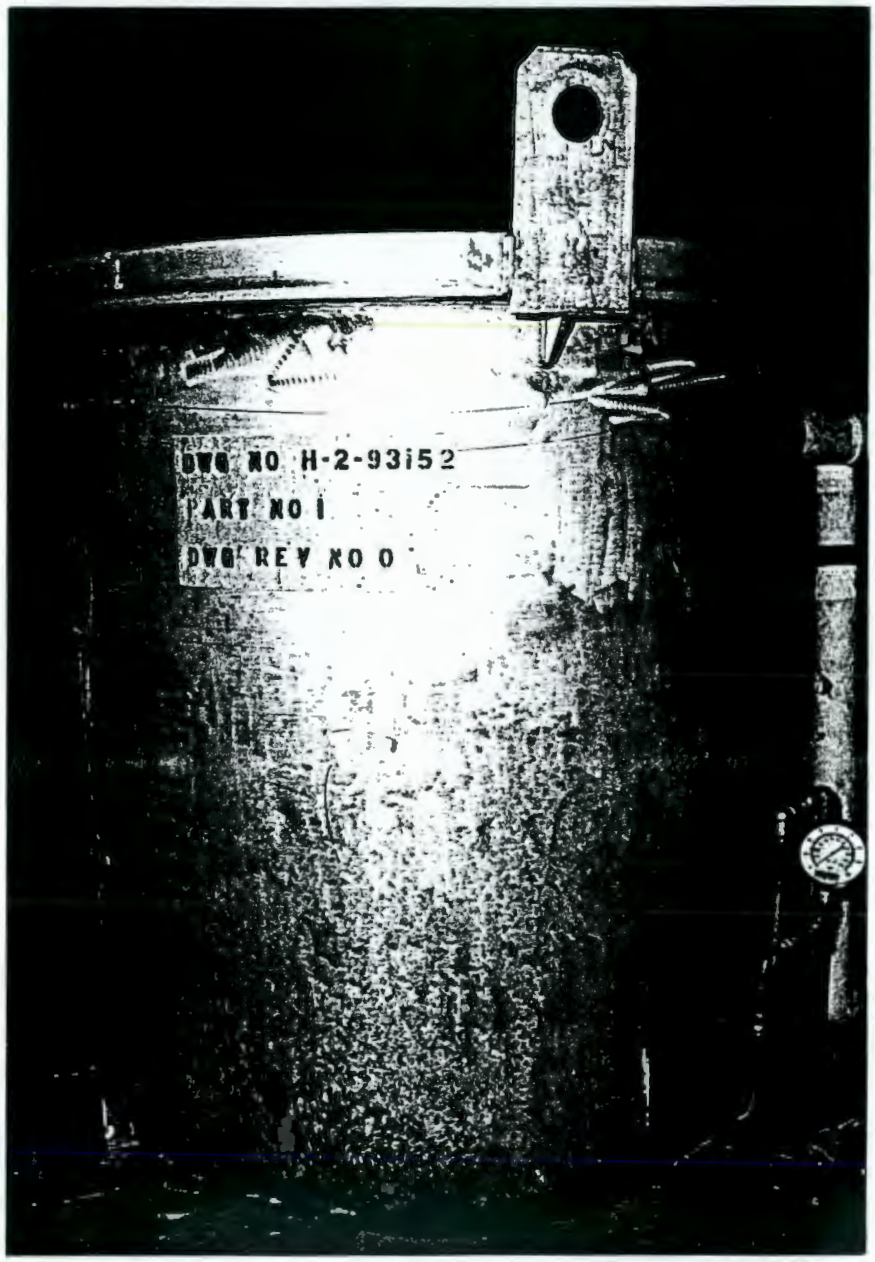


221-T BUILDING

46°33'38"
119°37'09"

95040488-24CN
(PHOTO TAKEN 1995)

T PLANT COMPLEX
221-T BUILDING

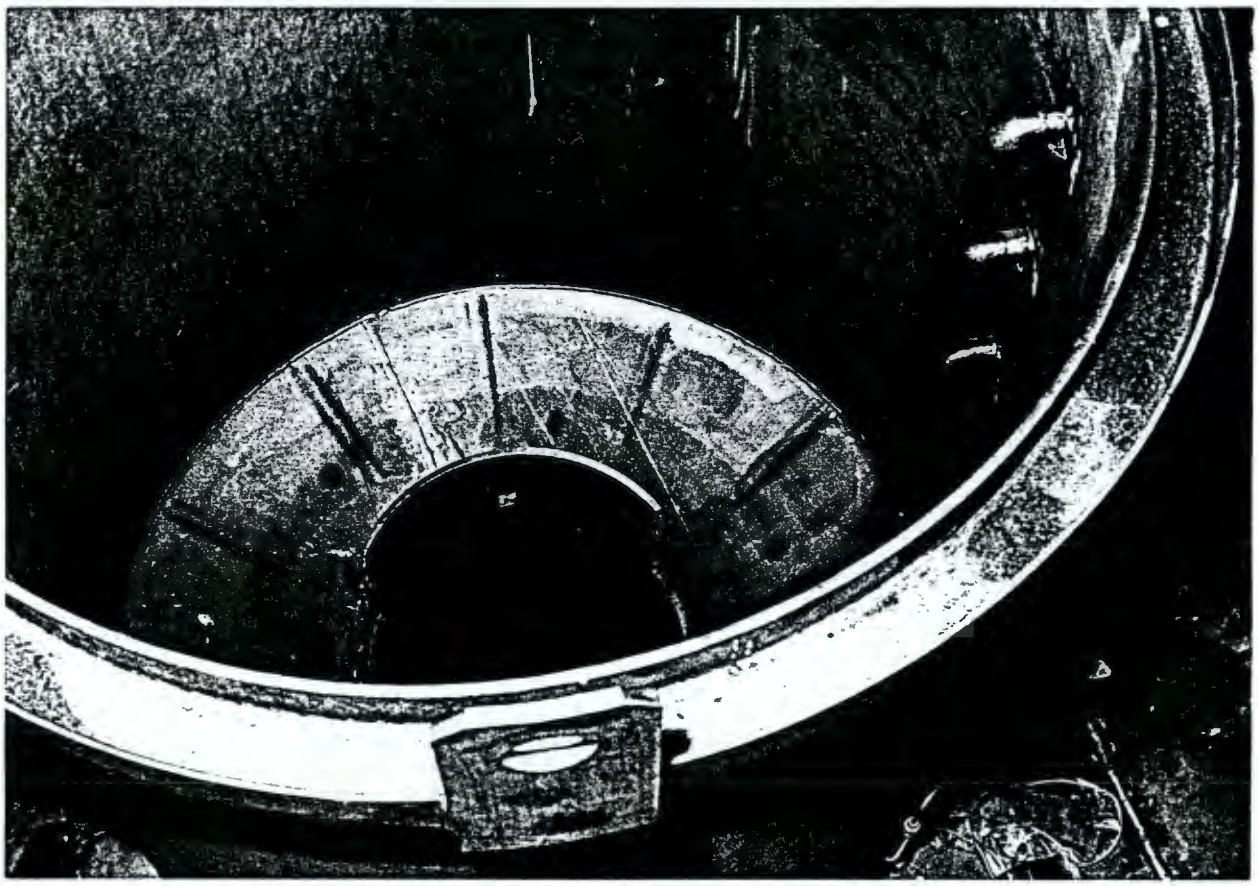


TYPICAL THIMBLE

46°33'38"
119°37'09"

93051132-3CN
(PHOTO TAKEN 1993)

T PLANT COMPLEX
221-T BUILDING

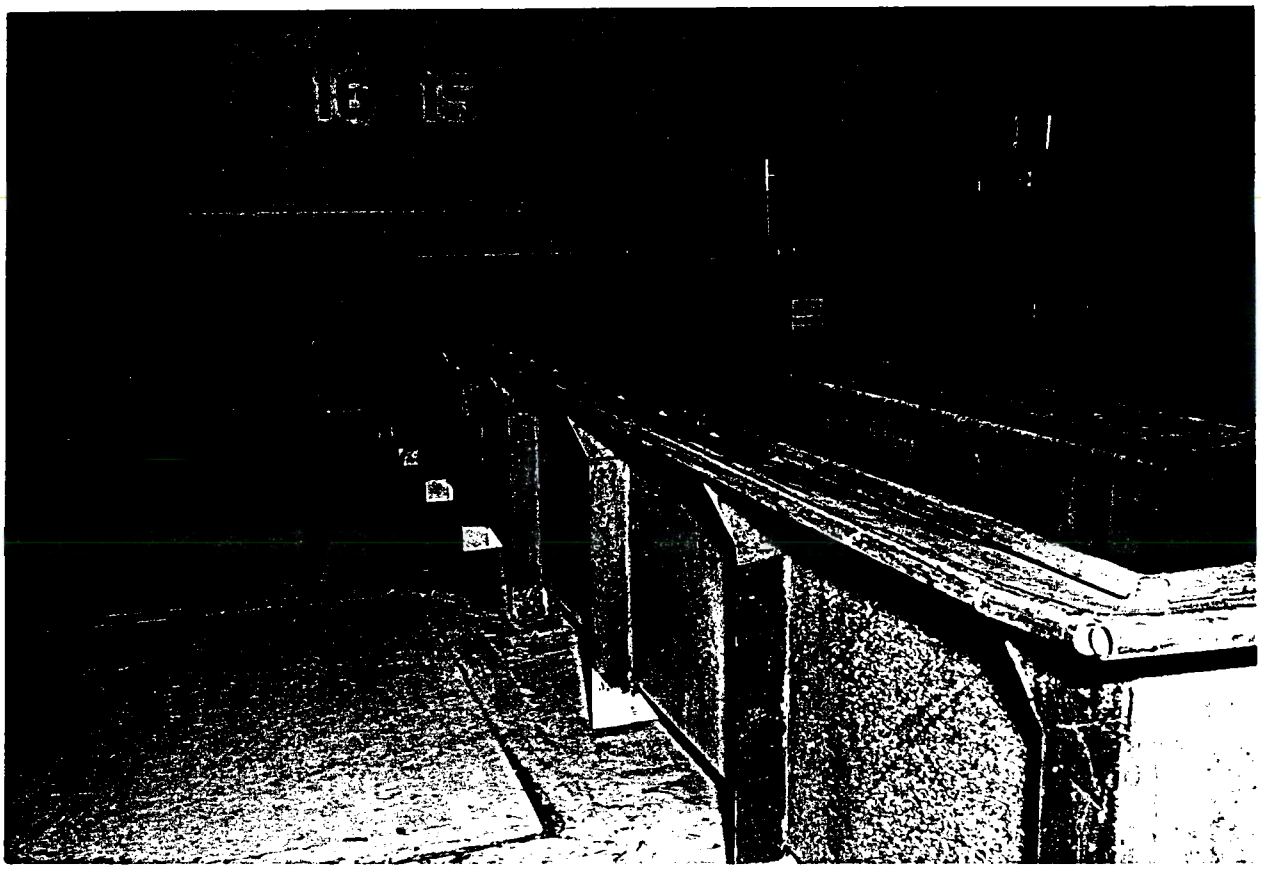


TYPICAL THIMBLE INTERNAL VIEW

46°33'38"
119°37'09"

93051473-9CN
(PHOTO TAKEN 1993)

T PLANT COMPLEX
221-T BUILDING



TYPICAL TROUGH

46°33'38"
119°37'09"

93060740-10CN
(PHOTO TAKEN 1993)

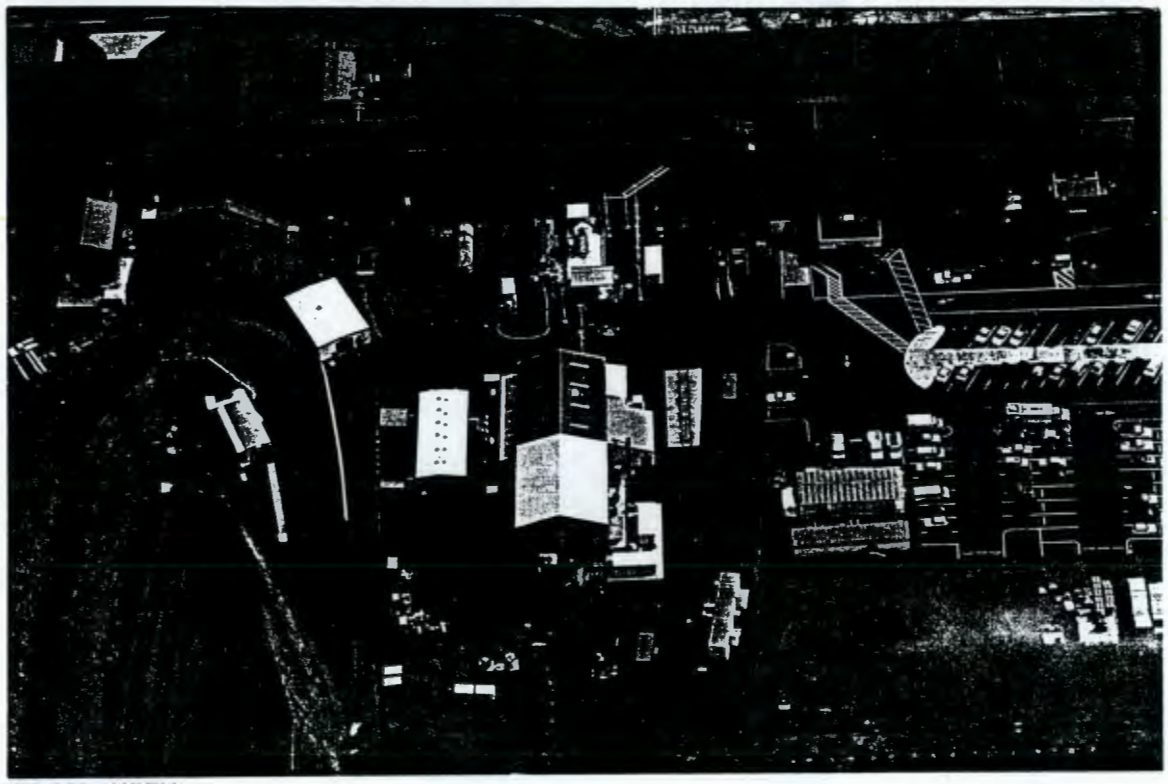
T PLANT COMPLEX
221-T BUILDING

CANYON DECK

46°33'38"
119°37'09"

93051132-8CN
(PHOTO TAKEN 1993)

T PLANT COMPLEX
2706-T BUILDING

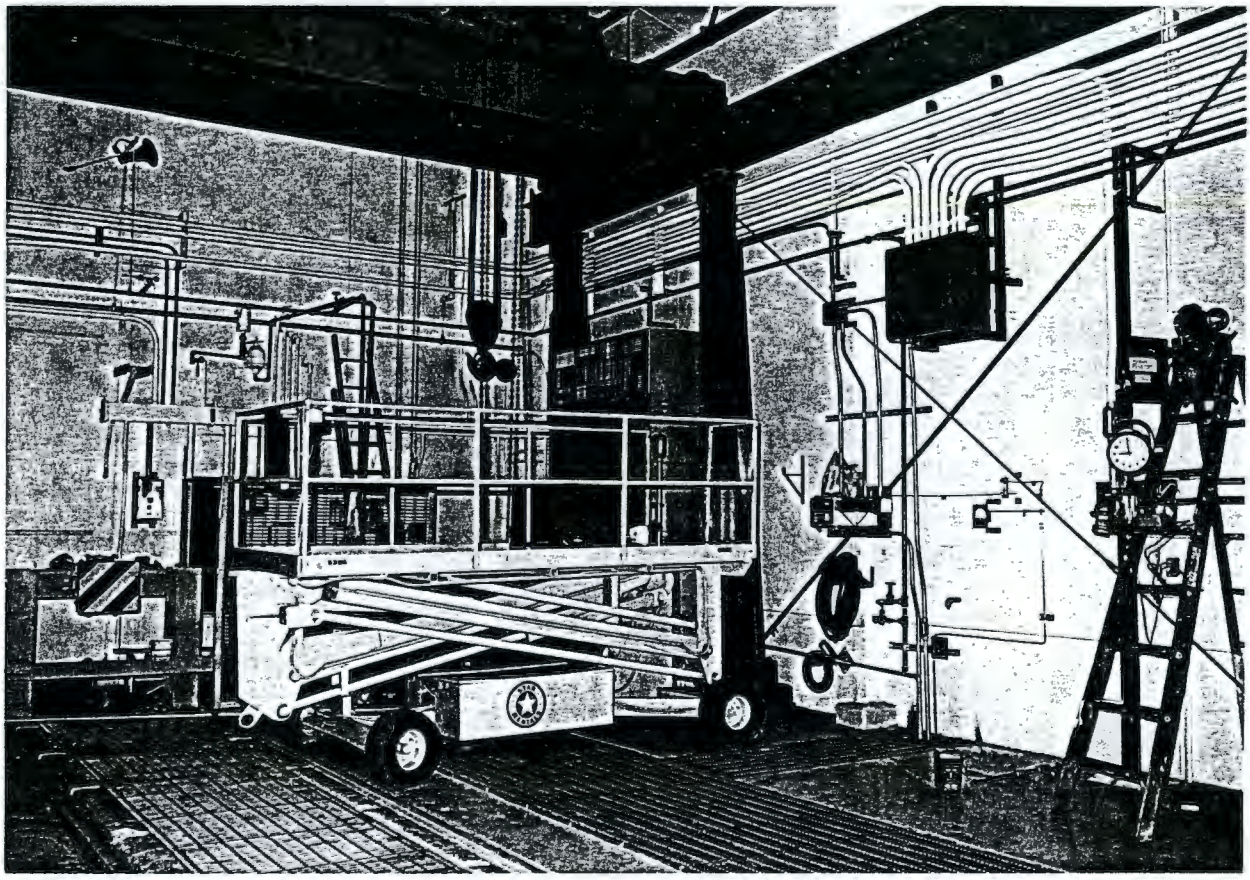


AERIAL VIEW

46°33'38"
119°37'09"

95040488-29CN
(PHOTO TAKEN 1995)

T PLANT COMPLEX
2706-T BUILDING

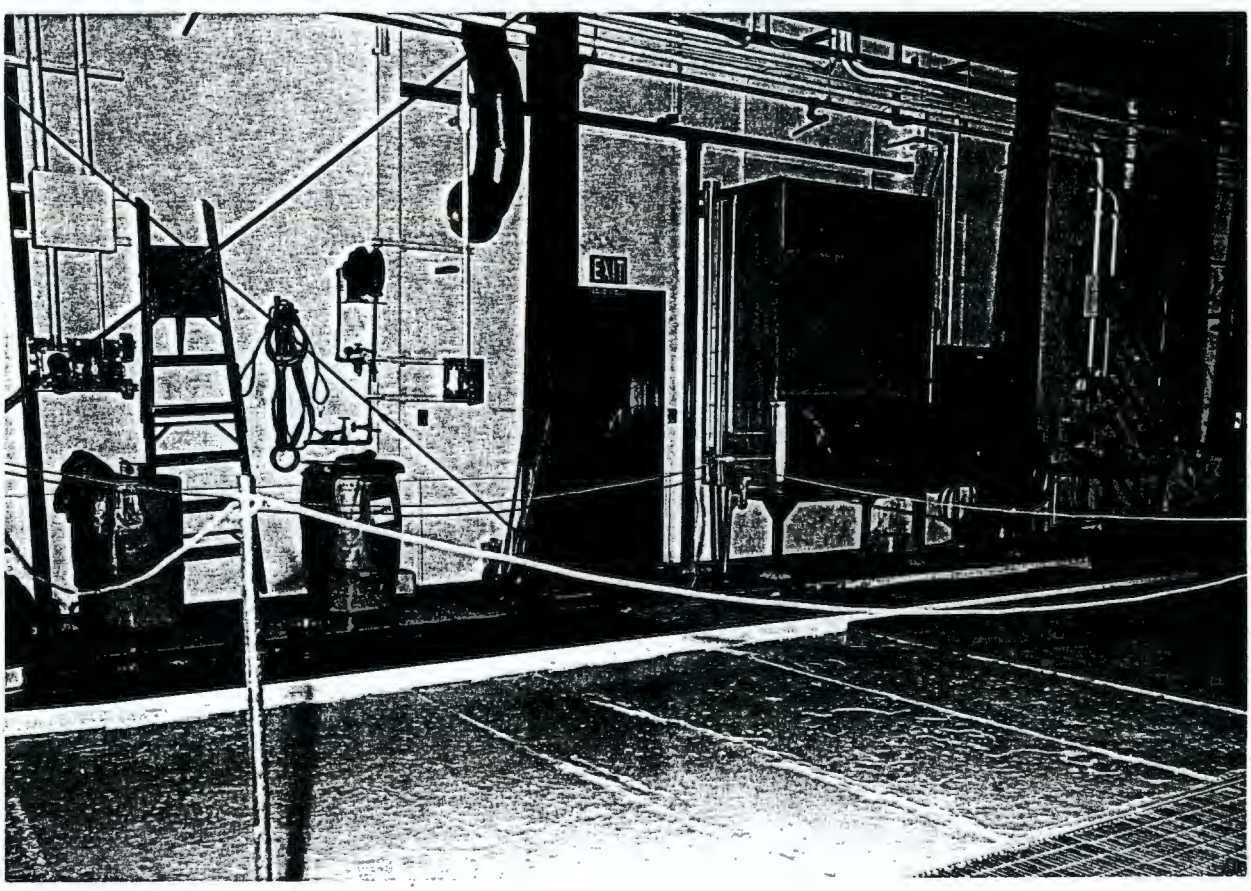


RAILROAD PIT

46°33'38"
119°37'09"

93040127-3CN
(PHOTO TAKEN 1993)

T PLANT COMPLEX
2706-T BUILDING

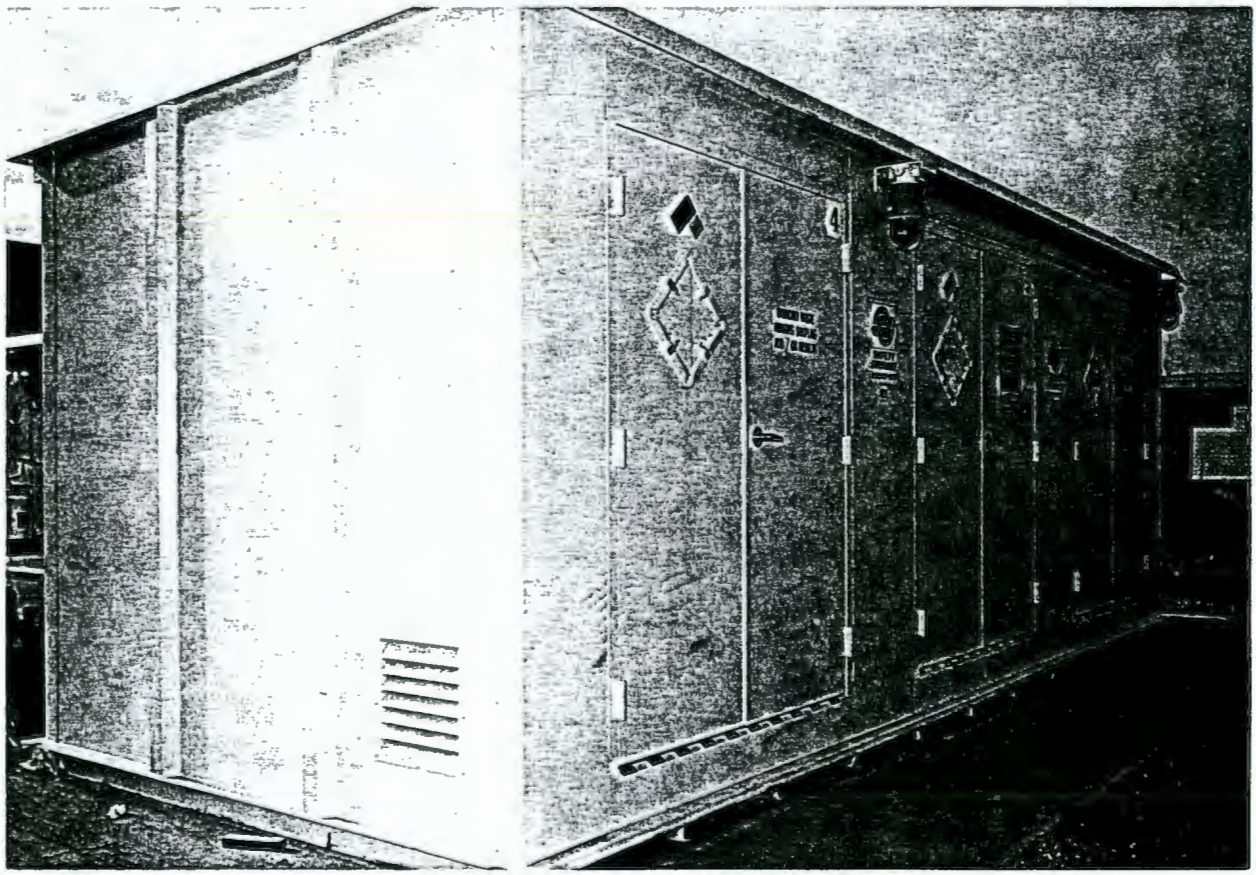


AUTOMOTIVE PIT

46°33'38"
119°37'09"

93040127-2CN
(PHOTO TAKEN 1993)

T PLANT COMPLEX



TYPICAL STORAGE BUILDING

46°33'38"
119°37'09"

93040127-13CN
(PHOTO TAKEN 1993)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 * FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr.)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 2	69,300	L		7				
2	T 0 1	16,277	V		8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

S02
The 241-Z Treatment and Storage Tanks (241-Z) support the Plutonium Finishing Plant (PFP), which was constructed in November 1948. The 241-Z consists of storage tanks D-4, D-5, D-7, D-8, and an overflow tank. Tank D-5 also serves as the waste treatment tank.. These tanks, located in the belowground portion of the 241-Z Building, have a combined storage capacity of 69,300 liters (18,307 gallons). Tanks D-4 and D-5 each have a capacity of 16,400 liters (4,332 gallons), while tanks D-7 and D-8 each have a capacity of 17,900 liters (4,729 gallons). The overflow tank, located in the D-7 Vault, has a capacity of 700 liters (185 gallons) and is in place to serve only in a capacity for receiving waste that might overflow from one of the other tanks. The overflow tank is not in place to serve as storage capacity for dangerous waste. The 241-Z accumulates and stores mixed waste generated from PFP process activities. The waste accumulated in 241-Z is transferred to tank D-5 for treatment. Once treated, the waste is stored in Tank D-5 before final transfer to the Double-Shell Tank (DST) System. The original construction of 241-Z included a fifth 16,400 liter (4,332 gallon) tank that also is located in the belowground portion of the facility. Tank D-6 was taken out of service and isolated from the 241-Z tank system in 1972 and never stored dangerous waste. The purpose of identifying Tank D-6 is to note its existence within the 241-Z Building, but not to include it with the tank system covered by the Part A, Form 3, for the 241-Z.

T01
Treatment that occurs in tank D-5 consists of a batch process that includes the addition of sodium hydroxide or potassium hydroxide, sodium nitrite, ferric nitrate, and water. The sodium hydroxide is added to adjust the pH of the waste to make the waste more amenable for transfer to the DST System. Ferric nitrate solution is added to provide 1 percent stable solids for transfer to the DST System, while water could be used to adjust the plutonium concentration of the waste to be transferred so that the waste meets the DST System criteria for acceptance. This treatment process makes the waste more amenable for transfer to the DST System. The maximum process design capacity for tank treatment is 16,277 liters per day (4,300 gallons per day).

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	Included with above

 CONTINUE ON PAGE 3

Continued from page 2.
NOTE: *Photocopy this page before completing if you have more than 26 wastes to list.*

. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	D002	1,360,777	K	T01	Treatment-Tank
2	D007				
3	D008				
4	D011				
5	D019				
6	WT01				
7	WT02				Included With Above
8	D002	2,494,758	K	S02	Storage-Tank
9	D007				
10	D008				
11	D011				
12	D019				
13	WT01				
14	WT02				Included With Above
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The waste received by the 241-Z from PFP process activities could be assigned one or more of the following dangerous waste numbers as determined through process knowledge, modeling, and some process sampling. Waste could designate corrosive (D002), and/or toxic for chromium (D007), lead (D008), silver (D011), or carbon tetrachloride (D019). Depending on the waste stream received, the waste also could designate as a state-only toxic dangerous waste (WT01 or WT02).

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

 CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner

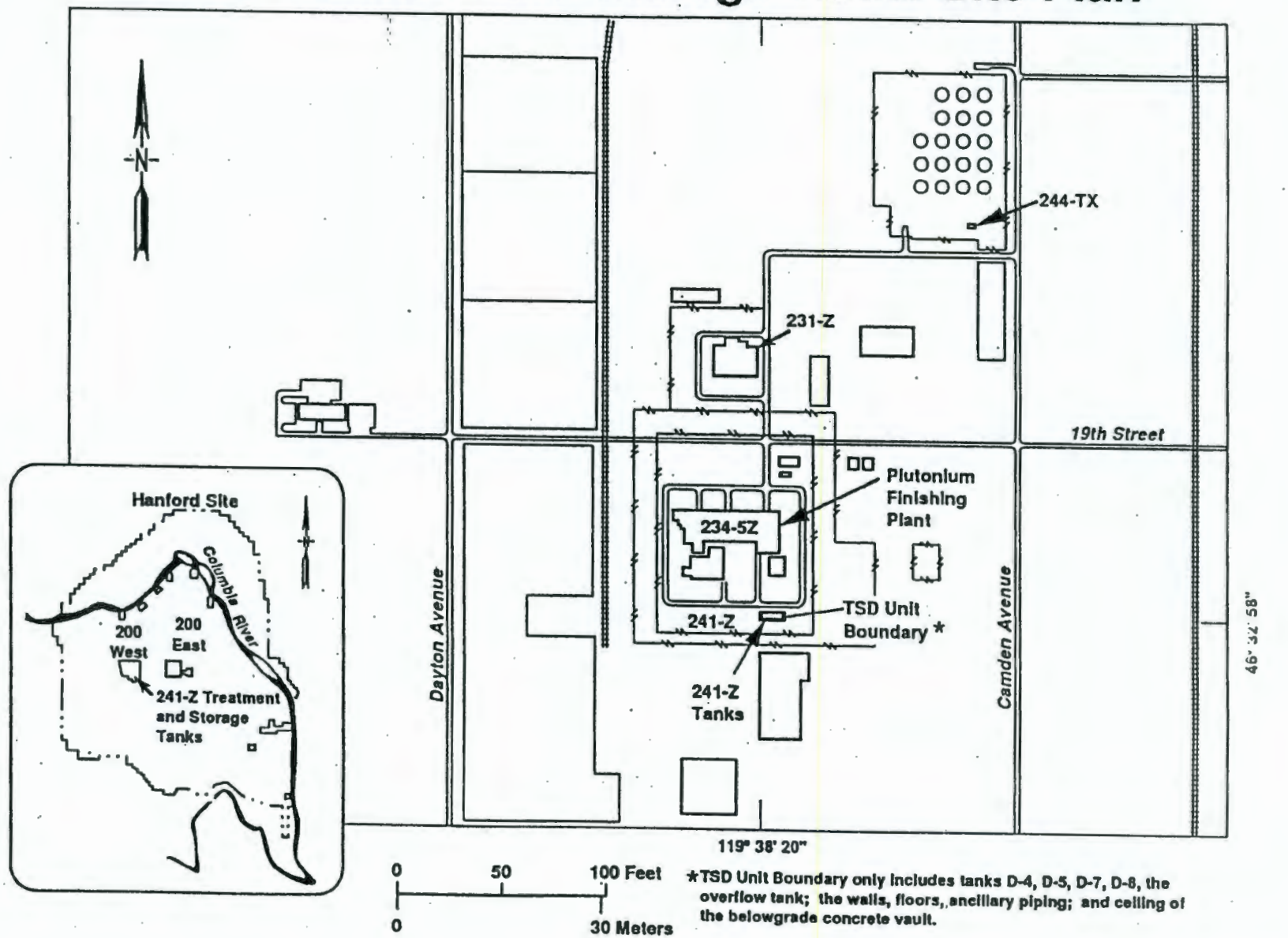
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/13/96
Date

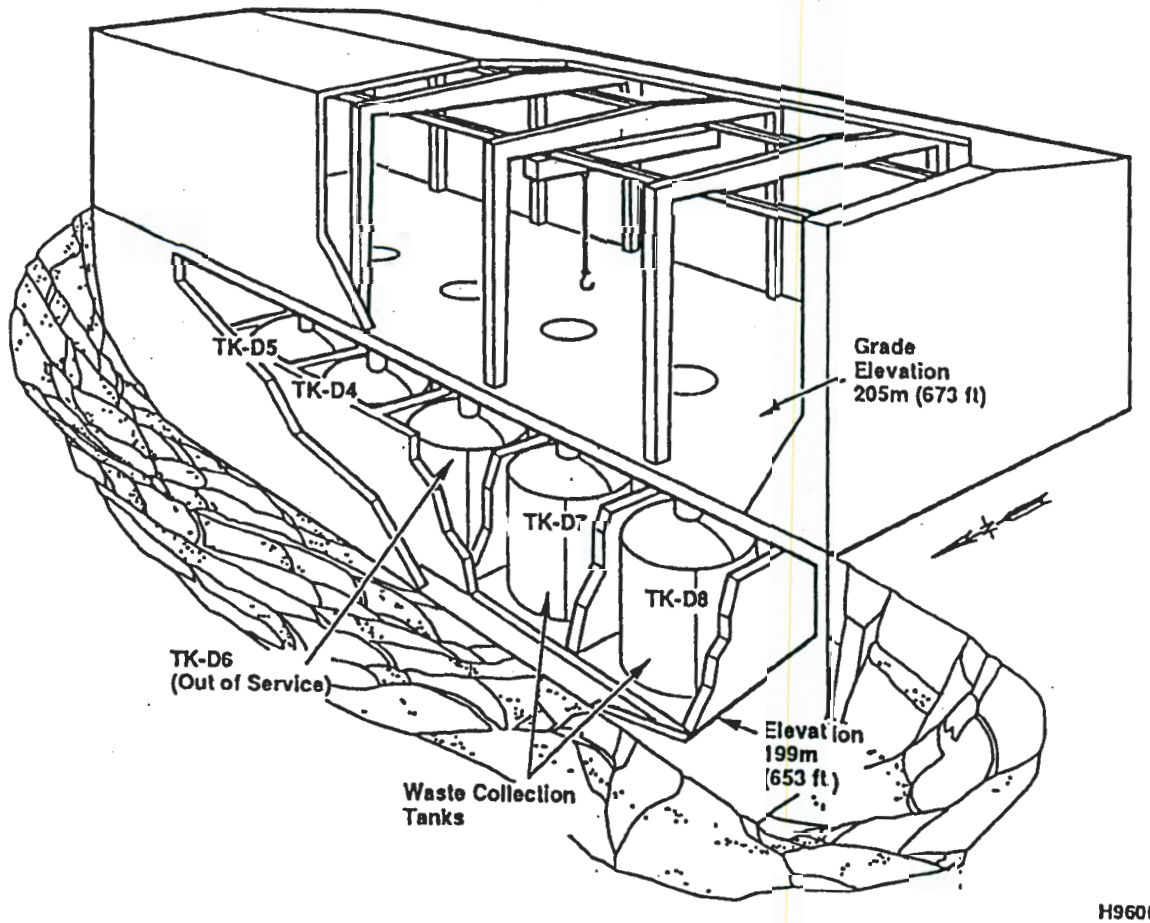
241-Z Treatment and Storage Tanks Site Plan



*TSD Unit Boundary only includes tanks D-4, D-5, D-7, D-8, the overflow tank; the walls, floors, ancillary piping; and ceiling of the belowgrade concrete vault.

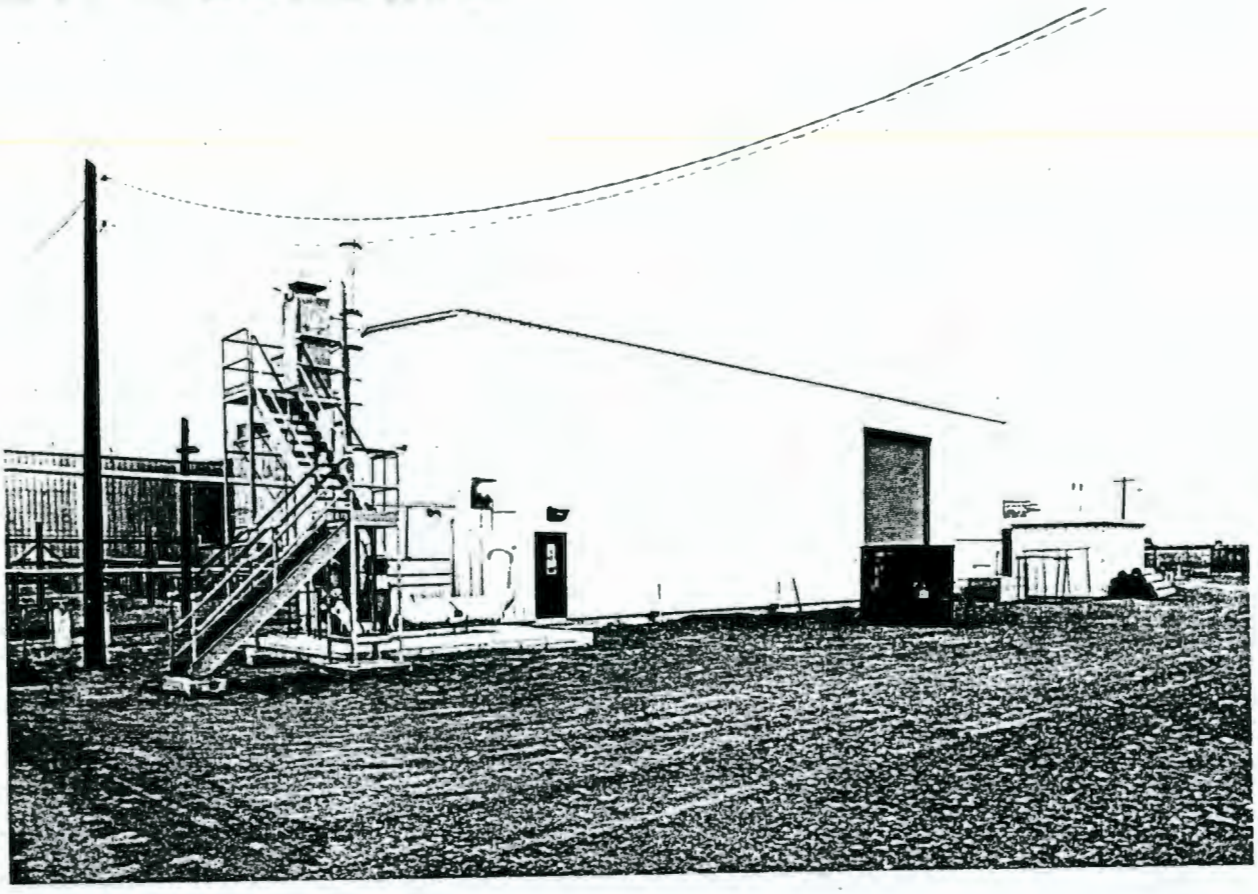
H96070161.5

241-Z Building
Cutaway View



H96050058.5

241-Z BUILDING



46°32'58"
119°38'20"

8706219-5CN
(PHOTO TAKEN 1987)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 *

FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR.

FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occuring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		6	S 0 6	35,170	C	
X-2	T 0 3	20	E		6	S 0 2	104,236	L	
1	S 0 2	347,056	L		7	S 0 2	348,020	L	
2	T 0 1	79,493	V		8				
3	T 0 1	27,633	V		9				
4	S 0 1	51,008	L		10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

Refer to the following pages.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*included with above*

CONTINUE ON PAGE 3

FORM 3 DANGEROUS WASTE PERMIT APPLICATION
U.S. ENVIRONMENTAL PROTECTION AGENCY/STATE IDENTIFICATION NUMBER WA7890008967

Section III.C., Description of Process Codes Listed in Section III.A.

B Plant, which was constructed in 1943 and began operation in April of 1945, is located in the northwestern portion of the 200 East Area. The first mission for B Plant was the recovery of plutonium using a bismuth phosphate chemical separation process (1945 to 1952). In the early 1960's, B Plant was modified for a second mission, the recovery and purification of cesium and strontium. The cesium and strontium were encapsulated and stored in the Waste Encapsulation and Storage Facility (WESF).

Presently, the B Plant Complex consists of two primary structures (the 221-B Building and the 271-B Building, shown on pages 13 and 16) and various support structures. However, the 271-B Building does not treat, store, and/or dispose of mixed and/or dangerous waste and therefore is not included in the B Plant Complex treatment, storage, and/or disposal (TSD) unit boundary. The 221-B Building contains four dangerous waste storage and/or treatment tank systems, Cell 4 container storage, and containment building storage. A typical cell is 5.5 meters (18 feet) long by 3.9 meters (13 feet) wide by 8.5 meters (28 feet) deep. Each cell is covered with four concrete cover blocks. In addition, the 221-B Building is made of reinforced concrete and is 259.1 meters (850 feet) long by 20.7 meters (68 feet) wide by 22.5 meters (74 feet) high, covering an area of 5,369.8 square meters (57,800 square feet).

The B Plant Complex currently supports the safe management and storage of the B Plant and WESF radionuclide inventory. Mixed and/or dangerous waste activities at the B Plant Complex include organic mixed waste storage (both within the 221-B Building and tanks located outside), containerized non-liquid waste storage, and other waste handling operations. These operations are primarily carried out in the 221-B Building, which uses a remote process cell design to house the process tanks and associated equipment as discussed in the previous paragraph. Additional operations also are carried out in the 221-BF Building and the 221-BB Building.

S02/T01

The neutralized current acid waste (NCAW) was transferred to the B Plant Complex (221-B Building) for the Tank Waste Remediation pretreatment project. The NCAW inventory was transferred back to the Double-Shell Tank (DST) System in May 1993 after the Tank Waste Remediation pretreatment project was canceled. Although no waste currently is being stored or treated, and there is no intention of future storage or treatment of any waste in this tank system, the system is included to reflect past operations. The tanks that comprise the NCAW storage and treatment tank system are as follows: TK-6-2 [19,684 liter (5,200 gallon) capacity], TK-7-1 [19,306 liter (5,100 gallon) capacity], TK-7-2 [18,927 liter (5,000 gallon) capacity], TK-8-1 [19,684 liter (5,200 gallon) capacity], TK-8-2 [19,684 liter (5,200 gallon) capacity], TK-13-1 [15,142 liter (4,000 gallon) capacity], TK-14-2 [14,763 liter (3,900 gallon) capacity], TK-29-3 [15,520 liter (4,100 gallon) capacity], TK-39-2 [6,814 liter (1,800 gallon) capacity], and TK-39-5 [7,571 liter (2,000 gallon) capacity].

The following tanks comprise the low-level waste storage and treatment tanks: TK-9-1 [19,684 liter (5,200 gallon) capacity], TK-9-2 [19,684 liter (5,200 gallon) capacity], TK-10-1 [37,839 liter (9,996 gallon) capacity], TK-24-1 [52,617 liter (13,900 gallon) capacity], TK-25-1 [18,548 liter (4,900 gallon) capacity], TK-25-2 [18,548 liter (4,900 gallon) capacity],

Section III.C., Description of Process Codes (Cont.)

TK-26-3 [9,922 liter (2,621 gallon) capacity], and TK-39-1 [13,120 liter (3,466 gallon) capacity]. Treatment of low-level waste (to meet DST System acceptance standards) includes the addition of sodium hydroxide until the pH is greater than 12.0. Treatment also includes the addition of sodium nitrite until the nitrite concentration is above 600 parts per million and any other chemicals required to meet the acceptance criteria. The low-level waste tank storage is intended for waste generated at the 221-B Building and WESF that will not be transferred within 90 days to the DST System. There is no intent or plan to store low-level waste at the 221-B Building from other sources.

The maximum storage process design capacity for the NCAW and low-level waste tanks is 347,056 liters (91,683 gallons). The maximum treatment process design capacity for the NCAW and low-level waste tanks is 79,493 liters (21,000 gallons) per day.

T01

The low-level waste concentrator (formerly known as the single-stage thermal siphon reboiler), located in Cell 23 of the 221-B Building, was operated to concentrate the low-level waste in the low-level waste storage and treatment tank system. The low-level waste concentrator is a thermal siphon and shell and tube heat exchanger. This system currently is inactive with no intention of resuming operation and is included to reflect past operations. The low-level waste concentrator system includes the following equipment: the waste concentrator (E-23-3); tube bundles (E-23-3-1 and E-23-3-2); the deentrainer (D-23-2); the condenser (E-23-4); and receiving tank (TK-23-1).

The maximum process design capacity for the low-level waste concentrator is 27,633 liters (7,300 gallons) per day.

S01

The Cell 4 containerized waste storage unit is used for the storage of 208-liter (55-gallon) containers of solid mixed waste that does not contain free liquids. Waste stored in Cell 4 includes light bulbs with lead solder.

The maximum process design capacity for container storage is 51,008 liters (13,475 gallons).

S06

The designation S06 (containment building/storage) has been used to indicate that the solid mixed waste stored on the canyon deck and in various cells is considered to be in a containment building subject to the requirements of 40 CFR 265, Subpart DD. The solid mixed waste consists of radioactively contaminated failed canyon process equipment and jumpers (or isolated components thereof) containing lead used as weights, counterweights, or radiation shielding. The solid mixed waste also could be contaminated with residues from the processing of tank waste.

The maximum process design capacity for storage on the canyon deck and in the cells is 35,170 cubic meters (46,000 cubic yards).

Section III.C., Description of Process Codes (Cont.)

S02

The organic mixed waste storage tank system, contained in Cells 26 through 30 of the 221-B Building, includes the following tanks: TK-26-1 [14,763 liter (3,900 gallon) capacity], TK-27-2 [7,571 liter (2,000 gallon) capacity], TK-27-3 [14,385 liter (3,800 gallon) capacity], TK-27-4 [1,060 liter (280 gallon) capacity], TK-28-3 [14,385 liter (3,800 gallon) capacity], TK-28-4 [1,060 liter (280 gallon) capacity], TK-29-4 [492 liter (130 gallon) capacity], and TK-30-3 [15,520 liter (4,100 gallon) capacity].

Two external waste storage tanks [each with a nominal 17,500-liter (4,623-gallon) design capacity] will be used to store organic mixed waste transferred from the organic mixed waste storage tank system located in cells 26 through 30 of the 221-B Building. The organic mixed waste will be stored until transferred to an onsite TSD unit or an offsite TSD facility.

The maximum process design capacity for organic mixed waste storage in Cells 26 through 30 of the 221-B Building and for the two external organic mixed waste storage tanks is 104,236 liters (27,536 gallons).

S02

Additional miscellaneous tanks in the B Plant Complex that managed mixed waste after the 1987 date of regulation for mixed waste in the state of Washington are identified on the B Plant Complex Vessel Table (page 6 of 27). The Vessel Table includes the tank/vessel identification number, tank/vessel location, and tank/vessel capacity. The total process design capacity for miscellaneous tank storage is 348,020 liters (91,937 gallons).

B PLANT COMPLEX VESSEL TABLE		
VESSEL ID	LOCATION	CAPACITY (LITERS)
E-5-2	Cell 5	1,639
TK-17-1	Cell 17	18,700
TK-17-2	Cell 17	18,908
TK-18-2	Cell 18	11,761
TK-18-3	Cell 18	2,794
E-20-2	Cell 20	1,552
TK-21-1	Cell 21	53,272
TK-22-1	Cell 22	1,775
T-28-1	Cell 28	2,642
TK-29-2	Cell 29	15,077
T-30-1	Cell 30	2,634
TK-32-1	Cell 32	15,024
TK-33-1	Cell 33	53,211
TK-34-2	Cell 34	15,520
TK-35-2	Cell 35	15,002
TK-36-1	Cell 36	15,547
BCP	221-BB*	2,271
BCS	221-BB*	2,271
221-BF-A	221-BF*	49,210
221-BF-B	221-BF*	49,210
Total Capacity		348,020

* The 221-BB and 221-BF Buildings are located adjacent to the 221-B Building (refer to the B Plant Complex Site Plan, page 13 of 27).

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)* WA7890000BDG7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D008	6,804	K	S01	Storage - Container
2	WT01				(Cell 4 Container Storage)
3	WT02				Included With Above
4	D002	6,804	K	S06	Containment Building/Storage
5	D004				
6	through				
7	D011				
8	F001				
9	through				
10	F005				
11	WT01				
12	WT02				Included With Above
13	D002	34,324	K	S02	Storage - Tank
14	D004				(External organic mixed waste
15	through				storage)
16	D011				
17	F001				
18	through				
19	F005				
20	WT01				
21	WT02				Included With Above
22					
23					
24					
25					
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890000895G7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D002	18,927*	K	S02	Storage-Tank (Organic mixed waste
2	D004				storage)
3	through				
4	D011				
5	F001				
6	through				
7	F005				
8	WT01				
9	WT02				Included With Above

* The quantity of waste represents the total amount of organic mixed waste that is stored in the B Plant Complex. There are no plans to generate additional organic mixed waste in the future.

13	D002	90,992**	K	T01	Treatment-Tank (Low-level waste
14	D004				concentrator treatment tank system)
15	through				
16	D011				
17	F001				
18	through				
19	F005				
20	WT01				
21	WT02				Included With Above

** The quantity of waste represents past operational activities of the low-level waste concentrator. There are no plans to use the low-level waste concentrator for mixed waste activities in the future.

25					
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890000002G7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D002	41,146*	K	S02 T01	Storage-Tank/Treatment-Tank
2	D004				(NCAW storage and treatment tank
3	through				system)
4	D011				
5	F001				
6	through				
7	F005				
8	WT01				
9	WT02				Included With Above

* The quantity of waste represents the total amount of NCAW that was transferred to the B Plant Complex for a test run of the Tank Waste Remediation pretreatment process. The use of the B Plant Complex for the Tank Waste Remediation pretreatment process was canceled; therefore, the entire NCAW inventory was transferred back to the Double-Shell Tank System. There will be no future use of the NCAW storage and treatment tank system for dangerous waste activities at the B Plant Complex.

14	D002	1,044,732	K	S02 T01	Storage-Tank/Treatment-Tank
15	D004				(Low-level waste storage and
16	through				treatment tank system)
17	D011				
18	F001				
19	through				
20	F005				
21	WT01				
22	WT02				Included With Above
23					
24					
25					
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	D002	339,538	K	S02	Storage-Tank (Miscellaneous)
2	D004				
3	through				
4	D011				
5	F001				
6	through				
7	F005				
8	WT01				
9	WT02				Included With Above
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

CONTINUE ON REVERSE

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The B Plant Complex is used for the storage and/or treatment of mixed and/or dangerous waste. The mixed and/or dangerous waste, depending on the source, can be transferred to the 221-B Building Cell 4 container storage, other onsite TSD units, or to an offsite TSD facility.

The dangerous waste numbers identified in Section IV.A. are associated with waste that could be stored and/or treated at the B Plant Complex. The mixed and/or dangerous waste consists of listed waste, characteristic waste, toxicity characteristic waste, and state-only waste (extremely hazardous and dangerous waste).

The NCAW was transferred back to the DST System in May 1993. There are no plans to use the NCAW storage and treatment tank systems to store or treat mixed and/or dangerous waste. Also, there are no plans to use the low-level waste concentrator to treat mixed and/or dangerous waste.

The estimated annual quantities of mixed and/or dangerous waste identified for Process Codes S01, S02, S06, and T01 represent the maximum quantities of waste that could be stored and/or treated in the B Plant Complex. Future operations might necessitate an increase in excess of these estimates and a revision could be pursued as required by the Washington Administrative Code 173-303 Dangerous Waste Regulations.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

 CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner

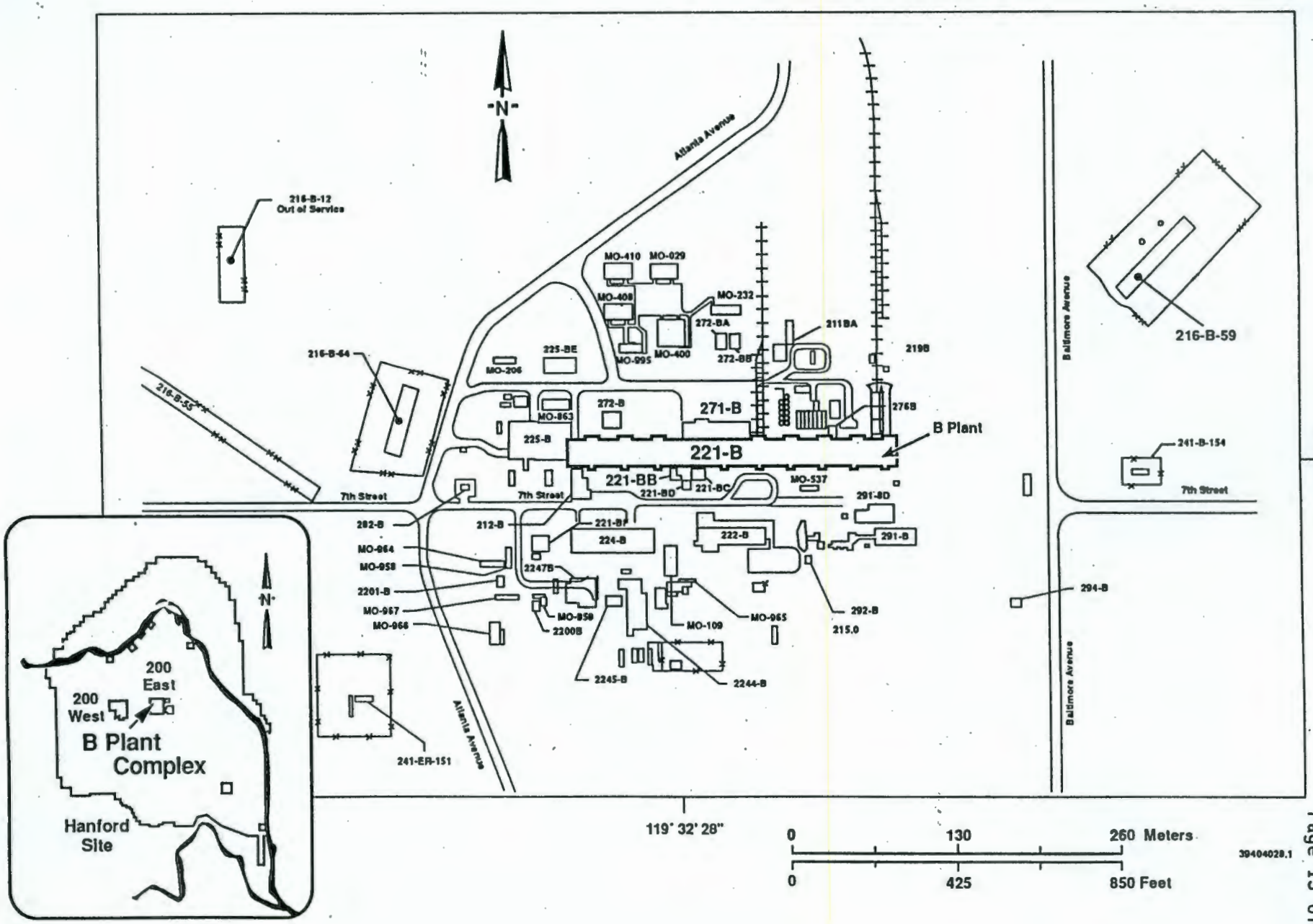
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/13/96
Date

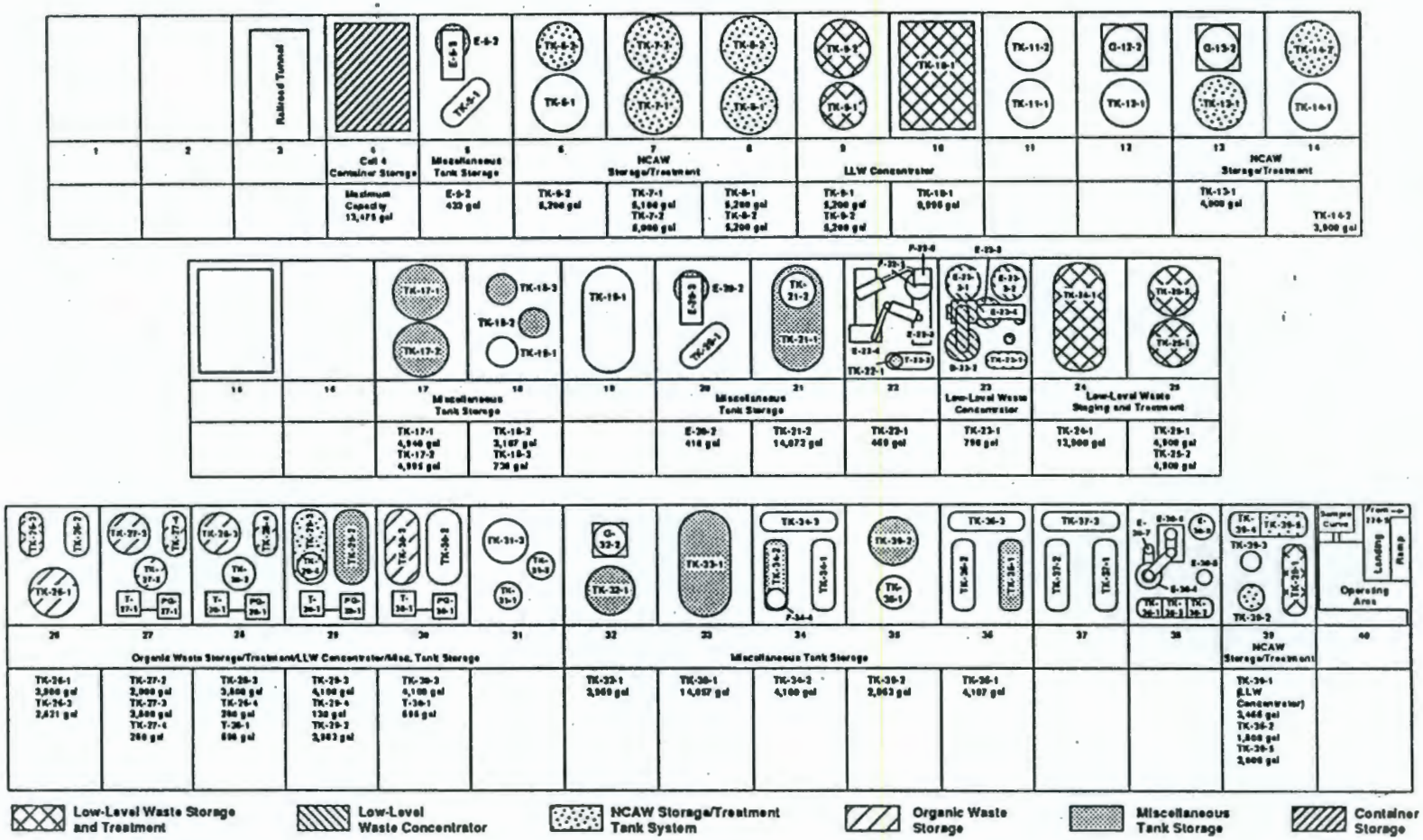
B Plant Co[illegible]lex Site Plan



WA7890008967

9713532.0471

221-B Building Process Cells



Low-Level Waste Storage and Treatment

Low-Level Waste Concentrator

NCAW Storage/Treatment Tank System

Organic Waste Storage

Miscellaneous Tank Storage

Container Storage

39402094.1

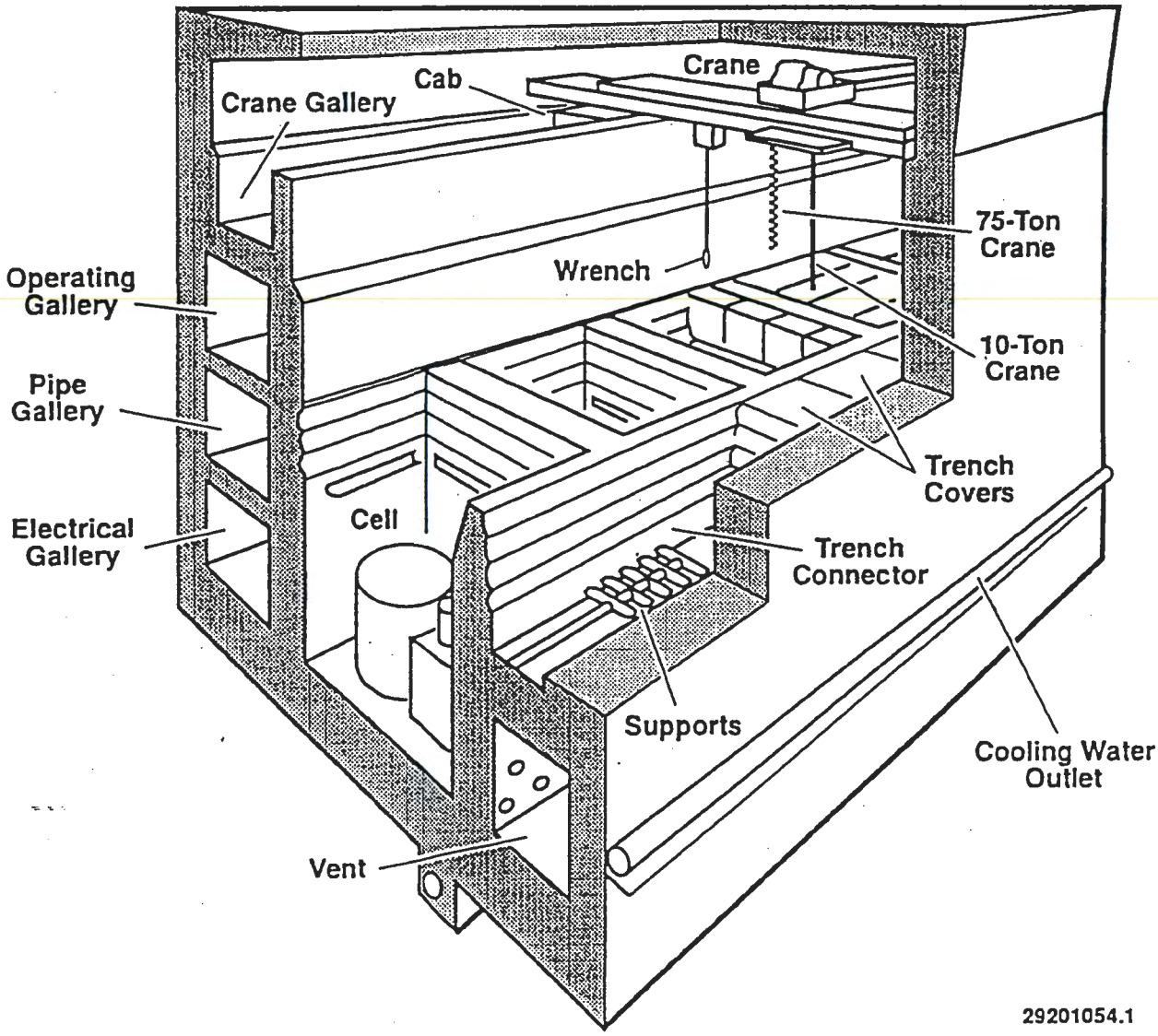
Key:

NCAW = neutralized current acid waste	G = centrifuge
gal = gallon	P = pump
D = decontainer	PG = pulse generator
E = heat transfer equipment	T = tower
F = filter	TK = tank

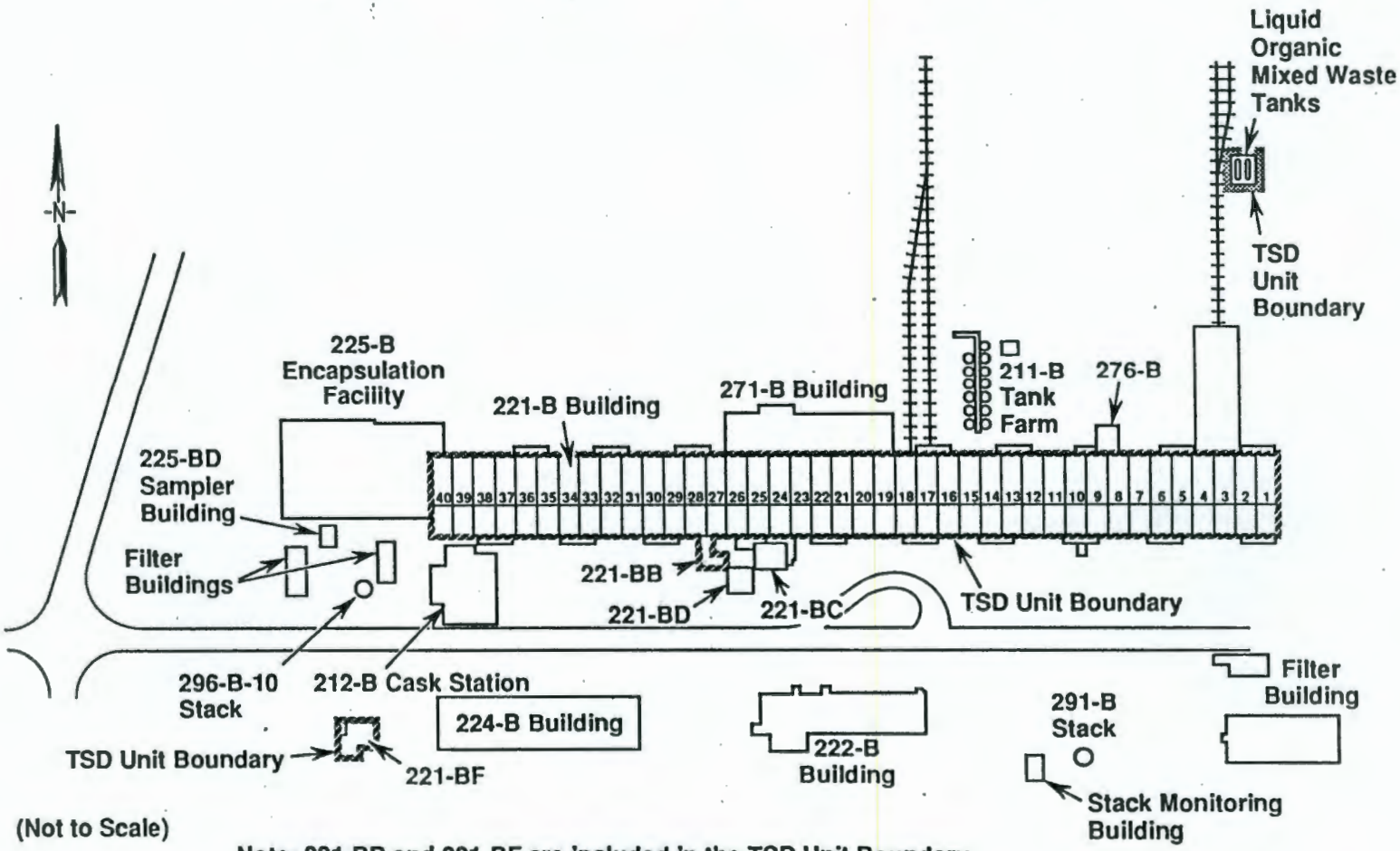
Note 1: For process cell configuration refer to the B Plant Complex TSD Unit Boundary graphic on page 16 of 27.

Note 2: For conversion to liters, multiply gallons by 3.7854.

B Plant Cutaway (Typical)



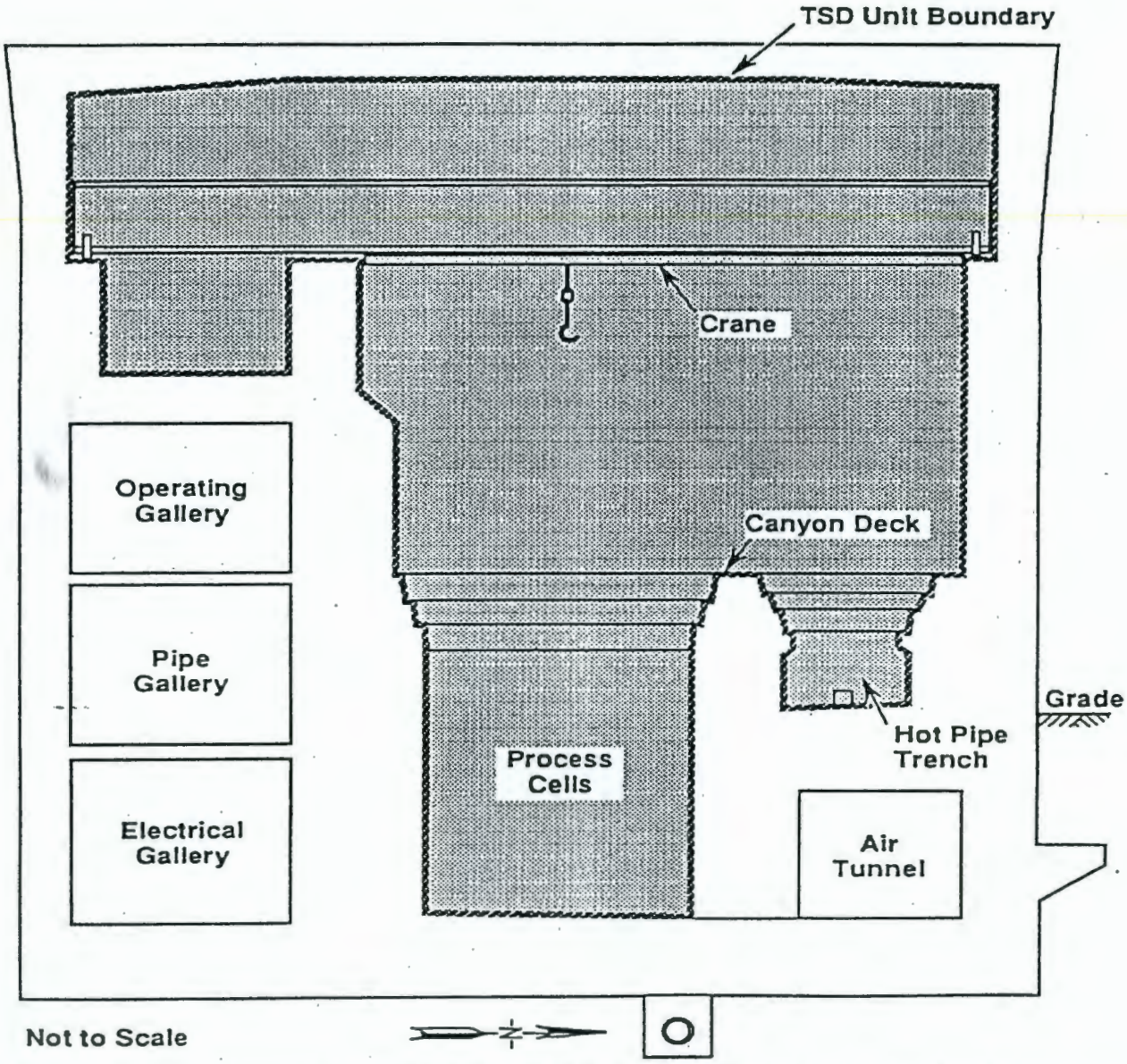
B Plant Complex TSD Unit Boundary



Note: 221-BB and 221-BF are included in the TSD Unit Boundary

H95110328.3

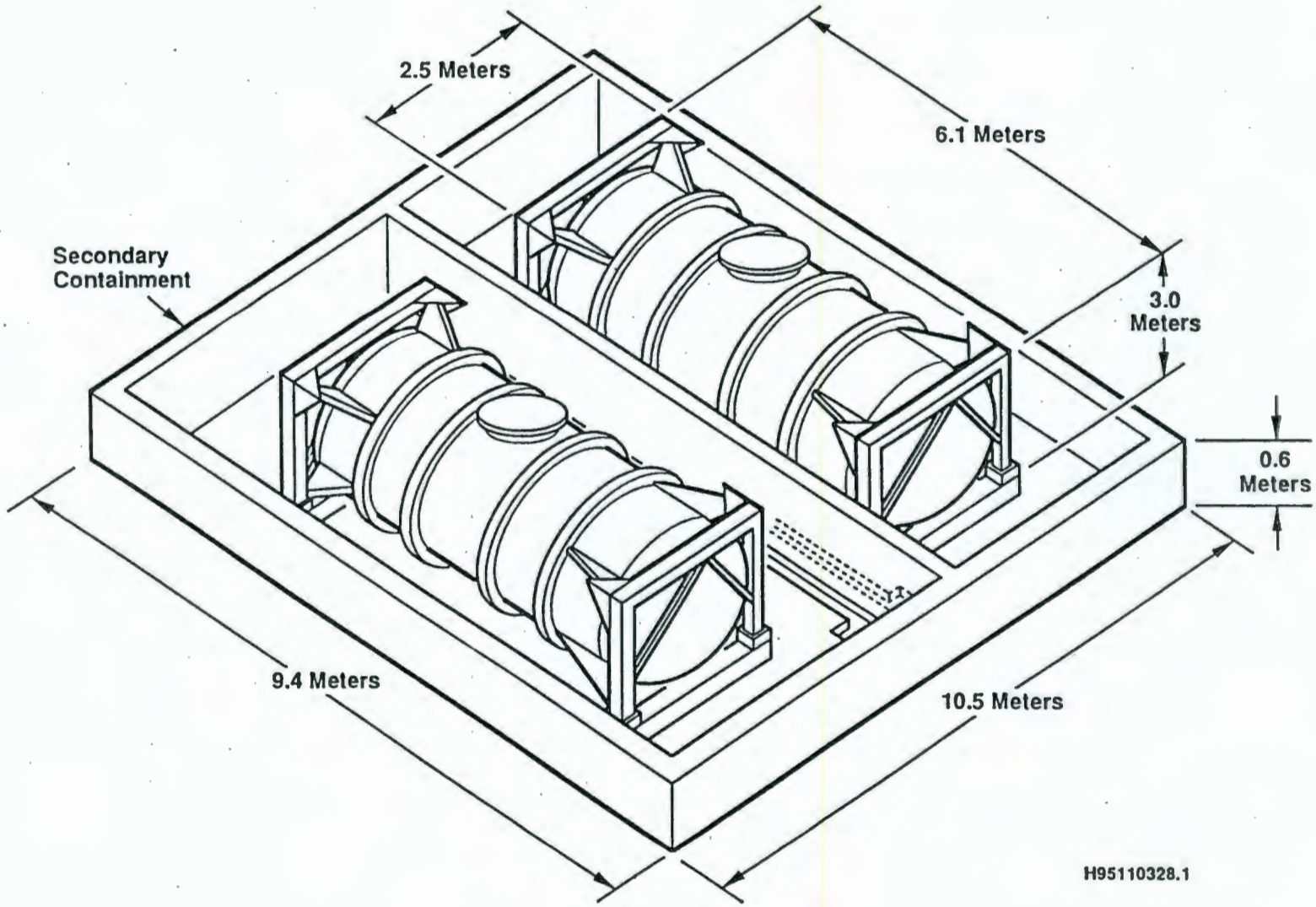
221-B Building TSD Unit Boundary (typical cross-sectional view)



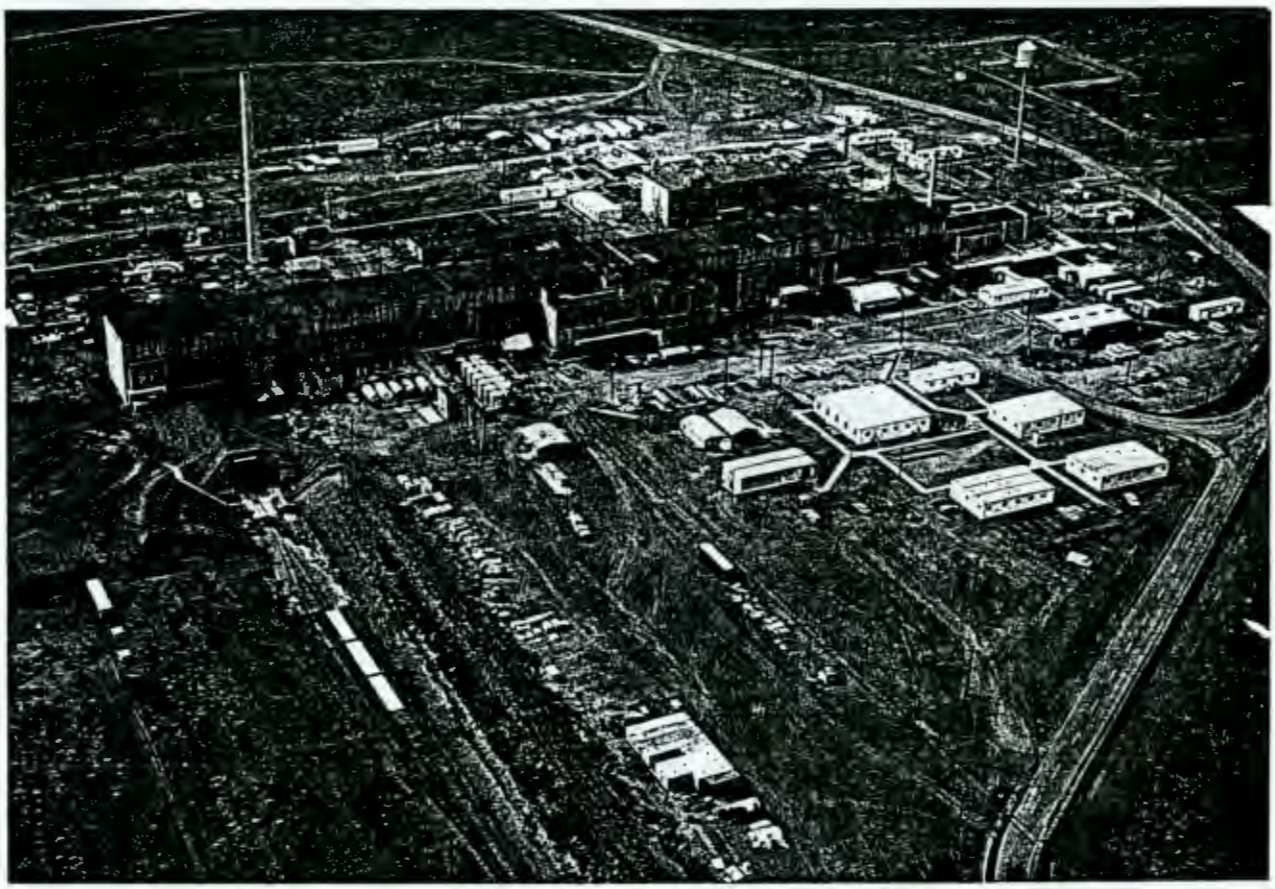
Note: Shaded portions denote areas that are within the TSD Unit Boundary

H96030202.1

Organic Mixed Waste Storage Tanks



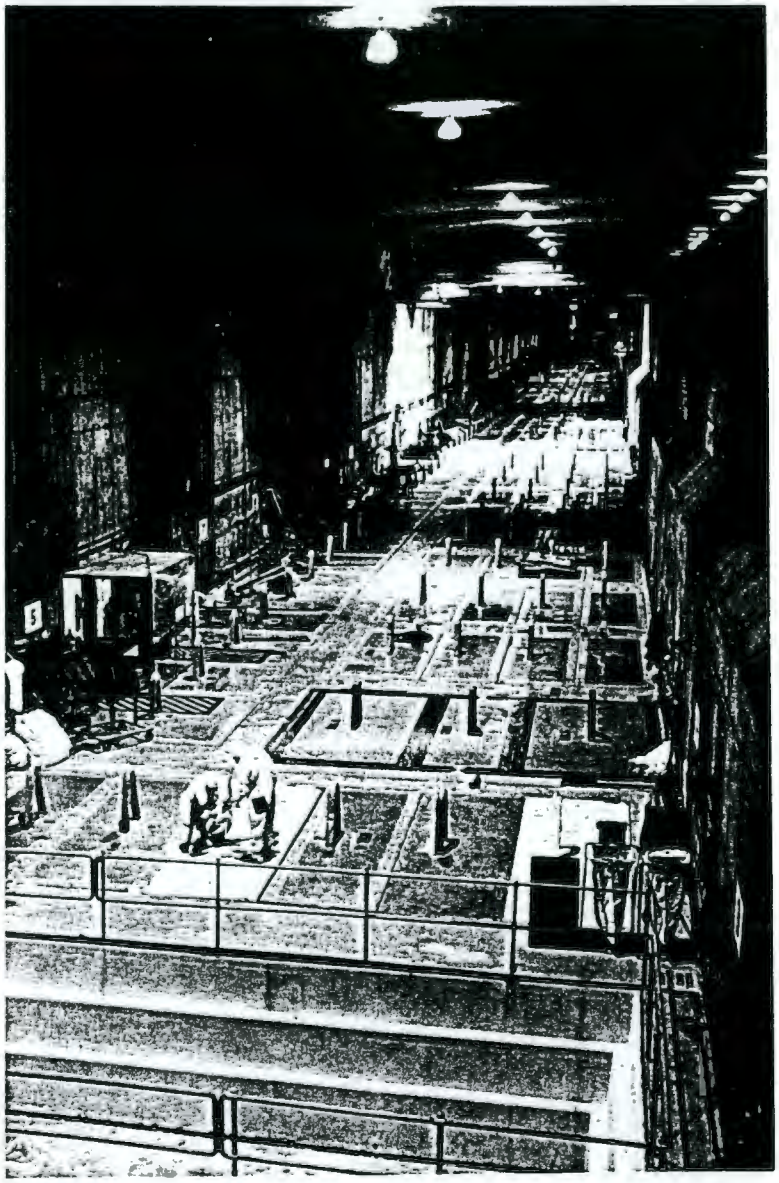
B PLANT COMPLEX AERIAL VIEW



46°33'26"
119°32'28"

93030994-91CN
(PHOTO TAKEN 1993)

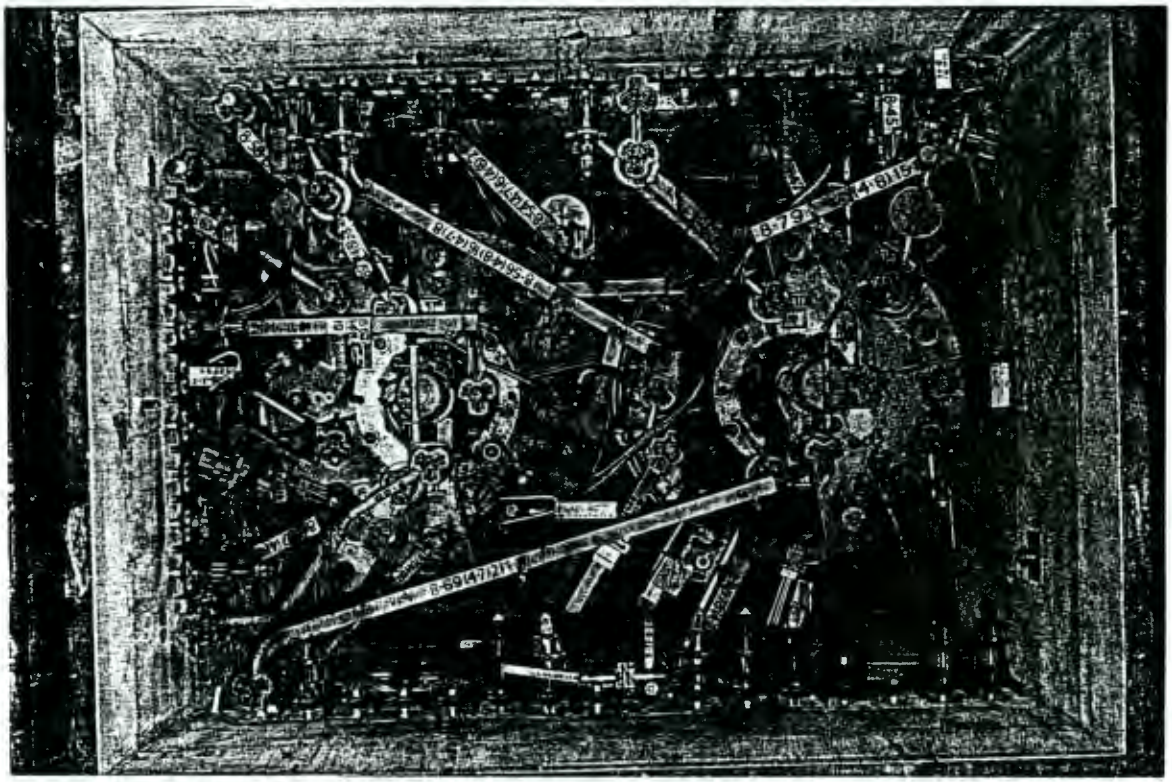
221-B BUILDING CANYON



46°33'26"
119°32'28"

81094277-1CN
(PHOTO TAKEN 1981)

221-B BUILDING
CELL 8

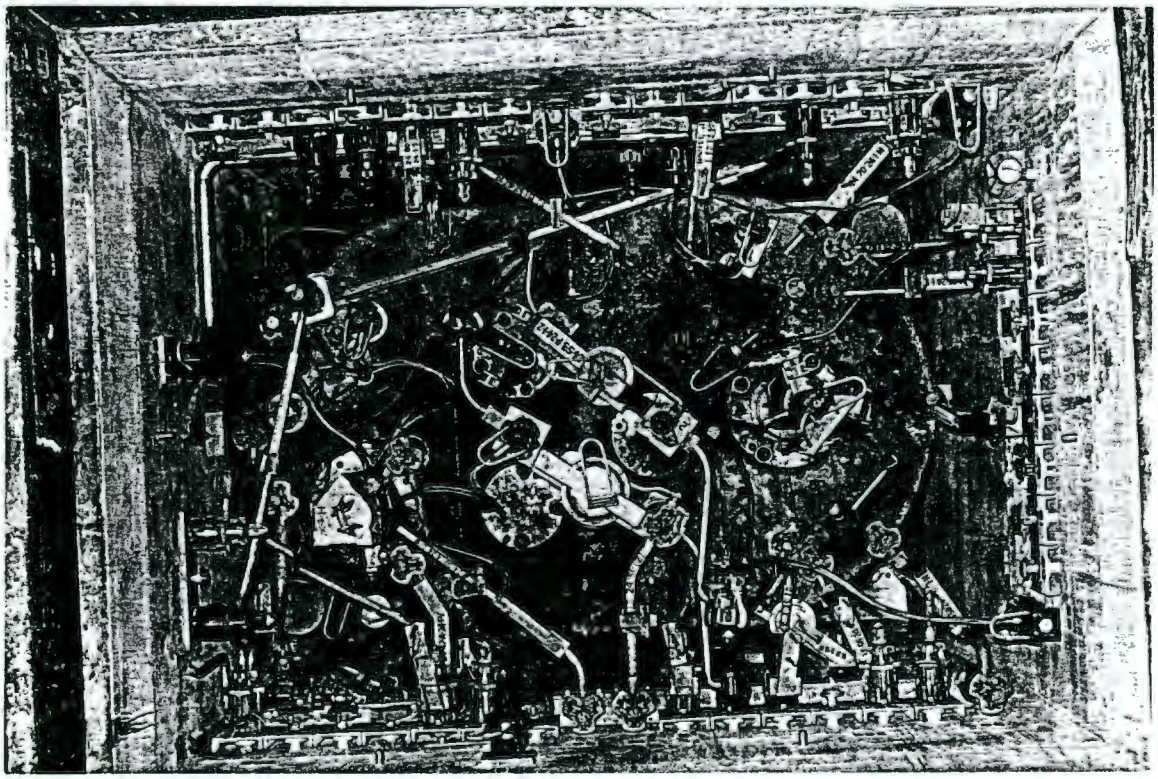


TOP VIEW - TYPICAL NCAW STORAGE AND TREATMENT TANK

46°33'26"
119°32'28"

83107243-11CN
(PHOTO TAKEN 1983)

221-B BUILDING
CELL 24

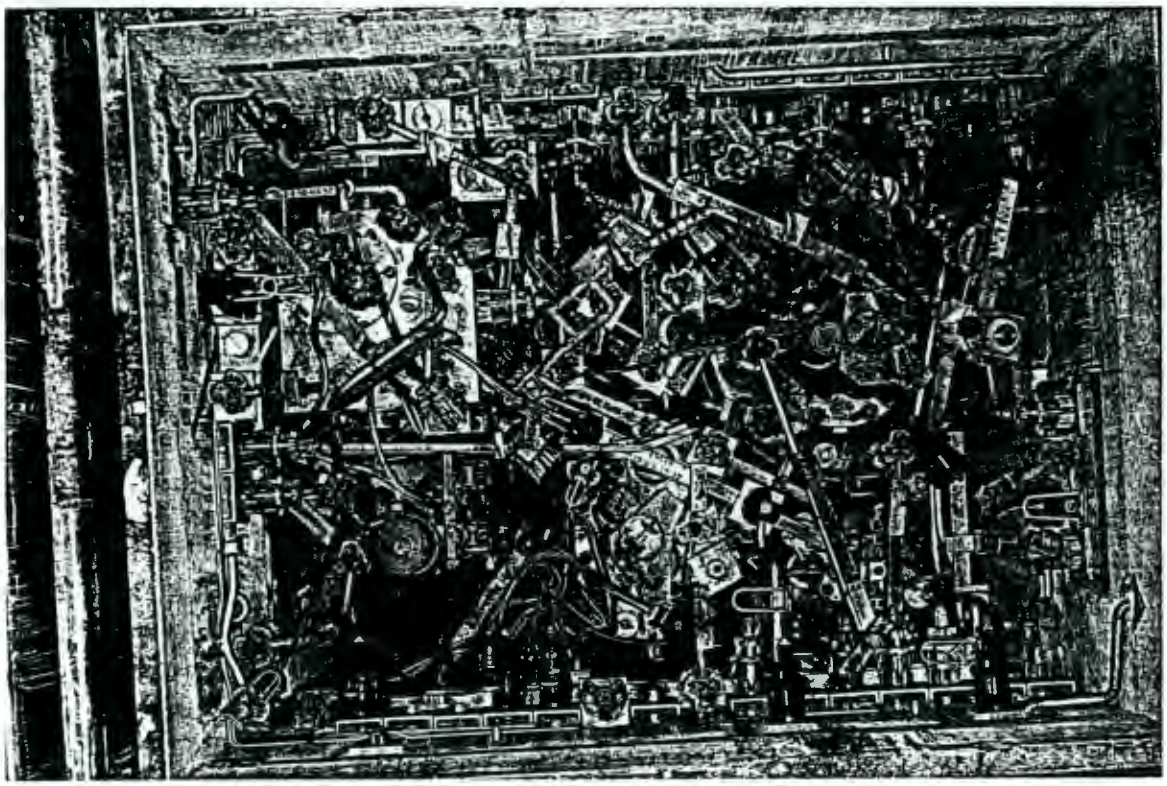


TOP VIEW - TYPICAL LOW-LEVEL WASTE STORAGE AND TREATMENT TANKS (TK-24-1)

46°33'26"
119°32'28"

83106298-6CN
(PHOTO TAKEN 1983)

221-B BUILDING
CELL 28

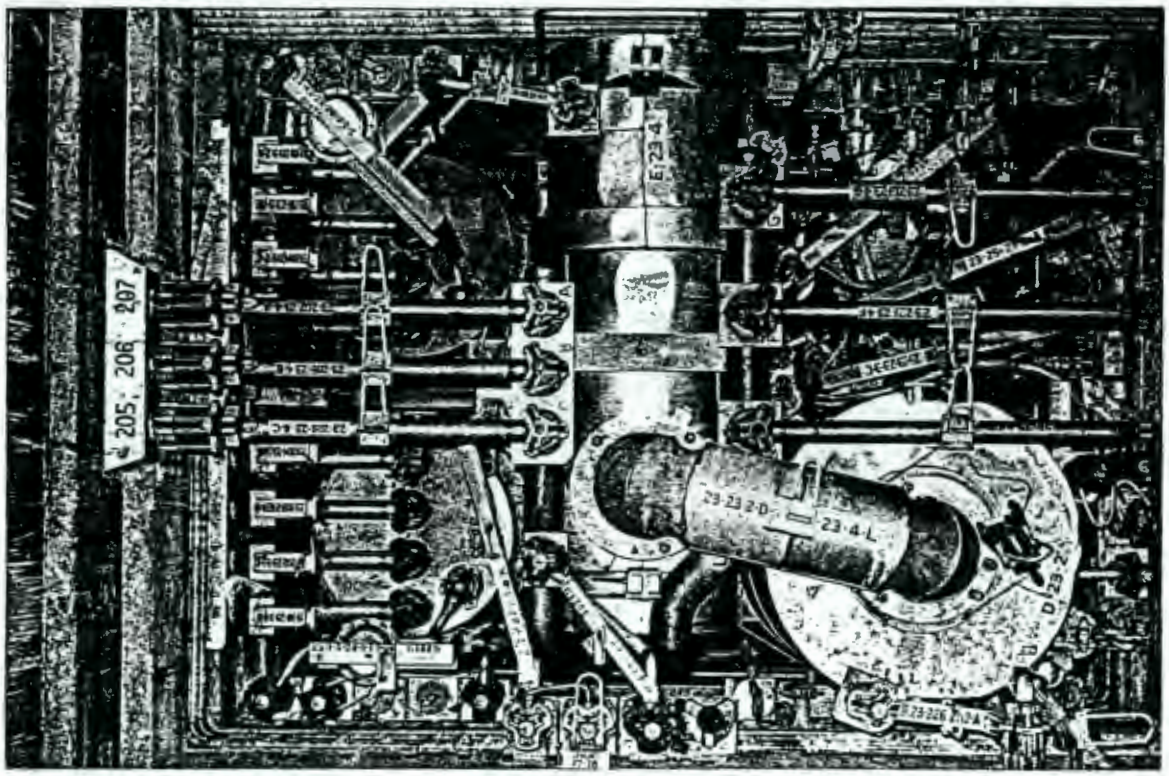


TOP VIEW - TYPICAL ORGANIC STORAGE TANK

46°33'26"
119°32'28"

83107243-67CN
(PHOTO TAKEN 1983)

221-B BUILDING
CELL 23

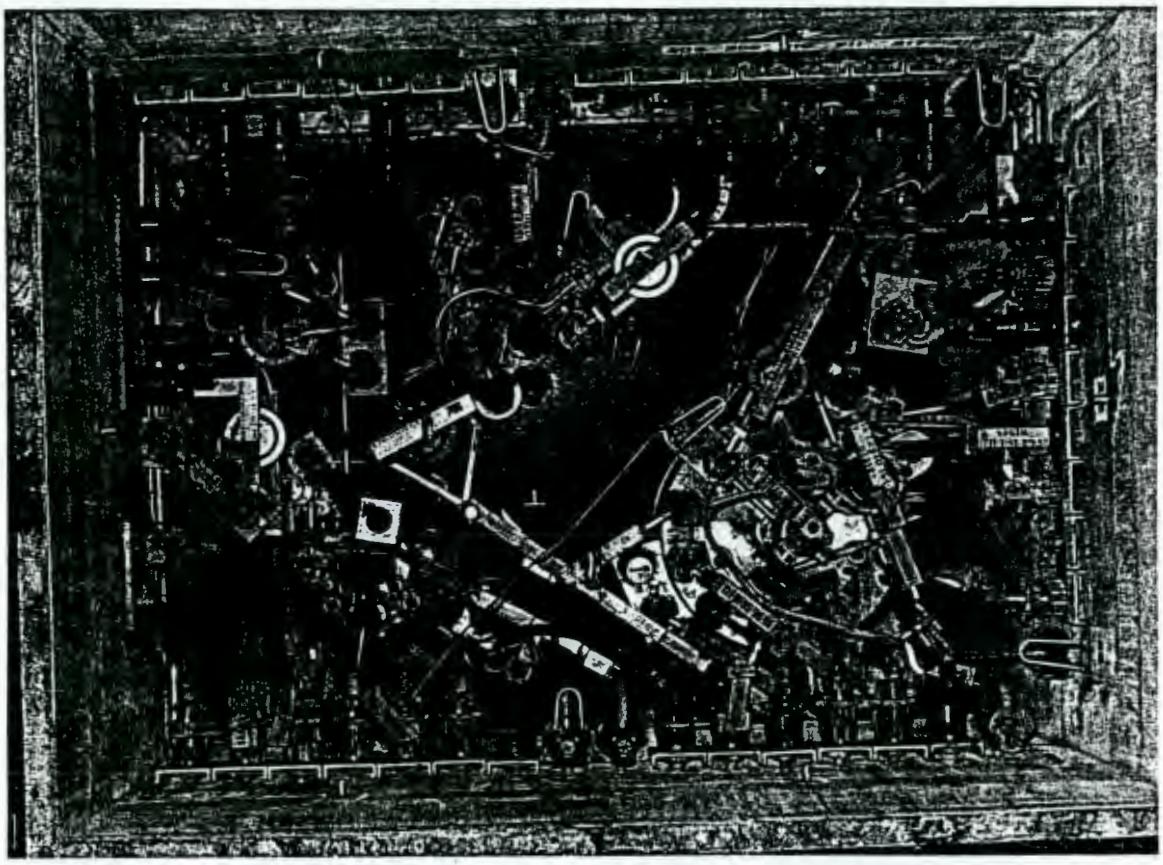


TOP VIEW - LOW-LEVEL WASTE CONCENTRATOR

46°33'26"
119°32'28"

83107243-40CN
(PHOTO TAKEN 1983)

221-B BUILDING
CELL 18

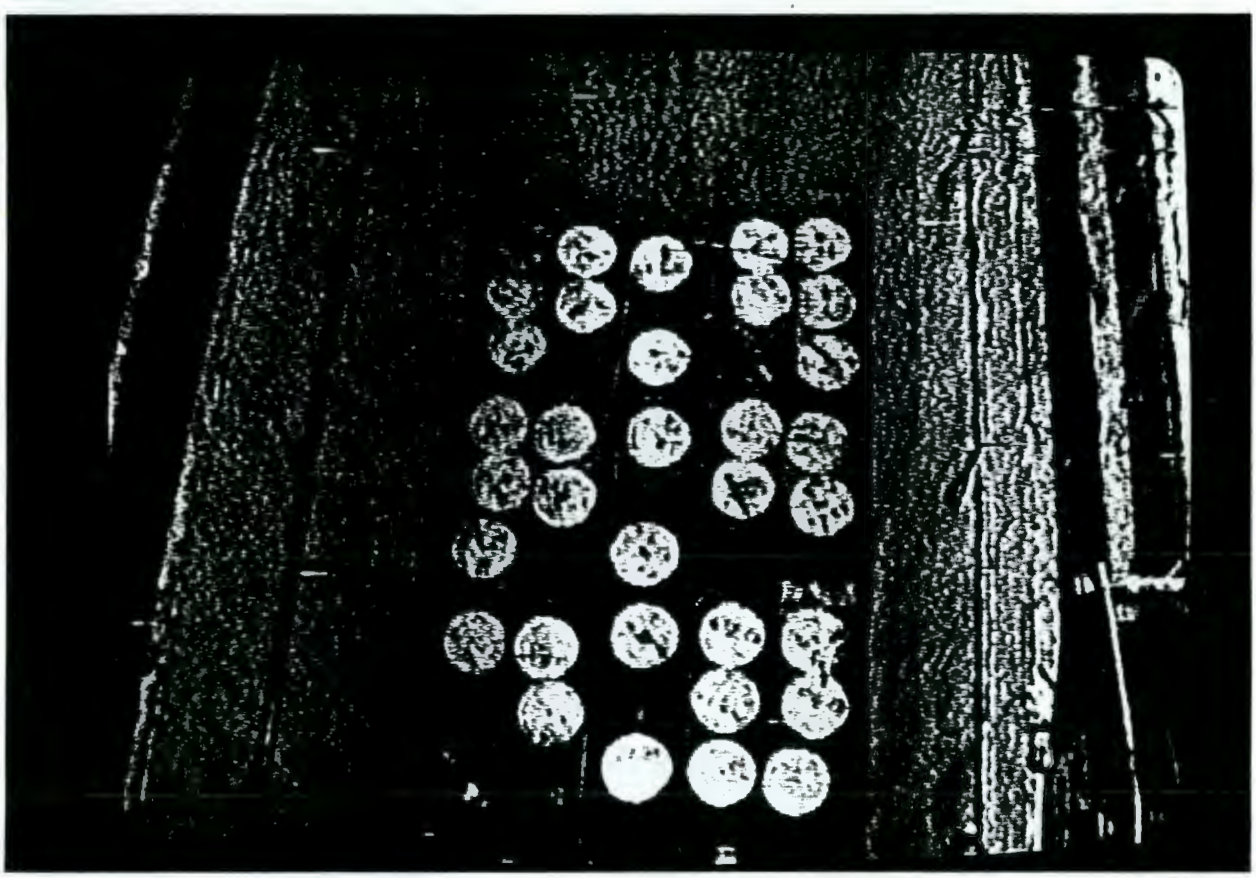


TOP VIEW - TYPICAL MISCELLANEOUS STORAGE TANKS (TK-18-2, TK-18-3)

46°33'26"
119°32'28"

107243-26CN
(PHOTO TAKEN 1983)

221-B BUILDING
CELL 4

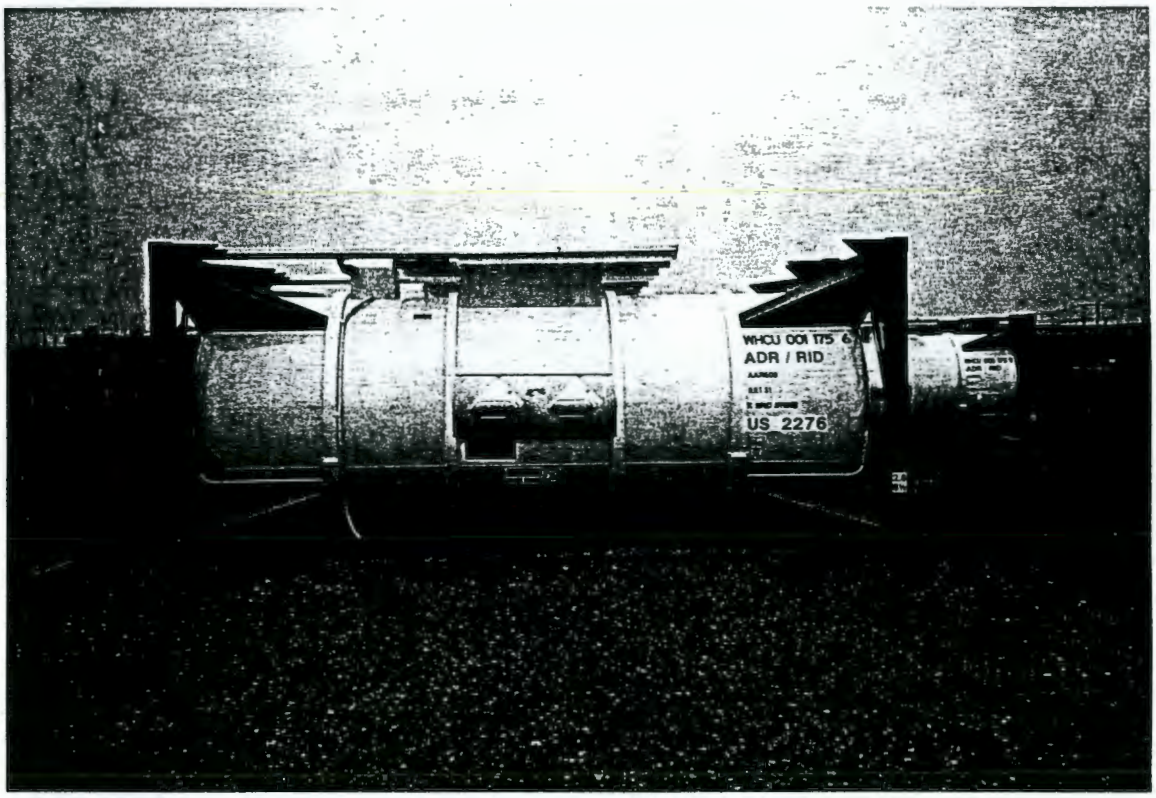


TOP VIEW - CONTAINER STORAGE

46°33'26"
119°32'28"

94040656-5CN
(PHOTO TAKEN 1994)

ORGANIC MIXED WASTE STORAGE TANK



TYPICAL ORGANIC MIXED WASTE STORAGE TANK

46°33'26"
119°32'28"

95030807-9CN
(PHOTO TAKEN 1995)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 2	37,200	L		7				
2	T 0 1	780	V		8				
3	S 0 1	3,700	L		9				
4					10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

The 222-S Laboratory Complex began waste management operations in June of 1951. The 222-S Laboratory Complex consists of the following two waste management units, the 219-S Waste Handling Facility and the 222-S Dangerous and Mixed Waste Storage Area. Processes associated with these two units are described as follows.

S02, T01 - The 219-S Waste Handling Facility is located northeast of the 222-S Analytical Laboratory Building. The 219-S Waste Handling Facility contains four stainless steel tanks: Tanks 101 [15,000 liters (4,000 gallons)], 102 [15,000 liters (4,000 gallons)], 103 [6,000 liters (1,500 gallons)], and 104 [7,200 liters (1,900 gallons)]. These tanks are located in a belowground concrete vault (S02). Tank 103 will be used until tank 104 is in place, at which time tank 103 will be drained and closed. Tanks 101 and 104 are used for primary and backup storage of mixed waste from the 222-S Analytical Laboratory. The mixed waste is transferred from tanks 101 and 104 to tank 102 for treatment (T01) and storage before transfer to the Double-Shell Tank (DST) System. The mixed waste is treated in tank 102 with sodium hydroxide (NaOH) to a pH greater than or equal to 12.0 and with sodium nitrite ($NaNO_2$) to a concentration of 600 parts per million. This treatment process makes the mixed waste more amenable for storage in the DST System. The maximum process design capacity of storage tanks 101, 102, and 104 is 37,200 liters (9,827 gallons). The maximum treatment process design capacity for tank 102 is 780 liters (206 gallons) per day [284,000 liters (75,000 gallons) per year].

S01 - The 222-S Dangerous and Mixed Waste Storage Area is located on the north side of the 222-S Analytical Laboratory Building. The 222-S Dangerous and Mixed Waste Storage Area consists of two metal storage structures resting on a concrete pad. The 222-S Dangerous and Mixed Waste Storage Area stores approved various-sized containers or other approved packages and overpacks of mixed waste and nonradioactive dangerous waste (S01). Each metal storage structure holds containers of waste. The containers are stored at the 222-S Dangerous and Mixed Waste Storage Area until transferred to an onsite treatment, storage, and/or disposal (TSD) unit or offsite TSD facility. The maximum design capacity of the 222-S Dangerous and Mixed Waste Storage Area is 3,700 liters (977 gallons) [57 liters (15 gallons) of liquids per container].

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	Included with above

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	D001	283,955	K	S02 T01	Storage - Tank/Treatment - Tank
2	through				
3	D011				
4	D018				
5	D019				
6	D022				
7	D028				
8	through				
9	D030				
10	D033				
11	through				
12	D036				
13	D038				
14	through				
15	D041				
16	D043				
17	WP01				
18	WP02				
19	WT01				
20	WT02				
21	F001				
22	through				
23	F005				
24	F039				Included With Above
25					
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

D. NUMBER *(entered from page 1)* N A 7 8 9 0 0 0 8 9 6 7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	D001	7,200	K	S01	Storage - Container
2	through				
3	D043				
4	WSC2				
5	WT01				
6	WT02				
7	WP01				
8	through				
9	WP03				
10	W001				
1	F001				
12	through				
13	F005				
14	F020				
15	through				
16	F023				
17	F026				
18	through				
19	F028				
20	F039				
21	U001				
22	through				
23	U012				
24	U014				
25	through				
26	U039				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	U041		K	S01	Storage - Container (Continued)
2	through				
3	U053				
4	U055				
5	through				
6	U064				
7	U066				
8	through				
9	U099				
10	U101				
11	through				
12	U103				
13	U105				
14	through				
15	U194				
16	U196				
17	U197				
18	U200				
19	through				
20	U223				
21	U225				
22	through				
23	U228				
24	U232				
25	through				
26	U240				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U243		K	S01				Storage - Container (Continued)
2	through							
3	U249							
4	U328							
5	U353							
6	U359							
7	P001							
8	through							
9	P018							
10	P020							
11	through							
12	P024							
13	P026							
14	through							
15	P031							
16	P033							
17	P034							
18	P036							
19	through							
20	P051							
21	P054							
22	P056							
23	through							
24	P060							
25	P062							
26	P063							

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008987

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	P064		K	S01	Storage - Container (Continued)
2	through				
3	P078				
4	P081				
5	P082				
6	P084				
7	P085				
8	P087				
9	P088				
10	P089				
11	P092				
12	through				
13	P099				
14	P101				
15	through				
16	P116				
17	P118				
18	through				
19	P123				Included With Above
20					
21					
22					
23					
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

Mixed waste from the 222-S Analytical Laboratory Building flows by gravity to the 219-S Waste Handling Facility for treatment before transfer to the DST System. Some mixed waste could require chemical treatment within the 222-S Laboratory Complex before introducing the mixed waste into the 219-S Waste Handling Facility. The mixed waste is considered corrosive because of the presence of nitric acid before treatment and sodium hydroxide following treatment. Treated mixed waste transferred to the DST System consists of characteristic waste, toxic constituents, state-only waste, and spent halogenated and nonhalogenated solvent waste. Multi-source leachate is included as a waste derived from nonspecific source waste. Before transfer, sodium nitrite is added to the mixed waste for corrosion protection of the DST System.

The approved containers or other approved packages and overpacks of waste are stored in two metal storage structures located on a concrete pad until transferred to an onsite TSD unit or offsite TSD facility. The contents of the containers are identified through process knowledge and sample results. The containers hold characteristic waste, toxic constituents, spent halogenated and nonhalogenated solvent waste, nonspecific source waste, discarded polychlorinated biphenyls, and state-only waste.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner

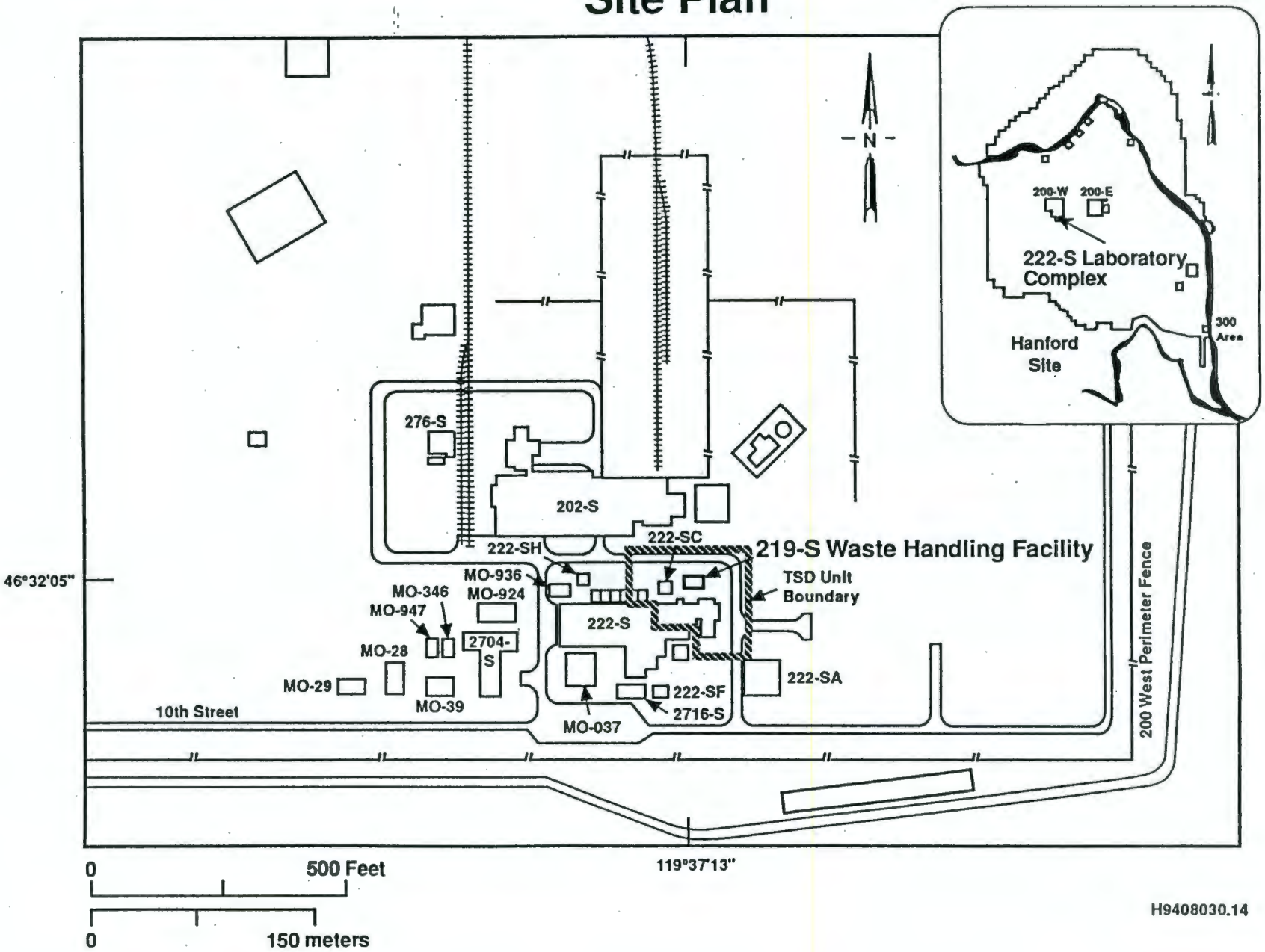
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

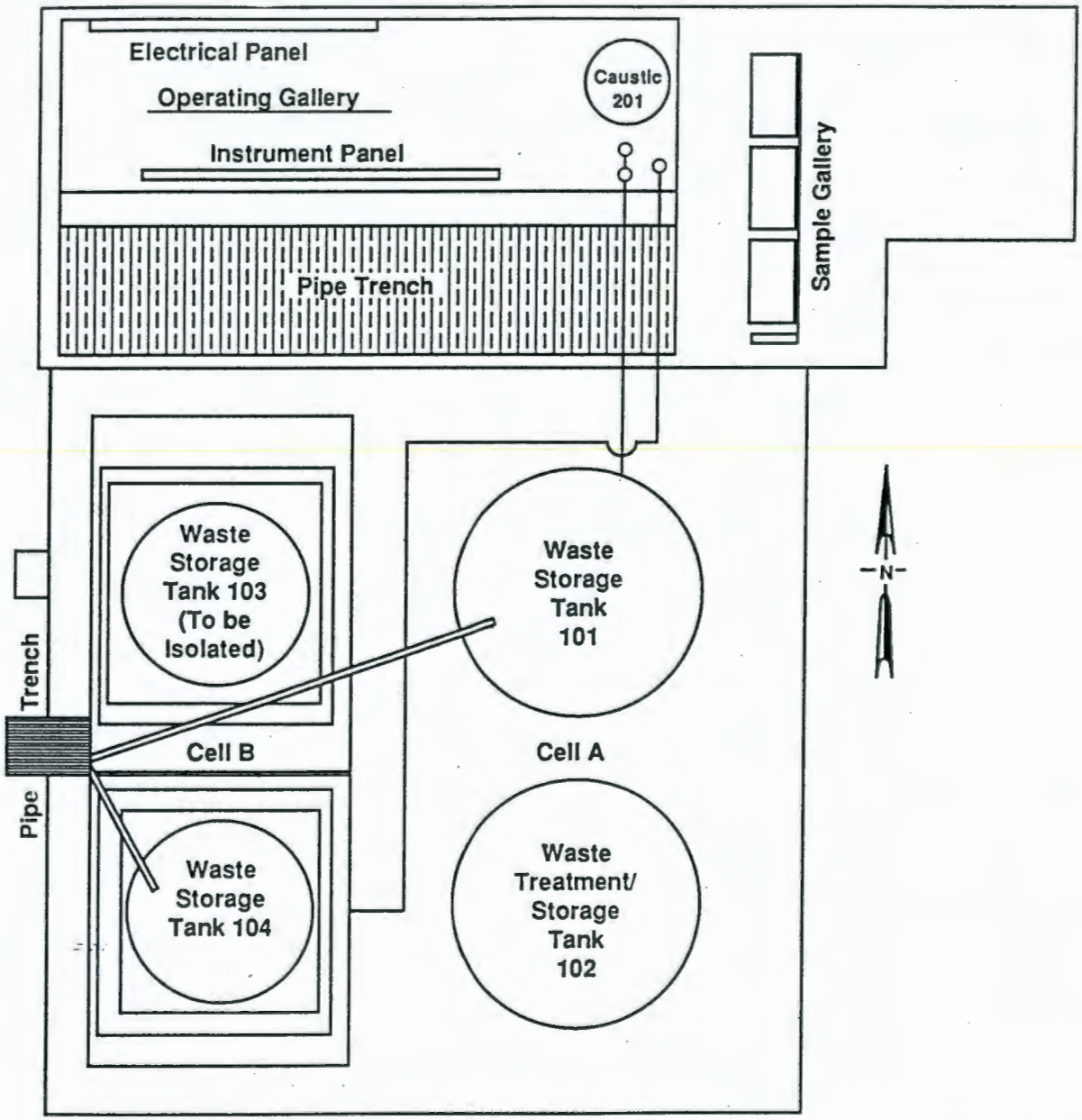
9/13/96
Date

222-S Laboratory Complex
219-S Waste Handling Facility Tanks 101, 102, 103, and 104
Site Plan



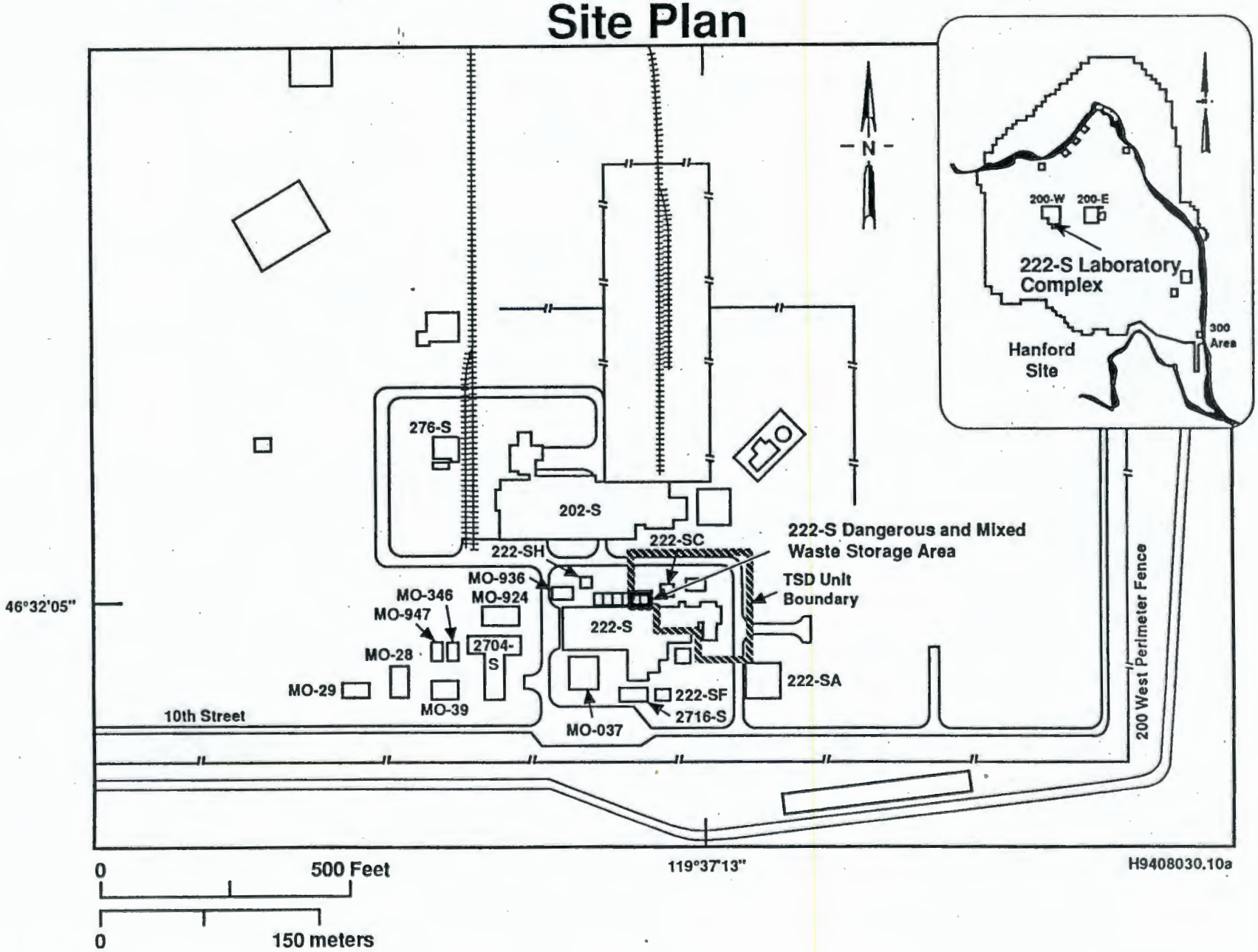
9713532.0495

222-S Laboratory Complex



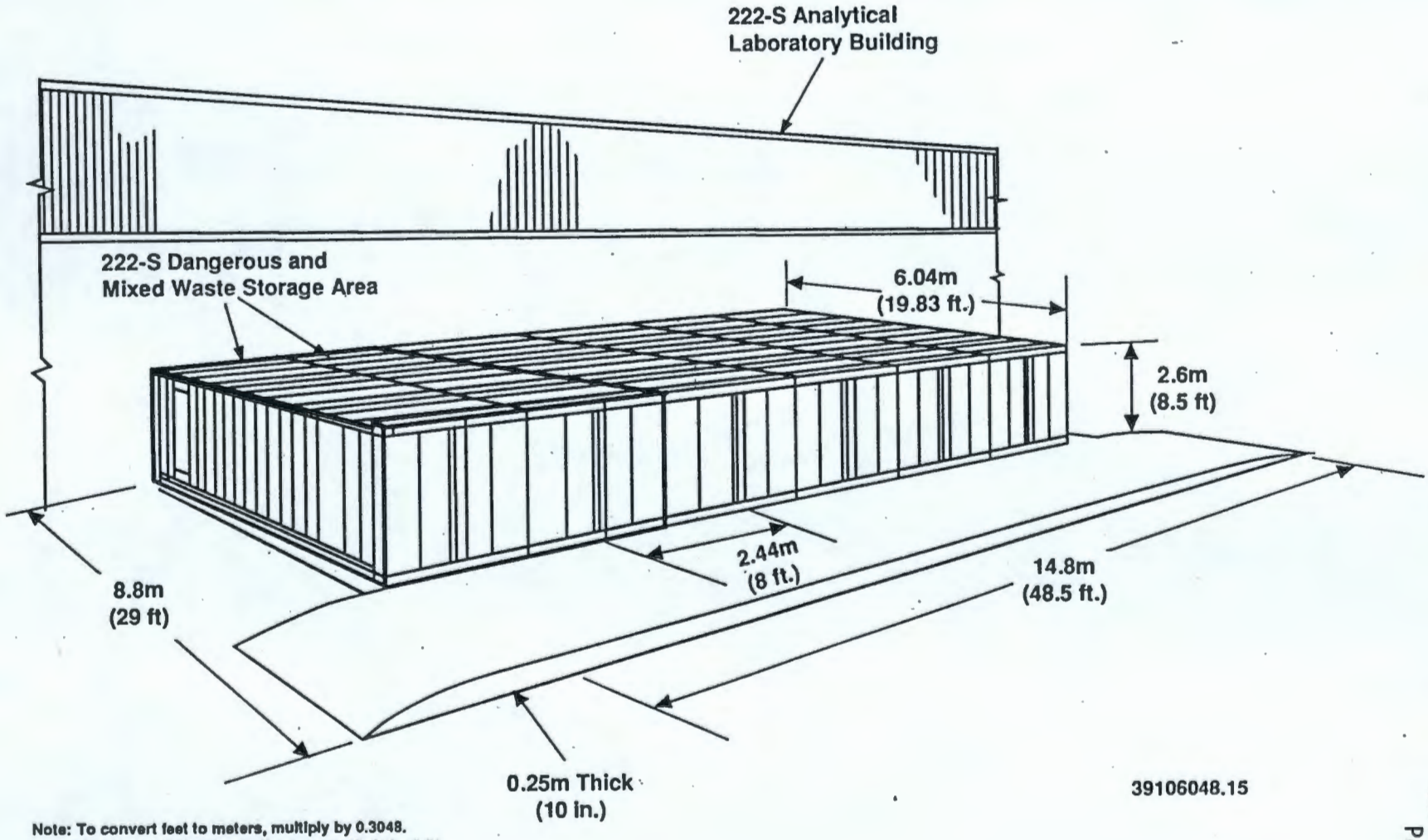
H96070161.16

222-S Laboratory Complex
222-S Dangerous and Mixed Waste Storage Area
Site Plan



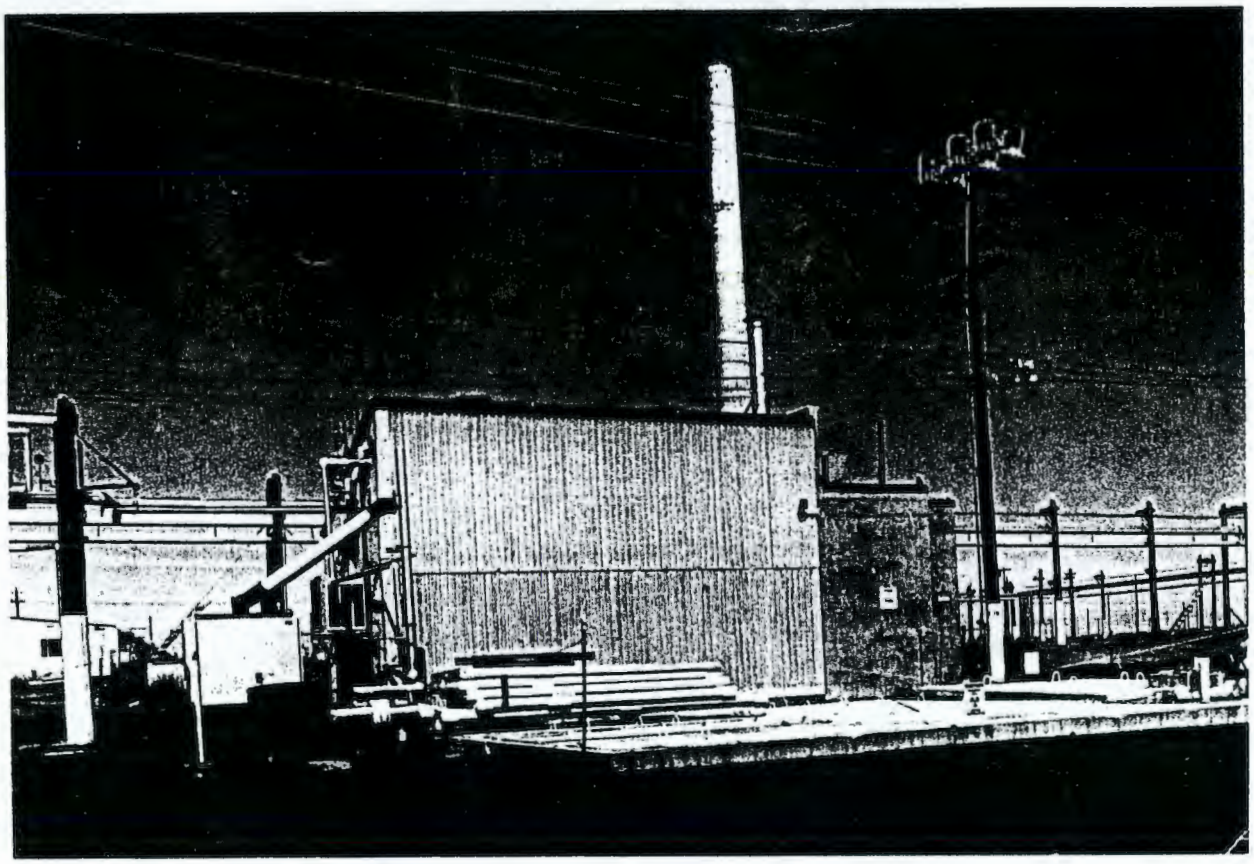
9713532.0498

222-S Laboratory Complex



Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

222-S LABORATORY COMPLEX

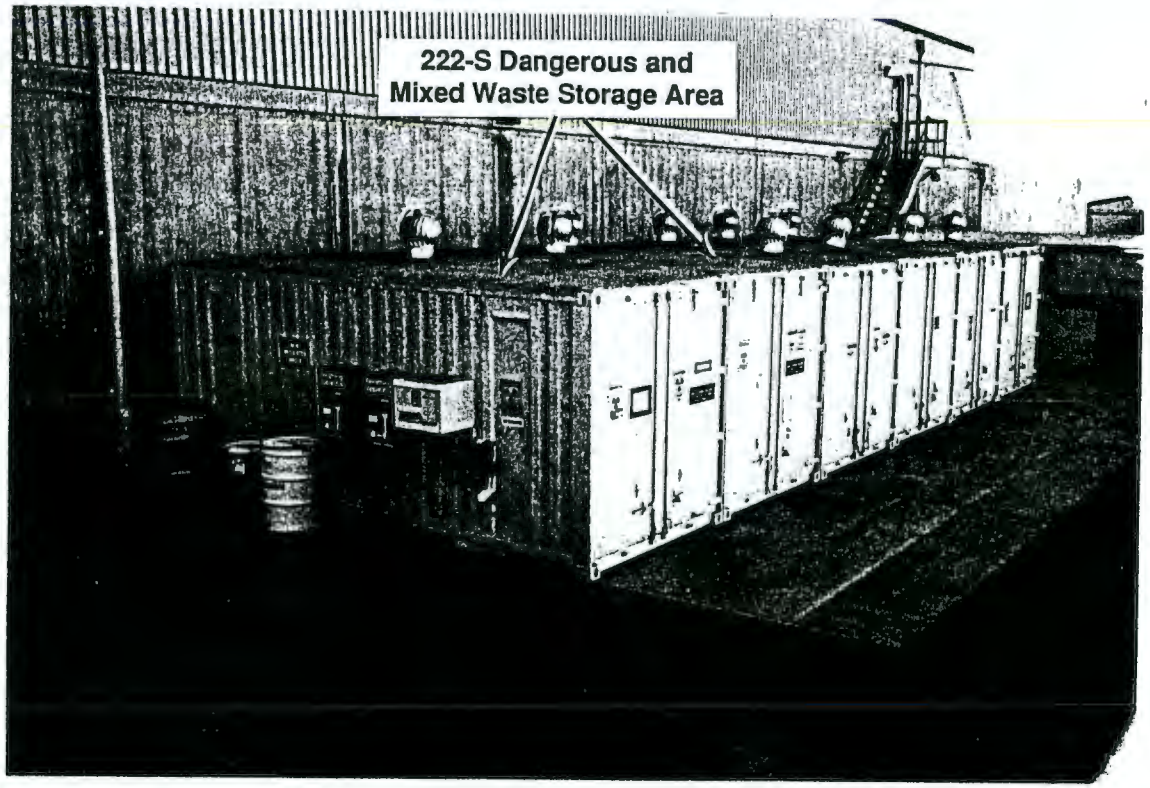


219-S WASTE HANDLING FACILITY

46°32'05"
119°37'13"

91092605-2CN
(PHOTO TAKEN 1991)

222-S LABORATORY COMPLEX DANGEROUS AND MIXED WASTE STORAGE AREA



METAL STORAGE STRUCTURES ON STORAGE PAD

46°32'05"
119°37'13"

91022217-24CN
(PHOTO TAKEN 1991)

222-S LABORATORY COMPLEX DANGEROUS AND MIXED WASTE STORAGE AREA

METAL STORAGE STRUCTURE INTERNAL VIEW

46°32'05"
119°37'13"

91022217-27CN
(PHOTO TAKEN 1991)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

* FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	T 0 4	189,270	V		7				
2					8				
3					9				
4					10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T04

The 204-AR Waste Unloading Station began waste management operations in February of 1982. The 204-AR Waste Unloading Station receives liquid mixed waste transported in railroad tank cars or tank trucks of varying capacity. Mixed waste is generated from decontamination and regeneration operations in the 100 and 200 Areas, from recovery and laboratory operations in the 200 and 300 Areas, and from decontamination operations in the 400 Area. The liquid mixed waste is chemically adjusted in-line during pumpout to meet Double-Shell Tank (DST) System corrosion specifications, then transferred to the DST System. The maximum process design capacity, with a specfic gravity for the waste of 1.0, for tank treatment at the 204-AR Waste Unloading Station is 189,270 liters (50,000 gallons) of which 37,854 liters (10,000 gallons) is associated with the flushing of the system.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*included with above*

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	8	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	D001	7,076,040	K	T04	Treatment-Other/Chemical Treatment
2	through				
3	D011				
4	D018				
5	D019				
6	D022				
7	D028				
8	through				
9	D030				
10	D033				
11	through				
12	D036				
13	D038				
14	through				
15	D041				
16	D043				
17	WT01				
18	WT02				
19	WP01				
20	WP02				
21	F001				
22	through				
23	F005				
24	F039				Included With Above
25					
26					

CONTINUE ON REVERSE

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The 204-AR Waste Unloading Station is used for the treatment of liquid mixed waste that exhibits a pH of less than 12. The waste is treated in-line at the 204-AR Waste Unloading Station by adding caustic (sodium hydroxide and sodium nitrate) to increase the pH of the waste, making the waste amenable for storage in the DST System.

The waste identified in Section IV.A. has the potential for being transported to the 204-AR Waste Unloading Station, treated, and transferred to the DST System. The mixed waste consists of listed waste, characteristic waste (D001, D002, and D003), toxic constituents (D004 through D011, D018, D019, D022, D028 through D030, D033 through D036, D038 through D041, and D043), nonspecific source waste (F001 through F005 and F039), and state-only waste (WT01, WT02, WP01, and WP02). Multi-source leachate (F039) is included as a waste derived from nonspecific source wastes F001 through F005.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

 CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

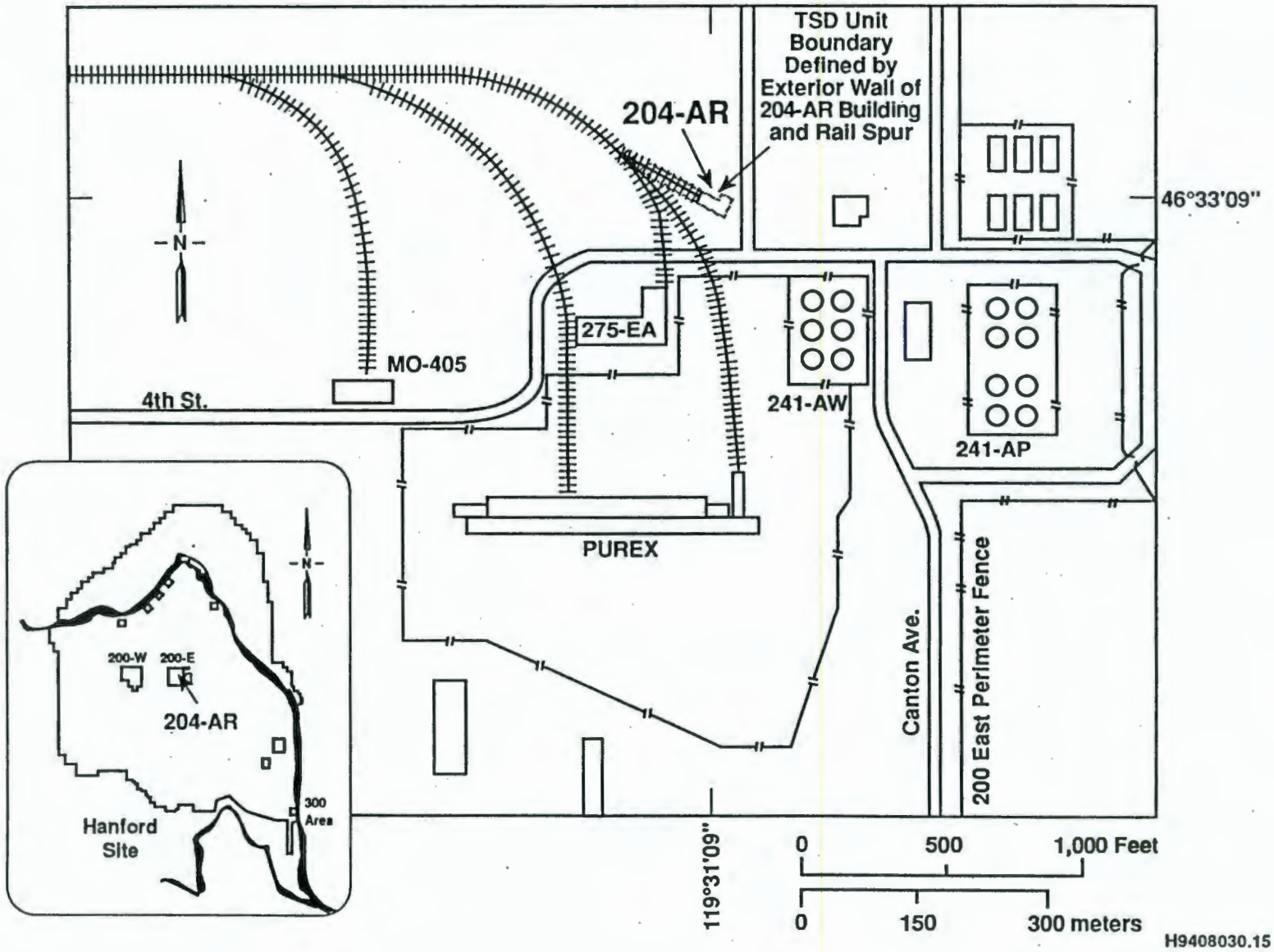
Date

9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

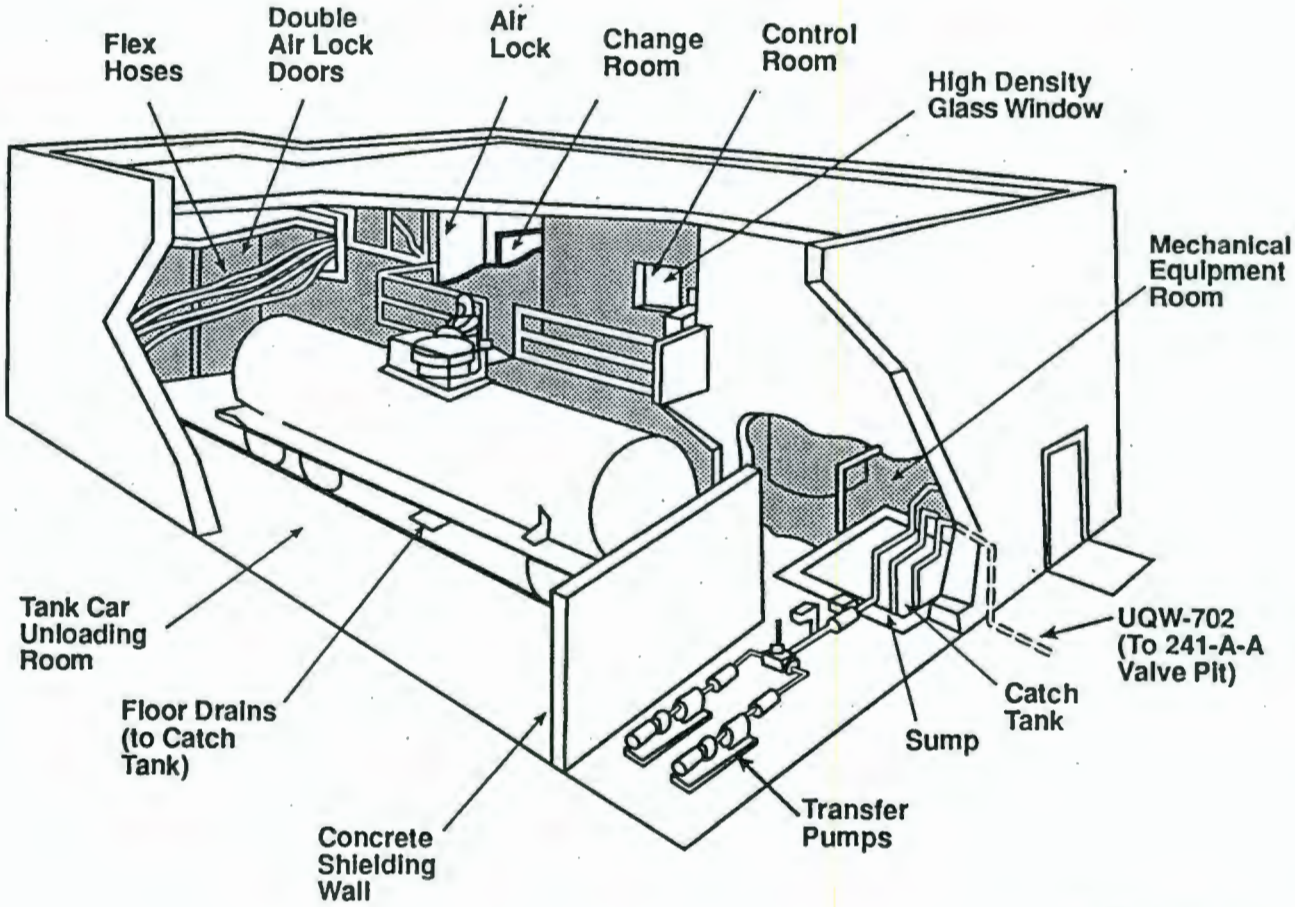
Date

204-AR Building Waste Unloading Station
Site Plan



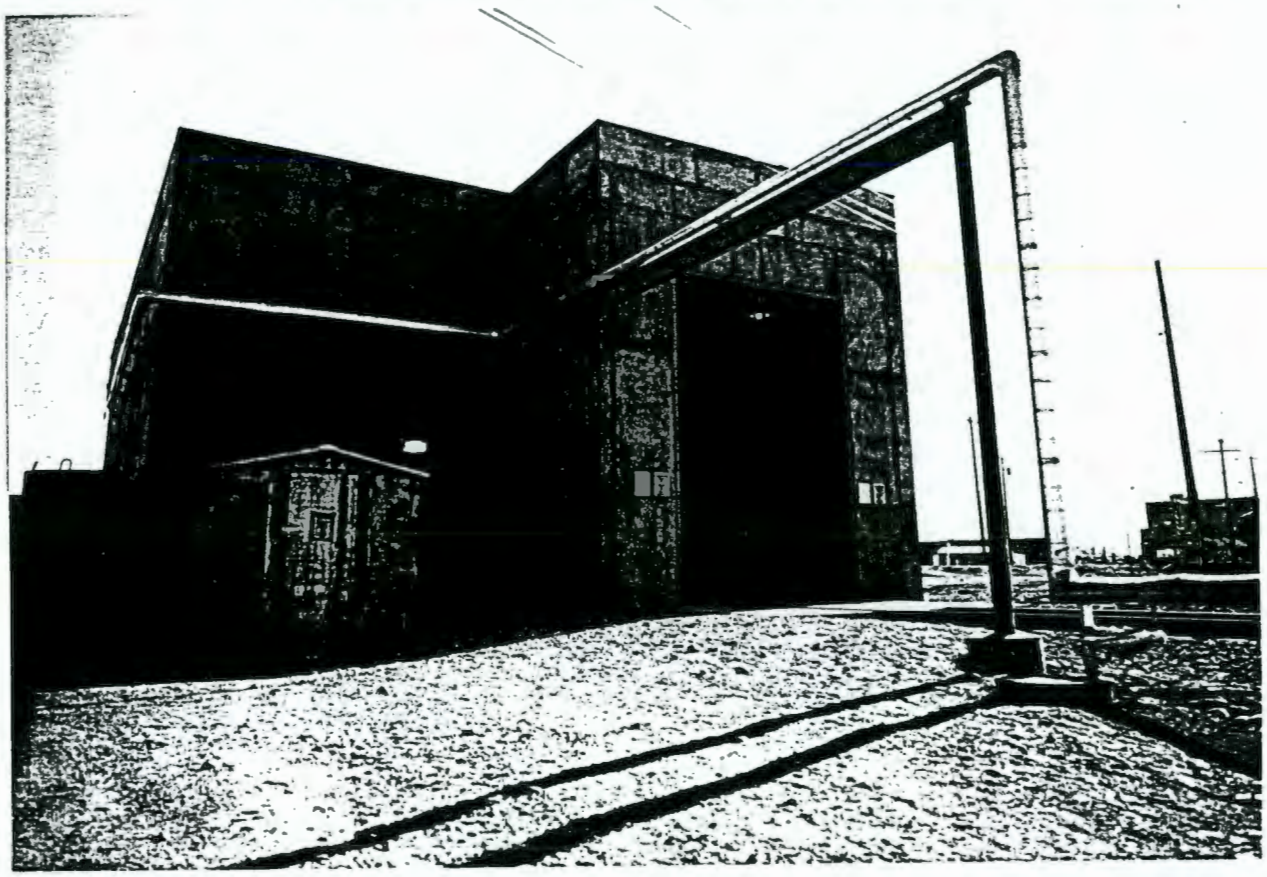
9713532.0507

204-AR Waste Unloading Station Cutaway View



H96070161.25

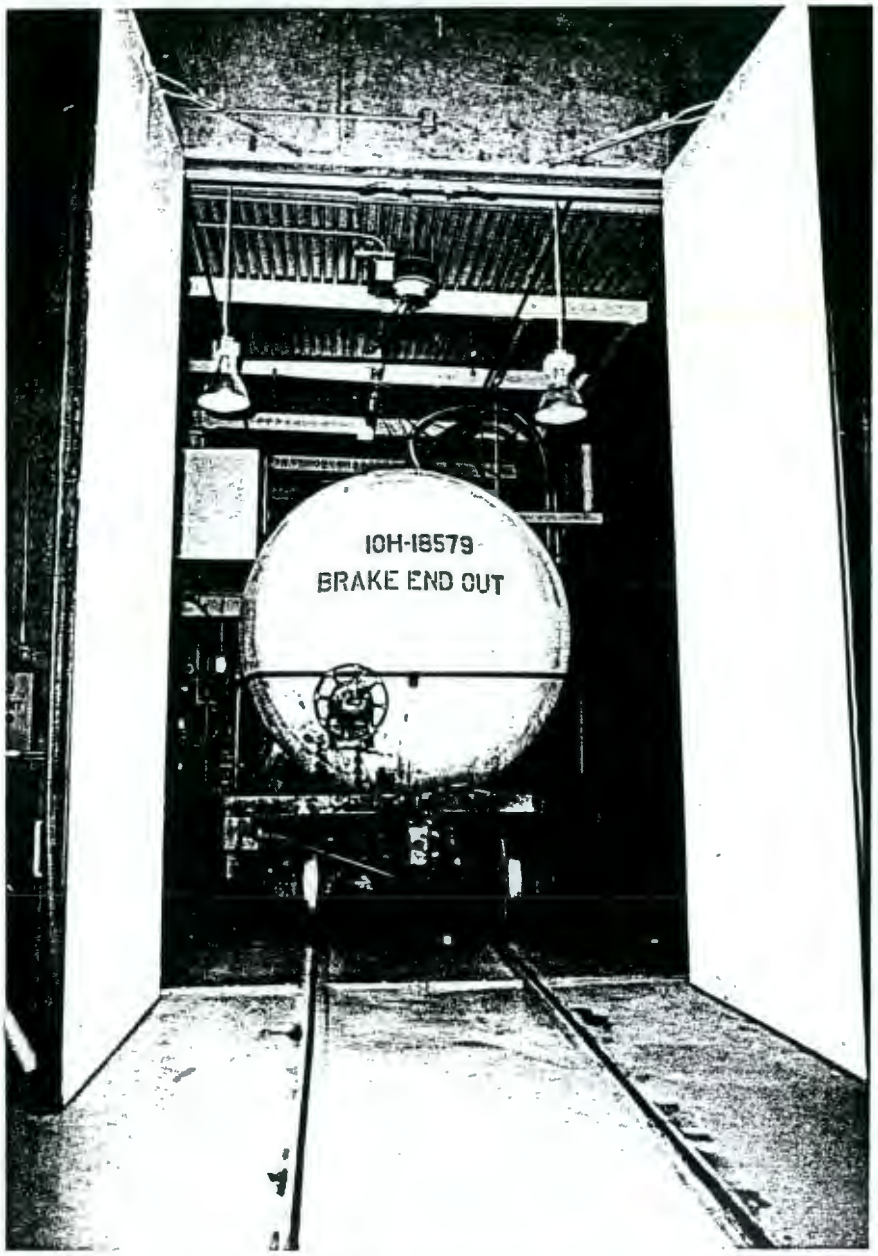
204-AR WASTE UNLOADING STATION



46°33'09"
119°31'09"

8706421-18CN
(PHOTO TAKEN 1987)

204-AR WASTE UNLOADING STATION INTERNAL VIEW



TYPICAL RAILROAD TANK CAR UNLOADING

46°33'09"
119°31'09"

8706421-18CN
(PHOTO TAKEN 1987)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

* FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

*The date construction of the Hanford Facility commenced

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occuring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	T 0 1	392,167	V		7				
2	S 0 2	1,263,233	L		8				
3	S 0 6	434	C		9				
4					10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

Refer to the following pages.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*Included with above*

CONTINUE ON PAGE 3

FORM 3 DANGEROUS WASTE PERMIT APPLICATION
U.S. ENVIRONMENTAL PROTECTION AGENCY/STATE IDENTIFICATION NUMBER WA7890008967

Section III.C., Description of Process Codes Listed in Section III.A.

The Plutonium-Uranium Extraction (PUREX) Plant, constructed in 1956, is located in the southeast corner of the 200 East Area. The PUREX Plant was used for the recovery of uranium and plutonium from irradiated reactor fuel. Liquid-liquid processes were used to separate the plutonium and uranium from fission products and to separate the plutonium from the uranium.

The PUREX Plant consists of the 202-A Building and various support structures. The 202-A Building is a reinforced concrete structure 306.3 meters (1,005 feet) long, 36.3 meters (119 feet) wide (at its maximum), and 30.5 meters (100 feet) high with approximately 12.2 meters (40 feet) of the height below grade. The 202-A Building consists of three main structural components: (1) a thick-walled, concrete canyon containing remotely operated process equipment (in cells below grade); (2) the pipe and operating, sample, and storage galleries; and (3) an annex that includes offices, process control rooms, laboratories, and building services.

The PUREX Plant currently is undergoing a transition phase where past process solutions will be either removed from the 202-A Building in bulk for treatment, storage, and/or disposal, or treated and stored until the waste is transferred to the Double-Shell Tank (DST) System. Dangerous waste activities at the PUREX Plant include the treatment and storage of regulated materials that support the transition of this treatment, storage, and/or disposal unit. Also, the 202-A Building may receive and temporarily stage mixed waste from onsite sources before storage in the PUREX Storage Tunnels.

The following are treatment and storage processes for the PUREX Plant:

T01 Tank E5 [19,873-liter (5,250-gallon) design capacity] - mixed waste was treated with NaOH and $NaNO_2$ before transferring the waste to the DST System.

The concentrator [E-F11; 9,804-liter (2,590-gallon) design capacity] and tank G7 [56,781-liter (15,000-gallon) design capacity] - Ammoniacal mixed waste was processed in the concentrator with the ammonia distillate going to the 216-A-36B Crib before September 1987. From September 1987 to March 1990, ammoniacal waste was collected in tank G7 and treated with NaOH and $NaNO_2$ before being transferred to the DST System. During PUREX Plant transition, the E-F11 could have been used to minimize the volume of liquid waste sent to the DST System by evaporation of water from flush solutions (both regulated and nonregulated) with the distillate (nonregulated) being discharged to the atmosphere via the PUREX main stack (291-A-1). The concentrate generated in the E-F11 was treated with NaOH and $NaNO_2$ in tank F18 [19,798-liter (5,230-gallon) design capacity] or tank G7 before transfer to the DST System. Tank G7 also was used during transition activities to treat the flush and other waste solutions before transferring the solutions to the DST System.

Section III.C., Description of Process Codes (continued)

Tank F15 [19,419-liter (5,130-gallon) design capacity] and tank F16 [19,870-liter (5,249-gallon) design capacity] - Mixed waste could have been sent to E-F11 for volume reduction. Residual liquids in tanks F15 or F18 were treated with NaOH and $NaNO_2$ before being transferred to the DST System.

Tank F18 [19,798-liter (5,230-gallon) design capacity], tank U3 [31,124-liter (8,222-gallon) design capacity], and tank U4 [31,184-liter (8,238-gallon) design capacity] - Mixed waste was collected from all sections of the PUREX Plant (E-F11 bottoms, other vessels, sumps, sinks, drains, overflows, laboratory waste) and treated with NaOH and $NaNO_2$ before being transferred to the DST System.

Tank Q21 [81-liter (21-gallon) design capacity] and tank Q22 [968-liter (256-gallon) design capacity] - During deactivation, nitric acid was treated with NaOH before being transferred to tank F18, and transferred to the DST System.

The total process design capacity for tank treatment is 392,167 liters (103,600 gallons) per day.

S02 Vessels permitted to store mixed waste are shown on the PUREX Plant Vessel Table (page 5 of 21), which includes the vessel identification (ID) number, tank location, and tank capacity. The total process design capacity for tank storage is 1,263,233 liters (333,712 gallons).

S06 The designation S06 (containment building/storage) is used to indicate that the solid mixed waste in the canyon and in F-Cell is stored in a containment building subject to the requirements of 40 CFR 265, Subpart DD. The solid mixed waste in the canyon could consist of contaminated discarded canyon process equipment, jumpers (or isolated components thereof) or other material from various onsite sources. The solid mixed waste in F-Cell consists mainly of concrete and tank dunnage corrosion products. The process design capacity of the storage areas in the canyon and in F-Cell is 434 cubic meters (567 cubic yards).

PUREX PLANT VESSEL TABLE

VESSEL ID	LOCATION	CAPACITY (LITERS)
TK-D5	D Cell	19,851
TK-E5	E Cell	19,873
TK-E6	E Cell	19,813
TK-F3	F Cell	19,964
TK-F4	F Cell	19,593
T-F5	F Cell	1,132
E-F11	F Cell	9,804
TK-F15	F Cell	19,419
TK-F16	F Cell	19,870
TK-F18	F Cell	19,798
TK-G1	G Cell	18,662
TK-G2	G Cell	7,064
T-G2	G Cell	8,248
TK-G5	G Cell	55,403
TK-G7	G Cell	50,827
TK-G8	G Cell	19,881
TK-H1	H Cell	19,593
T-H2	H Cell	7,003
E-H4	H Cell	10,137
TK-J1	J Cell	19,926
TK-J3	J Cell	19,911
T-J6	J Cell	6,057
T-J7	J Cell	6,730
TK-J21	J Cell	1,162
T-J22	J Cell	568
T-J23	J Cell	393
TK-K1	K Cell	19,828
T-K2	K Cell	5,194
T-K3	K Cell	6,507
TK-K6	K Cell	19,593
T-L2	L Cell	447
TK-L3	L Cell	488
T-L4	L Cell	139
TK-M2	M Cell	6,852
TK-Q21	Q Cell AMU*	81
TK-Q22	Q Cell AMU*	968
TK-R1	R Cell	18,121
TK-R2	R Cell	6,746
T-R2	R Cell	8,282
TK-R7	R Cell	35,174
TK-U3	U Cell	31,124
TK-U4	U Cell	31,184
TK-P4	203-A	402,930
TK-40	211-A	247,360
TK-156	AMU	1,533
Total Capacity		1,263,233

* Q Cell aqueous makeup is located in the storage gallery (refer to the PUREX Plant cross-section drawing, page 12 of 21).

For conversion, apply the following:
liters to gallons - multiply liters by 0.26417

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008987

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	WT01	29,937,096*	K	T01	S02			Treatment - Chemical/Storage - Tank
2	WT02							
3	WP01							
4	WP02							
5	D001							
6	through							
7	D011							Included With Above
8	WT01	15,200*	K	S06				Containment Building/Storage
9	WT02							
10	D005							
11	through							
12	D008							
13	D010							
14	D011							Included With Above
18								
19								
20								
21								
22								
23								
24								
25								
26								

* The estimated annual quantity of waste listed above represents the maximum quantities of solid mixed waste that were treated and stored at the PUREX Plant. Future closure activities could necessitate an increase in excess of these estimates and a permit application revision could be pursued as required by dangerous waste regulations.

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

During PUREX Plant operation, the following tanks were operated in the manner described. Waste managed in these tanks was treated to DST System acceptance standards before transferring the waste for storage.

- Tank E5 contained: (1) decladding waste consisting of NH_4F, $(NH_4)_2ZrF_6$, $(NH_4)_2UF_6$, and NH_4NO_3; (2) metathesis solutions consisting of KOH and KF; or (3) metathesis rinse and miscellaneous flushes with similar chemical makeups. Following treatment of these streams with NaOH, the resulting waste stream consisted mainly of NaF, KF, UO_2, ZrO_2, NH_3, NH_4OH, and $NaNO_3$.
- The E-F11 bottoms, containing NH_4NO_3 and NH_4OH, were transferred to tank F18.
- Tanks F15 and F16 contained acid waste with HNO_3 and possibly $Al(NO_3)_3$.
- Tank F18 and tanks U3 and U4 received miscellaneous waste with a constantly changing composition consisting mainly of water and HNO_3.

During PUREX Plant deactivation, all vessels (refer to PUREX Plant Vessel Table on page 5 of 21) could have received and stored dangerous waste solutions. Waste and flush solutions received in tanks E5, F15, F16, F18, G7, U3, and U4 were treated to DST System acceptance standards before transferring the waste for storage. These solutions also could have been concentrated in E-F11 and/or treated before storage.

Solutions found in tanks Q21 and Q22 during deactivation were treated with NaOH to neutralize the solution before transfer to tank F18, where the solution was treated to DST System acceptance standards before being transferred for storage.

The PUREX Plant containment building stores material containing barium, cadmium, chromium, lead, silver, selenium and/or light mineral oil (WT02) contained in oil absorbent material.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

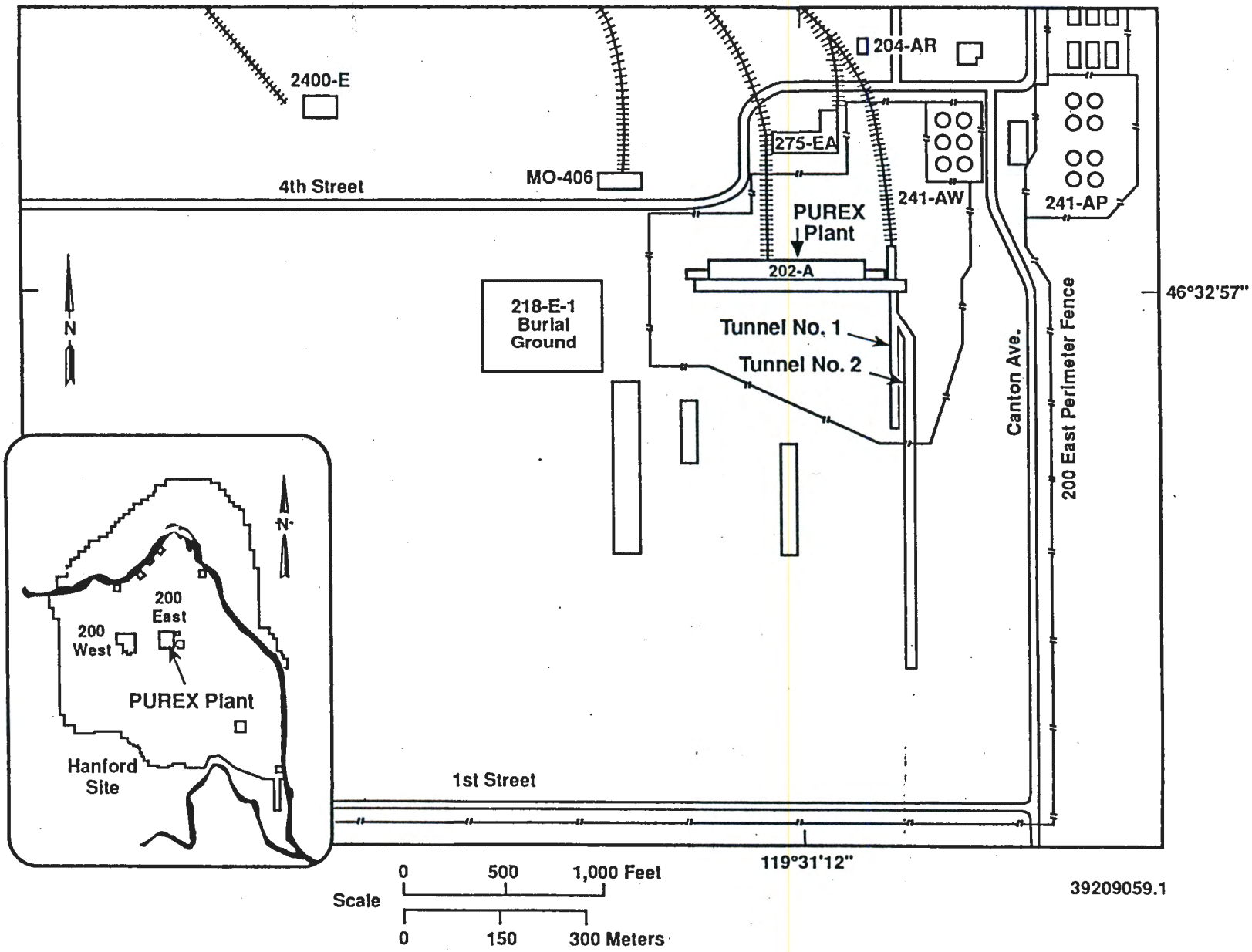
Date

9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

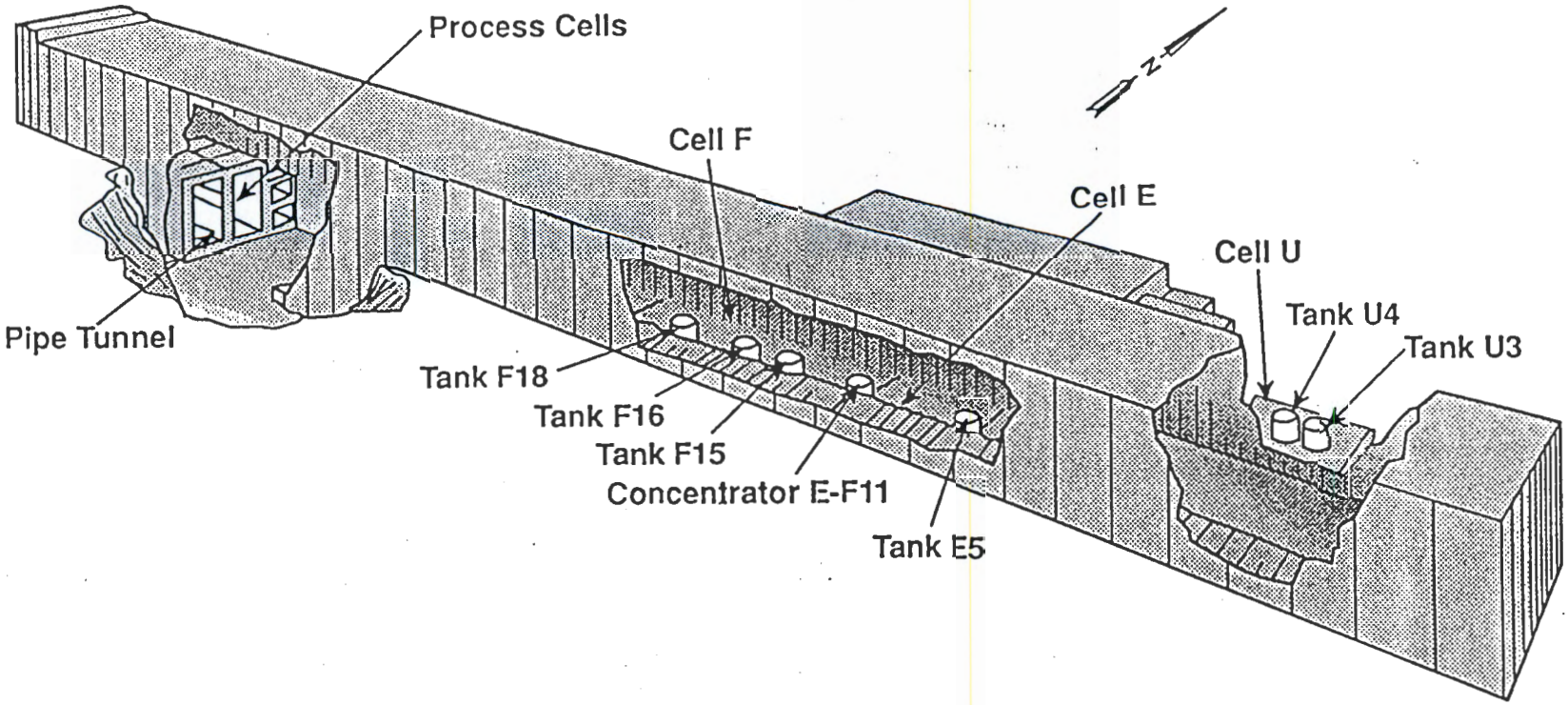
Date

PUREX Plant
Site Plan



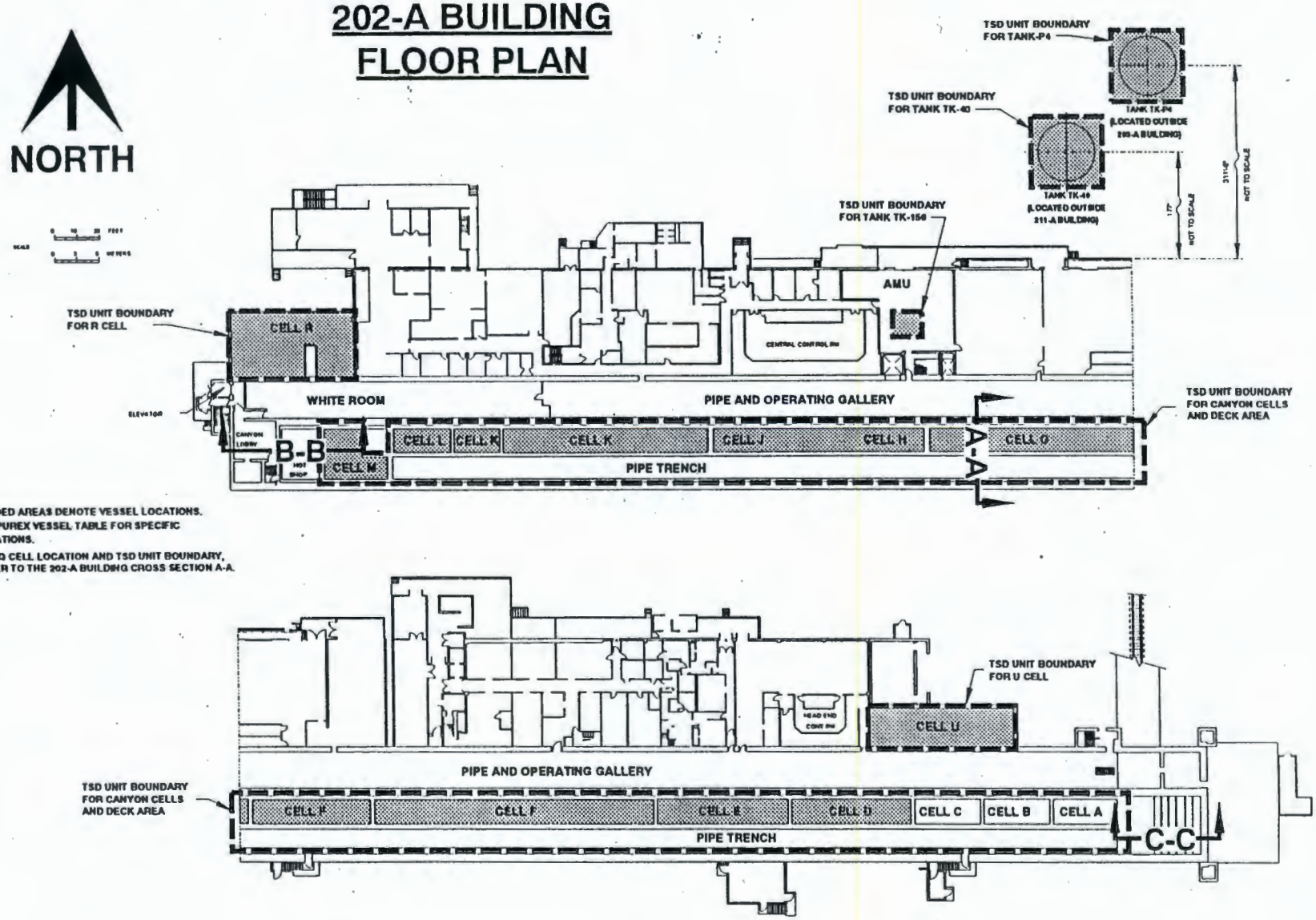
9713532.0520

PUREX Plant Cutaway View (202-A Building)



39201061.7

202-A BUILDING FLOOR PLAN

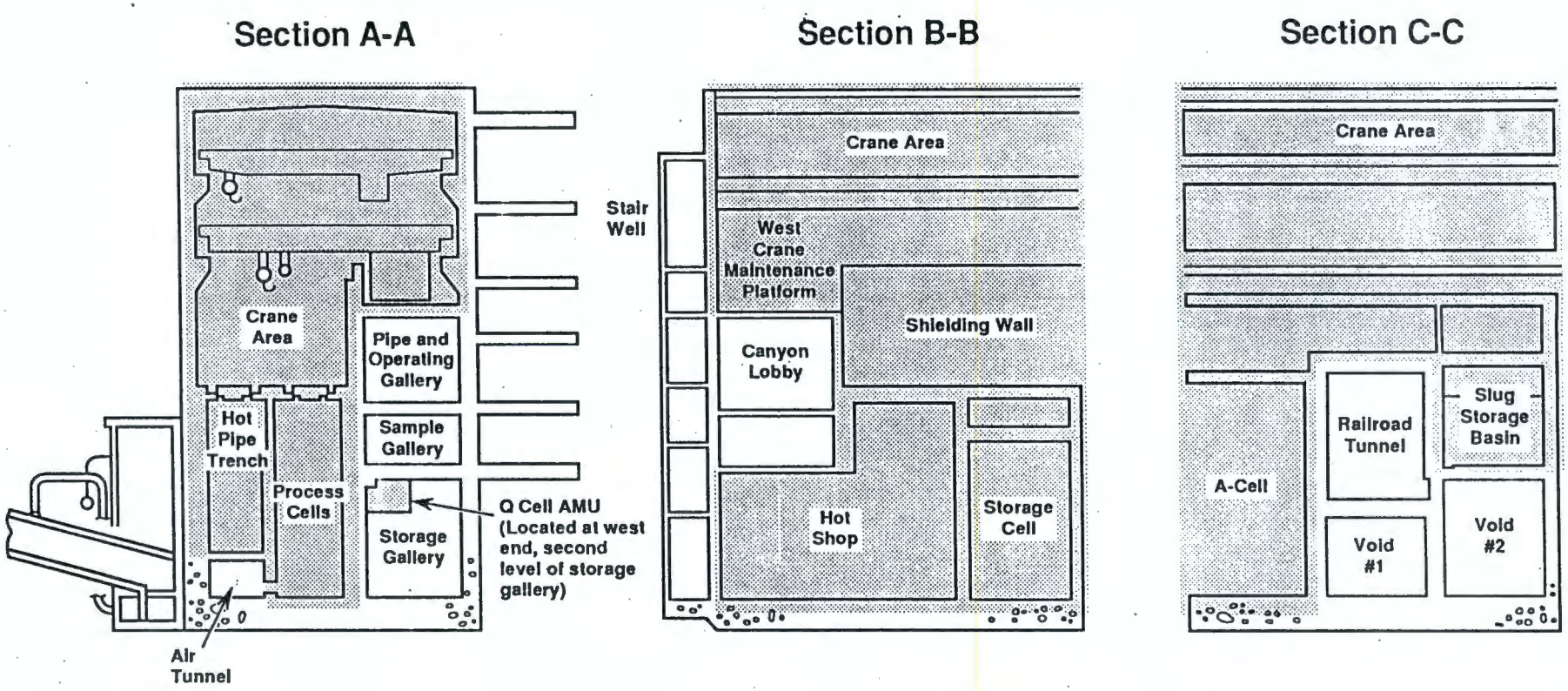


NOTE 1: SHADED AREAS DENOTE VESSEL LOCATIONS. SEE PUREX VESSEL TABLE FOR SPECIFIC LOCATIONS.

NOTE 2: FOR Q CELL LOCATION AND TSD UNIT BOUNDARY, REFER TO THE 202-A BUILDING CROSS SECTION A-A.

9713532.0521

9713532.0522

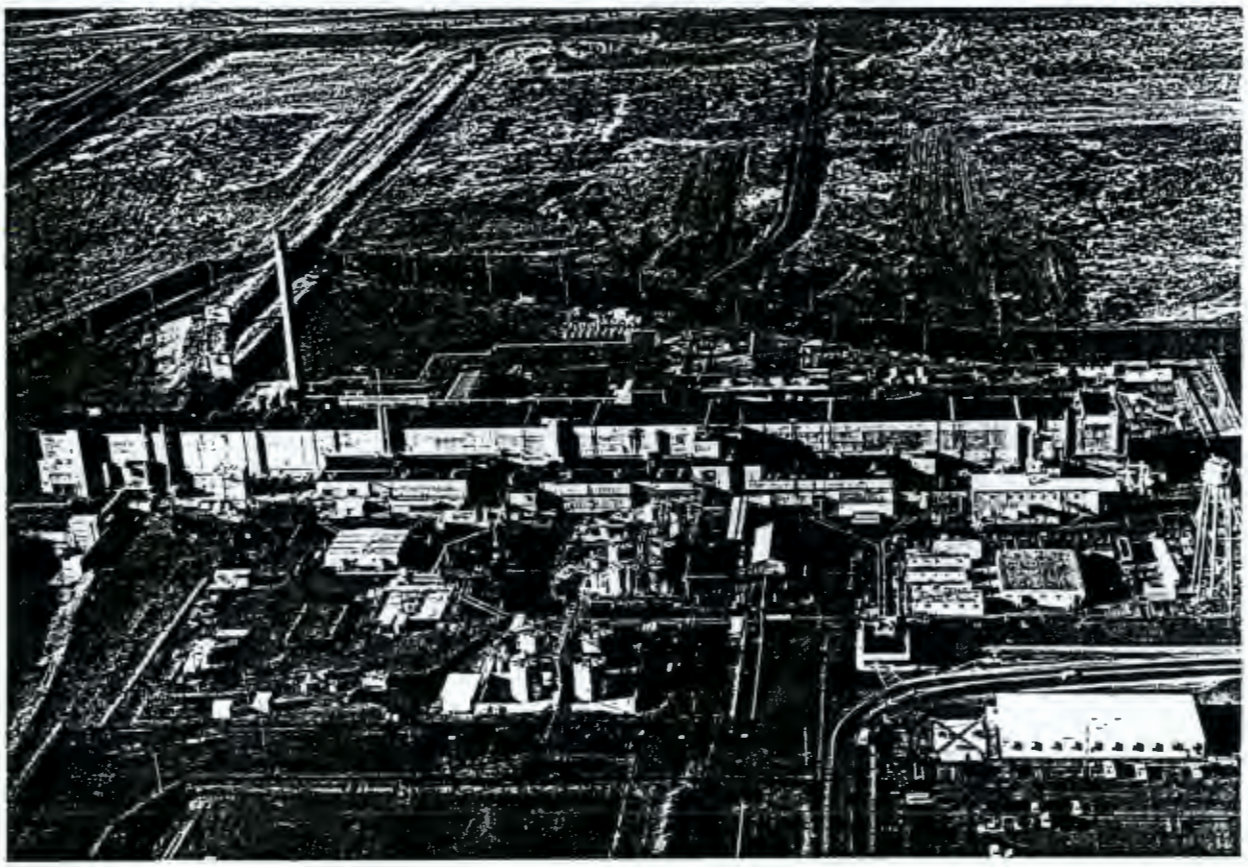


(Not to Scale)

Note: Shaded portions denote areas that are within the TSD boundary.

H96020325.1a

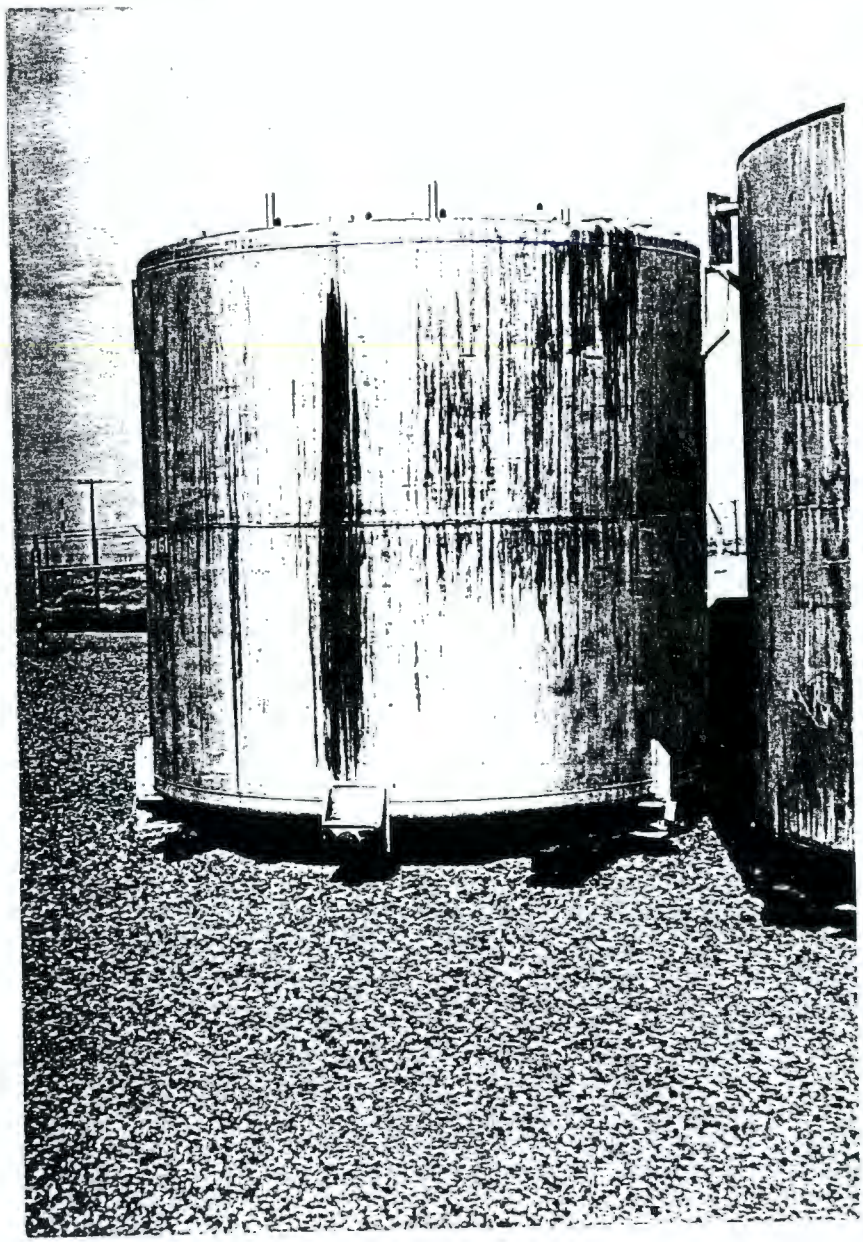
PUREX PLANT (AERIAL VIEW)



46°32'57"
119°31'12"

96060585-20CN
(PHOTO TAKEN 1996)

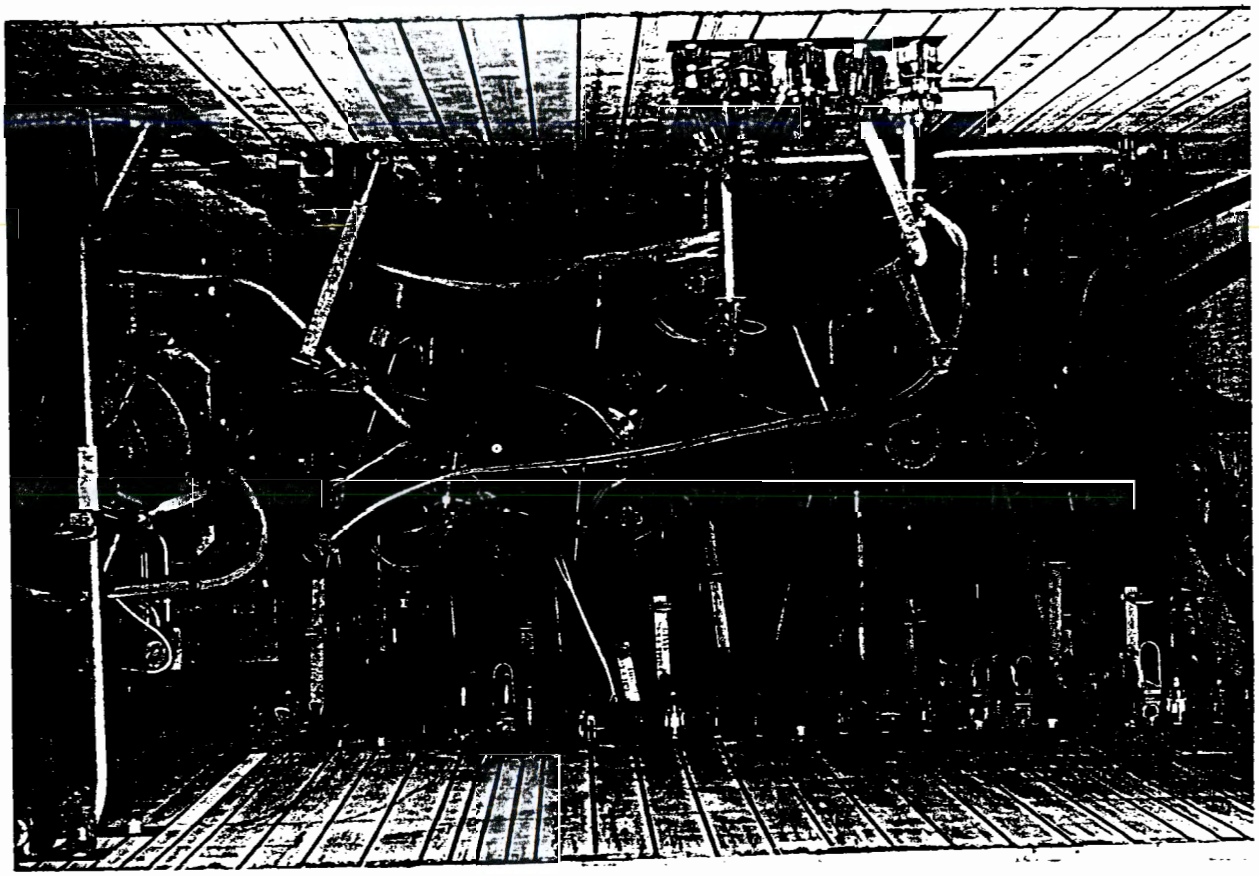
STANDARD 18,927-LITER TANK (TYPICAL OF E5, F15, F16, AND F18)



8706243-5CN
(PHOTO TAKEN 1987)

TANK E5

Pipe Trench Wall - Top View

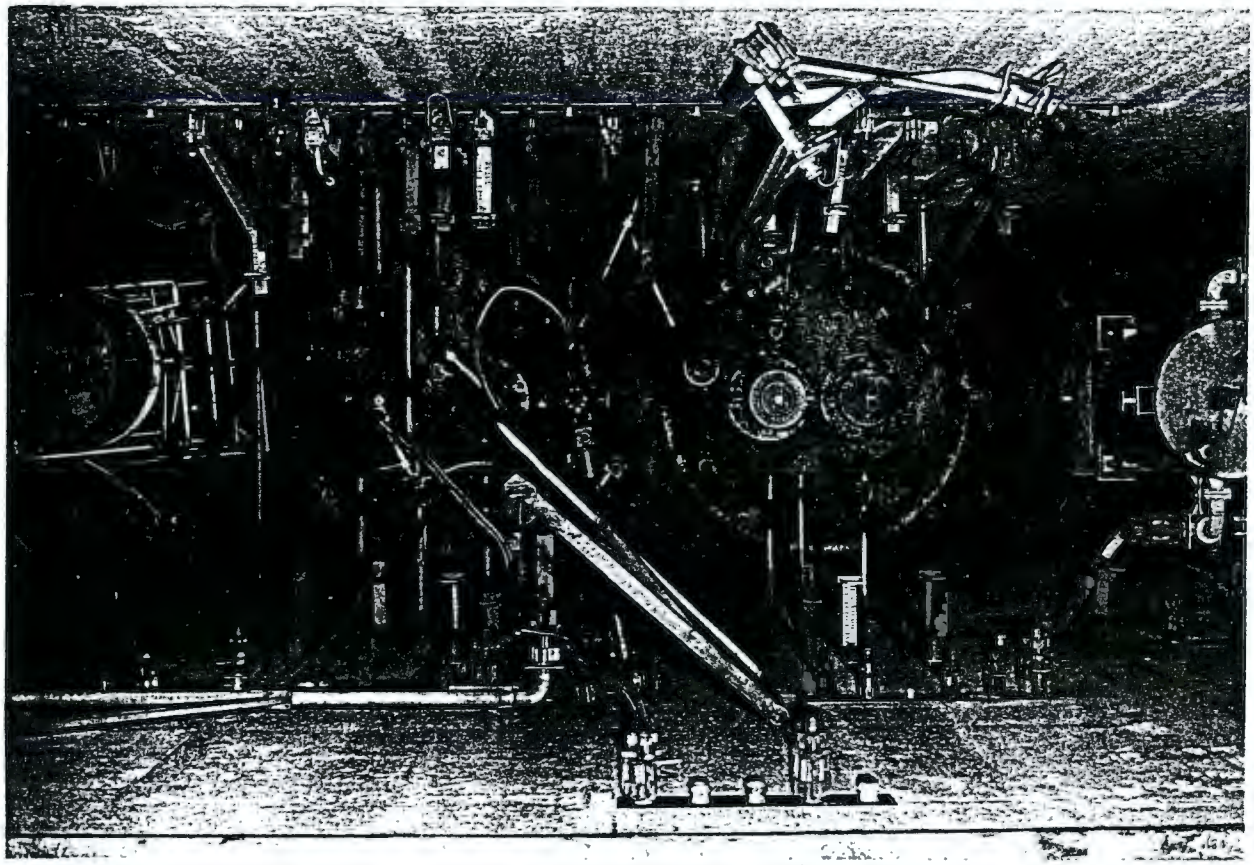


46°32'57"
119°31'12"

099948-38CN
(PHOTO TAKEN 1982)

TANK F15 AND TANK F16

Pipe Trench Wall - Top View

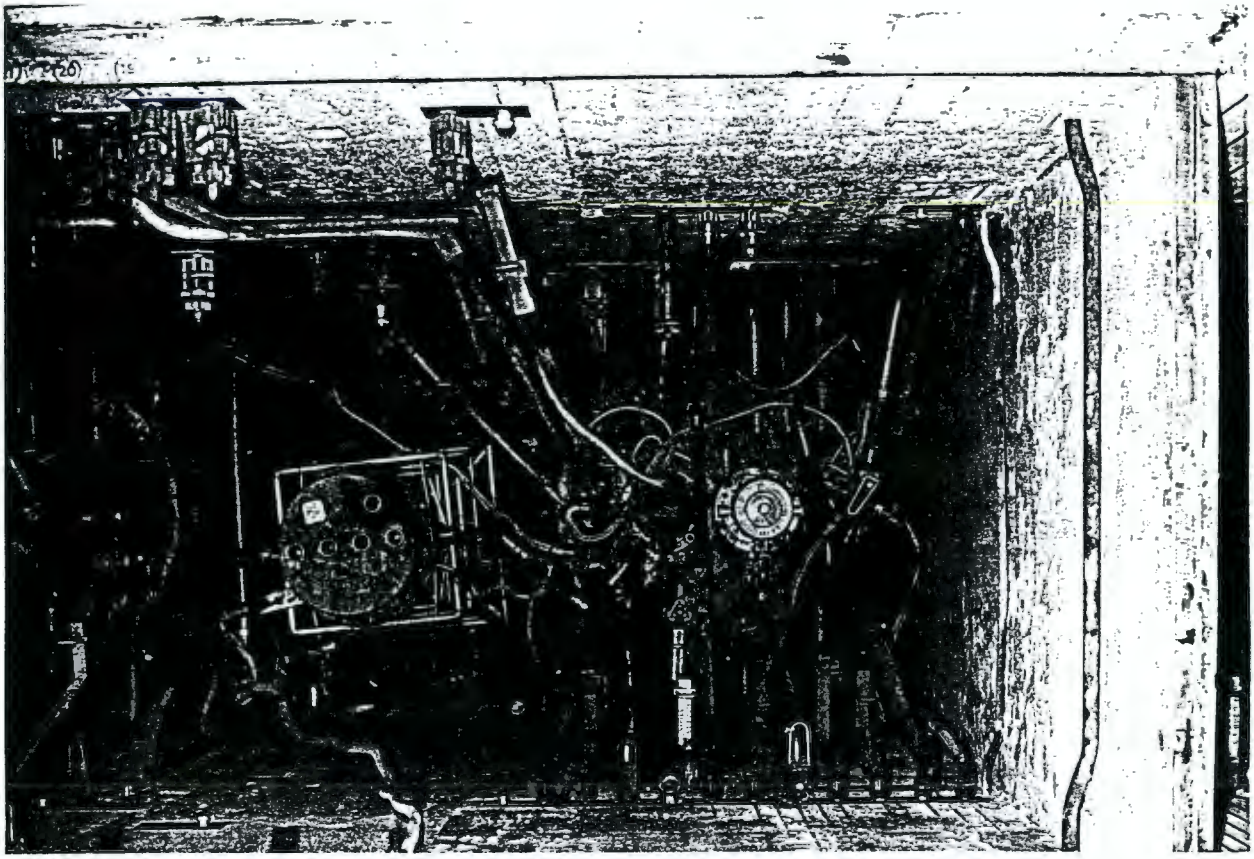


46°32'57"
119°31'12"

099948-71CN
(PHOTO TAKEN 1982)

TANK F18

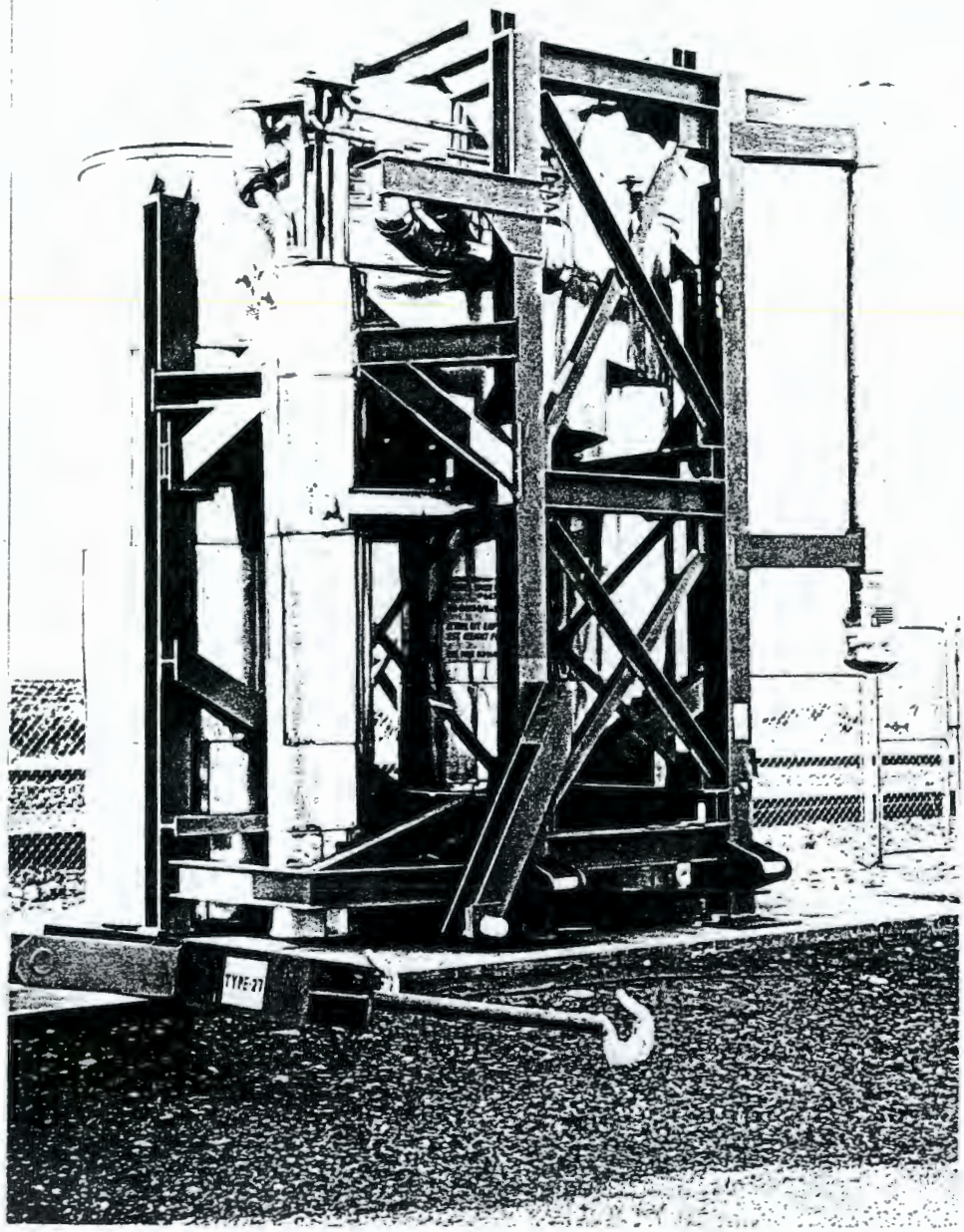
Pipe Trench Wall - Top View



46°32'57"
119°31'12"

099948-74CN
(PHOTO TAKEN 1982)

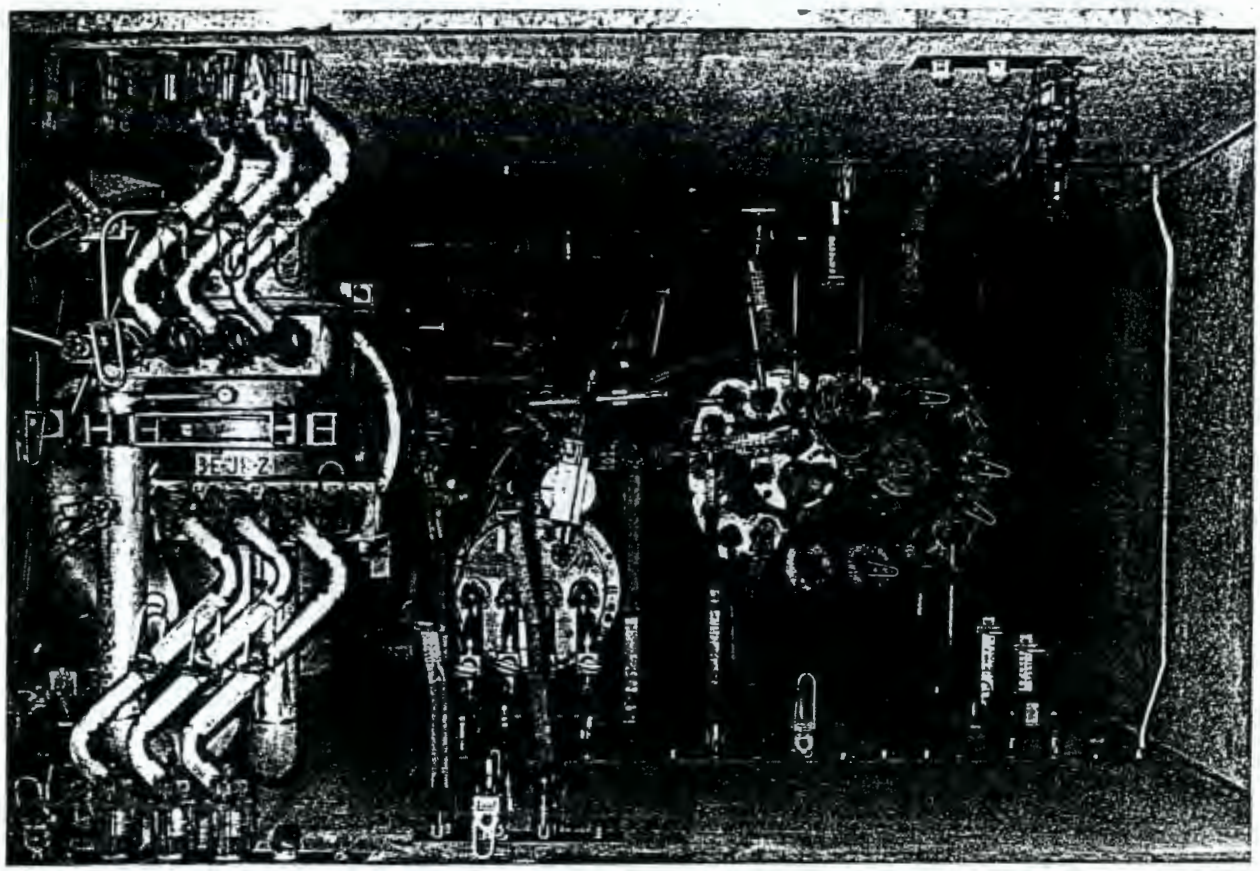
E-F11 CONCENTRATOR



8706243-8CN
(PHOTO TAKEN 1987)

E-F11 CONCENTRATOR

Pipe Trench Wall - Top View

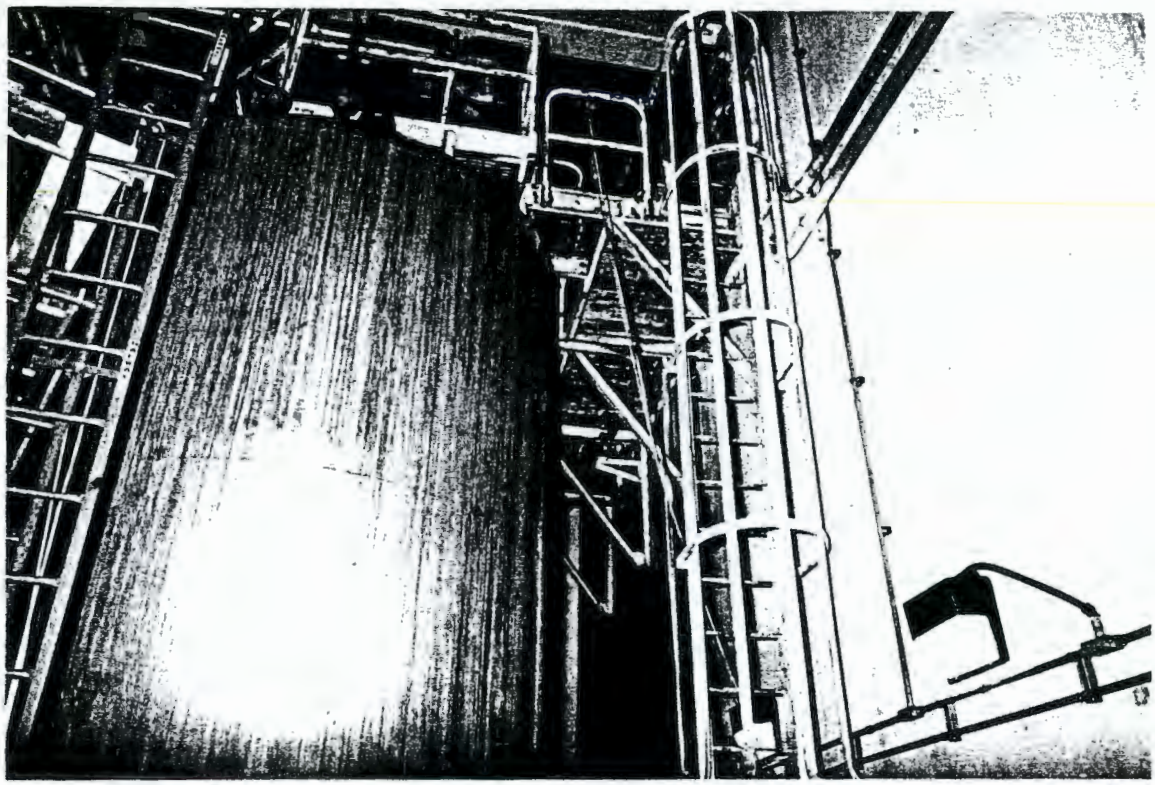


46°32'57"
119°31'12"

099948-64CN
(PHOTO TAKEN 1982)

U CELL

Top of Tank U3 (Typical of Tank U4)



46°32'57"
119°31'12"

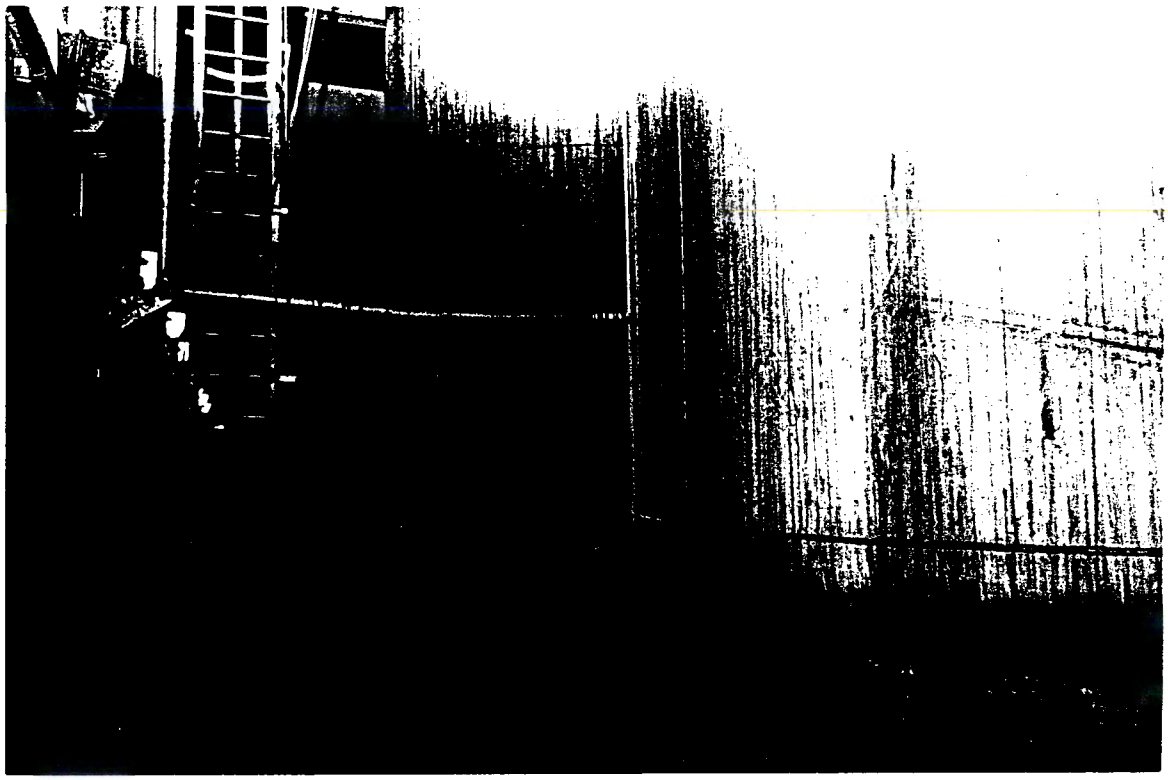
92102839-10CN
(PHOTO TAKEN 1992)

U CELL

Bottom of Tanks

Tank U3

Tank U4



46°32'57"
119°31'12"

92102839-7CN
(PHOTO TAKEN 1992)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 * FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
1	T01	33,308	V		6	S02	696,440	L	
2	T04	250**	H		7	T01	417	V	
3	S02	416,350	L		8	S02	431,490	L	
4	S05	2,271**	L		9	S01	1,479,935	L	
5	T01	66,616	V					L	

** Process Codes T04 and S05 are being used to designate the Hanford Waste Vitrification Plant Melter as a "miscellaneous unit" per Washington Administrative Code 173-303-680 "Miscellaneous Units."

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

Refer to the following pages.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T03 D80	
X-2	D 0 0 2	400	P	T03 D80	
X-3	D 0 0 1	100	P	T03 D80	
X-4	D 0 0 2			T03 D80	*Included with above*

CONTINUE ON PAGE 3

FORM 3 DANGEROUS WASTE PERMIT APPLICATION
U.S. ENVIRONMENTAL PROTECTION AGENCY/STATE IDENTIFICATION NUMBER WA7890008967

Section III.C, Description of Process Codes Listed in Section III.A

T01, T04, S02, S05 (Vitrification and Related Treatment and Storage Processes)

The Hanford Waste Vitrification Plant (HWVP) is proposed to be located in the 200 East Area of the Hanford Facility[1]. At the HWVP, mixed waste received from a pretreatment unit will be treated in a series of tanks. Treatment will include concentration by evaporation, adjustment with chemicals and glass forming materials, and immobilization in borosilicate glass (vitrification) (T01, T04)[2]. The vitrified waste will be cast into stainless steel canisters and stored at the HWVP until the canisters are shipped to a national repository. The HWVP Melter is designed to process 250 liters per hour of melter feed, producing 100 kilograms per hour of borosilicate glass. The associated HWVP treatment tanks will be designed to process 33,308 liters per day of mixed waste. The dangerous waste treatment tanks will be capable of storing dangerous waste (S02) under offnormal conditions. The HWVP Melter also will be capable of storing dangerous waste (S05)[2] under offnormal conditions. The total storage capacity of the tanks included in the vitrification process is 416,350 liters. The storage capacity of the HWVP Melter is 2,271 liters.

T01, S02, (Tank Treatment and Storage of Secondary Mixed Waste)

Secondary liquid mixed waste generated by the HWVP will be collected and treated (T01) in a series of tanks. Treatment will include neutralization, filtration, sorption, and evaporation. The high-activity fraction from the treatment process will be recycled. The remainder of the waste will be transferred to the Double-Shell Tank (DST) System. Treatment design capacity will be 66,616 liters per day of mixed waste. The dangerous waste treatment tanks also will be capable of storing dangerous waste (S02) under offnormal conditions. The total storage capacity of tanks handling secondary liquid mixed waste is 696,440 liters.

T01, S02 (Neutralization, Solar Evaporation, and Tank Storage of Secondary Nonradioactive Dangerous Waste)

Secondary nonradioactive dangerous waste generated from leaks, spills, and/or overflows from chemical storage, makeup, and feed tanks will be collected, treated in a series of tanks (T01), and stored (S02) at the HWVP. Treatment will include neutralization, concentration by solar evaporation, and decomposition of dangerous constituents during storage. Treatment design capacity is 417 liters per day with a storage design capacity of 431,490 liters.

1. Per Amendment Four of the Hanford Federal Facility Consent and Order (Tri-Party Agreement), construction of a high-level waste virtification plant, such as the HWVP, was delayed until the year 2002 to accommodate changes in waste management planning and prioritization. Hot startup of a high-level vitrification plant has been delayed until the year 2009 (Tri-Party Agreement Milestone M-51-03).

2. The HWVP Melter, to be used for treatment (vitrification) (T04) and storage (S05) of dangerous waste, will be considered a 'miscellaneous unit' per Washington Administrative Code (WAC) 173-303-680 "Miscellaneous Units."

S01 (Storage of Vitrified Waste in Canisters)

The vitrified waste will be cast into stainless steel canisters and stored (S01) at the HWVP until the canisters are shipped to a national repository[3]. Approximately 2,000 canisters of vitrified waste will be stored at the HWVP. Conservatively assuming that the vitrified waste will fill 100 percent of the total canister volume (0.73 cubic meters), the total container storage capacity is 1,479,935 liters.

3. Because the vitrified waste has been classified as a listed waste (Dangerous Waste Codes F003 and F005), the U.S. Department of Energy, Richland Operations Office intends to submit a petition to the U.S. Environmental Protection Agency to delist the vitrified waste produced at the HWVP. In addition, a variance, per WAC 173-303-072 "Procedures and Bases For Exempting and Excluding Wastes," will be submitted to the Washington State Department of Ecology requesting a variance for the borosilicate glass from the dangerous waste regulations.

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)* WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	D001	12,439,660	K	T01	T04	S02	S05	Treatment-Tank/Treatment-Other Miscellaneous Unit Storage-Tank/Storage-Other Miscellaneous Unit
2	through							
3	D011							
4	WP01							
5	WP02							
6	WT01							
7	F003							
8	F005							Included With Above
9	D002	17,161,200	K	T01	S02			Treatment-Tank/Storage of Secondary Liquid Mixed Waste.
10	D004							
11	through							
12	D011							
13	WP01							
14	WP02							
15	WT01							
16	F003							
17	F005							Included With Above
18	D002	149,900	K	T01	S02			Treatment-Tank/Storage of Secondary Liquid Mixed Waste
19	WT01							
20	WT02							Included With Above
21	WT01	876,300	K	S01				Storage-Container Vitrified Waste
22	F003							
23	F005							Included With Above
24								
25								
26								

(enter "A1", "B", "C", etc. behind the "3" to identify photo copied pages)

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The mixed waste that will be treated and stored in stainless steel canisters at the HWVP will consist of existing and future high-activity waste stored in the DST System. The mixed waste will be designated as a dangerous waste due to ignitability (D001), corrosivity (D002), reactivity (D003), and the presence of spent nonhalogenated solvents (F003 and F005). The mixed waste also will be designated state-only extremely hazardous waste and/or dangerous waste for toxicity (WT01) and persistent (WP01, WP02).

The secondary liquid mixed waste is expected to be designated dangerous waste due to corrosivity (D002), and to the presence of spent nonhalogenated solvents (F003 and F005). The secondary liquid mixed waste also will be designated state-only waste for persistent (WP01, WP02) and toxicity (WT01, WT02). Treatment is expected to eliminate the extremely hazardous waste designation of the secondary liquid mixed waste before the mixed waste is transferred out of this unit.

The secondary nonradioactive chemical waste that will be treated and stored at the HWVP is expected to be designated dangerous waste due to corrosivity (D002) and state-only waste for toxicity (WT01, WT02). Treatment is expected to eliminate the extremely hazardous waste characteristics designation before treatment and storage in a solar evaporation tank.

The vitrified waste stored in stainless steel canisters is expected to be designated dangerous waste due to the presence of spent nonhalogenated solvents (F003 and F005) and state-only waste for toxicity (WT01).

When the HWVP Project is underway, a Part A, Form 3, permit application revision could be pursued as required by the dangerous waste regulations to change the dangerous waste number(s) and revise the estimated annual quantity of waste.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

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John D. Wagoner

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

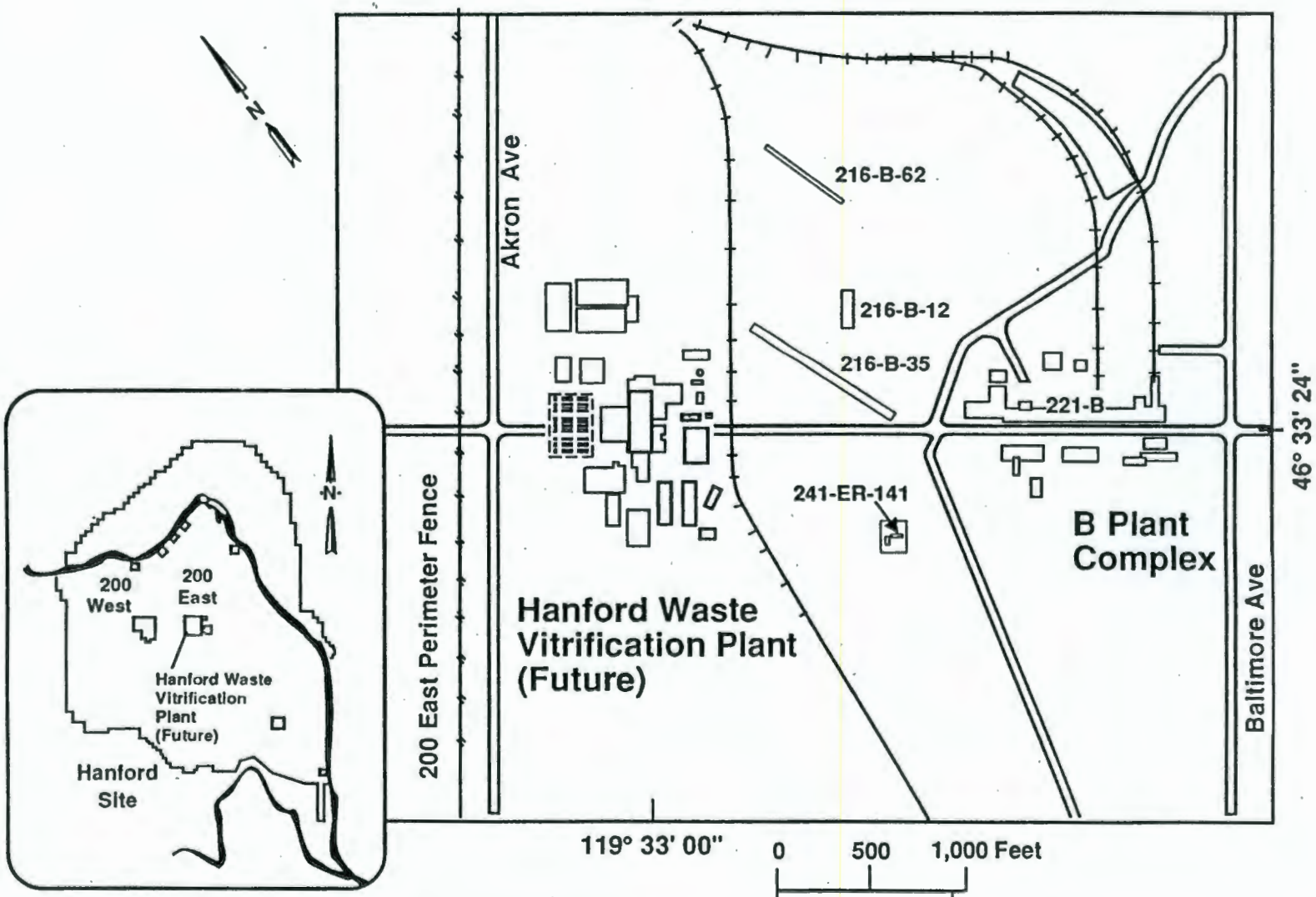
9/26/96
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/13/96
Date

9713532.0539

Hanford Waste Vitrification Plant
Future Site Plan



TSD Unit Boundary to be determined at time of construction

H96070161.2

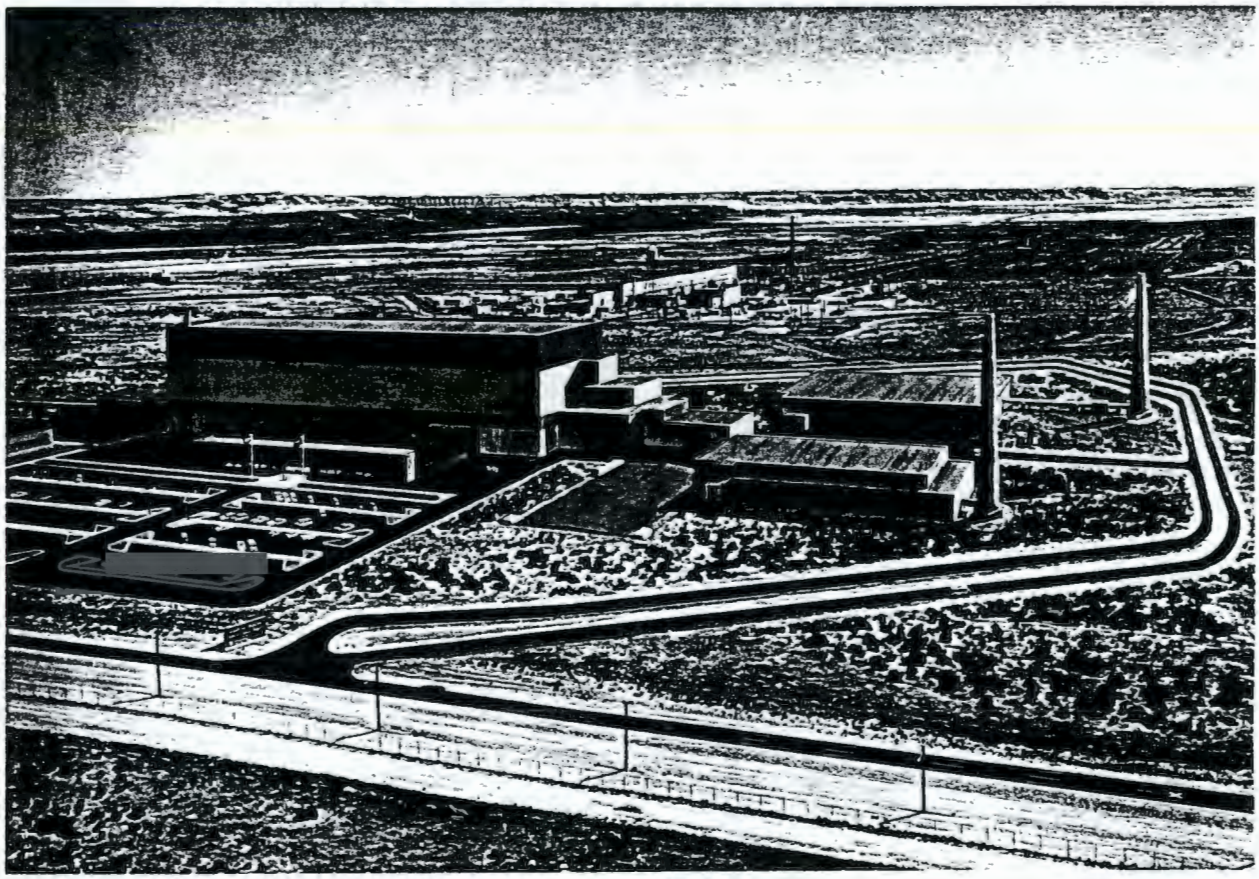
HANFORD WASTE VITRIFICATION PLANT PROPOSED LOCATION--AERIAL VIEW

46°33'24"
119°33'00"

8600906-13CN
(PHOTO TAKEN 1986)

9713532.0541

HANFORD WASTE VITRIFICATION PLANT FUTURE CONCEPTUAL LAYOUT



46°33'24"
119°33'00"

90112857-1CN
(PHOTO TAKEN 1990)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM **3**

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 * FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	T 0 1	817,646	V		7				
2	S 0 2	7,608,654	L		8				
3	S 0 1	147,630	L		9				
4					10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T01, S02

The 200 Area Effluent Treatment Facility (ETF) began waste management operations in November of 1995. The ETF was constructed to treat and store process condensate from the 242-A Evaporator and the Liquid Effluent Retention Facility, and other Hanford Facility waste streams. The ETF is located in the northeast corner of the 200 East Area. The treatment process includes filtration, pH adjustment, ultraviolet oxidation, hydrogen peroxide decomposition, degasification, reverse osmosis, ion exchange, effluent quality verification in tanks, evaporation, concentration, and thin film drying (T01). The treated effluent is stored in three verification tanks (S02) and sampled to determine if the effluent meets required discharge standards. When the effluent meets the discharge standards as established by the regulations, the effluent will be discharged to the soil. If the sample analysis of the effluent in the verification tanks does not meet the discharge standards, the effluent will be sent back through the system for further treatment.

The maximum process design capacity for tank treatment is 568 liters (150 gallons) per minute or 817,646 liters (216,000 gallons) per day. The maximum process design capacity for tank storage is 7,608,654 liters (2,010,000 gallons).

S01

A secondary waste is generated during operation of the ETF. This secondary waste is concentrated into a powder, containerized, and transferred to the Central Waste Complex for storage or to the Low-Level Burial Grounds or the Environmental Restoration Disposal Facility for disposal (as appropriate). Other mixed waste generated and containerized during the operation of the ETF includes dewatered spent bead resin, spent membranes, spent high-efficiency particulate air cartridges, spent filter elements, spent activated carbon cartridges, and spent ultraviolet lamps. Nonradioactive dangerous waste includes chemicals used in the various processes. This nonradioactive dangerous waste is containerized and transferred to an onsite treatment, storage, and/or disposal (TSD) unit or shipped offsite to a TSD facility.

The maximum process design capacity for container storage is 147,630 liters (39,600 gallons).

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	included with above

 CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

.D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D001	298,434,296	K	T01	Treatment-Tank
2	through				
3	D011				
4	D018				
5	D019				
6	D022				
7	D028				
8	through				
9	D030				
10	D033				
11	through				
12	D036				
13	D038				
14	through				
15	D041				
16	D043				
17	F001				
18	through				
19	F005				
20	F039				
21	WT01				
22	WT02				Included With Above
23	D001	30,433,326	K	S02	Storage-Tank
24	through				
25	D011				
26	D018				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	D019		K	S02	Storage-Tank (Cont.)
2	D022				
3	D028				
4	through				
5	D030				
6	D033				
7	through				
8	D036				
9	D038				
10	through				
11	D041				
12	D043				
13	F001				
14	through				
15	F005				
16	F039				
17	WT01				
18	WT02				Included With Above
19	D001	1,986,735	K	S01	Storage-Container
20	through				
21	D011				
22	D018				
23	D019				
24	D022				
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I. NUMBER *(entered from page 1)* WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D028		K	S01	Storage-Container (Cont.)
2	through				
3	D030				
4	D033				
5	through				
6	D036				
7	D038				
8	through				
9	D041				
10	D043				
	F001				
12	through				
13	F005				
14	F039				
15	WT01				
16	WT02				Included With Above
17					
18					
19					
20					
21					
22					
23					
24					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The ETF stores and treats the 242-A Evaporator process condensate and other dilute, aqueous waste streams from the Hanford Facility. A description of the dangerous and/or mixed waste managed at the ETF is as follows.

The 242-A Evaporator process condensate is regulated as a mixed waste because of the "derived from" rule from treating Double-Shell Tank (DST) System waste. The DST System waste is a listed waste due to the presence of spent halogenated and nonhalogenated solvents (F001, F002, F003, F004, and F005). The ETF also could treat other waste streams from onsite remediation and waste management activities, which could carry the F001 through F005 dangerous waste numbers; the waste stream also could have the potential presence of characteristic waste (D001 through D011, D018, D019, D022, D028 through D030, D033 through D036, D038 through D041, and D043). The ETF could treat multi-source leachate (F039) that is derived from nonspecific source waste F001 through F005. The process condensate and/or other influent waste streams also could display the state-only criteria of toxicity (WT01 or WT02).

The secondary waste stream also could be regulated as a dangerous waste because of the "derived from" rule for listed waste (F001 through F005, and F039 derived from F001 through F005), and because of the potential presence of characteristic waste (D001 through D011, D018, D019, D022, D028 through D030, D033 through D036, D038 through D041, and D043), and could display the state-only criteria for toxicity (WT01 or WT02).

The 'Estimated Annual Quantity of Waste' listed under Section I.V.B. was based on an operating schedule of 365 days a year. This basis was used to provide a maximum estimated annual quantity of waste that could be treated and stored by the ETF.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

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John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

Date

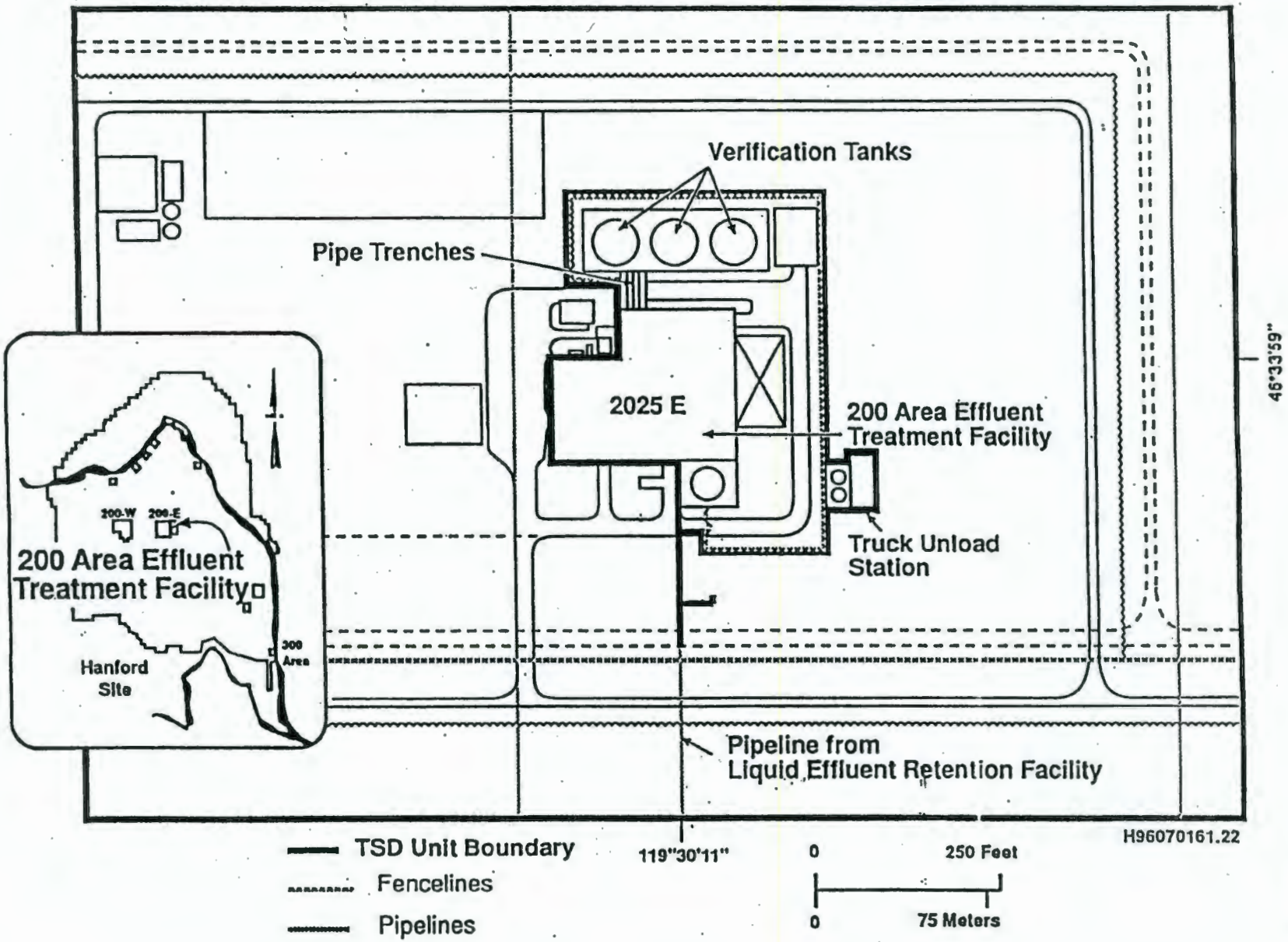
9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

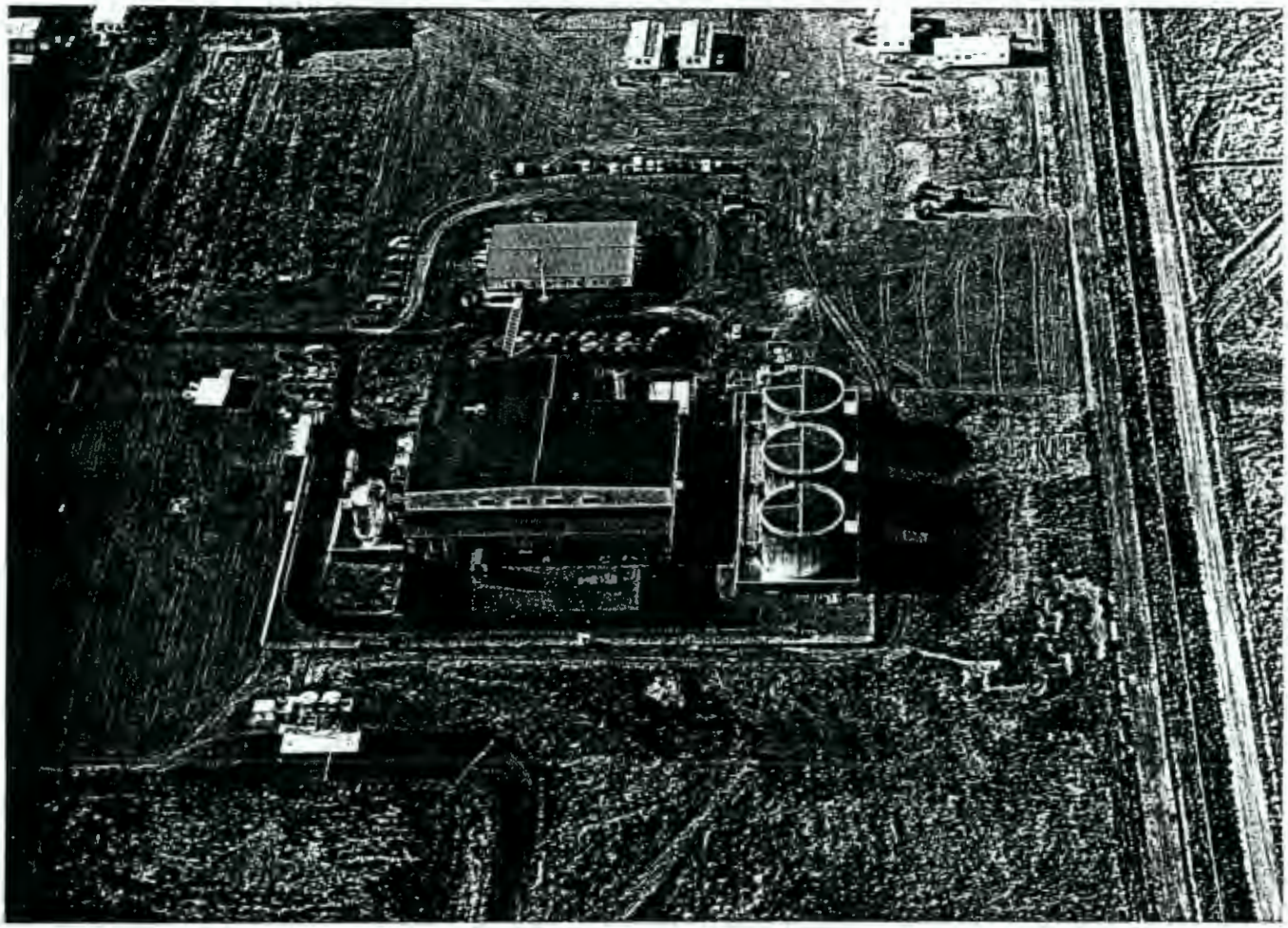
Date

9713532.0549

200 Area Effluent Treatment Facility Site Plan



200 AREA EFFLUENT TREATMENT FACILITY



46°33'59"
119°30'11"

95110502-9CN
(PHOTO TAKEN 1995)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

I. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 8 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 — FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. — FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	T 0 4	12,900	V	
2	S 0 1	73,500	L	
3				
4				

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
5				
6				
7				
8				
9				
10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

Refer to the following pages.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*included with above*

CONTINUE ON PAGE 3

FORM 3 DANGEROUS WASTE PERMIT APPLICATION
U.S. ENVIRONMENTAL PROTECTION AGENCY/STATE IDENTIFICATION NUMBER WA7890008967

Section III.C., Description of Process Codes Listed in Section III.A.

T04, S01

The Waste Receiving and Processing 1 (WRAP 1) is expected to begin waste management operations in March of 1997. This unit is located in the 200 West Area of the Hanford Facility. The WRAP 1 has been constructed to treat and store various sizes and types of mixed waste containers.

The WRAP 1 consists of the 2336-W Building [an approximately 73-meter (240-foot) long by 61-meter (200-foot) wide metal structure] that will provide waste receipt, certification, repackaging, treatment, volume reduction, and/or storage of mixed waste from onsite and/or offsite sources. The WRAP 1 will accept contact-handled mixed waste in 208-liter (55-gallon) or 322-liter (85-gallon) containers and boxes generally no larger than 2.4 meters (8 feet) long by 1.5 meters (5 feet) high by 1.5 meters (5 feet) wide, and other containers. The WRAP 1 was designed to receive approximately 7,000 waste containers annually. These containers include retrieved[1] and newly generated contact-handled[2], low-level, transuranic, and/or mixed waste. Remote-handled waste (with an external surface dose rate exceeding 200 millirem per hour) will not be handled in WRAP 1 except under special cases. The maximum weight of the containers received in WRAP 1 generally will not exceed 453.6 kilograms (1,000 pounds) for containers and 3,175 kilograms (7,000 pounds) for boxes. However, containers and boxes in excess of these weights could be accepted on a case-by-case basis. The WRAP 1 will have the capability to treat waste through compaction, solidification or absorption of liquids, neutralization of corrosives, immobilization of particulates, and reaction of reactive waste.

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[1]Retrieved waste from the Hanford Facility is contained primarily in 0.21-cubic meter (7.41-cubic foot) containers and metal or wooden boxes. Waste also is contained in casks, concrete boxes, concrete filled culverts, and other miscellaneous containers. The waste normally will be received in U.S. Department of Transportation 208-liter (55-gallon) containers, but also could be received in other containers. Waste will be transported to WRAP 1 where the waste will be opened, sorted, sampled, treated (if necessary), classified, certified (if required), and transported to an onsite treatment, storage, and/or disposal (TSD) unit or to an offsite TSD facility for further treatment, storage, and/or disposal.

[2]Contact-handled waste is any waste with an external surface dose rate not exceeding 200 millirem per hour.

Some of the contact-handled waste containers received at WRAP 1 could contain lead that was used to shield against radiation. When these containers are identified, the lead will be removed in the waste process enclosures and returned to storage pending future decontamination, treatment, and/or disposal.

Two other subsequent WRAP modules, which are presently on hold, were conceptually designed for future construction. One module is conceptually designed to be able to process and treat debris waste. The other module is conceptually designed to be able to treat, characterize, and certify remote-handled transuranic or low-level mixed waste in containers that are too large, too heavy, and/or too contaminated for other WRAP modules to handle.

The total process design capacity for treatment is 12,900 liters (3,408 gallons) per day. The total process design capacity for storage is 73,500 liters (19,416 gallons).[3]

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[3]The total process design capacity for treatment and storage includes the future conceptual WRAP modules.

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	D001	20,000	K	T04 S01	Treatment-Other/Storage-Container
2	D002	15,000			
3	D003	500			
4	D004	50			
5	D005	400			
6	D006	117			
7	D007	400			
8	D008	400			
9	D009	800			
10	D010	10			
11	D011	20			
12	D012	300			
13	D016				
14	D018				
15	through				
16	D043				
17	WT01	16,000			
18	WT02	22,000			
19	WP01	12,000			
20	WP02	3,000			
21	WP03	2,000			
22	WSC2	15,000			
23	W001	5,000			
24	F001	4,000			
25	F002	4,500			
26	F003	6,500			

Continued from page 2.
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I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	F004	570	K	T04 S01	Treatment-Other/Storage-Container
2	F005	6,000			
3	F020	300			
4	F021				
5	F022				
6	F023				
7	F026				
8	F027	500			
9	F028	300			
10	F039	500			
11	U001	500			
12	U002	1,000			
13	U003	1,000			
14	U004	500			
15	through				
16	U012				
17	U014				
18	through				
19	U031				
20	U032	1,000			
21	U033	500			
22	through				
23	U039				
24	U041				
25	U042				
26	U043				

Continued from page 2.
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I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	U044	1,000	K	T04 S01	Treatment-Other/Storage Container
2	U045	500			
3	through				
4	U050				
5	U051	2,000			
6	U052	500			
7	U053				
8	U055				
9	through				
10	U064				
11	U066				
12	through				
13	U099				
14	U101				
15	U102				
16	U103				
17	U105				
18	through				
19	U132				
20	U133	5,000			
21	U134	1,000			
22	U135	500			
23	through				
24	U144				
25	U145	1,000			
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	U146	500	K	T04	S01			Treatment-Other/Storage-Container
2	through							
3	U150							
4	U151	5,000						
5	U152	500						
6	U153	500						
7	U154	1,000						
8	U155	500						
9	through							
10	U185							
11	U186	300						
12	U187	500						
13	U188	300						
14	U189	500						
15	through							
16	U197							
17	U200							
18	through							
19	U209							
20	U210	1,500						
21	U211	5,000						
22	through							
23	U219							
24	U220	1,500						
25	U221	500						
26	U222	500						

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	U223	1,500	K	T04 S01	Treatment-Other/Storage-Container
2	U225	1,500			
3	U226	5,000			
4	U227	500			
5	U228	1,000			
6	U232	↓			
7	U233	↓			
8	U234	500			
9	U235	1,000			
10	U236	↓			
11	U237	↓			
12	U238	500			
13	U239	1,000			
14	U240	300			
15	U243	1,000			
16	U244	1,000			
17	U245	300			
18	U246	↓			
19	U247	↓			
20	U248	500			
21	U249	↓			
22	U328	↓			
23	U353	↓			
24	U359	↓	↓	↓ ↓	↓
25					
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	P001	500	K	T04 S01	Treatment-Other/Storage-Container
2	through				
3	P018				
4	P020				
5	through				
6	P024				
7	P026				
8	through				
9	P031				
10	P033				
11	P034				
12	P036				
13	through				
14	P051				
15	P054				
16	P056				
17	through				
18	P060				
19	P062				
20	through				
21	P078				
22	P081				
23	P082				
24	P084				
25	P085				
26	P087				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008987

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	P088	500	K	T04	S01			Treatment-Other/Storage-Container
2	P089							
3	P092							
4	through							
5	P099							
6	P101							
7	through							
8	P116							
9	P118							
10	through							
11	P123							Included With Above
12								
13								
14								
15								
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26								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

WRAP 1, and possible future modules, will provide waste receipt, verification, certification, repackaging, treatment, and/or storage of mixed waste from onsite generating units or from offsite generators. Waste will consist of listed waste, nonspecific source waste, characteristic waste, discarded chemical products, state-only waste (extremely hazardous and dangerous waste), and multi-source leachate.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

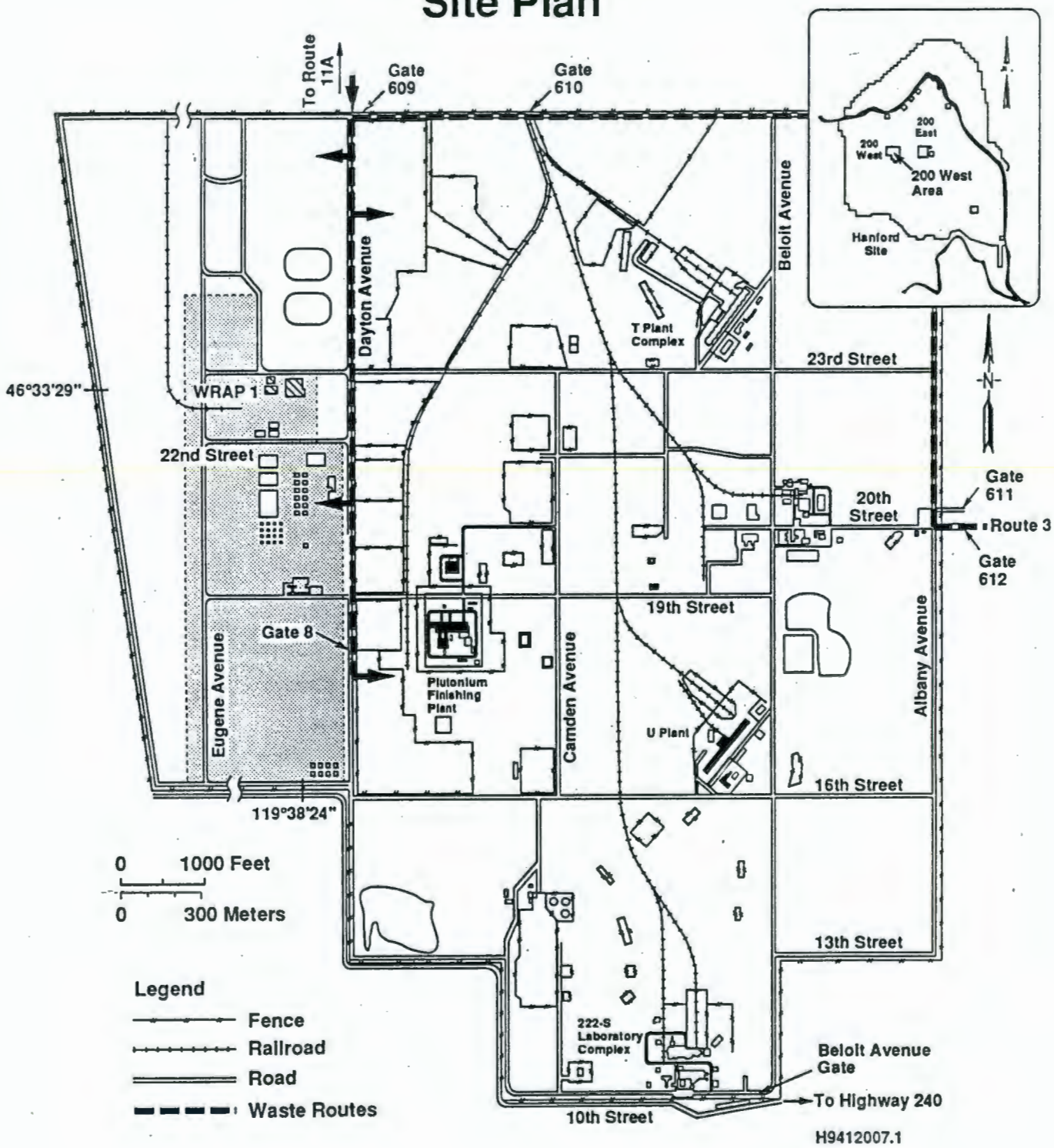
Date

9/13/96

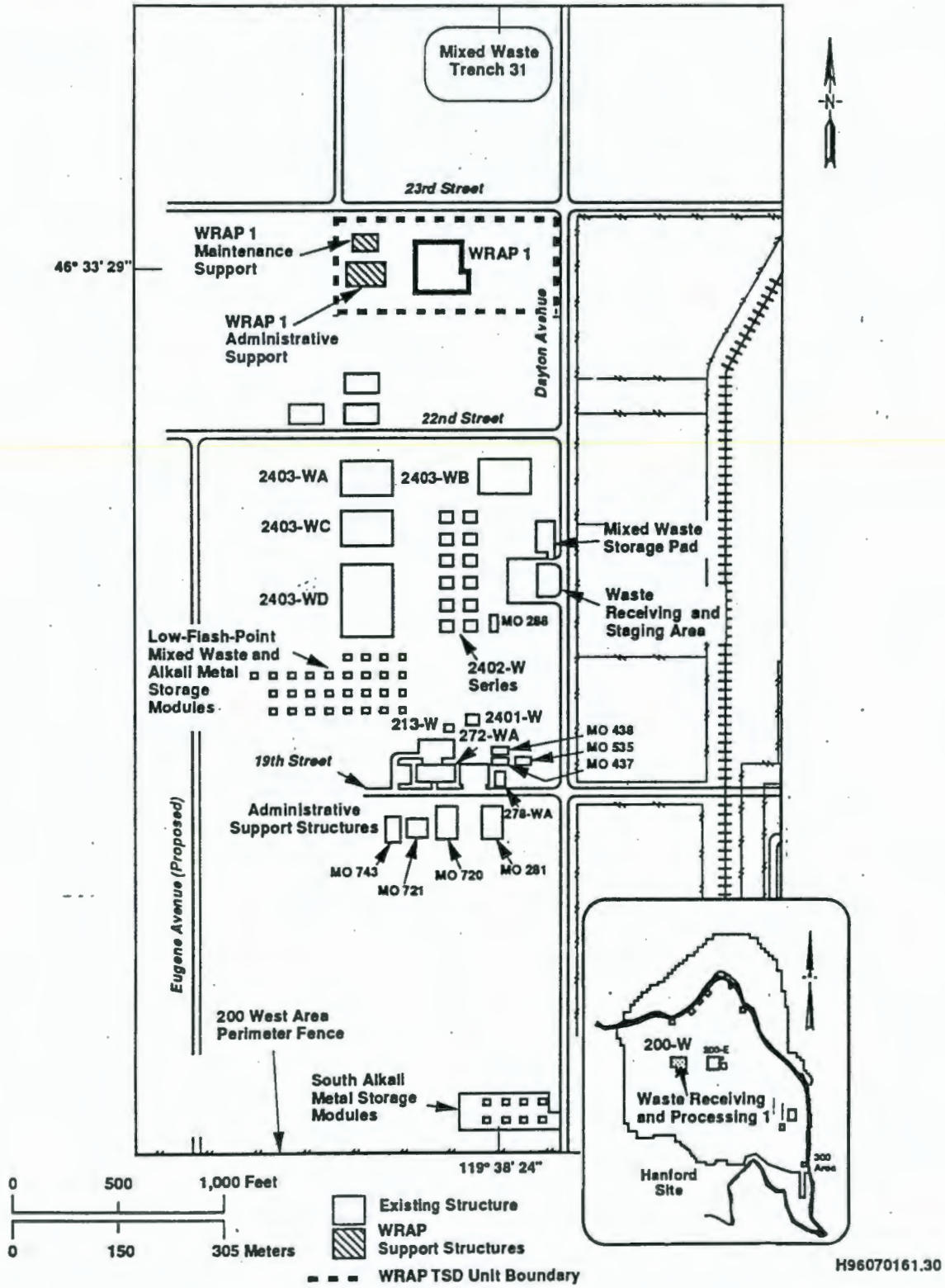
Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

Date

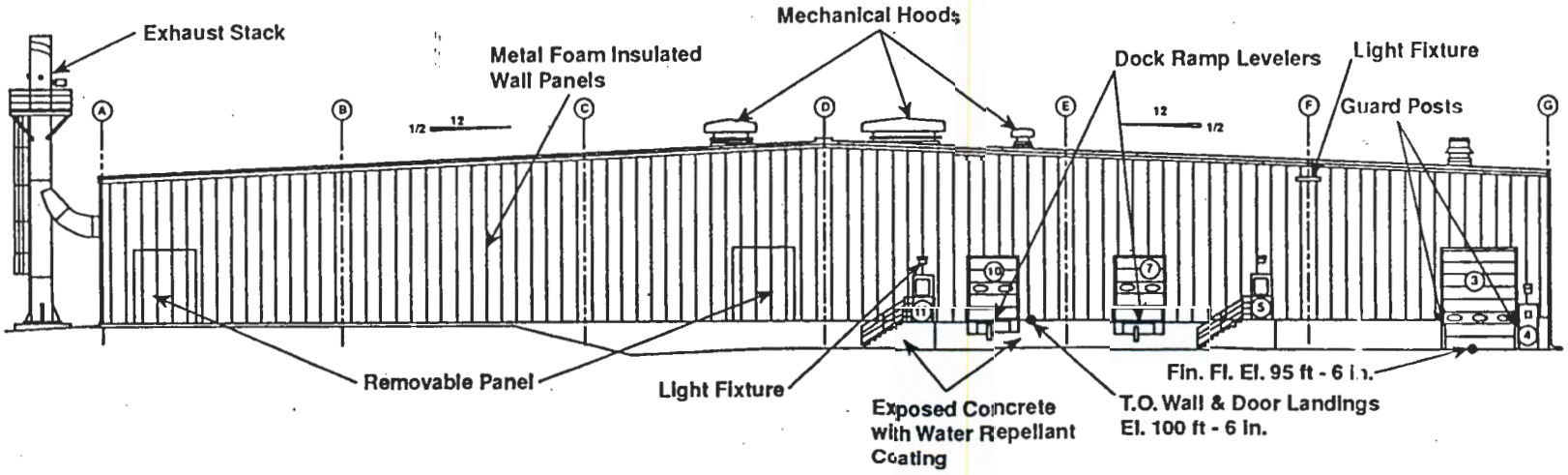
200 West Area Site Plan



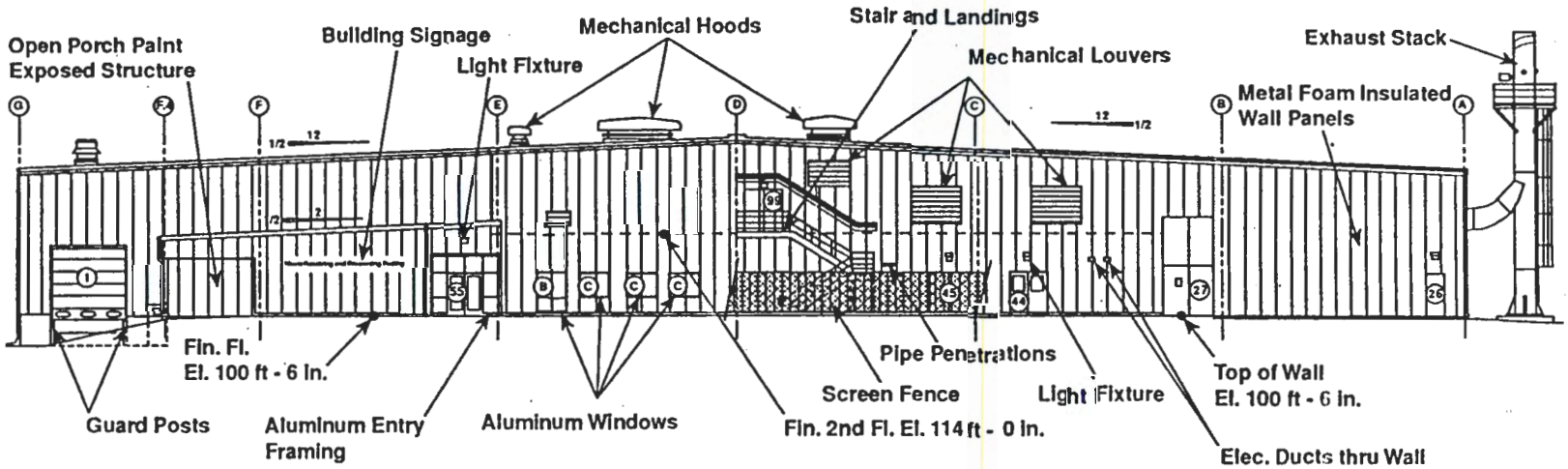
Waste Receiving and Processing (WRAP 1) Site Plan



Waste Receiving and Processing 1
2336-W Building



South Elevation

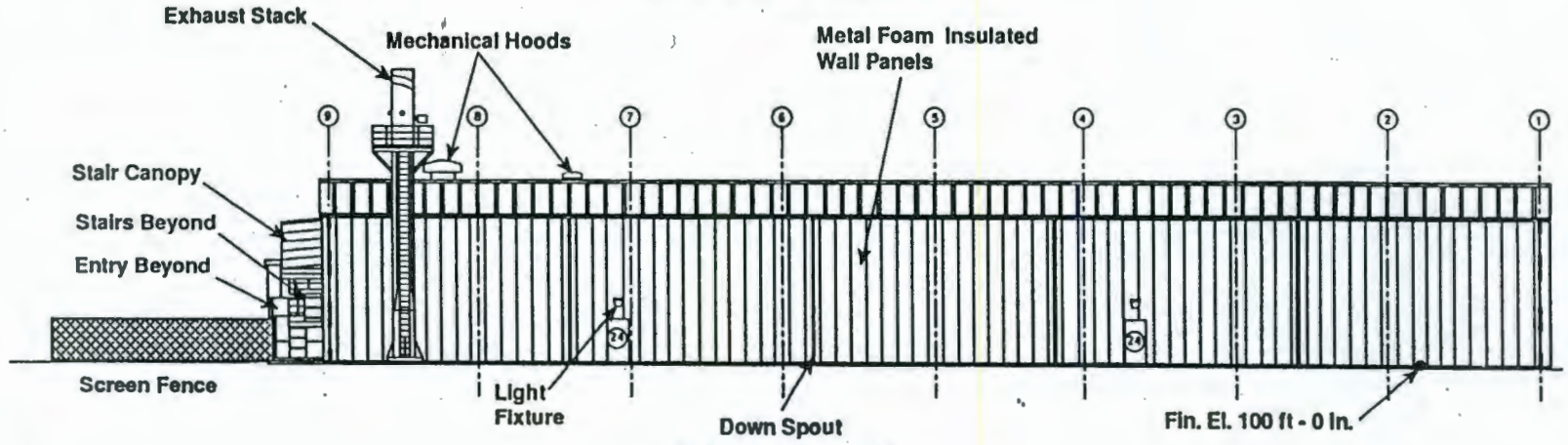


North Elevation

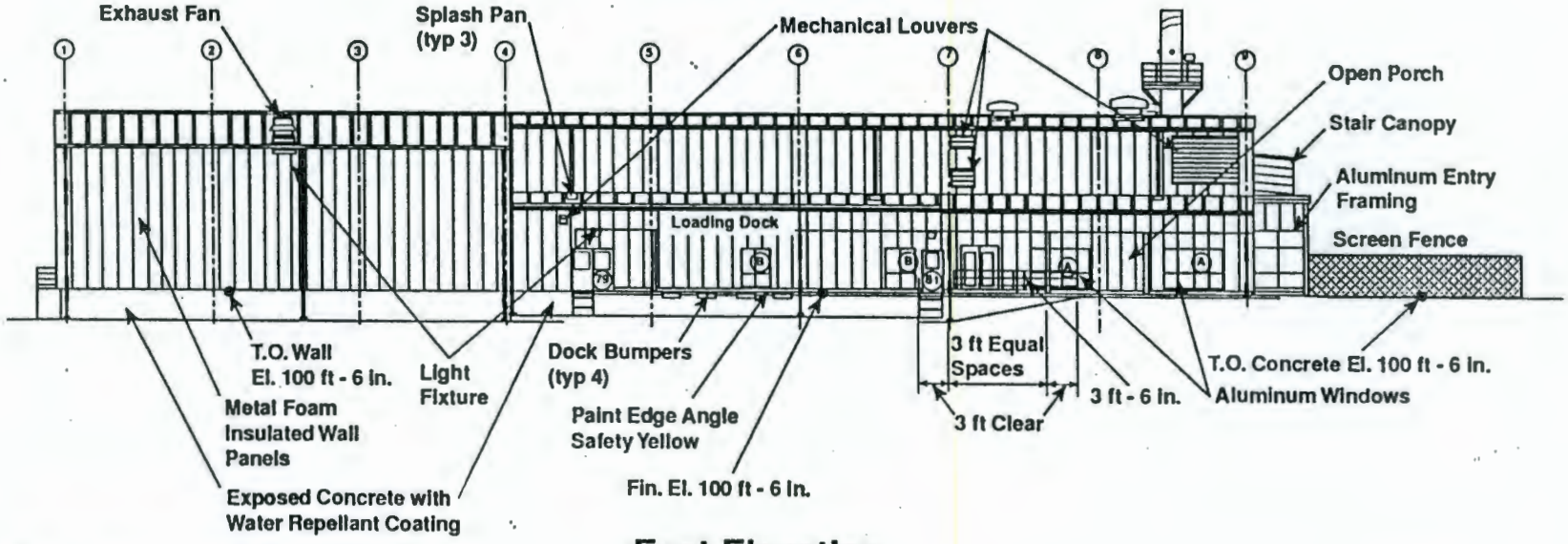
Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

39305096.3

Waste Receiving and Processing 1
2336-W Building



West Elevation



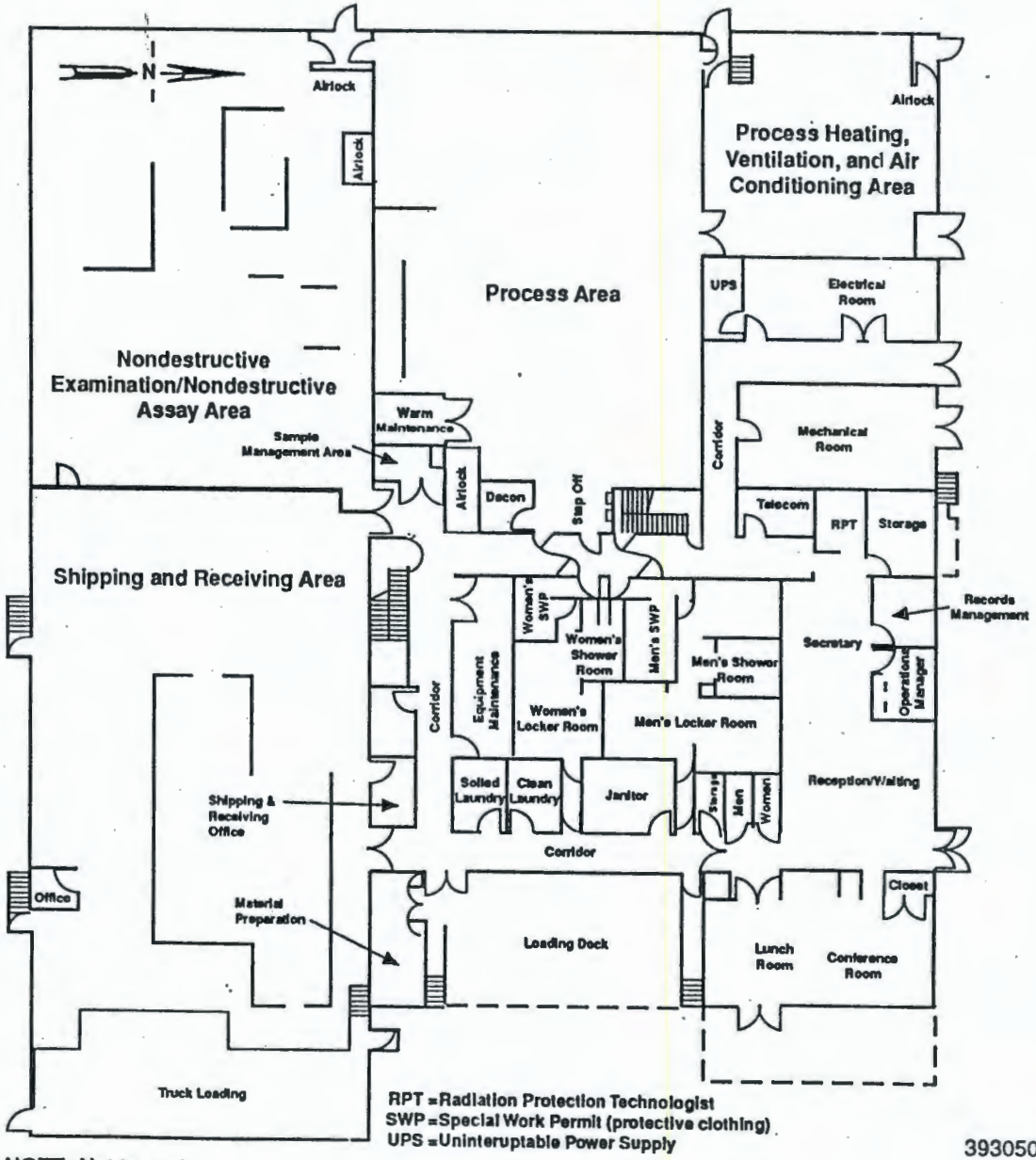
East Elevation

Notes: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

39305096.4

Waste Receiving and Processing 1

2336-W Building Floor Plan

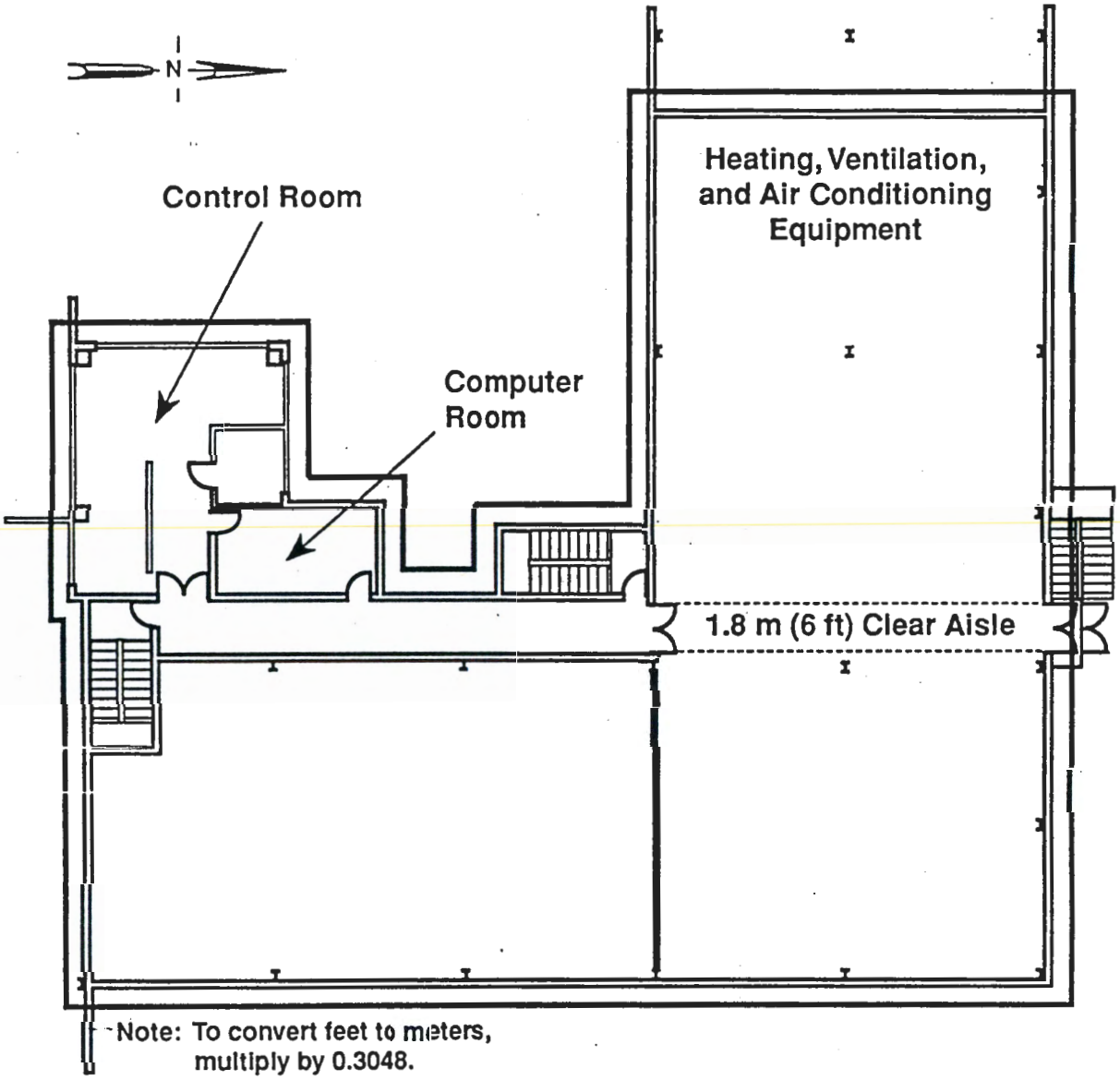


RPT = Radiation Protection Technologist
SWP = Special Work Permit (protective clothing)
UPS = Uninteruptable Power Supply

39305096.6

NOTE: Not to scale

2336-W Building



Plan-Upper Level
(not to scale)

39305096.1

WASTE RECEIVING AND PROCESSING 1

46°33'29"
119°38'24"

96050191-68CN
(PHOTO TAKEN 1996)

HANFORD FACILITY DANGEROUS WASTE PART A PERMIT APPLICATION

CONTENTS

	Revision
1.0 INTRODUCTION	
2.0 PERMITTING STATUS FOR DANGEROUS WASTE TREATMENT, STORAGE, AND/OR DISPOSAL UNITS	♦
3.0 FORM 1 - DANGEROUS WASTE PERMIT APPLICATION	♦
4.0 FORM 3 - DANGEROUS WASTE PERMIT APPLICATION	
4.1 100 AREA FACILITIES	
4.1.1 Treatment Facilities	
4.1.1.1 1324-N Surface Impoundment	3
4.1.1.2 105-DR Sodium Fire Facility	3 ♦
4.1.1.3 1706-KE Waste Treatment System	3 ♦
4.1.1.4 183-H Solar Evaporation Basins	4
4.1.2 Disposal Facilities	
4.1.2.1 1301-N Liquid Waste Disposal Facility	5
4.1.2.2 1325-N Liquid Waste Disposal Facility	5
4.1.2.3 1324-NA Percolation Pond	3
4.1.2.4 100-D Ponds	4
4.2 200 AREA FACILITIES	
4.2.1 Treatment Facilities	
4.2.1.1 221-T Containment Systems Test Facility	3 ♦
4.2.1.2 200 West Area Ash Pit Demolition Site *CLOSED 10/26/95*	4
4.2.1.3 218-E-8 Borrow Pit Demolition Site *CLOSED 10/26/95*	4
4.2.1.4 242-A Evaporator	7 ♦
4.2.1.5 Grout Treatment Facility	5 ♦
4.2.1.6 T Plant Complex	6 ♦
4.2.1.7 241-Z Treatment and Storage Tanks	4 ♦
4.2.1.8 B Plant Complex	5 ♦
4.2.1.9 222-S Laboratory Complex	4 ♦
4.2.1.10 204-AR Waste Unloading Station	4 ♦
4.2.1.11 PUREX Plant	8 ♦
4.2.1.12 Hanford Waste Vitrification Plant	5 ♦
4.2.1.13 200 Area Effluent Treatment Facility	2 ♦
4.2.1.14 Waste Receiving and Processing	1 ♦

VOLUME 1 OF 3

♦ = Revised this issue.

CONTENTS (cont)

		Revision	
4.2.2	Storage Facilities		
4.2.2.1	2727-S Storage Facility *CLOSED 06/27/95*	2	
4.2.2.2	Double-Shell Tank System	8 ♦	
4.2.2.3	Hexone Storage and Treatment Facility	3	
4.2.2.4	2727-WA SRE Sodium Storage Building	1 ♦	V
4.2.2.5	PUREX Storage Tunnels	5 ♦	O
4.2.2.6	224-T Transuranic Waste Storage and Assay Facility	6 ♦	L U
4.2.2.7	Central Waste Complex	4 ♦	M
4.2.2.8	Single-Shell Tank System	4 ♦	E
4.2.2.9	207-A South Retention Basin	2 ♦	
4.2.2.10	Liquid Effluent Retention Facility	5 ♦	2
4.2.2.11	241-CX Tank System	3	
4.2.3	Disposal Facilities		O
4.2.3.1	Low-Level Burial Grounds	8 ♦	F
4.2.3.2	216-S-10 Pond and Ditch	3	
4.2.3.3	2101-M Pond *CLOSED 10/26/95*	2	3
4.2.3.4	216-A-29 Ditch	3	
4.2.3.5	216-B-3 Main Pond	5	
4.2.3.6	216-B-63 Trench	3 ♦	
4.2.3.7	216-A-10 Crib	3	
4.2.3.8	216-U-12 Crib	3	
4.2.3.9	216-A-36B Crib	1	
4.2.3.10	216-A-37-1 Crib	2	
4.2.3.11	216-B-3 Expansion Ponds *CLOSED 06/27/95*	0	

4.3 300 AREA FACILITIES

4.3.1	Treatment Facilities		V
4.3.1.1	3718-F Alkali Metal Treatment and Storage Area	4 ♦	O L
4.3.1.2	324 Pilot Plant	3	U
4.3.1.3	304 Concretion Facility *CLOSED 11/30/95*	4	M E
4.3.1.4	300 Area Solvent Evaporator *CLOSED 06/27/95*	4	3
4.3.1.5	300 Area Waste Acid Treatment System	5 ♦	
4.3.1.6	303-M Oxide Facility	1 ♦	O
4.3.1.7	325 Hazardous Waste Treatment Units	3	F
4.3.1.8	Biological Treatment Test Facilities	0	3

♦ = Revised this issue.

CONTENTS (cont)

		Revision	
4.3.1.9	Physical and Chemical Treatment Test Facilities *CLOSED 05/13/96*	1	
4.3.1.10	Thermal Treatment Test Facilities *CLOSED 05/13/96*	0	
4.3.2	Storage Facilities		
4.3.2.1	311 Tanks (incorporated into 300 Area Waste Acid Treatment System, Rev. 3)	1	
4.3.2.2	303-K Storage Unit	5 ♦	
4.3.2.3	305-B Storage Facility	1	
4.3.2.4	332 Storage Facility	0	
4.3.3	Disposal Facilities		
4.3.3.1	300 Area Process Trenches	4	
4.4	400 AREA FACILITIES		
4.4.1	Treatment Facilities		
4.4.1.1	437-MASF	3 ♦	
4.4.2	Storage Facilities		
4.4.2.1	4843 Alkali Metal Storage Facility	3 ♦	
4.4.2.2	Sodium Storage Facility and Sodium Reaction Facility	1 ♦	
4.5	600 AREA FACILITIES		
4.5.1	Treatment Facilities		
4.5.1.1	Hanford Patrol Academy Demolition Sites *CLOSED 10/26/95*	4	
4.5.2	Storage Facilities		
4.5.2.1	616 Nonradioactive Dangerous Waste Storage Facility	6 ♦	
4.5.2.2	600 Area Purgewater Storage and Treatment Facility	2 ♦	
4.5.3	Disposal Facility		
4.5.3.1	Nonradioactive Dangerous Waste Landfill	4	
4.6	1100 AREA FACILITIES		
4.6.1	Treatment Facilities		
4.6.1.1	Simulated High-Level Waste Slurry Treatment/Storage *CLOSED 09/06/95*	2	

VOLUME 3 OF 3

♦ = Revised this issue.

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM **3**

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 8 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 — *FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. — FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U

UNIT OF MEASURE	UNIT OF MEASURE CODE
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H

UNIT OF MEASURE	UNIT OF MEASURE CODE
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	S 0 2	124,654,500	L	
2	T 0 1	124,654,500	V	
3				
4				
5				
6				
7				
8				
9				
10				

CONTINUE ON REVERSE

Continued from the front.

II. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

The Double-Shell Tank (DST) System began operations between November 1955 and October 1986 (refer to the Tank Table on pages 3 and 4). The DST System is used for the interim storage (S02) of liquid mixed waste generated on the Hanford Facility. Several operating units in the 200 East and 200 West Areas transfer liquid mixed waste through buried double-encased transfer lines to designated underground DSTs. Other types of liquid mixed waste in the DST System are received from railroad tank car transfers, tank truck transfers, the Single-Shell Tank (SST) System, and smaller temporary storage tanks.

Pretreatment will be performed as necessary at a future unit and/or at the 242-A Evaporator. The low-level liquid mixed waste is accumulated in the DST System until the waste is transferred for treatment to a proposed low-level vitrification plant in preparation for final disposal. The high-level liquid mixed waste from the DST System could be treated at the proposed Hanford Waste Vitrification Plant (HWVP) and shipped to a national repository for disposal. The HWVP could be superseded by another high-level waste immobilization facility.

The tanks in the DST System are considered treatment units (T01) because chemicals can be added for corrosion control, the waste can be mixed using equipment such as airlift circulators or pumps, and water can be evaporated from the aging waste tanks by adding heat.

The tanks in the DST System are shown on the Tank Table (pages 3 and 4), which includes tank numbers, locations, design capacities, and operational dates. The specific TSD unit boundaries will be defined in the DST System Dangerous Waste Part B permit application documentation.

The maximum process design capacity for tank storage at the DST System is approximately 124,654,500 liters (32,930,230 gallons). The maximum process design capacity for tank treatment at the DST System is approximately 124,654,500 liters (32,930,230 gallons).

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K054	900	P	T03 D80	
X-2	D002	400	P	T03 D80	
X-3	D001	100	P	T03 D80	
X-4	D002			T03 D80	included with above

CONTINUE ON PAGE 3

TANK TABLE (Sheet 1 of 2)

1. There are twenty-four nonaging* DSTs.

Tank Number	Location	Design Capacity (liters)	Operation Date
241-AN-101	200 East Area	4,542,480	9/81
241-AN-102	200 East Area	4,542,480	9/81
241-AN-103	200 East Area	4,542,480	9/81
241-AN-104	200 East Area	4,542,480	9/81
241-AN-105	200 East Area	4,542,480	9/81
241-AN-106	200 East Area	4,542,480	9/81
241-AN-107	200 East Area	4,542,480	9/81
241-AP-101	200 East Area	4,542,480	10/86
241-AP-102	200 East Area	4,542,480	10/86
241-AP-103	200 East Area	4,542,480	10/86
241-AP-104	200 East Area	4,542,480	10/86
241-AP-105	200 East Area	4,542,480	10/86
241-AP-106	200 East Area	4,542,480	10/86
241-AP-107	200 East Area	4,542,480	10/86
241-AP-108	200 East Area	4,542,480	10/86
241-AW-101	200 East Area	4,542,480	8/80
241-AW-102	200 East Area	4,542,480	8/80
241-AW-103	200 East Area	4,542,480	8/80
241-AW-104	200 East Area	4,542,480	8/80
241-AW-105	200 East Area	4,542,480	8/80
241-AW-106	200 East Area	4,542,480	8/80
241-SY-101	200 West Area	4,542,480	4/77
241-SY-102	200 West Area	4,542,480	4/77
241-SY-103	200 West Area	4,542,480	4/77

* Nonaging is a waste that is not neutralized current acid waste.

TANK TABLE (Sheet 2 of 2)

2. There are four aging* waste DSTs.

Tank Numbers	Location	Design Capacity (liters)	Operation Date
241-AY-101	200 East Area	3,785,400	4/71
241-AY-102	200 East Area	3,785,400	4/76**
241-AZ-101	200 East Area	3,735,400	11/76
241-AZ-102	200 East Area	3,735,400	11/76

* Aging waste is neutralized current acid waste generated from the PUREX Plant.
** Estimated operational date.

3. There is one tank in a transfer building.

Tank Number	Location	Design Capacity (liters)	Operation Date
241-EW-151	200 East Area Vent Station	3,028	11/55*

* Estimated operational date.

4. There are five double-contained receiver tanks.

Tank Number	Location	Design Capacity (liters)	Operation Date
244-BX	200 East Area	117,347	1983
244-TX	200 West Area	117,347	12/81
244-U	200 West Area	117,347	N/A
244-A	200 East Area	61,626	1975
244-S	200 West Area	76,768	1987

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890000897

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	426,850,108	K	S02	T01			Storage-Tank/Treatment-Tank
2	through							
3	D011							
4	D018							
5	D019							
6	D022							
7	D028							
8	D029							
9	D030							
10	D033							
11	through							
12	D036							
13	D038							
14	D039							
15	D040							
16	D041							
17	D043							
18	WT01							
19	WT02							
20	WP01							
21	WP02							
22	F001							
23	through							
24	F005							
25	F039							Included With Above
26								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The types of liquid mixed waste that could be stored, chemically treated, and evaporated in the DST System are as follows:

- Dilute miscellaneous waste generated on the Hanford Facility (100, 200, 300, 400 Areas, and the 340 Complex)
- Supernate and transuranic sludges that consist of neutralized cladding removal waste generated during Plutonium-Uranium Extraction (PUREX) Plant headend operations, and waste generated during the Plutonium Finishing Plant processing
- Concentrated DST waste (slurry) from the 242-A Evaporator
- Concentrated complexed waste and complexed waste generated from B Plant processing
- Neutralized current acid waste from the first extraction column at the PUREX Plant
- Liquid waste from the SST System
- Waste from the Grout Treatment Facility
- T Plant Complex decontamination activities
- Waste from the 204-AR Waste Unloading Station
- Leachate resulting from Hanford Facility land disposal and surface impoundment operations.

It is possible that any of these waste types could be stored and/or treated in any of the nonaging or aging DSTs.

The list of dangerous waste under Section IV.A. includes constituents that have not been detected in the waste; however, knowledge of processes providing the waste to the DST System indicates the strong possibility that these constituents will be in the waste. Other constituents listed under Section IV.A. have not been detected in the waste; however, the DST System has the potential to store these constituents. Multi-source leachate (F039) is included as a waste derived from nonspecific source wastes F001 through F005.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

 CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

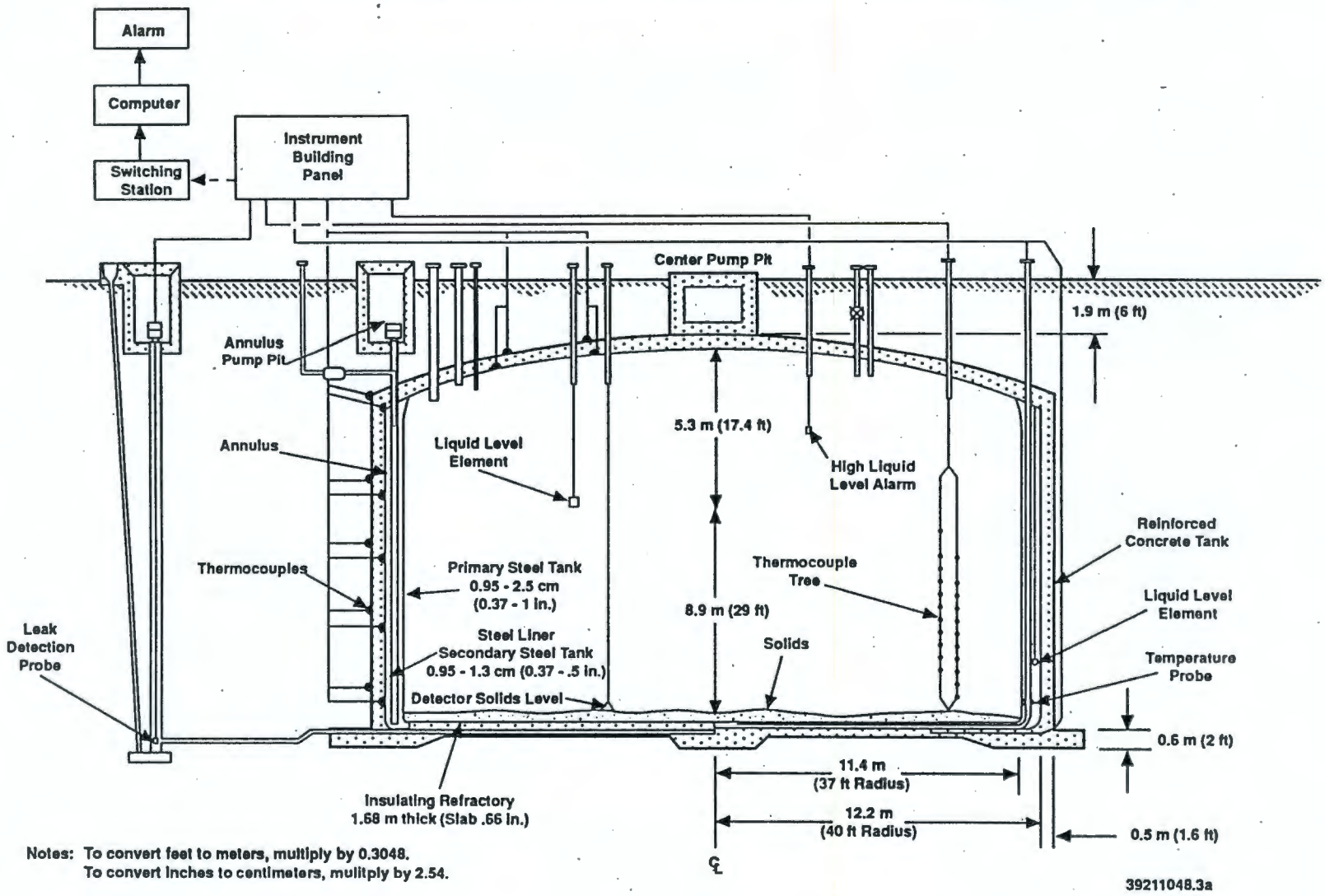
Date

9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

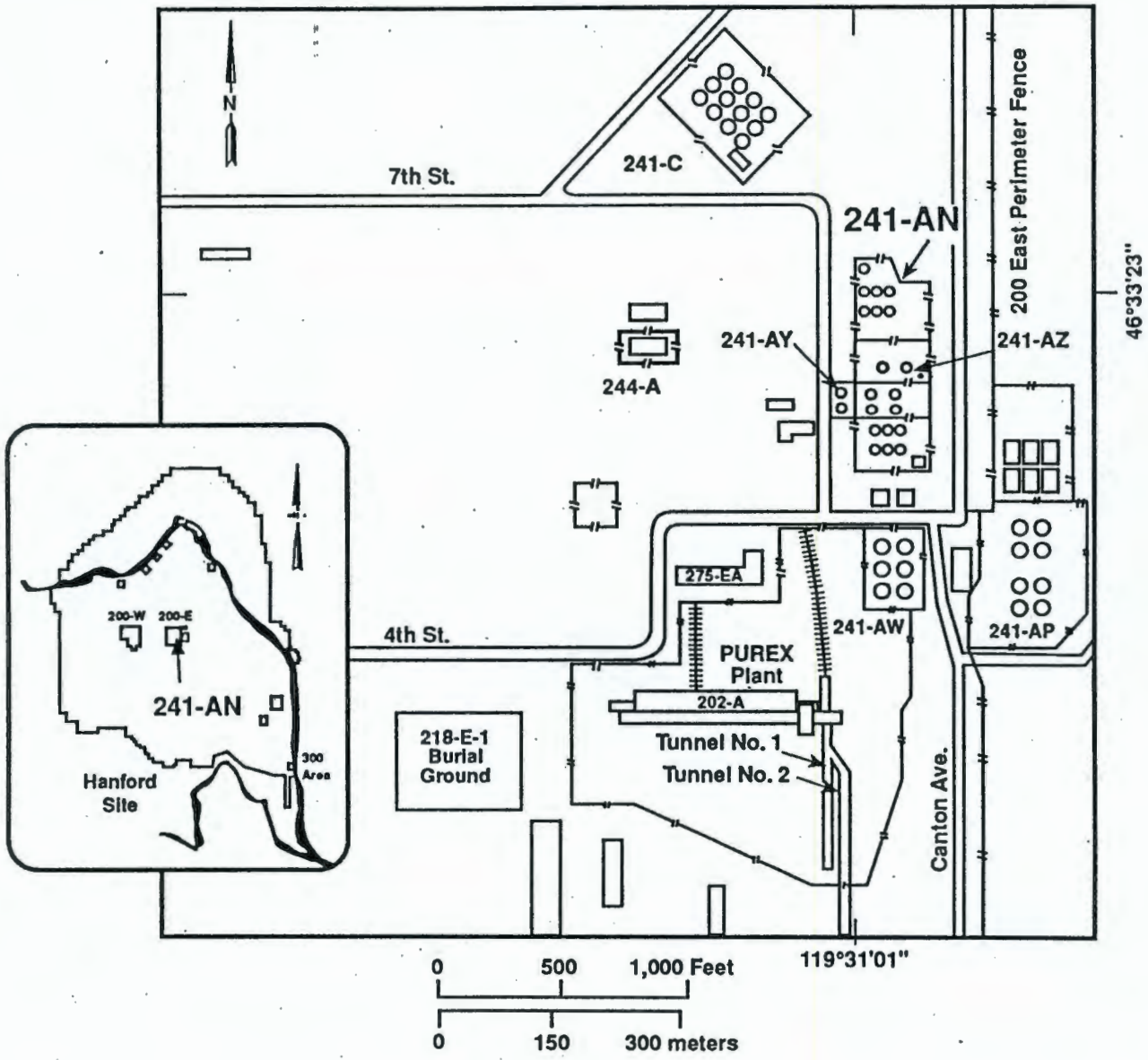
Date

Typical Nonaging Waste Double-Shell Tank



Notes: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

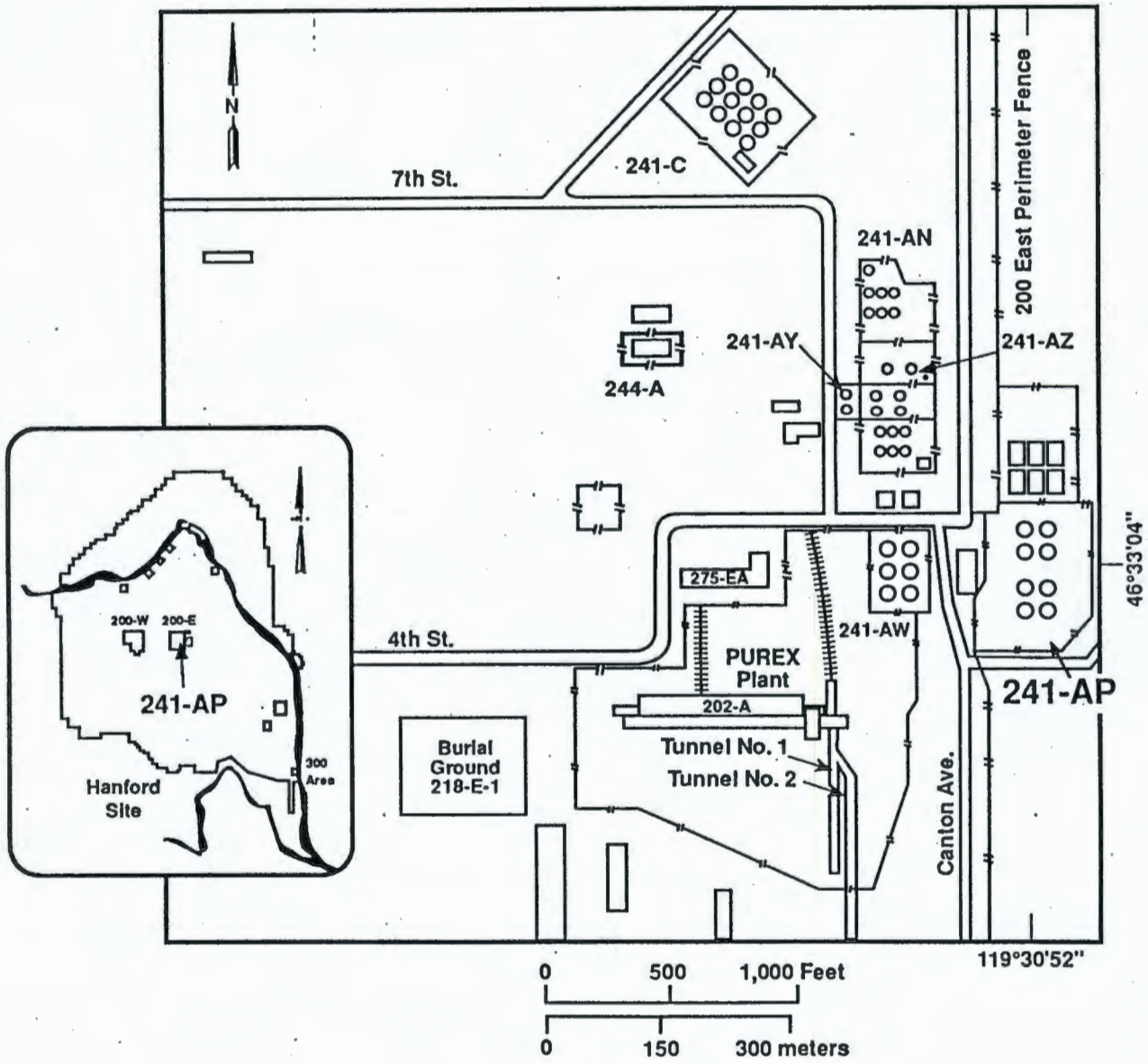
241-AN Double-Shell Tank Site Plan



H96070161.27b

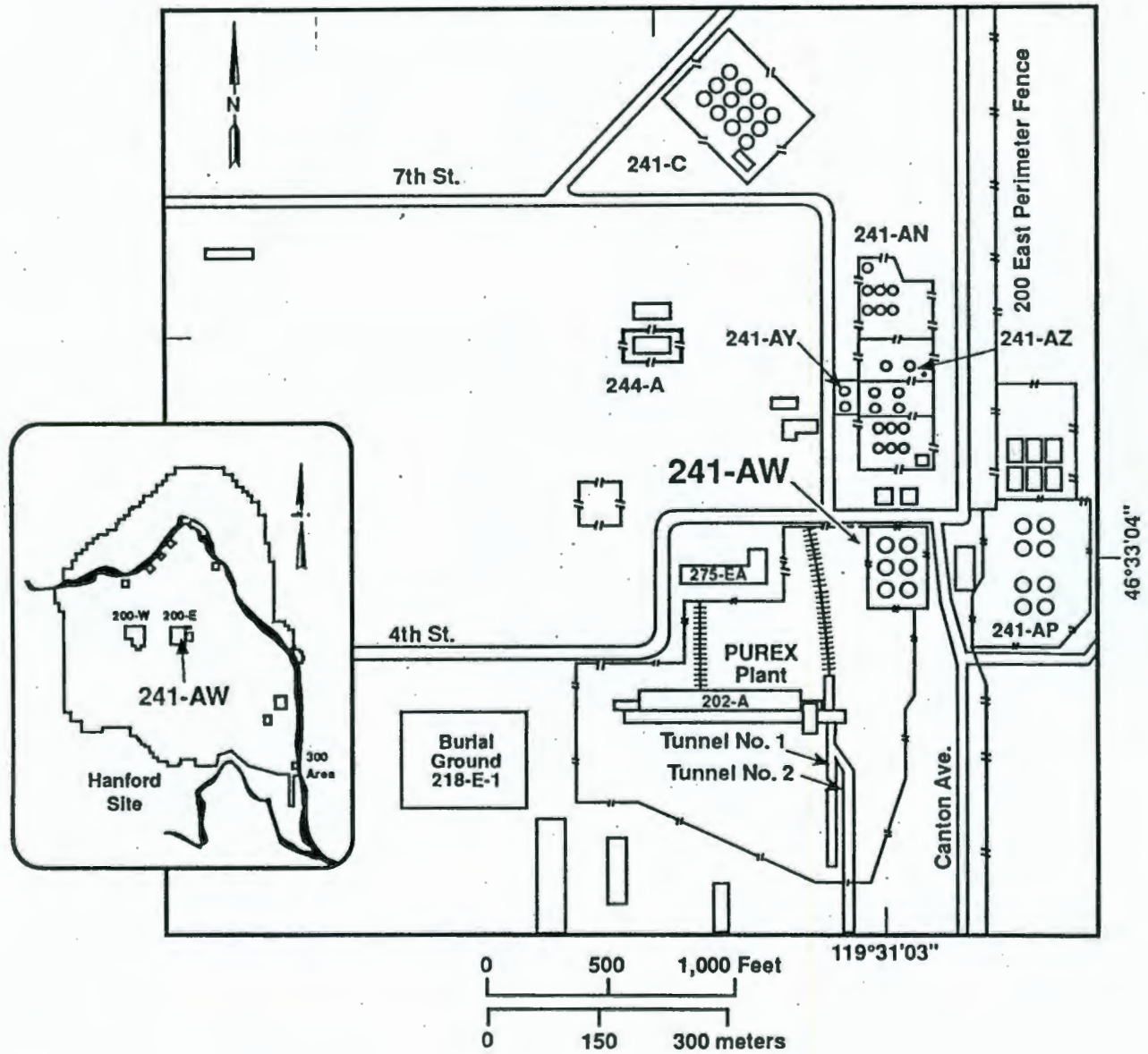
WA7890008967
9713532.0582

241-AP Double-Shell Tank Site Plan



H96070161.27c

241-AW Double-Shell Tank Site Plan



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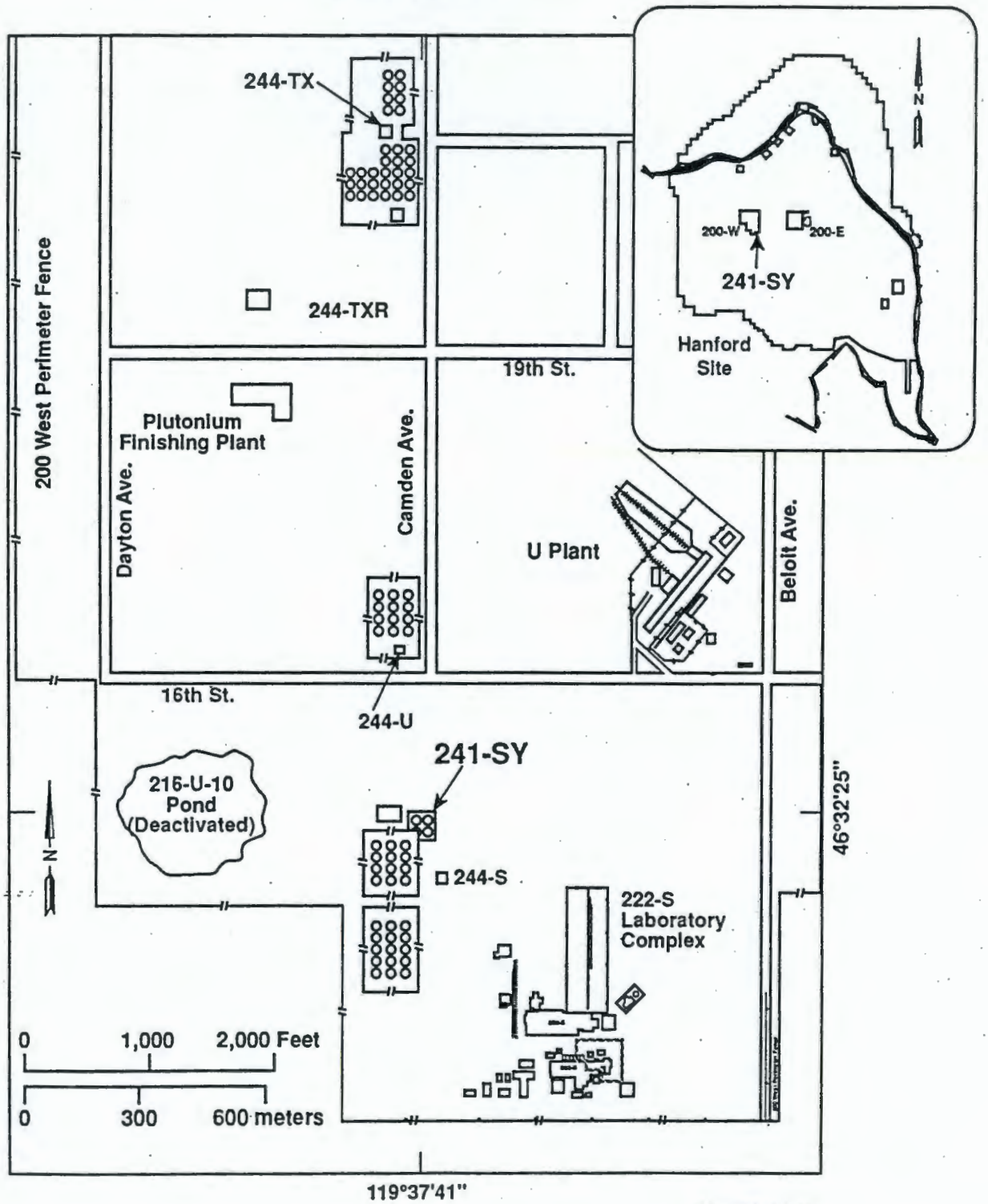
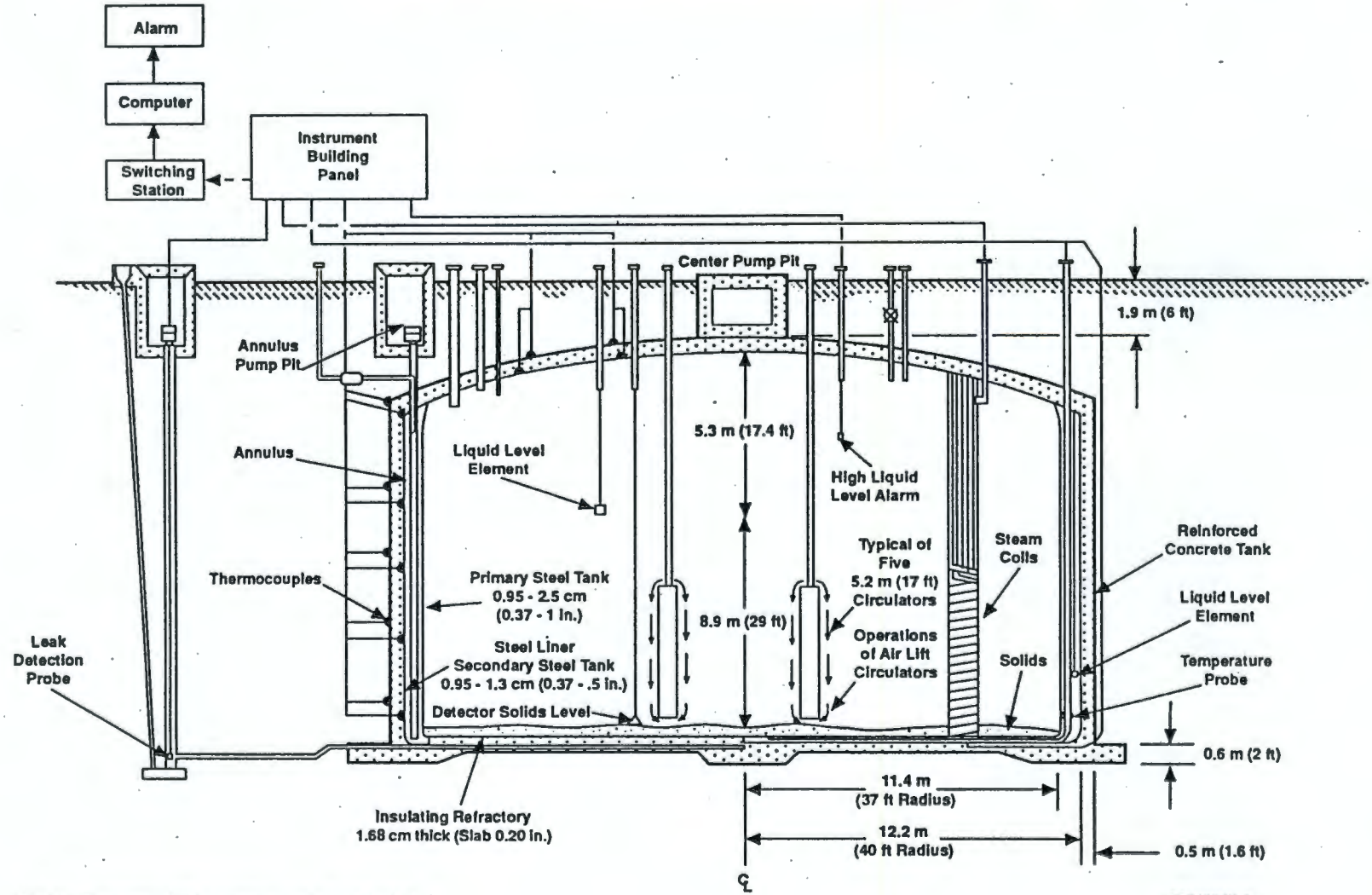
WA7890008967
9713532.0584

241-SY Double Shell Tank
Site Plan

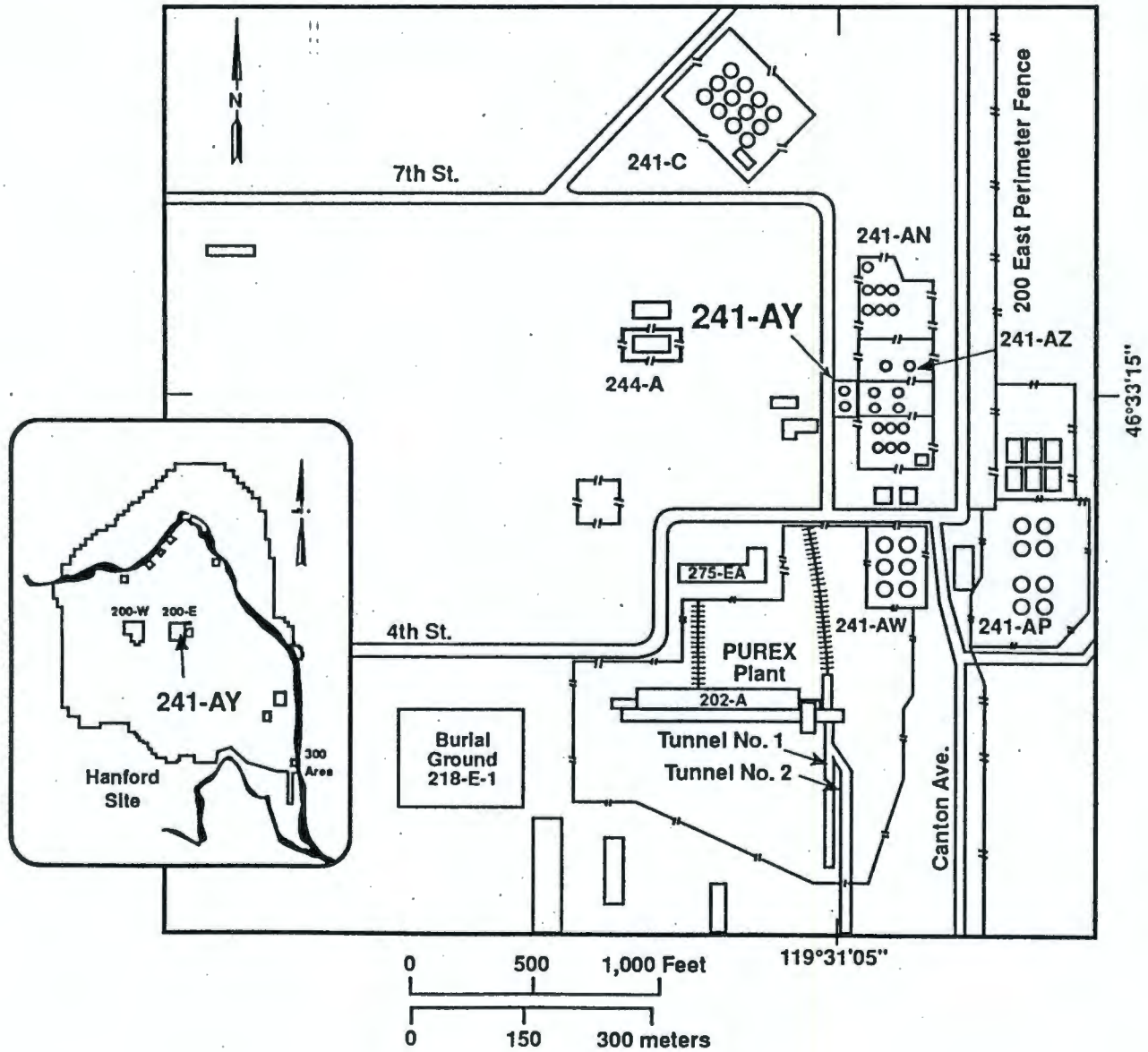


Typical Aging Waste Double-Shell Tank



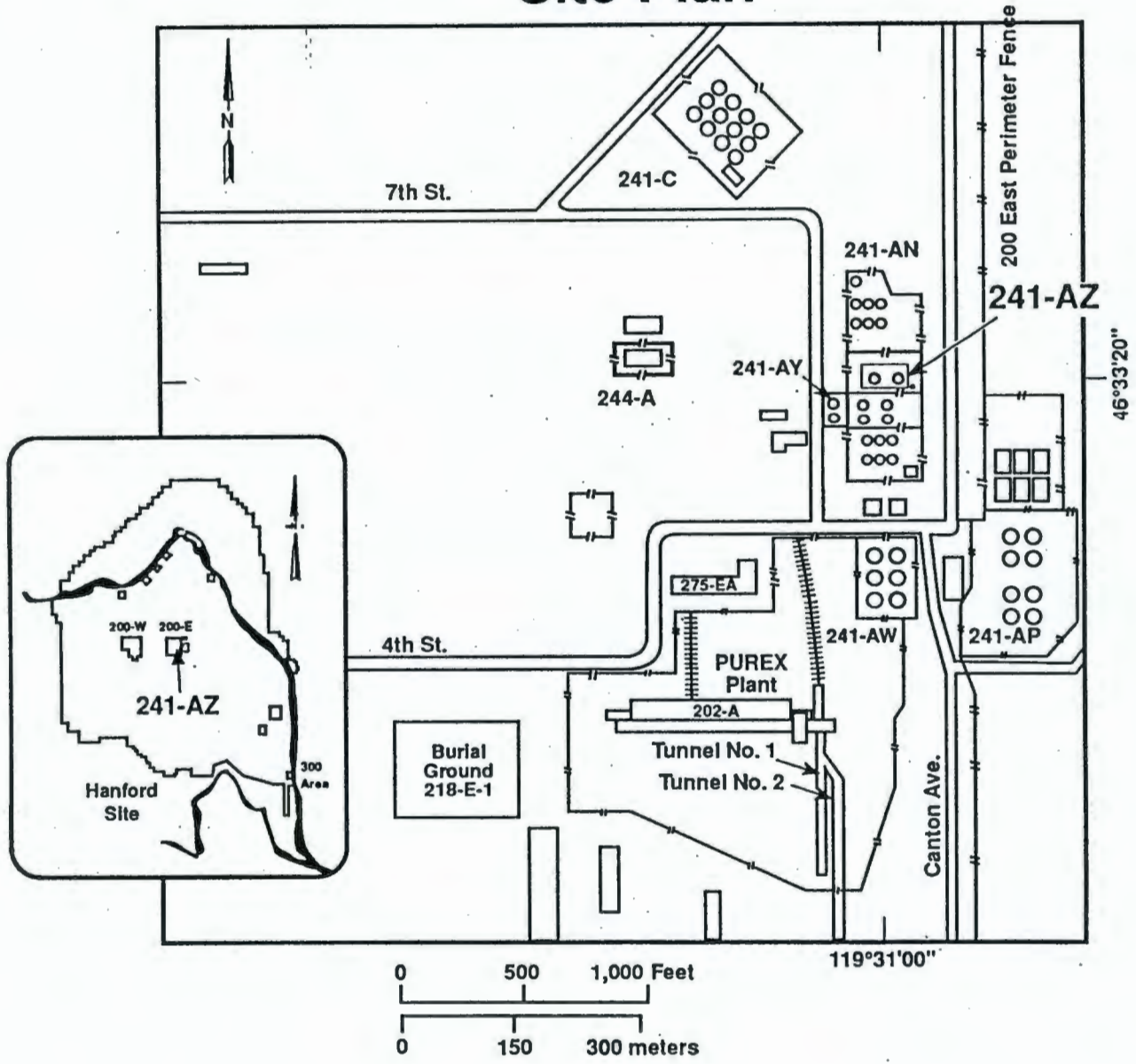
Notes: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

241-AY Aging Waste Double-Shell Tank Site Plan



H96070161.27e

241-AZ Aging Waste Double-Shell Tank Site Plan



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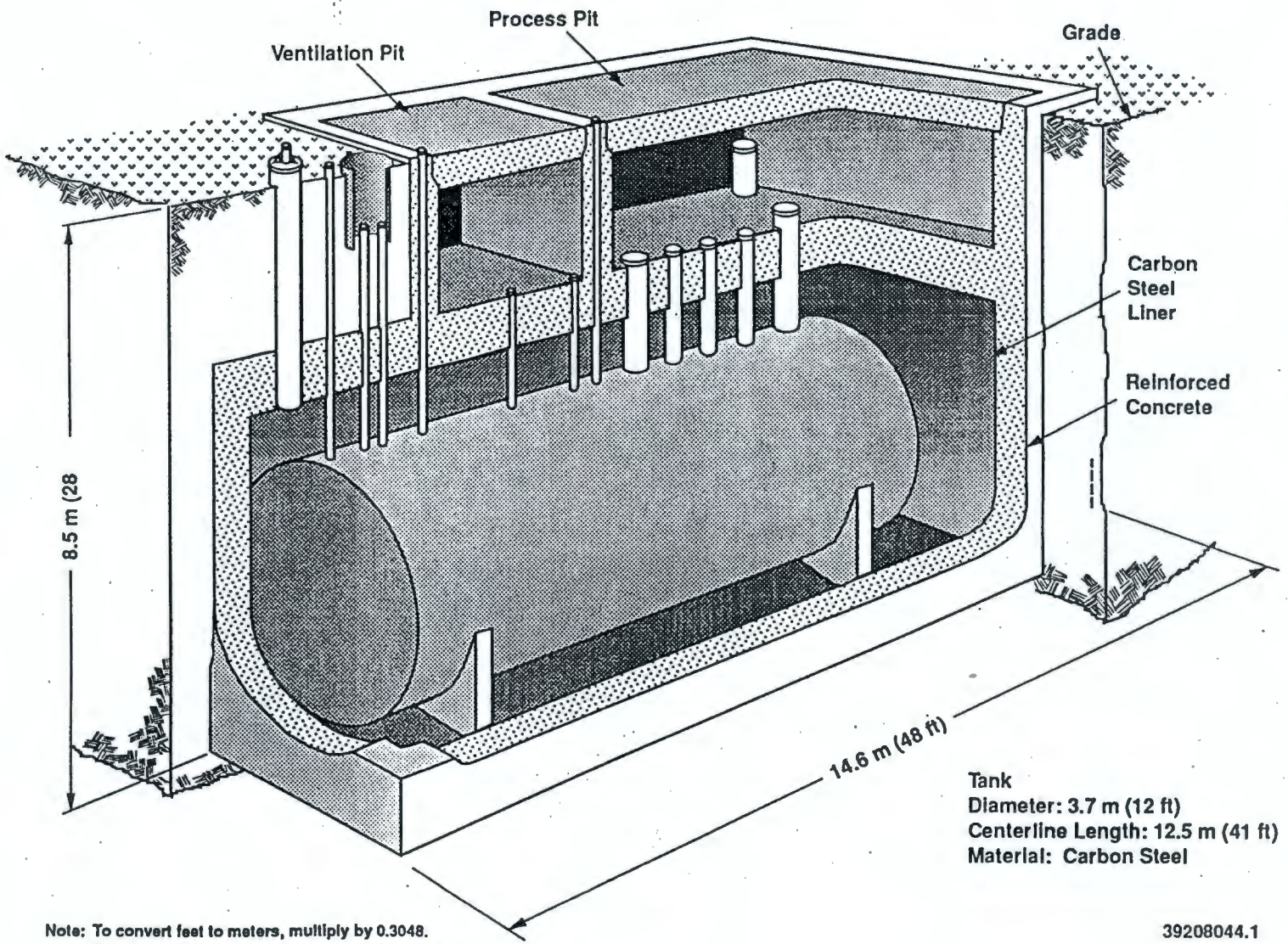
WA7890008967 9713532.0588

TYPICAL DOUBLE-CONTAINED RECEIVER TANK
(244-BX, 244-TX, and 244-U)

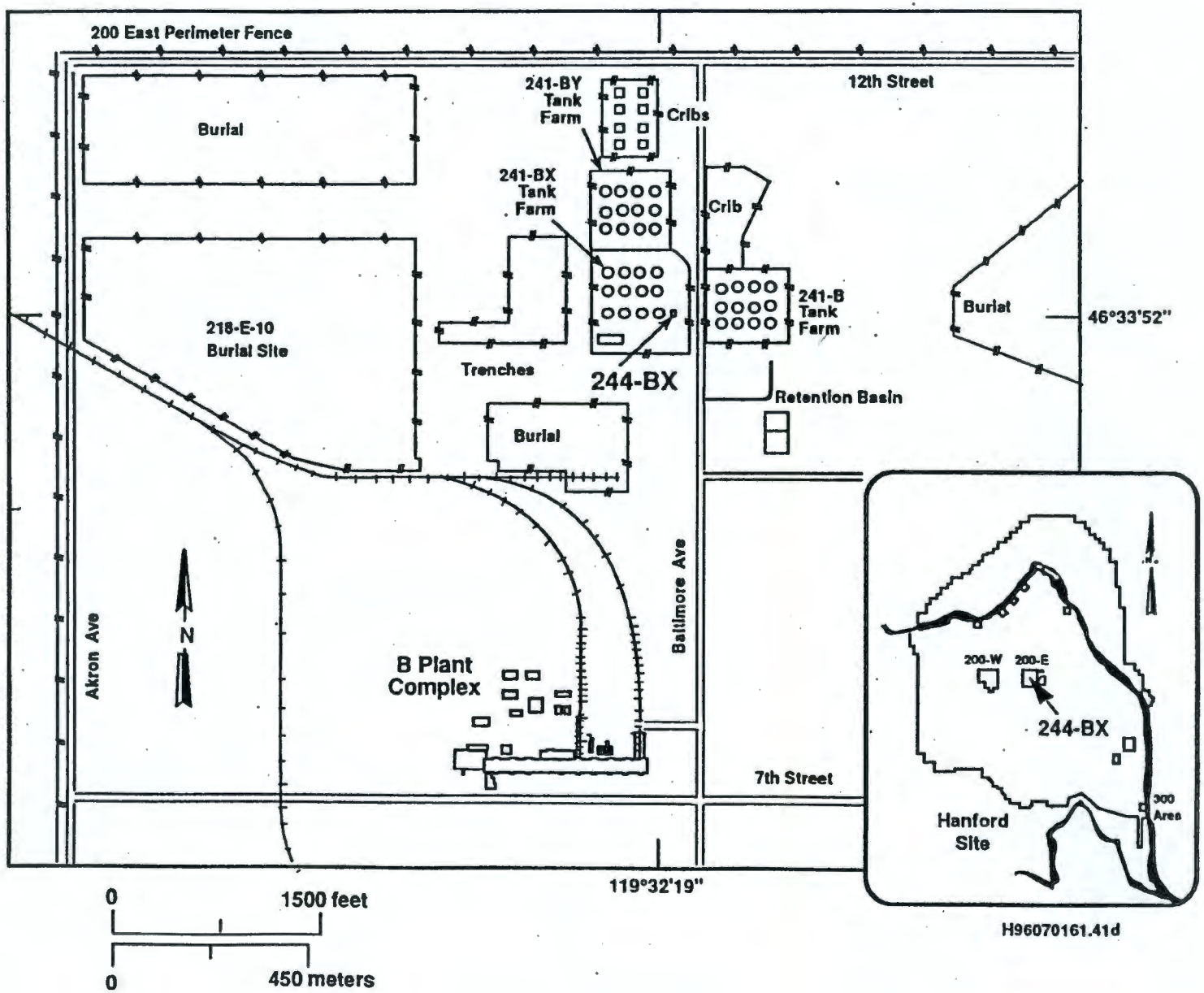


Tank
Diameter: 3.7 m (12 ft)
Centerline Length: 12.5 m (41 ft)
Material: Carbon Steel

39208044.1

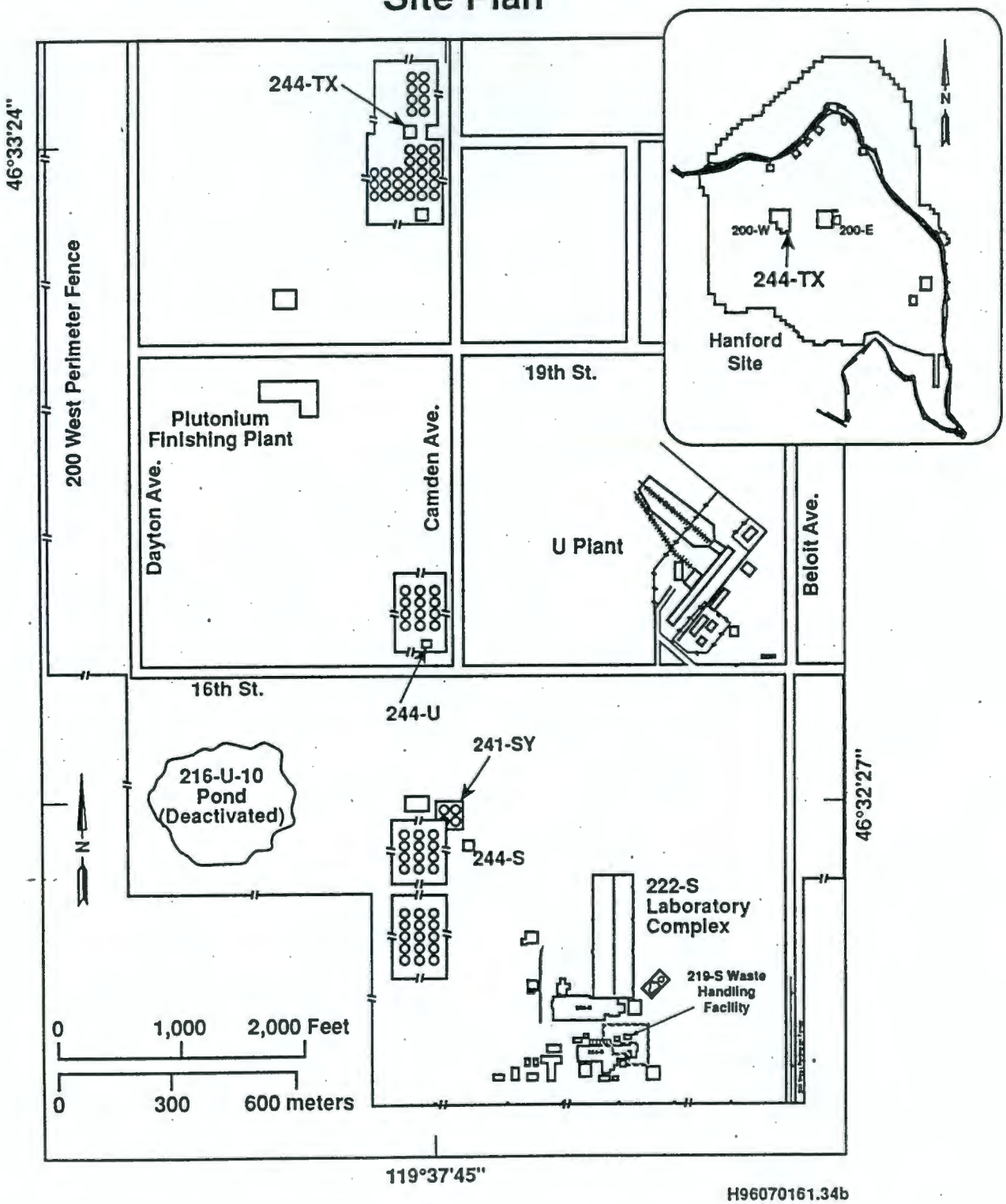
Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

244-BX Double-Contained Receiver Tank
Site Plan

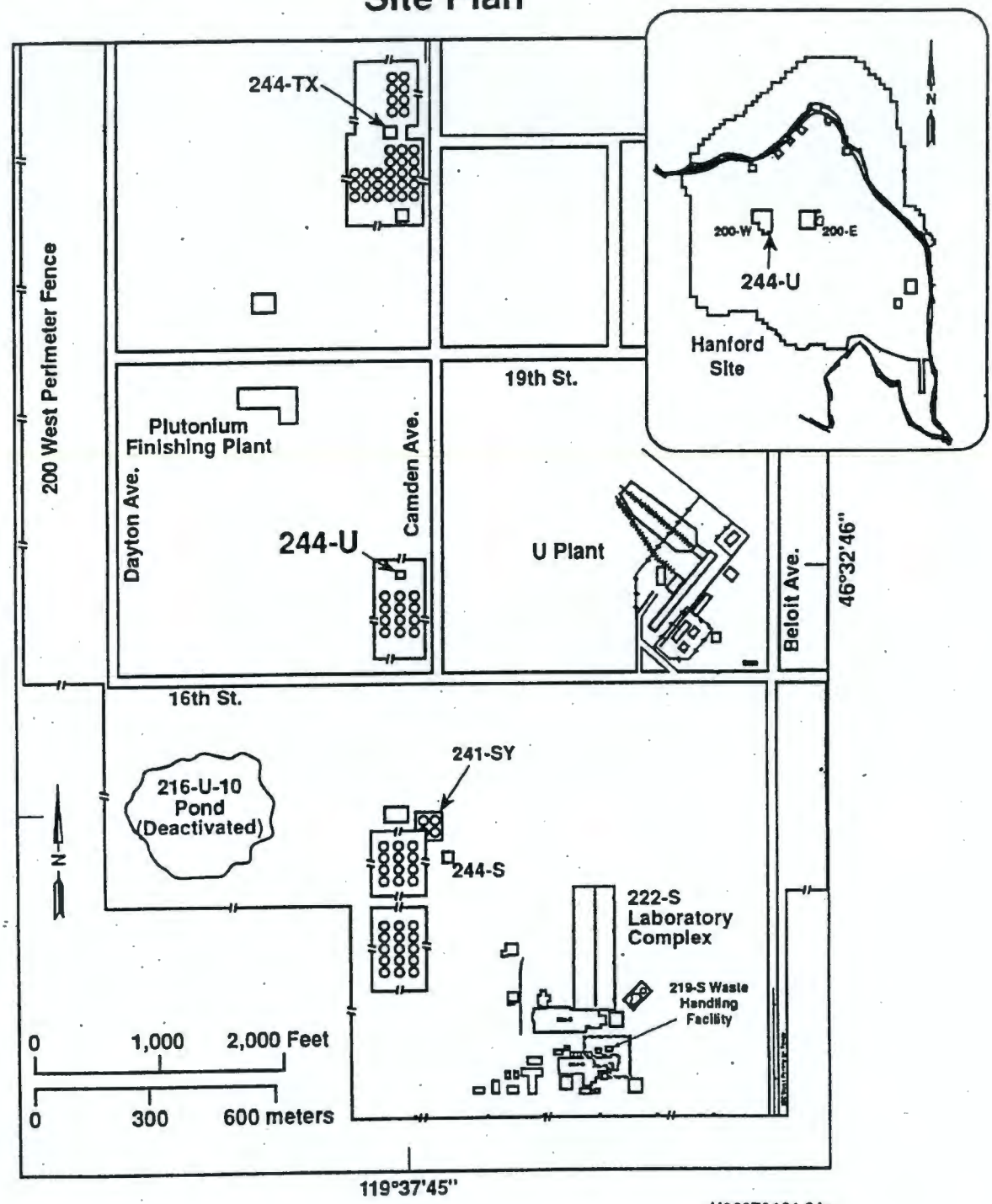


WA7890008967
9713532.0590

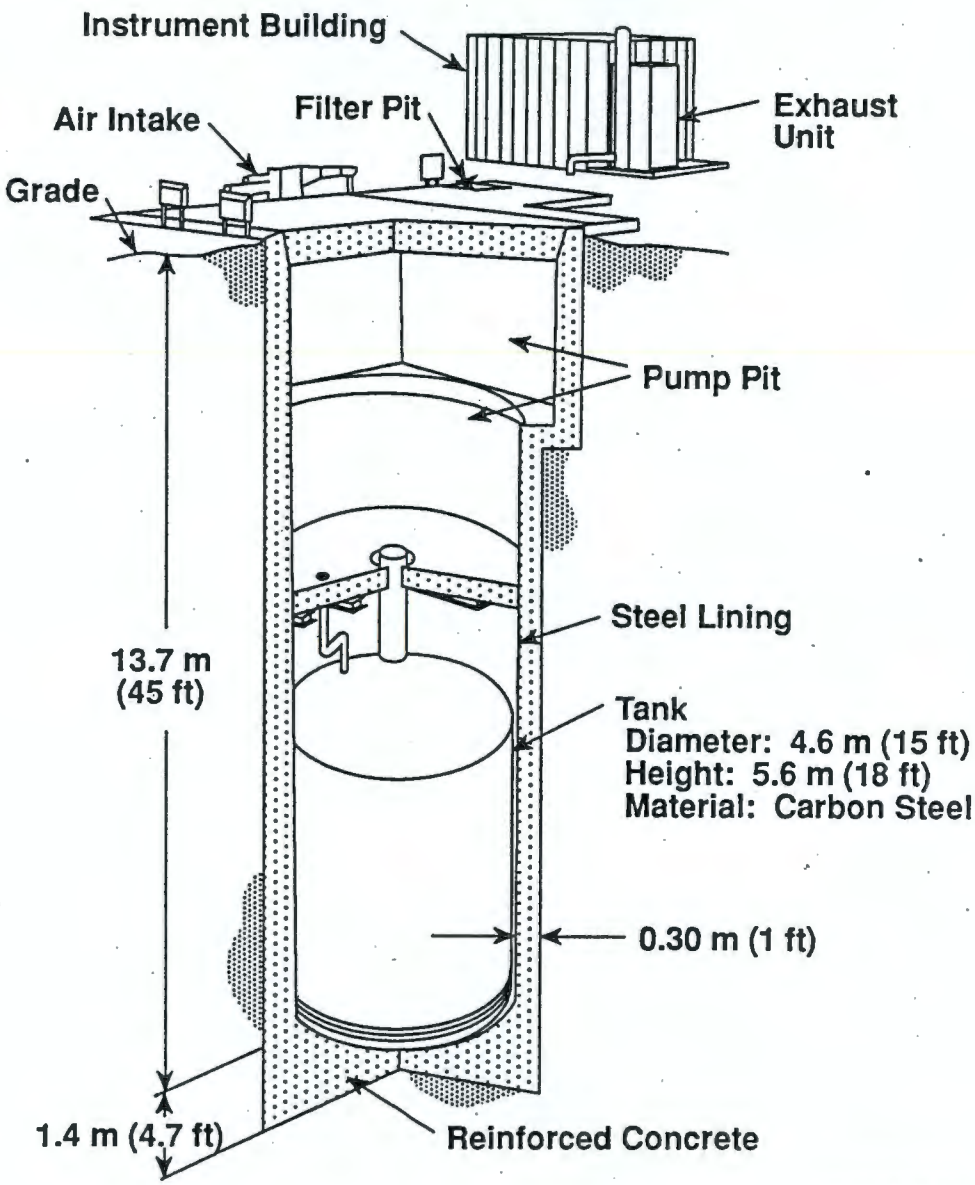
244-TX Double-Contained Receiver Tank
Site Plan



244-U Double-Contained Receiver Tank
Site Plan



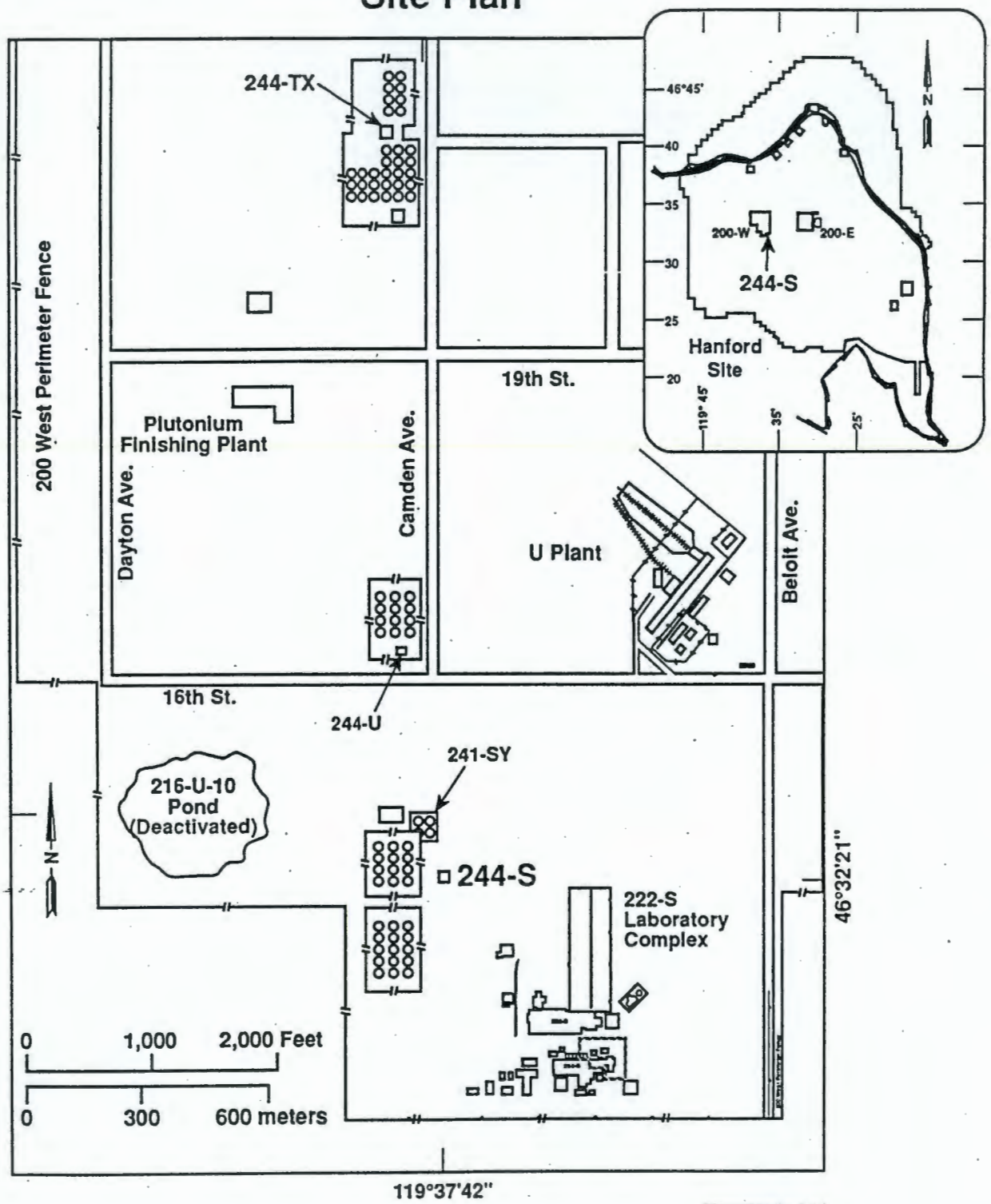
Typical Double-Contained Receiver Tank
(244-A and 244-S)



39208044.21

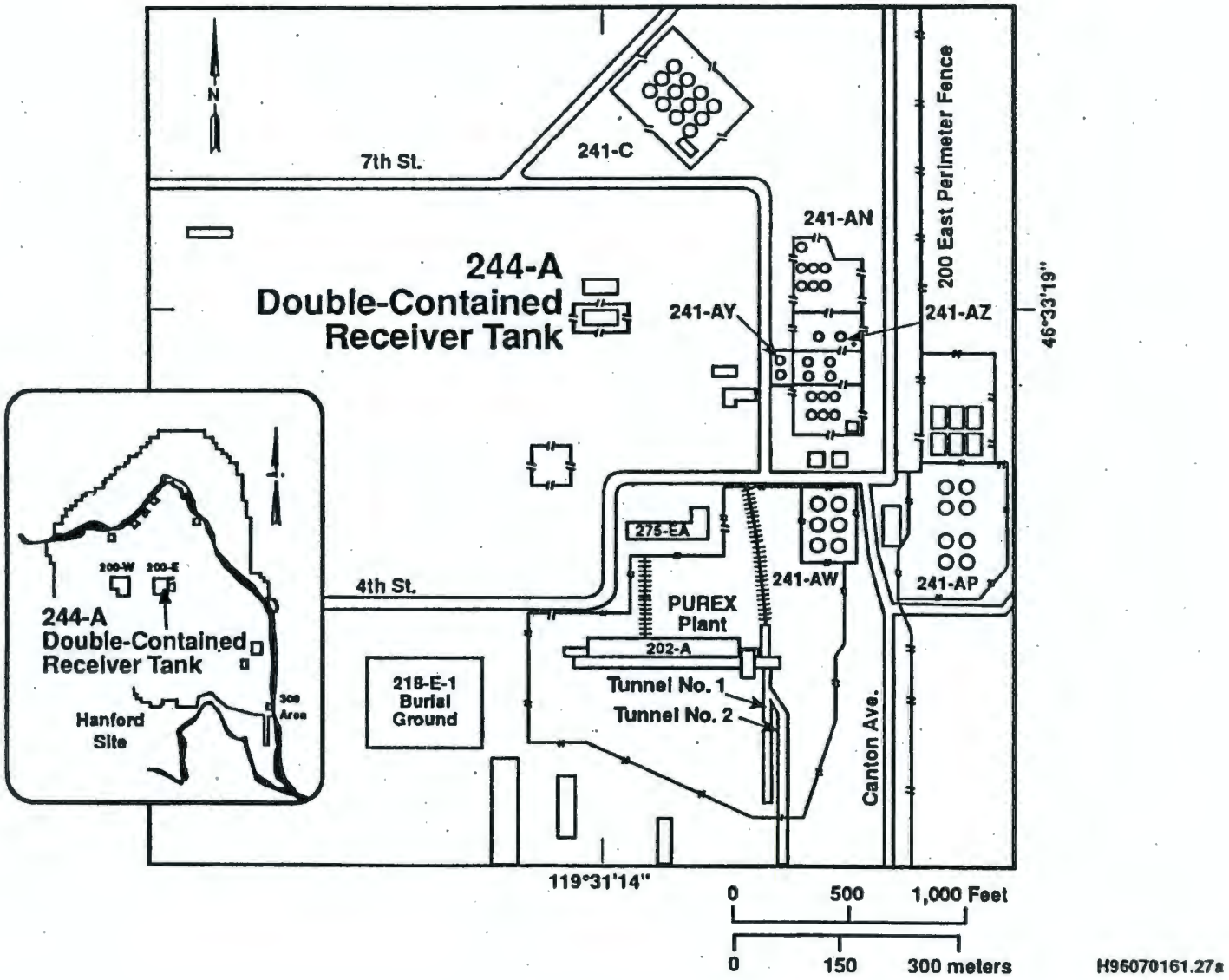
Notes: To convert feet to meters, multiply by 0.3048.

244-S Double-Contained Receiver Tank
Site Plan



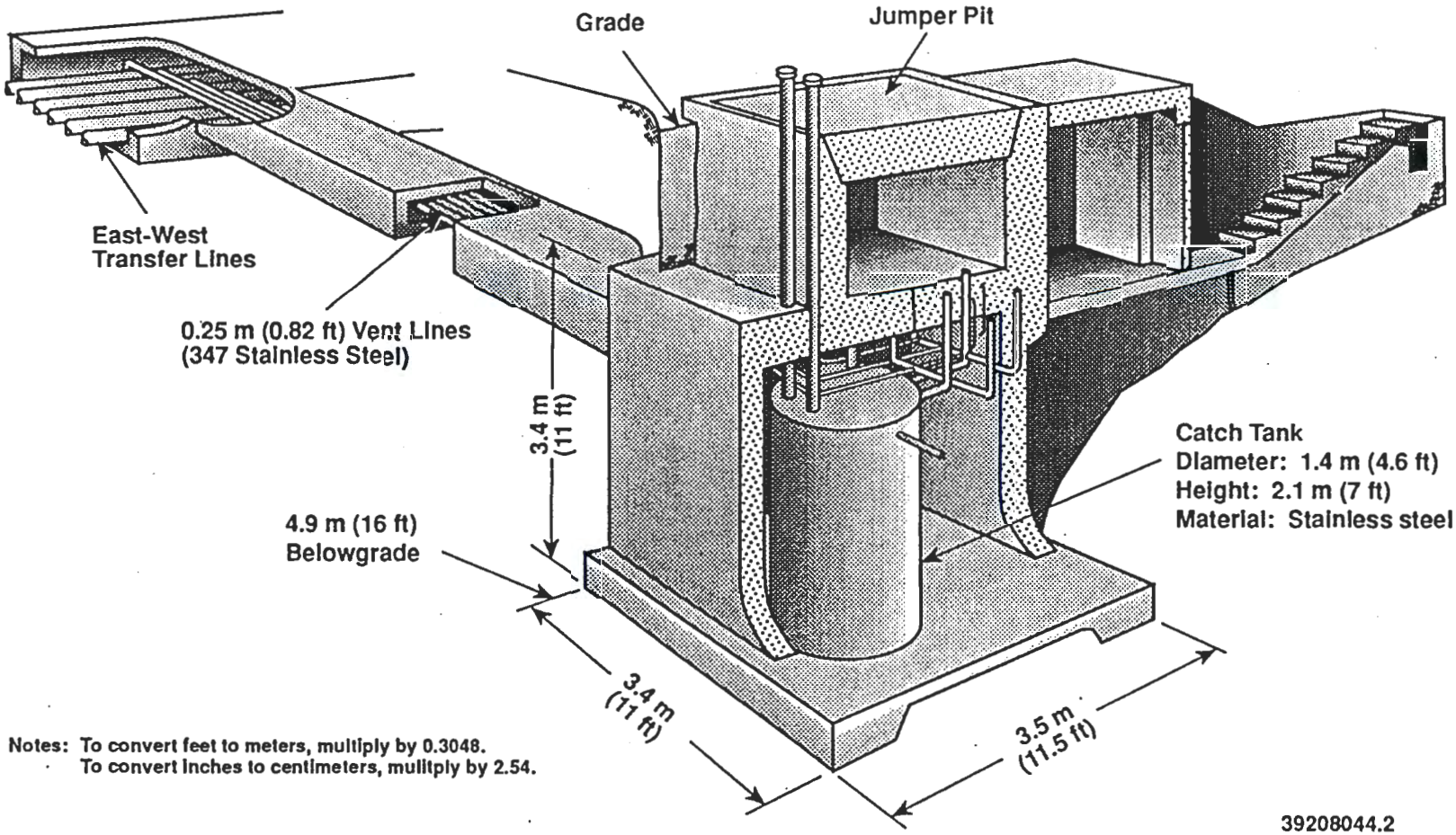
H96070161.34d

244-A Double-Contained Receiver Tank Site Plan



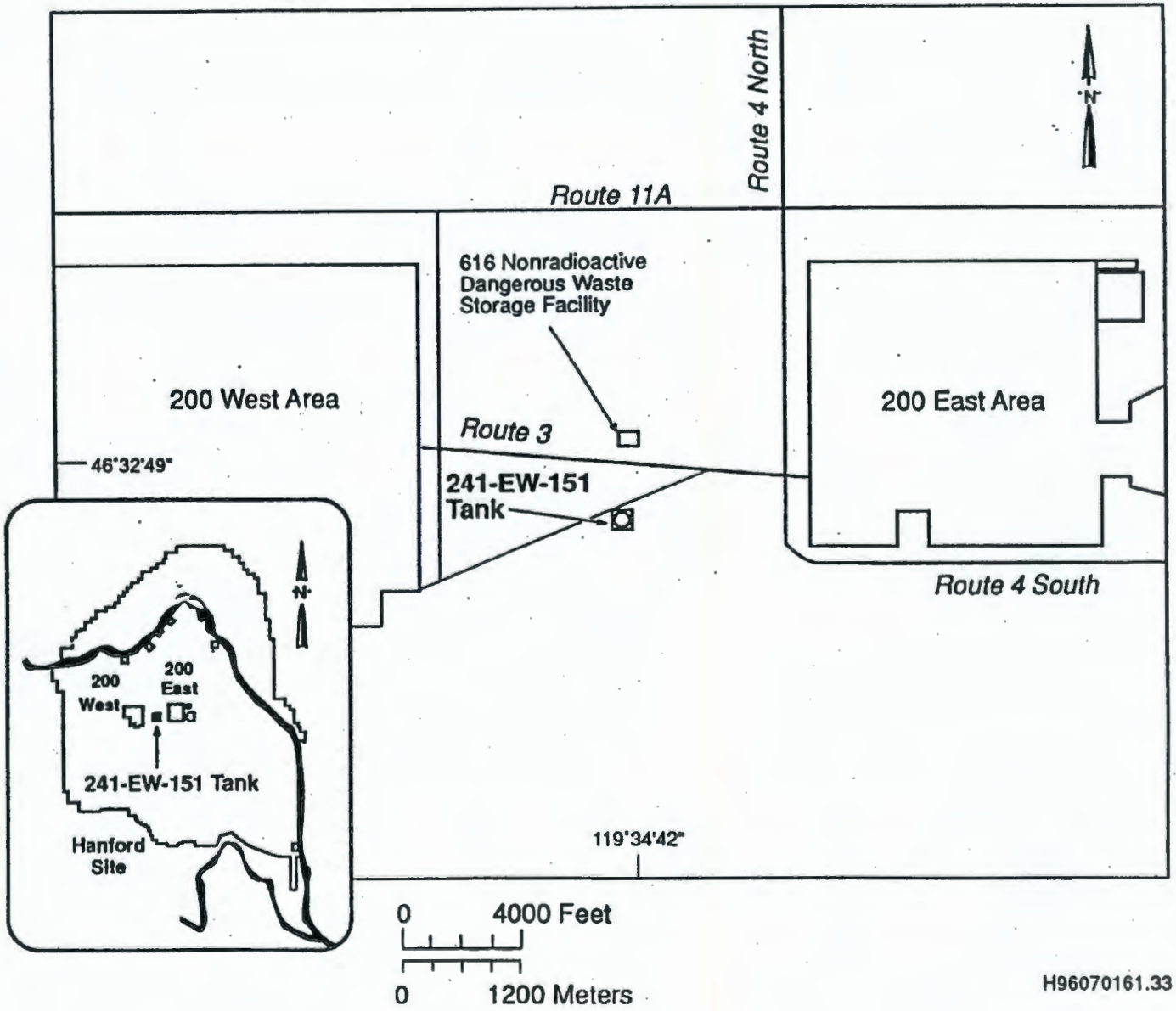
H96070161.27a

241-EW-151 TANK
(200 AREA EAST-WEST VENT STATION)

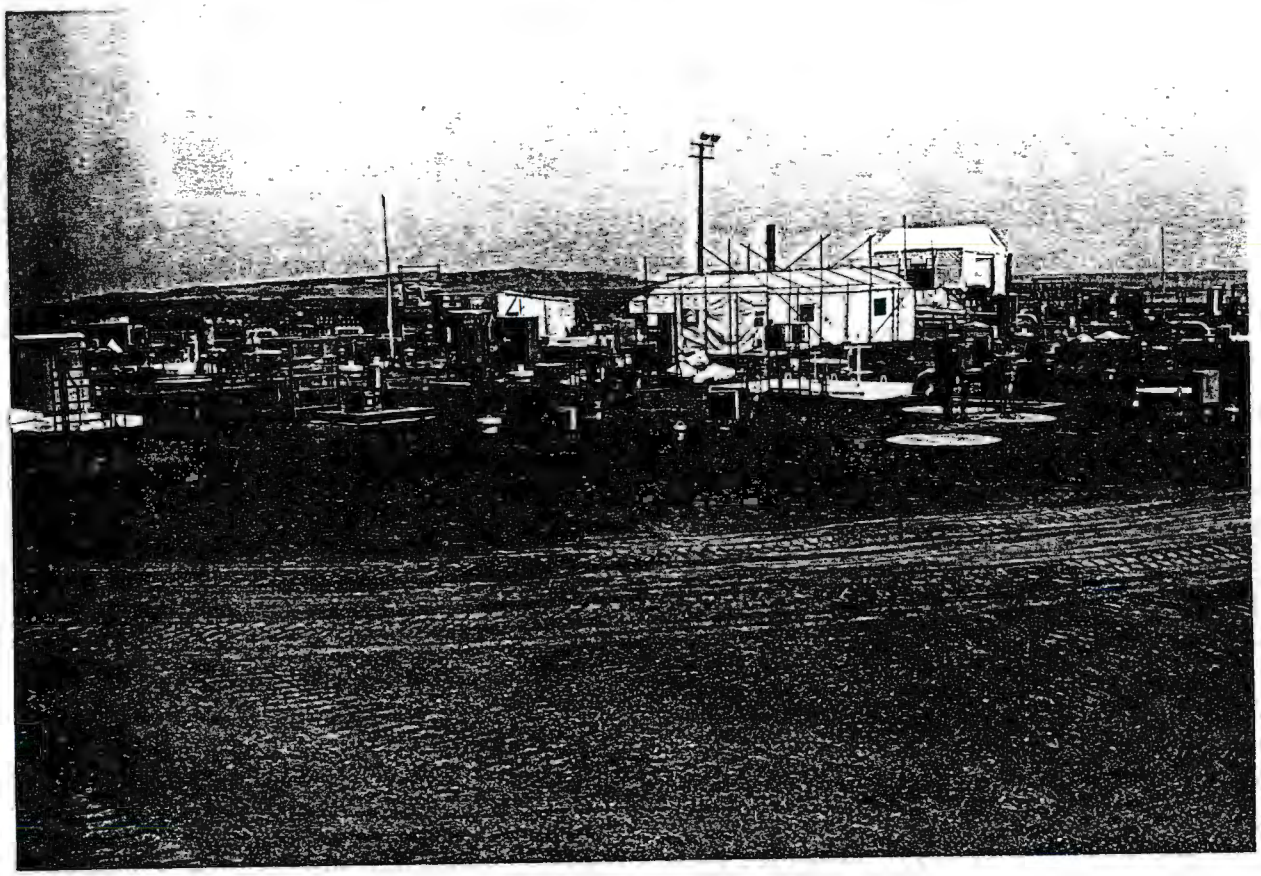


Notes: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

241-EW-151 Tank
(200 Area East/West Vent Station)
Site Plan



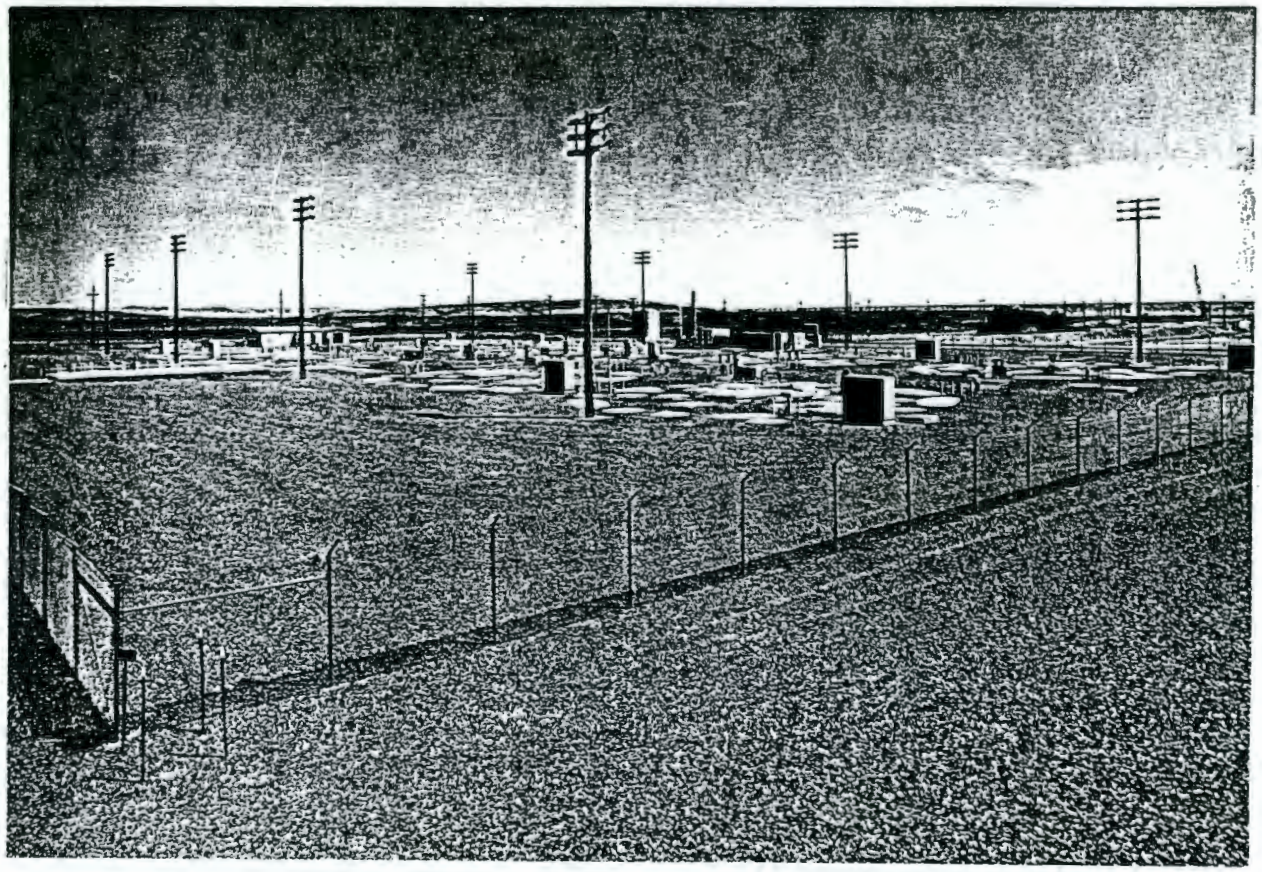
241-AN DOUBLE-SHELL TANKS



46°33'23"
119°31'01"

96080579-24CN
(PHOTO TAKEN 1996)

241-AP DOUBLE-SHELL TANKS



46°33'04"
119°30'52"

8704135-12CN
(PHOTO TAKEN 1987)

241-AW DOUBLE-SHELL TANKS

46°33'04"
119°31'03"

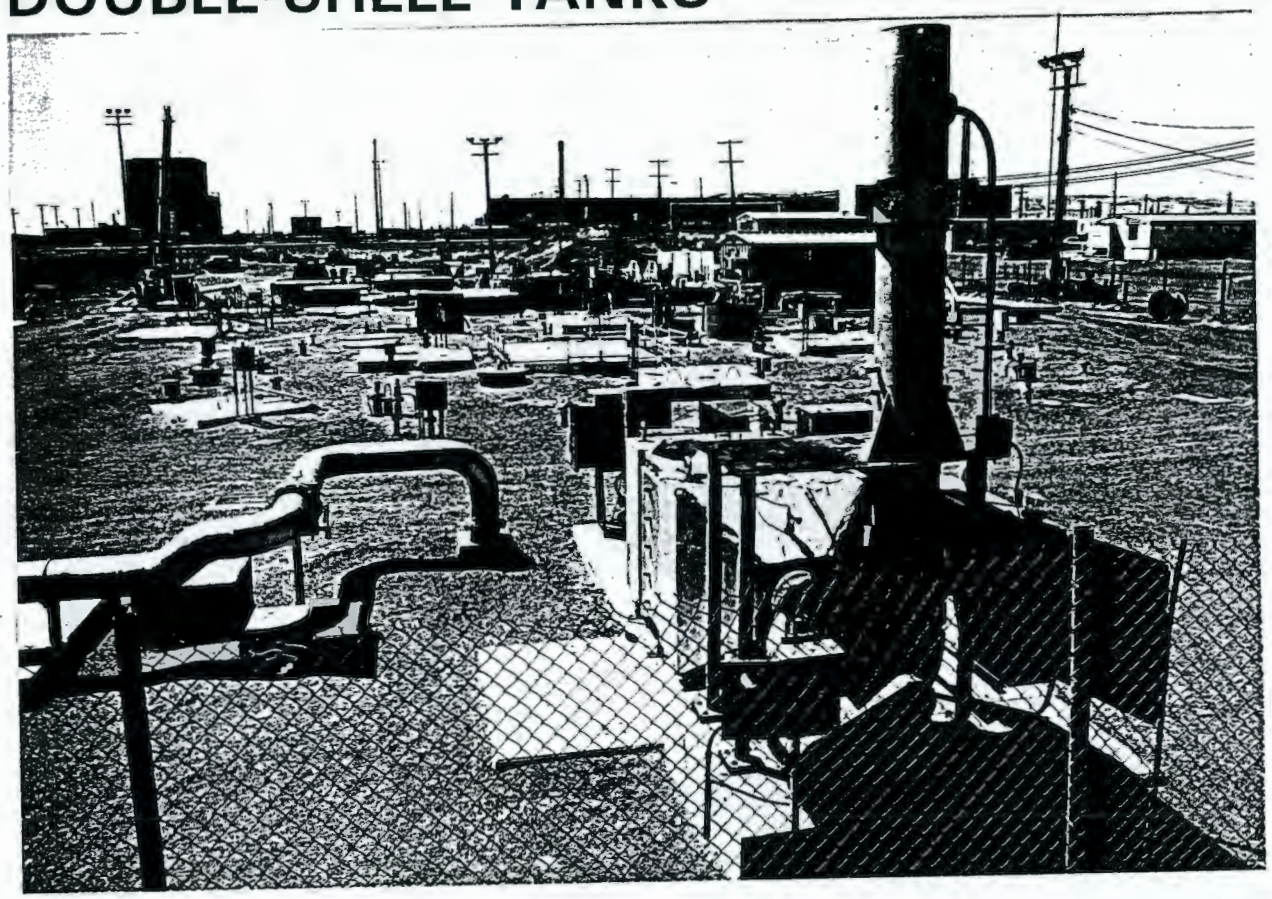
8704135-11CN
(PHOTO TAKEN 1987)

241-SY DOUBLE-SHELL TANKS

46°32'25"
119°37'41"

96080579-1CN
(PHOTO TAKEN 1996)

241-AY AGING WASTE DOUBLE-SHELL TANKS



46°33'15"
119°31'05"

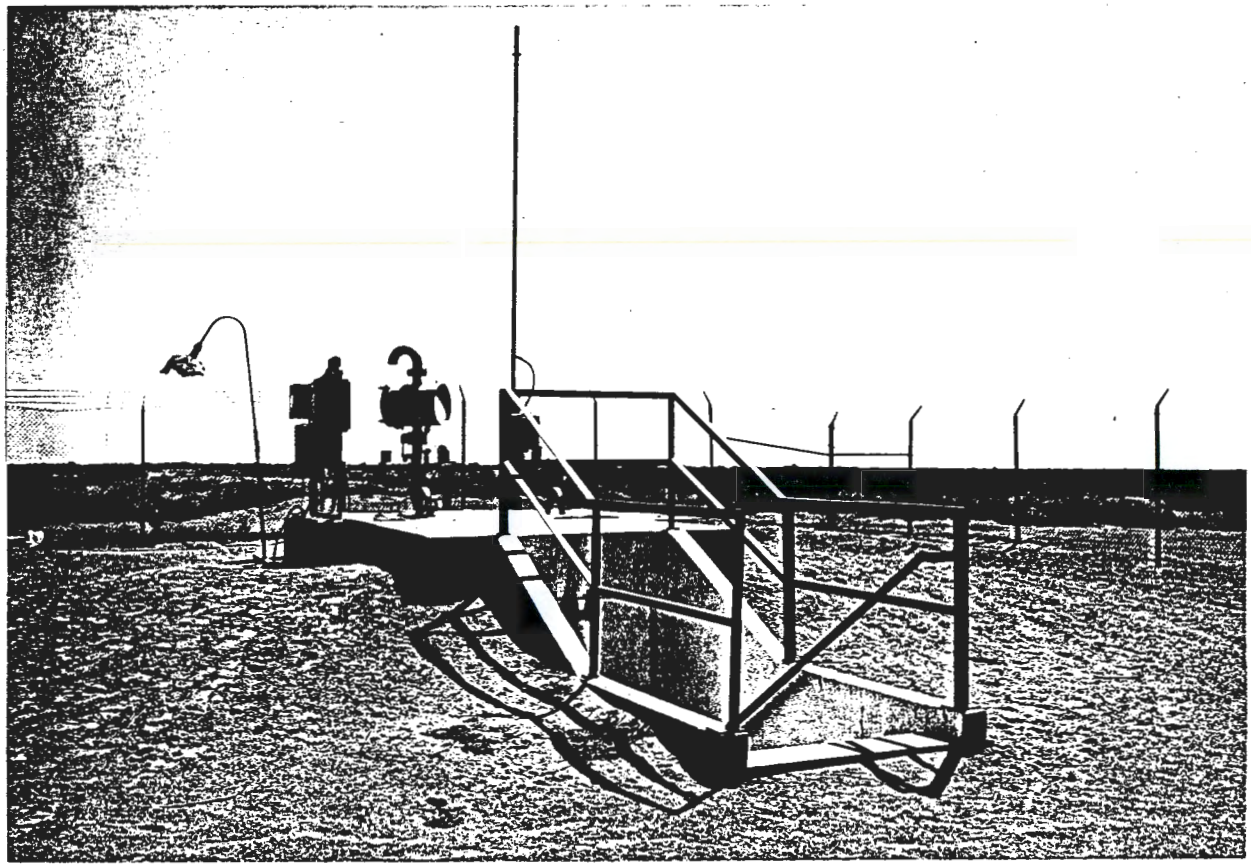
8704135-10CN
(PHOTO TAKEN 1987)

241-AZ AGING WASTE DOUBLE-SHELL TANKS

46°33'20"
119°31'00"

96020361-17CN
(PHOTO TAKEN 1996)

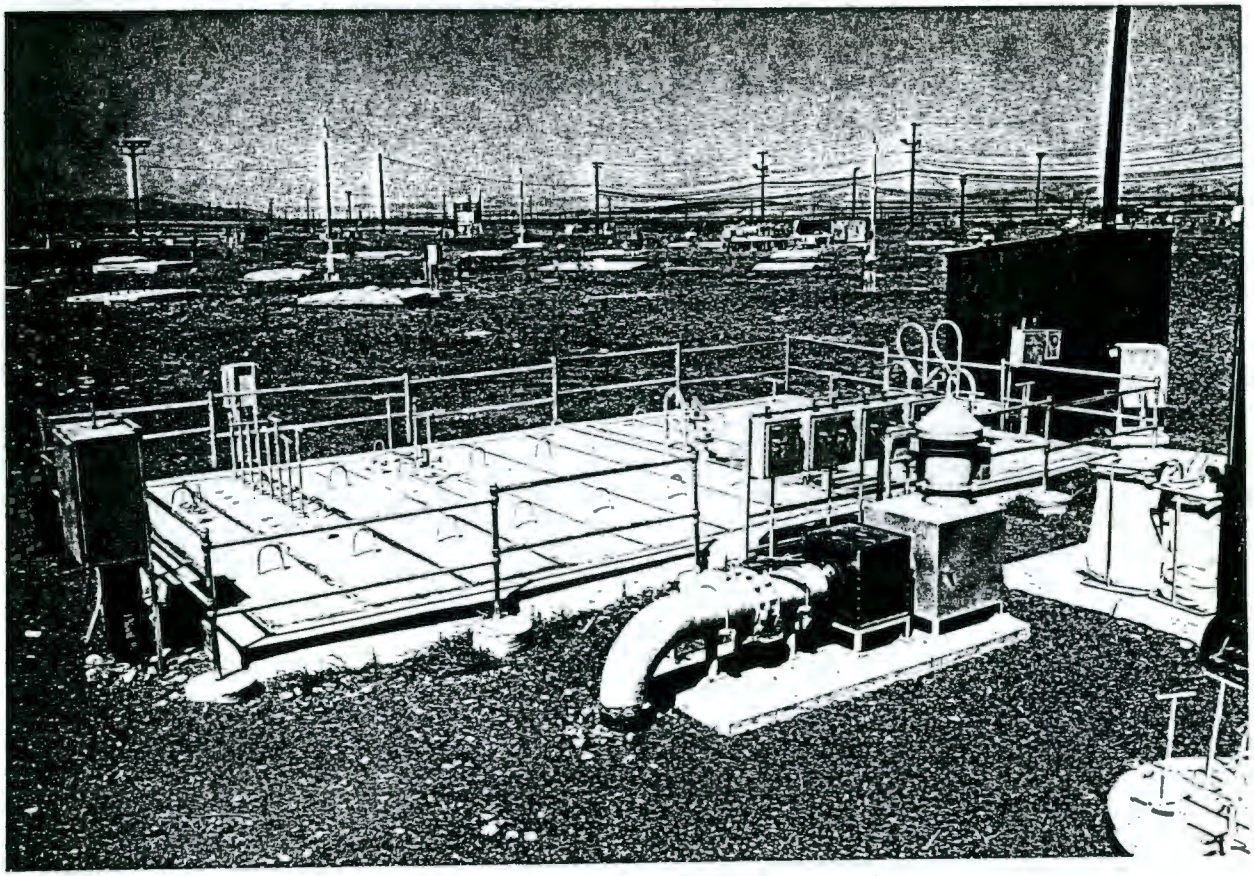
241-EW-151 TANK



46°32'49"
119°34'52"

8704433-17CN
(PHOTO TAKEN 1987)

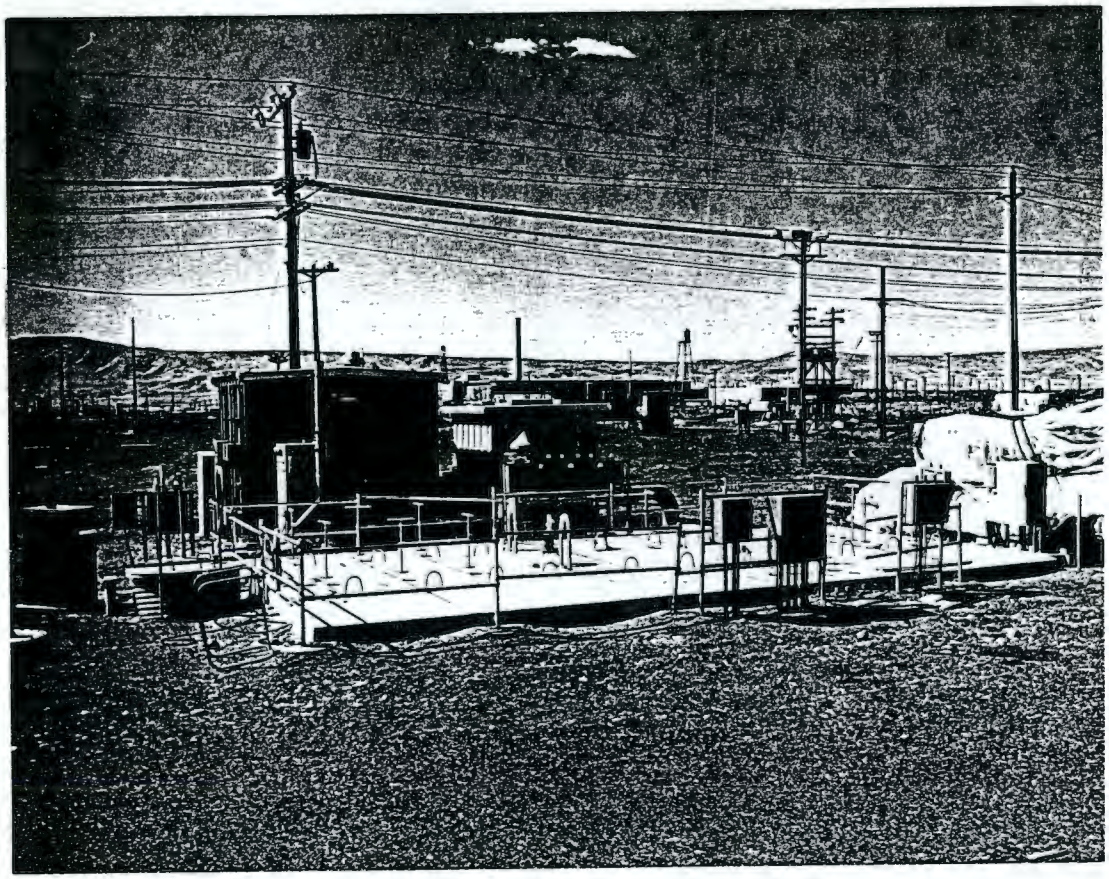
244-BX DOUBLE-CONTAINED RECEIVER TANK



46°33'52"
119°32'19"

8704135-18CN
(PHOTO TAKEN 1987)

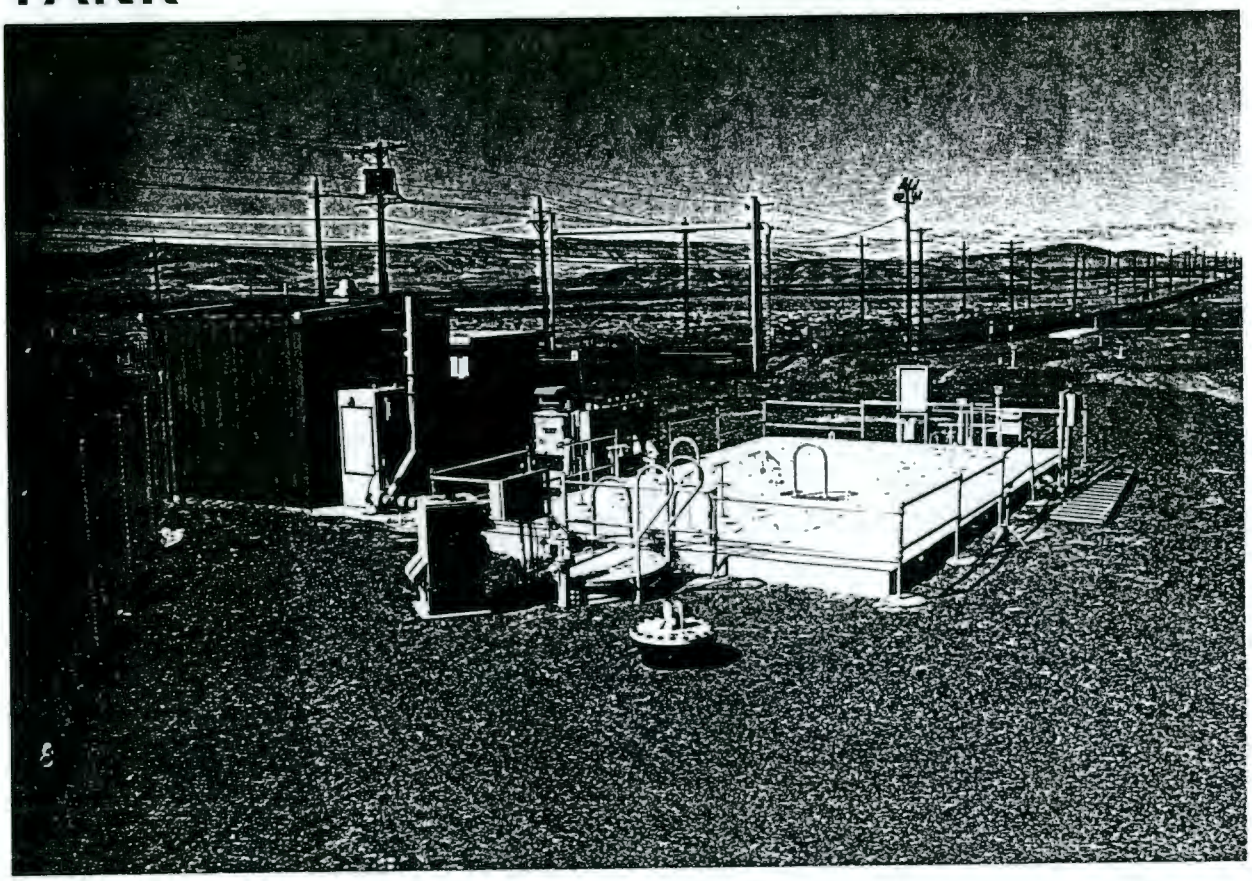
244-TX DOUBLE-CONTAINED RECEIVER TANK



46°33'24"
119°37'45"

8704433-7CN
(PHOTO TAKEN 1987)

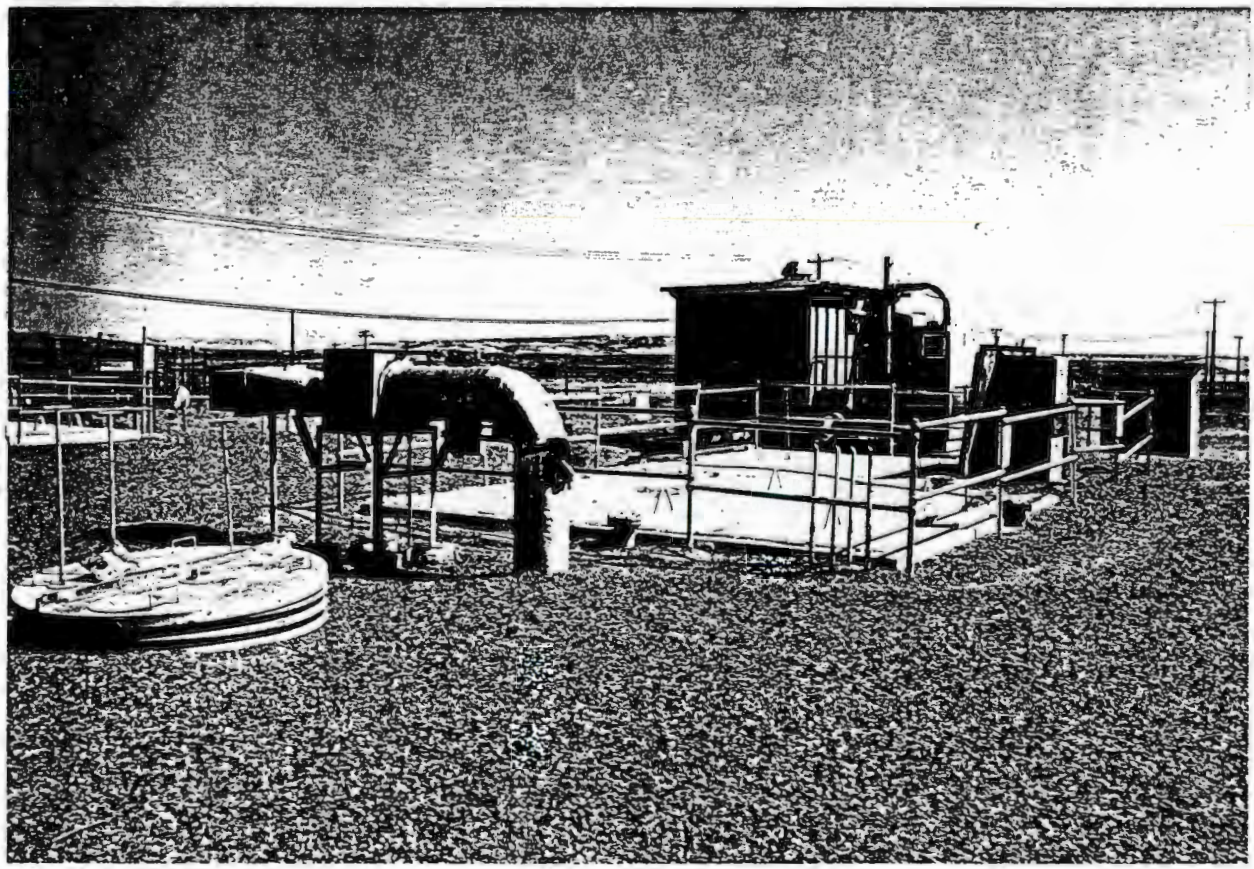
244-U DOUBLE-CONTAINED RECEIVER TANK



46°32'46"
119°37'45"

8704433-4CN
(PHOTO TAKEN 1987)

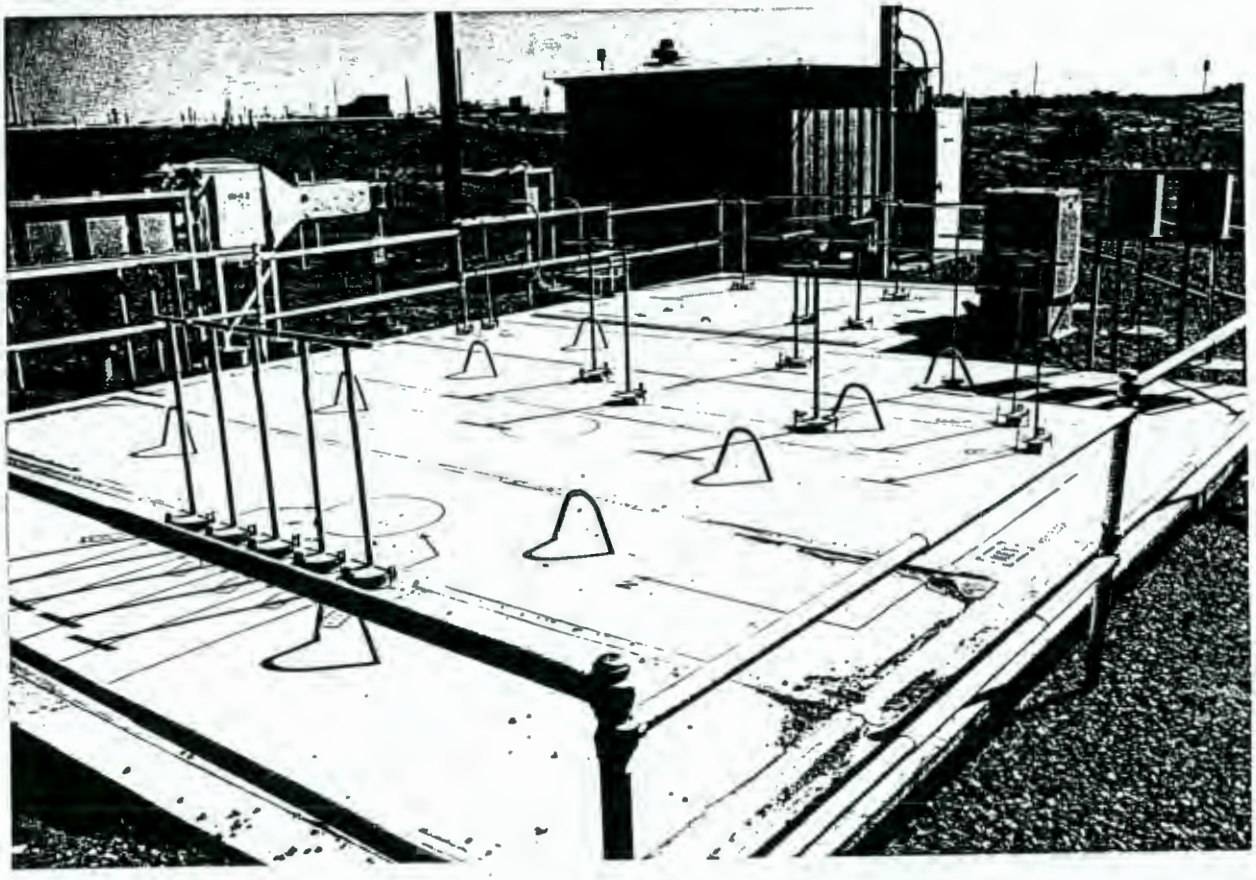
244-A DOUBLE-CONTAINED RECEIVER TANK



46°33'19"
119°31'14"

8704433-15CN
(PHOTO TAKEN 1987)

244-S DOUBLE-CONTAINED RECEIVER TANK



46°32'21"
119°37'42"

8704433-2CN
(PHOTO TAKEN 1987)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 8 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 * FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above).*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	132,489	L		7				
2					8				
3					9				
4					10				

CONTINUE ON REVERSE

Continued from the front.

. PROCESSES (continued)

. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

S01

The 2727-WA SRE Sodium Storage Building (2727-WA) was intended to begin waste management operations in April of 1977. This unit is a prefabricated (Butler-type) metal building that stored 158, 208-liter (55-gallon) steel containers of contaminated sodium waste. The sodium, in metallic form, was transferred to the Hanford Site in 1977 for storage after use by Atomics International as primary coolant in their Sodium Reactor Experiment (SRE) reactor.

The containers of sodium were purged of air and internally blanketed with nitrogen when filled at Atomics International. The containers were stored on noncombustible pallets [51-millimeter (2-inch) steel channels set atop 203-millimeter (8-inch) concrete blocks]. Approximately one-fourth of the concrete floor space was occupied by the stored containers.

The 2727-WA has never stored dangerous or mixed waste. A regulatory analysis was performed on the 2727-WA sodium by the U.S. Department of Energy, Chicago Operations Office and the Westinghouse Hanford Company. Both of these analyses concluded that the SRE sodium is not a dangerous or mixed waste. Therefore, withdrawal of the Part A permit application for this unit was requested. The Washington State Department of Ecology granted approval to withdraw this Part A on August 17, 1989, but has yet to finalize the withdrawal. Presently, all of the SRE sodium containers have been removed from the 2727-WA. The maximum process design capacity for container storage was 132,489 liters (35,000 gallons).

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 800 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 6 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	Included with above

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D003	31,848	K	S01	Storage-Container
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The SRE sodium is metallic sodium that was previously used in a sodium-cooled nuclear reactor.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

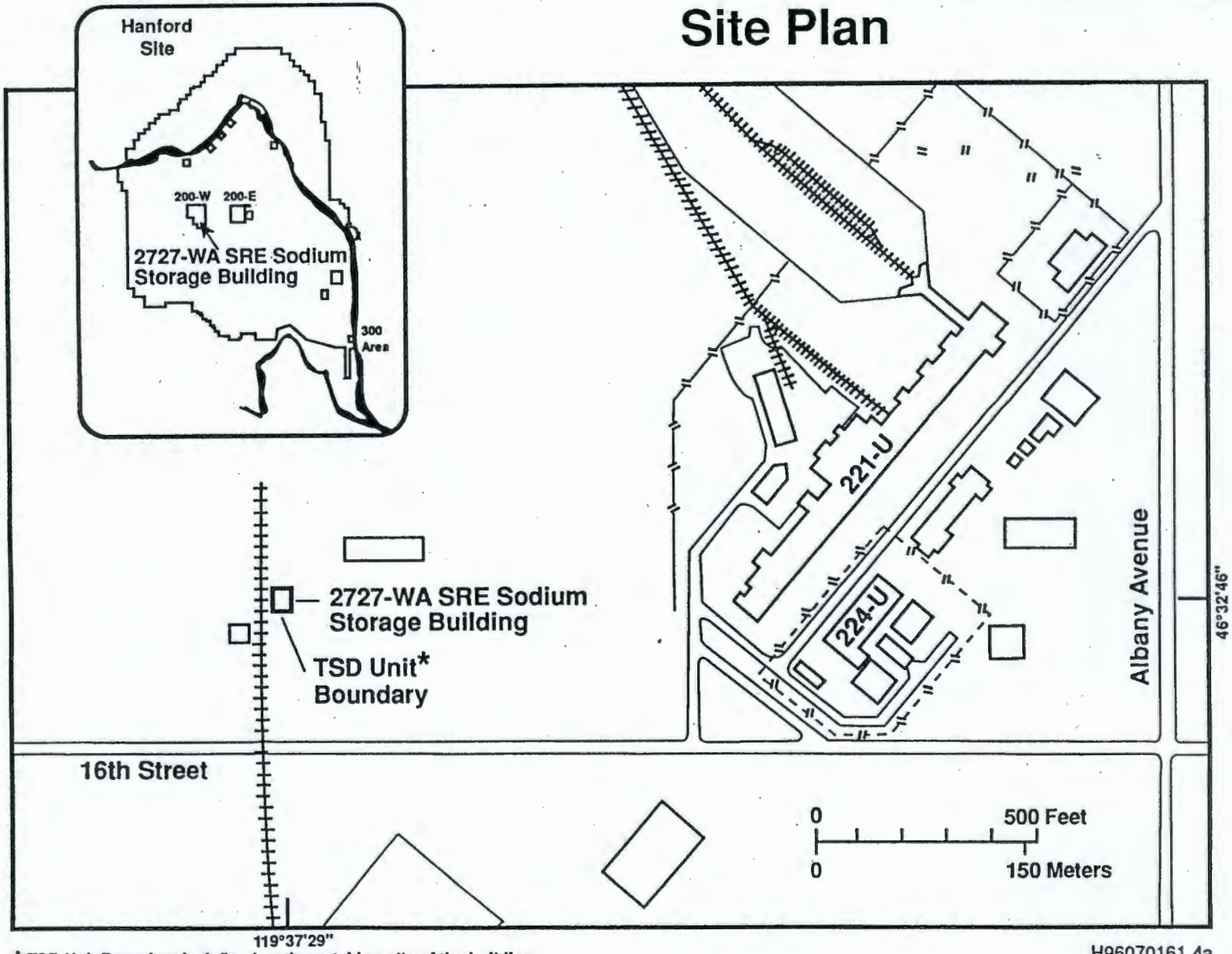
Date

9/18/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

Date

2727-WA SRE Sodium Storage Building Site Plan

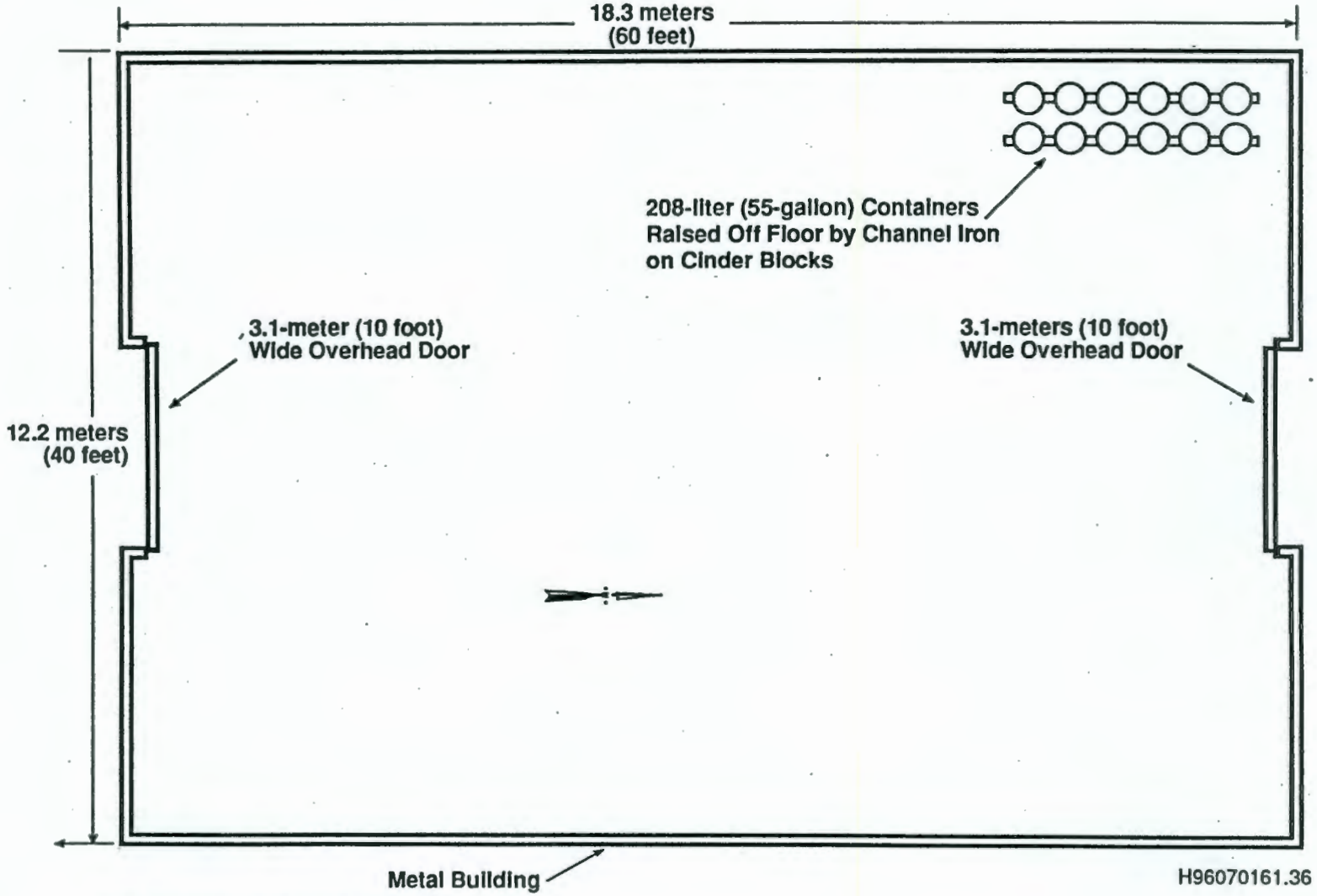


*TSD Unit Boundary is defined as the outside walls of the building.

H96070161.4a

9713532.0616

2727-WA Building
Interior Floor Plan



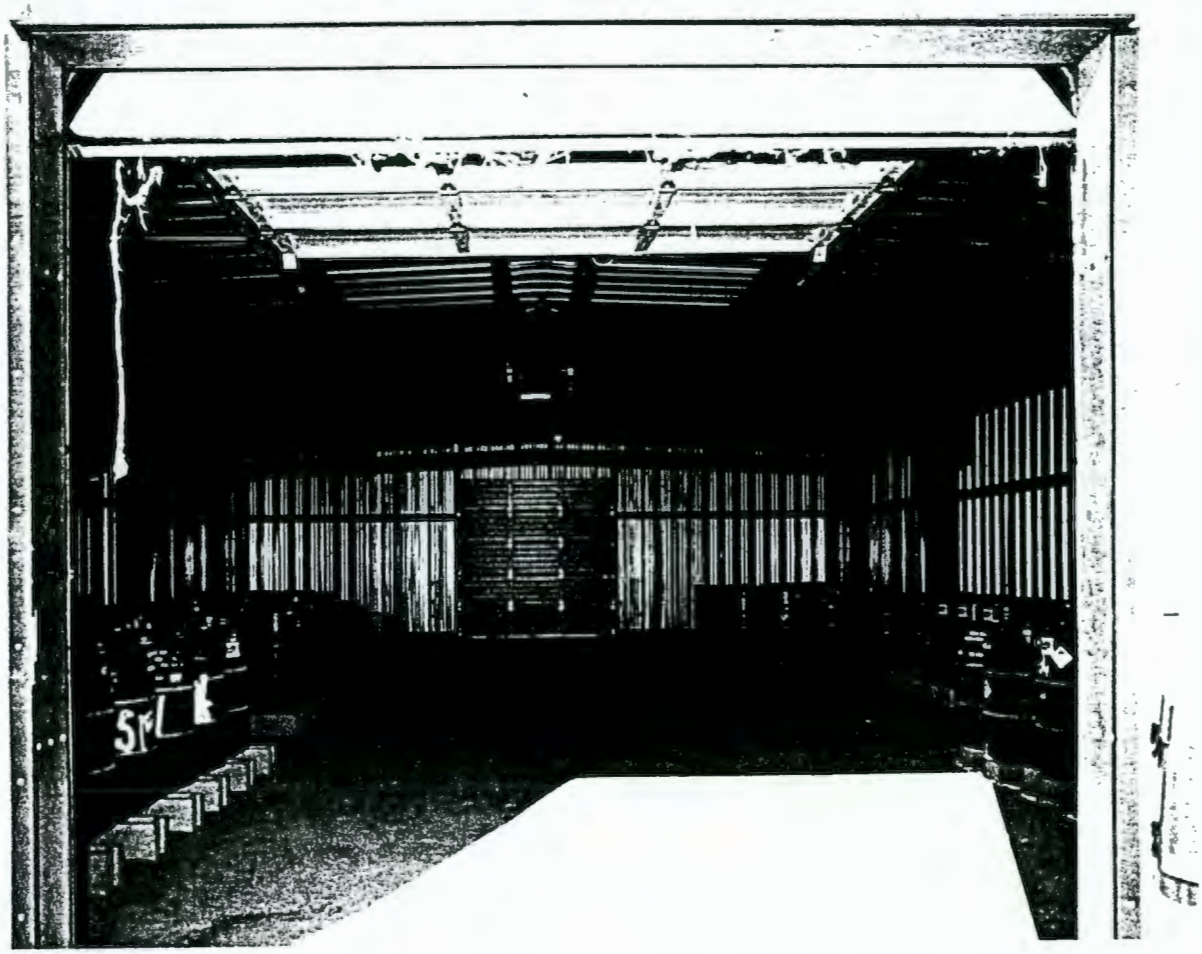
Note: To convert feet to meters, multiply by 0.348
To convert gallons to liters, multiply by 3.7854

2727-WA BUILDING SRE SODIUM STORAGE

46°32'46"
119°37'29"

8706421-9CN
(PHOTO TAKEN 1987)

2727-WA BUILDING SRE SODIUM STORAGE



46°32'46"
119°37'29"

8706421-22CN
(PHOTO TAKEN 1987)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.*
0 3	2 2	4 3

FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED
*(use the boxes to the left)
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 5	24,007	C		7				

Process Code S05 is being used to designate the PUREX Storage Tunnels as a "Miscellaneous Unit" per Washington Administrative Code 173-303-680.

4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

S05

The PUREX Storage Tunnels, a miscellaneous unit (S05), are used for storage of mixed waste subject to the requirements of WAC 173-303-680. The two tunnels store waste from the PUREX Plant and other onsite sources. Since being placed into service, mixed waste has been stored in the tunnels on railcars. Not all material stored in the tunnels contains mixed waste.

The construction of Tunnel Number 1 was completed in 1956. The tunnel is approximately 5.8 meters (19 feet) wide by 6.7 meters (22 feet) high by 109 meters (358 feet) long and provides storage space for eight railcars. Between June 1960 and January 1965, all eight railcar positions were filled and the tunnel subsequently was sealed. The combined volume of the equipment stored on the eight railcars presently in Tunnel Number 1 is approximately 596 cubic meters (780 cubic yards). The maximum process design capacity for storage in Tunnel Number 1 is approximately 4,129 cubic meters (5,400 cubic yards).

The construction of Tunnel Number 2 was completed in 1964. Tunnel Number 2 is approximately 5.8 meters (19 feet) wide by 6.7 meters (22 feet) high by 514 meters (1,686 feet) long and provides storage space for 40 railcars. The first railcar was placed in Tunnel Number 2 in December 1967 and as of July 1996, 28 railcars have been placed in the tunnel. The combined volume of equipment stored on the 28 railcars presently in Tunnel Number 2 is approximately 2,204 cubic meters (2,883 cubic yards). The maximum process design capacity for storage in Tunnel Number 2 is approximately 19,878 cubic meters (26,000 cubic yards).

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*Included with above*

 CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER (entered from page 1) WA7890000897

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D005	454*	K	S05	Storage - Miscellaneous
2	D006	454*			
3	WT02				
4	D007	454*			
5	D008	8,000*			
6	D009	45*			
7	D010	454*			
8	D011	680*			
9	D001				
10	WT02	454*			Included With Above
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

* The estimated annual quantity of waste listed above represents the maximum quantity of waste placed in either tunnel in a given year.

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The waste stored in the tunnels could include barium (D005), cadmium (D006), chromium (D007), lead (D008), mercury (D009), selenium (D010), silver (D011), and light mineral oil (WT02, state-only, toxic, dangerous waste) contained in oil absorption material. The silver is predominately in the form of salts and is considered ignitible (D001) because of the presence of silver nitrate ($AgNO_3$). Cadmium also could be considered state-only, toxic, dangerous waste (WT02).

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

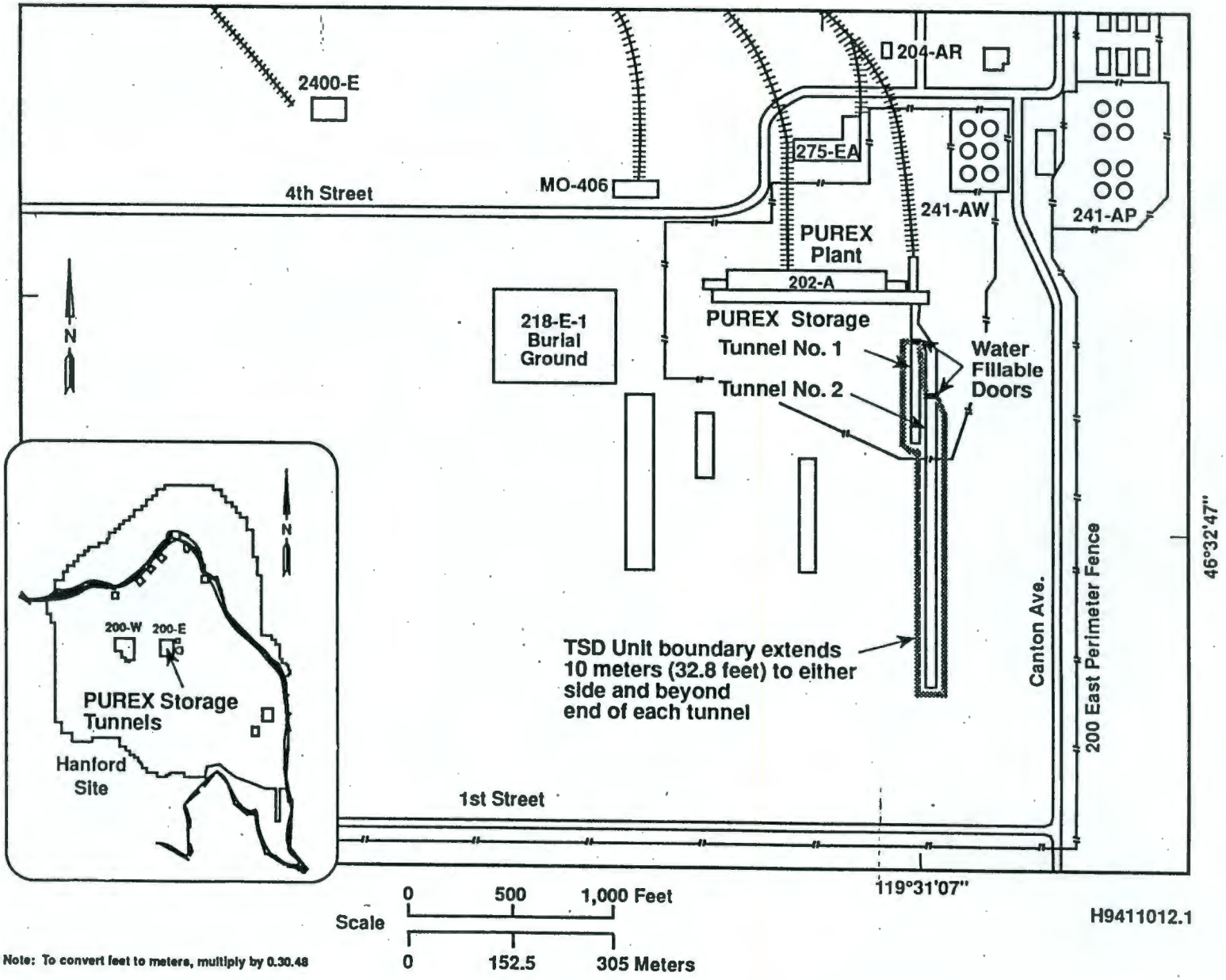
Date

9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

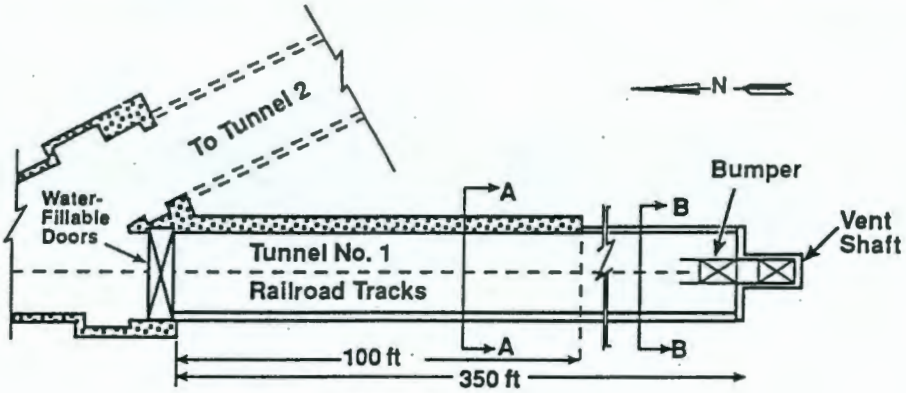
Date

PUREX Storage Tunnels Site Plan

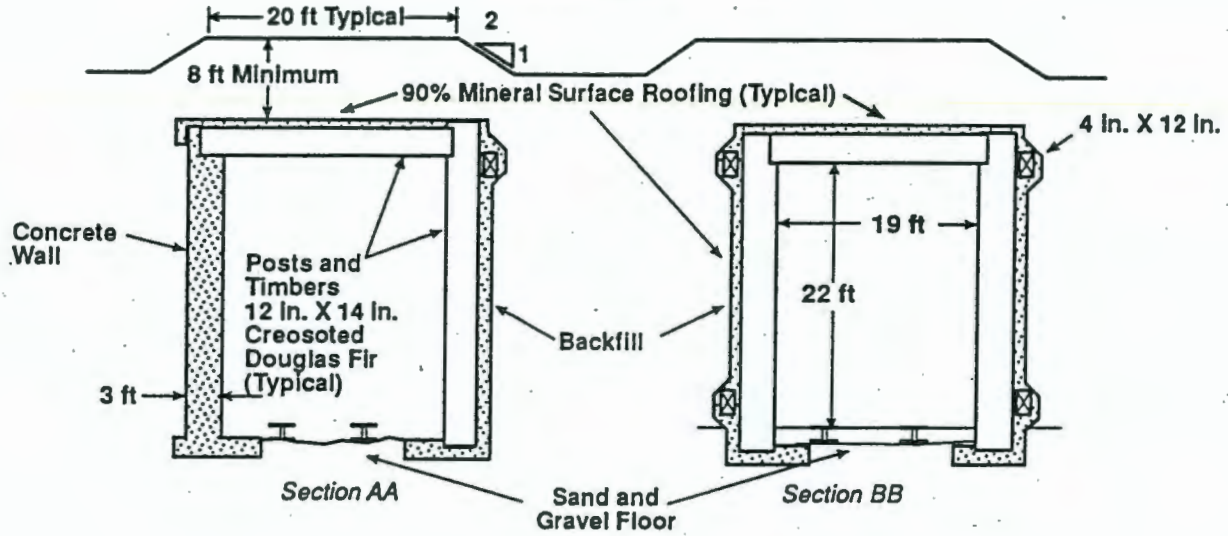


Note: To convert feet to meters, multiply by 0.30.48

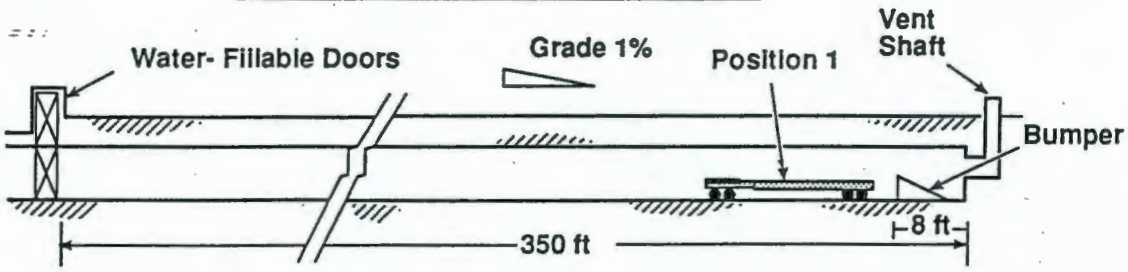
PUREX Tunnel No. 1 - Details



PUREX Tunnel No.1 - Plan View



PUREX Tunnel No.1 - Section View

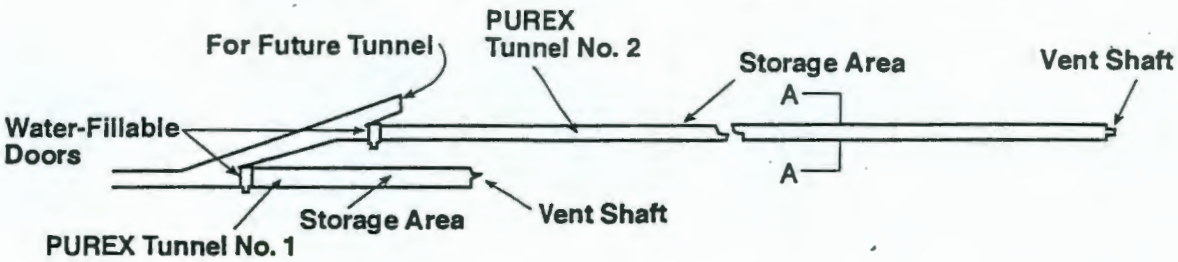


PUREX Tunnel No.1 - Elevation View

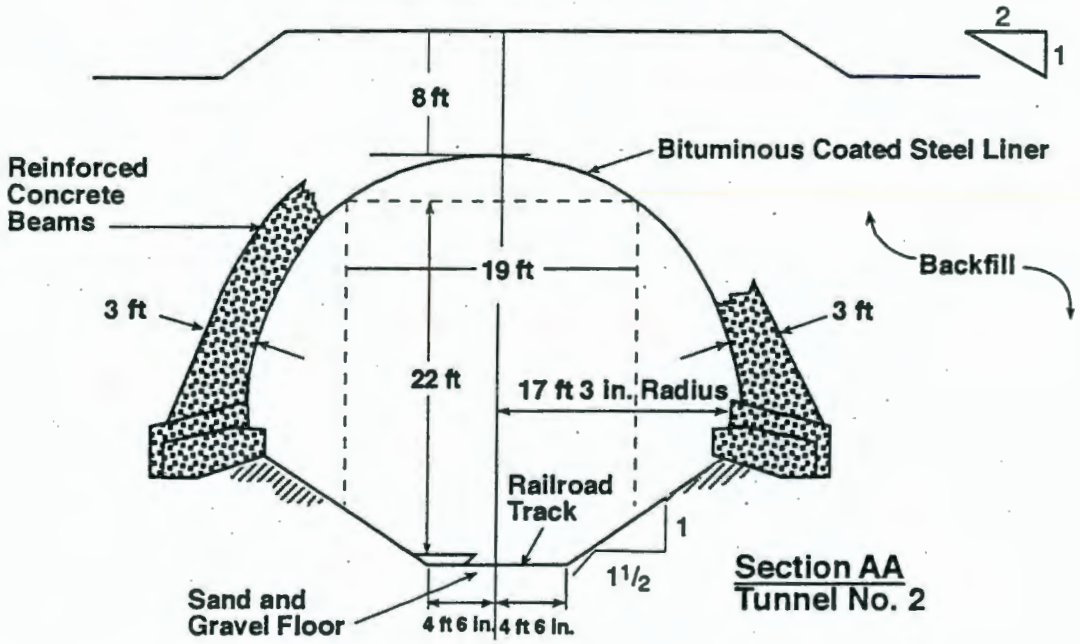
For conversion to meters, multiply feet by 0.3048.
For conversion to centimeters, multiply inches by 2.54.

H96030106.2

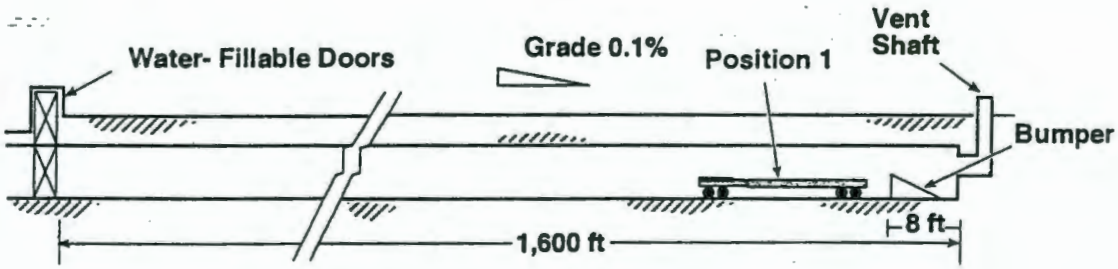
PUREX Tunnel No. 2 - Details



PUREX Tunnels - Plan View



Section AA
Tunnel No. 2

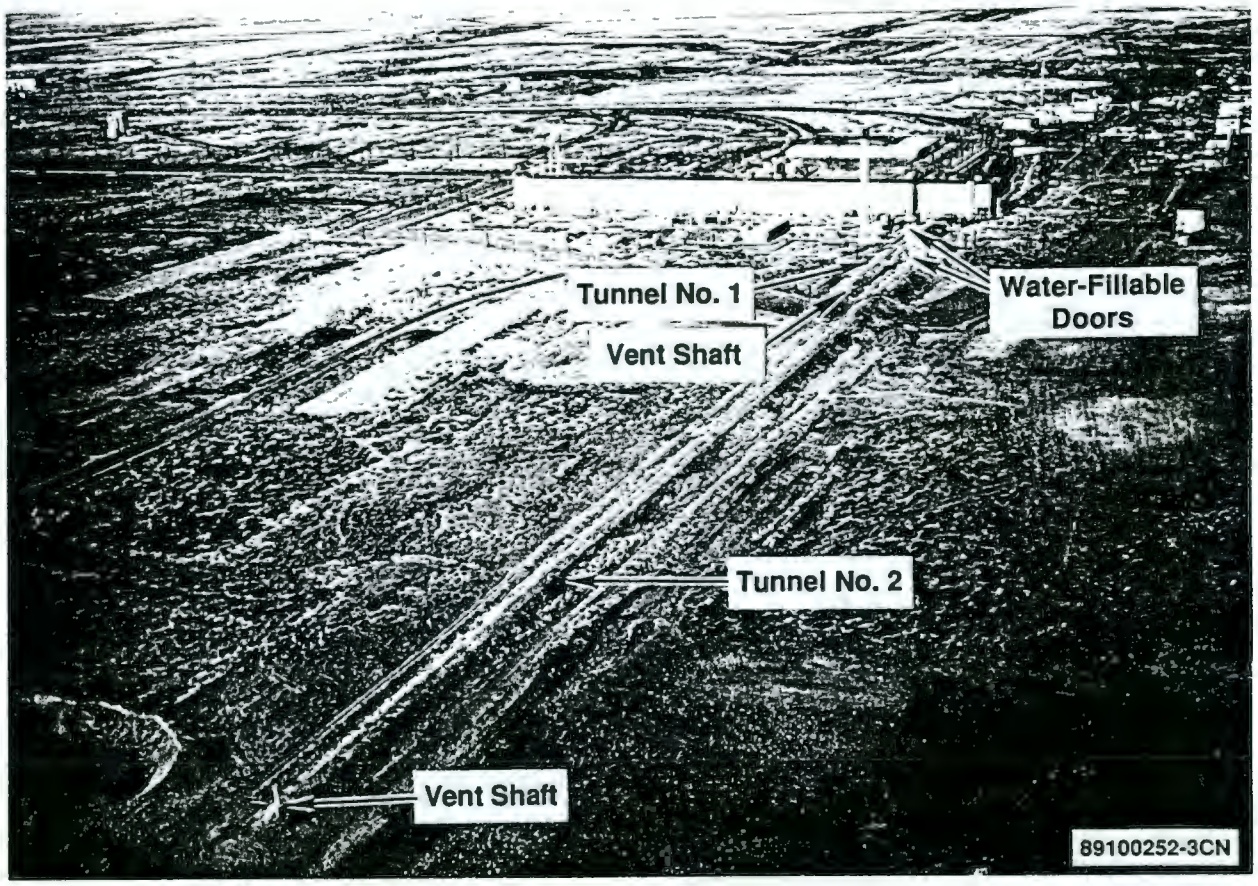


PUREX Tunnel No. 2 - Elevation View

For conversion to meters, multiply feet by 0.3048.
For conversion to centimeters, multiply inches by 2.54.

H96030106.1

PUREX STORAGE TUNNELS



46°32'47"
119°31'07"

89100252-3CN
(PHOTO TAKEN 1989)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 DAY 2 2 YR. 4 3 * FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. DAY YR. FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		6				
X-2	T 0 3	20	E		6				
1	S 0 1	416,395	L		7				
2					8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

The 224-T Transuranic Waste Storage and Assay Facility (224-T TRUSAF) began waste management operations in September of 1985. This unit is a RCRA-compliant container storage unit located within the 224-T building (refer to attached drawings). The 224-T Building is located southeast of the T Plant Complex in the 200 West Area of the Hanford Facility. This building consists of two sections. The western two-thirds of the building are used for the RCRA-compliant storage of containerized transuranic mixed waste and low-level mixed waste. The eastern one-third of the building consists of six radiologically-contaminated process cells that contain equipment that was flushed when the process was terminated. These process cells were sealed from the rest of the building in 1975. It is unknown whether any regulated material remains within the process cells.

S01

The 224-T TRUSAF provides a centralized storage unit for storage of containerized transuranic mixed waste and low-level mixed waste from various Hanford Facility operations and from other U.S. Department of Energy and U.S. Department of Defense facilities. The transuranic mixed waste will be transferred to an onsite treatment, storage, and/or disposal (TSD) unit or offsite TSD facility to be prepared for transfer to, and disposal at, the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico or at other approved disposal site(s). The 224-T TRUSAF also will store retrieved containers of transuranic mixed waste from the Low-Level Burial Grounds (LLBG). Before storage at the 224-T TRUSAF, the LLBG transuranic mixed waste will be retrieved for characterization and reprocessing at an onsite TSD unit or offsite TSD facility. Assay of the retrieved waste will consist of nondestructive testing to confirm the fissile isotope content and to confirm the absence of prohibited items before shipment to the WIPP or to other approved disposal site(s). The total process design capacity for storage at the 224-T TRUSAF is approximately 416,395 liters (110,000 gallons).

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 800 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*included with above*

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890089967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	227	K	S01				Storage - Container
2	through							
3	D007							
4	D008	454						
5	D009	227						
6	through							
7	D043							
8	F001							
9	through							
10	F005							
11	F020							
12	through							
13	F023							
14	F026							
15	through							
16	F028							
17	WT01	4,536						
18	WT02							
19	WP01	3,629						
20	WP02							
21	WP03							
22	W001	227						
23	U001							
24	through							
25	U012							
26								

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	U014	227	K	S01	Storage - Container
2	through				(Continued)
3	U039				
4	U041				
5	through				
6	U053				
7	U055				
8	through				
9	U064				
10	U066				
11	through				
12	U099				
13	U101				
14	through				
15	U103				
16	U105				
17	through				
18	U174				
19	U176				
20	through				
21	U194				
22	U196				
23	U197				
24	U200				
25	through				
26	U223				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U225	227	K	S01	Storage - Container
2	through				(Continued)
3	U228				
4	U232				
5	through				
6	U240				
7	U243				
8	through				
9	U249				
10	U328				
11	U353				
12	U359				
13	P001				
14	through				
15	P018				
16	P020				
17	through				
18	P024				
19	P026				
20	through				
21	P031				
22	P033				
23	P034				
24	P036				
25	through				
26	P051				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	P054	227	K	S01	Storage - Container
2	P056				(Continued)
3	through				
4	P060				
5	P062				
6	through				
7	P078				
8	P081				
9	P082				
10	P084				
11	P085				
12	P087				
13	through				
14	P089				
15	P092				
16	through				
17	P099				
18	P101				
19	through				
20	P117				
21	P118				
22	through				
23	P123				Included With Above
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The transuranic mixed waste and low-level mixed waste managed at the 224-T TRUSAF includes waste generated from various Hanford Facility operations and from other U.S. Department of Energy and U.S. Department of Defense facilities. The transuranic mixed waste and low-level mixed waste managed could include waste from nonspecific sources, characteristic waste, toxicity characteristic waste, listed waste, and state-only waste (extremely hazardous, dangerous, and polychlorinated biphenyl contaminated waste). The estimated annual quantity (Section IV.B.) of waste is based on gross estimates of waste that could be stored at the 224-T TRUSAF.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

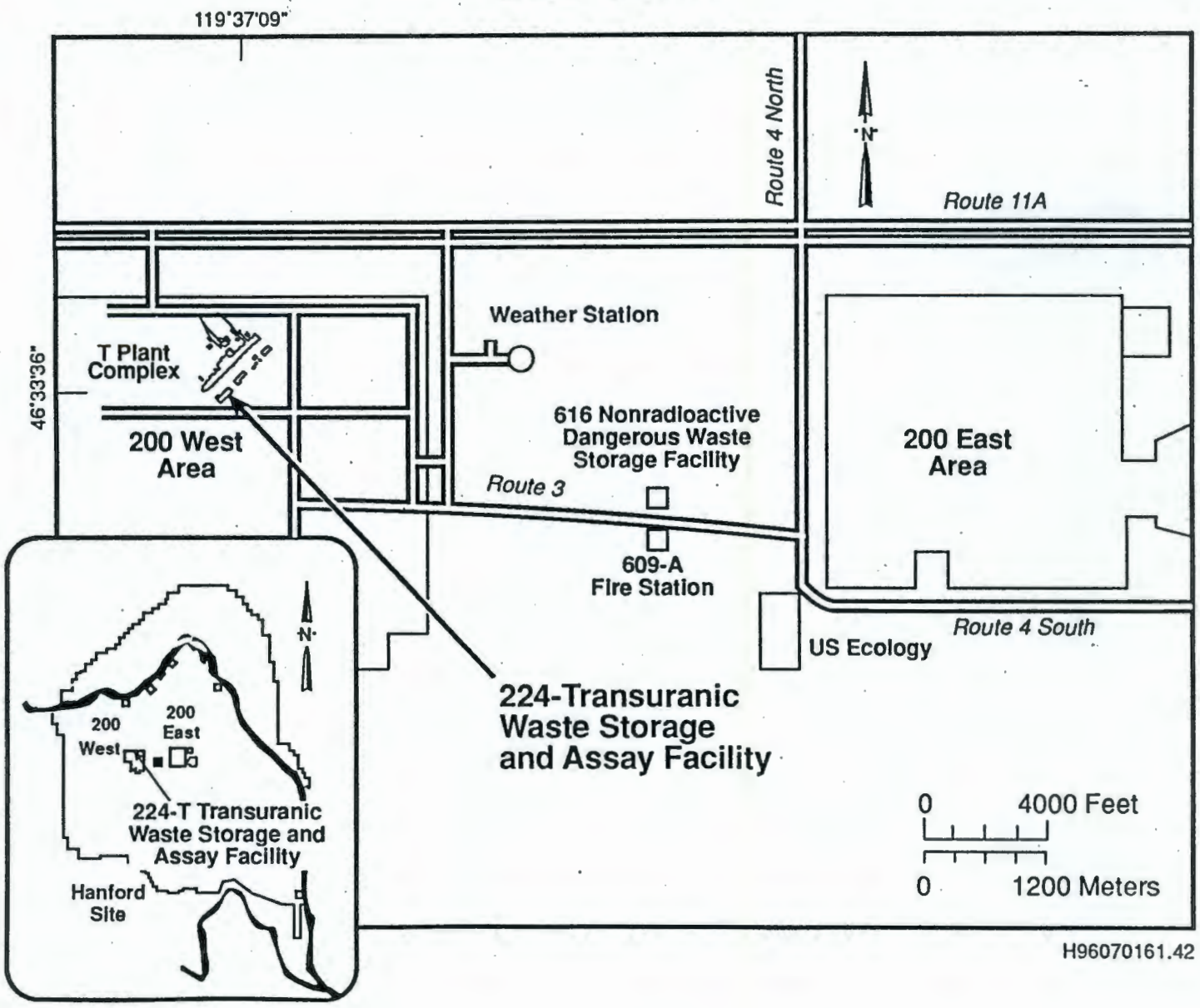
Date

9/23/96

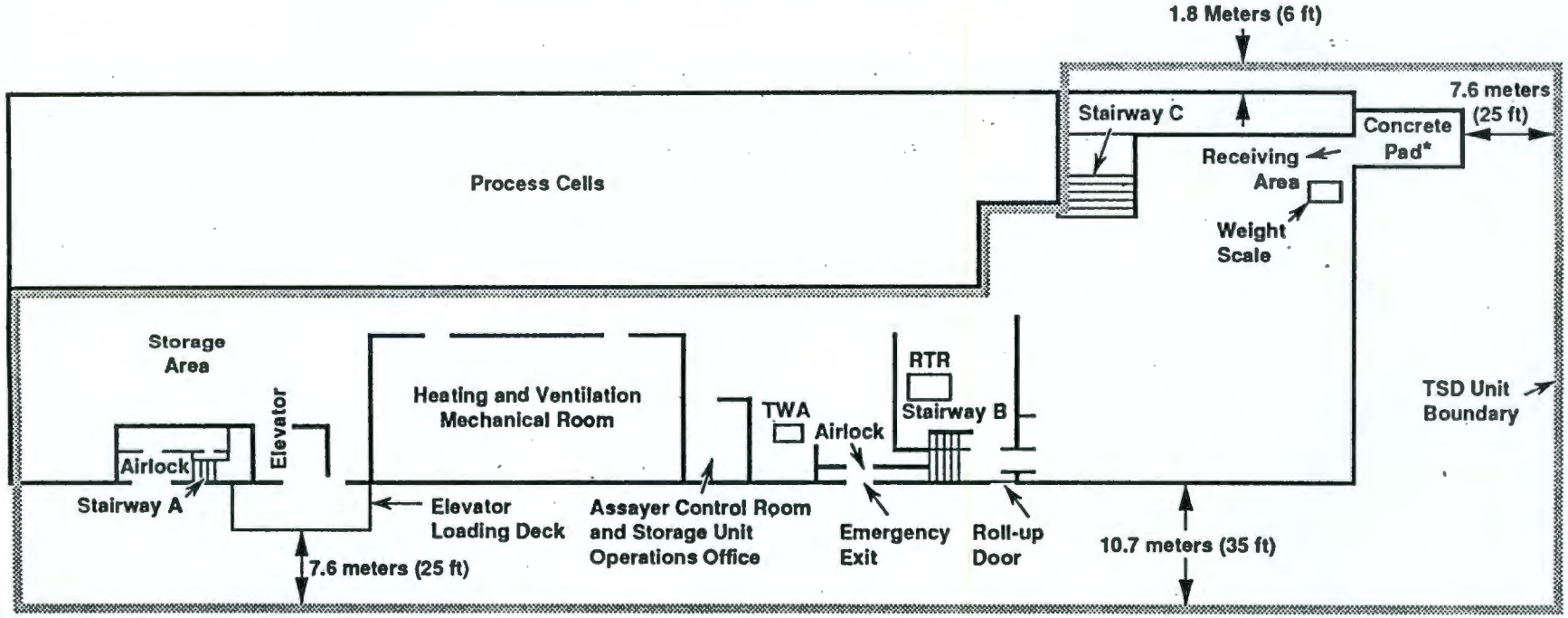
Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

Date

224-Transuranic Waste Storage and Assay Facility Site Plan



224-T TRUSAF - First Floor



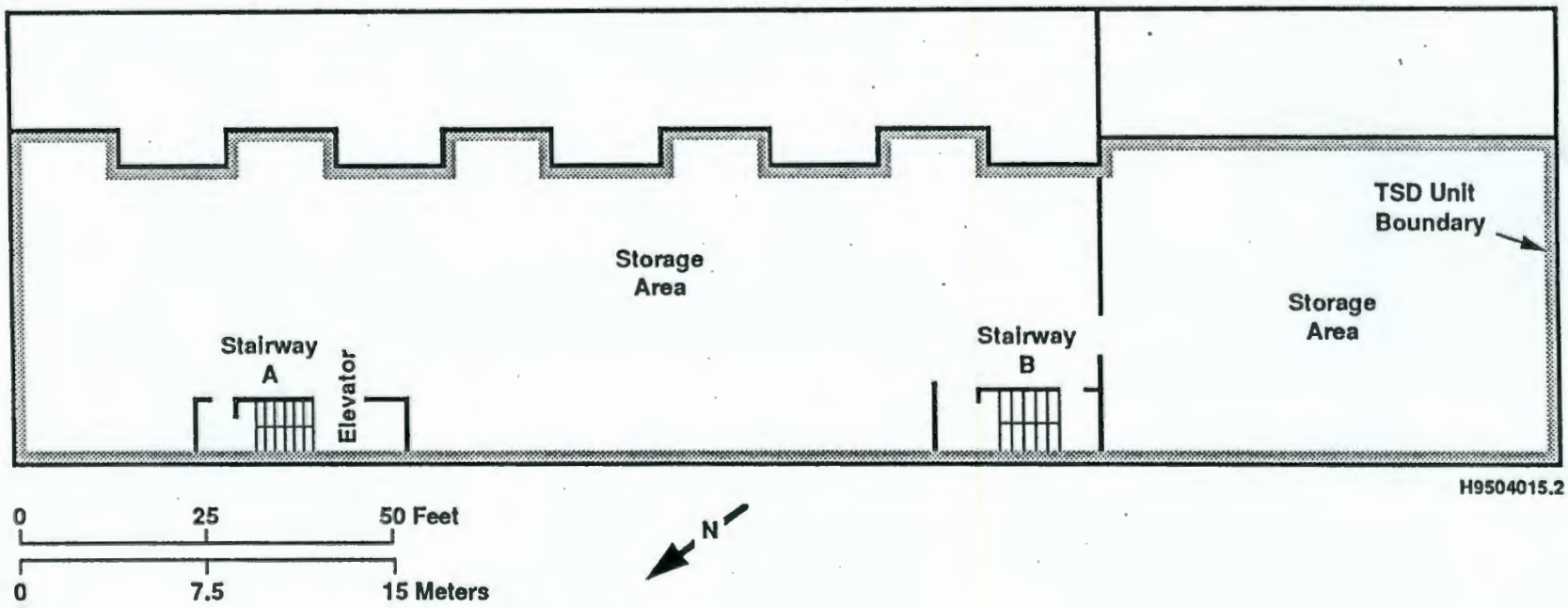
TWA = transuranic waste assayer.

RTR = real-time radiography x-ray system.

* Primary loading and unloading pad.

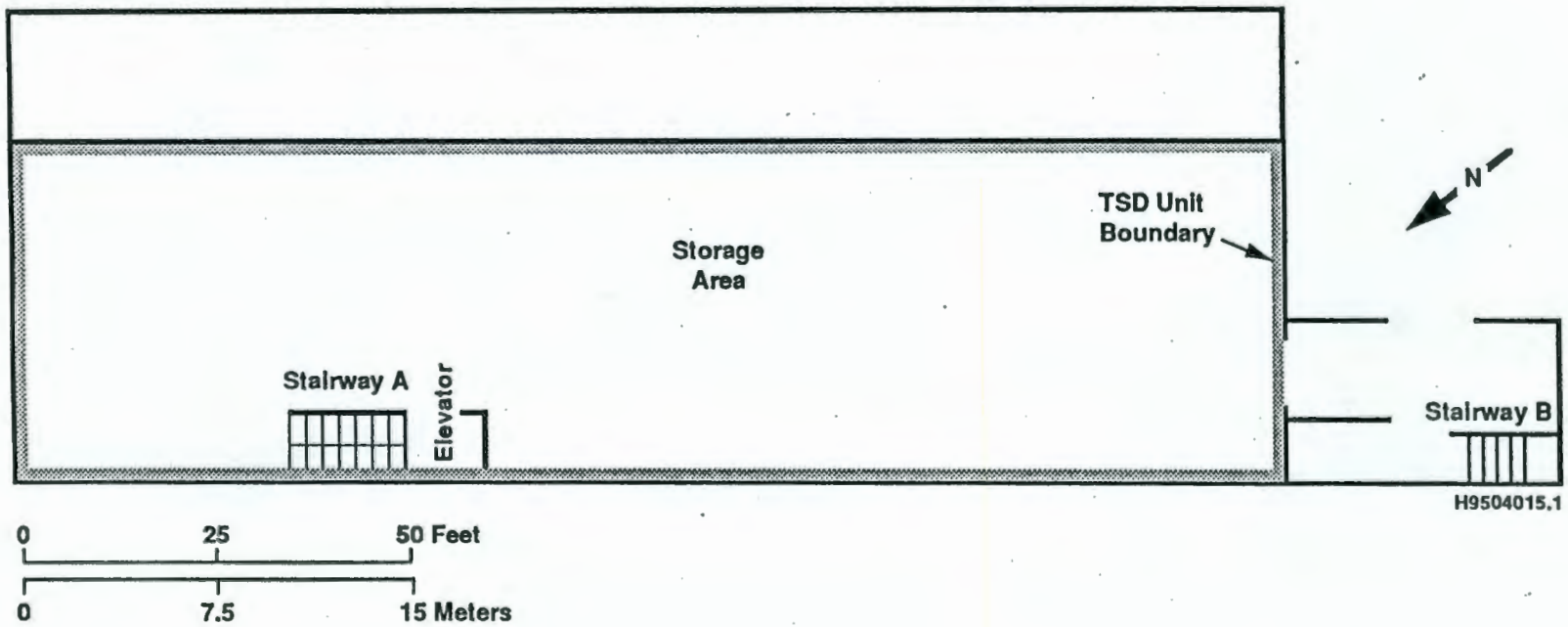
Note: To convert feet to meters, multiply by 0.3048.

224-T TRUSAF - Second Floor

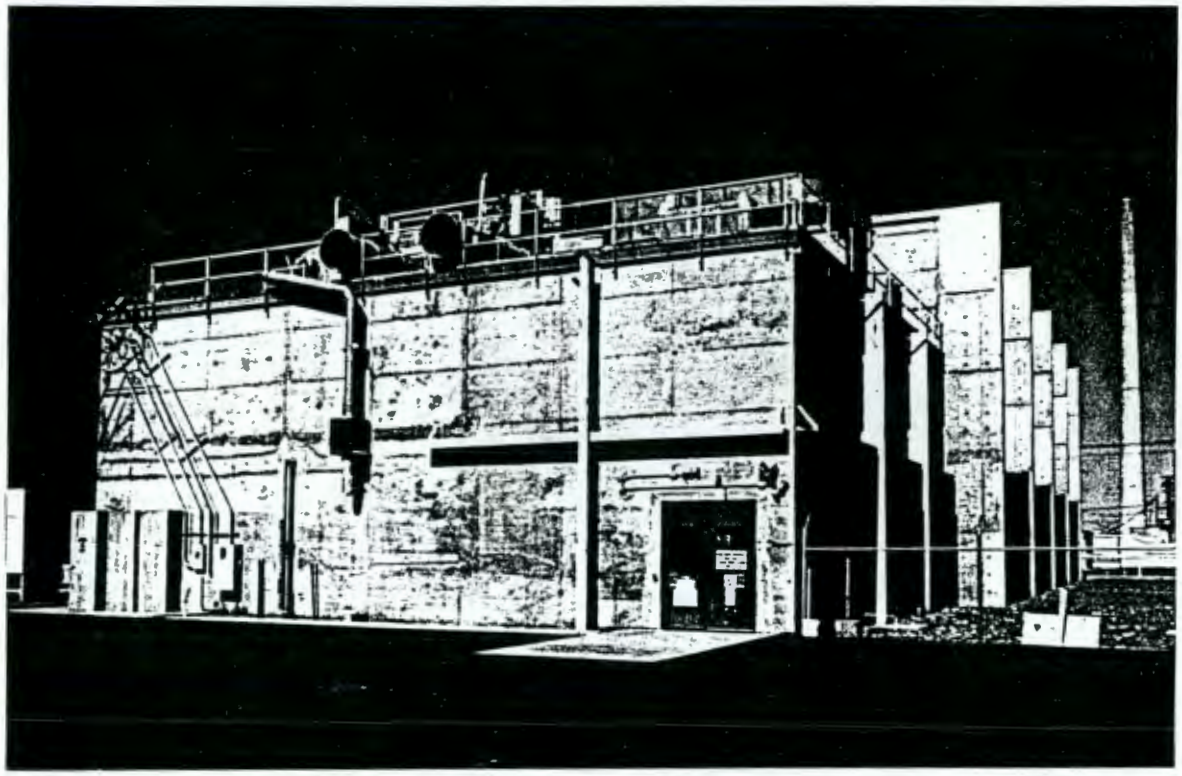


9713532.0639

224-T TRUSAF - Third Floor



224-T TRUSAF



46°33'36"
119°37'09"

95030798-31CN
(PHOTO TAKEN 1995)

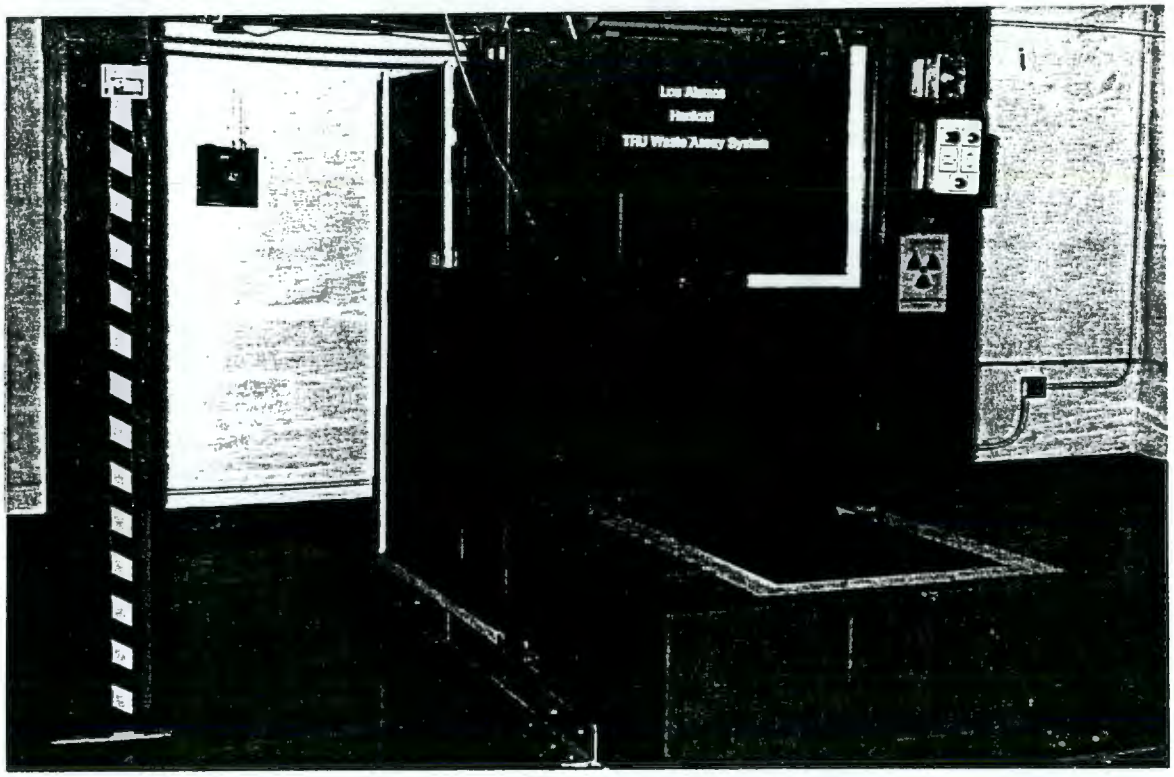
224-T TRUSAF

TYPICAL CONTAINERS

46°33'36"
119°37'09"

95030798-15CN
(PHOTO TAKEN 1995)

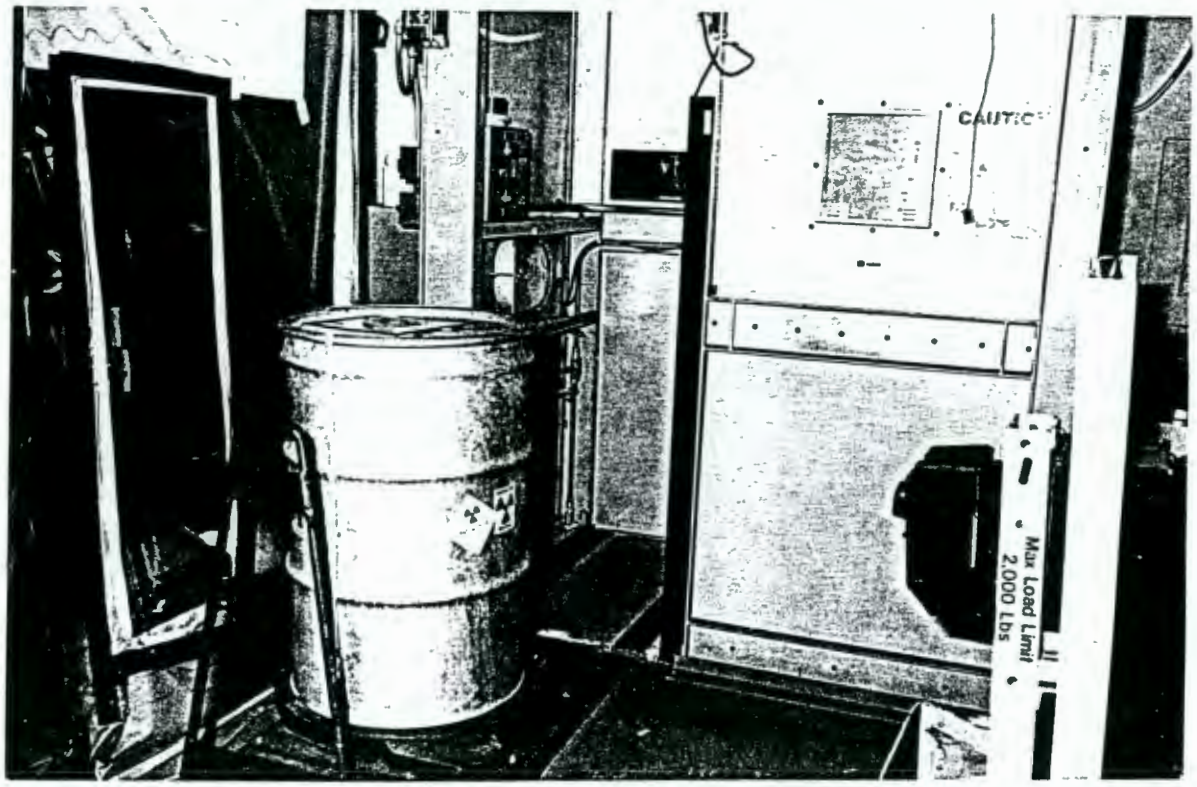
224-T TRUSAF
TRANSURANIC WASTE ASSAYER



46°33'36"
119°37'09"

95030798-1CN
(PHOTO TAKEN 1995)

224-T TRUSAF REAL-TIME RADIOGRAPHY X-RAY SYSTEM



46°33'36"
119°37'09"

95030798-4CN
(PHOTO TAKEN 1995)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 8 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

*FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	22,710,000	L		7				
2	T 0 4	45,420	V		8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

S01, T04

The Central Waste Complex (CWC) began waste management operations in August of 1988. This unit consists of multiple storage units for mixed waste and inspection, verification, sampling, and repackaging of mixed waste. Mixed waste that could be managed includes low-level waste (LLW) and transuranic waste (TRU). Mixed waste could be stored temporarily on the Mixed Waste Storage Pad while awaiting transfer until storage capacity becomes available in the Mixed Waste Storage units. The mixed waste accepted for storage is managed in Mixed Waste Storage units comprised of compliant storage structures. Waste that has less than a 38°C (100°F) flash point (ignitable) is stored in the Low-Flash-Point Storage units. Alkali metals are stored in Alkali Metal Storage Modules. The storage design capacity for all the mixed waste storage units at the CWC is 22,710,000 liters (5,999,300 gallons). Treatment includes the absorption and solidification of free liquids, and the neutralization of corrosive materials. The maximum treatment design capacity at the CWC is 45,420 liters (11,999 gallons) per day.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)			D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K	0	6	4	900	P	T03	D80		
X-2	D	0	0	2	400	P	T03	D80		
X-3	D	0	0	1	100	P	T03	D80		
X-4	D	0	0	2			T03	D80		included with above

 CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	D001	4,600	K	S01 T04	Storage-Container/Treatment-Other
2	D002	1,000			
3	D003	↓			
4	D004	300			
5	through				
6	D007	↓			
7	D008	45,400			
8	D009	300			
9	through				
10	D043				
11	WSC2	↓			
12	WT01	363,200			
13	WT02	36,000			
14	WP01	3,700			
15	through				
16	WP03	↓			
17	W001	10,000			
18	F001	3,700			
19	through				
20	F005				
21	F020	↓			
22	F021	300			
23	through				
24	F023	↓	↓	↓ ↓	↓
25					
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	F026	300	K	S01 T04	Storage-Container/Treatment-Other
2	through				
3	F028				
4	F039				
5	U001				
6	through				
7	U012				
8	U014				
9	through				
10	U039				
11	U041				
12	through				
13	U053				
14	U055				
15	through				
16	U064				
17	U066				
18	through				
19	U099				
20	U101				
21	through				
22	U103				
23	U105				
24	through				
25	U194				
26	U196				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	U197	300	K	S01	T04			Storage-Container/Treatment-Other
2	U200							
3	through							
4	U223							
5	U225							
6	through							
7	U228							
8	U232							
9	through							
10	U240							
11	U243							
12	through							
13	U249							
14	U328							
15	U353							
16	U359							
17	P001							
18	through							
19	P018							
20	P020							
21	through							
22	P024							
23	P026							
24	through							
25	P031							
26								

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	P033	300	K	S01 T04	Storage-Container/Treatment-Other
2	P034				
3	P036				
4	through				
5	P051				
6	P054				
7	P056				
8	through				
9	P060				
10	P062				
11	through				
12	P078				
13	P081				
14	P082				
15	P084				
16	P085				
17	P087				
18	through				
19	P089				
20	P092				
21	through				
22	P099				
23	P101				
24	through				
25	P116				
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	P118	300	K	S01	T04			Storage-Container/Treatment-Other
2	through		↓	↓	↓			↓
3	P123		↓	↓	↓			Included With Above
4								
5								
6								
7								
8								
9								
10								
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24								
25								
26								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The mixed waste managed at the CWC includes mixed waste generated from various operations on and off the Hanford Site. Managed waste consists of listed waste, waste from nonspecific sources, characteristic waste, discarded chemical products, state-only waste (extremely hazardous and dangerous waste), and multi-source leachate.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner

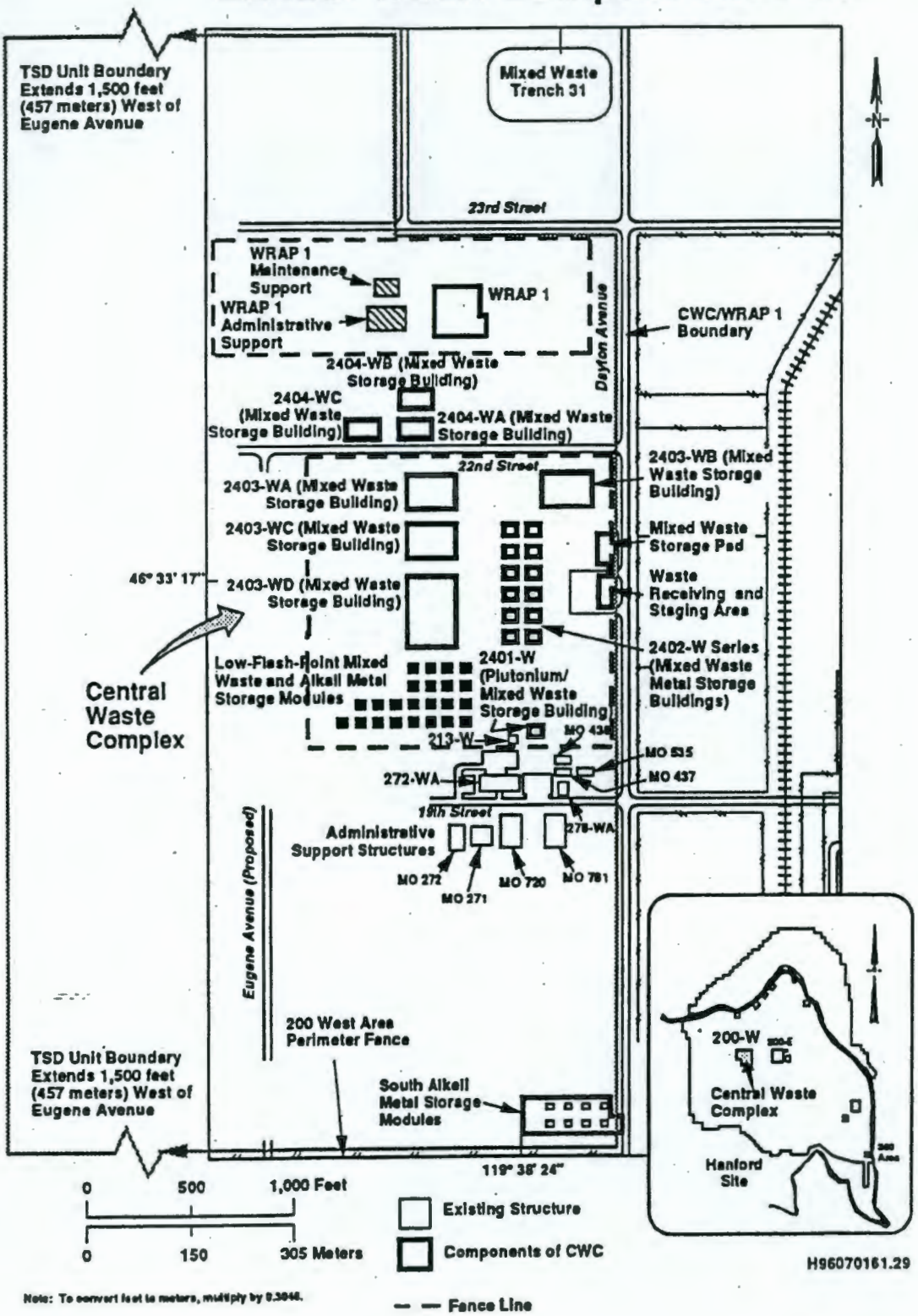
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

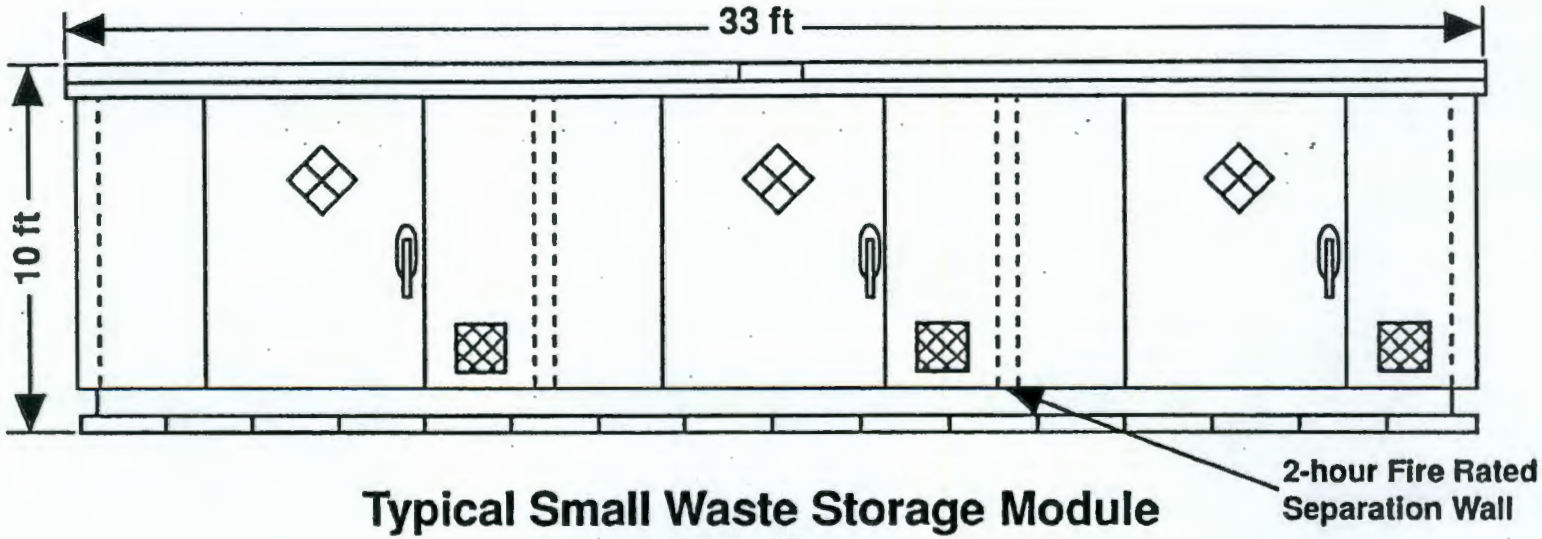
Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/13/96
Date

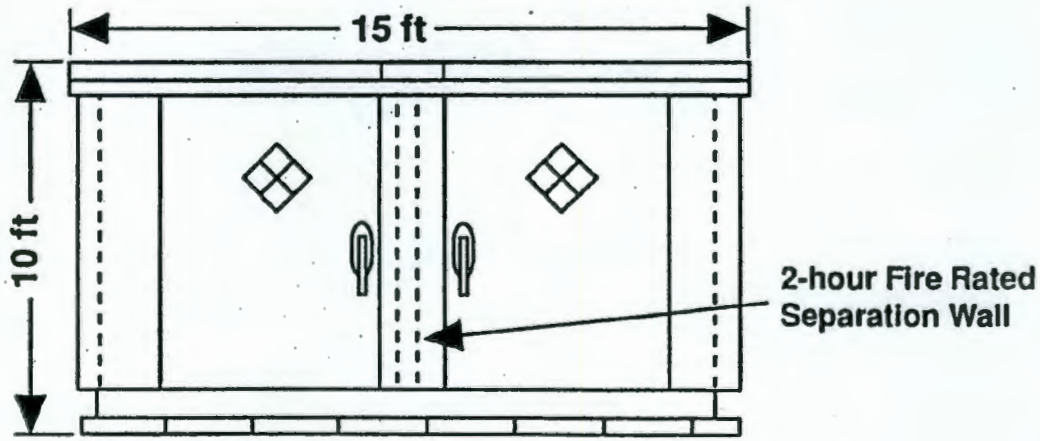
Central Waste Complex Site Plan



Typical Large Waste Storage Module
Front View



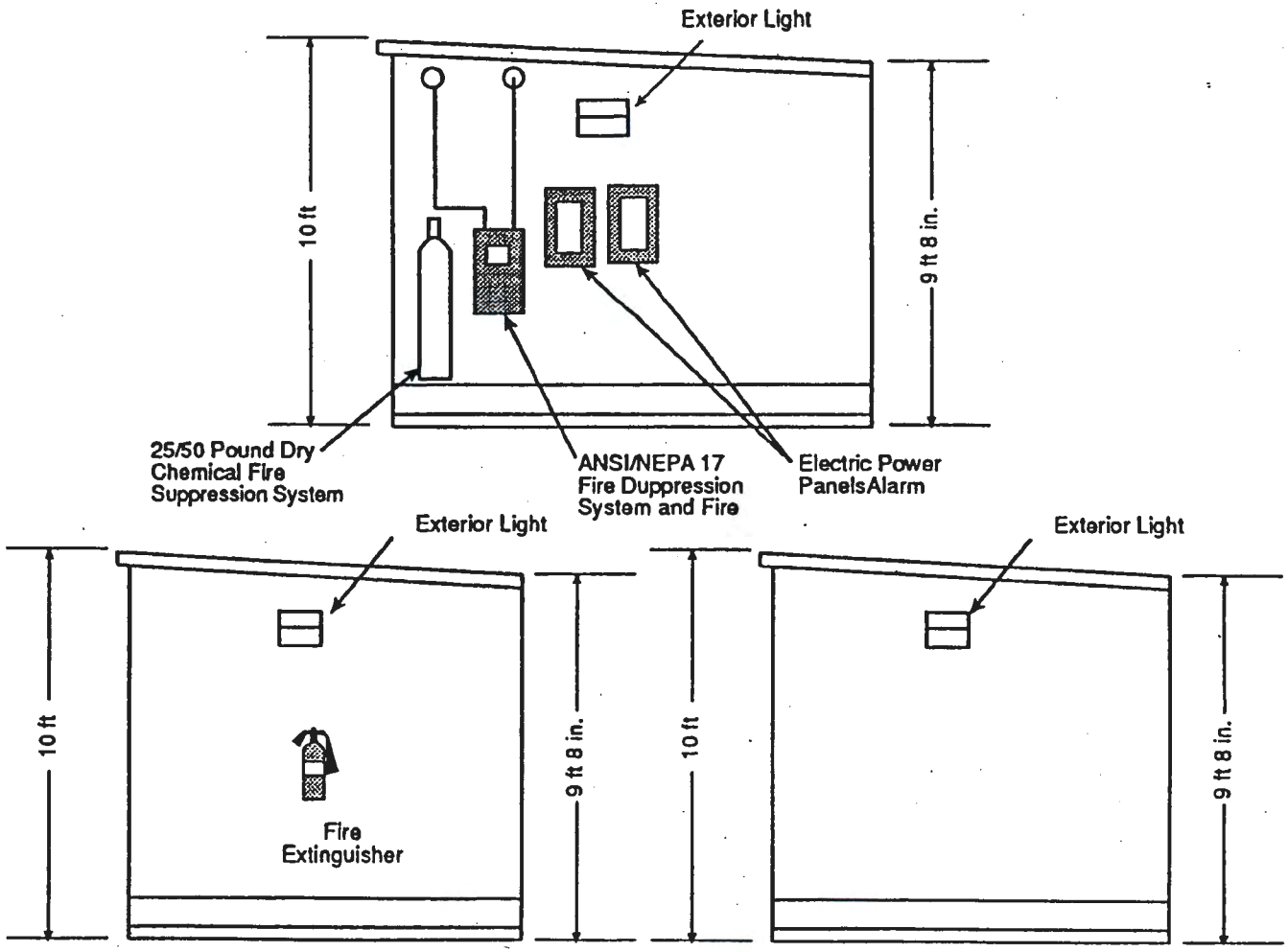
Typical Small Waste Storage Module
Front View



Note: To convert feet to meters, multiply by 0.3048.

39212049.3

Low-Flash Point Mixed Waste and Alkali Metal Waste Storage Module Side View

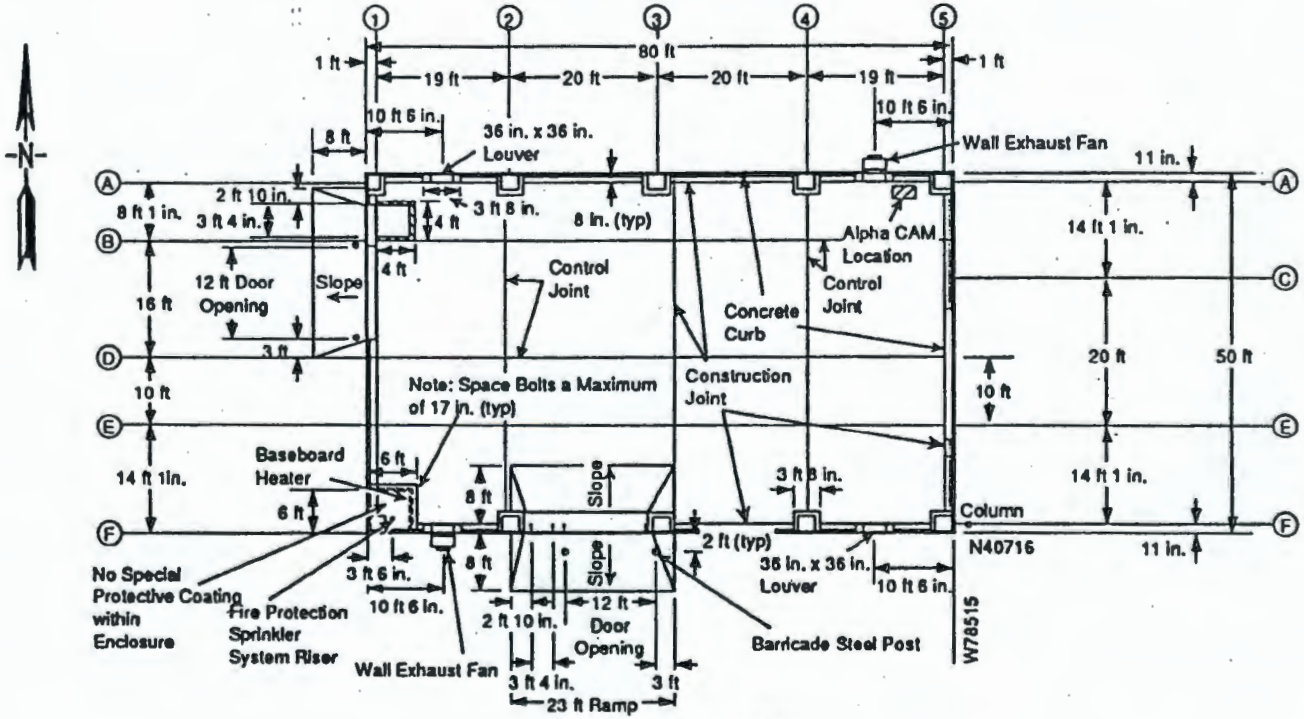


Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.
To convert to pounds to kilograms, multiply by 0.45359239.

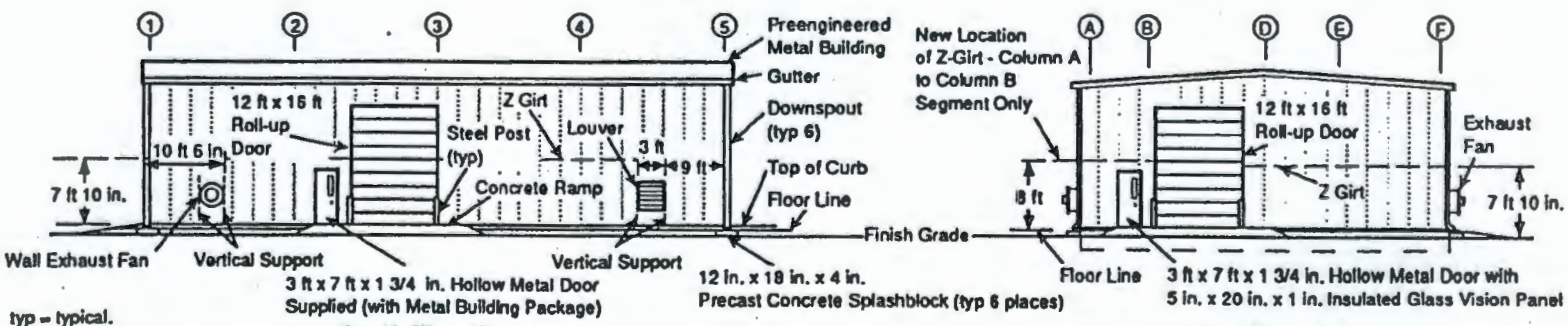
H96070161.28

Plutonium/Polychlorinated Biphenyl Mixed Waste Storage Building (2401-W)

Plan and Elevations



Foundation/Floor Plan



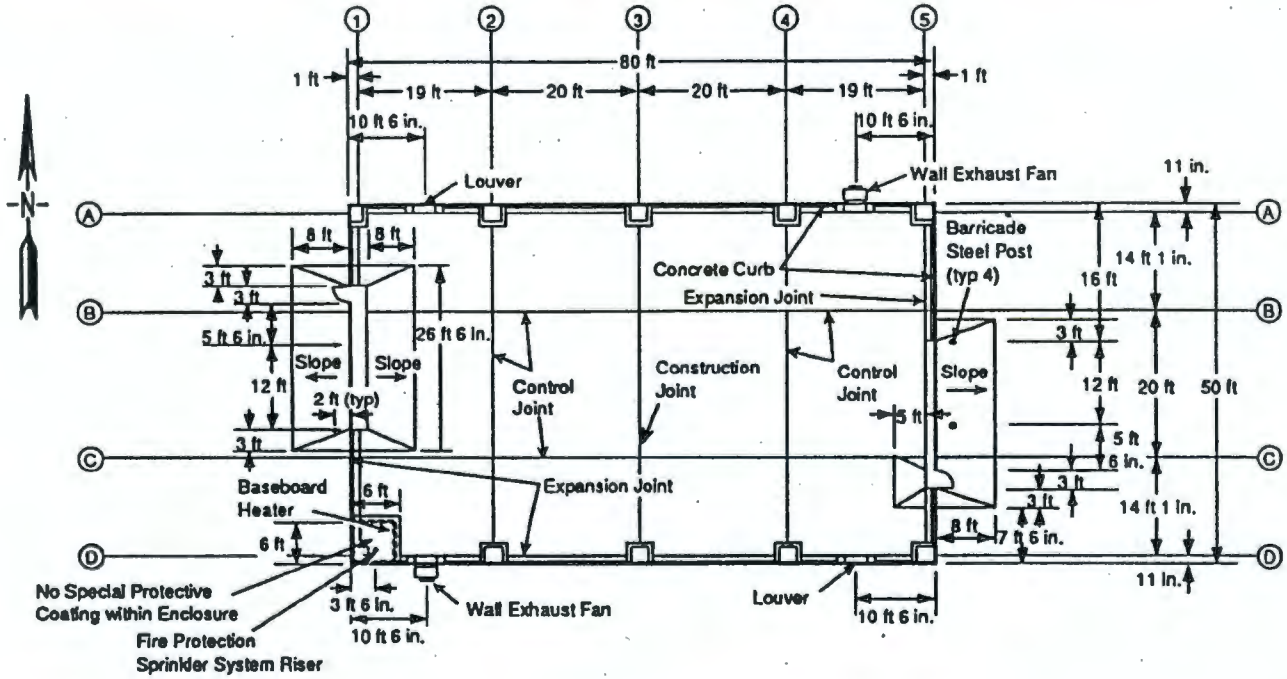
South Elevation

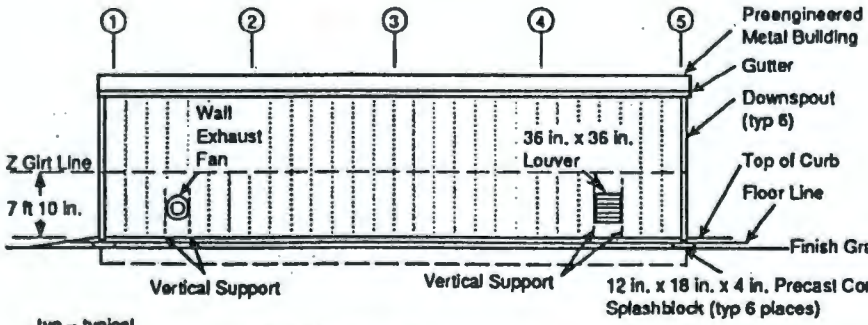
West Elevation

Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

39304068.6

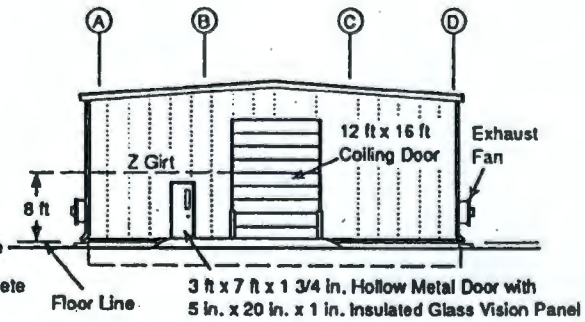
Typical Radioactive and/or Mixed Waste Storage Buildings (2402-W and 2402-WB through 2402-WL)
Plan and Elevations





typ = typical.

South Elevation



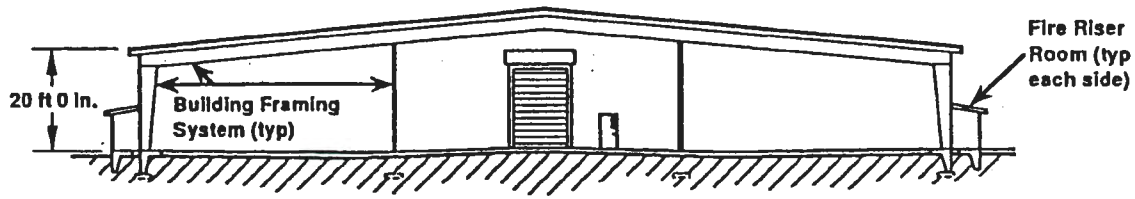
West Elevation

Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

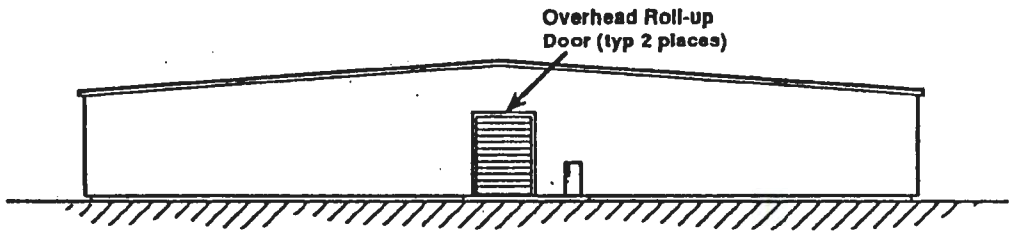
39304068.7

Typical Radioactive and/or Mixed Waste Storage Building (2403-WB and 2403-WC)

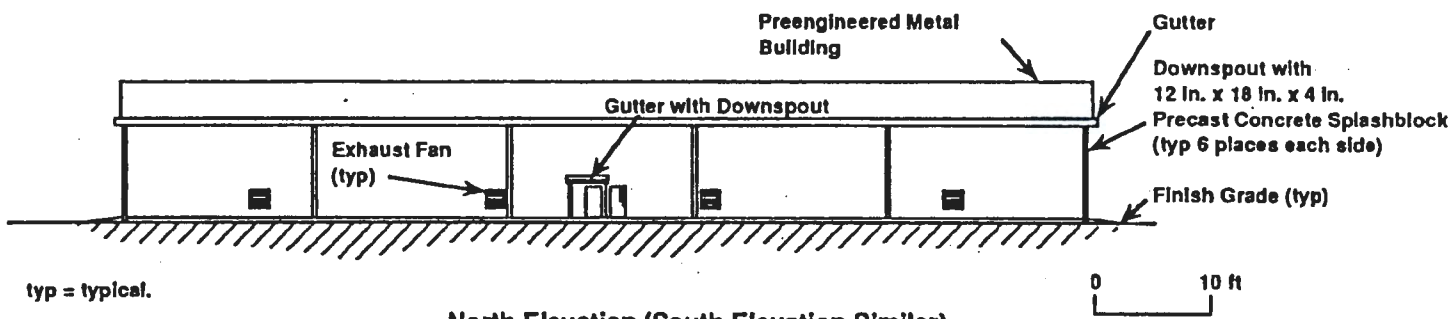
Elevations



Section



East Elevation (West Elevation Similar)



typ = typical.

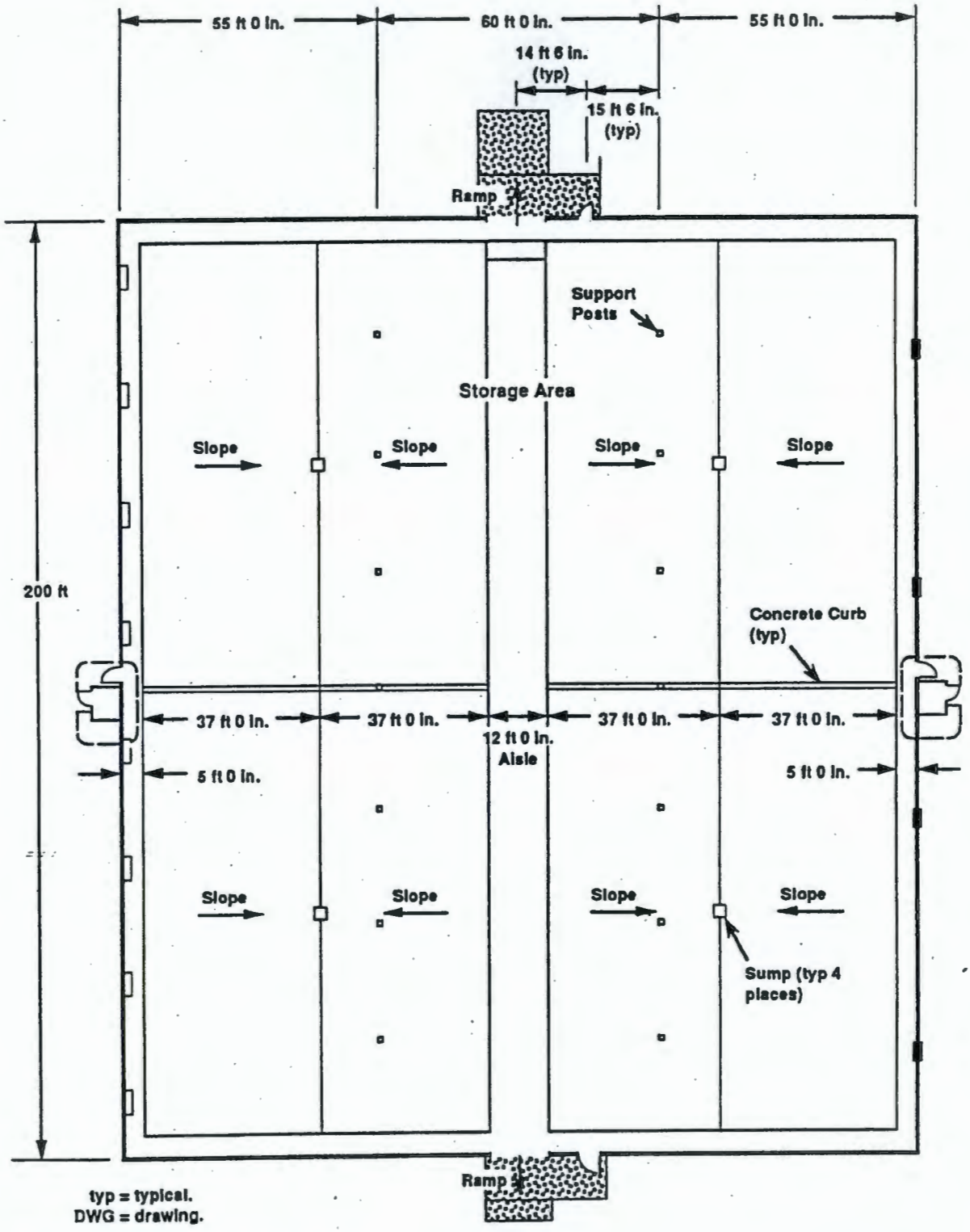
North Elevation (South Elevation Similar)

Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

39304068.8

9713532.0658

Typical Radioactive and/or Mixed Waste Storage Building (2403-WA, WB, and WC) Plan

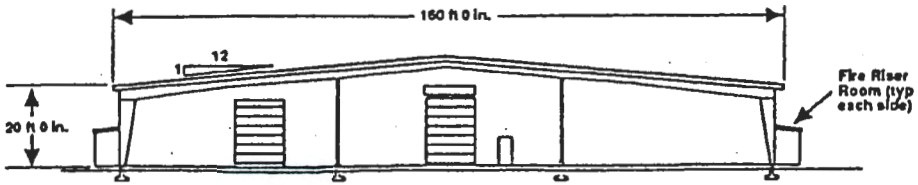


typ = typical.
DWG = drawing.

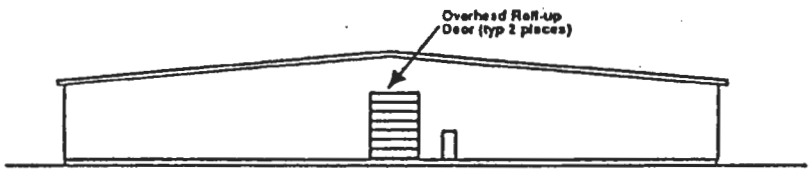
Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

39304068.9

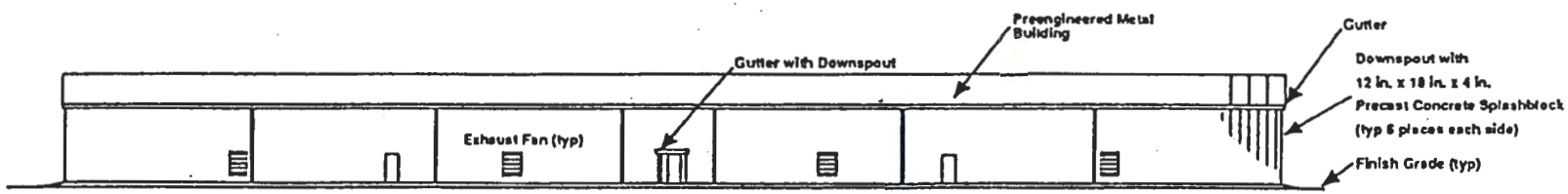
Radioactive and/or Mixed Waste Storage Building (2403-WD)



Section



North Elevation



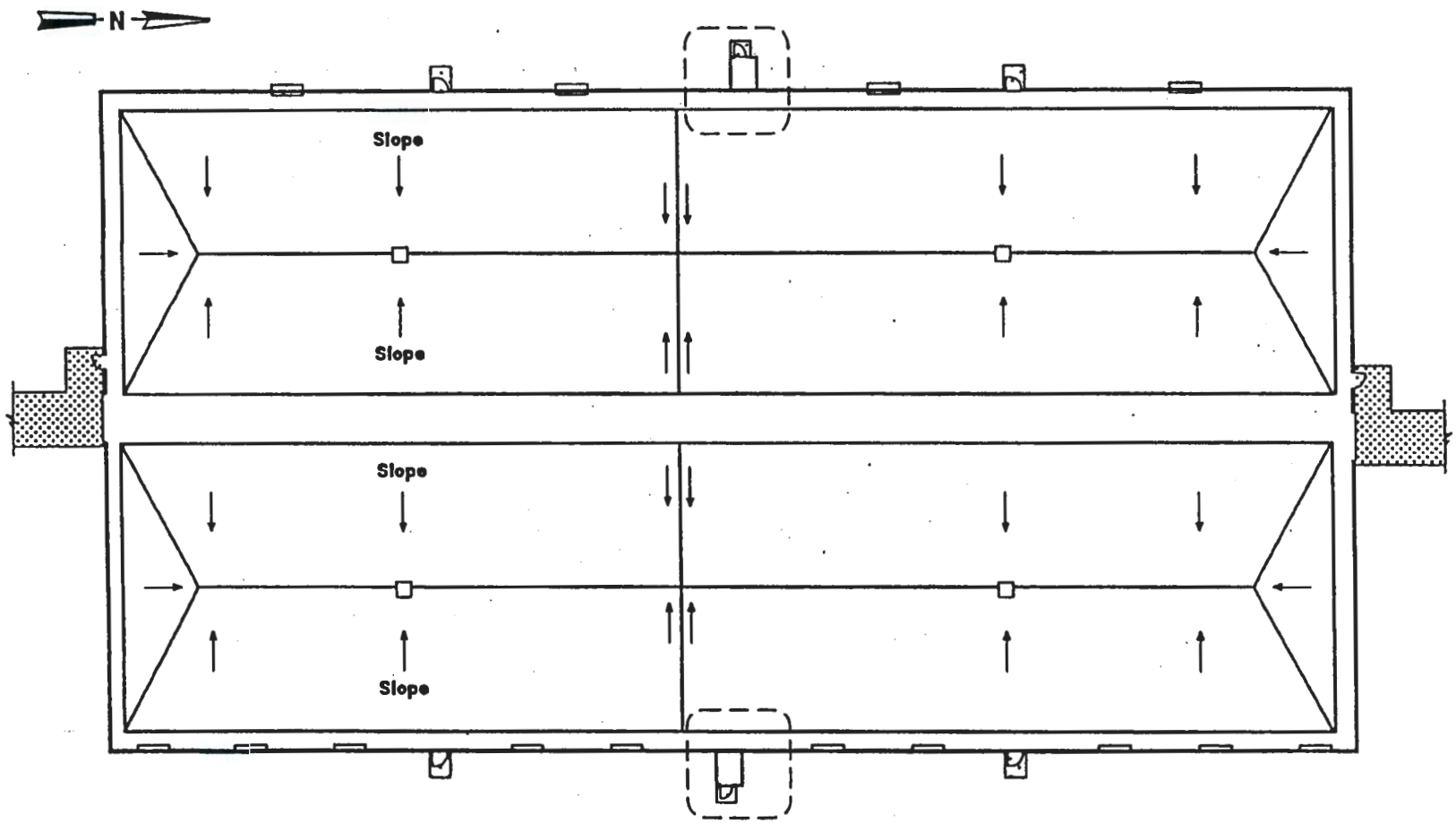
West Elevation

Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

typ = typical.

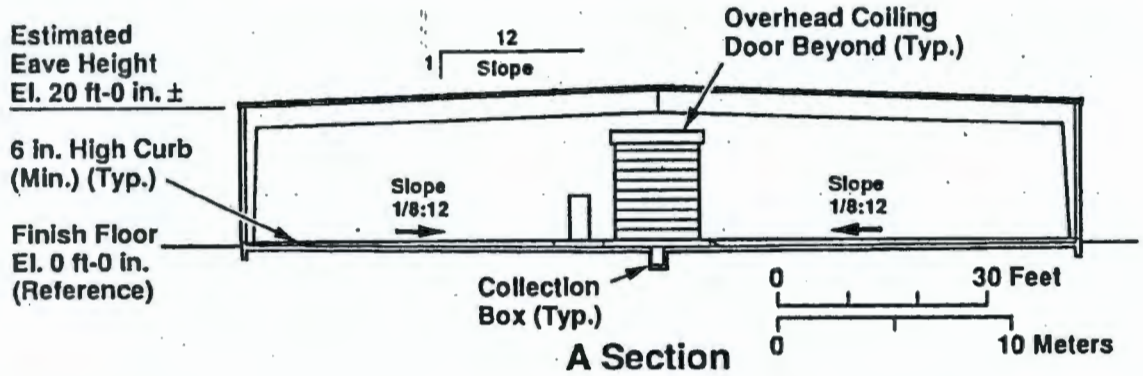
39304068.11

Radioactive and/or Mixed Waste Storage Building (2403-WD)

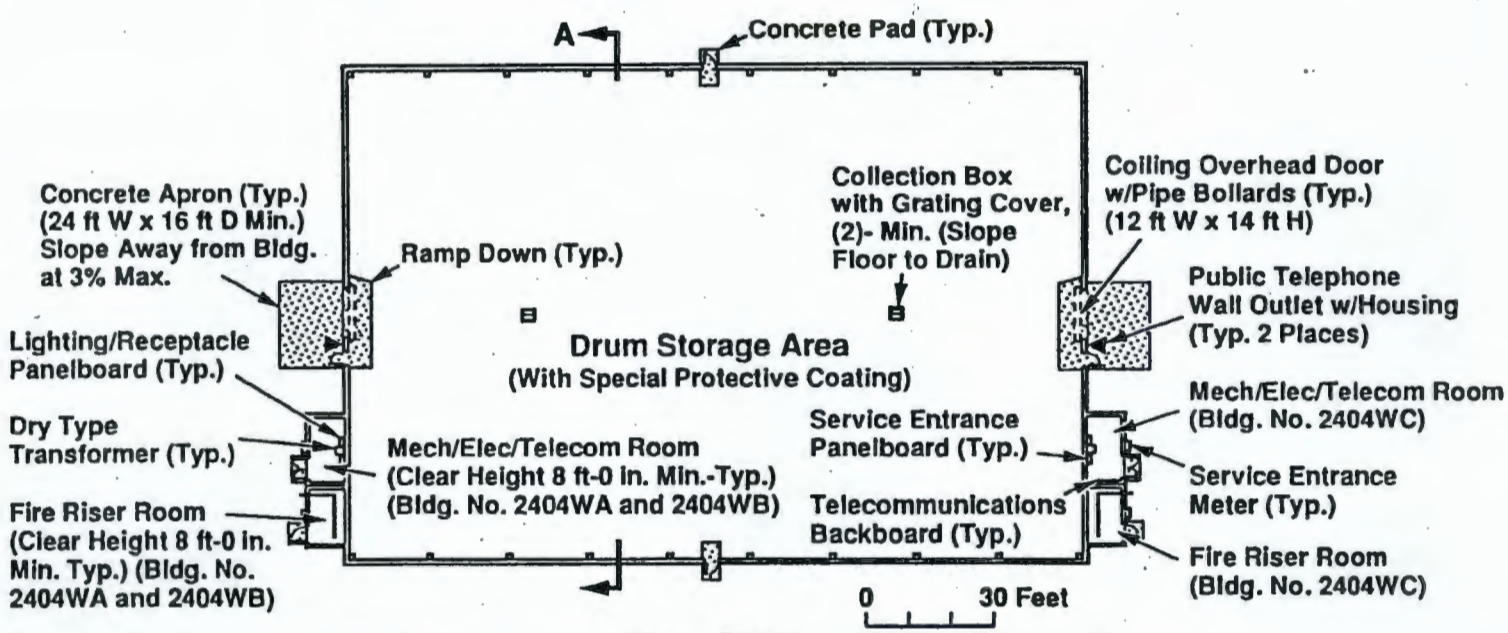


39304068.10

Typical Mixed Waste Storage Building (2404-WA, WB and WC)



A Section

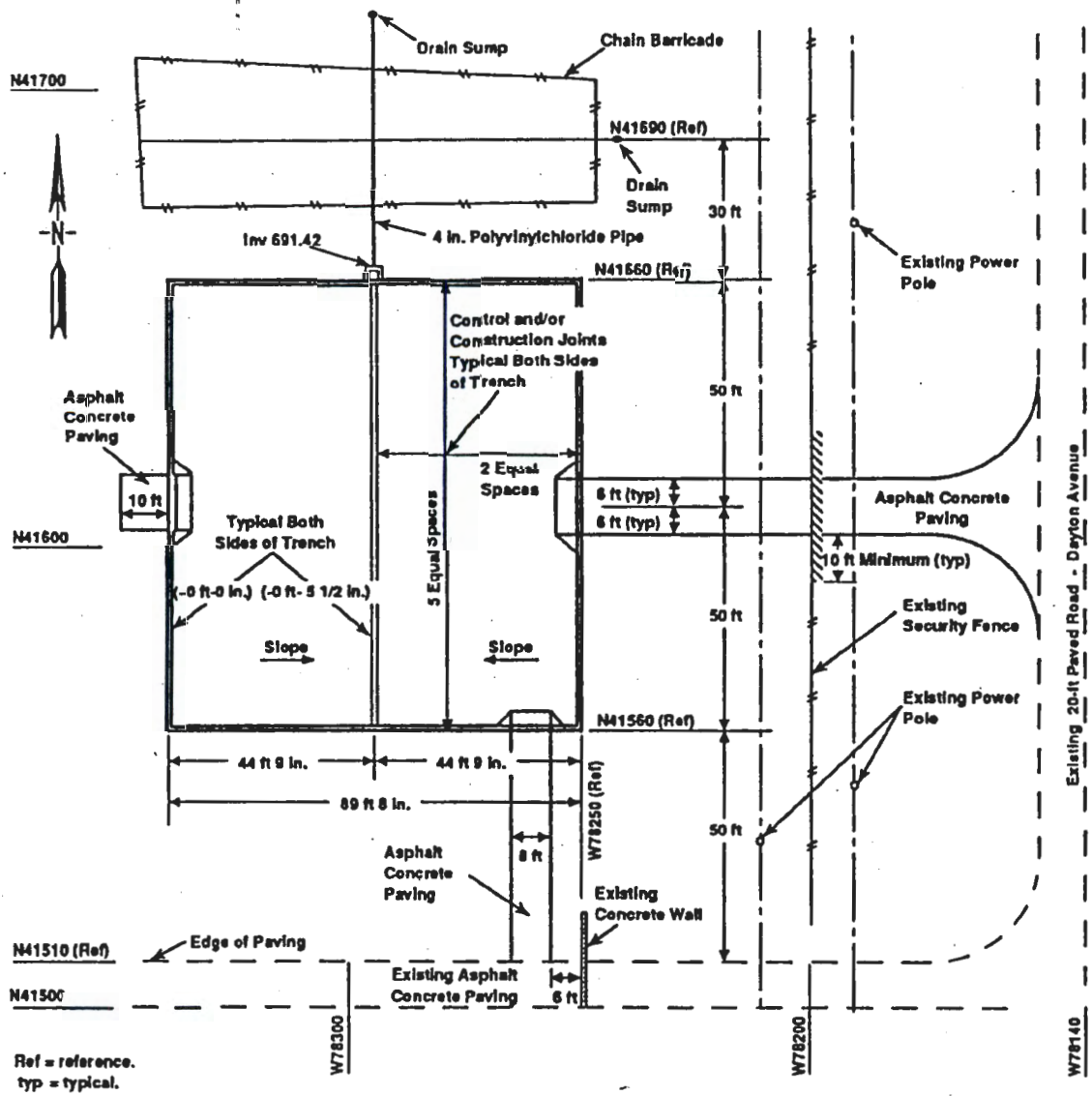


Floor Plan

Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

H96080291.1

Mixed Waste Storage Pad
Civil Plan

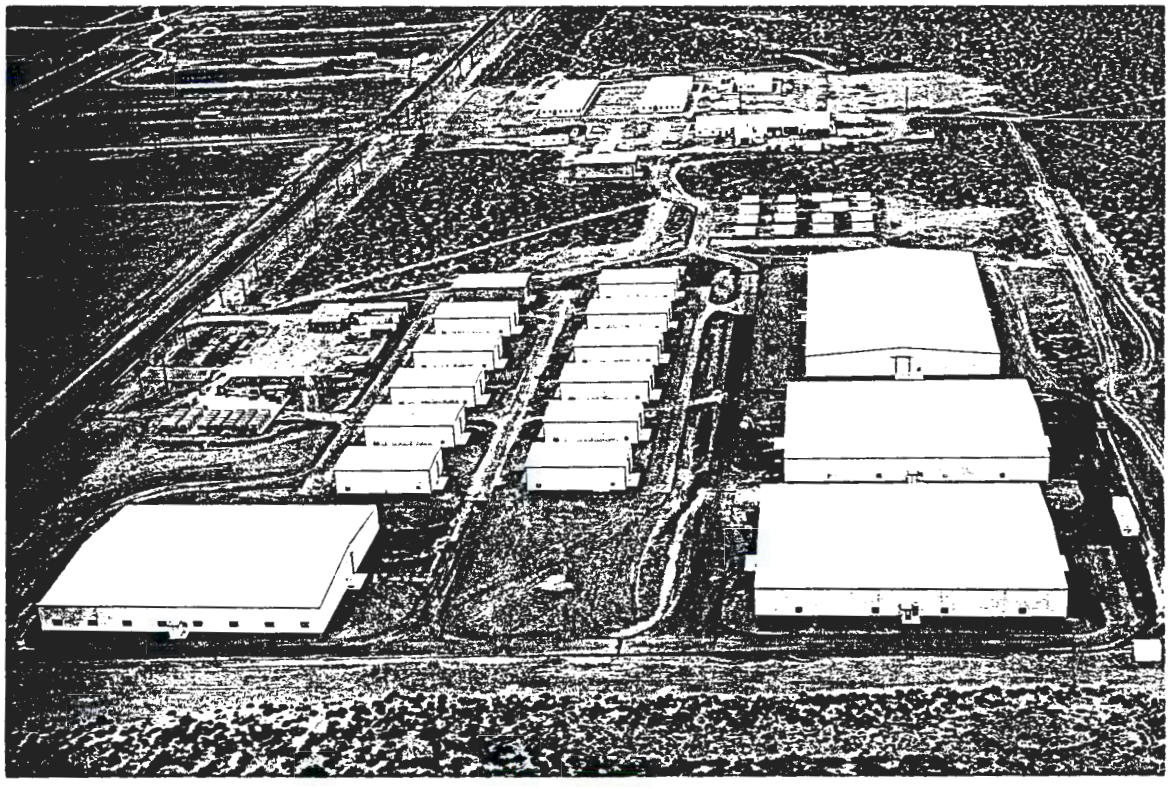


Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

39304068.5

9713512.0663

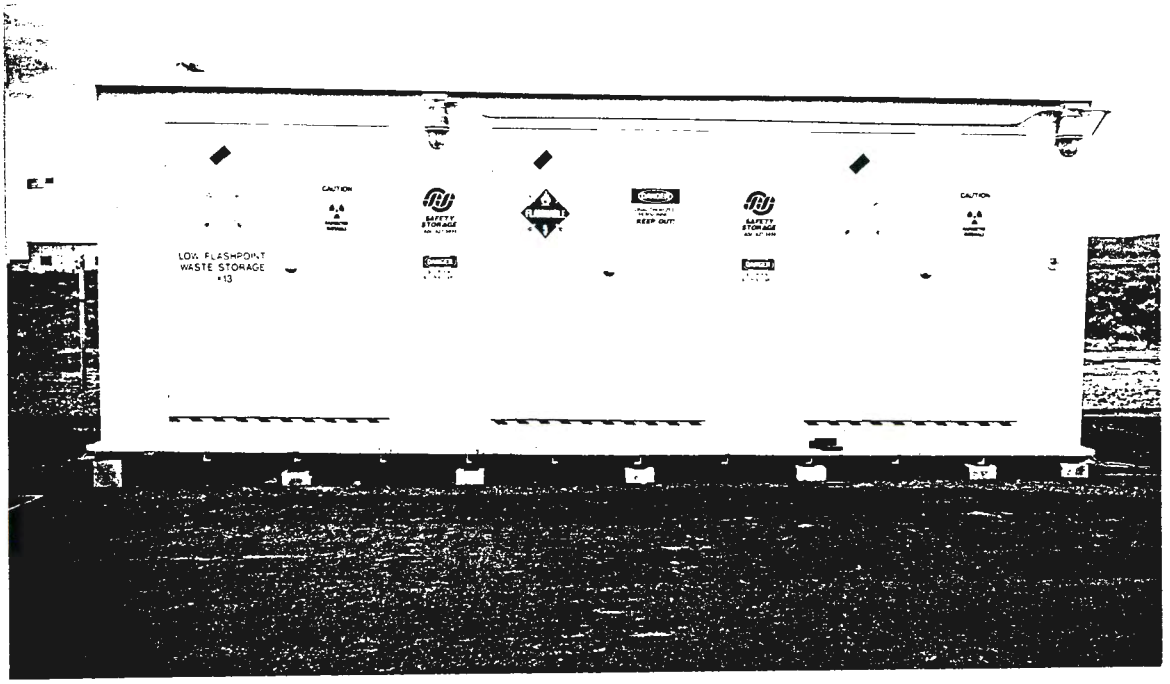
CENTRAL WASTE COMPLEX AERIAL VIEW



46°33'17"
119°38'24"

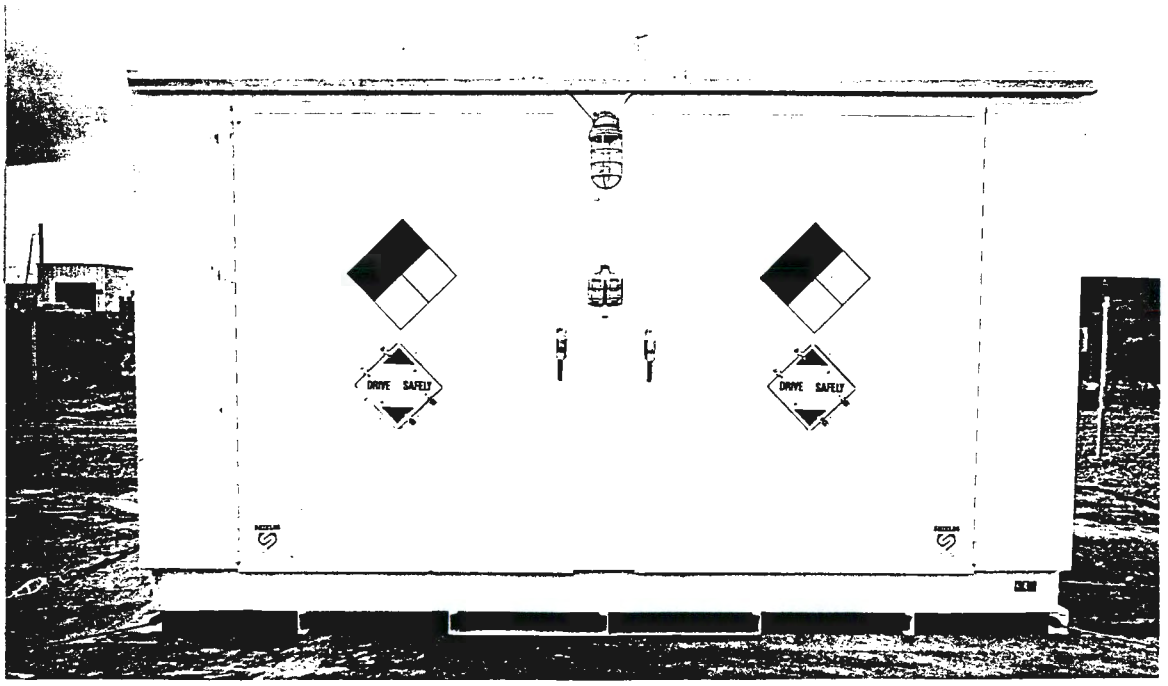
93030994-194CN
(PHOTO TAKEN 1993)

CENTRAL WASTE COMPLEX LOW-FLASH-POINT METAL MIXED WASTE STORAGE MODULES AND/OR MIXED ALKALI METAL STORAGE MODULES



TYPICAL (LARGE)
46°33'17"
119°38'24"

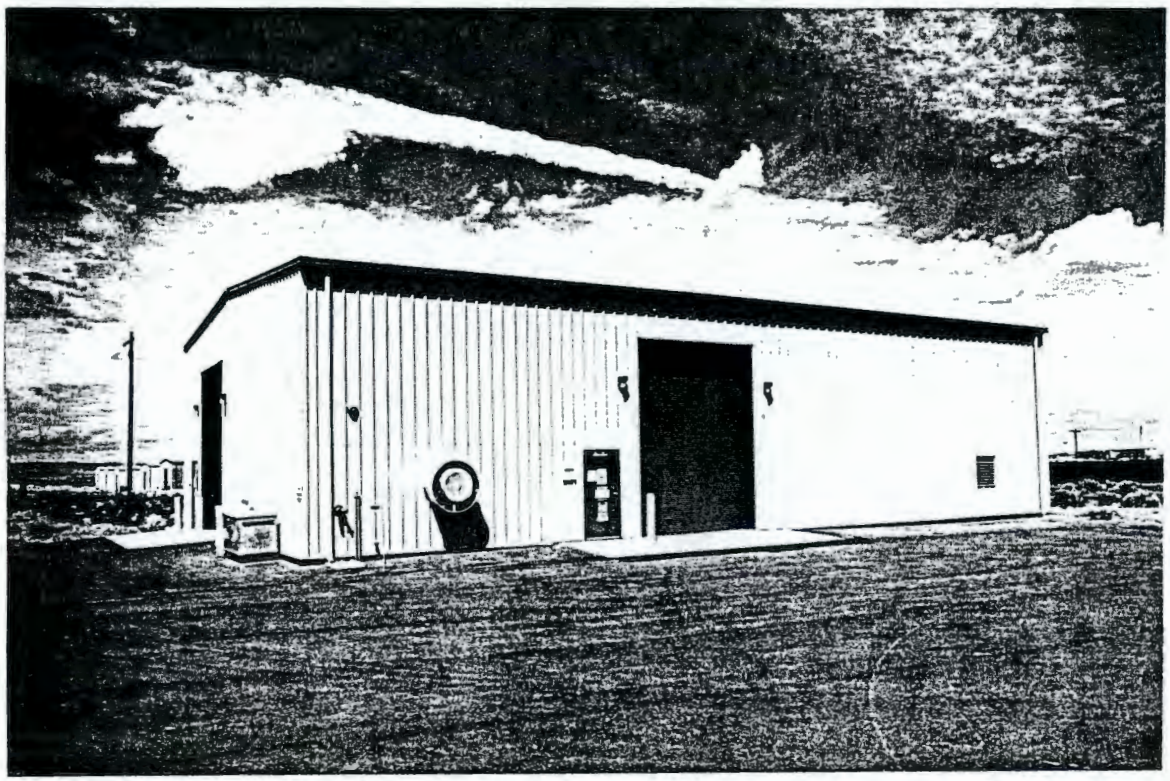
93040010-9CN
(PHOTO TAKEN 1993)



TYPICAL (SMALL)
46°33'17"
119°38'24"

93040010-11CN
(PHOTO TAKEN 1993)

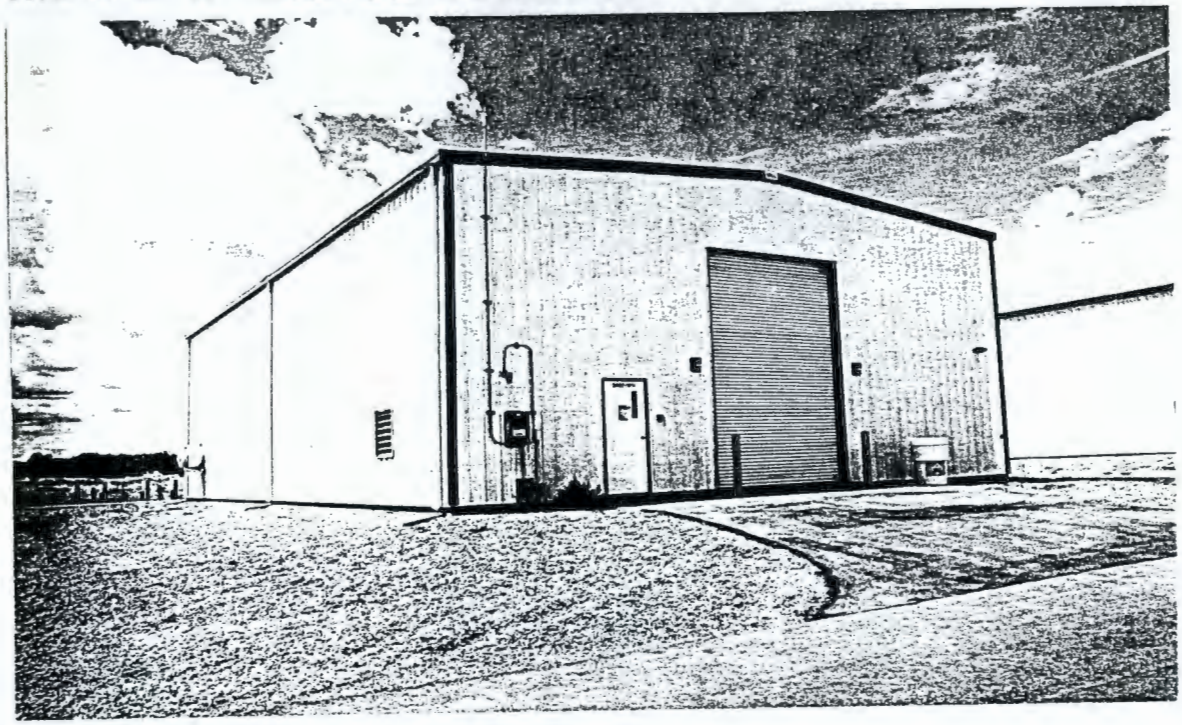
CENTRAL WASTE COMPLEX PLUTONIUM/POLYCHLORINATED BIPHENYL MIXED WASTE STORAGE BUILDING



TYPICAL (2401-W)
46°33'17"
119°38'24"

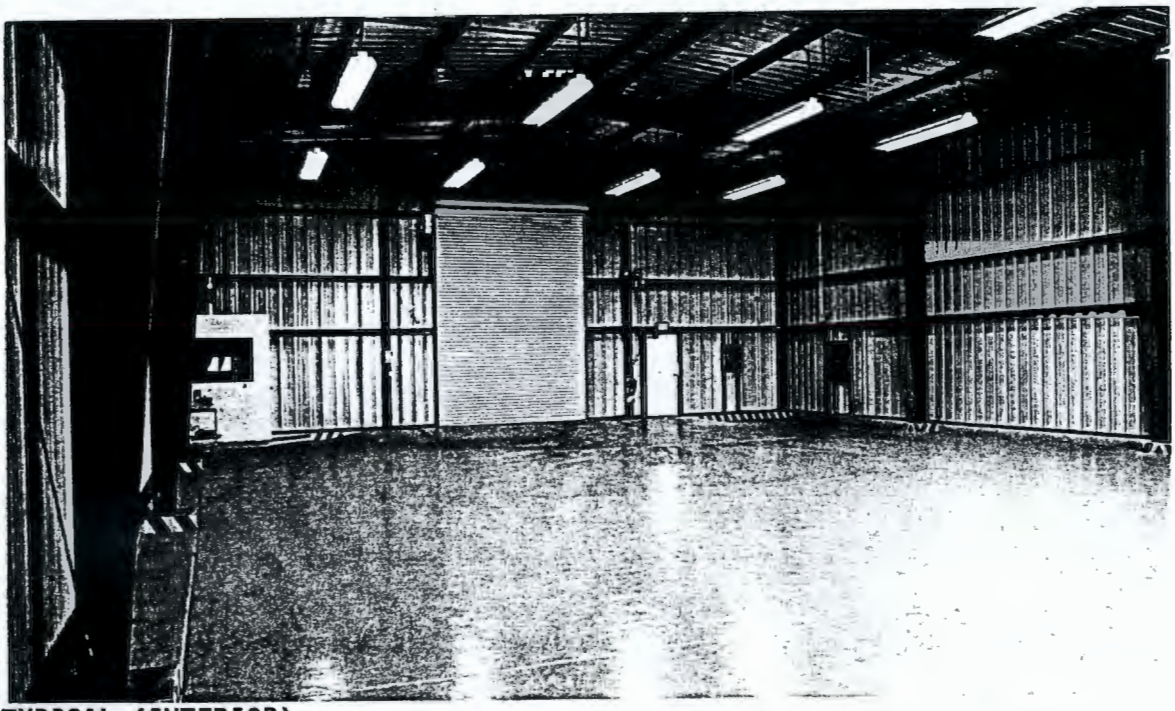
90061110-44CN
(PHOTO TAKEN 1990)

CENTRAL WASTE COMPLEX RADIOACTIVE AND/OR MIXED WASTE METAL STORAGE BUILDING



TYPICAL (2402-W, 2402-WB THROUGH 2402-WL)
46°33'17"
119°38'24"

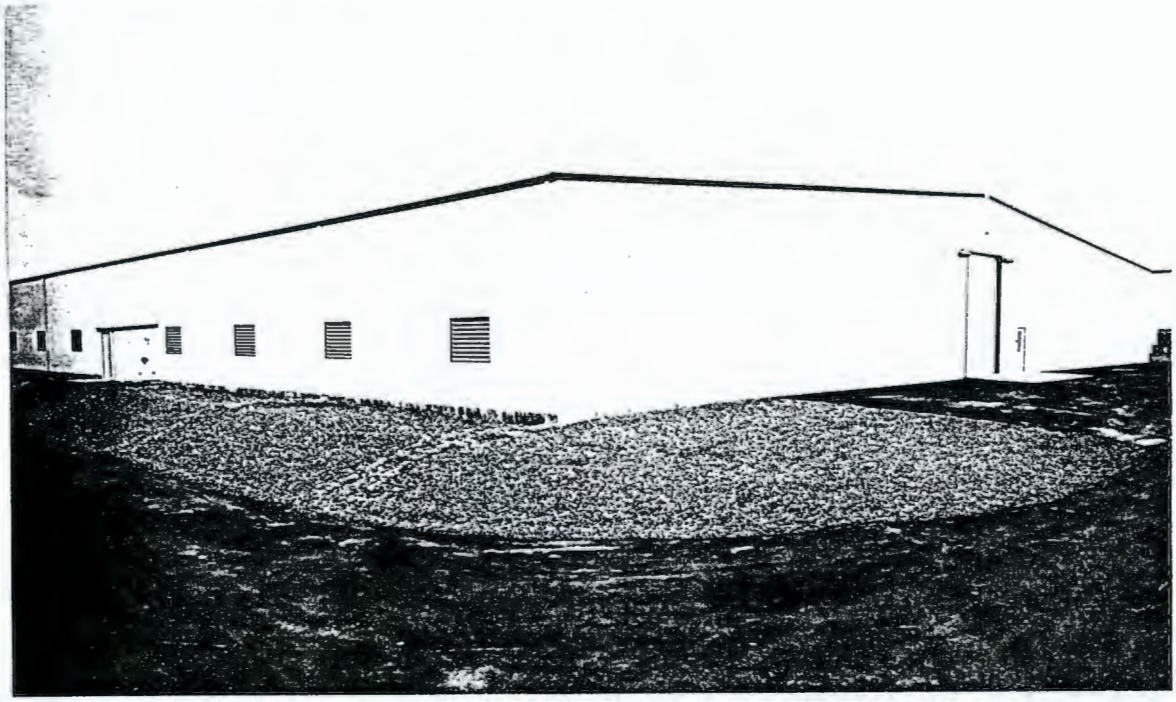
90061110-26CN
(PHOTO TAKEN 1990)



TYPICAL (INTERIOR)
46°33'17"
119°38'24"

90061110-10CN
(PHOTO TAKEN 1990)

CENTRAL WASTE COMPLEX RADIOACTIVE AND/OR MIXED WASTE STORAGE BUILDING



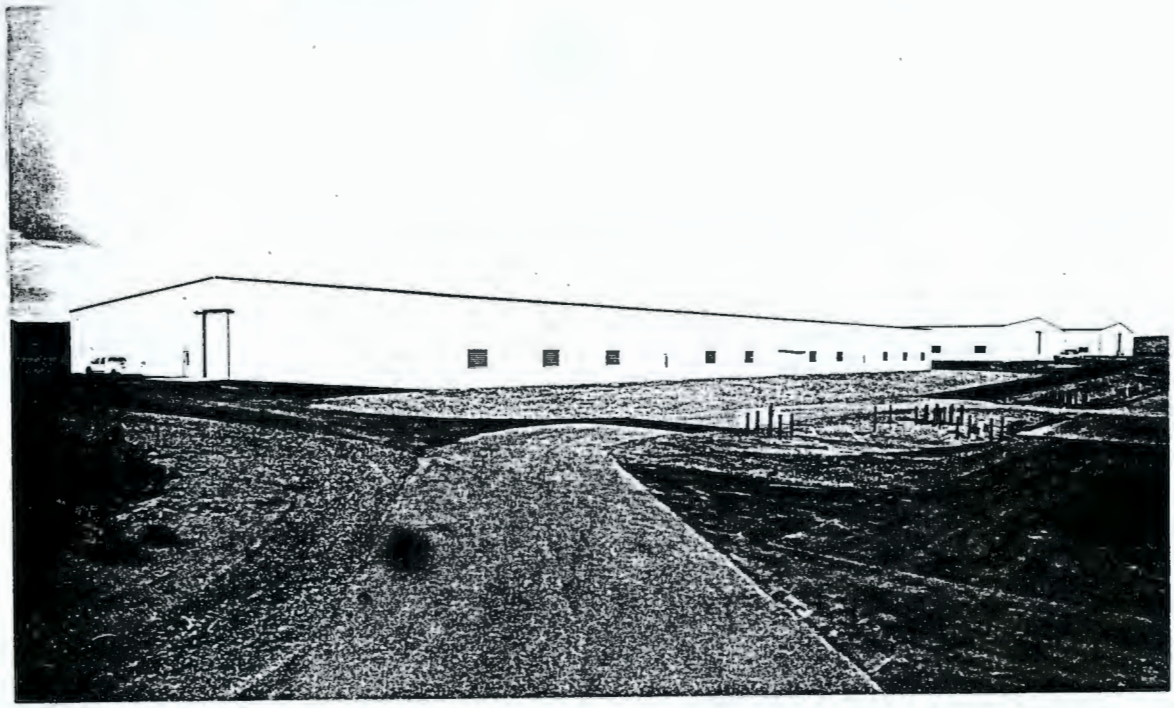
TYPICAL (2403-WA, WB, AND WC)
46°33'17"
119°38'24"

93040010-22CN
(PHOTO TAKEN 1993)

TYPICAL (INTERIOR)
46°33'17"
119°38'24"

93040010-25CN
(PHOTO TAKEN 1993)

CENTRAL WASTE COMPLEX RADIOACTIVE AND/OR MIXED WASTE STORAGE BUILDING



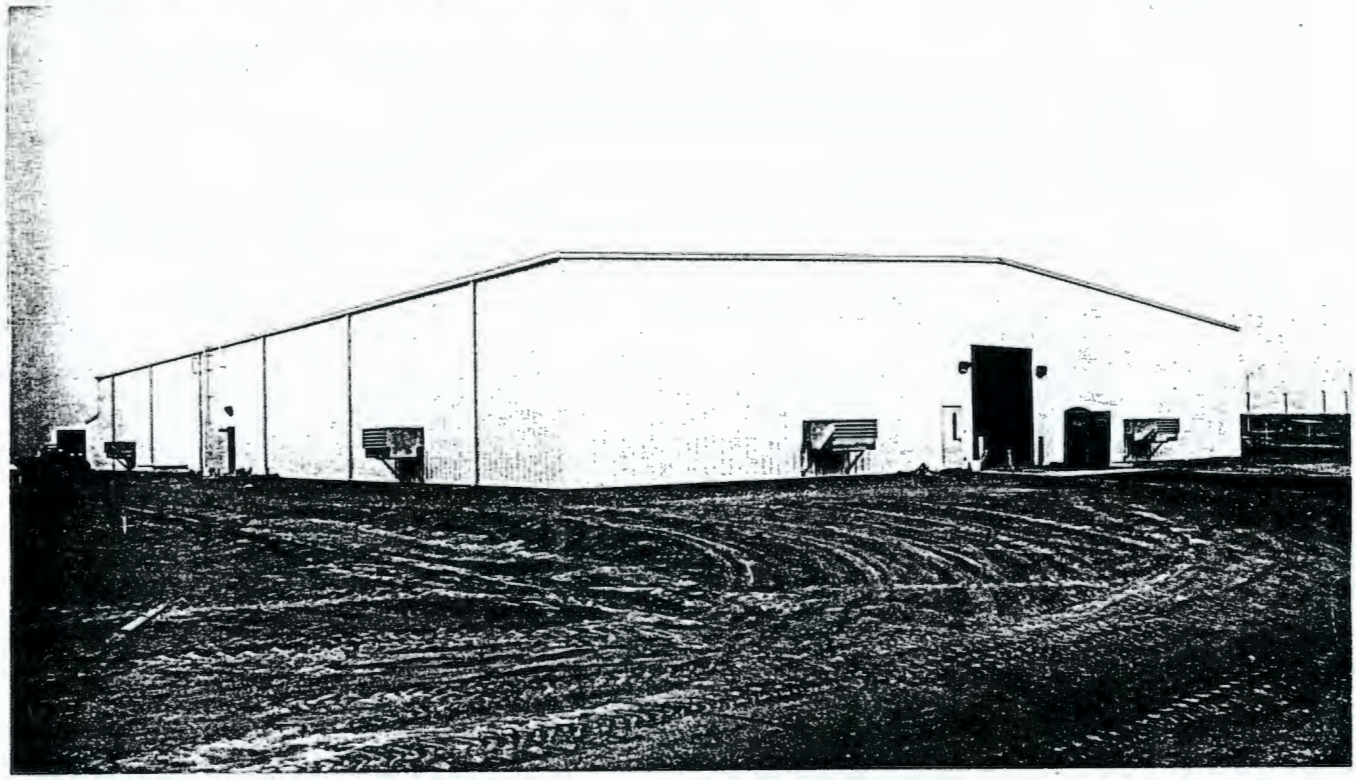
TYPICAL (2403-WD)
46°33'17"
119°38'24"

93040010-13CN
(PHOTO TAKEN 1993)

TYPICAL (INTERIOR)
46°33'17"
119°38'24"

93040010-16CN
(PHOTO TAKEN 1993)

CENTRAL WASTE COMPLEX
MIXED WASTE STORAGE BUILDING



TYPICAL (2404-WA, WB, and WC)
46°33'17"
119°38'24"

96080579-29CN
(PHOTO TAKEN 1996)

TYPICAL (INTERIOR)
46°33'17"
119°38'24"

96080579-32CN
(PHOTO TAKEN 1996)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

*FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 2	348,390,160	L		7				
2	T 0 1	2,271,240	V		8				
3	S 0 3	0.11	C		9				
4					10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

Refer to the following pages.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	Included with above

CONTINUE ON PAGE 3

FORM 3 DANGEROUS WASTE PERMIT APPLICATION
U.S. ENVIRONMENTAL PROTECTION AGENCY/STATE IDENTIFICATION NUMBER WA7890008967

Section III.C, Description of Process Codes Listed in Section III.A

S02, T01

The Single-Shell Tank (SST) System consists of 149 tanks that were built between the years 1943 and 1964 to store mixed waste (S02) generated on the Hanford Site. There are two types of tanks in the SST System, the 100 series and the 200 series. The 133 100-series SSTs are 23 meters (75 feet) in diameter with operating capacities of 1,892,700 to 3,785,400 liters (500,000 to 1,000,000 gallons). The sixteen 200-series SSTs are smaller and of a similar design with a 6 meter (20 foot) diameter and a capacity of 208,197 liters (55,000 gallons). The SST System also includes two waste transfer vault systems, the 244-AR and 244-CR Vault. The 244-AR Vault contains four permitted tanks and the 244-CR vault contains two permitted tanks. Table 1 lists tank numbers, year of construction, year removed from service, and operating capacity.

The maximum process design capacity for tank storage at the SST System is 348,390,160 liters (92,035,230 gallons).

Treatment of the mixed waste in the SST System occurs when solids and interstitial liquids are separated and/or cooling liquids are added (T01). These treatment processes involve, but are not limited to, mechanical retrieval, sluicing, and saltwell pumping of the mixed waste. The SST System has a process design limit of 2,271,240 liters (600,000 gallons) per day based on the simultaneous pumping of two SSTs in a 24-hour period. Ancillary equipment used for the transfer of liquid mixed waste consists of: (1) centrifugal pumps capable of pumping liquid mixed waste at 1,514 liters (400 gallons) per minute, (2) induction pumps capable of pumping liquid waste from the salt well at 19 liters (5 gallons) per minute, and (3) associated valves and piping to the DST System. Mechanical equipment, sluicing equipment, and similar treatment/processes are not limited to the processes described previously.

The maximum process design capacity for tank treatment at the SST System is 2,271,240 liters (600,000 gallons) per day.

S03

Associated with the SST System are 54 inactive diversion boxes designated as waste piles (S03). A summary of the SST System and corresponding diversion boxes is provided in Table 2. All diversion boxes used within the SST System are inactive and presently are isolated (weather covered). "Isolated" as used here means exterior water intrusion has been restricted.

The maximum process design capacity for waste pile storage at the SST System is approximately 23 kilograms (50 pounds) of waste lead stored in each diversion box (worst-case scenario) accounting for a total of 1,202 kilograms (2,650 pounds) or 0.11 cubic meter (0.14 cubic yard) of waste lead in storage.

Table 1 — Single-Shell Tank System Summary
(Sheet 1 of 3)

Tank Number	Year of Construction	Year Removed from Service[1]	Operating Capacity (Liters)
241-A-101	1954-1955	1980	3,785,400
241-A-102	1954-1955	1980	3,785,400
241-A-103	1954-1955	1980	3,785,400
241-A-104	1954-1955	1975	3,785,400
241-A-105	1954-1955	1963	3,785,400
241-A-106	1954-1955	1980	3,785,400
241-AX-101	1963-1964	1980	3,785,400
241-AX-102	1963-1964	1980	3,785,400
241-AX-103	1963-1964	1980	3,785,400
241-AX-104	1963-1964	1978	3,785,400
241-B-101	1943-1944	1974	1,892,700
241-B-102	1943-1944	1978	1,892,700
241-B-103	1943-1944	1977	1,892,700
241-B-104	1943-1944	1972	1,892,700
241-B-105	1943-1944	1972	1,892,700
241-B-106	1943-1944	1977	1,892,700
241-B-107	1943-1944	1969	1,892,700
241-B-108	1943-1944	1977	1,892,700
241-B-109	1943-1944	1977	1,892,700
241-B-110	1943-1944	1971	1,892,700
241-B-111	1943-1944	1976	1,892,700
241-B-112	1943-1944	1977	1,892,700
241-B-201	1943-1944	1971	208,197
241-B-202	1943-1944	1977	208,197
241-B-203	1943-1944	1977	208,197
241-B-204	1943-1944	1977	208,197
241-BX-101	1946-1947	1972	1,892,700
241-BX-102	1946-1947	1971	1,892,700
241-BX-103	1946-1947	1977	1,892,700
241-BX-104	1946-1947	1980	1,892,700
241-BX-105	1946-1947	1980	1,892,700
241-BX-106	1946-1947	1971	1,892,700
241-BX-107	1946-1947	1977	1,892,700
241-BX-108	1946-1947	1974	1,892,700
241-BX-109	1946-1947	1974	1,892,700
241-BX-110	1946-1947	1977	1,892,700
241-BX-111	1946-1947	1977	1,892,700
241-BX-112	1946-1947	1977	1,892,700
241-BY-101	1948-1949	1971	2,839,050
241-BY-102	1948-1949	1977	2,839,050
241-BY-103	1948-1949	1973	2,839,050
241-BY-104	1948-1949	1977	2,839,050
241-BY-105	1948-1949	1974	2,839,050
241-BY-106	1948-1949	1977	2,839,050
241-BY-107	1948-1949	1974	2,839,050
241-BY-108	1948-1949	1972	2,839,050
241-BY-109	1948-1949	1979	2,839,050
241-BY-110	1948-1949	1979	2,839,050
241-BY-111	1948-1949	1977	2,839,050
241-BY-112	1948-1949	1978	2,839,050
241-C-101	1943-1944	1970	1,892,700
241-C-102	1943-1944	1976	1,892,700
241-C-103	1943-1944	1979	1,892,700
241-C-104	1943-1944	1980	1,892,700
241-C-105	1943-1944	1979	1,892,700
241-C-106	1943-1944	1979	1,892,700
241-C-107	1943-1944	1978	1,892,700
241-C-108	1943-1944	1976	1,892,700
241-C-109	1943-1944	1976	1,892,700
241-C-110	1943-1944	1976	1,892,700
241-C-111	1943-1944	1978	1,892,700
241-C-112	1943-1944	1976	1,892,700
241-C-201	1943-1944	1977	208,197
241-C-202	1943-1944	1977	208,197
241-C-203	1943-1944	1977	208,197
241-C-204	1943-1944	1977	208,197

Table 1 — Single-Shell Tank System Summary
(Sheet 2 of 3)

Tank Number	Year of Construction	Year Removed from Service[1]	Operating Capacity (Liters)
241-S-101	1950-1951	1980	2,839,050
241-S-102	1950-1951	1980	2,839,050
241-S-103	1950-1951	1980	2,839,050
241-S-104	1950-1951	1968	2,839,050
241-S-105	1950-1951	1974	2,839,050
241-S-106	1950-1951	1979	2,839,050
241-S-107	1950-1951	1980	2,839,050
241-S-108	1950-1951	1979	2,839,050
241-S-109	1950-1951	1979	2,839,050
241-S-110	1950-1951	1979	2,839,050
241-S-111	1950-1951	1972	2,839,050
241-S-112	1950-1951	1974	2,839,050
241-SX-101	1953-1954	1980	3,785,400
241-SX-102	1953-1954	1980	3,785,400
241-SX-103	1953-1954	1980	3,785,400
241-SX-104	1953-1954	1980	3,785,400
241-SX-105	1953-1954	1980	3,785,400
241-SX-106	1953-1954	1980	3,785,400
241-SX-107	1953-1954	1964	3,785,400
241-SX-108	1953-1954	1962	3,785,400
241-SX-109	1953-1954	1965	3,785,400
241-SX-110	1953-1954	1976	3,785,400
241-SX-111	1953-1954	1974	3,785,400
241-SX-112	1953-1954	1969	3,785,400
241-SX-113	1953-1954	1958	3,785,400
241-SX-114	1953-1954	1972	3,785,400
241-SX-115	1953-1954	1965	3,785,400
241-T-101	1943-1944	1979	1,892,700
241-T-102	1943-1944	1976	1,892,700
241-T-103	1943-1944	1974	1,892,700
241-T-104	1943-1944	1974	1,892,700
241-T-105	1943-1944	1976	1,892,700
241-T-106	1943-1944	1973	1,892,700
241-T-107	1943-1944	1976	1,892,700
241-T-108	1943-1944	1974	1,892,700
241-T-109	1943-1944	1974	1,892,700
241-T-110	1943-1944	1976	1,892,700
241-T-111	1943-1944	1974	1,892,700
241-T-112	1943-1944	1977	1,892,700
241-T-201	1943-1944	1976	208,197
241-T-202	1943-1944	1976	208,197
241-T-203	1943-1944	1976	208,197
241-T-204	1943-1944	1976	208,197
241-TX-101	1947-1948	1980	2,839,050
241-TX-102	1947-1948	1977	2,839,050
241-TX-103	1947-1948	1980	2,839,050
241-TX-104	1947-1948	1977	2,839,050
241-TX-105	1947-1948	1977	2,839,050
241-TX-106	1947-1948	1977	2,839,050
241-TX-107	1947-1948	1977	2,839,050
241-TX-108	1947-1948	1977	2,839,050
241-TX-109	1947-1948	1977	2,839,050
241-TX-110	1947-1948	1977	2,839,050
241-TX-111	1947-1948	1977	2,839,050
241-TX-112	1947-1948	1974	2,839,050
241-TX-113	1947-1948	1971	2,839,050
241-TX-114	1947-1948	1971	2,839,050
241-TX-115	1947-1948	1977	2,839,050
241-TX-116	1947-1948	1969	2,839,050
241-TX-117	1947-1948	1969	2,839,050
241-TX-118	1947-1948	1980	2,839,050
241-TY-101	1951-1952	1973	2,839,050
241-TY-102	1951-1952	1979	2,839,050
241-TY-103	1951-1952	1973	2,839,050
241-TY-104	1951-1952	1974	2,839,050
241-TY-105	1951-1952	1980	2,839,050
241-TY-106	1951-1952	1959	2,839,050

Table 1 — Single-Shell Tank System Summary (Sheet 3 of 3)

Tank Number	Year of Construction	Year Removed from Service[1]	Operating Capacity (Liters)
241-U-101	1943-1944	1960	1,892,700
241-U-102	1943-1944	1979	1,892,700
241-U-103	1943-1944	1978	1,892,700
241-U-104	1943-1944	1951	1,892,700
241-U-105	1943-1944	1978	1,892,700
241-U-106	1943-1944	1977	1,892,700
241-U-107	1943-1944	1980	1,892,700
241-U-108	1943-1944	1979	1,892,700
241-U-109	1943-1944	1978	1,892,700
241-U-110	1943-1944	1975	1,892,700
241-U-111	1943-1944	1980	1,892,700
241-U-112	1943-1944	1970	1,892,700
241-U-201	1943-1944	1977	208,197
241-U-202	1943-1944	1977	208,197
241-U-203	1943-1944	1977	208,197
241-U-204	1943-1944	1977	208,197

Waste Transfer Vaults

Tank Number	Year of Constuction	Year Removed from Service	Operating Capacity (Liters)
244-AR-001	1976	NA	162,772
244-AR-002	1976	NA	162,772
244-AR-003	1976	NA	18,113
244-AR-004	1976	NA	18,113
244-CR-003	1946	NA	55,494
244-CR-011	1946	NA	170,343

[1]The last year the tank was capable of receiving waste; actual date of last waste receipt might have been earlier.

Table 2. Single-Shell Tank System Diversion Box Matrix.

Unit	SSTs	Diversion box	Construction date
A	241-A-101 through 241-A-106	241-A-152	1955
	241-AX-101 through 241-AX-104	241-A-153	1966
		241-AX-151	1963
		241-AX-152	1962
		241-AX-155	1983
		241-AY-151	1975
		241-AY-152	1970
B	241-B-101 through 241-B-112	241-B-151	1951
	241-B-201 through 241-B-204	241-B-152	1951
	241-BX-101 through 241-BX-112	241-B-153	1951
		241-B-154	1951
		241-B-252	1951
		241-BR-152	1952
		241-BX-153	1951
		241-BX-154	1951
		241-BX-155	1951
		241-BXR-151	1952
		241-BXR-152	1952
		241-BXR-153	1952
		241-BYR-152	1952
		241-BYR-153	1952
		241-BYR-154	1952
C	241-C-101 through 241-C-112	241-C-151	1951
	241-C-201 through 241-C-204	241-C-152	1951
		241-C-153	1951
		241-C-154	1965
		241-C-252	1951
		241-CR-151	1952
		241-CR-152	1952
		241-CR-153	1952
S	241-S-101 through 241-S-152	240-S-151	1952
	241-SX-101 through 241-SX-115	240-S-152	1952
		241-S-152	1975
		241-SX-151	1953
		241-SX-152	1957
T	241-T-101 through 241-T-112	241-T-151	1950
	241-T-201 through 241-T-204	241-T-152	1951
	241-TX-101 through 241-TX-118	241-T-153	1951
	241-TY-101 through 241-TY-106	241-T-252	1951
		242-T-151	1951
		241-TR-152	1951
		241-TR-153	1952
		241-TX-153	1951
		241-TX-155	1951
		241-TXR-151	1951
		241-TXR-152	1952
		241-TXR-153	1952
		241-TY-153	1952
U	241-U-101 through 241-U-112	241-U-153	1951
	241-U-201 through 241-U-204	241-U-252	1951
		241-UR-151	1951
		241-UR-152	1952
		241-UR-153	1952
		241-UR-154	1952

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	204,116,566	K	S02	T01			Storage-Tank/Treatment-Tank
2	through							
3	D011							
4	D018							
5	D019							
6	D022							
7	D028							
8	D029							
9	D030							
10	D033							
11	through							
12	D036							
13	D038							
14	through							
15	D041							
16	D043							
17	WP01							
18	WP02							
19	WT01							
20	WT02							
21	F001							
22	through							
23	F005							Included With Above
24	D008	1,202	K	S03				Storage-Waste Pile
25								
26								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The mixed waste stored in the SST System was generated by four major chemical reprocessing operations: the bismuth phosphate (BiPo) process, the reduction-oxidation (REDOX) process, the plutonium-uranium extraction (PUREX) process, and the tributyl phosphate (TBP) process.

The dangerous waste numbers listed under the description of dangerous waste are based on a computer model and past process knowledge rather than on chemical analysis of waste. The Estimated Annual Quantity of Dangerous Waste (Section IV.B.) listed is 204,116,556 kilograms (450,000,000 pounds) and is based on an average density of the waste calculated from the densities of 26 core samples taken of waste stored in various SSTs. The average density (1.4 kilograms/liter [12 pounds/gallon]) was multiplied by 139,440,000 liters (36,836,000 gallons) and rounded-up to 204,116,556 kilograms (450,000,000 pounds). The figure 139,440,000 liters (36,836,000 gallons) represents the estimated volume of liquid mixed waste remaining in the SST System.

The quantity of waste lead stored in the diversion boxes is based on previous research of historical records. Because of the radiological hazards associated with individual inspection of the diversion boxes, a quantity of 23 kilograms (50 pounds) of waste lead was estimated for each box. This represents a conservative estimate, as 23 kilograms (50 pounds) is the maximum quantity of waste lead known to be in any one diversion box.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

Date

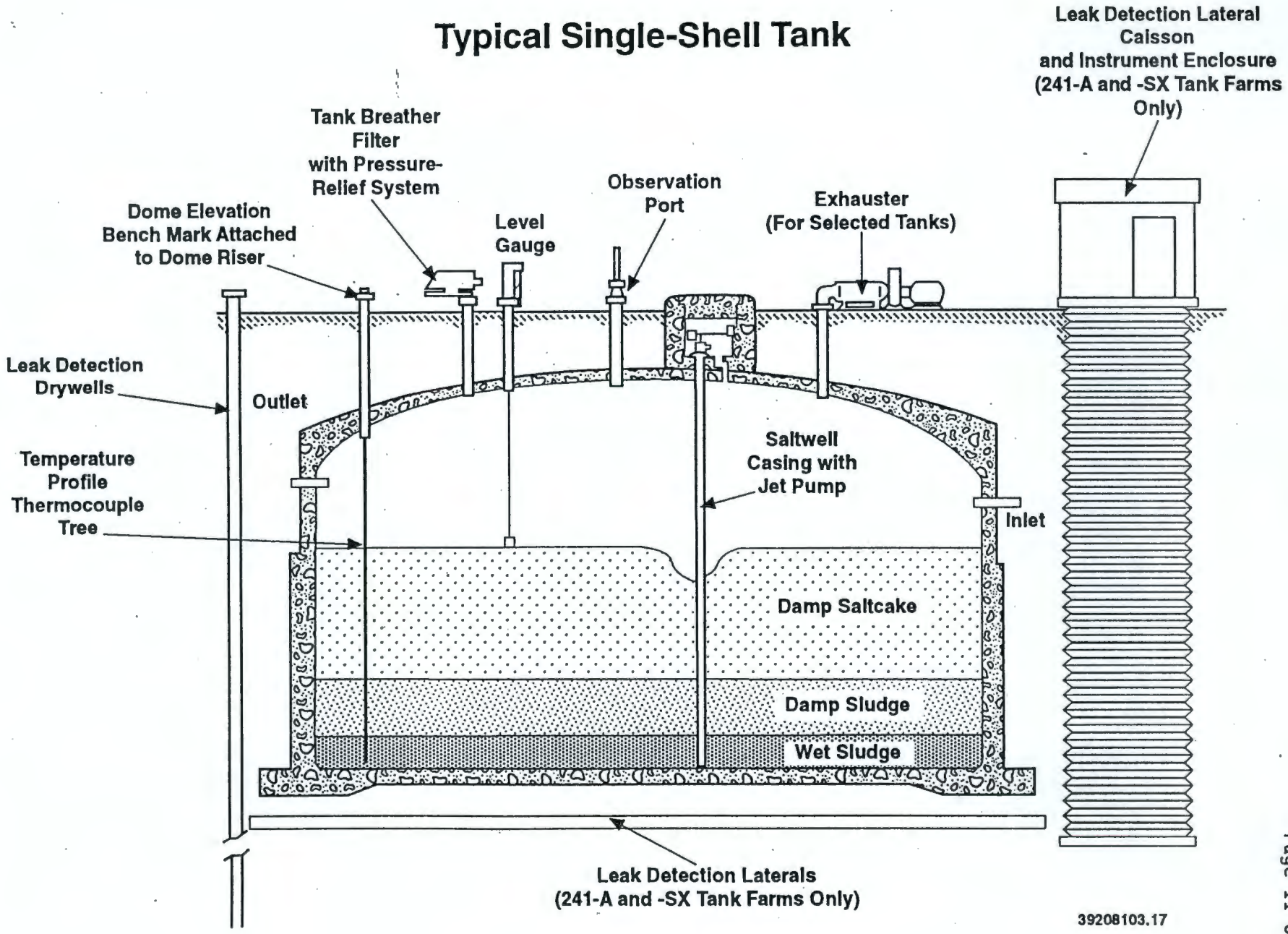
9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

Date

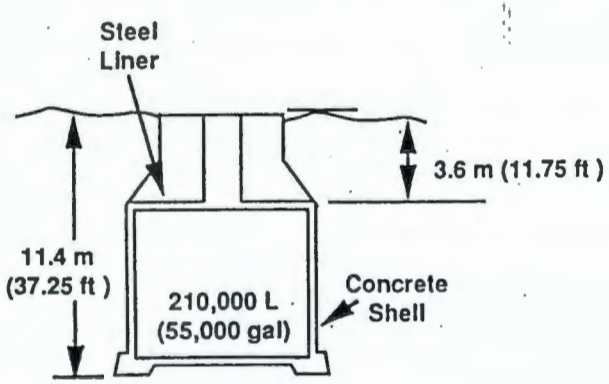
9713532.0681

Typical Single-Shell Tank

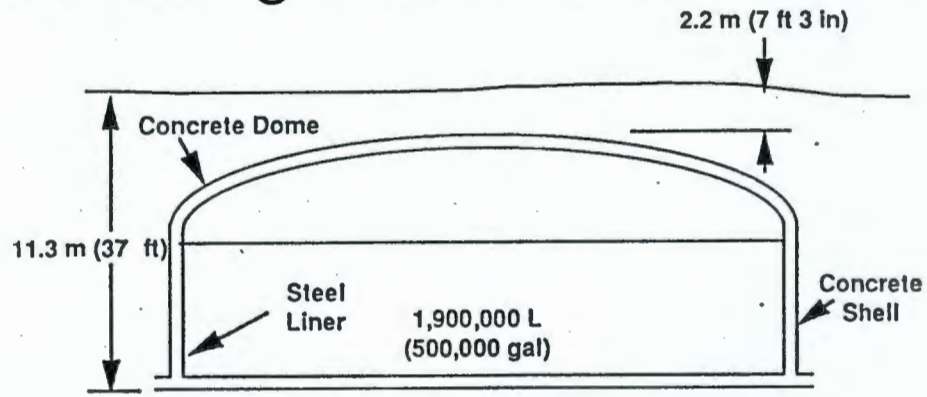


9713532.0682

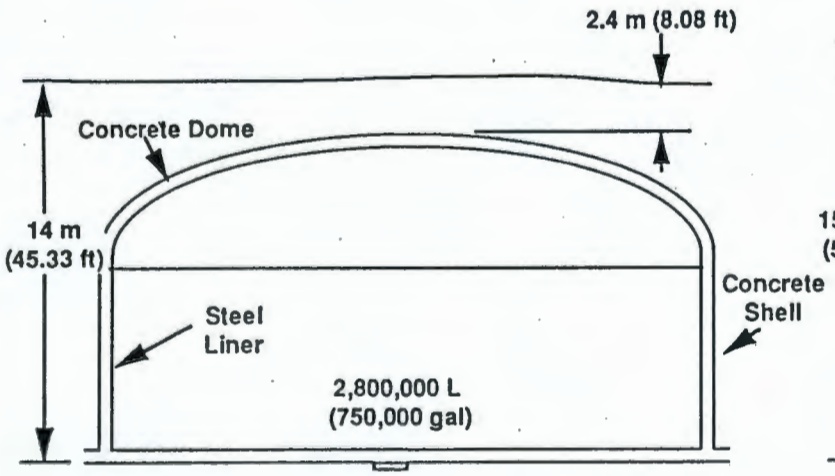
Cross-Sectional Views of Single-Shell Tanks



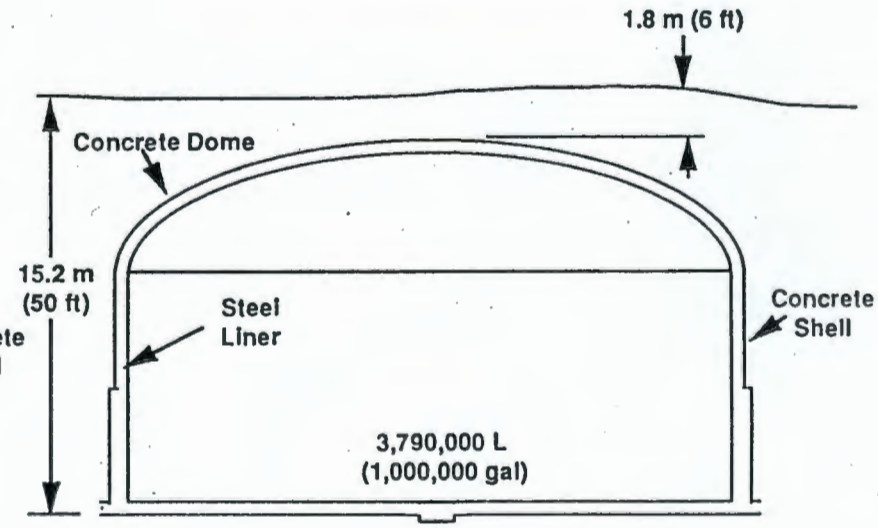
6 m (20 ft) Diameter Single-Shell Tank



22.9 m (75 ft) Diameter Single-Shell Tank



22.9-m (75 ft) Diameter Single-Shell Tank

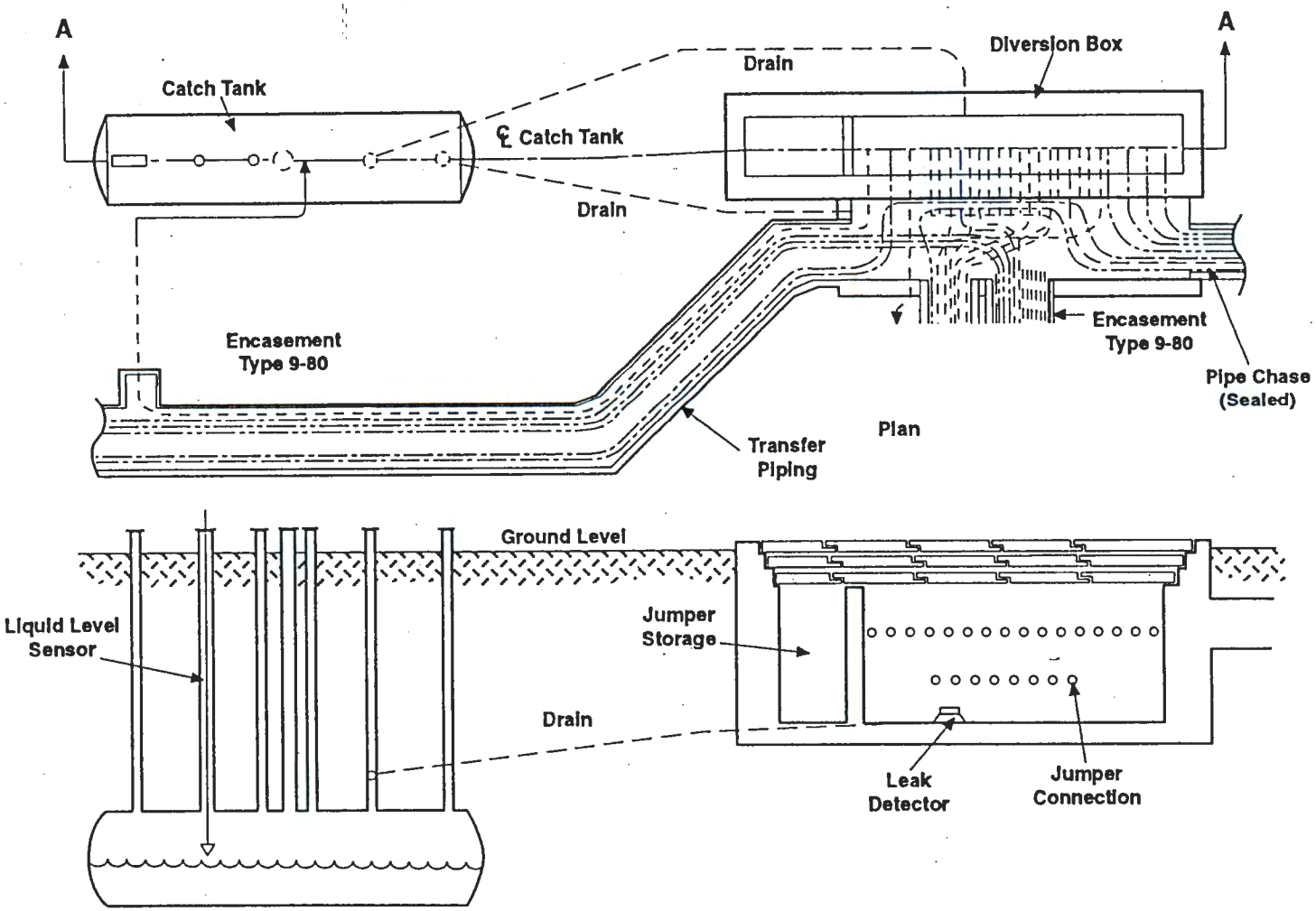


22.9 m (75 ft) Diameter Single-Shell Tank

Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.
To convert gallons to liters, multiply by 3.7854.

39211048.5a

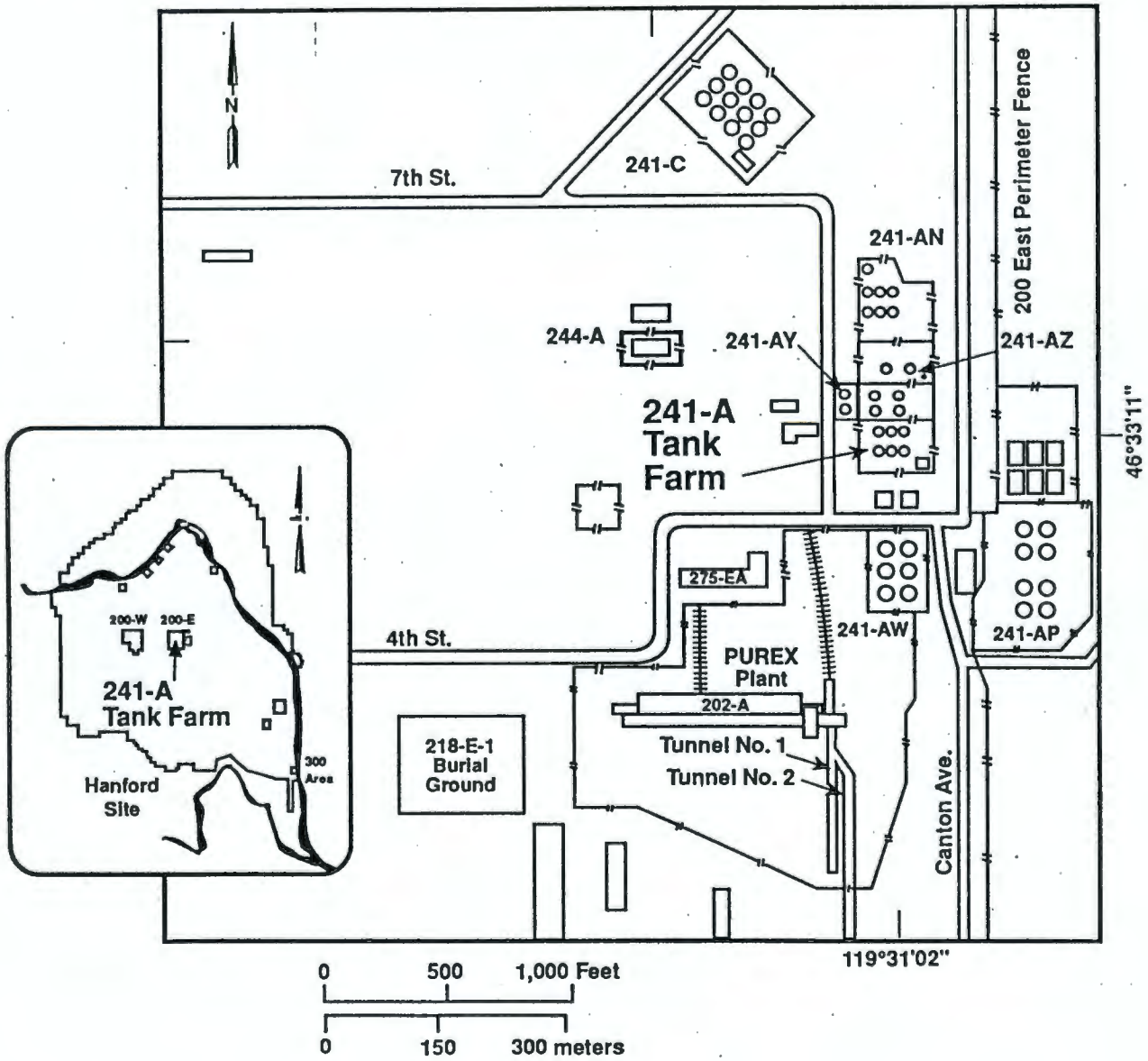
Typical Transfer System



Section A-A

9713572.0693

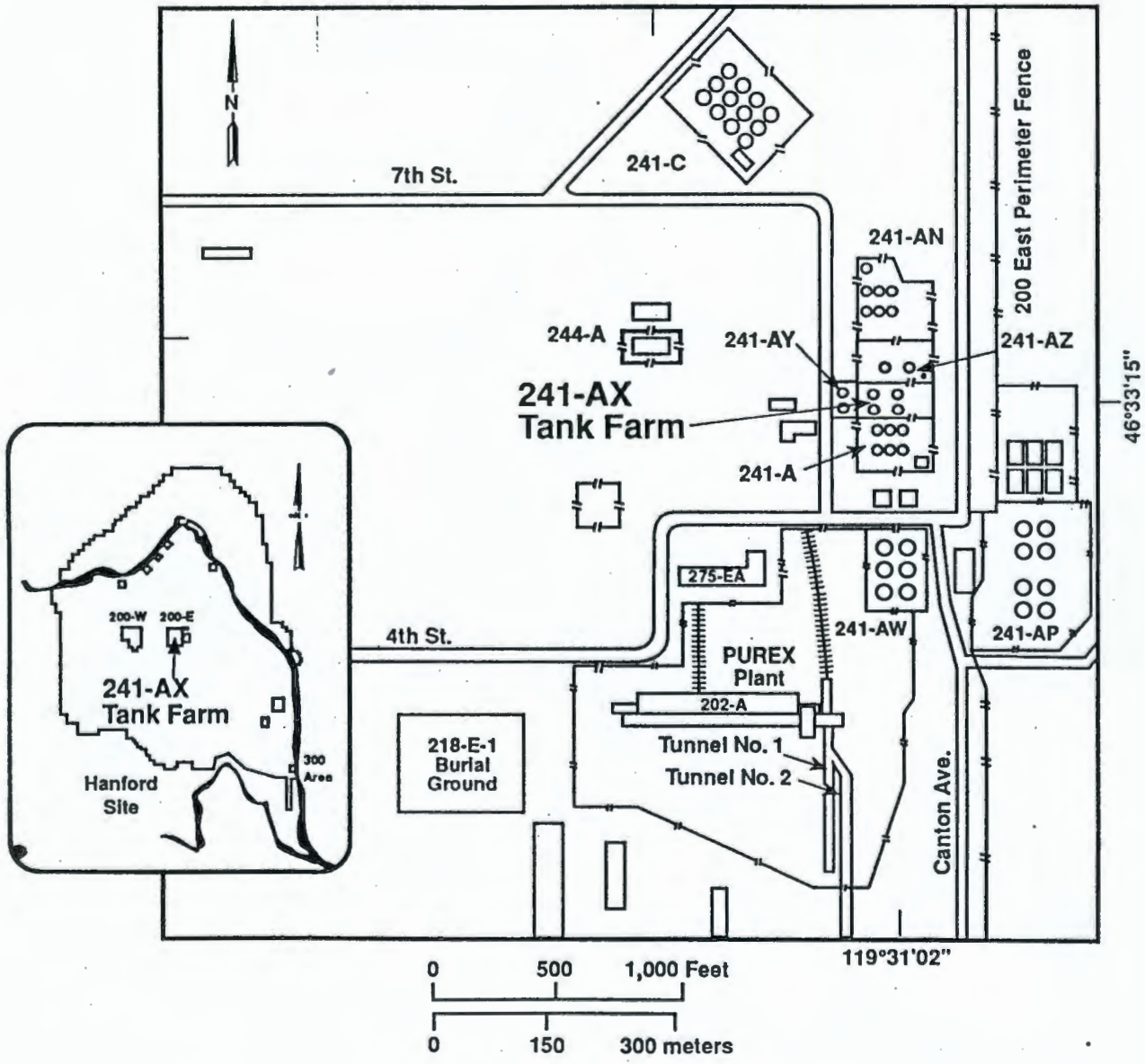
241-A Single-Shell Tank Farm Site Plan



H96070161.35a

9713532.0684

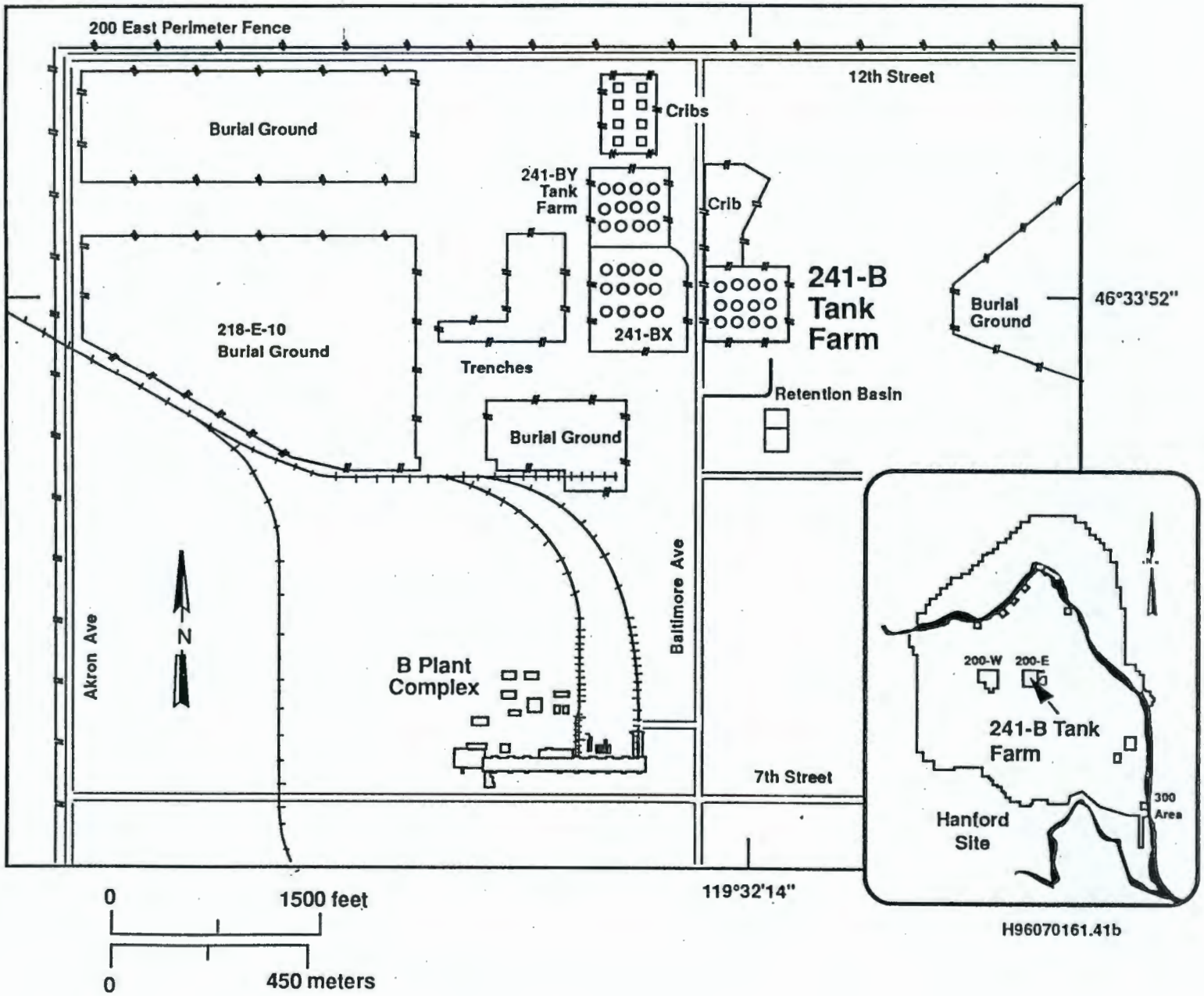
241-AX Single-Shell Tank Farm Site Plan



H96070161.35b

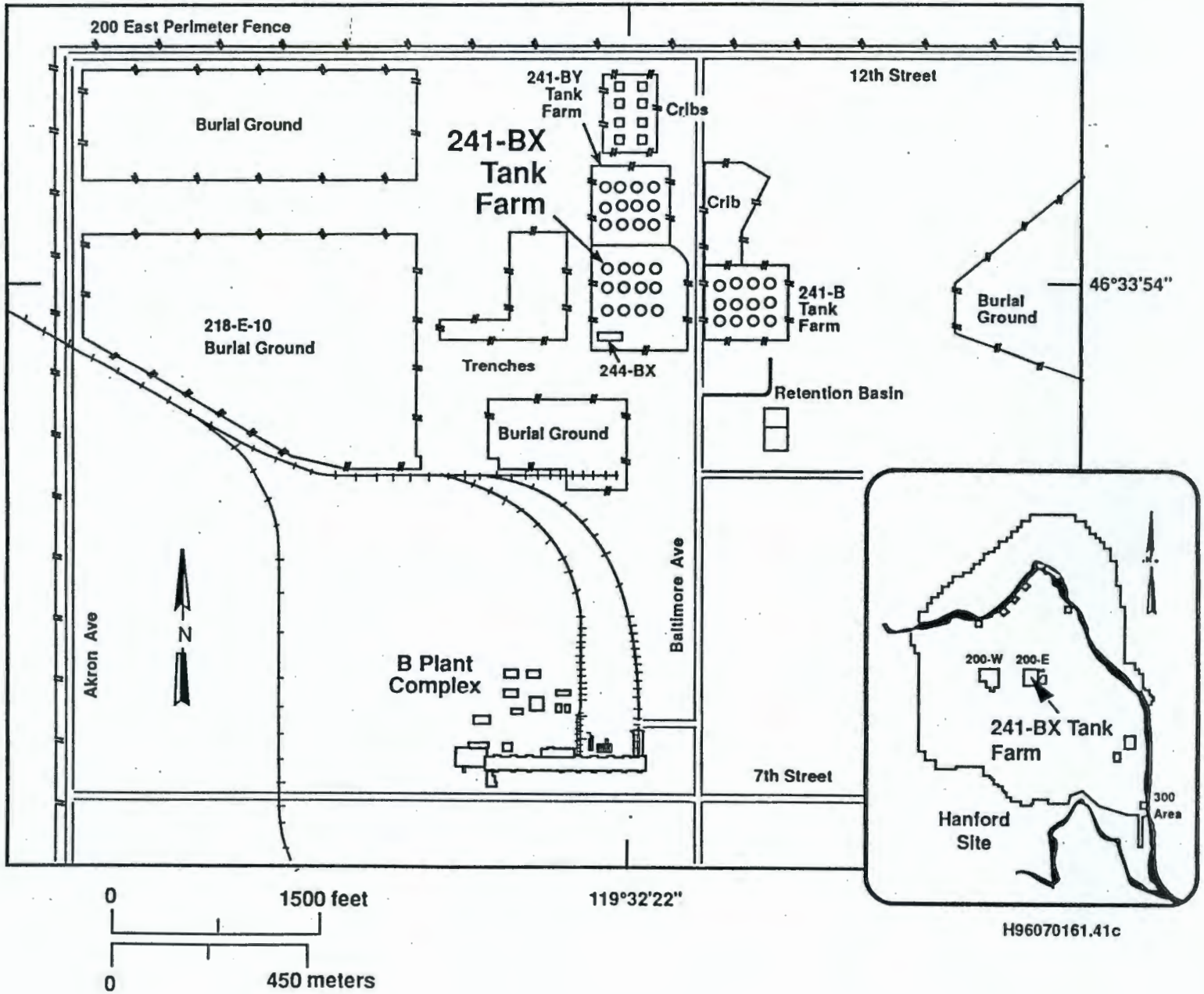
9713532.0685

241-B Single-Shell Tank Farm Site Plan

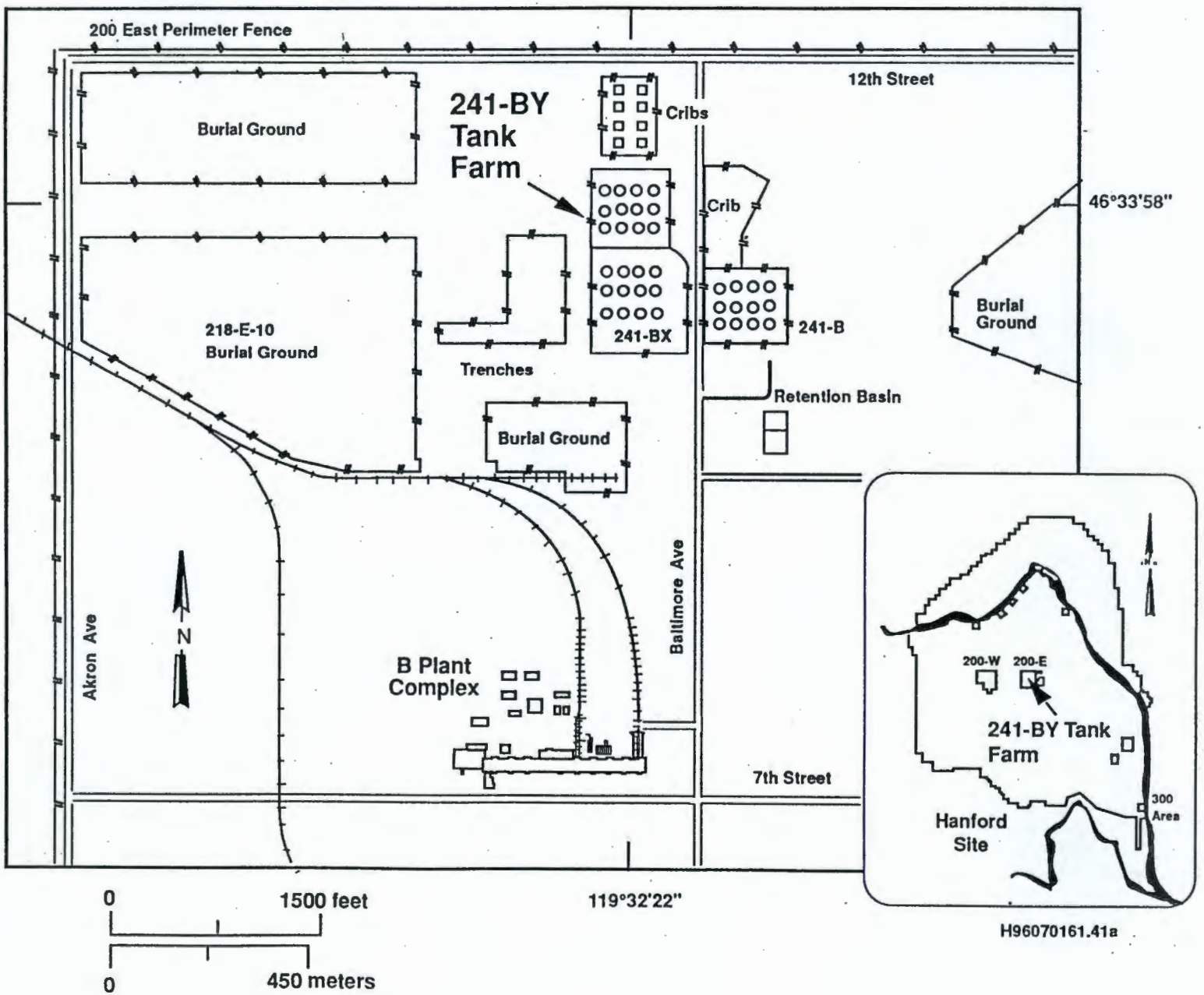


H96070161.41b

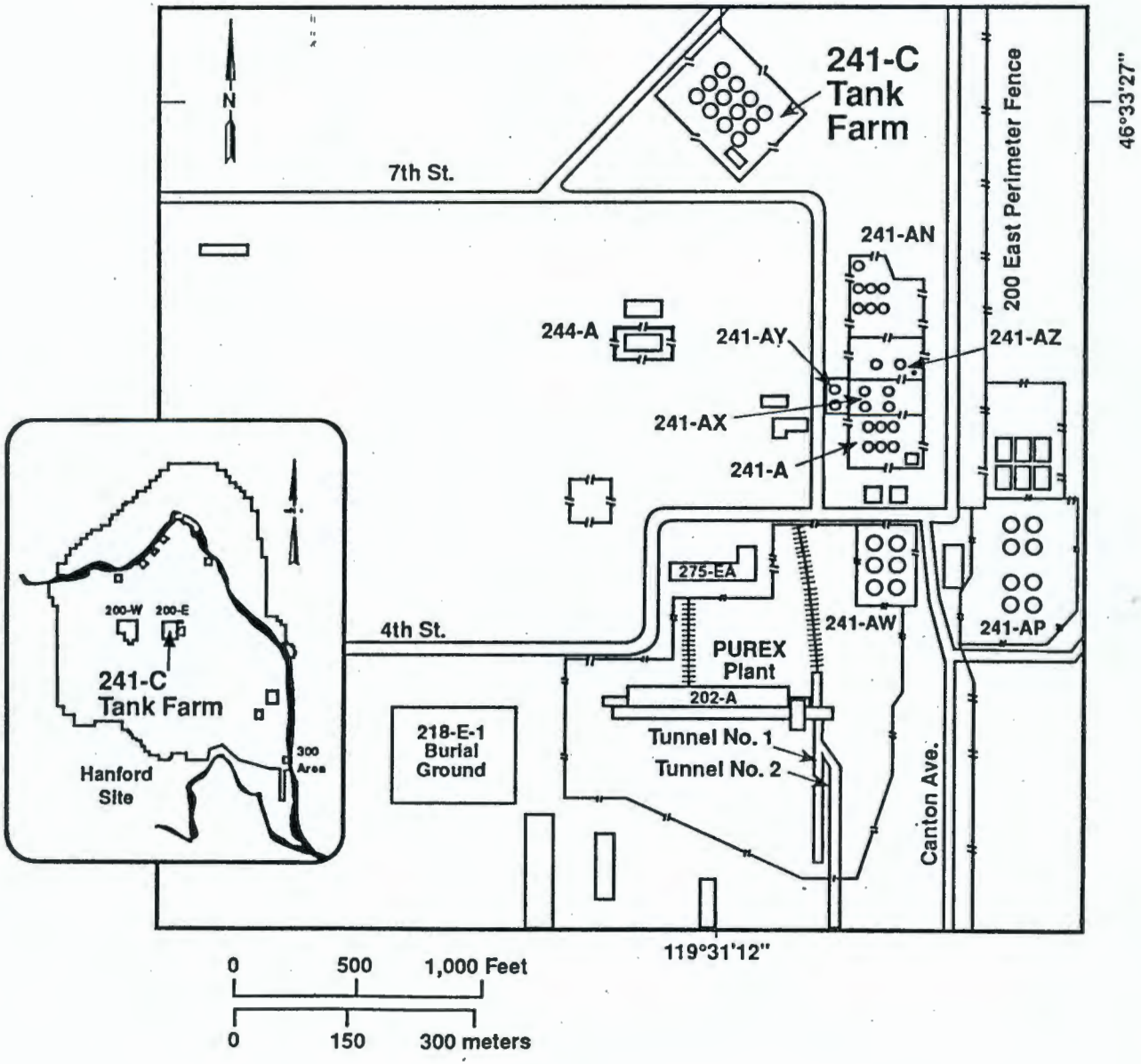
241-BX Single-Shell Tank Farm Site Plan



241-BY Single-Shell Tank Farm Site Plan



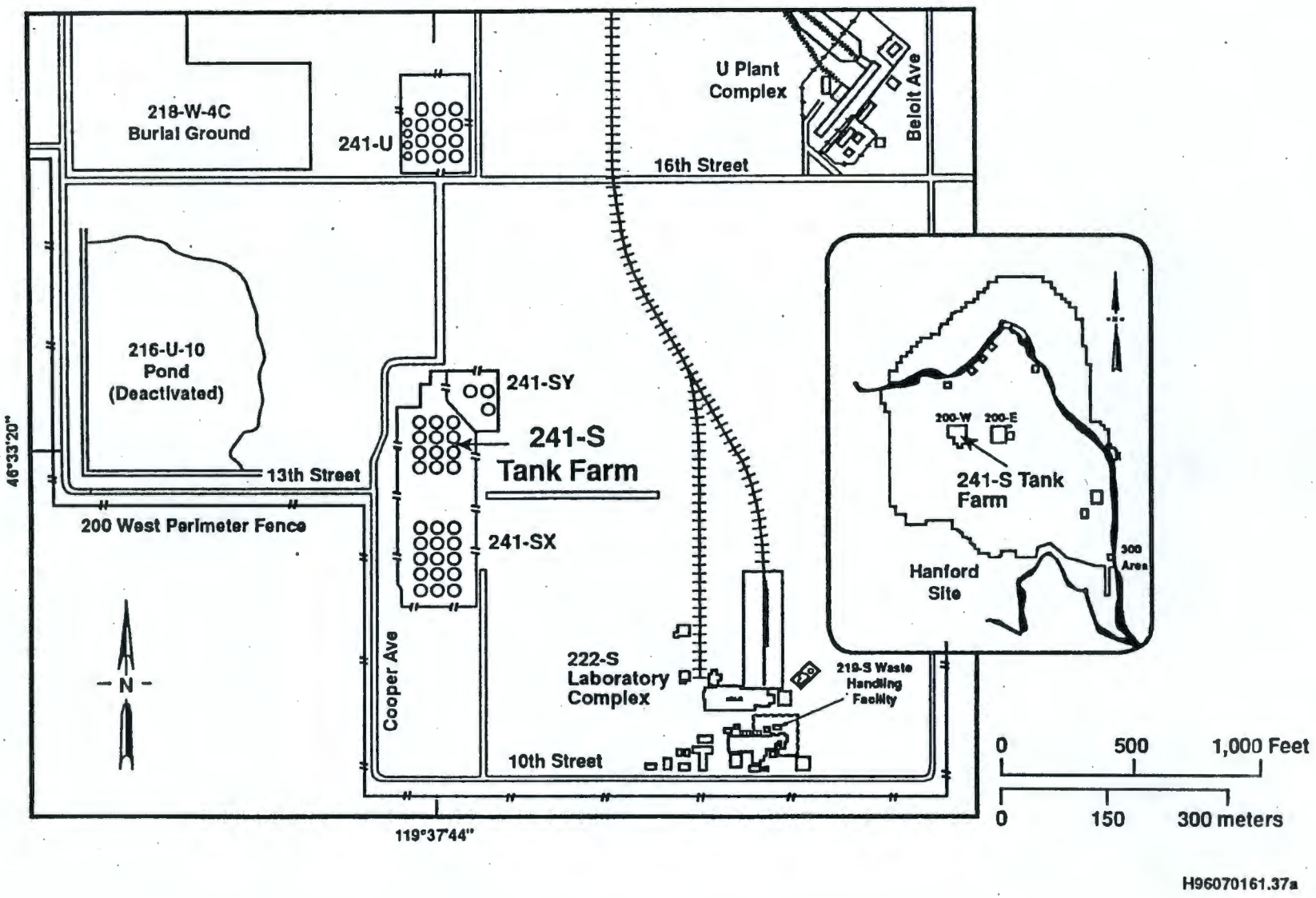
241-C Single-Shell Tank Farm Site Plan



H96070161.35c

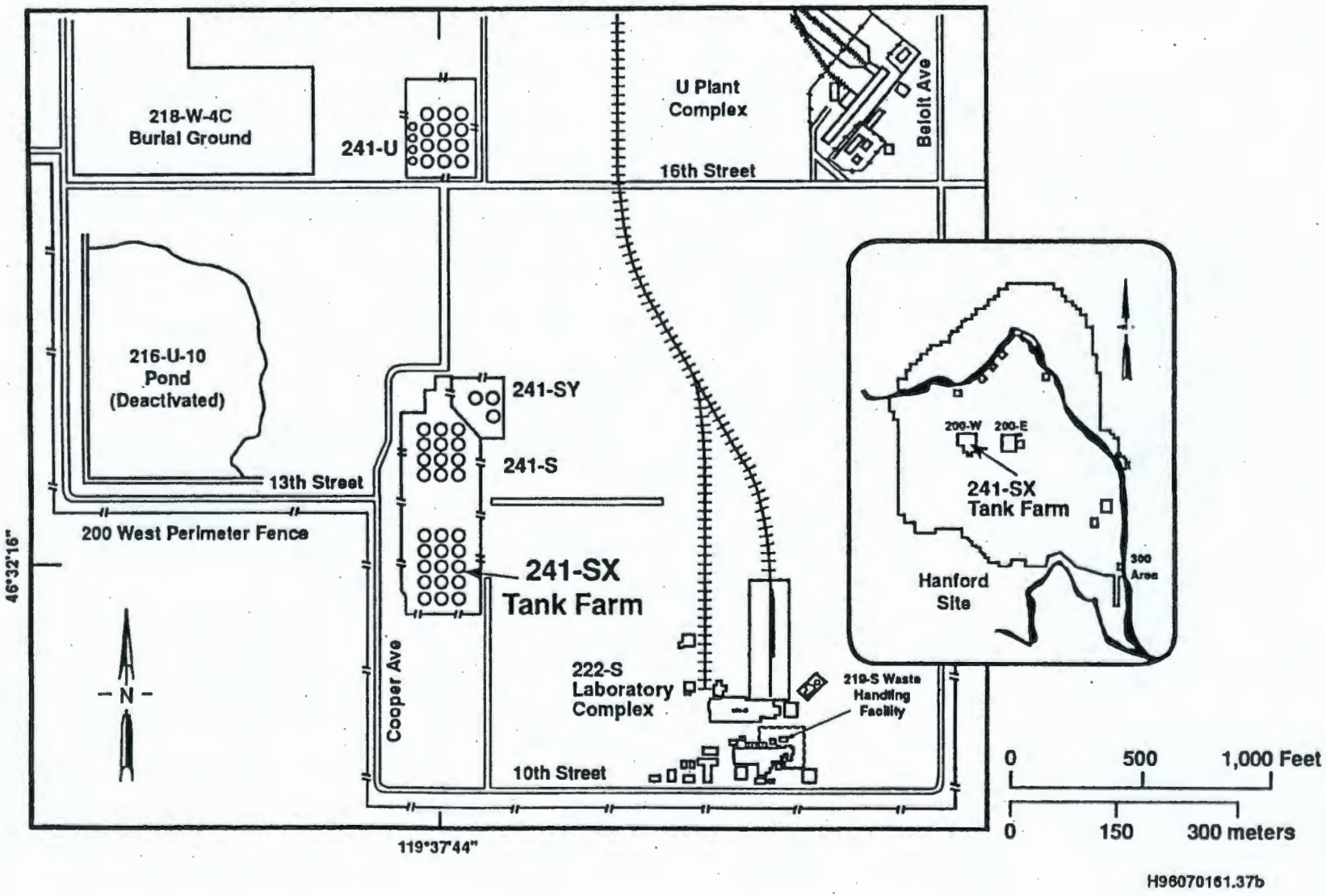
9713532.0689

241-S Single-Shell Tank Farm Site Plan



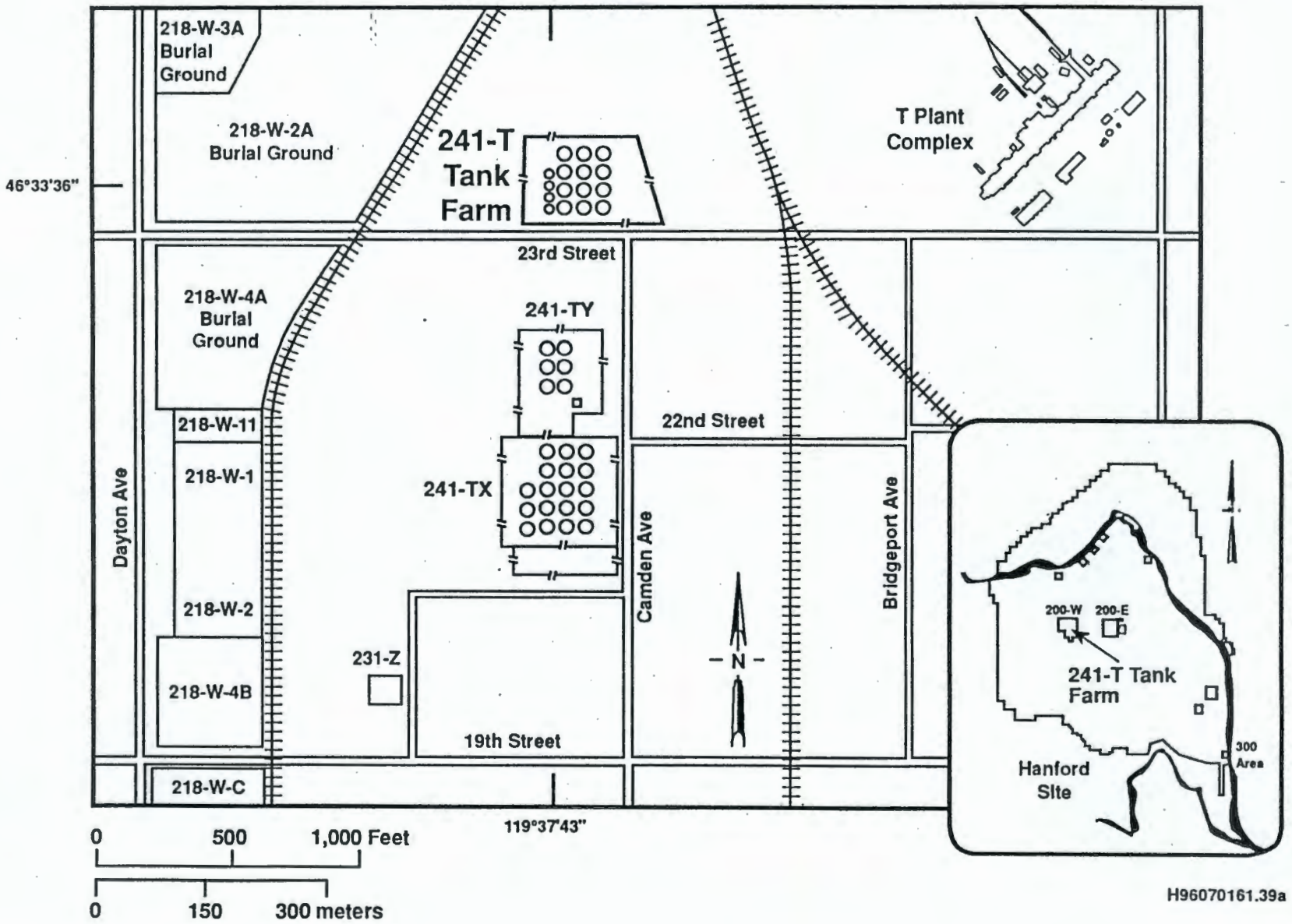
9713532.0690

241-SX Single-Shell Tank Farm Site Plan

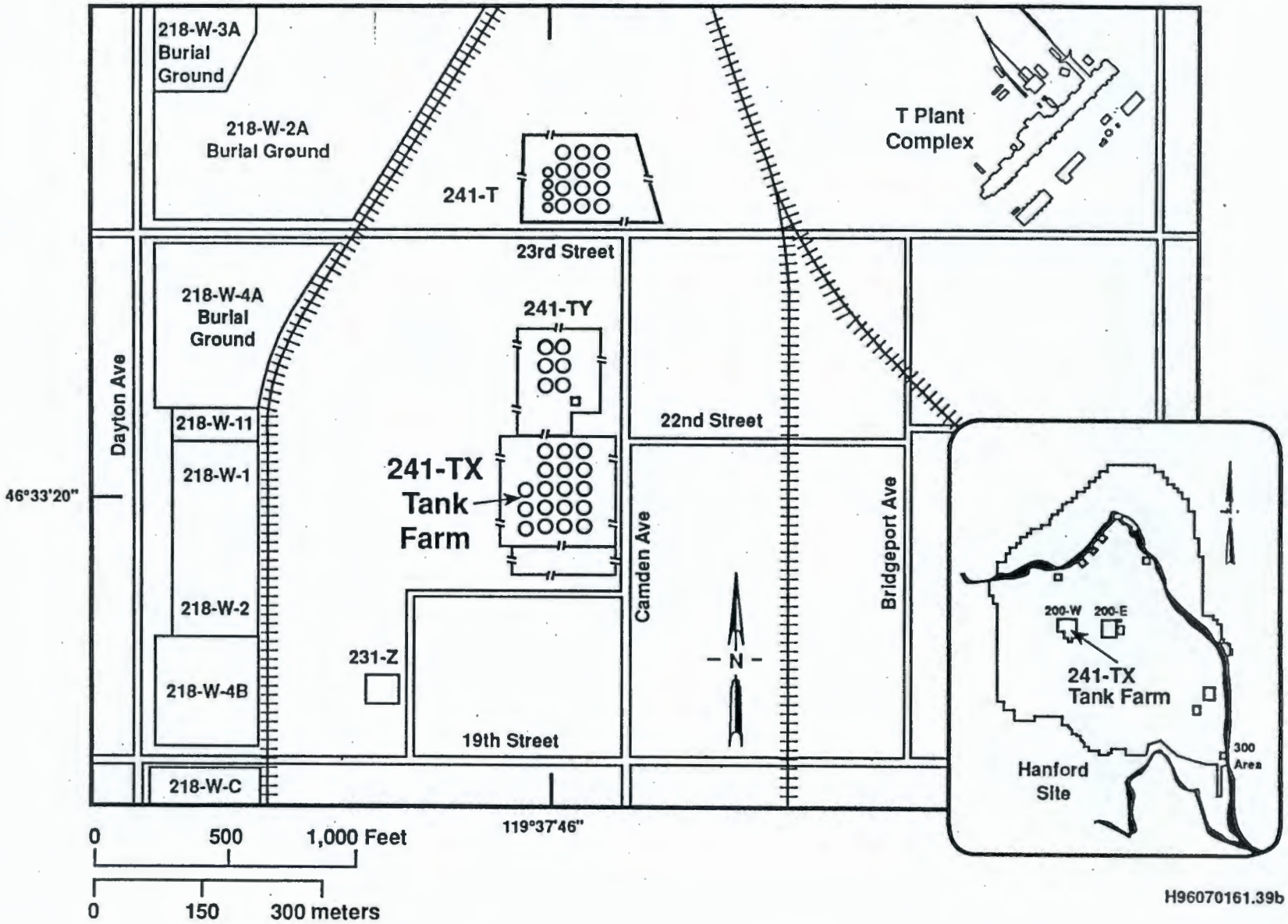


9713532.0691

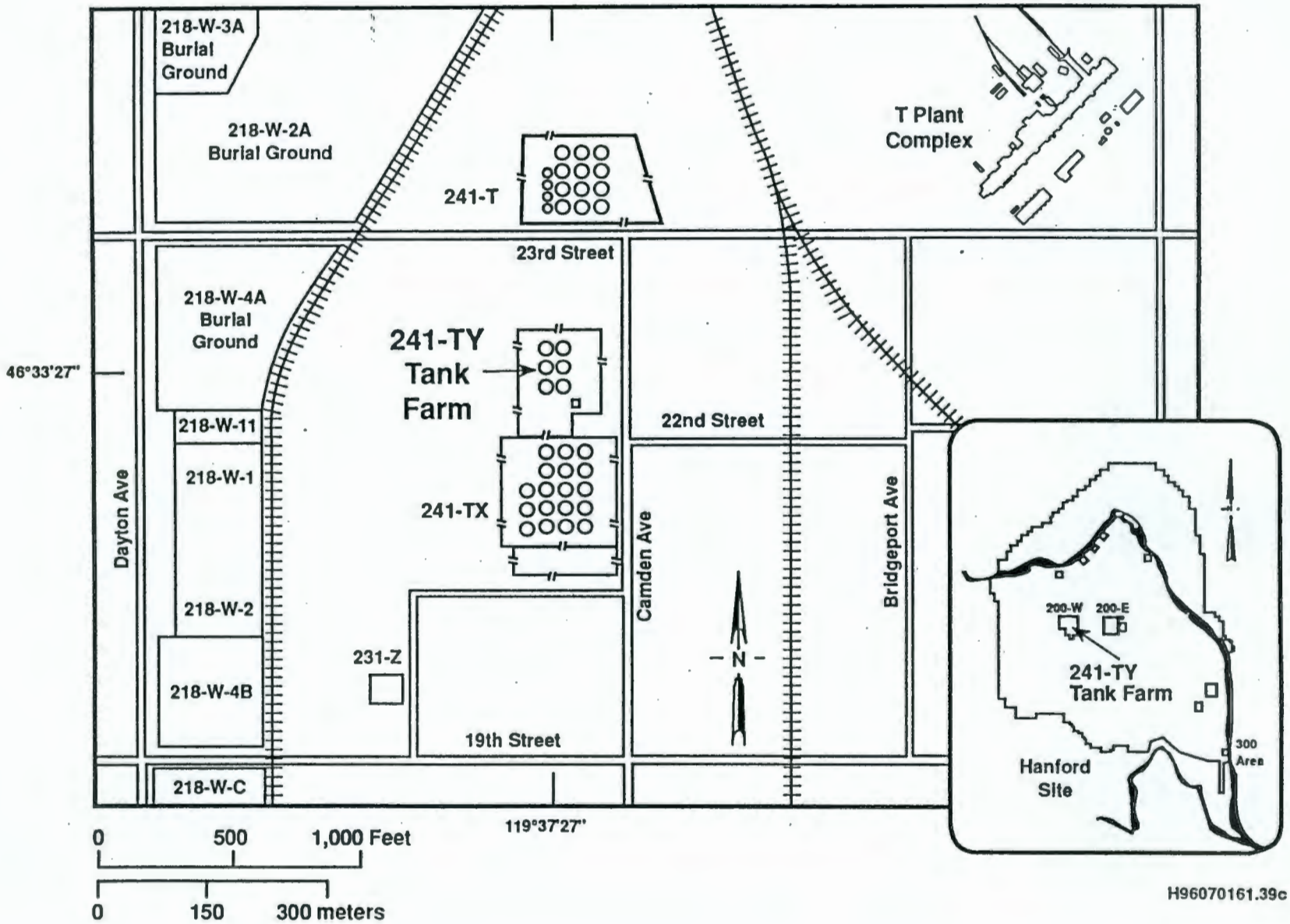
241-T Single-Shell Tank Farm Site Plan



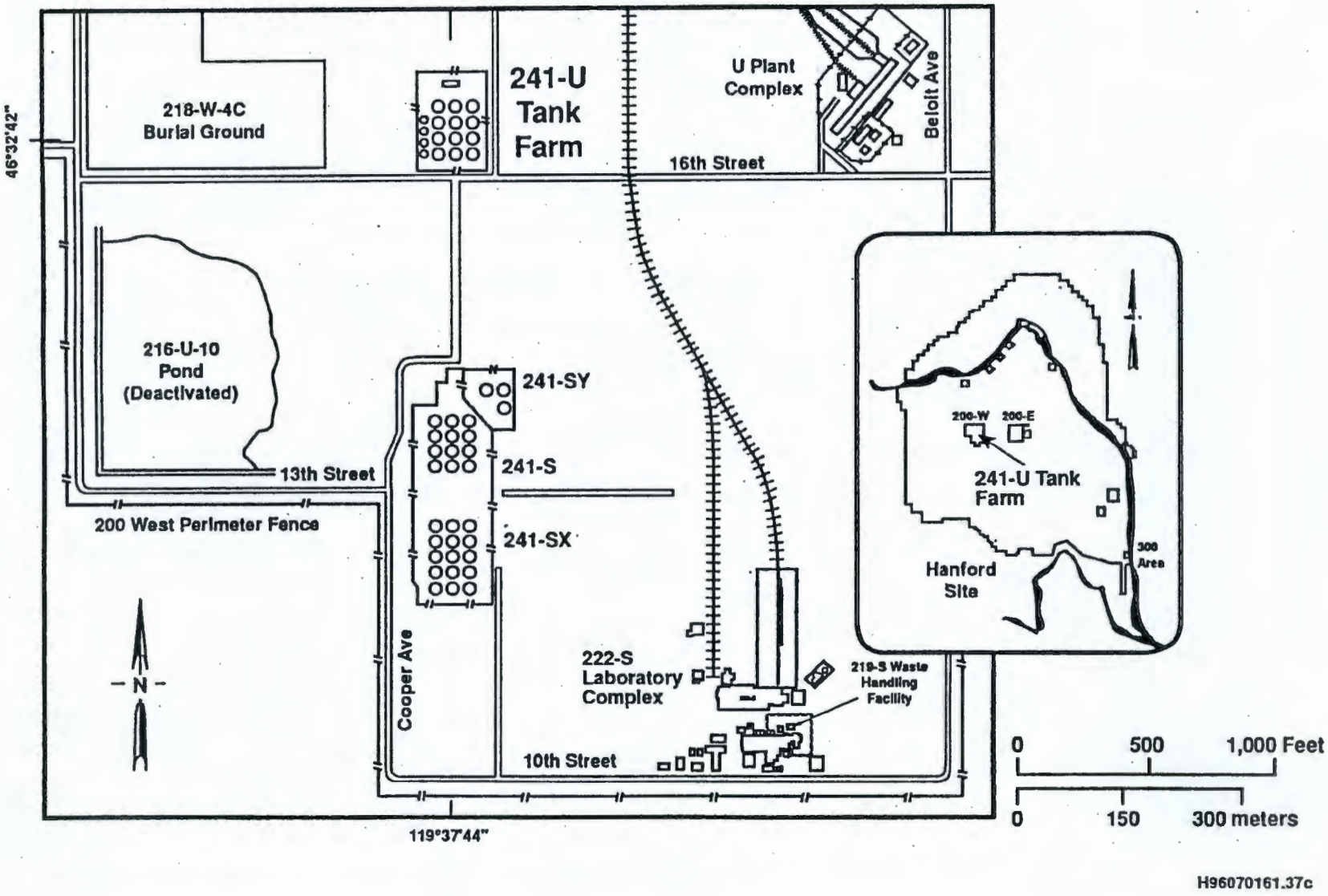
241-TX Single-Shell Tank Farm Site Plan



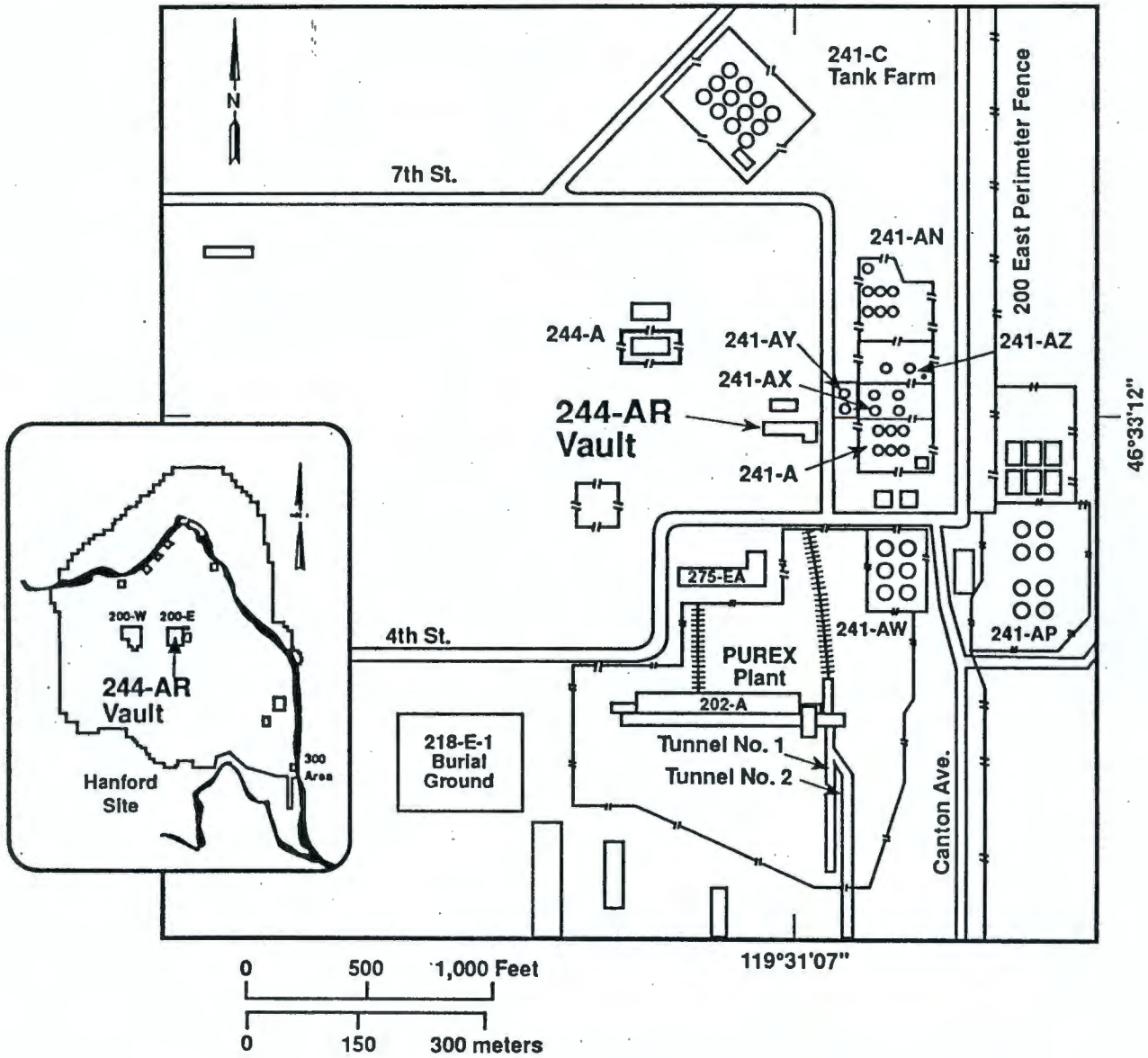
241-TY Single-Shell Tank Farm Site Plan



241-U Single-Shell Tank Farm Site Plan



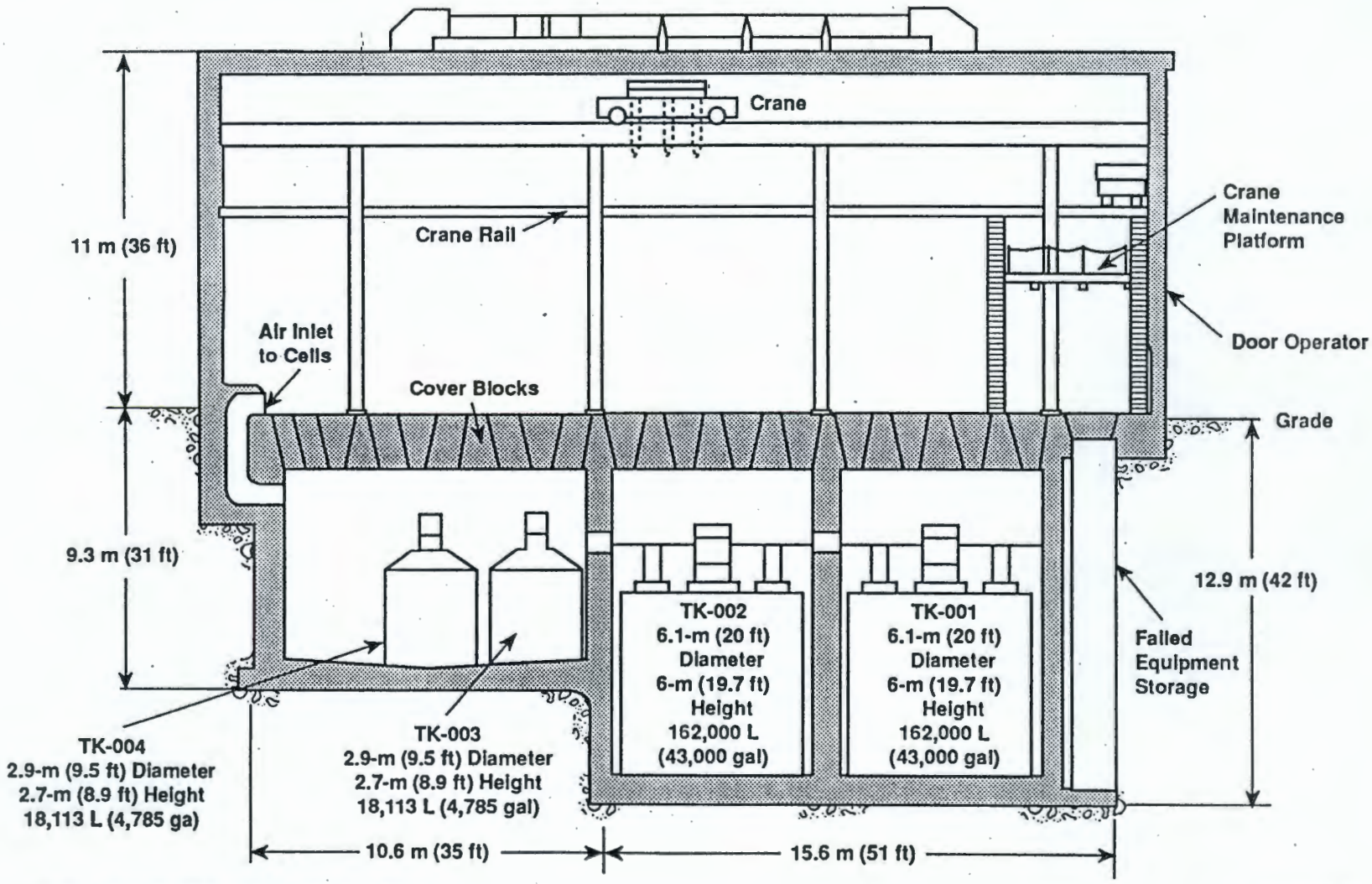
244-AR Vault
Site Plan



H96070161.35d

9713532.0696

244-AR Vault

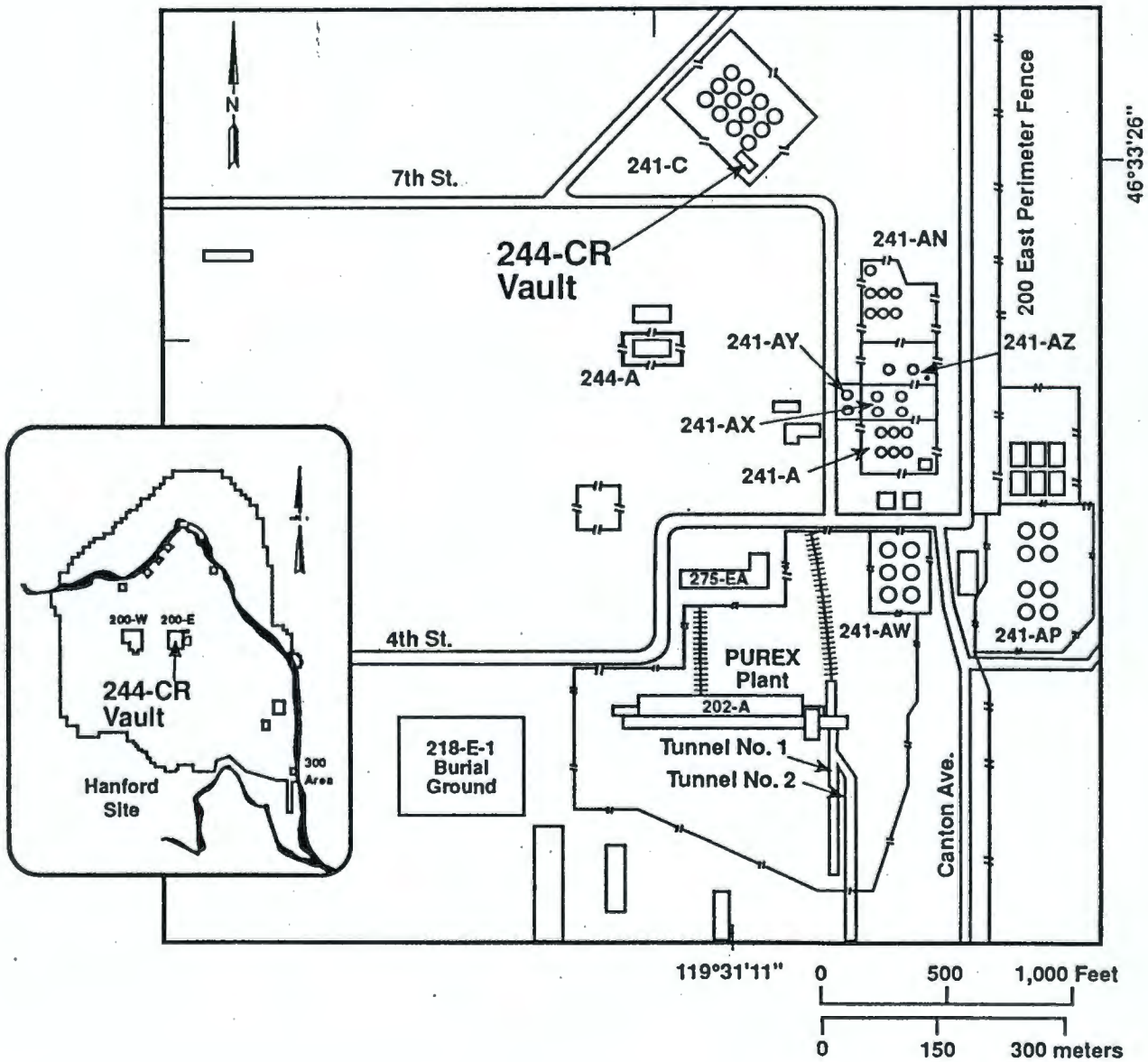


Notes: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.
To convert gallons to liters, multiply by 3.7854.

39208044.23

9713532.0697

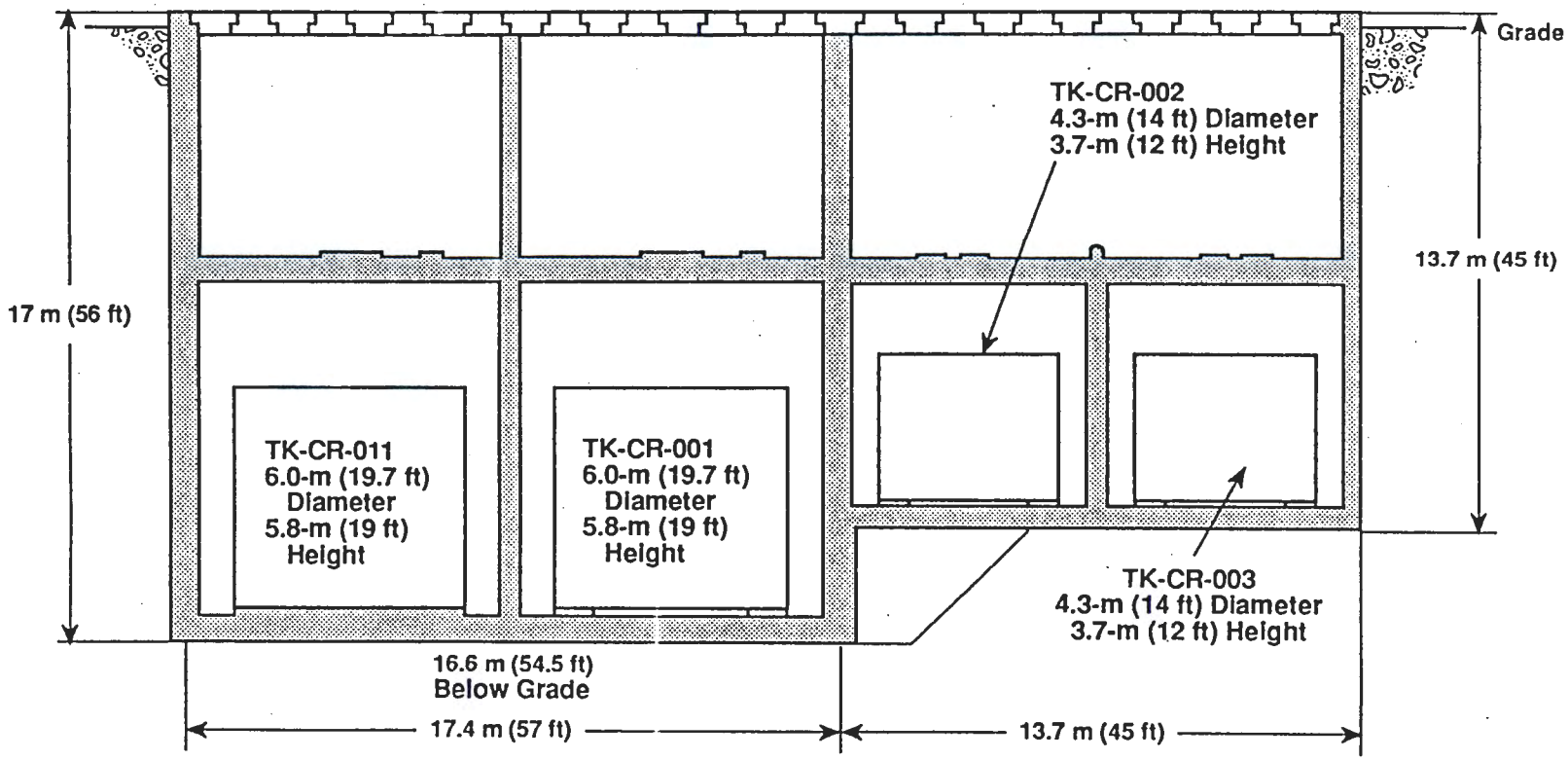
244-CR Vault Site Plan



H96070161.35e

9713532.0698

244-CR Vault



Notes: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, mulitply by 2.54.

39208044.22

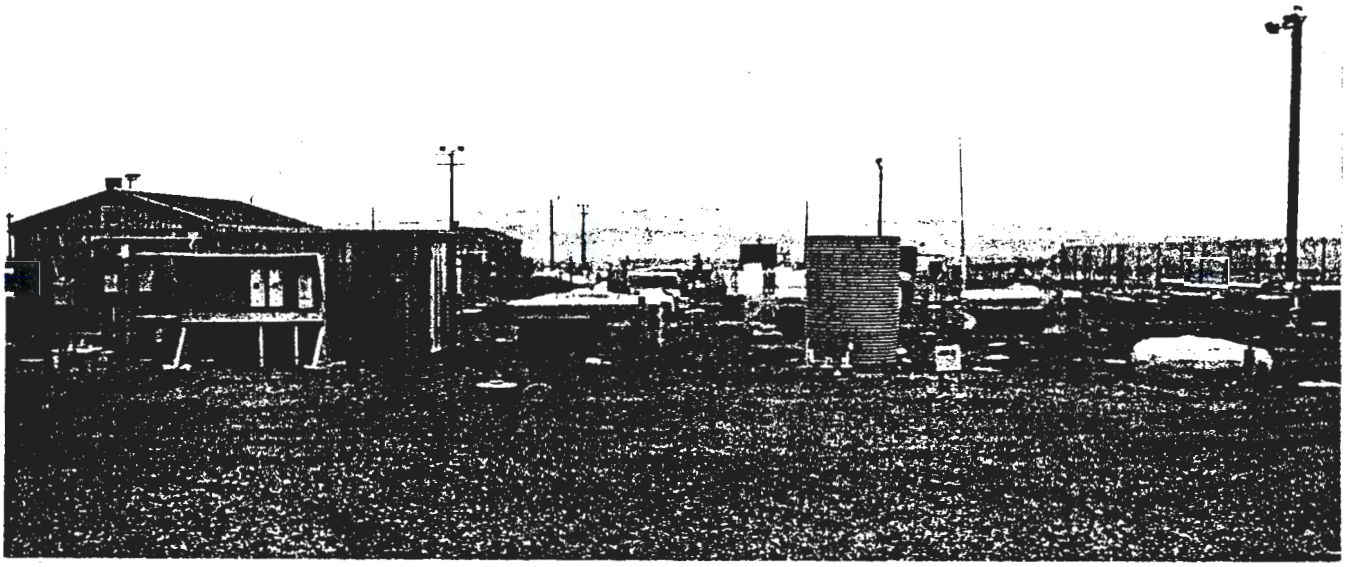
9713512.0699

241-A SINGLE-SHELL TANK FARMS

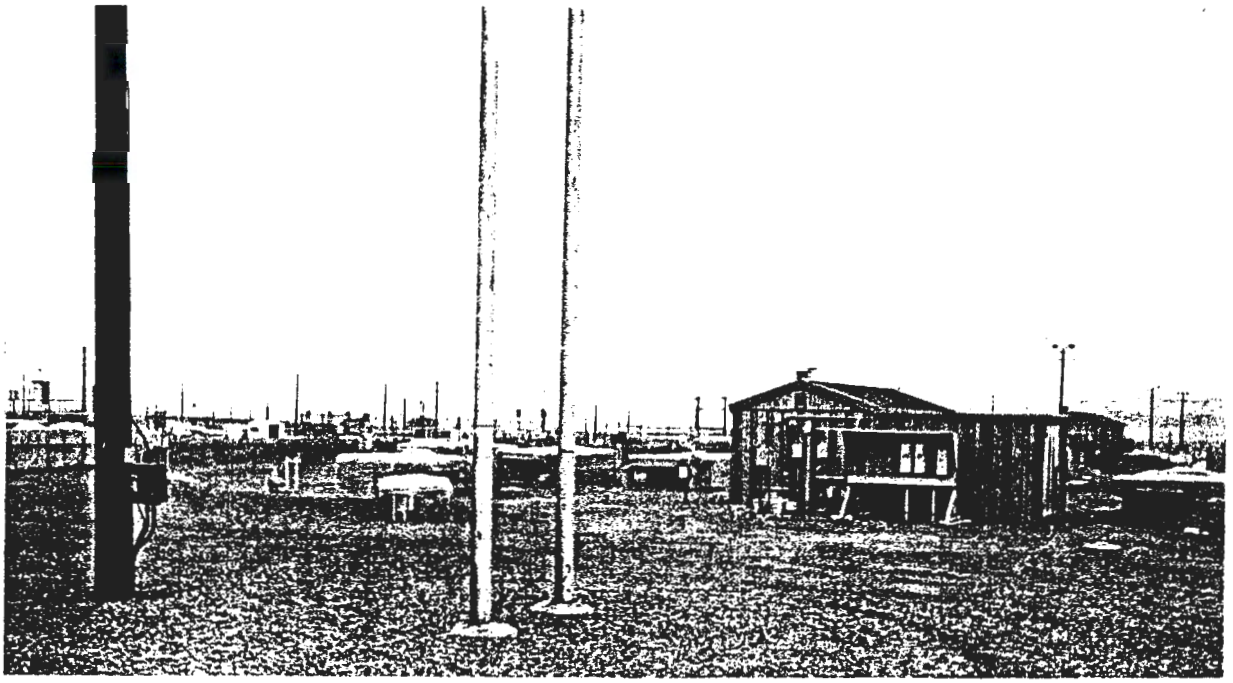
46°33'11"
119°31'02"

8800284-1CN
(PHOTO TAKEN 1988)

241-AX SINGLE-SHELL TANK FARM



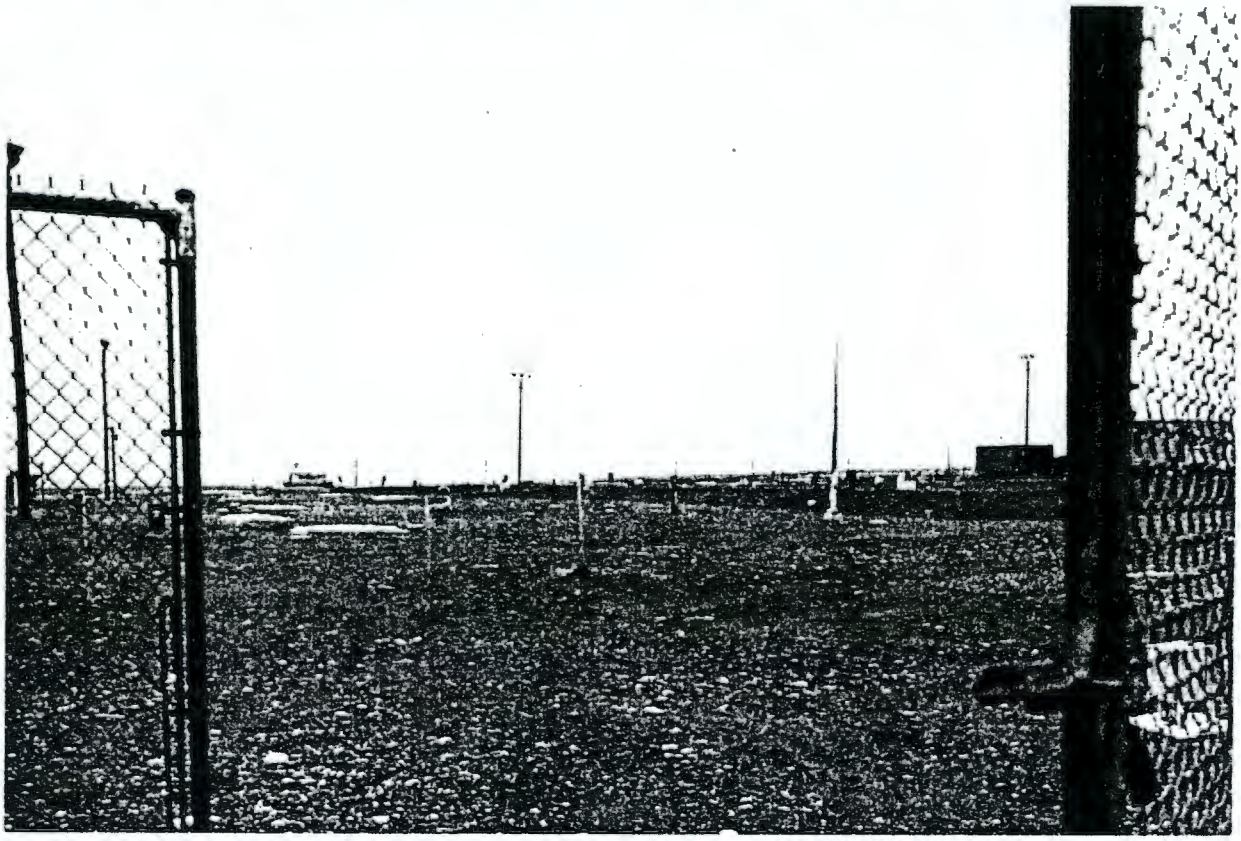
8800284-2CN
(PHOTO TAKEN 1988)



46°33'15"
119°31'02"

8800284-3CN
(PHOTO TAKEN 1988)

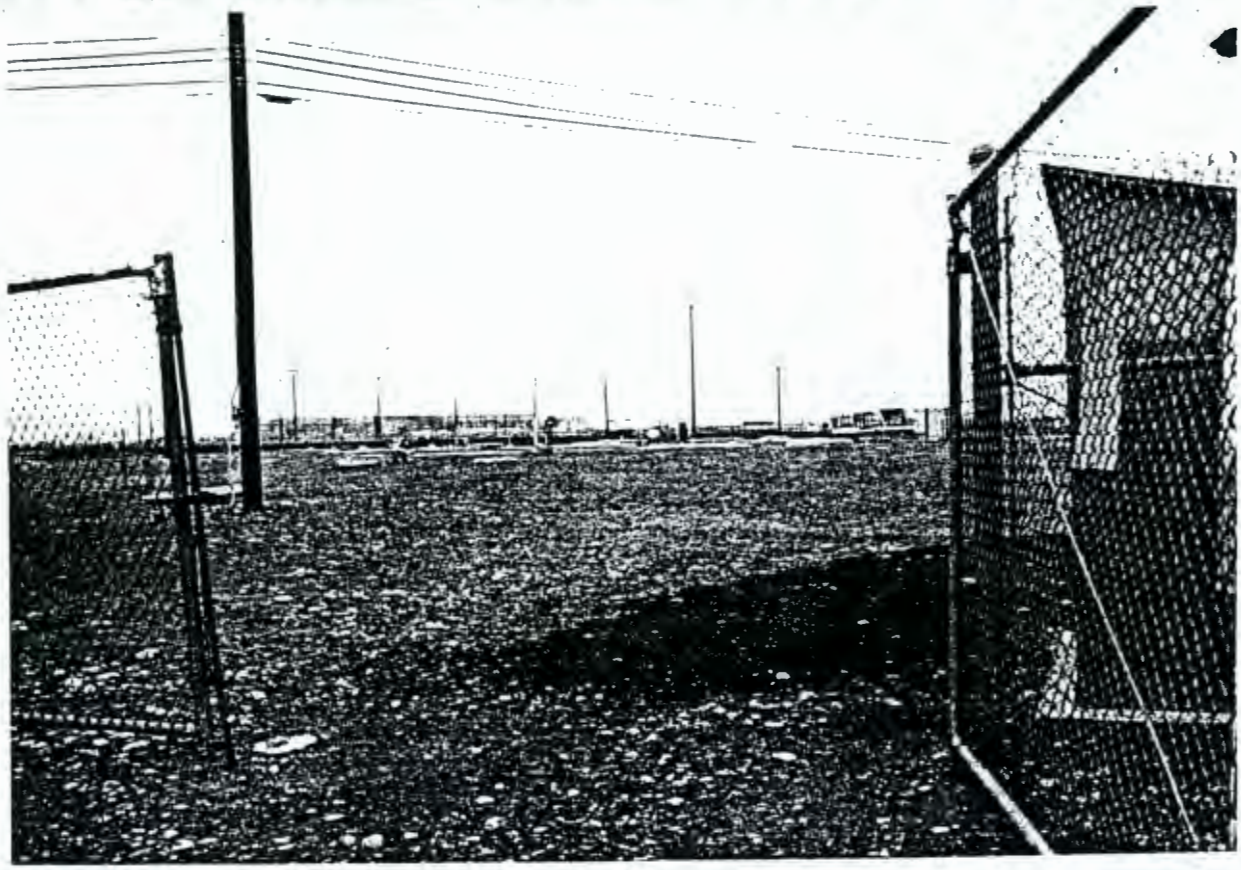
241-B SINGLE-SHELL TANK FARM



46°33'52"
119°32'14"

8800284-6CN
(PHOTO TAKEN 1988)

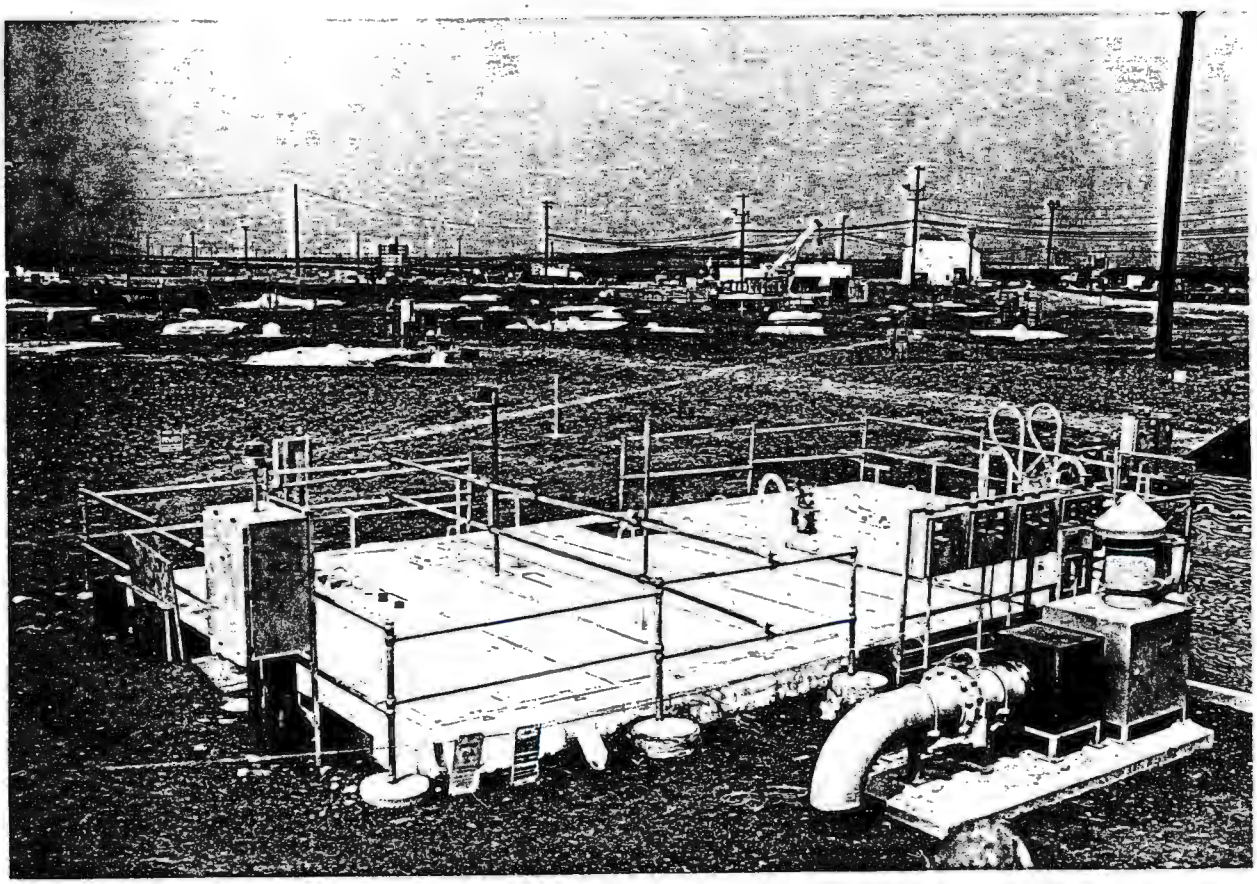
241-BX SINGLE-SHELL TANK FARM



46°33'54"
119°32'22"

8800284-7CN
(PHOTO TAKEN 1988)

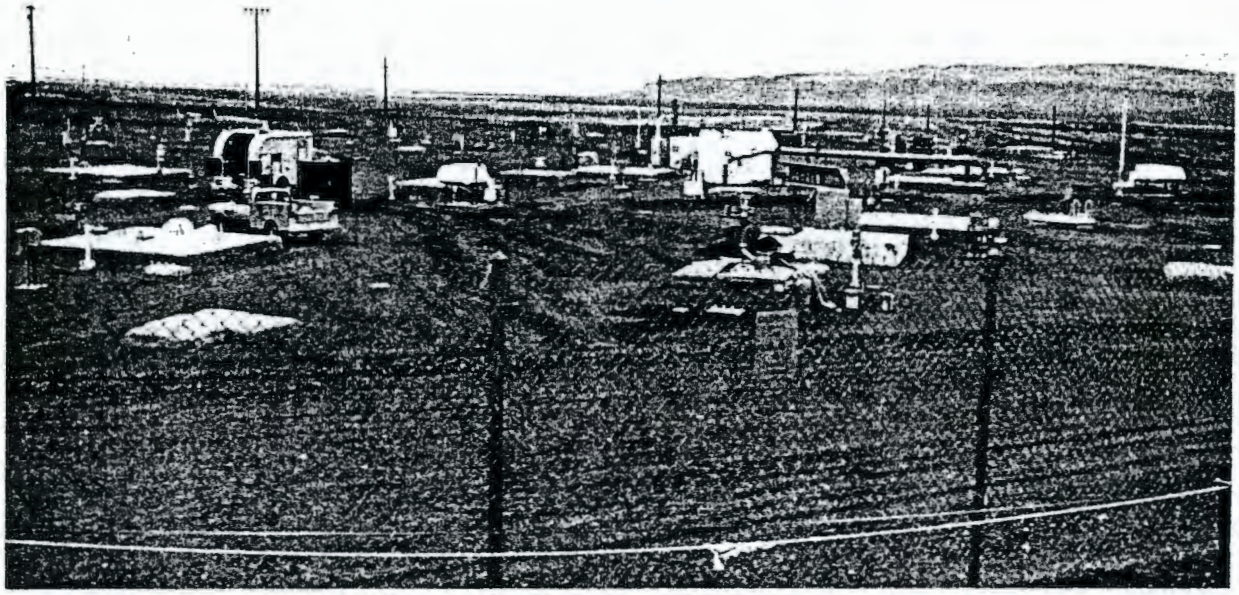
241-BY SINGLE-SHELL TANK FARM



46°33'58"
119°32'22"

96080579-27CN
(PHOTO TAKEN 1996)

241-C SINGLE-SHELL TANK FARM



46°33'27"
119°31'12"

8800284-5CN
(PHOTO TAKEN 1988)

241-S SINGLE-SHELL TANK FARM

46°33'20"
119°37'44"

96080579-3CN
(PHOTO TAKEN 1996)

241-SX SINGLE-SHELL TANK FARM

46°32'16"
119°37'44"

96080579-6CN
(PHOTO TAKEN 1996)

241-T SINGLE-SHELL TANK FARM

46°33'36"
119°37'43"

96080579-13CN
(PHOTO TAKEN 1996)

241-TX SINGLE-SHELL TANK FARM

46°33'20"
119°37'46"

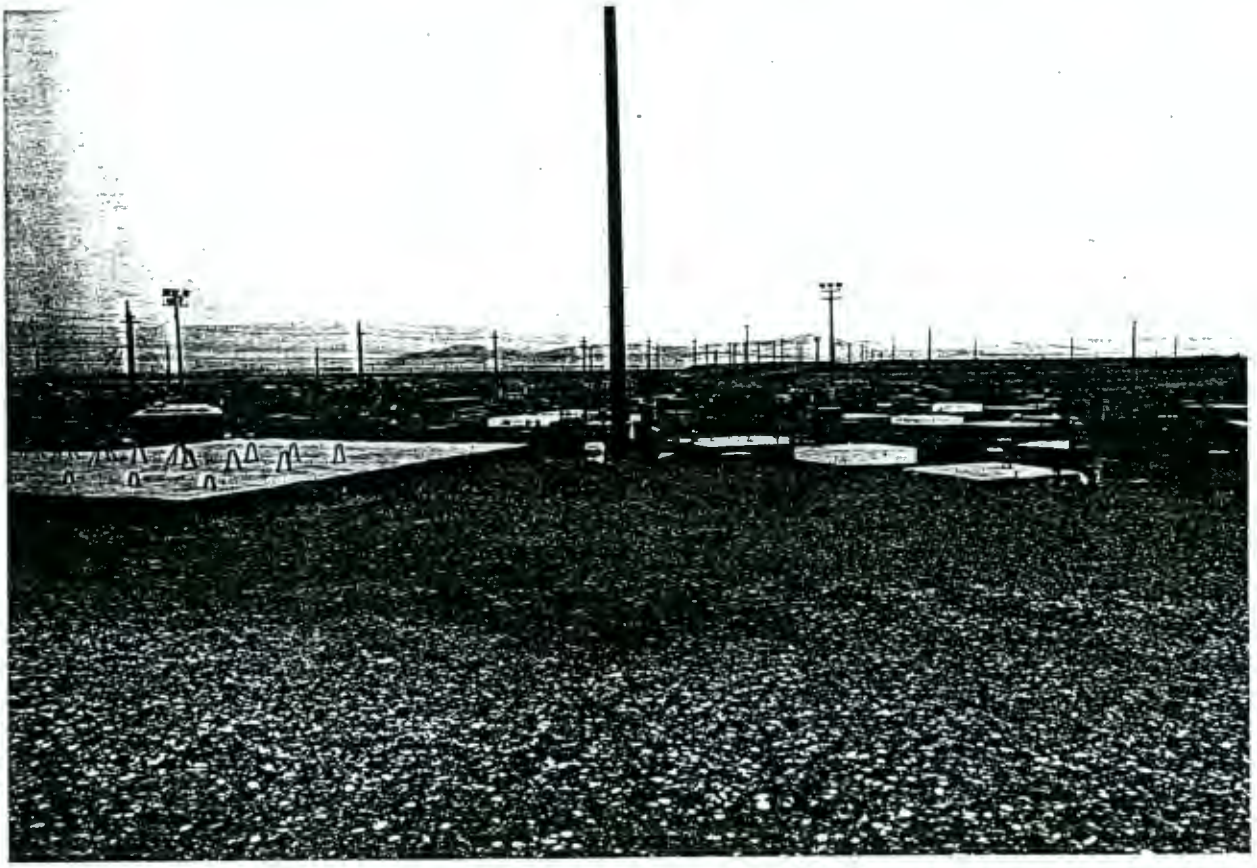
96070579-15CN
(PHOTO TAKEN 1996)

241-TY SINGLE-SHELL TANK FARM

46°33'27"
119°37'27"

96080579-18CN
(PHOTO TAKEN 1996)

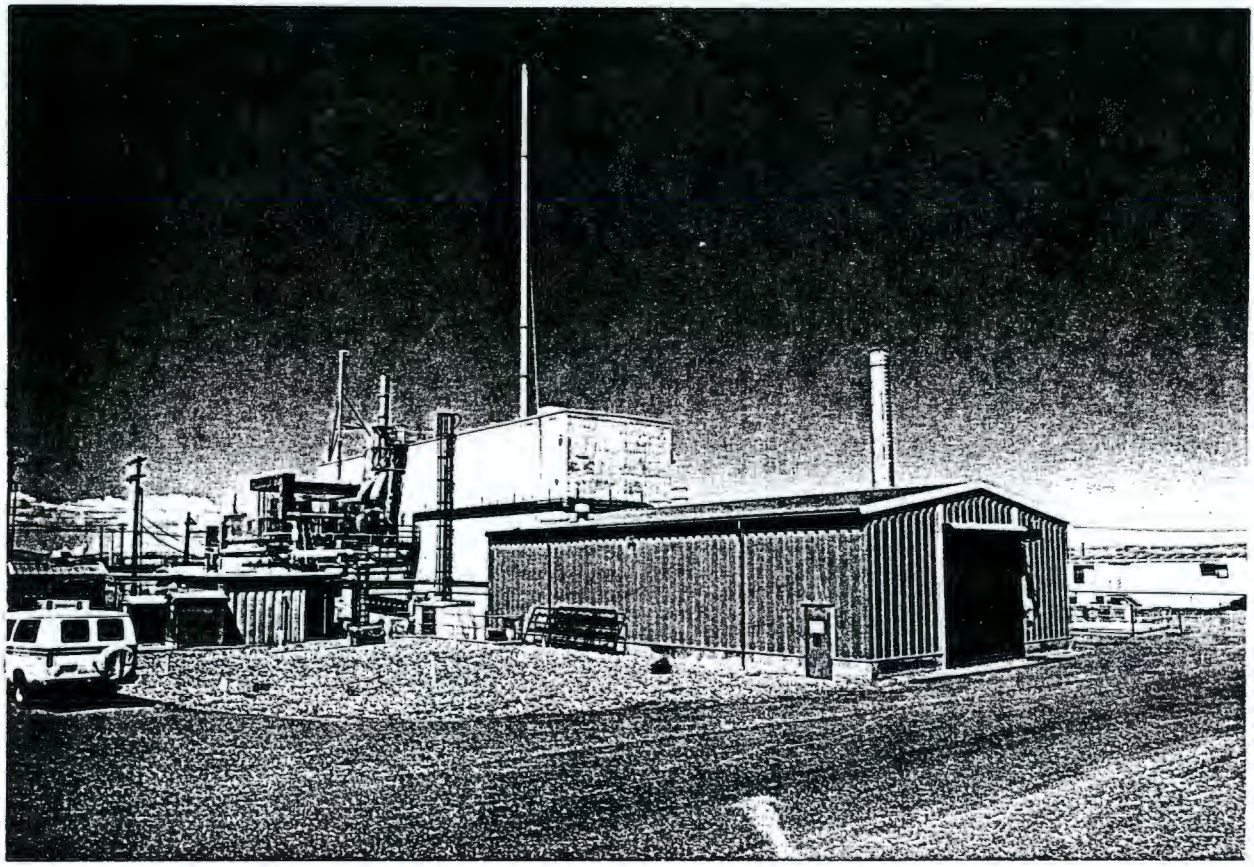
241-U SINGLE-SHELL TANK FARM



46°32'42"
119°37'44"

96080579-9CN
(PHOTO TAKEN 1996)

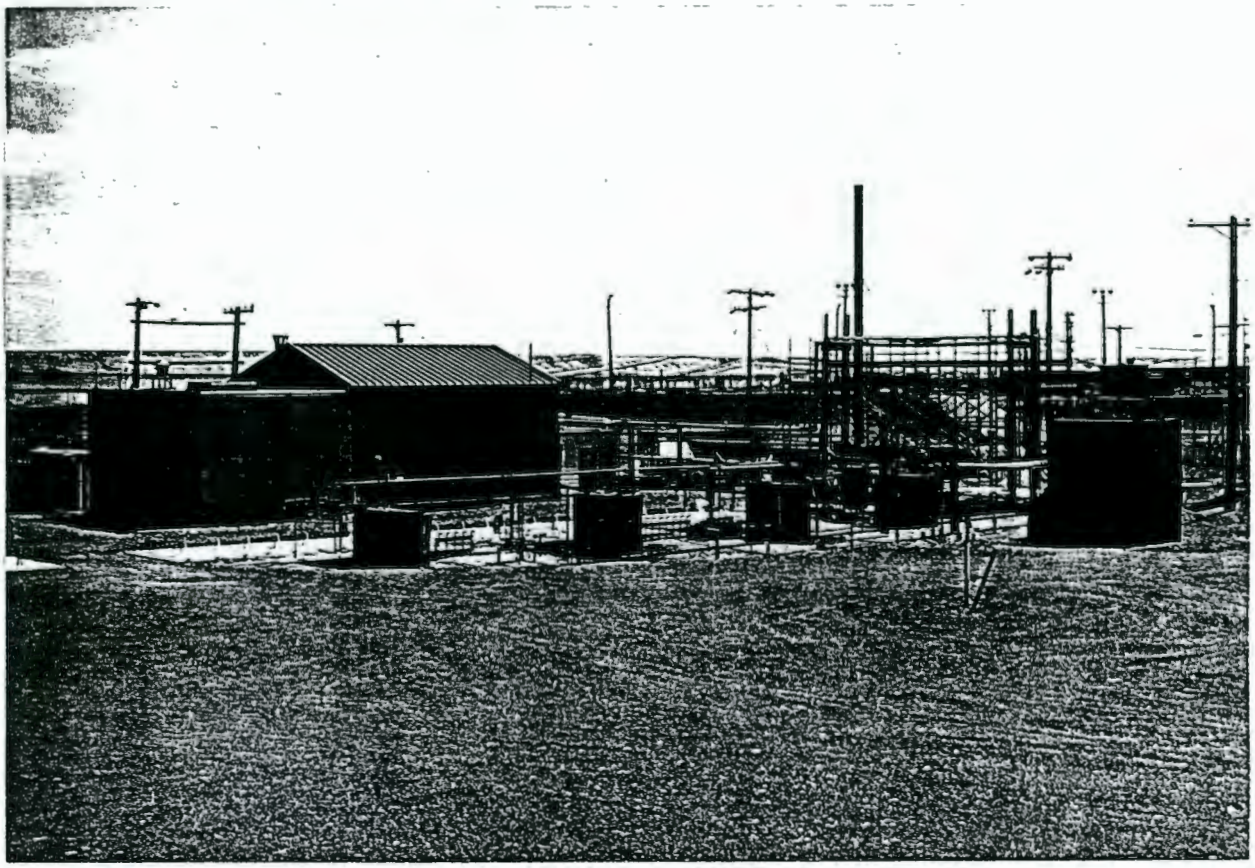
244-AR VAULTS



46°33'12"
119°31'07"

8704135-16CN
(PHOTO TAKEN 1987)

244-CR VAULTS



46°33'26"
119°31'11"

8704135-14CN
(PHOTO TAKEN 1987)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 * FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. FOR NEW FACILITIES, PROVIDE THE DATE: *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	S 0 4	794,937	L	
2				
3				
4				
5				
6				
7				
8				
9				
10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

S04

The 207-A South Retention Basin (207-A Basin), which also is known as the Process Condensate (PC) Basins 1, 2, and 3 (i.e., PC-1, PC-2, and PC-3), began operation in March of 1977. The 207-A Basin consists of three concrete cells (S04), each with a 264,979-liter (70,000-gallon) design capacity for a total capacity of 794,937 liters (210,000 gallons). All three cells were coated to prevent constituents from penetrating the concrete. The 207-A Basin was used for the interim storage of the 242-A Evaporator process condensate to allow for sampling and analysis before the condensate was discharged to the 216-A-37-1 Crib for final disposition. Discharge of 242-A Evaporator process condensate to the 207-A Basin was terminated on April 12, 1989, when it was determined that the 242-A Evaporator process condensate contained mixed waste regulated under Washington Administrative Code 173-303. The 207-A Basin was emptied and is no longer used to receive or store mixed waste. The 207-A Basin will remain out of service and will be closed. Closure activities for the 207-A Basin are in the planning phase.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*included with above*

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	F001	793,469	K	S04	Storage - Surface Impoundment
2	F002				
3	F003				
4	F004				
5	F005				
6	WT02				Included With Above
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The 207-A Basin was taken out of service on April 12, 1989, emptied, and no longer receives or stores mixed waste. A description of the mixed waste residue at the 207-A Basin follows.

The 242-A Evaporator process condensate is regulated as mixed waste because the waste is derived from a waste containing spent halogenated and nonhalogenated solvents (F001, F002, F003, F004, and F005), and for the toxicity of ammonia (WT02, state-only, toxic, dangerous waste). The estimated annual quantity of dangerous waste (Section IV.B.) of 793,469 kilograms (1,749,300 pounds) represents the maximum operating capacity of the 207-A Basin, and a specific gravity for the waste of 1.0, when the basin was operational.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D Wagoner

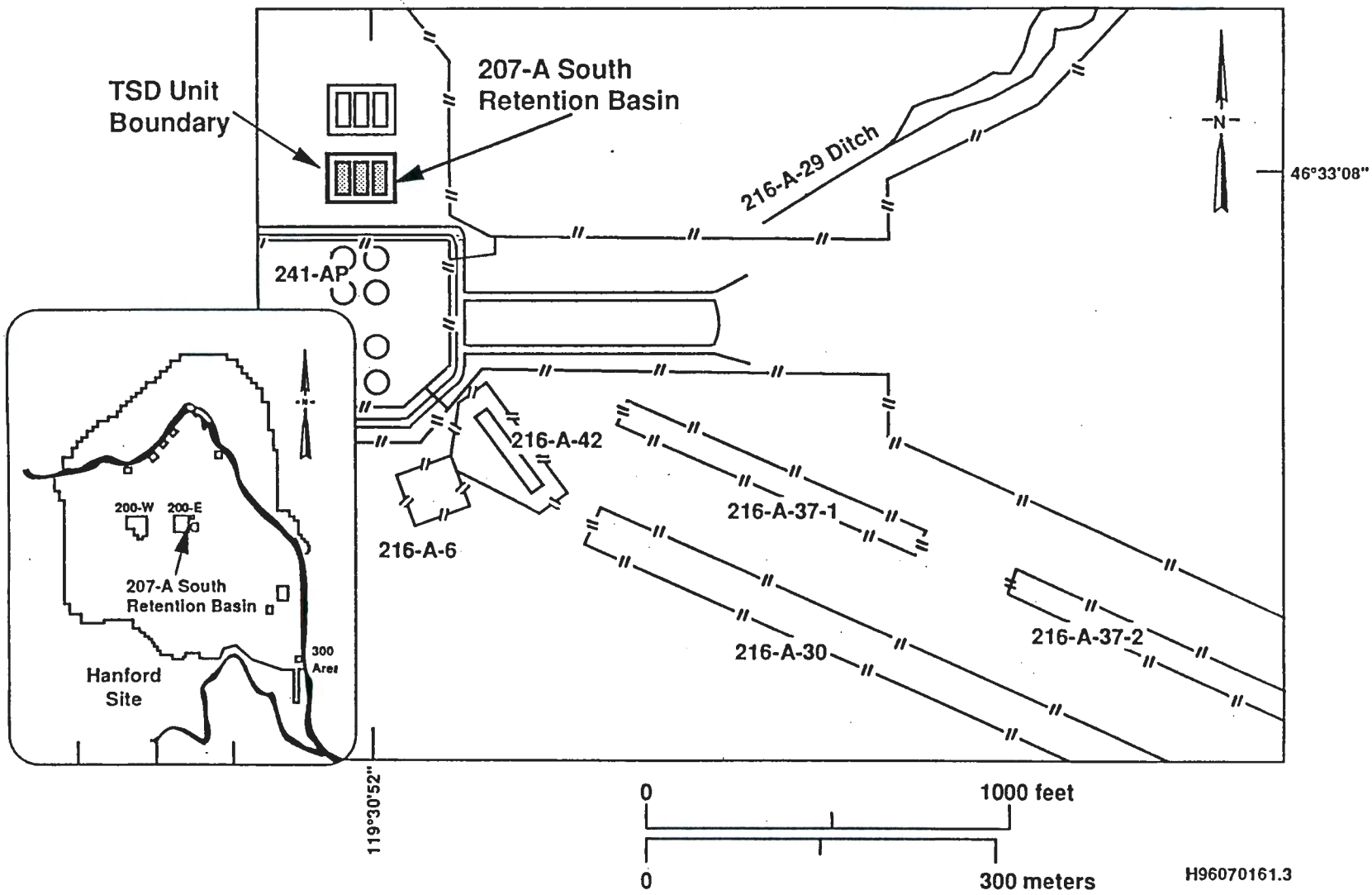
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/13/96
Date

207-A South Retention Basin
Site Plan



207-A SOUTH RETENTION BASIN

46°33'08"
119°30'52"

93060005-12CN
(PHOTO TAKEN 1993)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate data)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 *FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 4	73,815,000	L		7				
2	T 0 2	73,815,000	L		8				
3					9				
4					10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

S04 T02

The Liquid Effluent Retention Facility (LERF) began waste management operations in April of 1994. The LERF was constructed under interim status in accordance with Washington Administrative Code (WAC) 173-303. The LERF provides interim storage and treatment of the 242-A Evaporator process condensate and dilute aqueous waste streams from other Hanford Facility generating units until further treatment is conducted at the 200 Area Effluent Treatment Facility (ETF).

The LERF is a retention basin consisting of three cells (surface impoundments) (S04). Treatment (T02), consisting of flow and pH equalization, takes place in accordance with the treatment surface impoundment exemption (Title 40 Code of Federal Regulations, Part 268.4). Each cell has a design capacity of 24,605,000 liters (6,500,000 gallons), with a total capacity of 73,815,000 liters (19,500,000 gallons).

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*included with above*

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D001	73,812,000	K	S04	T02			Storage/Treatment -
2	through							Surface Impoundment
3	D011							
4	D018							
5	D019							
6	D022							
7	D028							
8	through							
9	D030							
10	D033							
11	through							
12	D036							
13	D038							
14	through							
15	D041							
16	D043							
17	F001							
18	through							
19	F005							
20	F039							
21	WT01							
22	WT02							Included With Above
23								
24								
25								
26								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The LERF stores and treats the 242-A Evaporator process condensate and dilute aqueous waste streams from other Hanford Facility generating units until further treatment is conducted at the ETF. A description of the dangerous waste managed at the LERF is as follows.

The 242-A Evaporator process condensate is regulated as a mixed waste because of the "derived from" rule from treating Double-Shell Tank System waste. Double-Shell Tank System waste is a listed waste due to the presence of spent halogenated and nonhalogenated solvents (F001, F002, F003, F004, and F005). The LERF also could receive other waste streams from onsite remediation and waste management activities, which could carry the F001 through F005 dangerous waste numbers, and have the potential presence of characteristic waste (D001 through D011, D018, D019, D022, D028 through D030, D033 through D036, D038 through D041, and D043). The LERF could receive multi-source leachate (F039), which is derived from nonspecific source waste F001 through F005. The process condensate and/or other influent waste streams also could display the state-only criteria of toxicity (WT01 or WT02).

The Estimated Annual Quantity of Dangerous Waste (Section IV.B.) of 73,812,000 kilograms (162,728,000 pounds) per year is based on approximately 73,815,000 liters (19,500,000 gallons) of waste, or the total capacity of the LERF.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

Date

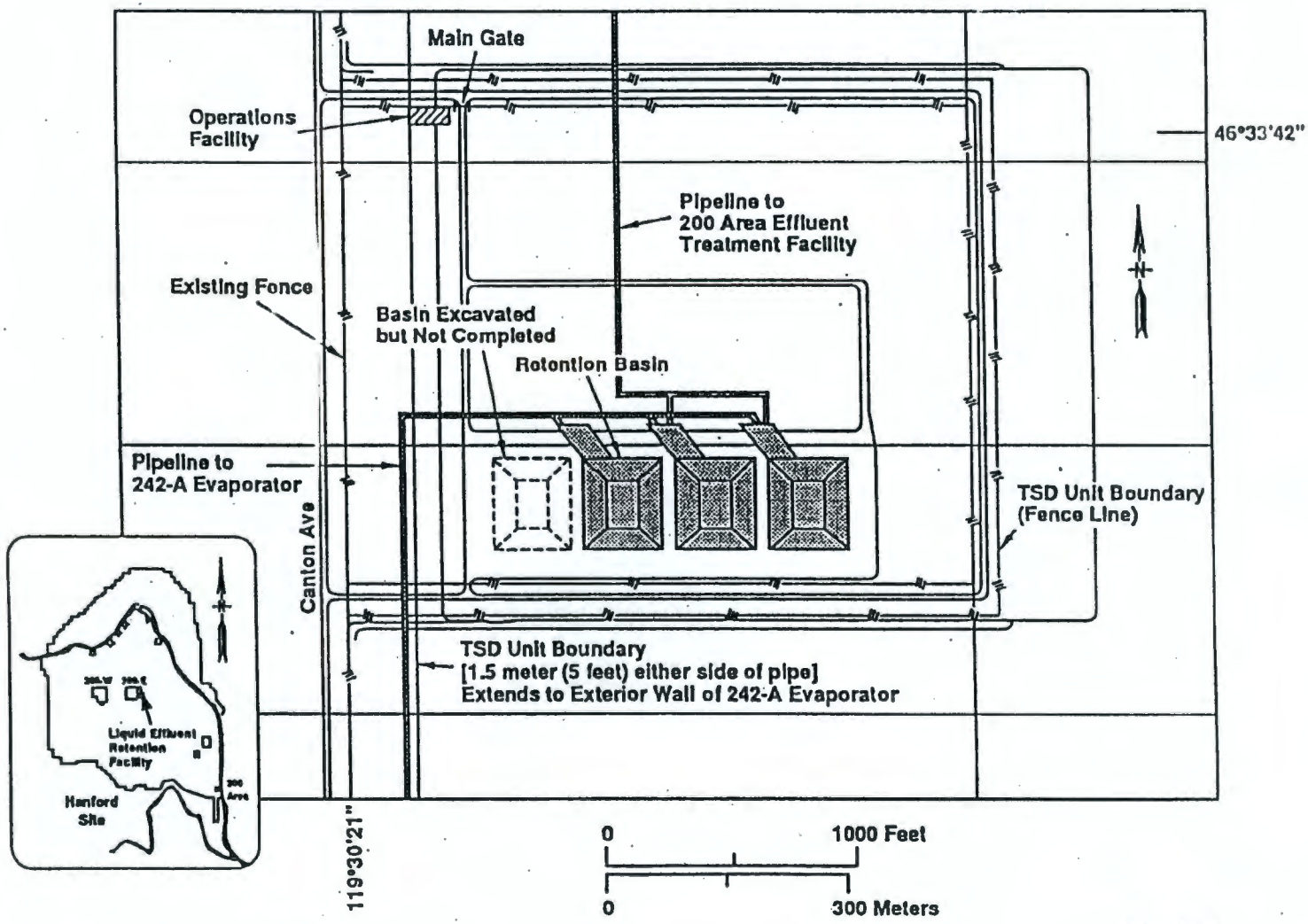
9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

Date

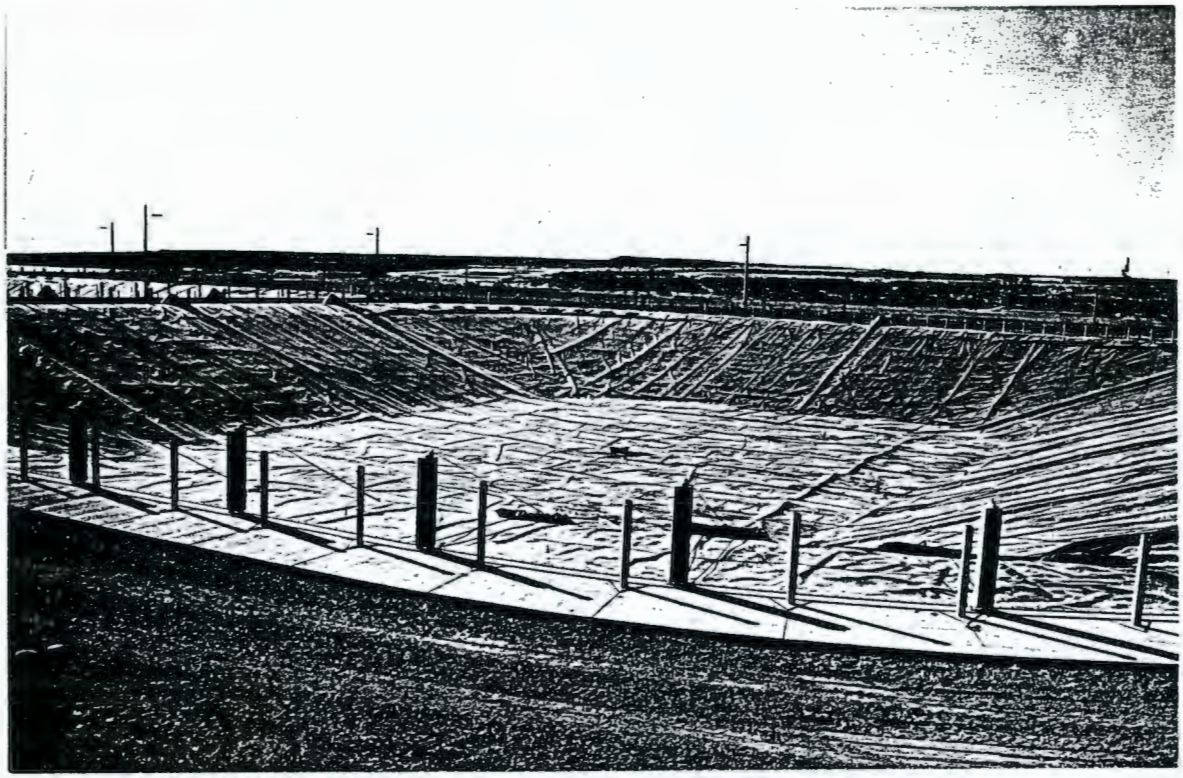
9713532.0726

Liquid Effluent Retention Facility Site Plan



Note: To convert feet to meters, multiply by 0.3048.

LIQUID EFFLUENT RETENTION FACILITY



TYPICAL BASIN

46°33'42"
119°30'21"

92081260-9CN
(PHOTO TAKEN 1992)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate data)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

* FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	D 8 1	174	F		7				
2					8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

Refer to the following page.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
X-1	K054	900	P	T03 D80	
X-2	D002	400	P	T03 D80	
X-3	D001	100	P	T03 D80	
X-4	D002			T03 D80	*Included with above*

CONTINUE ON PAGE 3

FORM 3 DANGEROUS WASTE PERMIT APPLICATION
U.S. ENVIRONMENTAL PROTECTION AGENCY/STATE IDENTIFICATION NUMBER WA7890008967

Section III.C., Description of Process Codes listed in Section III.a.

D81

The Low-Level Burial Grounds (LLBG) began waste management operations in January of 1960. The LLBG comprise a landfill disposal unit (D81) and cover a total area of approximately 225 hectares. The landfill is divided into eight burial grounds. Six burial grounds are located in the 200 West Area and two in the 200 East Area, as depicted on the attached drawings.* The LLBG consist of lined and unlined trenches of various sizes and depths. All mixed waste destined for disposal in lined trenches will meet land disposal restriction requirements. The lined trenches consist of a double-liner leachate collection and removal system or use alternative technologies such as high-integrity packaging. The use of unlined trenches for disposal of remote-handled mixed waste requires Ecology approval on a case-by-case basis. This notification must demonstrate that disposing of remote-handled mixed waste in unlined trenches is in the best interest to protect human health and the environment.

The process design capacity for mixed waste in the LLBG is 174 hectare-meters (2,275,819 cubic yards) of which 150 hectare-meters (1,961,913 cubic yards) is dedicated solely for the disposal of reactor compartment disposal packages.

* The regulated areas defined in the attached drawings are based on the effective date of November 23, 1987 when the state of Washington first received authorization to regulate mixed waste from the U.S. Environmental Protection Agency (52 Federal Register 35556). This permit application is being submitted with the understanding that application of the state's mixed waste program to federal facilities in the 1987 timeframe currently is being discussed by the Washington State Department of Ecology and the U.S. Department of Energy. When these discussions are completed, and if necessary, a revised Part A, Form 3, will be submitted consistent with the outcome of these discussions.

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D001	160,000,000	K	D81	Disposal
2	through				
3	D043				
4	WT01				
5	WT02				
6	WP01				
7	WP02				
8	WP03				
9	F001				
10	through				
11	F005				
12	F028				
13	F039				
14	W001				
15	U001				
16	through				
17	U012				
18	U014				
19	through				
20	U039				
21	U041				
22	through				
23	U053				
24	U055				
25	through				
26	U064				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: W A 7 8 9 0 0 0 8 9 8 7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	U066		K	D81	Disposal (Continued)
2	through				
3	U099				
4	U101				
5	U102				
6	U103				
7	U105				
8	through				
9	U174				
10	U176				
11	through				
12	U194				
13	U196				
14	U197				
15	U200				
16	through				
17	U223				
18	U225				
19	through				
20	U228				
21	U232				
22	through				
23	U240				
24	U243				
25	through				
26	U249				

CONTINUE ON REVERSE

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U328		K	D81	Disposal (Continued)
2	U353				
3	U359				
4	P001				
5	through				
6	P018				
7	P020				
8	through				
9	P024				
10	P026				
11	through				
12	P031				
13	P033				
14	P034				
15	P036				
16	through				
17	P051				
18	P054				
19	P056				
20	through				
21	P060				
22	P062				
23	through				
24	P078				
25	P081				
26	P082				

CONTINUE ON REVERSE

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	P084		K	D81	Disposal (Continued)
2	P085				
3	P087				
4	P088				
5	P089				
6	P092				
7	through				
8	P099				
9	P101				
10	through				
11	P116				
12	P118				
13	through				
14	P123				Included With Above
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

CONTINUE ON REVERSE

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The mixed waste managed in the LLBG consists of toxicity characteristic waste (D001 through D043), state-only waste (WT01, WT02, WP01, WP02, and WP03), and listed waste from nonspecific sources (F001 through F005 and F039). Multi-source leachate (F039) is included as a waste derived from nonspecific source waste F001 through F005; however, future alternatives for management of leachate or other regulatory pathways could allow for the eventual disposal of other listed waste that includes all "U", "P", and other "F" dangerous waste numbers. The reactor compartments in the 218-E-12B Burial Ground contain shielding constructed of metallic lead (D008).

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

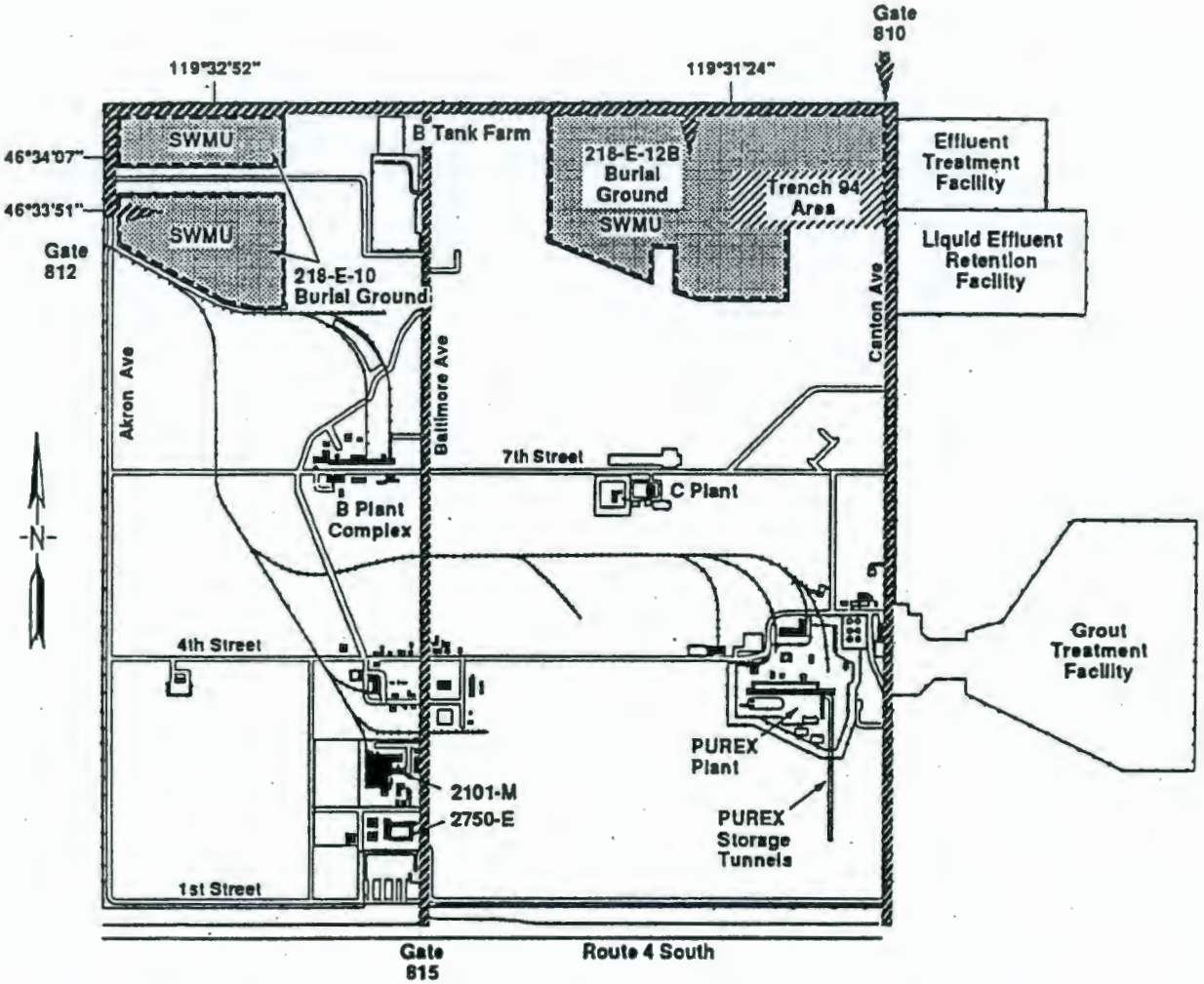
John D. Wagoner

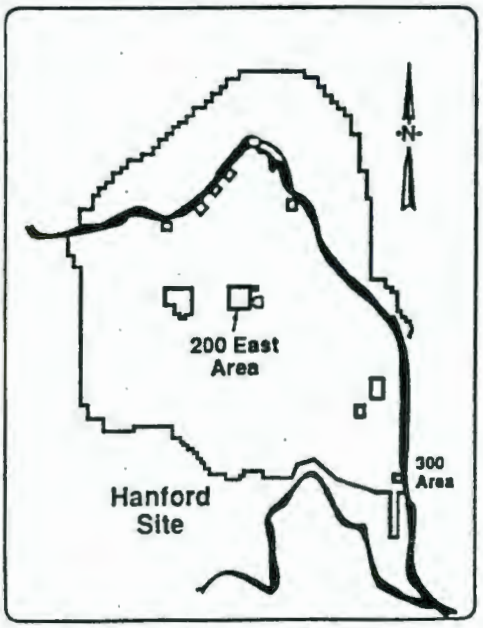
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/13/96
Date





Regulated Burial Grounds

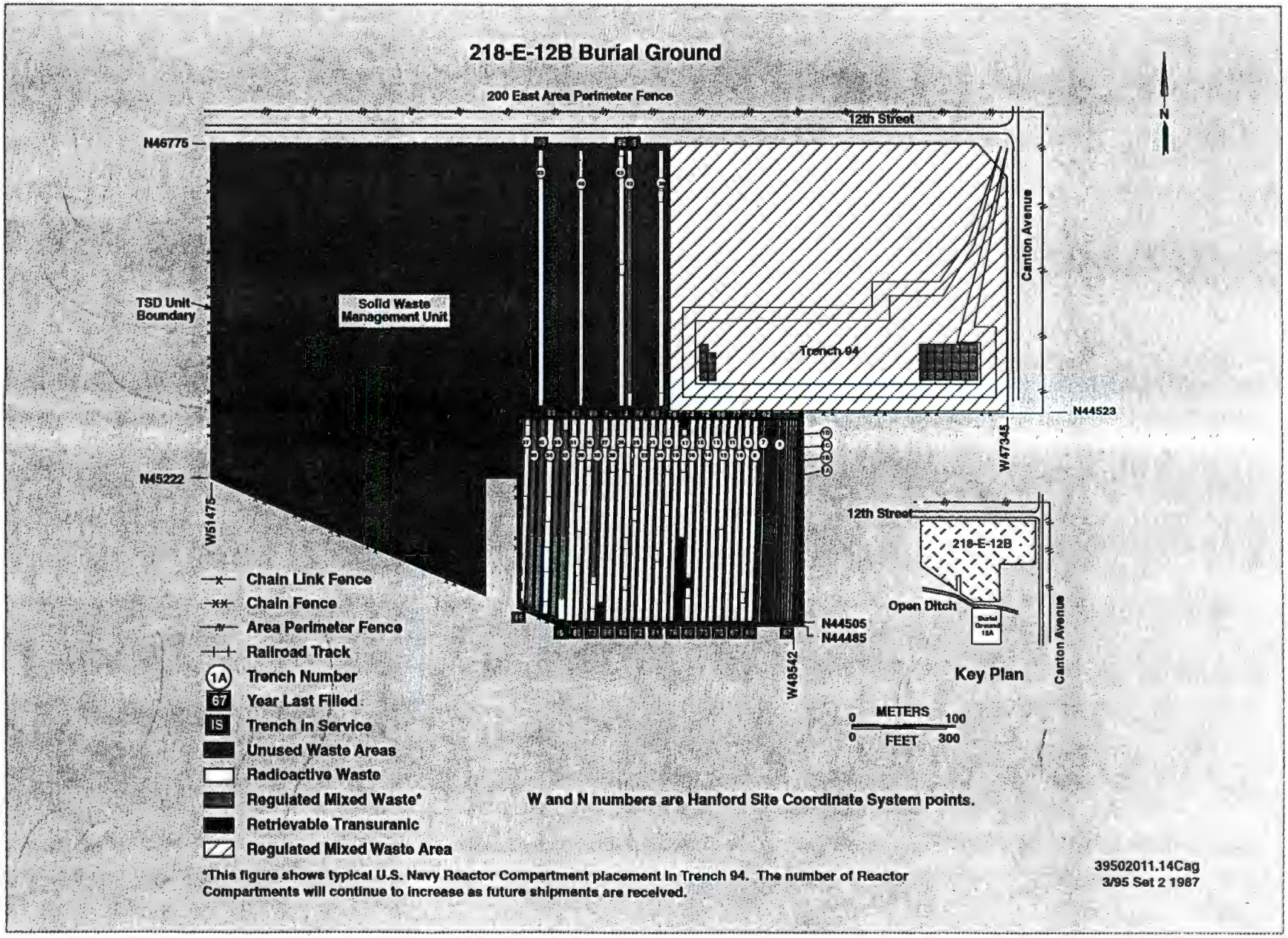
SWMU (Solid Waste Management Unit)

Waste Routes

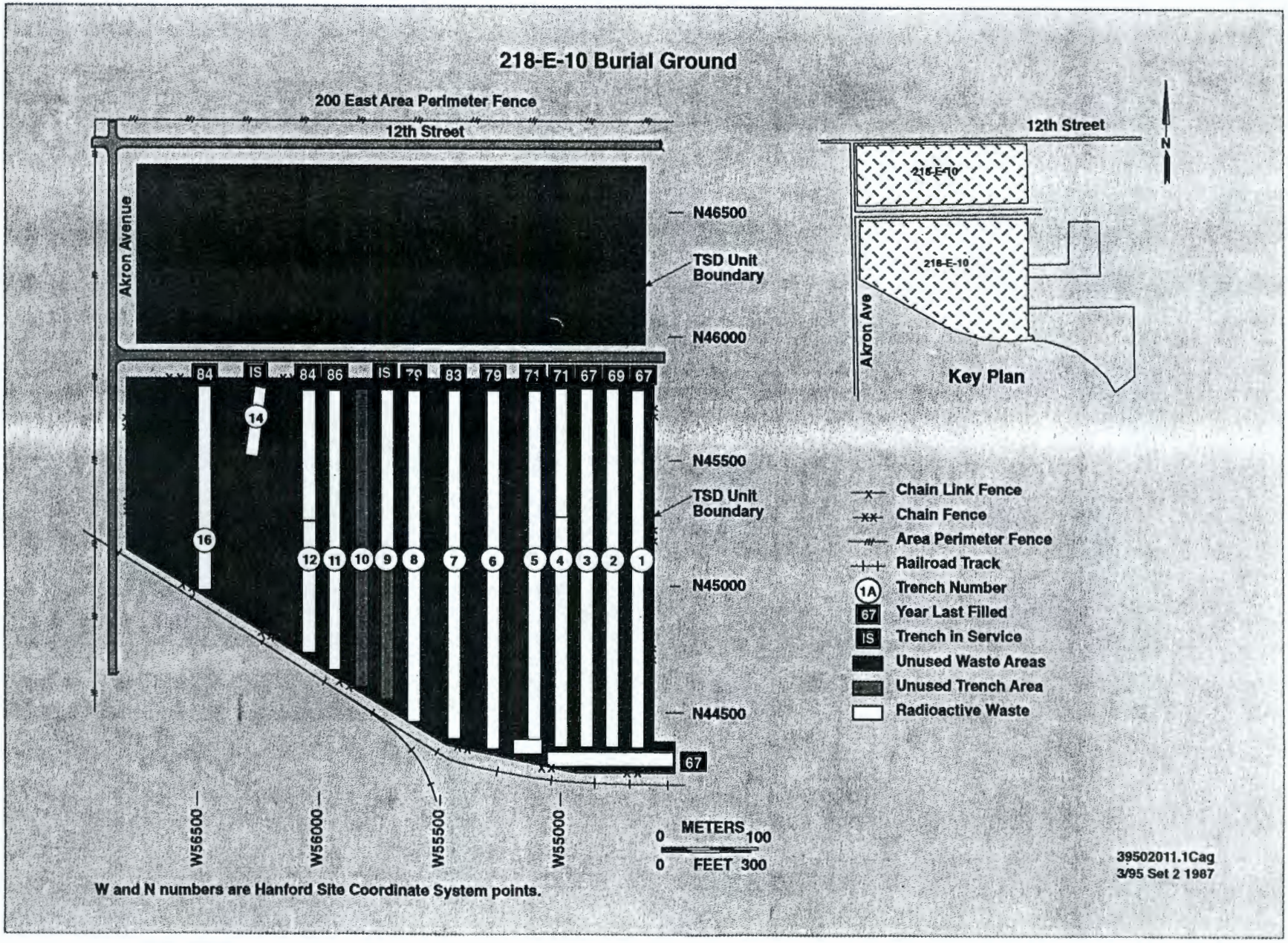
Note: TSD Unit boundaries are defined by dashed lines.

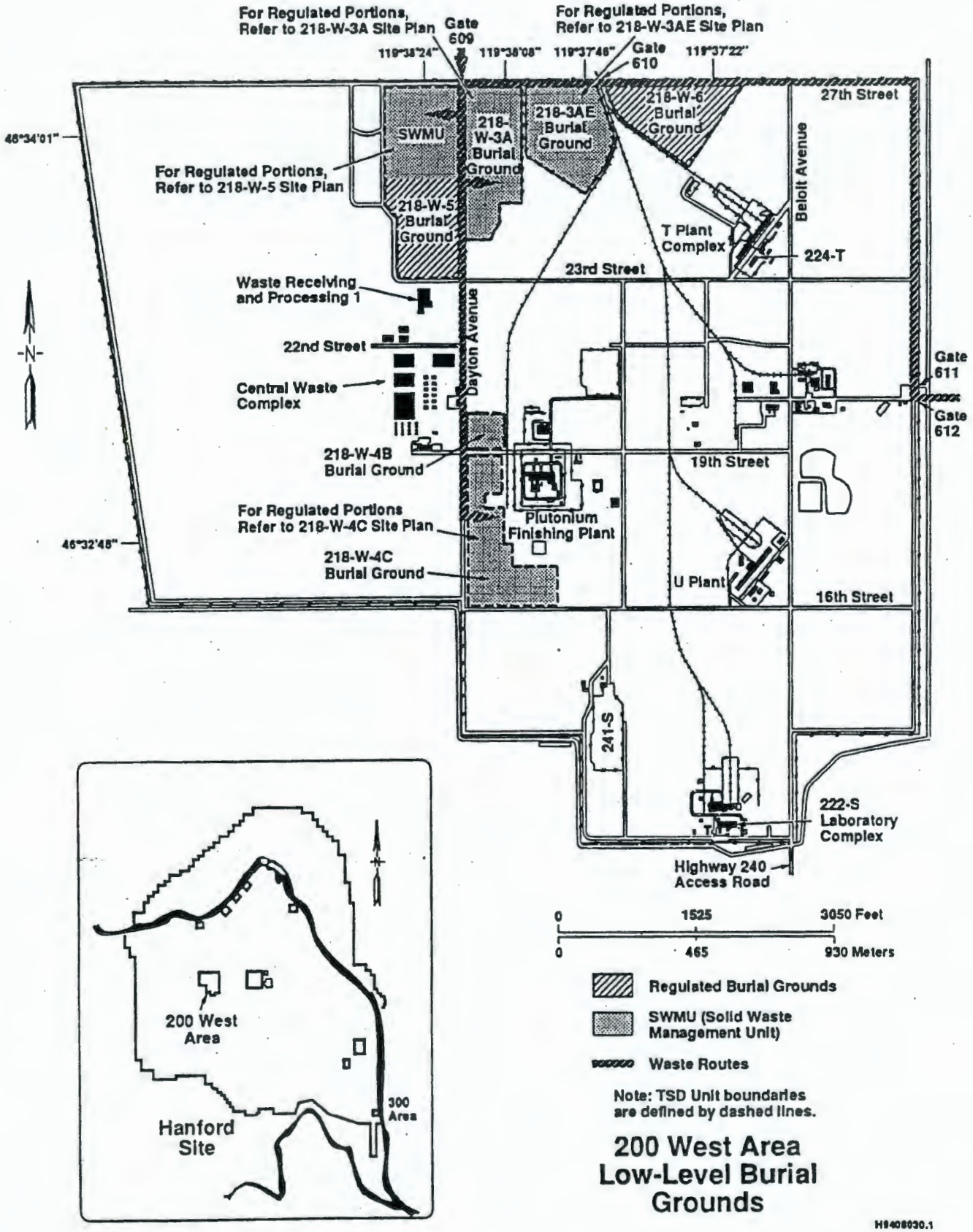
200 East Area Low-Level Burial Grounds

39407118.2a

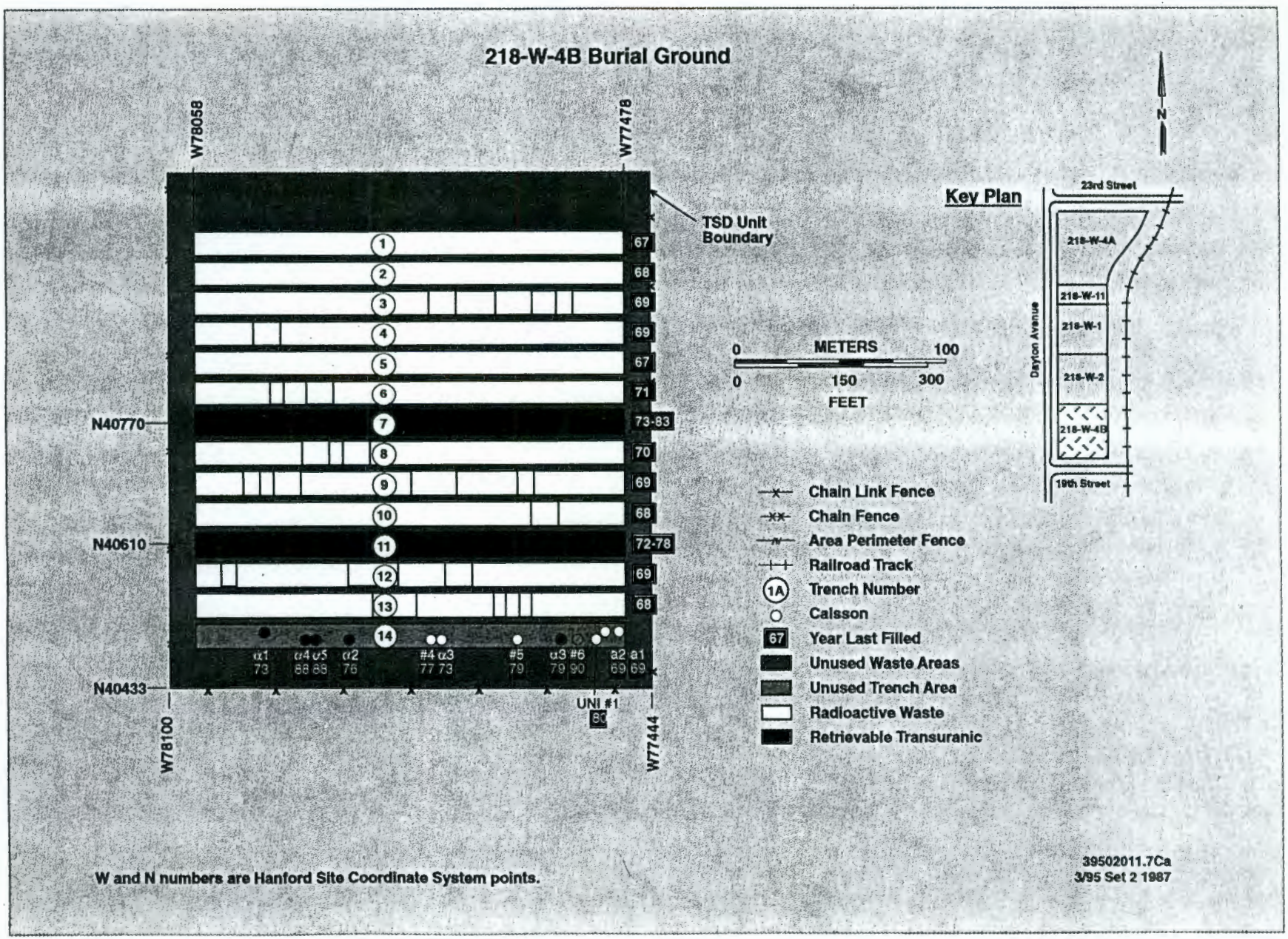

218-E-12B Burial Ground
200 East Area Perimeter Fence
12th Street
N46775
TSD Unit Boundary
Solid Waste Management Unit
Trench 94
Canton Avenue
N44523
W47345
N45222
W51475
12th Street
218-E-12B
Open Ditch
Burial Ground 18A
Canton Avenue
N44505
N44485
W48542
Key Plan
0 METERS 100
0 FEET 300
Chain Link Fence
Chain Fence
Area Perimeter Fence
Railroad Track
1A Trench Number
67 Year Last Filled
IS Trench In Service
Unused Waste Areas
Radioactive Waste
Regulated Mixed Waste*
Retrievable Transuranic
Regulated Mixed Waste Area
W and N numbers are Hanford Site Coordinate System points.
*This figure shows typical U.S. Navy Reactor Compartment placement in Trench 94. The number of Reactor Compartments will continue to increase as future shipments are received.
39502011.14Cag
3/95 Set 2 1987

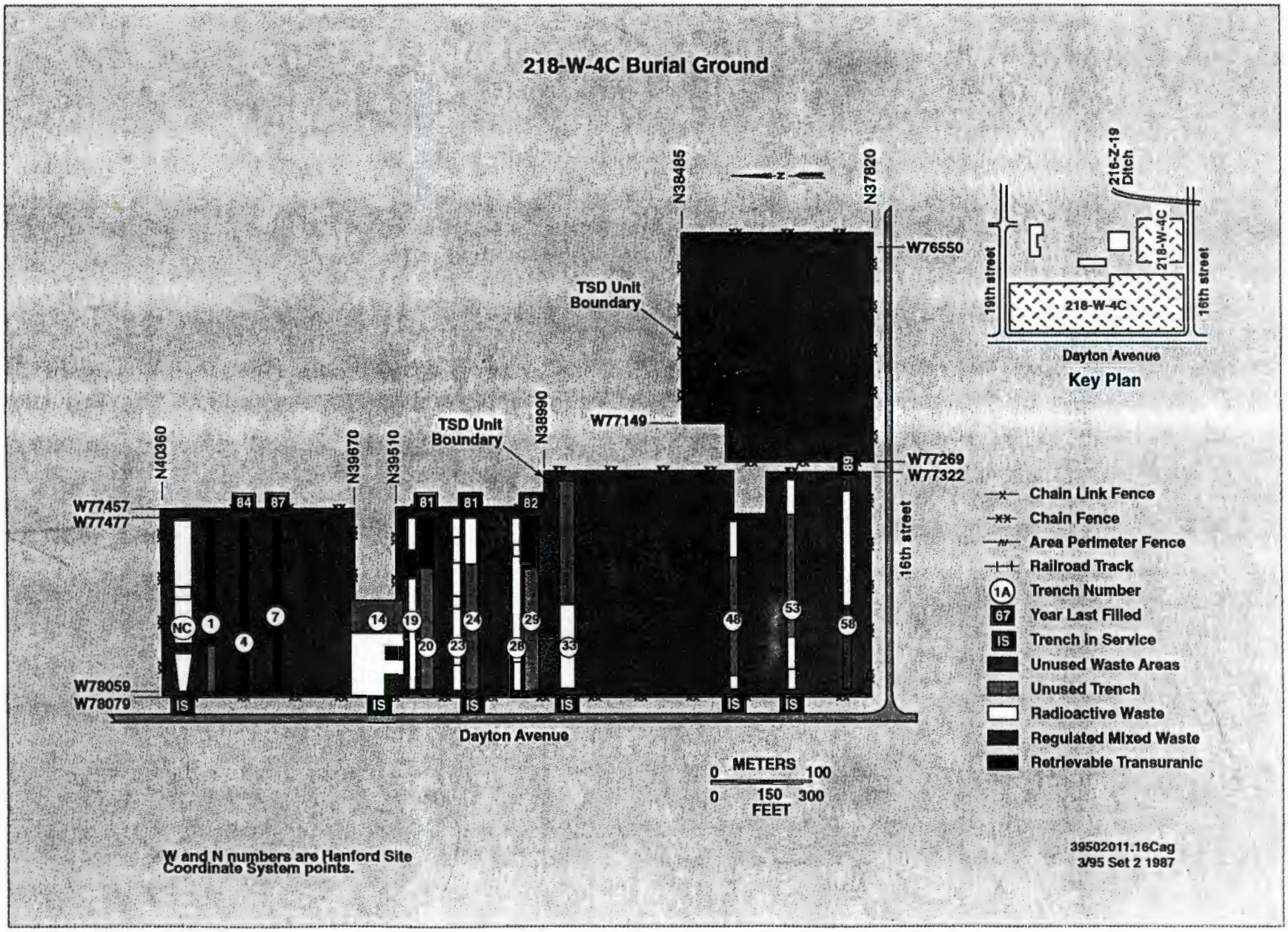
9713532.0739



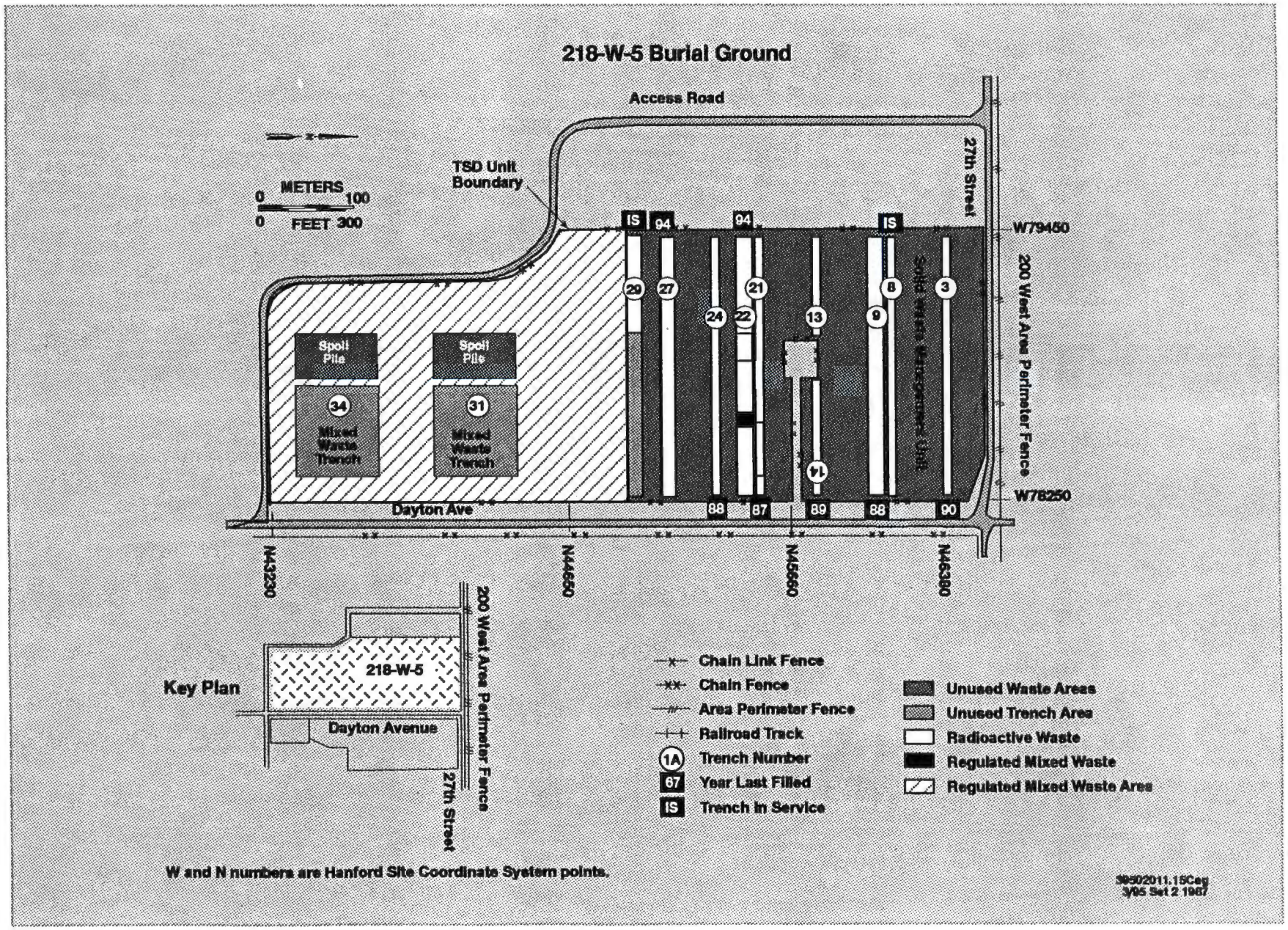

For Regulated Portions, Refer to 218-W-3A Site Plan
Gate 609
For Regulated Portions, Refer to 218-W-3AE Site Plan
Gate 610
119°38'24"
119°38'08"
119°37'46"
119°37'22"
46°34'01"
46°32'48"
SWMU
218-W-3A Burial Ground
218-3AE Burial Ground
218-W-6 Burial Ground
27th Street
Beloit Avenue
For Regulated Portions, Refer to 218-W-5 Site Plan
218-W-5 Burial Ground
T Plant Complex
224-T
23rd Street
Waste Receiving and Processing 1
Dayton Avenue
22nd Street
Central Waste Complex
Gate 611
Gate 612
218-W-4B Burial Ground
19th Street
For Regulated Portions Refer to 218-W-4C Site Plan
Plutonium Finishing Plant
218-W-4C Burial Ground
U Plant
16th Street
241-S
222-S Laboratory Complex
Highway 240 Access Road
0
1525
3050 Feet
0
465
930 Meters
Regulated Burial Grounds
SWMU (Solid Waste Management Unit)
Waste Routes
Note: TSD Unit boundaries are defined by dashed lines.
200 West Area
300 Area
Hanford Site
200 West Area Low-Level Burial Grounds
H9408030.1

9713532.0741

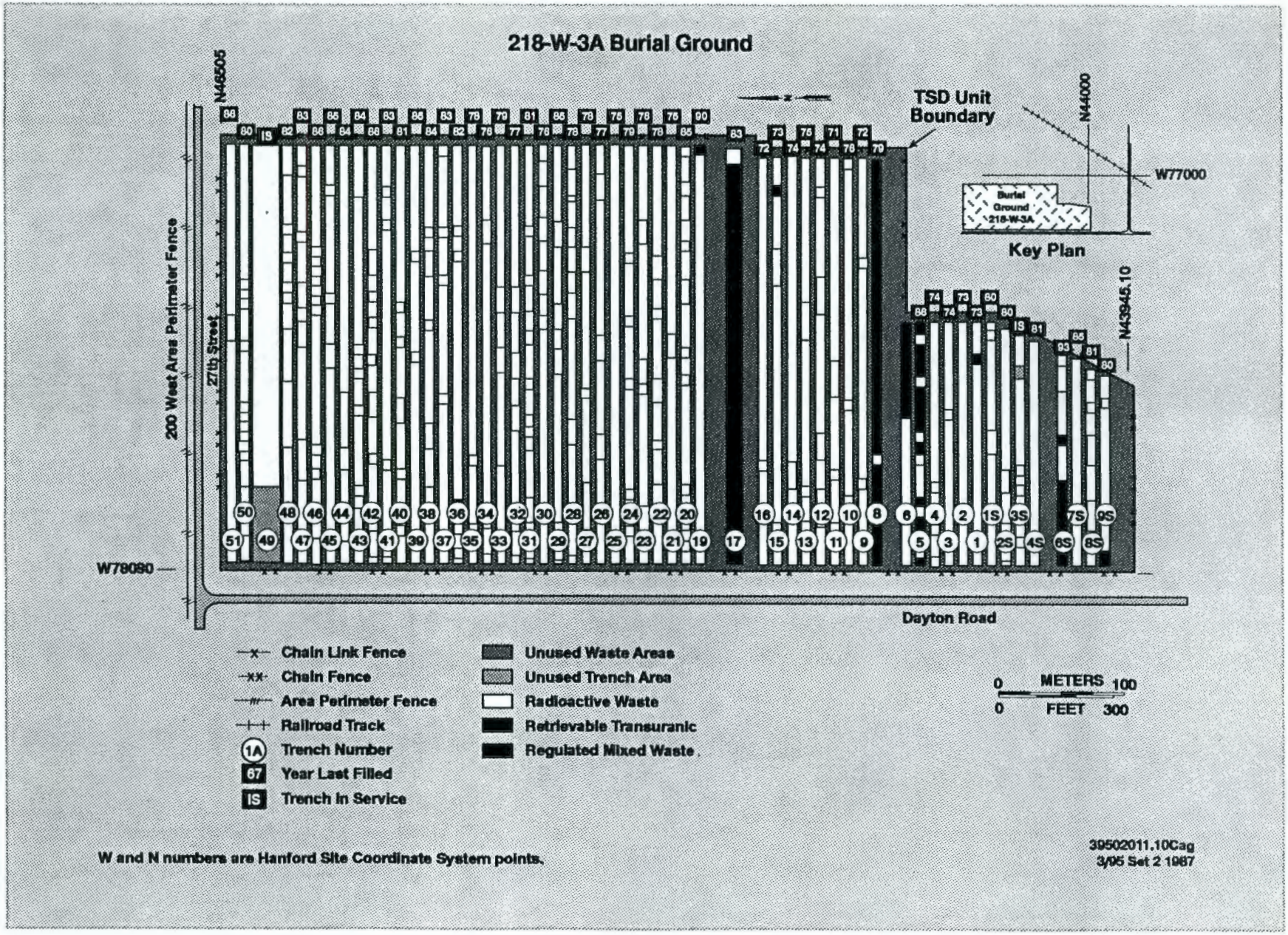


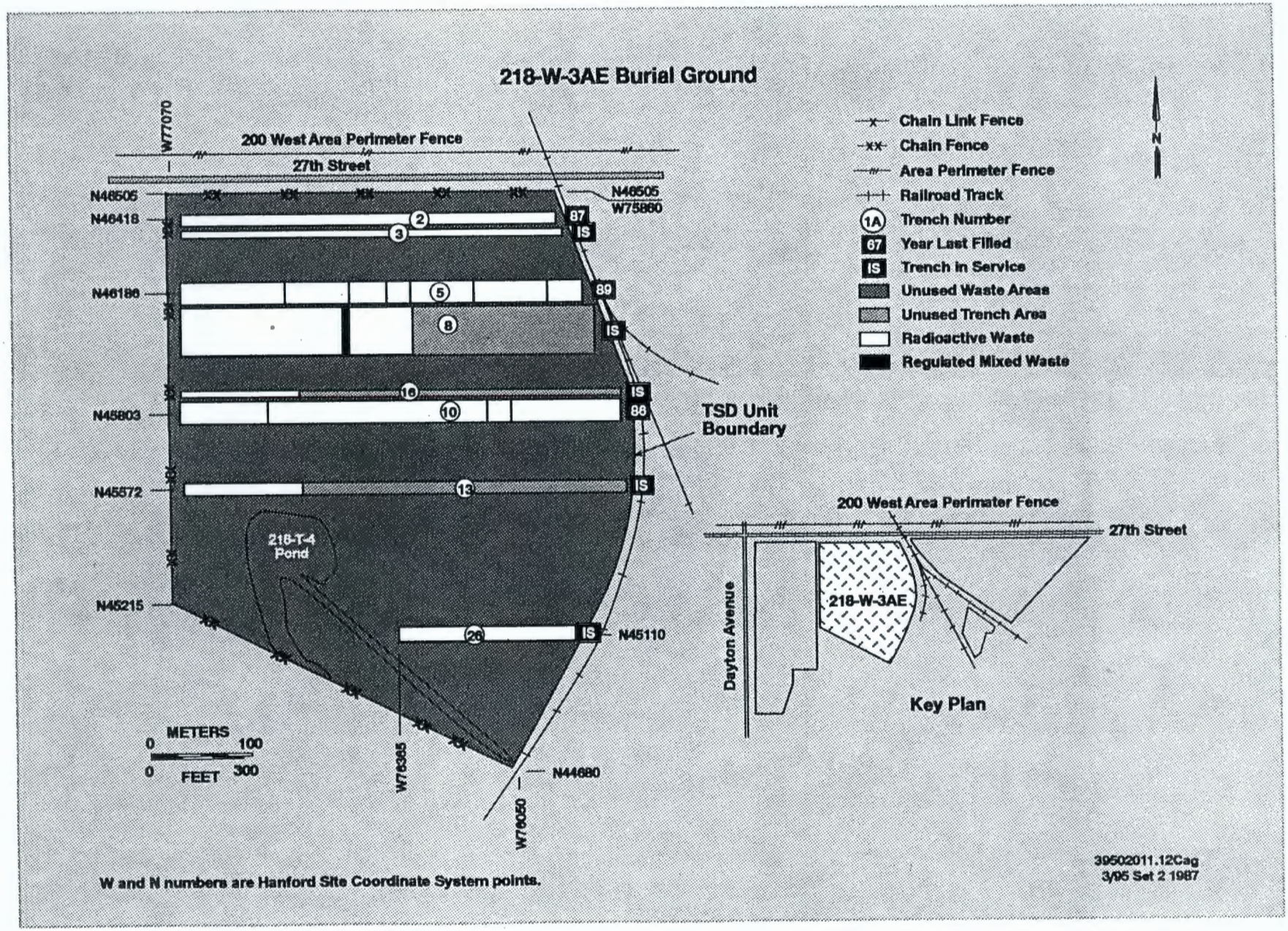


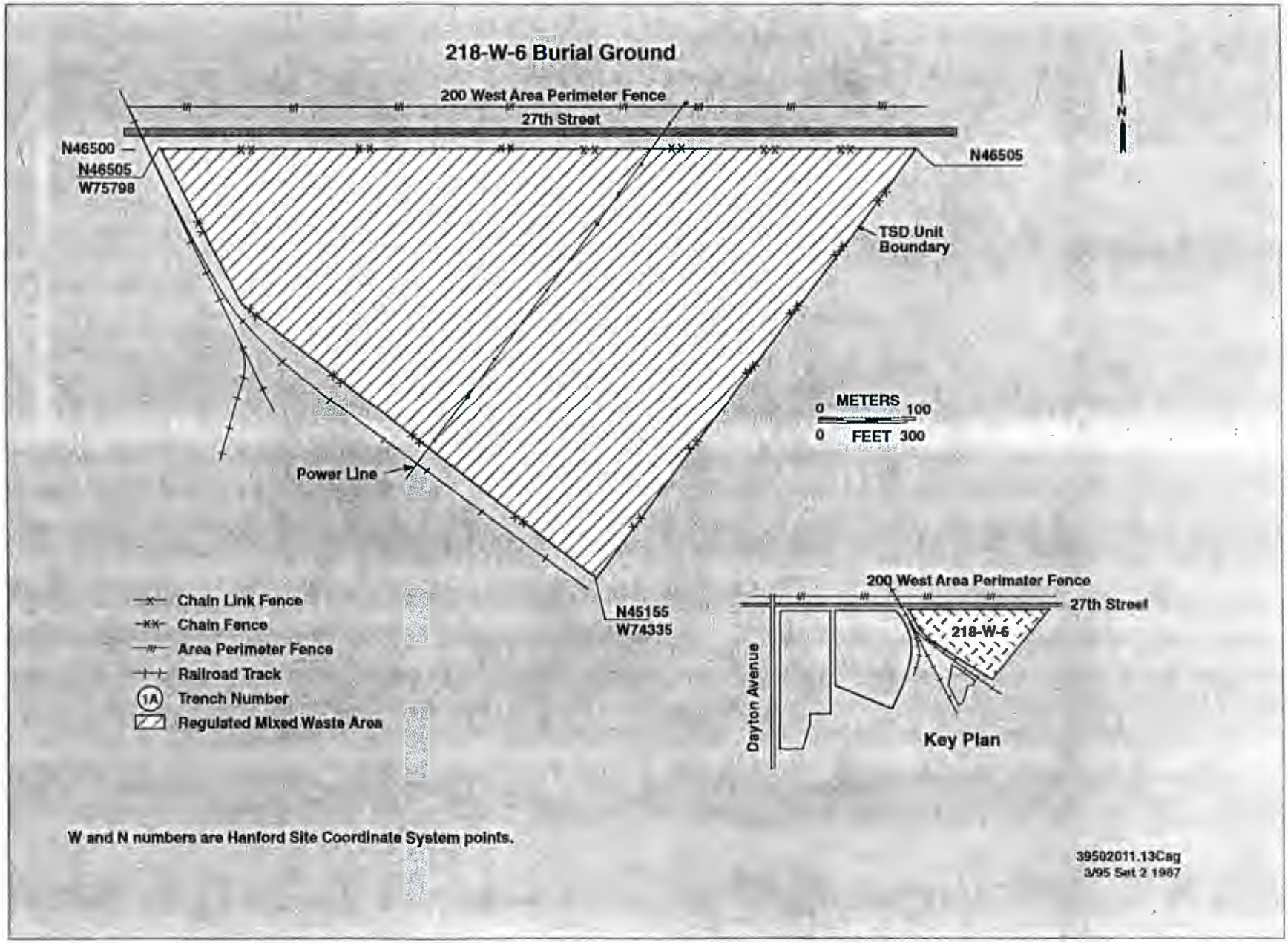
9713532.0742


218-W-5 Burial Ground
Access Road
TSD Unit Boundary
METERS 0 100
FEET 0 300
27th Street
200 West Area Perimeter Fence
W79450
W78250
Solid Waste Management Unit
IS
94
29
27
24
22
21
13
14
9
8
3
Spoil Pile
Spoil Pile
34
Mixed Waste Trench
31
Mixed Waste Trench
Dayton Ave
88
87
89
88
90
N43230
N44650
N45650
N46390
Key Plan
218-W-5
Dayton Avenue
200 West Area Perimeter Fence
27th Street
Chain Link Fence
Chain Fence
Area Perimeter Fence
Railroad Track
1A Trench Number
67 Year Last Filled
IS Trench In Service
Unused Waste Areas
Unused Trench Area
Radioactive Waste
Regulated Mixed Waste
Regulated Mixed Waste Area
W and N numbers are Hanford Site Coordinate System points.
9502011.15Cag
3/95 Set 2 1987

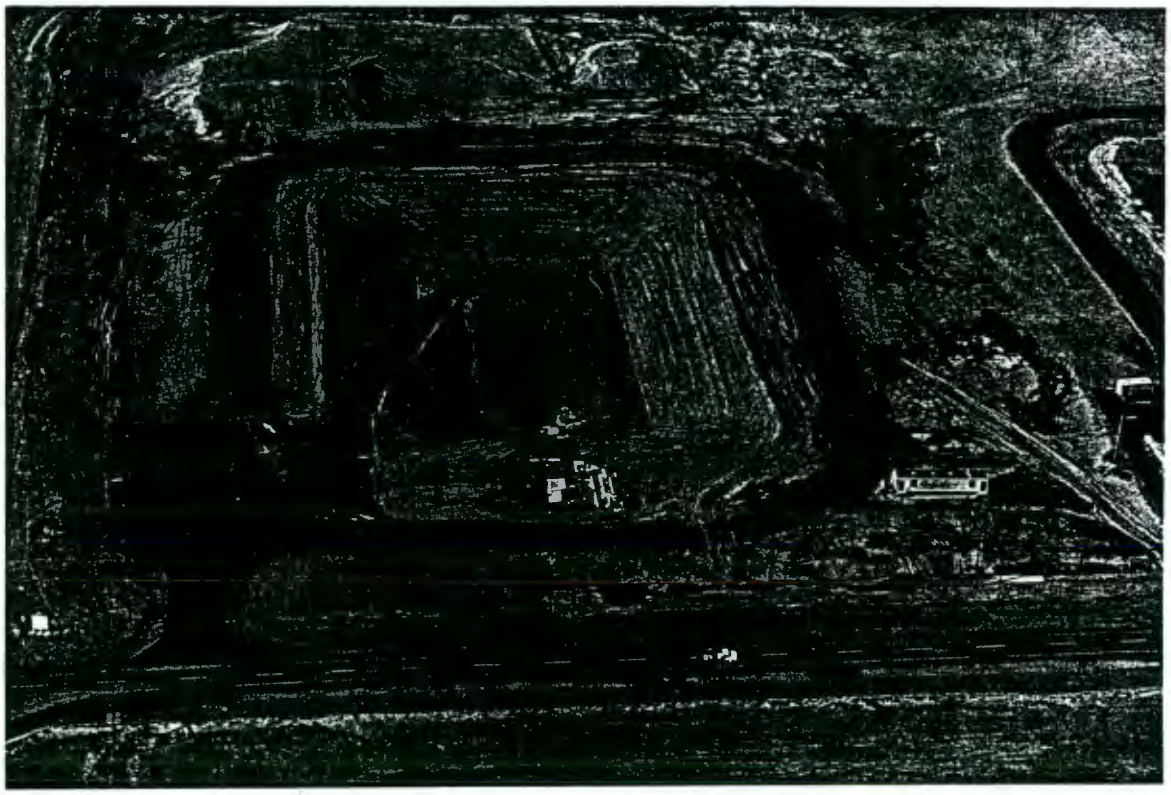
9713532.0744




218-W-3AE Burial Ground
200 West Area Perimeter Fence
27th Street
W77070
N46505
N46418
N46186
N45803
N45572
N45215
N46505
W75860
N45110
N44680
W76365
W76050
87
89
88
IS
2
3
5
8
10
13
26
218-T-4
Pond
TSD Unit
Boundary
Chain Link Fence
Chain Fence
Area Perimeter Fence
Railroad Track
Trench Number
Year Last Filled
Trench in Service
Unused Waste Areas
Unused Trench Area
Radioactive Waste
Regulated Mixed Waste
N
METERS
0
100
FEET
0
300
200 West Area Perimeter Fence
27th Street
Dayton Avenue
218-W-3AE
Key Plan
39502011.12Cag
3/95 Set 2 1987
W and N numbers are Hanford Site Coordinate System points.


218-W-6 Burial Ground
200 West Area Perimeter Fence
27th Street
N46500
N46505
W75798
N46505
TSD Unit Boundary
N
0 METERS 100
0 FEET 300
Power Line
N45155
W74335
Chain Link Fence
Chain Fence
Area Perimeter Fence
Railroad Track
1A Trench Number
Regulated Mixed Waste Area
200 West Area Perimeter Fence
27th Street
218-W-6
Dayton Avenue
Key Plan
W and N numbers are Hanford Site Coordinate System points.
39502011.13Cag
3/95 Set 2 1987

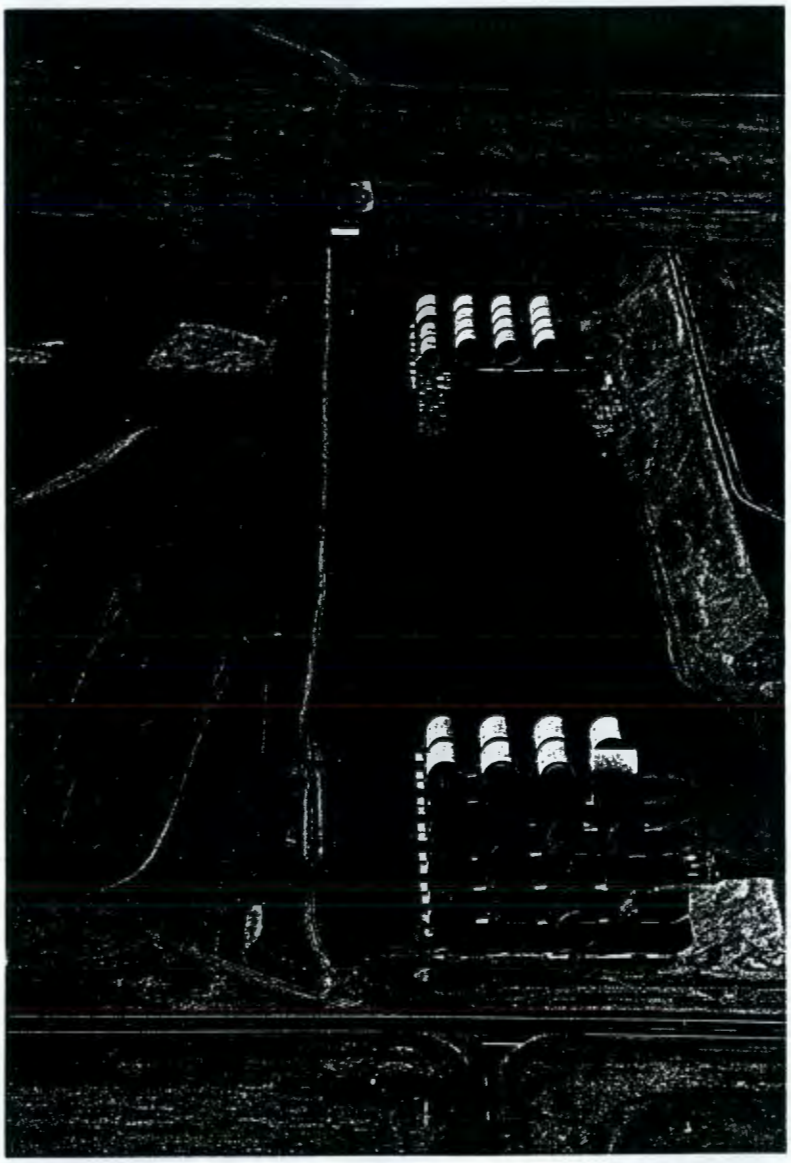
TYPICAL LINED MIXED WASTE TRENCH (TRENCH 34) 218-W-5/200 WEST AREA



46°33'36"
119°38'24"

95030469-44CN
(PHOTO TAKEN 1995)

REACTOR COMPARTMENT TRENCH-94



46°33'58"
119°31'06"

95030469-5CN
(PHOTO TAKEN 1995)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 8 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

*FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	T 0 2	757,080	V		7				
2	D 8 4	757,080	L		8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T02, D84

The 216-B-63 Trench began waste management operations in March of 1970. The 216-B-63 Trench received nonregulated process water from the B Plant chemical sewer. The trench also received corrosive dangerous waste from the regeneration of demineralizer columns in B Plant. Treatment occurred by the successive addition to the trench of acidic and caustic waste, which served to neutralize the waste while in the trench. Approximately 473,175 liters (125,000 gallons) per day of total flow reached the trench. The corrosive discharges constituted a major part of this flow. This unit has not received dangerous waste since September 1985 and will close. The 216-B-63 Trench was stabilized in November 1994 and permanently isolated in December 1994. The process design capacity reflects the maximum volume of water discharged to the trench on a daily basis rather than the physical capacity of the unit.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	Included with above

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	D002	68,038,856	K	T02	D84			Surface Impoundment(Neutralization)
2								/Surface Impoundment (Percolation)
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The 216-B-63 Trench received discharges of corrosive dangerous waste (D002) from B Plant. These discharges consisted of acidic and caustic backwashes from the regeneration of demineralizer columns in B Plant. Approximately 68,038,856 kilograms (150,000,000 pounds) of waste was managed in the trench on an annual basis.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

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SEE ATTACHMENT		

CONTINUE ON PAGE 5

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John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

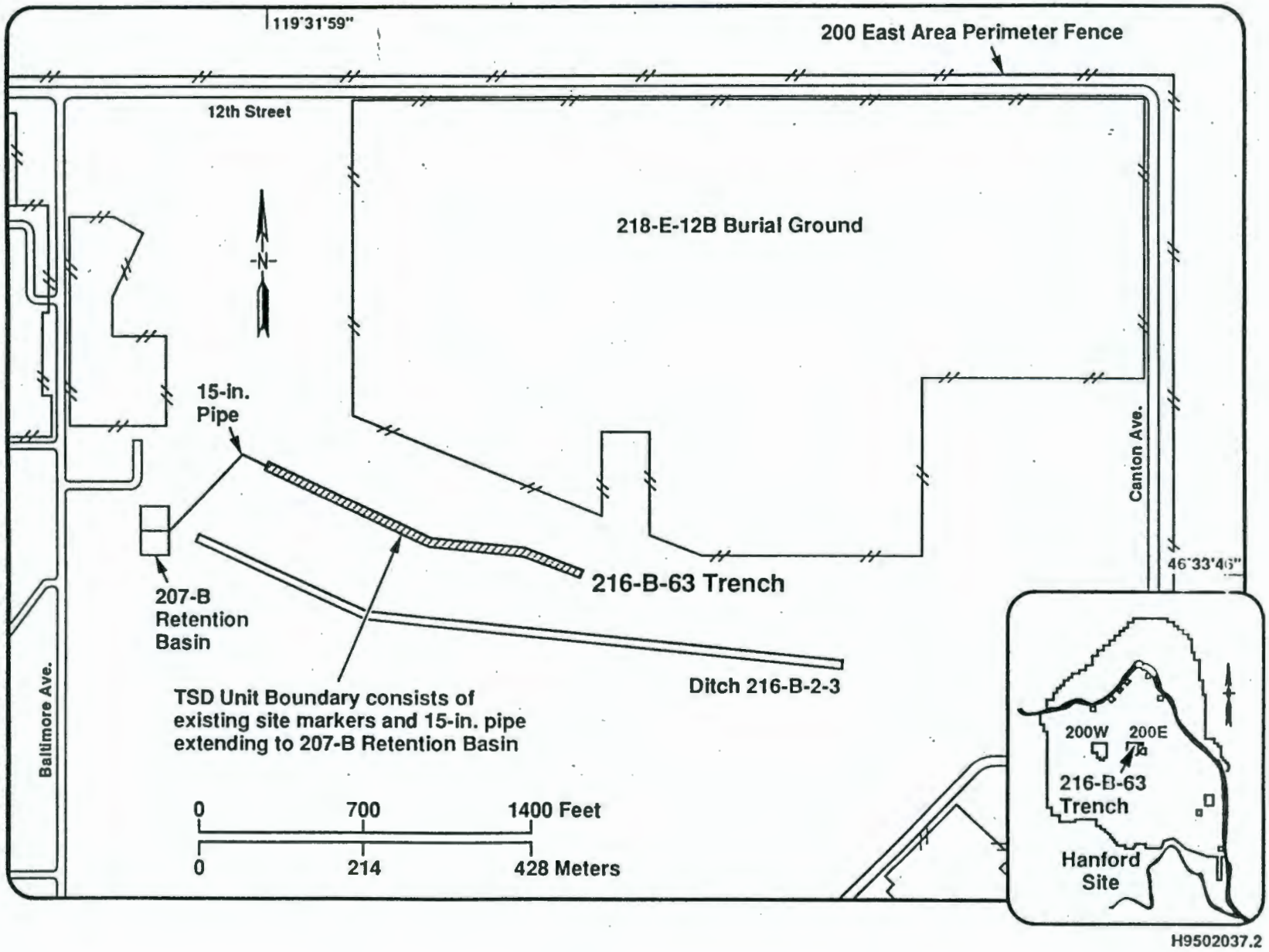
Date

9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

Date

216-B-63 Trench Site Plan



WA7890008967
9713532.0754

216-B-63 TRENCH

46°33'46"
119°31'59"

95020800-6CN
(PHOTO TAKEN 1995)

9713532.0756

HANFORD FACILITY DANGEROUS WASTE PART A PERMIT APPLICATION

CONTENTS

		Revision	
1.0	INTRODUCTION		VOLUME 1 OF 3
2.0	PERMITTING STATUS FOR DANGEROUS WASTE TREATMENT, STORAGE, AND/OR DISPOSAL UNITS	♦	
3.0	FORM 1 - DANGEROUS WASTE PERMIT APPLICATION	♦	
4.0	FORM 3 - DANGEROUS WASTE PERMIT APPLICATION		
4.1	100 AREA FACILITIES		
4.1.1	Treatment Facilities		
4.1.1.1	1324-N Surface Impoundment	3	
4.1.1.2	105-DR Sodium Fire Facility	3 ♦	
4.1.1.3	1706-KE Waste Treatment System	3 ♦	
4.1.1.4	183-H Solar Evaporation Basins	4	
4.1.2	Disposal Facilities		
4.1.2.1	1301-N Liquid Waste Disposal Facility	5	
4.1.2.2	1325-N Liquid Waste Disposal Facility	5	
4.1.2.3	1324-NA Percolation Pond	3	
4.1.2.4	100-D Ponds	4	
4.2	200 AREA FACILITIES		
4.2.1	Treatment Facilities		
4.2.1.1	221-T Containment Systems Test Facility	3 ♦	
4.2.1.2	200 West Area Ash Pit Demolition Site *CLOSED 10/26/95*	4	
4.2.1.3	218-E-8 Borrow Pit Demolition Site *CLOSED 10/26/95*	4	
4.2.1.4	242-A Evaporator	7 ♦	
4.2.1.5	Grout Treatment Facility	5 ♦	
4.2.1.6	T Plant Complex	6 ♦	
4.2.1.7	241-Z Treatment and Storage Tanks	4 ♦	
4.2.1.8	B Plant Complex	5 ♦	
4.2.1.9	222-S Laboratory Complex	4 ♦	
4.2.1.10	204-AR Waste Unloading Station	4 ♦	
4.2.1.11	PUREX Plant	8 ♦	
4.2.1.12	Hanford Waste Vitrification Plant	5 ♦	
4.2.1.13	200 Area Effluent Treatment Facility	2 ♦	
4.2.1.14	Waste Receiving and Processing	1 ♦	

♦ = Revised this issue.

CONTENTS (cont)

		Revision	
4.2.2	Storage Facilities		
4.2.2.1	2727-S Storage Facility *CLOSED 06/27/95*	2	
4.2.2.2	Double-Shell Tank System	8 ♦	
4.2.2.3	Hexone Storage and Treatment Facility	3	
4.2.2.4	2727-WA SRE Sodium Storage Building	1 ♦	VOLUME 2 OF 3
4.2.2.5	PUREX Storage Tunnels	5 ♦	
4.2.2.6	224-T Transuranic Waste Storage and Assay Facility	6 ♦	
4.2.2.7	Central Waste Complex	4 ♦	
4.2.2.8	Single-Shell Tank System	4 ♦	
4.2.2.9	207-A South Retention Basin	2 ♦	
4.2.2.10	Liquid Effluent Retention Facility	5 ♦	
4.2.2.11	241-CX Tank System	3	
4.2.3	Disposal Facilities		
4.2.3.1	Low-Level Burial Grounds	8 ♦	
4.2.3.2	216-S-10 Pond and Ditch	3	
4.2.3.3	2101-M Pond *CLOSED 10/26/95*	2	
4.2.3.4	216-A-29 Ditch	3	
4.2.3.5	216-B-3 Main Pond	5	
4.2.3.6	216-B-63 Trench	3 ♦	
4.2.3.7	216-A-10 Crib	3	
4.2.3.8	216-U-12 Crib	3	
4.2.3.9	216-A-36B Crib	1	
4.2.3.10	216-A-37-1 Crib	2	
4.2.3.11	216-B-3 Expansion Ponds *CLOSED 06/27/95*	0	

4.3 300 AREA FACILITIES

4.3.1	Treatment Facilities		
4.3.1.1	3718-F Alkali Metal Treatment and Storage Area	4 ♦	VOLUME 3 OF 3
4.3.1.2	324 Pilot Plant	3	
4.3.1.3	304 Concretion Facility *CLOSED 11/30/95*	4	
4.3.1.4	300 Area Solvent Evaporator *CLOSED 06/27/95*	4	
4.3.1.5	300 Area Waste Acid Treatment System	5 ♦	
4.3.1.6	303-M Oxide Facility	1 ♦	
4.3.1.7	325 Hazardous Waste Treatment Units	3	
4.3.1.8	Biological Treatment Test Facilities	0	

♦ = Revised this issue.

CONTENTS (cont)

		Revision
4.3.1.9	Physical and Chemical Treatment Test Facilities *CLOSED 05/13/96*	1
4.3.1.10	Thermal Treatment Test Facilities *CLOSED 05/13/96*	0
4.3.2	Storage Facilities	
4.3.2.1	311 Tanks (incorporated into 300 Area Waste Acid Treatment System, Rev. 3)	1
4.3.2.2	303-K Storage Unit	5 ♦
4.3.2.3	305-B Storage Facility	1
4.3.2.4	332 Storage Facility	0
4.3.3	Disposal Facilities	
4.3.3.1	300 Area Process Trenches	4
4.4	400 AREA FACILITIES	
4.4.1	Treatment Facilities	
4.4.1.1	437-MASF	3 ♦
4.4.2	Storage Facilities	
4.4.2.1	4843 Alkali Metal Storage Facility	3 ♦
4.4.2.2	Sodium Storage Facility and Sodium Reaction Facility	1 ♦
4.5	600 AREA FACILITIES	
4.5.1	Treatment Facilities	
4.5.1.1	Hanford Patrol Academy Demolition Sites *CLOSED 10/26/95*	4
4.5.2	Storage Facilities	
4.5.2.1	616 Nonradioactive Dangerous Waste Storage Facility	6 ♦
4.5.2.2	600 Area Purgewater Storage and Treatment Facility	2 ♦
4.5.3	Disposal Facility	
4.5.3.1	Nonradioactive Dangerous Waste Landfill	4
4.6	1100 AREA FACILITIES	
4.6.1	Treatment Facilities	
4.6.1.1	Simulated High-Level Waste Slurry Treatment/Storage *CLOSED 09/06/95*	2

VOLUME 3 OF 3

♦ = Revised this issue.

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 * FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	T 0 1	25	V		7				
2	T 0 4	100	V		8				
3	S 0 1	2,000	L		9				
4					10				

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Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T01, T04, S01

The 3718-F Alkali Metal Treatment and Storage Area (3718-F) began waste management operations in September 1968 and was used to treat and store alkali metal waste (sodium, lithium, and sodium potassium alloy) from the Fast Flux Test Facility (FFTF) and from various laboratories that used alkali metals for experiments. The alkali metal waste was treated in a burn shed equipped with two burn pans inside a containment catch pan, a fume scrubber, and two chemical reaction tanks. The chemical reaction tanks were used to treat scrap equipment and piping that contained alkali metal waste by dissolving the waste using either water, methanol, isopropyl alcohol, or 2-butoxy ethanol (T01). The treatment of the bulk alkali metal waste consisted of burning the metals in the burn shed to eliminate their ignitable and reactive characteristics. The gaseous emissions produced by the burn process were removed using a fume scrubber. Because of the corrosivity of the waste (e.g., sodium hydroxide) after the burn treatment, the waste was neutralized with acid to a pH of between 2.0 to 12.5 (T04). The 3718-F was used to store U.S. Department of Transportation-approved 208-liter (55-gallon) drums of alkali metal waste before treatment (S01). The 3718-F alkali metal waste treatment process was halted in June of 1987 and storage of the alkali metal waste was halted in May of 1989. The maximum process design capacity for T01 is 25 liters (6.6 gallons) per day, for T04 is 100 liters (26.4 gallons) per day, and for S01 is 2,000 liters (528.3 gallons).

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*included with above*

 CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890006967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	D001	2,000	K	T01 T04 S01	Treatment-Tank-Chemical\ Treatment-Other-Thermal\
2	D002				Storage-Container
3	D003				
4	WSC2				Included With Above
5					
6					
7					
8					
9					
10					
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24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The 3718-F was used for the treatment and storage of alkali metal waste. The alkali metal waste was considered characteristic waste due to ignitability (D001) and reactivity (D003) of the alkali metals and as a state-only, corrosive, dangerous waste (WSC2). The alkali metal waste when treated was considered corrosive (D002) because of the presence of sodium hydroxide. The estimated annual quantity of waste that was treated and stored at the 3718-F was approximately 2,000 kilograms (4,409 pounds).

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

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[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

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1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

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NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

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NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

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John D. Wagoner

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

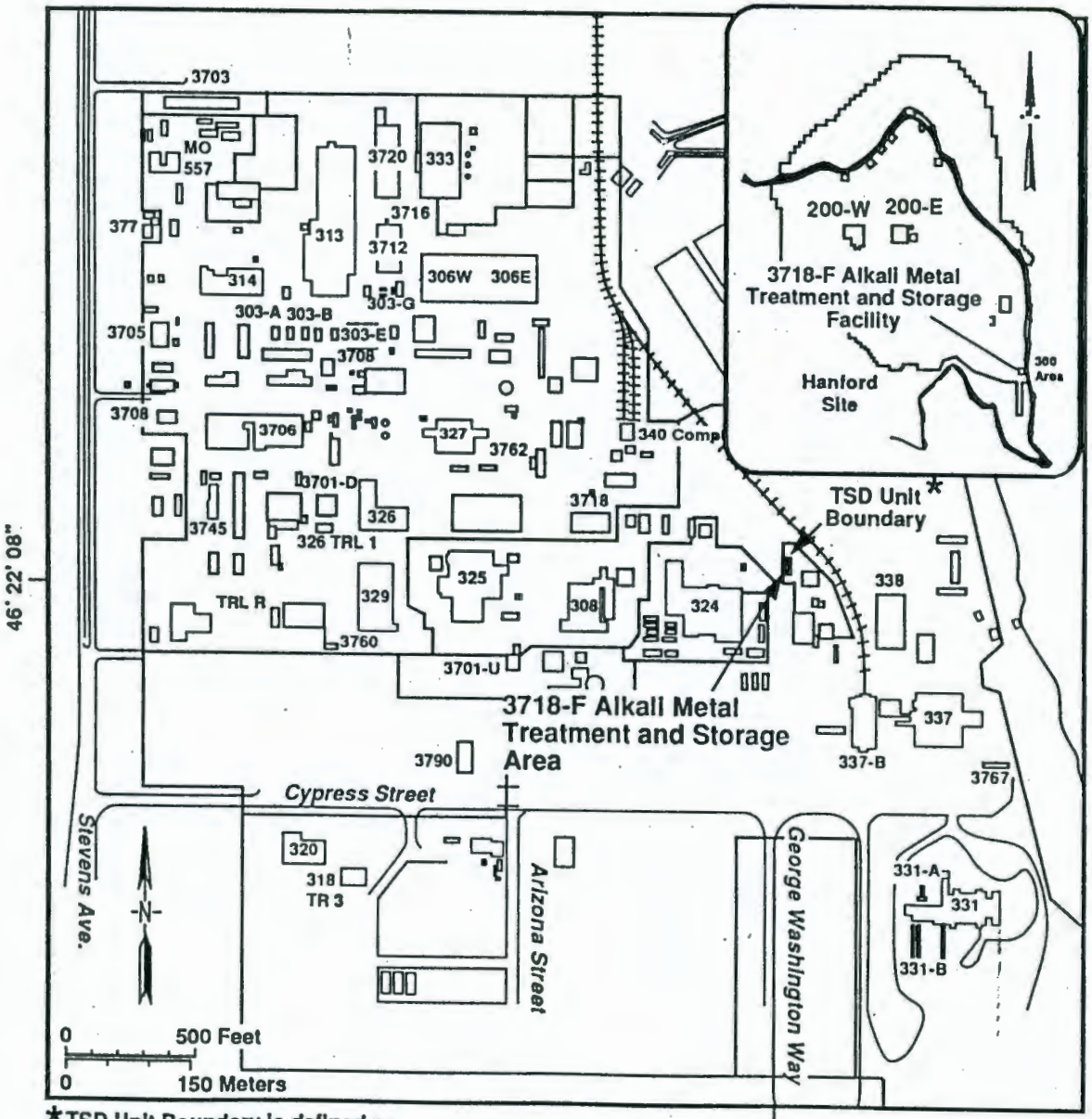
9/26/96
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/13/96
Date

97135:32.0764

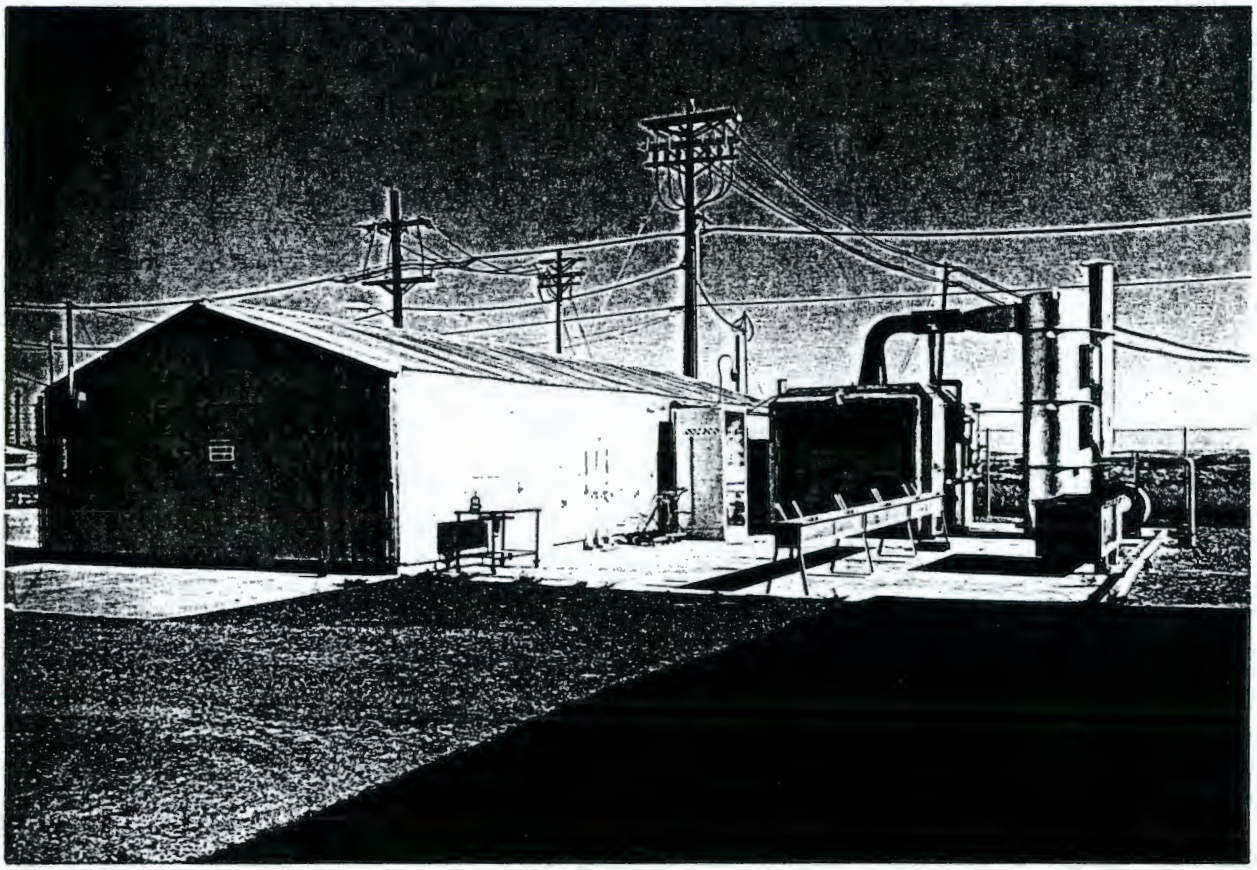
3718-F Alkali Metal Treatment and Storage Facility Site Plan



*TSD Unit Boundary is defined as the 3718-F Building and concrete pad.

H96070161.12a

3718-F ALKALI METAL TREATMENT AND STORAGE AREA



46°22'08"
119°16'26"

91071032-1CN
(PHOTO TAKEN 1991)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 * FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
	300 Area Waste Acid Treatment System				5	311 Tanks			
					6				
1	T01	14,006	V		7	T01	18,927	V	
2	S02	16,505	L		8	S02	34,069	L	
3	T04	15,898	V		9				
4					10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

Refer to the following pages.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*included with above*

CONTINUE ON PAGE 3

FORM 3 DANGEROUS WASTE PERMIT APPLICATION
U.S. ENVIRONMENTAL PROTECTION AGENCY/STATE IDENTIFICATION NUMBER WA7890008967

Section III.C., Description of Process Codes Listed in Section III.A.

T01, S02, T04 - The 300 Area Waste Acid Treatment System (300 WATS) and Tank 40 began waste management operations in April 1973; auxiliary equipment and centrifuge operations began in November 1995. The 300 WATS was used for the treatment and storage of mixed waste generated during fuel fabrication operations in the 300 Area. The 300 WATS also was used for disposing of used and/or unneeded chemicals for other Hanford Facility operations. A portion of the waste initially was treated in two tanks (tanks 7 and 11) in the 333 Building to reduce the chromium (VI) to chromium (III). From May 1983 to January 1987, tanks 7 and 11 were used twice a year to treat up to 757 liters (200 gallons) per day of waste (T01). This waste, along with all other waste acid generated in the 333 Building, was drained to the 334-A Building and stored in two storage tanks (tanks B and C) (S02), with a combined volume of 15,142 liters (4,000 gallons). Previously, waste entered the 334-A Building passing through a settling tank [tank A, volume 1,363 liters (360 gallons)] before entering tanks B and C. Tank A ceased receiving waste in August 1984 when piping was disconnected to the tank and waste was routed directly to tanks B and C. Tank A was cleaned out and the polyvinyl chloride liner removed in 1988.

From startup in April 1973 until August 1973, the waste acid from the 333 Building was collected in a plastic-lined steel underground 14,385 liter (3,800 gallon) tank and a plastic-lined steel aboveground 22,712 liter (6,000 gallon) tank (tank 4) in the 334 Tank Farm. At that time, the underground tank developed a leak and was removed from service. The 334-A Building storage tanks replaced this underground tank in December 1974. Tank 4 was retained for emergency storage when the 313 Building neutralization activities were down for maintenance or modifications. Tank 4 usually was empty and when the tank was filled in January 1986, a leak developed near the top of the tank. Tank 4 was emptied and abandoned at that time. Tank 4 was removed, cleaned, and disposed of onsite in 1988.

The waste acid was pumped from the 334-A Building to the 313 Building where the waste acid underwent pH adjustment in a waste acid neutralization tank (tank 2) (T01). Tank 2 was capable of treating a maximum of 13,249 liters (3,500 gallons) per day of waste acid. The waste acid was pumped from tank 2 to tank 11 and then to a centrifuge where the waste acid underwent further treatment to separate the liquid and solid phases (T04). A maximum of 11,356 liters (3,000 gallons) of waste acid per day could be treated in the centrifuge. The solid waste from the centrifuge was collected in containers and transferred to the 303-K Storage Unit. The liquid effluent was pumped from the centrifuge to tank 5 and to a filter press for additional treatment to remove fine solids (T04), which remained following treatment in the centrifuge. The filter press treated a maximum of 4,542 liters (1,200 gallons) per day. Solids collected in the filter press were sent to the uranium recovery system or to the 303-K Storage Unit. The filtered liquid effluent was drained into effluent collection tanks (tanks 9 and 10), where the liquid effluent was stored temporarily before being pumped to the 311 Tank Farm.

Section III.C., Description of Process Codes (Cont.)

T01, S02 - The 311 Tank Farm was used for storage of treated liquid effluents from both the 300 WATS and the uranium recovery process. Storage occurred in two tanks (tanks 40 and 50) with capacities of 15,142 and 18,927 liters (4,000 and 5,000 gallons), respectively. Tanks 40 and 50 are constructed of stainless steel. Tank 50, the 18,927 liter (5,000 gallon) tank, occasionally was used for decanting waste when the centrifuge in the 313 Building was down for maintenance. Tank 50 was capable of treating up to 18,927 liters (5,000 gallons) per day, but only was used occasionally for decanting waste (a total of five times between January 1986 and December 1987).

Auxiliary equipment (two pumps, two cartridge filters, and two sample ports) are housed in the adjacent 303-F Building. Auxiliary equipment was used to filter solutions and to recirculate the solutions between various tanks and the 313 Building for reprocessing.

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	6	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	300 Area Waste Acid Treatment System							
2	D001	2,086,525	K	T01	S02	T04		Tank-Treatment/Tank-Storage/
3	D002							Treatment-Other (Phase Seperation)
4	WT02							
5	D004							
6	through							
7	D009							Included With Above
8	D007	907	K	T01				Treatment-Tank (chemical treatment)
9	311 Tanks							
10	WT02	2,086,525	K	T01	S02			Treatment-Tank/Storage-Tank
11	D002							
12	D004							
13	through							
14	D009							Included With Above
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The 300 WATS was used to treat both mixed and dangerous waste from fuels fabrication operations in the 333 Building and from nonroutine waste additions. Treatment was performed to make the waste more amenable for further treatment and for storage. The 333 Building waste primarily consisted of hydrofluoric acid, nitric acid, sulfuric acid, and copper nitrate. These routine waste types exhibited the dangerous waste characteristics of ignitability (D001) and corrosivity (D002) as the nitric acid is considered an oxidizer in accordance with Washington Administrative Code 173-303. Routine waste also was considered a state-only, toxic, dangerous waste (WT02). Additionally, some of the routine waste was designated characteristic waste due to chromium (D007). Nonroutine waste added to the system included characteristic waste due to arsenic (D004), barium (D005), cadmium (D006), lead (D008), and mercury (D009). Approximately 2,086,525 kilograms (4,600,000 pounds) of waste were treated and stored yearly in this system. Approximately 907 kilograms (2,000 pounds) of waste (D007, chromium IV to chromium III) were treated per year.

The 311 tank system was used for the treatment and storage of waste. This waste was effluent from the waste acid treatment and uranium recovery process. This waste, depending on the variations in the treatment process, was considered mixed waste due to toxicity (WT02). Routine and nonroutine waste added to the waste acid treatment system included characteristic waste due to arsenic (D004), barium (D005), cadmium (D006), chromium (D007), lead (D008), and mercury (D009). The waste frequently had a pH greater than 12.5, which exhibits the dangerous waste characteristic of corrosivity (D002). Approximately 2,086,525 kilograms (4,600,000 pounds) of waste were treated and stored per year in the 311 tanks.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner

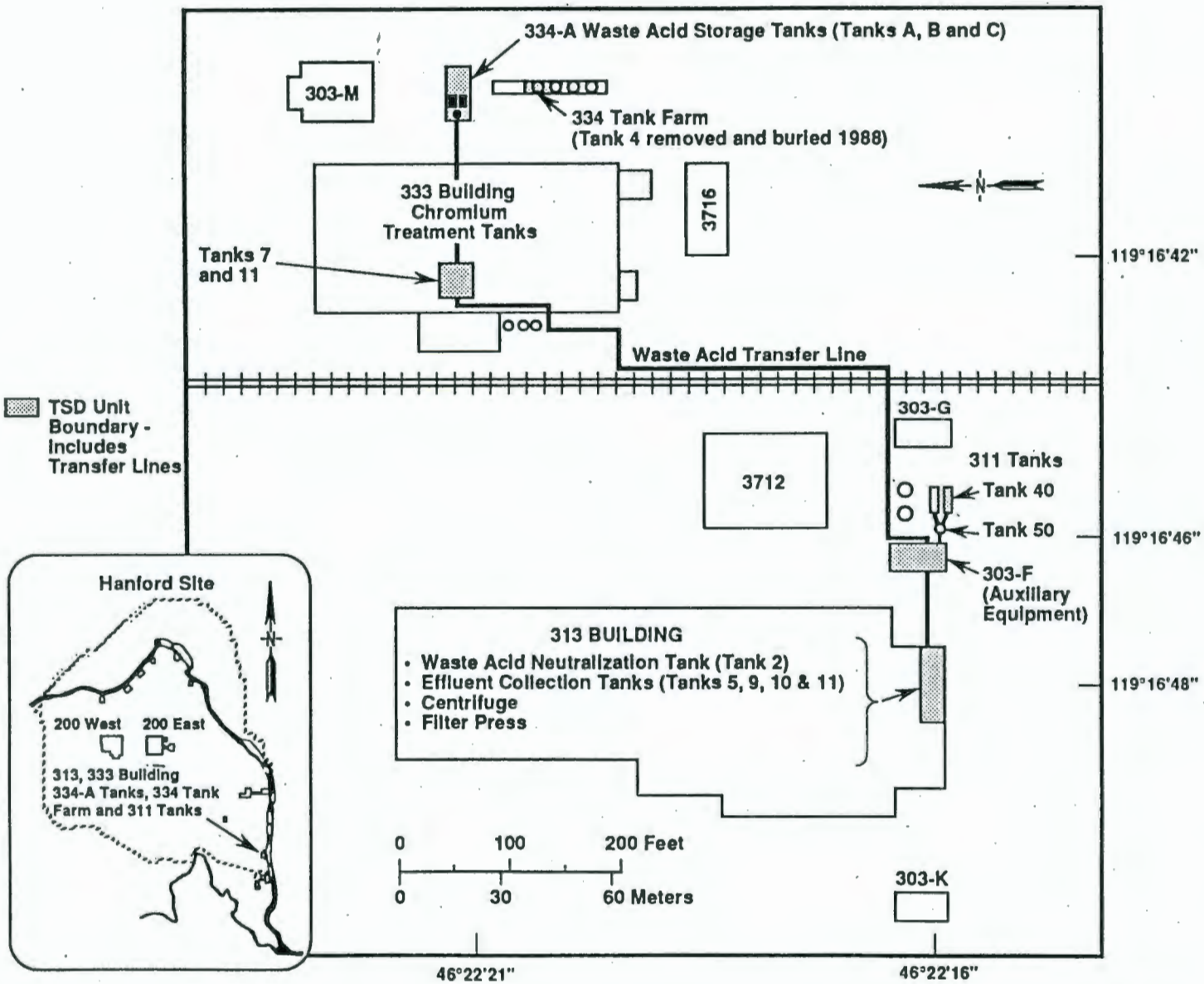
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

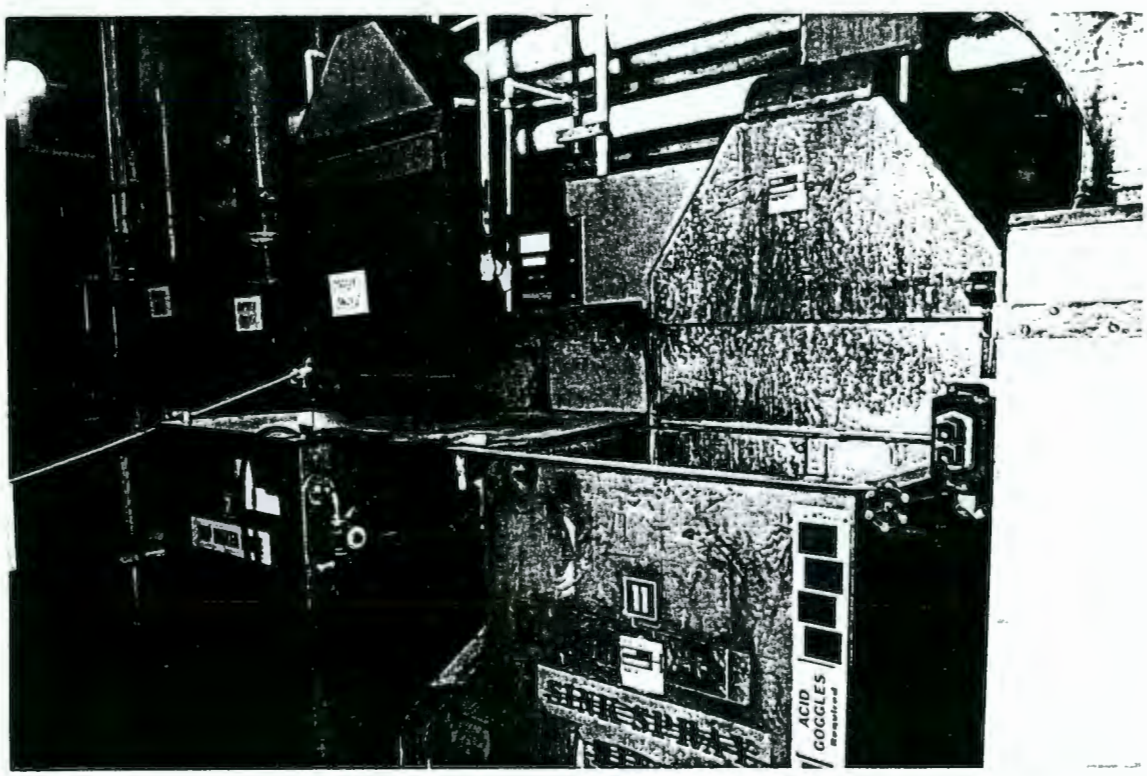
Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/13/96
Date

300 Area Waste Acid Treatment System



300 AREA WASTE ACID TREATMENT SYSTEM--333 BUILDING

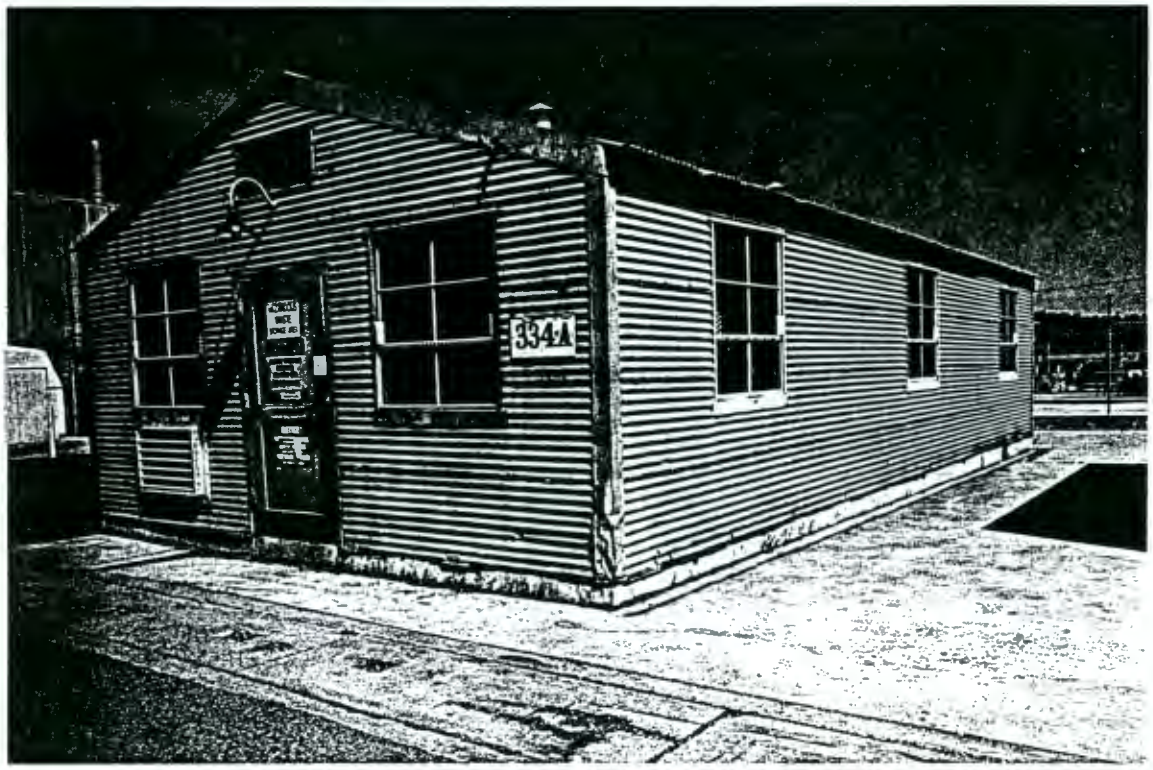


TANKS 7 AND 11--CHROMIUM (IV) REDUCTION

46°22'21"
119°16'42"

95080690-2CN
(PHOTO TANK 1987)

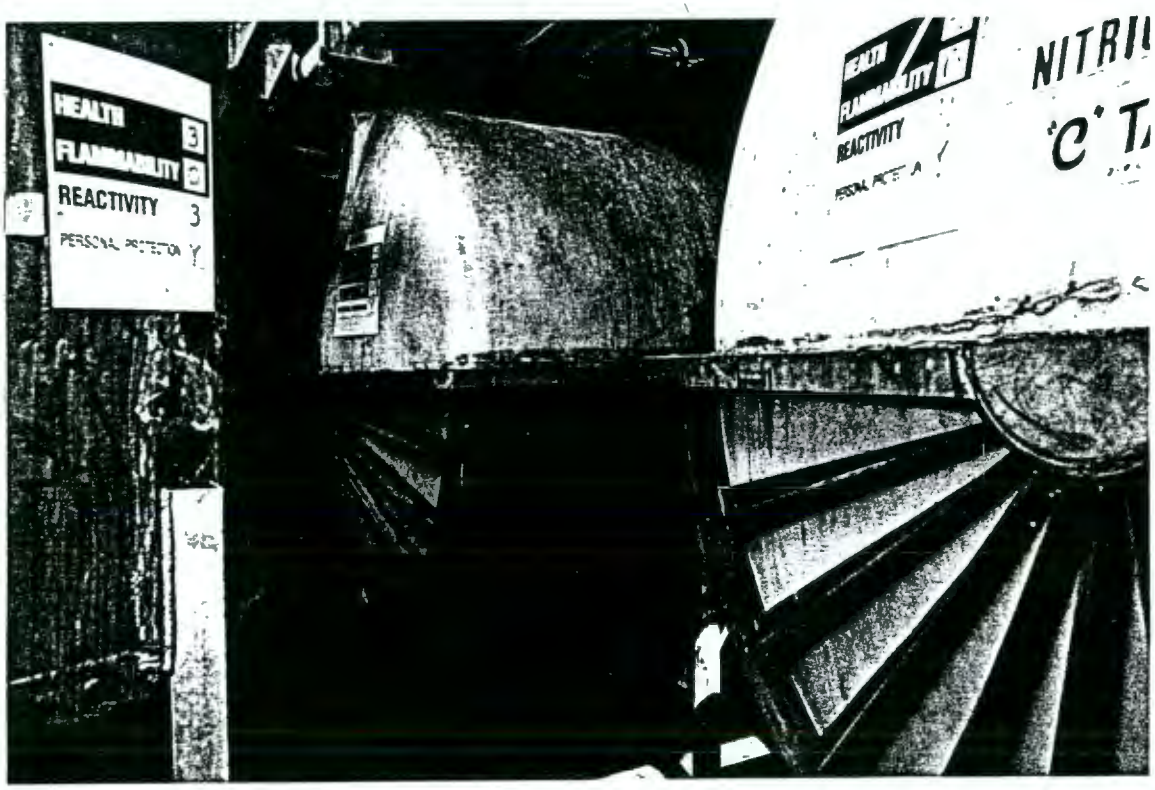
300 AREA WASTE ACID TREATMENT SYSTEM--334-A BUILDING



46°22'21"
119°16'42"

95080690-12CN
(PHOTO TANK 1995)

300 AREA WASTE ACID TREATMENT SYSTEM--334-A WASTE ACID STORAGE TANKS

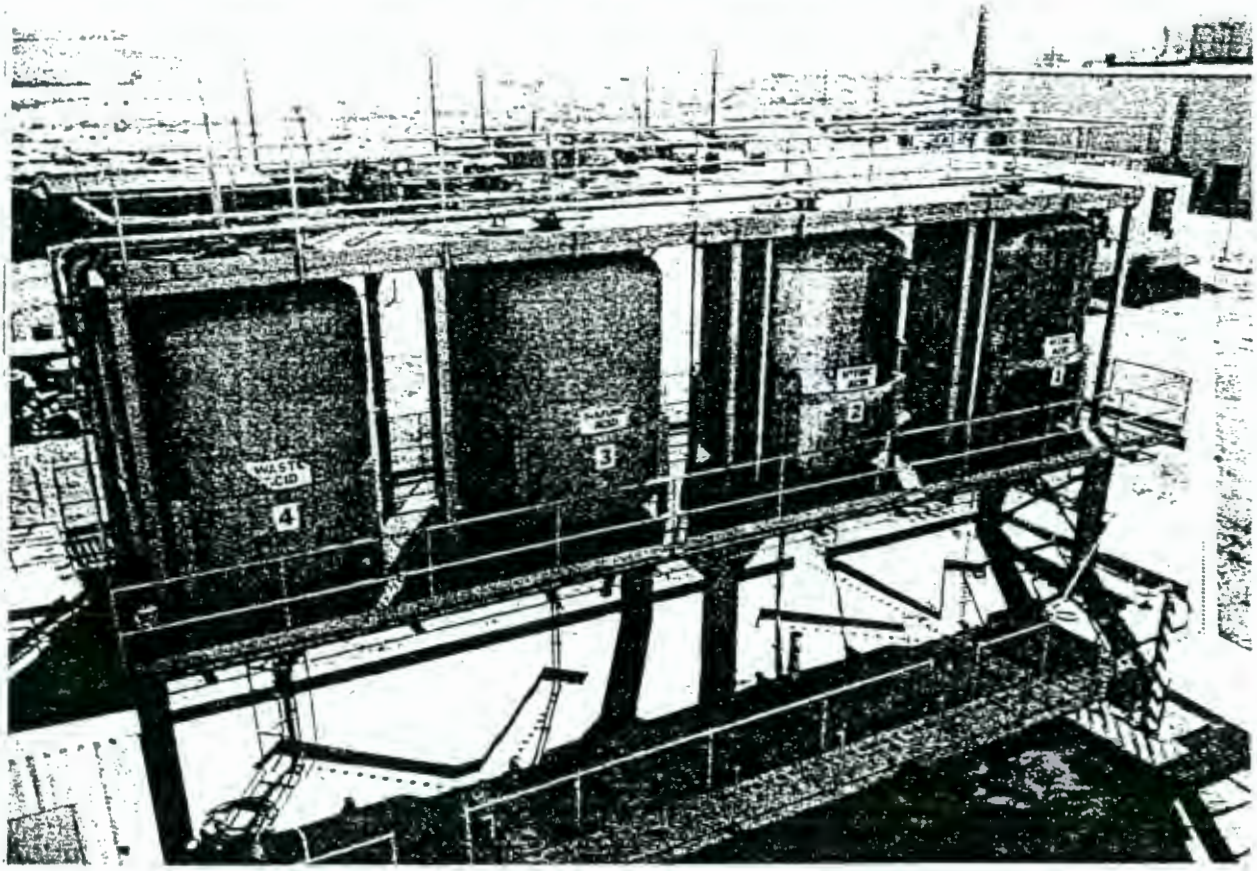


TANKS A, B, AND C
(TANK A TAKEN OUT OF SERVICE IN 1988)

46°22'21"
119°16'42"

95080690-22CN
(PHOTO TANK 1995)

300 AREA WASTE ACID TREATMENT SYSTEM--334 TANK FARM

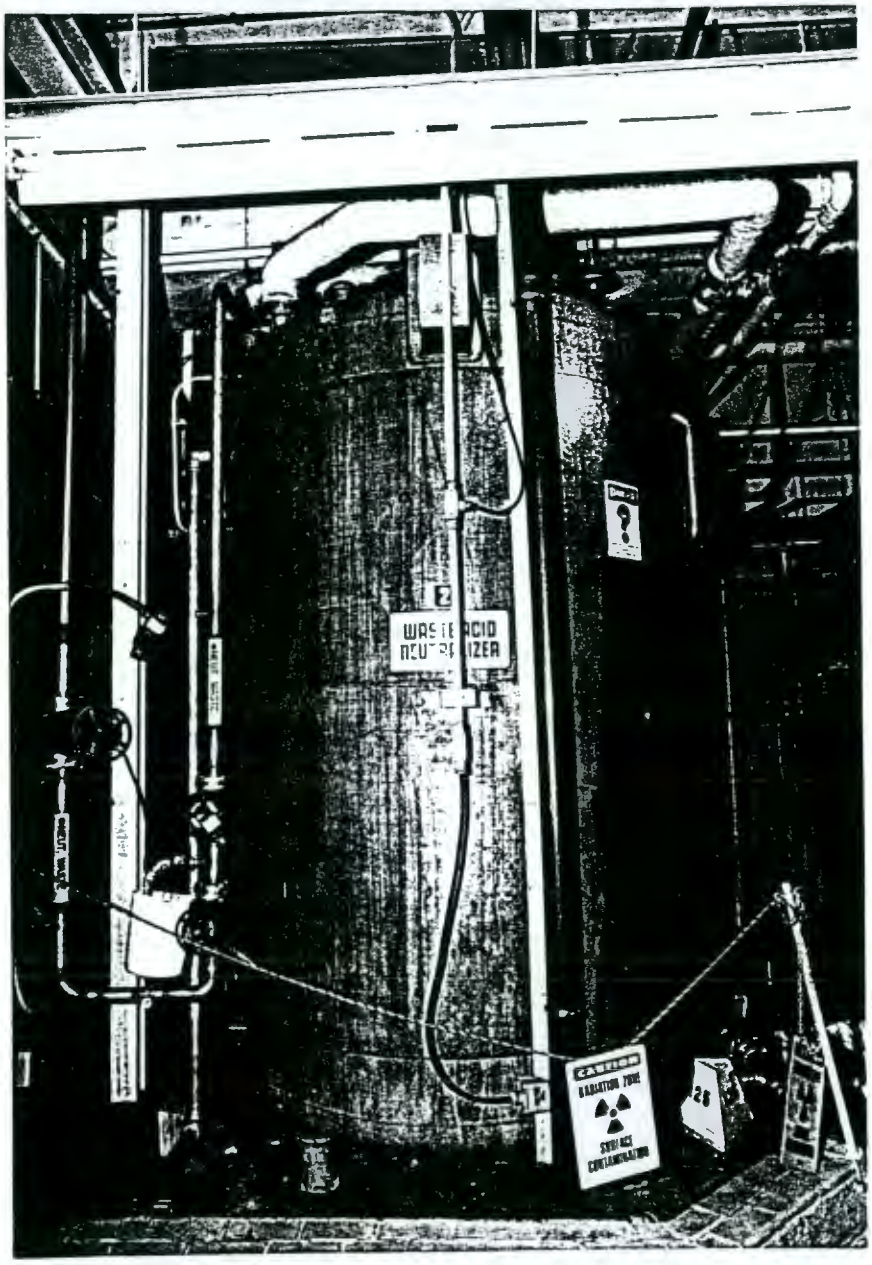


WASTE ACID TANK 4 (REMOVED, CLEANED, AND BURIED IN 1988)

46°22'21"
119°16'42"

8306387-6CN
(PHOTO TANK 1983)

300 AREA WASTE ACID TREATMENT SYSTEM--313 BUILDING WASTE ACID NEUTRALIZATION TANK

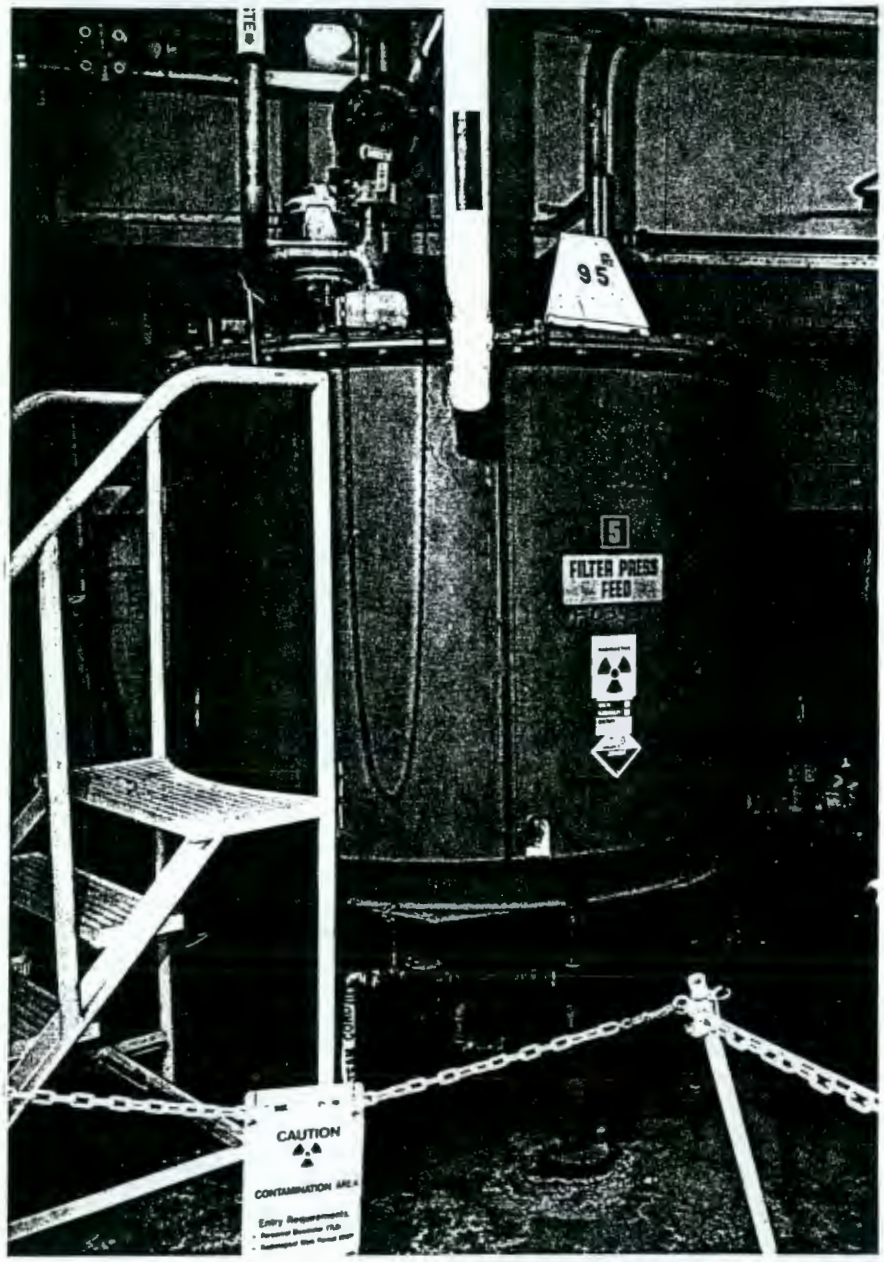


TANK 2

46°22'16"
119°16'48"

8704479-6CN
(PHOTO TAKEN 1987)

300 AREA WASTE ACID TREATMENT SYSTEM-- 313 BUILDING

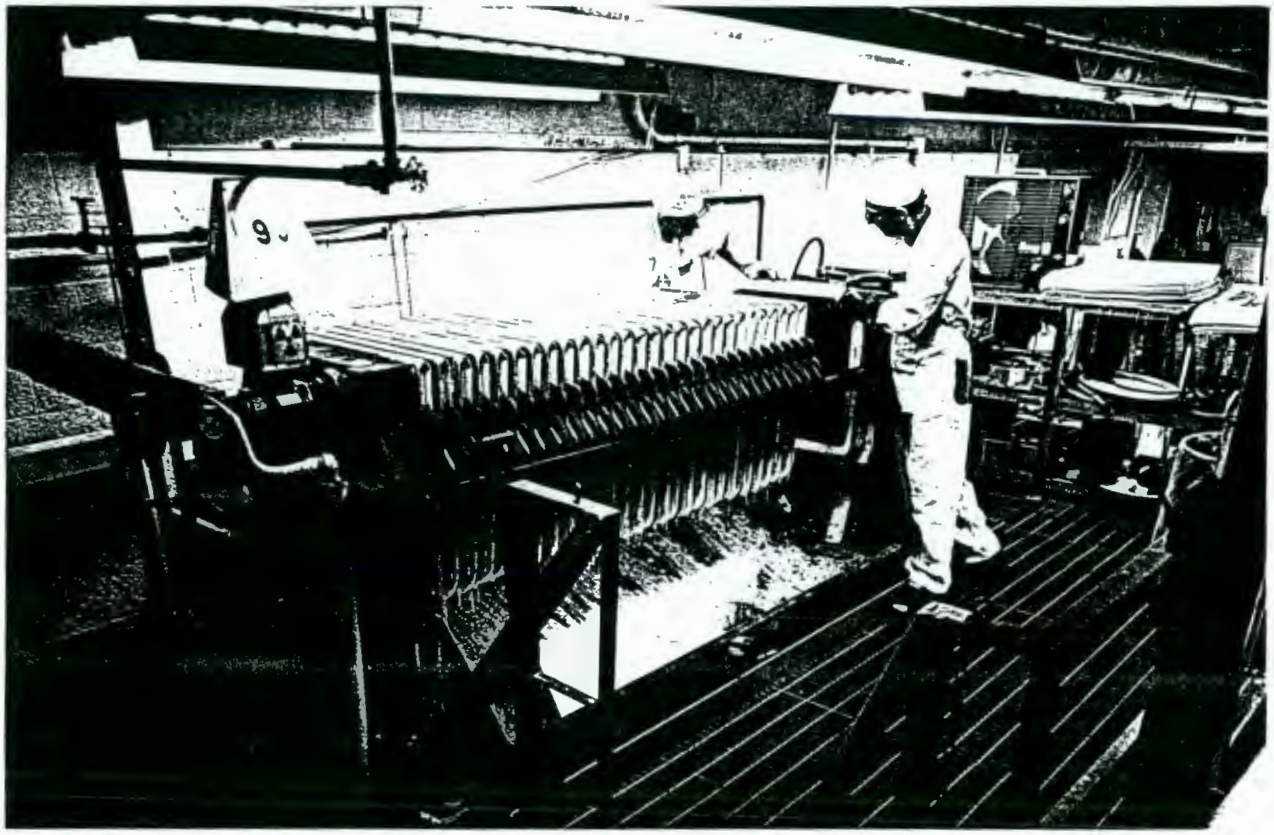


TANK 5

46°22'16"
119°16'48"

95080690-26CN
(PHOTO TAKEN 1987)

300 AREA WASTE ACID TREATMENT SYSTEM--313 BUILDING

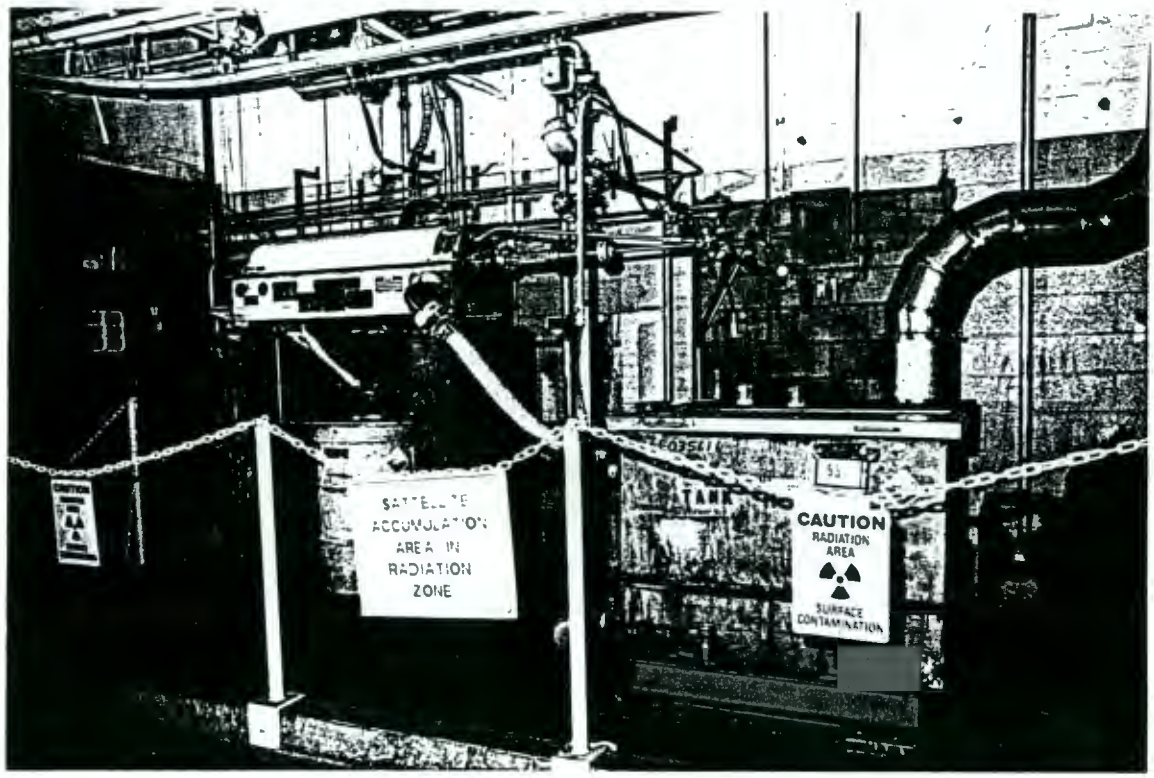


FILTER PRESS

46°22'16"
119°16'48"

7510170-19CN
(PHOTO TANK 1975)

300 AREA WASTE ACID TREATMENT SYSTEM--313 BUILDING

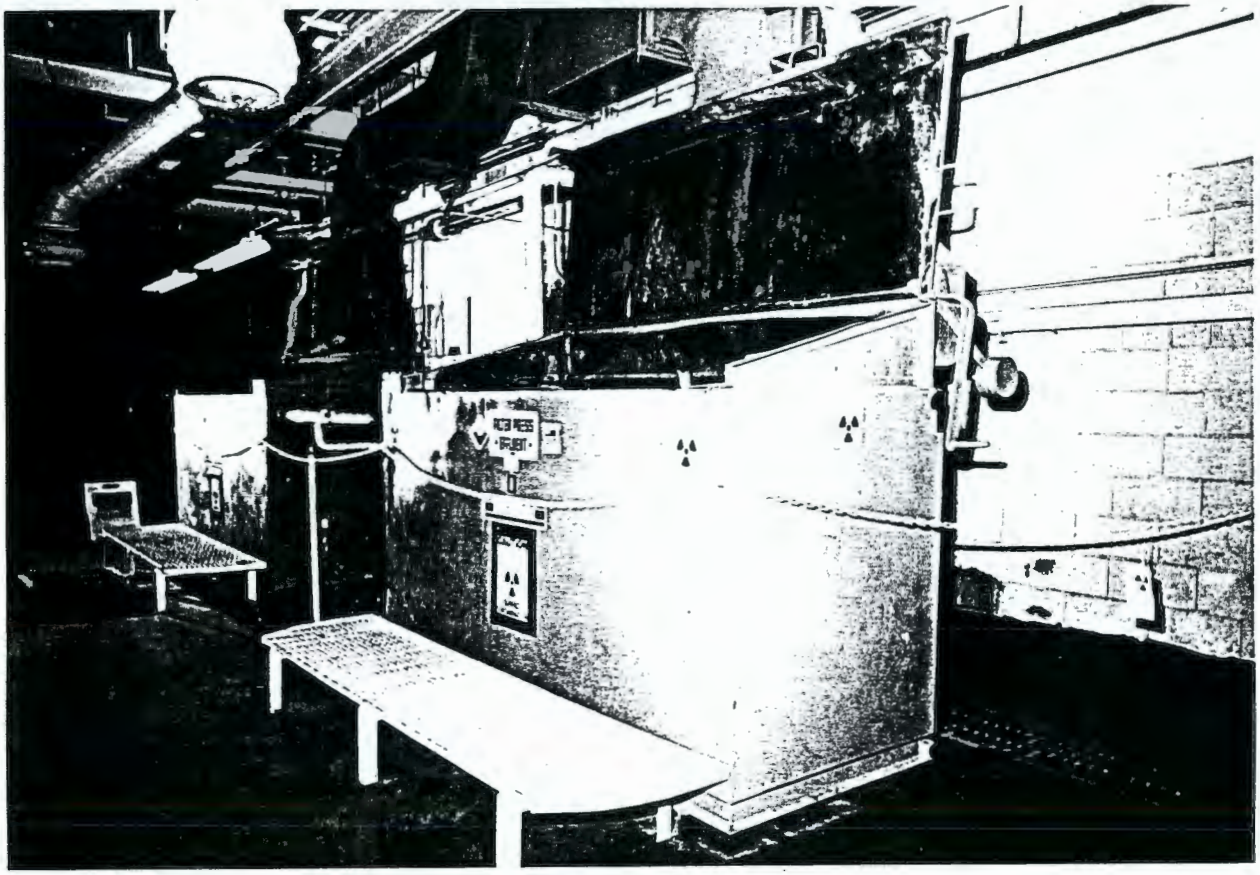


CENTRIFUGE WITH LIQUID RECEIVING TANK 11

46°22'16"
119°16'48"

90022759- 5CN
(PHOTO TANK 1989)

300 AREA WASTE ACID TREATMENT SYSTEM--313 BUILDING

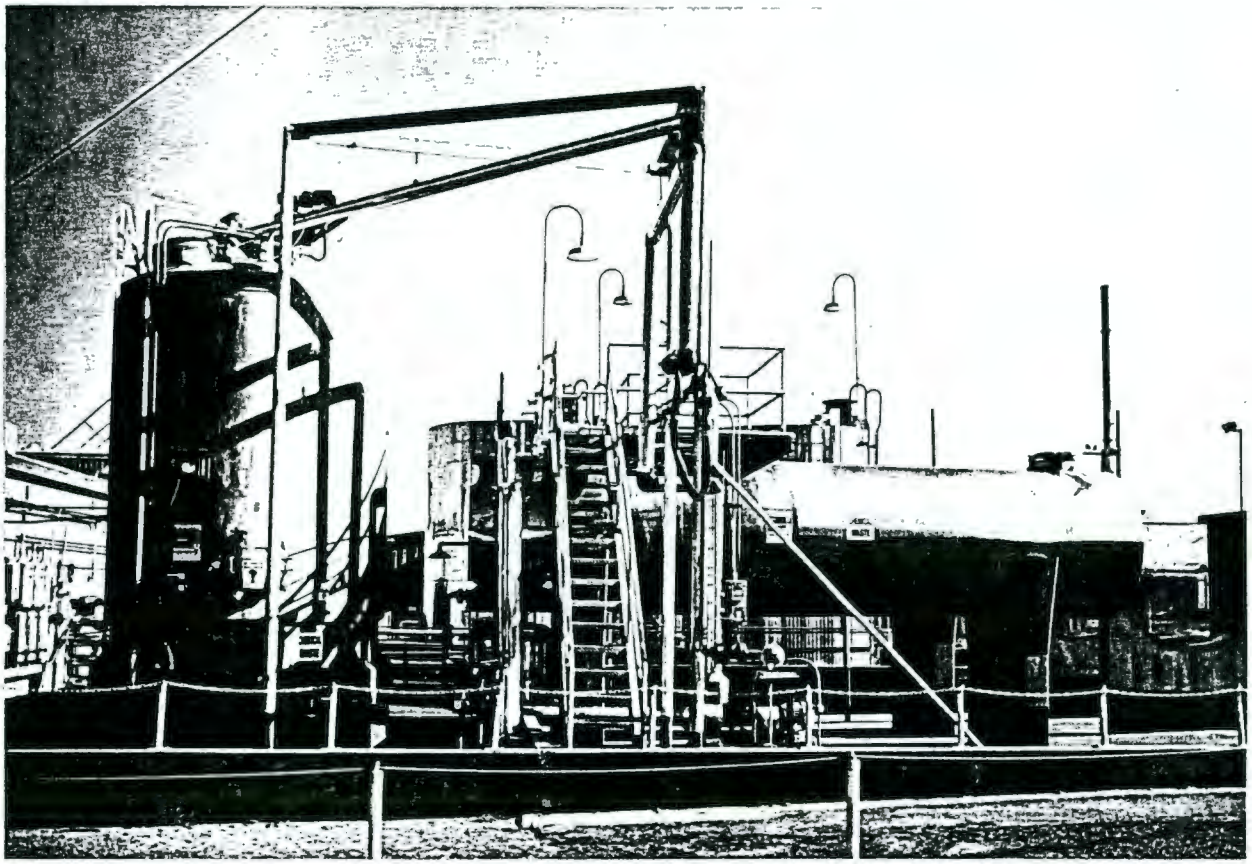


TANKS 9 AND 10--EFFLUENT COLLECTION TANKS

46°22'16"
119°16'48"

9022759-7CN
(PHOTO TANK 1990)

300 AREA WASTE ACID TREATMENT SYSTEM--311 TANK FARM

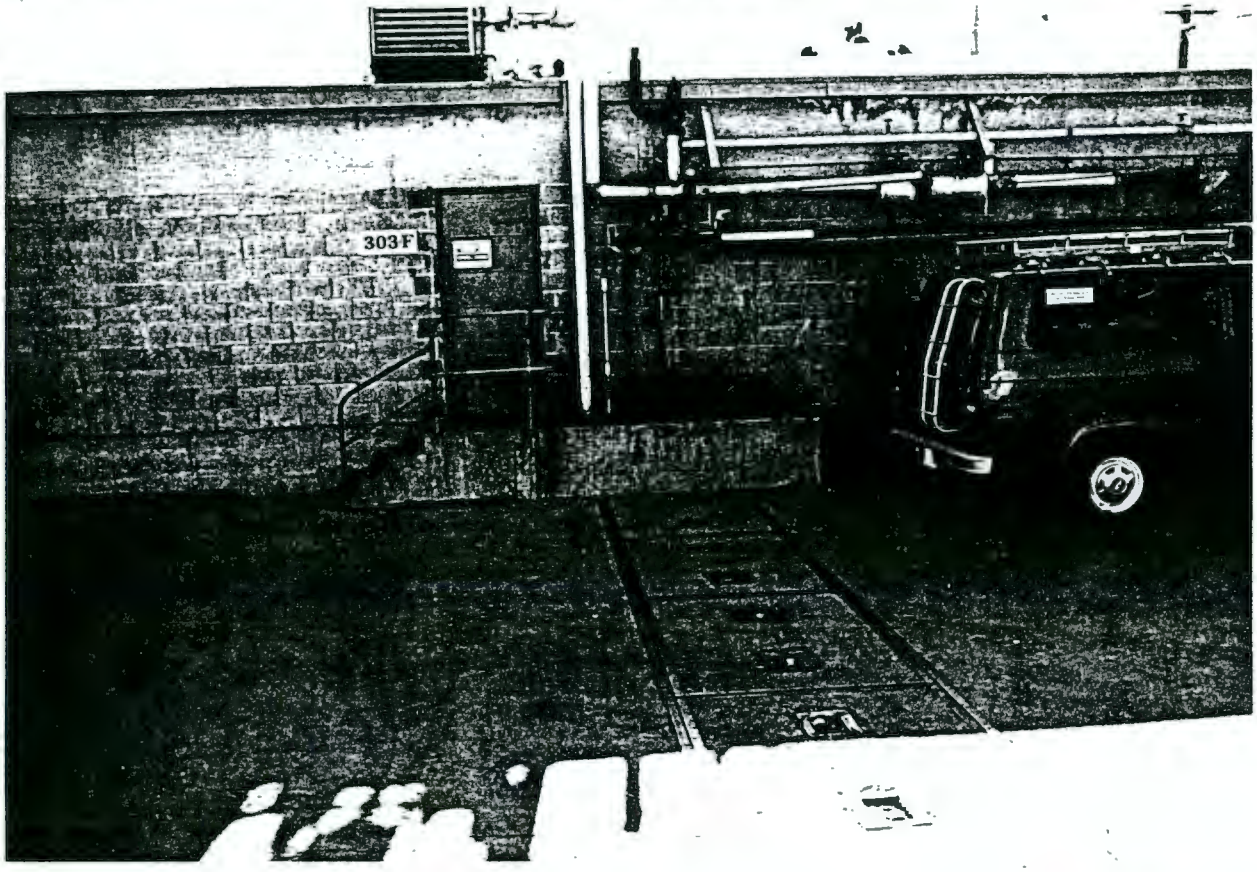


TANKS 40 AND 50

46°22'16"
119°16'46"

85050353-9CN
(PHOTO TANK 1985)

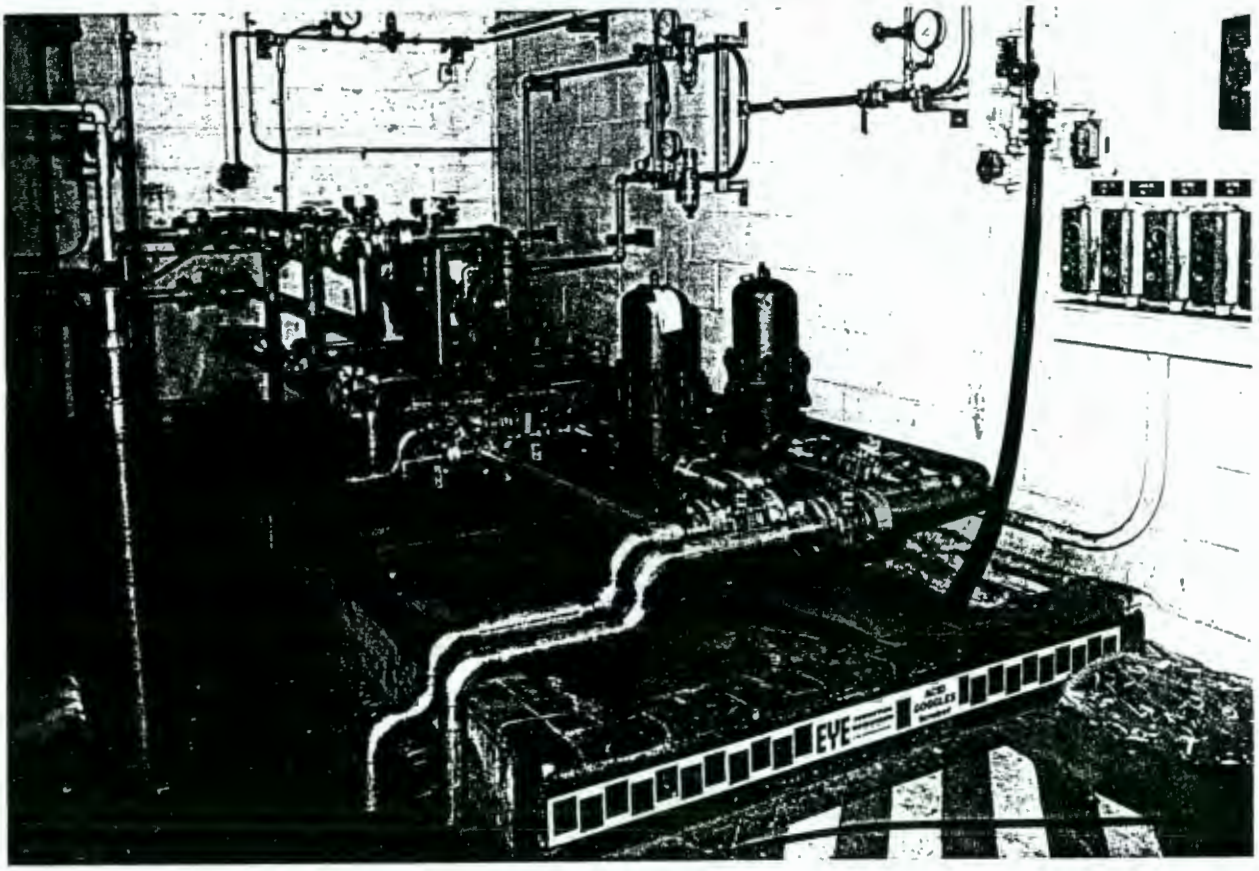
300 AREA WASTE ACID TREATMENT SYSTEM--303-F BUILDING



46°22'16"
119°16'46"

89050353-8CN
(PHOTO TANK 1989)

300 AREA WASTE ACID TREATMENT SYSTEM--303-F BUILDING



AUXILIARY EQUIPMENT (PUMPS, FILTERS, AND SAMPLE PORTS)

46°22'16"
119°16'46"

89050353-7CN
(PHOTO TANK 1989)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

* FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
* The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U

UNIT OF MEASURE	UNIT OF MEASURE CODE
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H

UNIT OF MEASURE	UNIT OF MEASURE CODE
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	T 0 3	0.09	W		7				
2					8				
3					9				
4					10				

CONTINUE ON REVERSE

ontinued from the front.

I. PROCESSES (continued)

. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T03

The 303-M Oxide Facility began waste management operations in May of 1983 and is located in the 300 Area. The 303-M was used to treat mixed waste generated during fuel fabrication operations. During treatment, saw fines and lathe turnings known as chips, consisting of uranium and zirconium, were treated by incineration to eliminate their pyrophoric nature and to allow for transportation without the possibility of spontaneous combustion. The chips and fines were received in water-filled, 114-liter (30-gallon) containers that were drained, weighed, and prepared for the treatment process. Before treatment, the chips were reduced in size by a chip chopper. The chips and fines were incinerated in 2.3 kilogram (5 pound) batches. A maximum of 0.09 metric ton (0.10 ton) of waste per hour could be treated by incineration. The oxidized material was shipped to Westinghouse Material Company of Ohio where the material was used for the production of fissionable uranium.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
X-1	K 0 6 4	900	P	T 0 3 D 8 0	
2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*Included with above*

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: W A 7 8 9 0 0 0 8 9 6 7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	D001	30,844	K	T03	Incineration
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The mixed waste treated at the 303-M Oxide Facility was designated as an ignitable waste (D001) due to its zirconium content, which was a pyrophoric material. The 303-M Oxide Facility could have treated 30,844 kilograms (68,000 pounds) of mixed waste per year.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

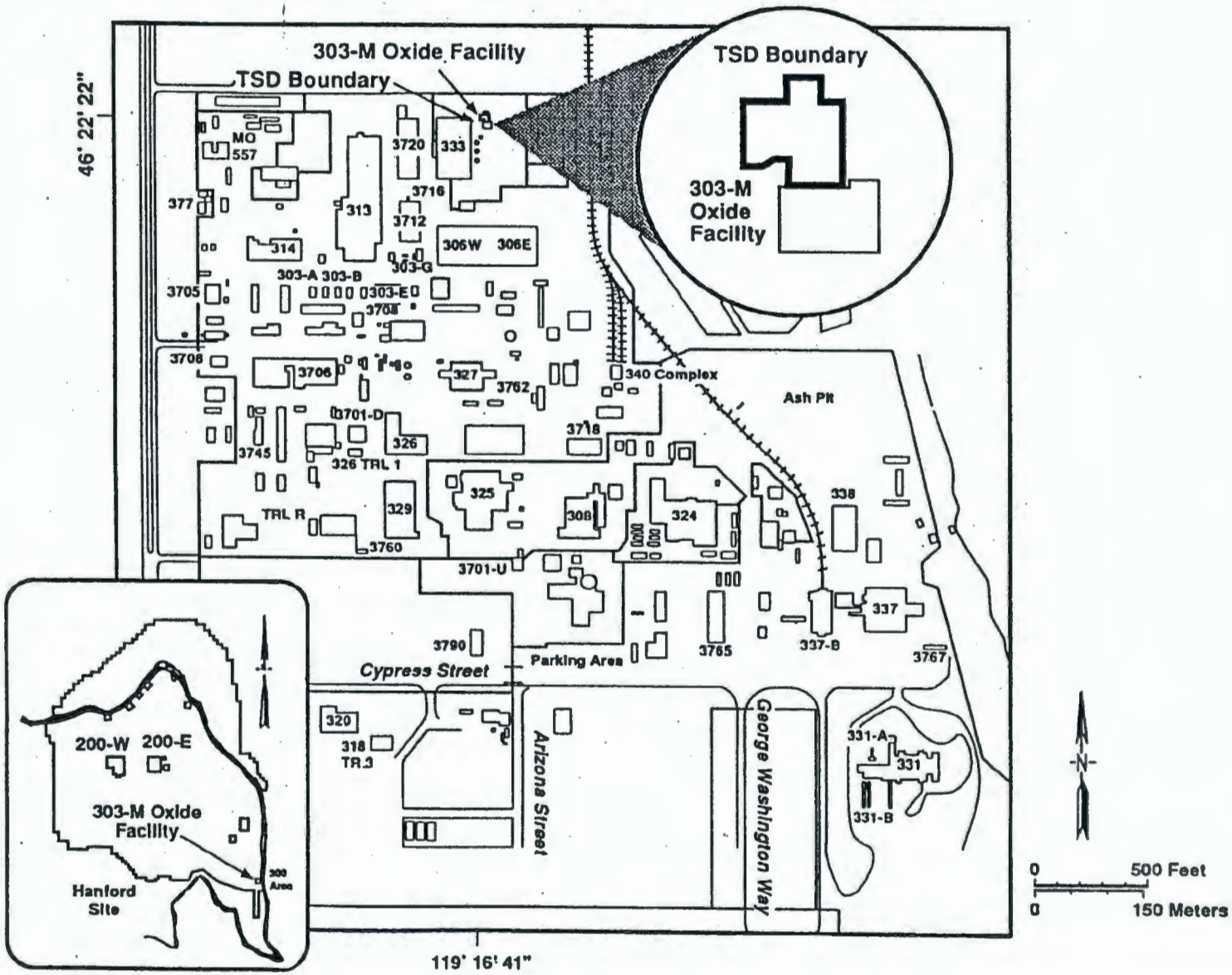
Date

9/13/96

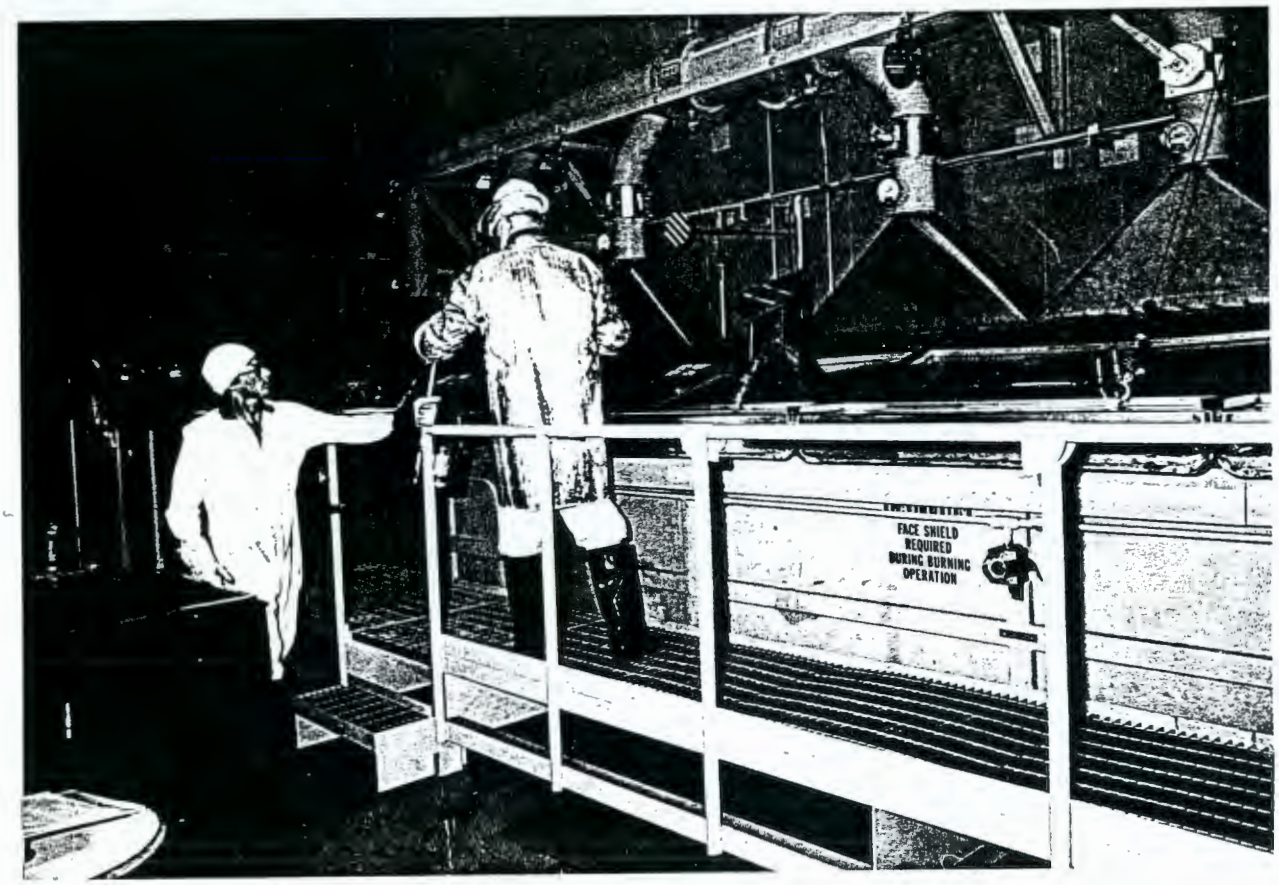
Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

Date

303-M Oxide Facility Site Plan



303-M OXIDE FACILITY

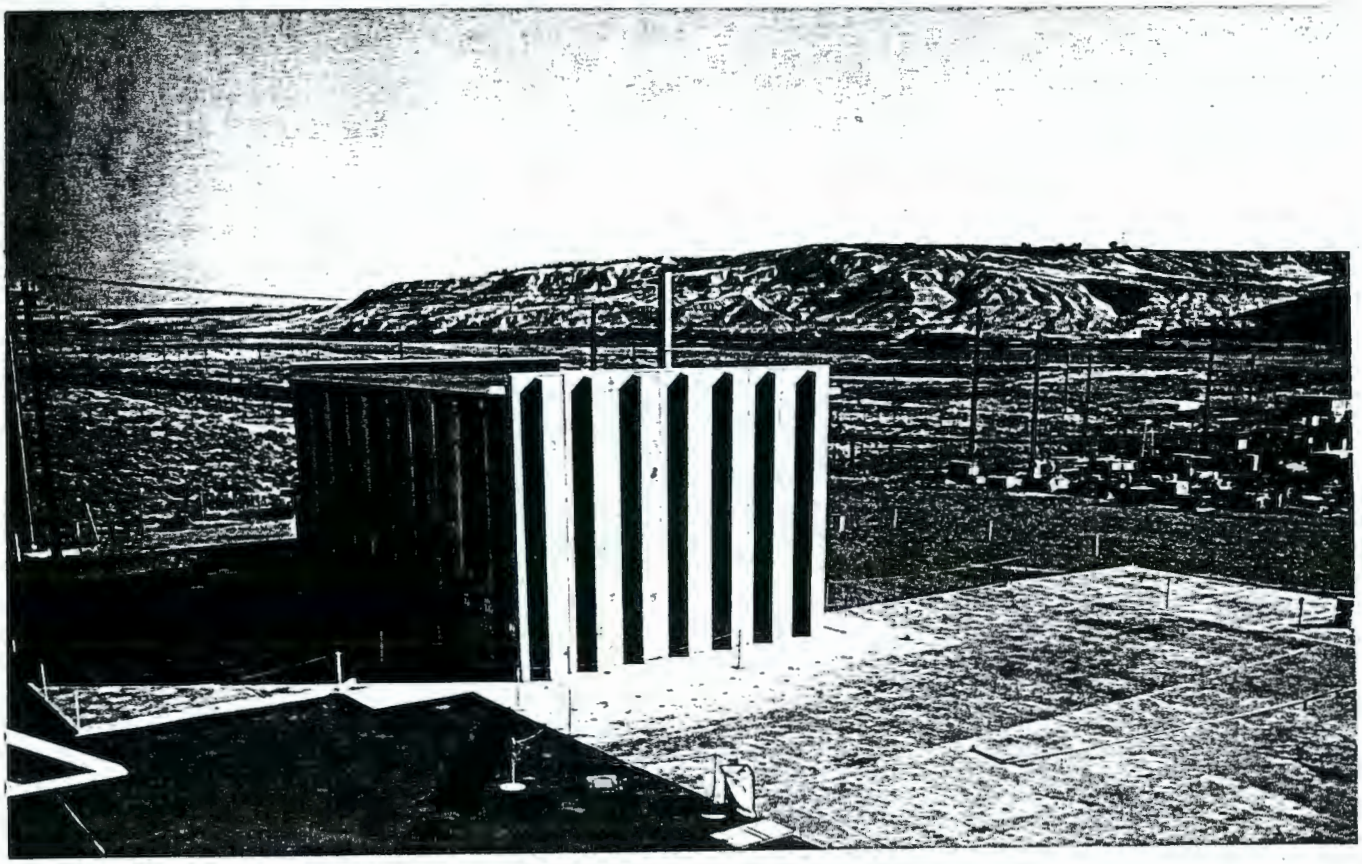


303-M BUILDING

46°22'22"
119°16'41"

8306387-3CN
(PHOTO TAKEN 1983)

303-M OXIDE FACILITY



INCINERATOR

46°22'22"
119°16'41"

8304810-36CN
(PHOTO TAKEN 1983)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 *FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	41,640	L		7				
2					8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

S01

The 303-K Storage Facility (303-K), which began waste management operation in January 1972, was used for the storage of mixed waste in U.S. Department of Transportation-specified containers. Both liquid and solid waste was stored at the 303-K. The liquid waste was stored on a 57-square meter (610-square foot) pad within the building. The building provided secondary containment for the contents of the containers. The solid waste was stored outside the building on a 426-square meter (4,590-square foot) asphalt, concrete, and gravel pad. The storage area is surrounded by a chain link fence. The 303-K no longer stores mixed waste and will be closed.

The maximum process design capacity for container storage at the 303-K was 41,640 liters (11,000 gallons).

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)			D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K	0	5	4	900	P	T03	D80		
X-2	D	0	0	2	400	P	T03	D80		
X-3	D	0	0	1	100	P	T03	D80		
X-4	D	0	0	2			T03	D80		included with above

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	6,804	K	S01	Storage-Container (Refer to IV.E.1)
2	D002				
3	D006				
4	D029				
5	D035				
6	D039				
7	D040				
8	F001				
9	F002				
10	F003				
11	F005				
12	WP01				
13	WT01				
14	WT02				Included With Above
15	D007	18,144	K	S01	Storage-Container (Refer to IV.E.2)
16	WT02				Included With Above
17	D001	18,144	K	S01	Storage-Container (Refer to IV.E.2)
18	D005				
19	D006				
20	WT01				Included With Above
21	D002	771	K	S01	Storage-Container (Refer to IV.E.3)
22	D001	2,313	K	S01	Storage-Container (Refer to IV.E.4)
23	D008	2,494	K	S01	Storage-Container (Refer to IV.E.5)
24					
25					
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D001	136,078	K	S01	Storage-Container (Refer to IV.E.6)
2	D004				
3	through				
4	D007				
5	D009				
6	D011				
7	WT02				Included With Above
8	D002	680	K	S01	Storage-Container (Refer to IV.E.7)
9	D007				Included With Above
10	D002	27	K	S01	Storage-Container (Refer to IV.E.8)
11	D004				
12	D007				
13	D011				Included With Above
14	WP02	91	K	S01	Storage-Container (Refer to IV.E.9)
15	D037	20	K	S01	Storage-Container(Refer to IV.E.10)
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The following provides information concerning the types of waste that were stored at the 303-K:

1. Approximately 6,804 kilograms (15,000 pounds) per year of spent solvents - [This included spent degreasing solvents (F001, WP01, and WT01) that were occasionally mixed with ethyl acetate (D001, F003, and WT02). This also included spent halogenated and nonhalogenated solvents (F002 and F005). Waste solvents were corrosive (D002) and contained cadmium (D006), 1,1-dichloroethylene (D039), and trichloroethylene (D040)].

2. Approximately 36,288 kilograms (80,000 pounds) per year of heat treated salts contaminated with naturally occurring radioactive potassium-40 - [The heat treated salts were generated from both beta bath (8,165 kilograms (18,000 pounds) per year) and quench bath - (8,165 kilograms (18,000 pounds) per year). The beta bath salts consisted of potassium nitrate, sodium nitrate, sodium nitrite, potassium chloride, and sodium chloride. The quench bath salts were considered toxic, extremely hazardous waste (WT01) and were considered ignitable (D001) because of the presence of oxidizers (solid nitrates and nitrites). The quench bath salts also contained barium (D005), cadmium (D006), chromium (D007), and could have been considered toxic, dangerous waste (WT02).

3. Approximately 771 kilograms (1,700 pounds) of corrosive (D002) copper fluorozirconate acid crystals from the bottom of the waste acid tanks in the 334-A Building.

4. Approximately 2,313 kilograms (5,100 pounds) per year of Zircaloy-2 and beryllium/Zircaloy-2 chips and fines before and after concreting the waste in the 304 Building - [This material designated as ignitable (D001) because of the pyrophoric properties.].

5. Approximately 2,494 kilograms (5,500 pounds) per year of metallic lead (D008).

6. Approximately 136,078 kilograms (300,000 pounds) per year of centrifuge and filter press sludge designated as a toxic, dangerous waste (WT02) by the mixture rule and ignitable (D001) because of the presence of solid nitrates - [The waste also could have contained the following chemical constituents introduced into the 300 Area Waste Acid Treatment System: arsenic (D004), barium (D005), cadmium (D006), chromium (D007), mercury (D009), and silver (D011)].

7. Approximately 680 kilograms (1,500 pounds) per year of corrosive (D002) waste acid absorbed by sedimentary opal clay - [This waste also contained chromium (D007)].

8. Approximately 27 kilograms (60 pounds) per year of waste acids contaminated with oil - [The waste acids were designated as corrosive (D002) and contained arsenic (D004), chromium (D007), and silver (D011)].

9. Approximately 91 kilograms (200 pounds) per year of waste hydraulic oil that contained halogenated hydrocarbons (WP02).

10. Approximately 20 kilograms (44 pounds) of a mixed waste that contained pentachlorophenol (D037).

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

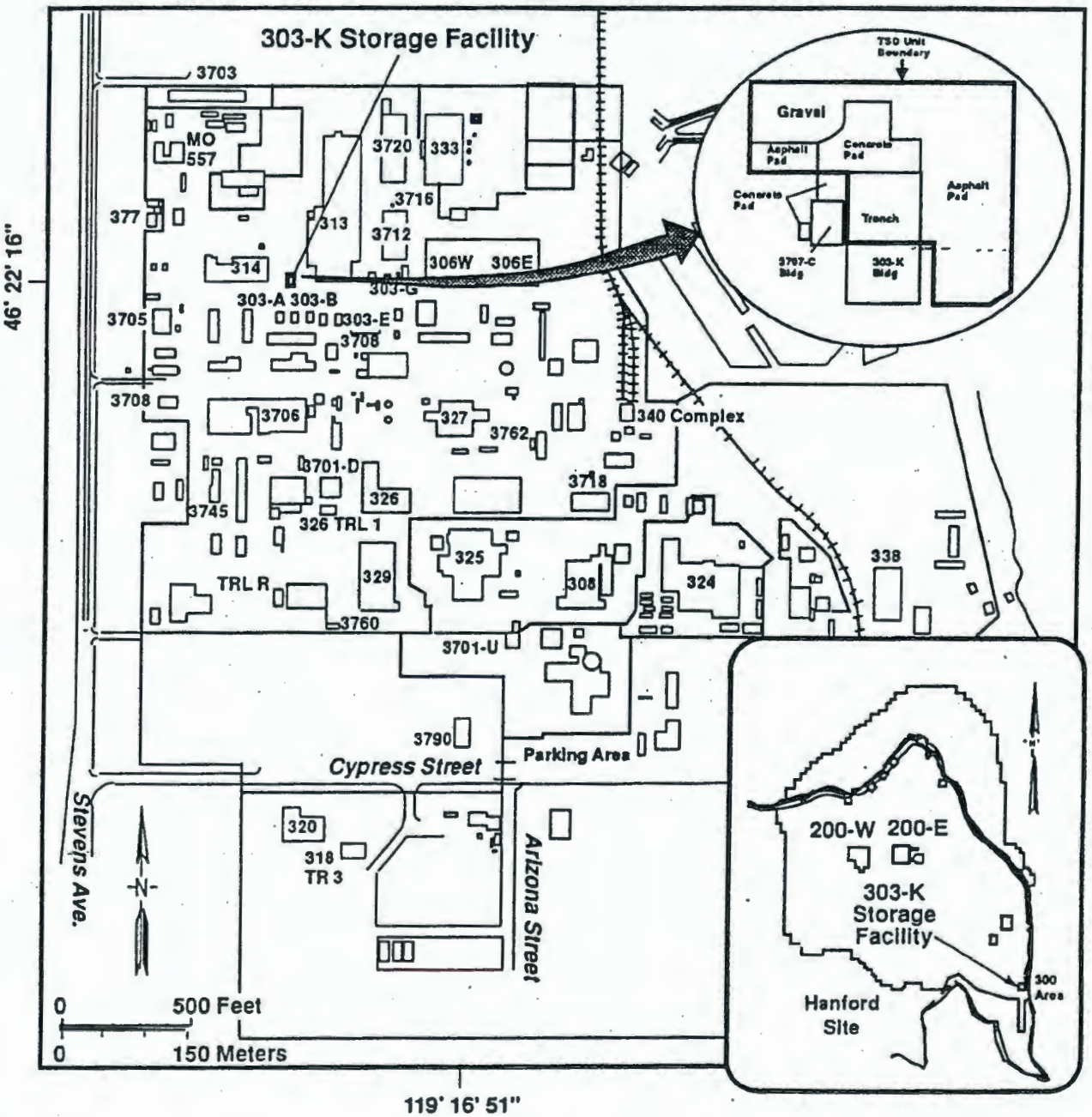
Date

9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

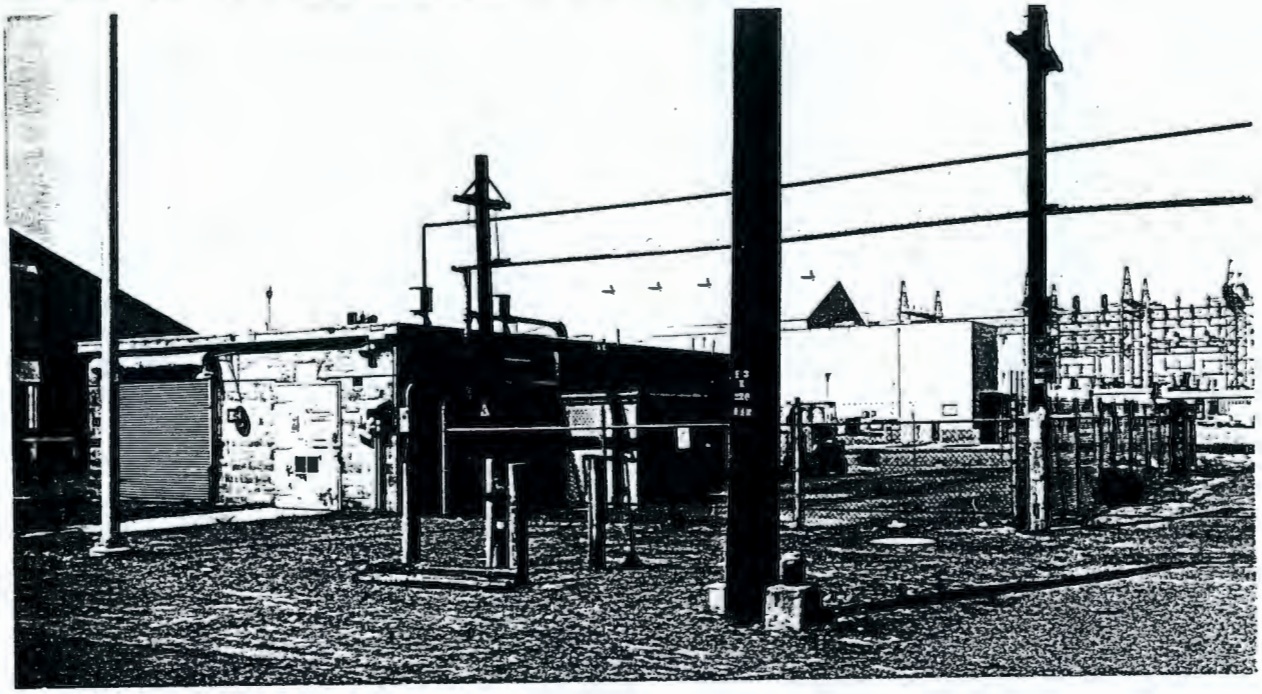
Date

303-K Storage Facility Site Plan

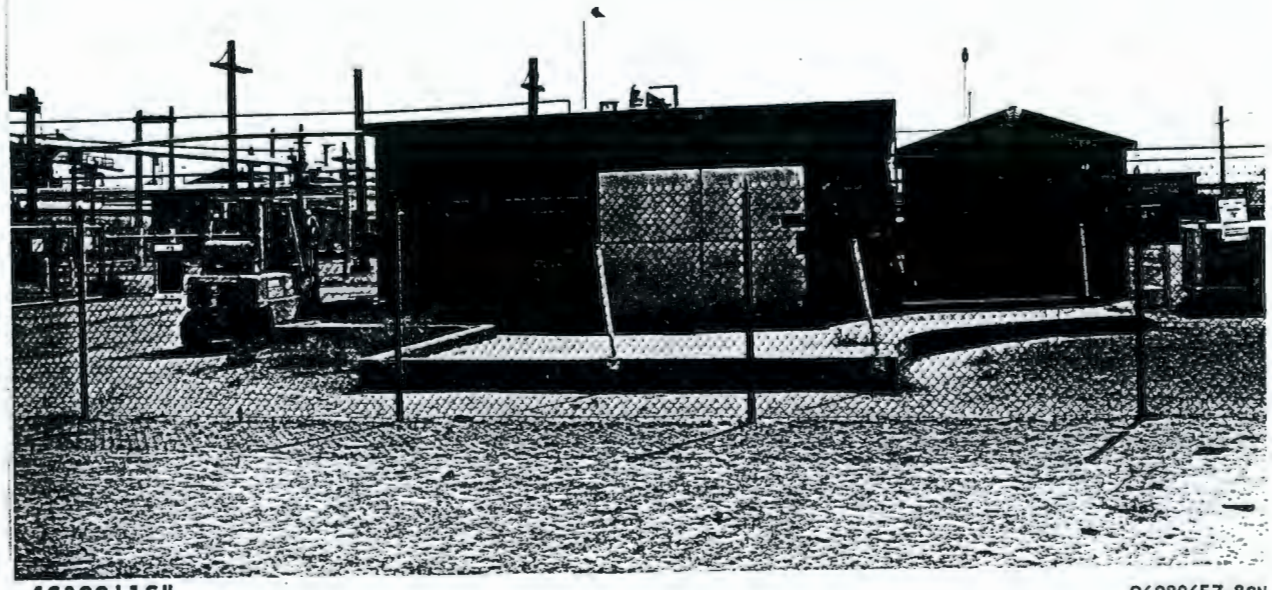


H96070161.21

303-K STORAGE FACILITY



96080657-6CN
(PHOTO TAKEN 1996)



46°22'16"
119°16'51"

96080657-8CN
(PHOTO TAKEN 1996)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

* FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	T 0 1	20	V	
2				
3				
4				
5				
6				
7				
8				
9				
10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T01

The 437 Maintenance and Storage Facility (437 MASF) was intended to begin waste management operations in 1989 that included the maintenance and repair of equipment used in the Fast Flux Test Facility. The 437 MASF also was to be used to treat dangerous and/or mixed waste (T01) by removing residual sodium from waste materials. The process was to be conducted by placing sodium contaminated material in a tank and reacting surface sodium residues with water.

The 437 MASF never managed dangerous and/or mixed waste and a procedural closure is being pursued for this unit. The maximum process design capacity for tank treatment was to be 20 liters (5.3 gallons) per day.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*Included with above*

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: W A 7 8 9 0 0 0 8 9 6 7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D001	5,000	K	T01				Treatment - Tank
2	D003		↓	↓				↓
3	WSC2		↓	↓				Included With Above
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The 437 MASF was to be used for the treatment of alkali metal waste. The waste would have consisted primarily of sodium that exhibits the dangerous waste characteristics of ignitability (D001), reactivity (D003), and corrosivity (WSC2, state-only, corrosive, dangerous waste). Approximately 5,000 kilograms (11,023 pounds) of dangerous and/or mixed waste could have been treated per year at the 437 MASF.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner

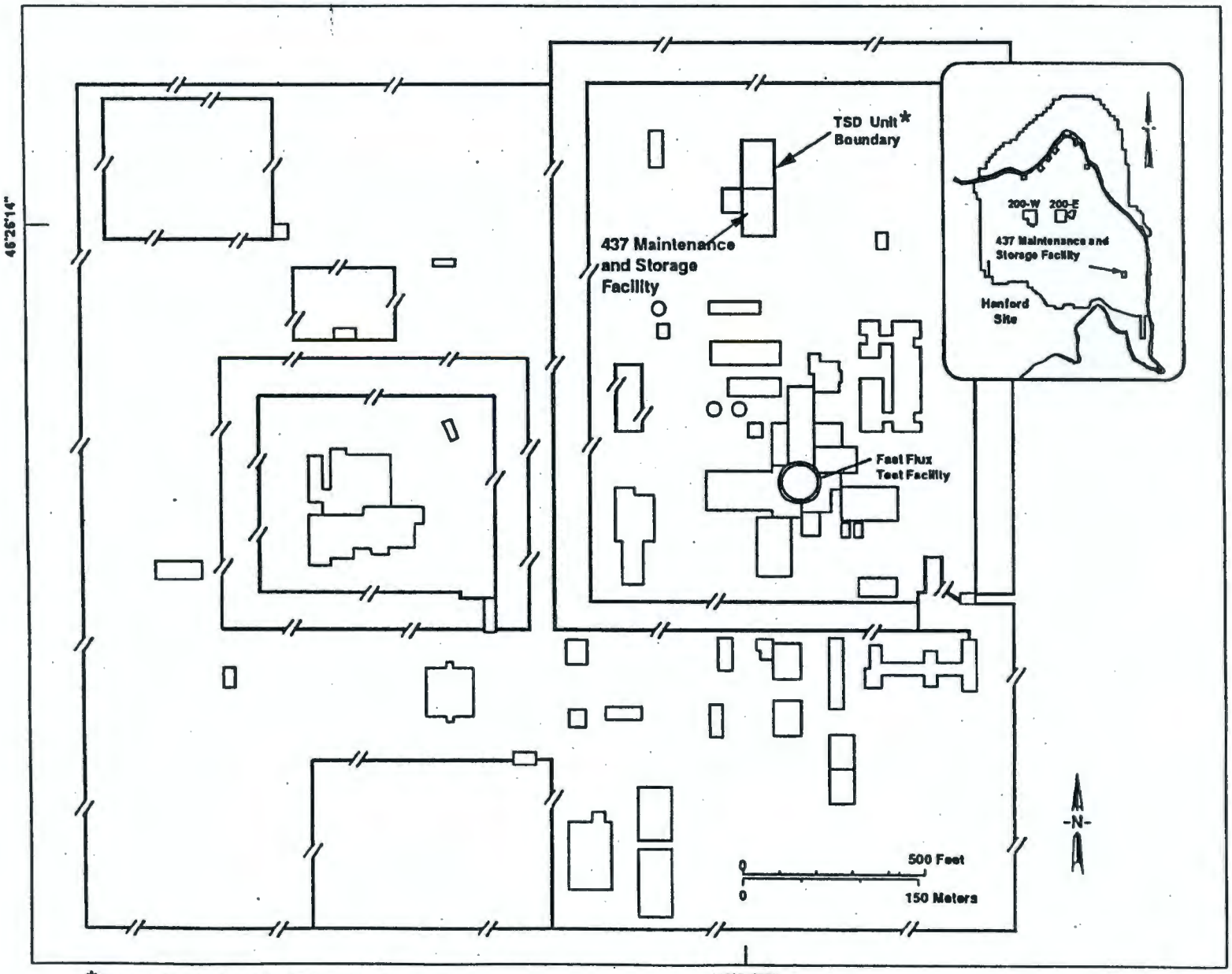
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/10/96
Date

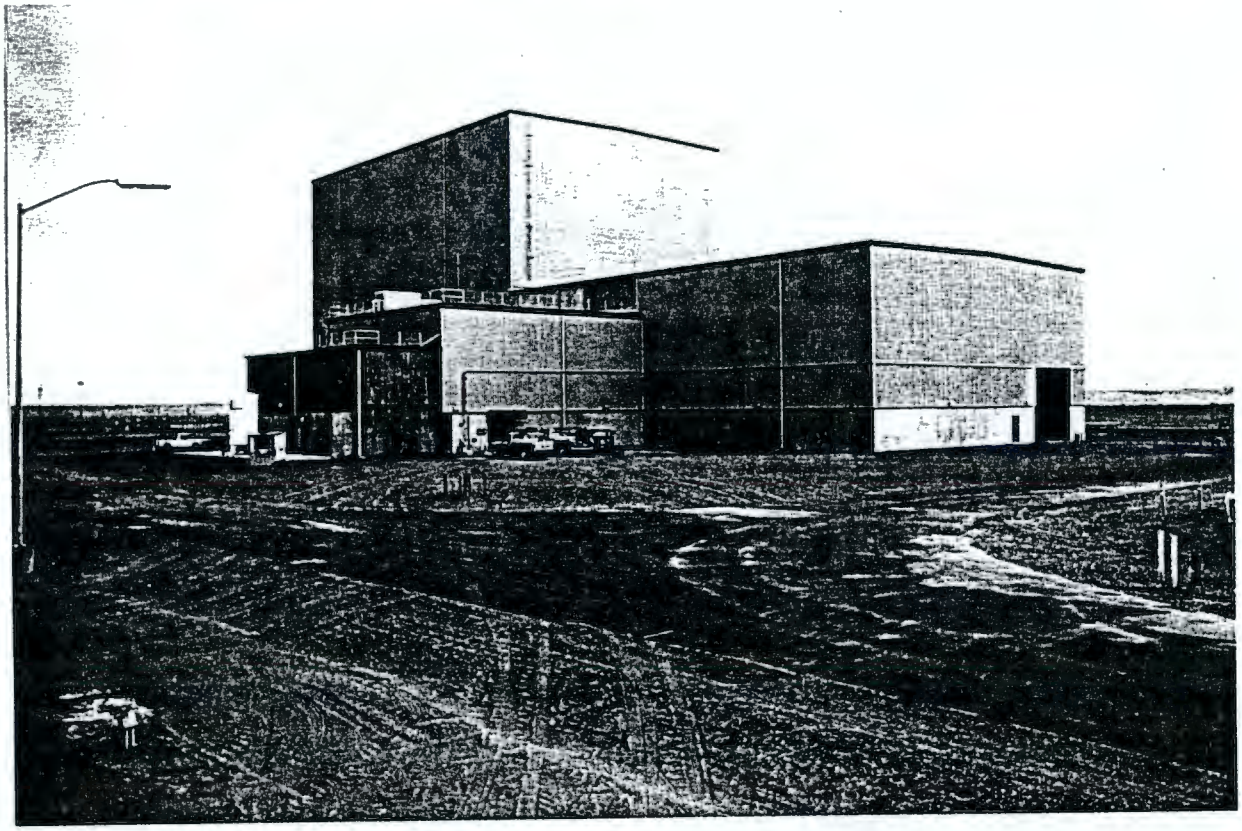
437 Maintenance and Storage Facility Site Plan



*TSD unit boundary is defined as outside wall of building.

H96070161.18

437 MAINTENANCE AND STORAGE FACILITY 437 MASF/400 AREA



46°26'14"
119°21'35"

8505779-2CN
(PHOTO TAKEN 1985)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

* FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
* The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	83,279	L		7				
2					8				
3					9				
4					10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

S01

The 4843 Alkali Metal Storage Facility (4843 AMSF) began waste management operations in April 1986 and was used for the storage of alkali metal waste generated from the Fast Flux Test Facility and from various other operations on the Hanford Site that used alkali metal.

The dangerous alkali metal waste storage area was separated from the mixed alkali metal storage area by a rope divider. The use of concrete blocks inside the 4843 AMSF provided shielding to protect the environment from radioactive alkali metal waste. Waste storage containers could have included steel 19-liter (5-gallon), 114-liter (30-gallon), and 208-liter (55-gallon) containers, or sealed piping and sealed components.

Presently, the 4843 AMSF does not store dangerous or mixed alkali metal waste and will be closed. The maximum process design capacity for container storage was 83,279 liters (22,000 gallons).

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*Included with above*

 CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D001	83.915	K	S01				Storage - Container
2	D003		↓	↓				↓
3	WSC2		↓	↓				Included With Above
4								
5								
6								
7								
8								
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26								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The 4843 AMSF was a storage unit for alkali metal waste that exhibited the dangerous waste characteristics of ignitability (D001), reactivity (D003), and corrosivity (WSC2, state-only, dangerous waste). A maximum of 83,279 liters (22,000 gallons) of dangerous and/or mixed alkali metal waste could have been stored at the 4843 AMSF.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

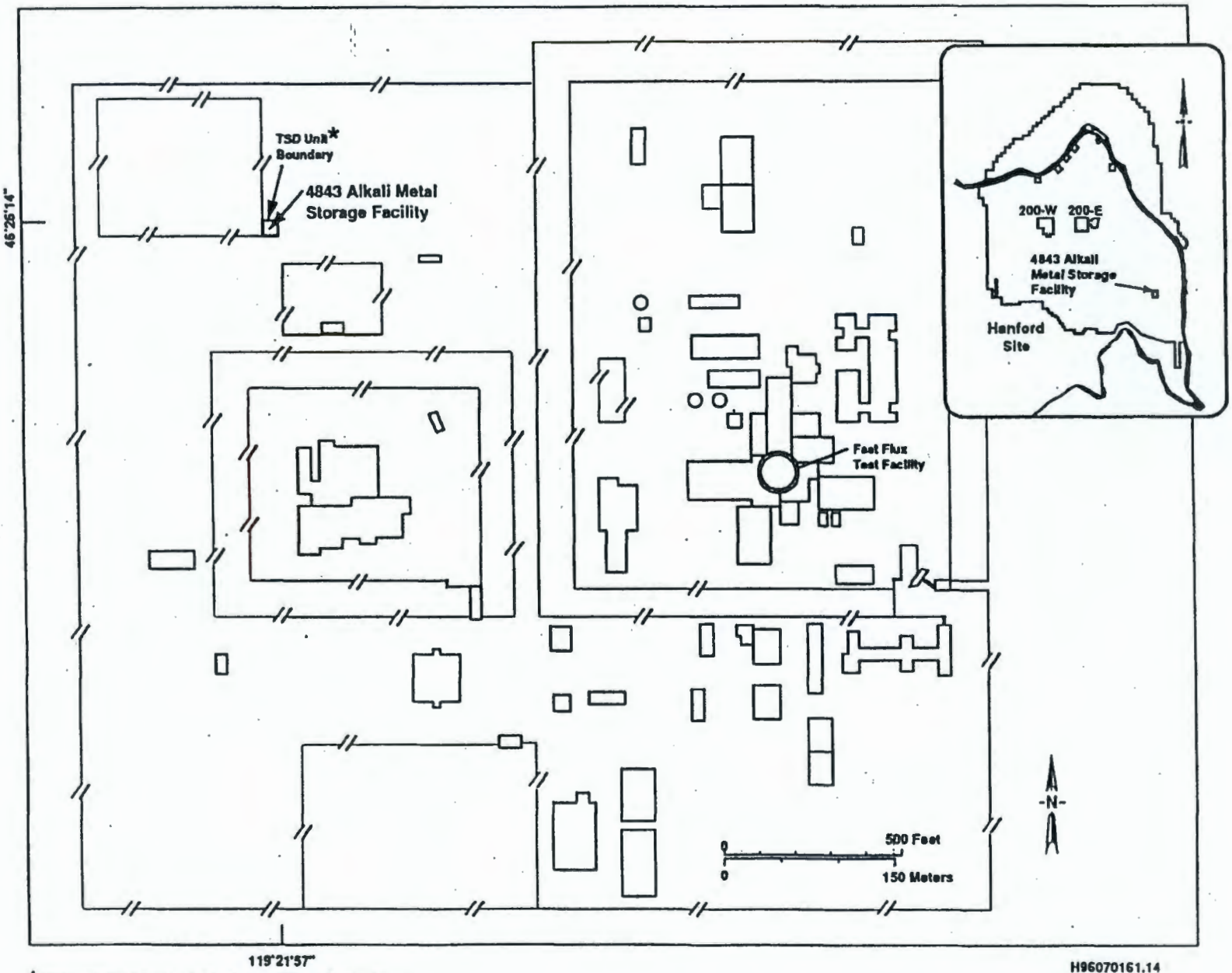
9/26/96
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/13/96
Date

9713532.0814

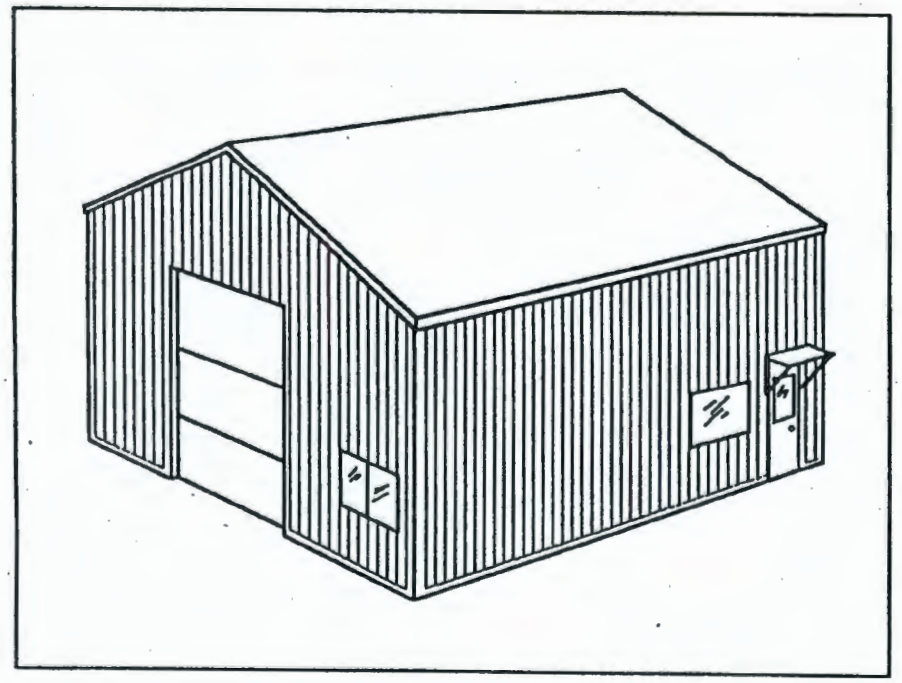
4843 Akali Metal Storage Facility Site Plan

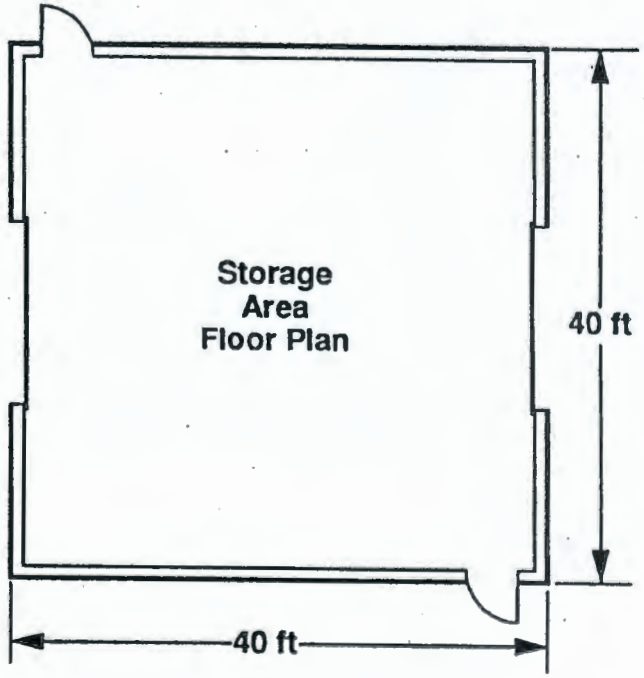


*TSD Unit Boundary is defined as outside wall of building.

4843 Alkali Metal Storage Facility

Fully insulated bolted steel building rests on a concrete slab. Two 12-ft roll-up doors used for moving supplies into and out of the building.

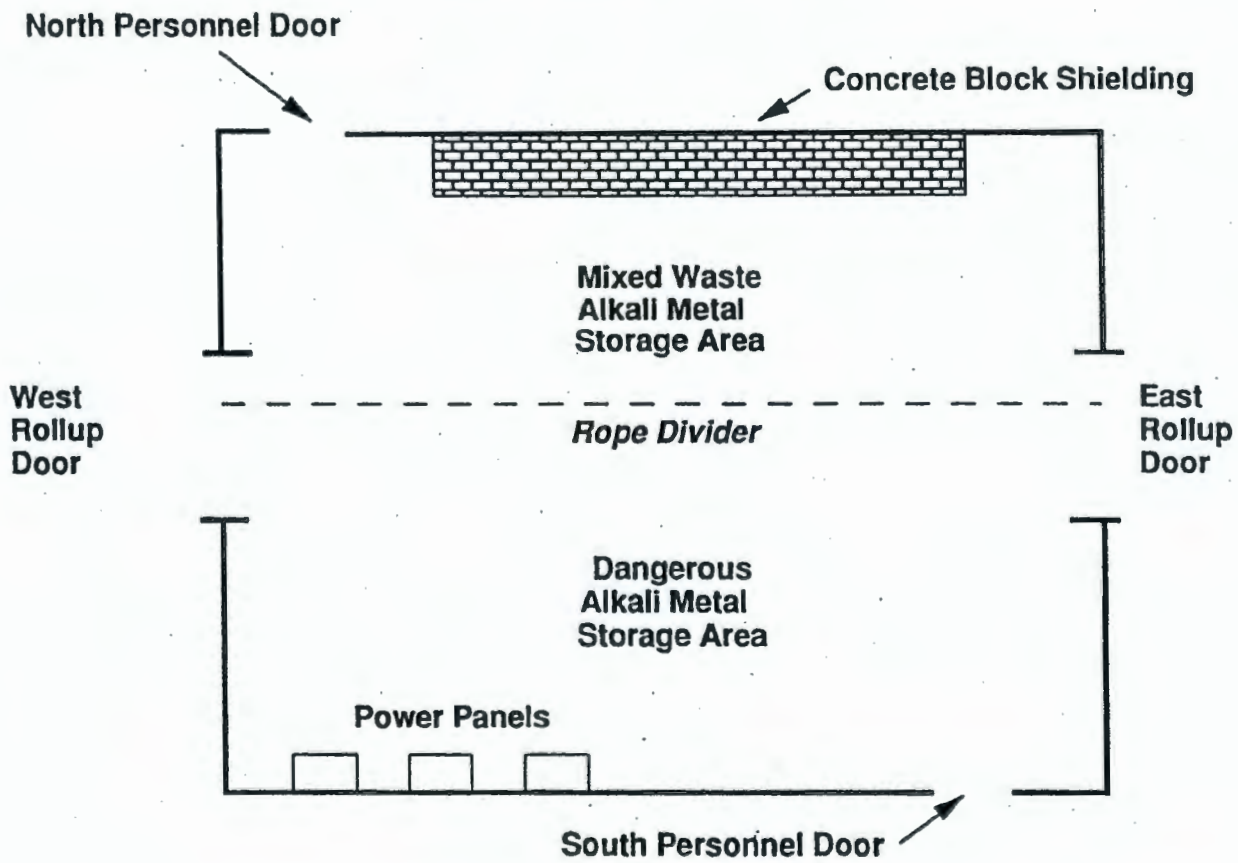




39010019.2

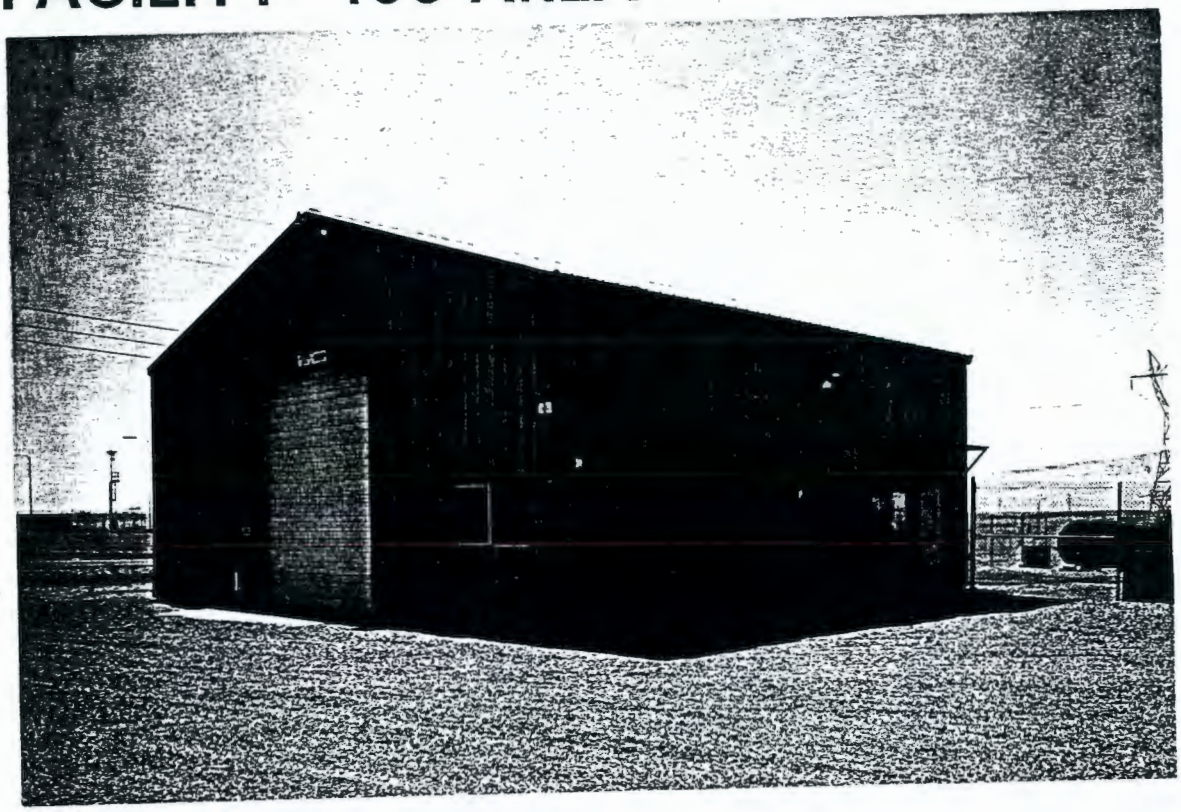
For conversion, apply the following
Feet to Meters - multiply feet by 0.3048

4843 Alkali Metal Storage Facility
Storage Area Floor Plan



H96070161.31

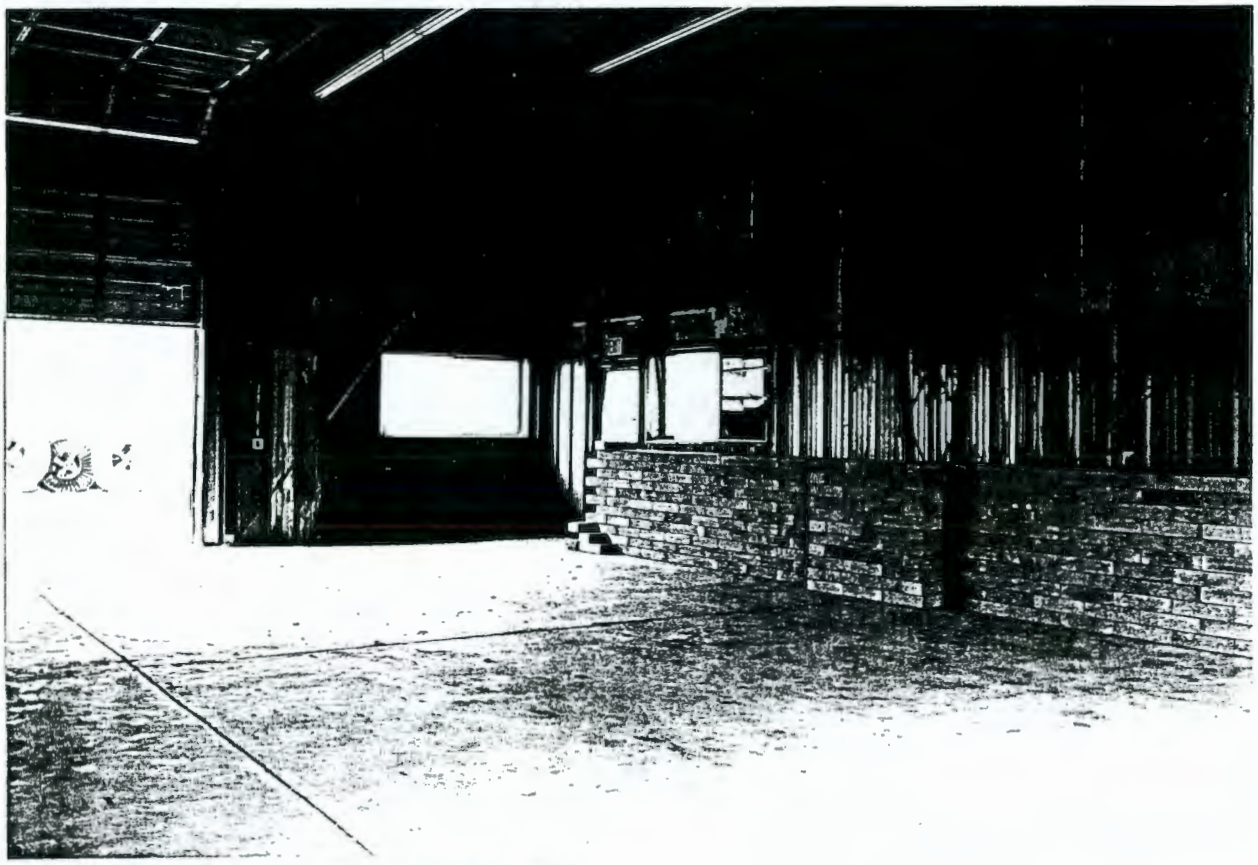
4843 ALKALI METAL STORAGE FACILITY--400 AREA



46°26'14"
119°21'57"

8704431-2CN
(PHOTO TAKEN 1987)

4843 ALKALI METAL STORAGE FACILITY--400 AREA



DANGEROUS ALKALI METAL STORAGE AREA

46°26'14"
119°21'57"

96080657-4CN
(PHOTO TAKEN 1996)

4843 ALKALI METAL STORAGE FACILITY--400 AREA

MIXED ALKALI METAL STORAGE AREA

46°26'14"
119°21'57"

96080657-2CN
(PHOTO TAKEN 1996)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO.	DAY	YR.
0 3	2 2	4 3

* FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 2	1,105,337	L		7				
2	T 0 1	2,700	V		8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

S02
Construction began on the Sodium Storage Facility (SSF) in June 1995 with the anticipated date for waste management operations to begin in April 1997. The anticipated date depends on the decision to restart the Fast Flux Test Facility (FFTF) and the potential use of the sodium coolant in support of the Tank Waste Remediation Project. The SSF is located adjacent to the FFTF in the 400 Area. The unit will consist of three 302,832-liter (80,000-gallon) tanks and one 196,841-liter (52,000-gallon) tank contained within a concrete structure approximately 27.7 meters (91 feet) long by 27.4 meters (90 feet) wide by 9.1 meters (30 feet) high. The SSF will receive liquid sodium containing trace amounts of potassium through batch transfers from the FFTF by way of transfer lines connecting the two facilities. The SSF also could receive and store sodium from other Hanford Facility operations on a case-by-case basis. The sodium will be stored in the SSF until transferred to the Sodium Reaction Facility (SRF) for treatment. The total process design capacity for the four SSF storage tanks will be 1,105,337 liters (292,000 gallons).

T01
Construction on the SRF depends on the decision to restart the FFTF and the potential use of the sodium coolant in support of the Tank Waste Remediation Project. If constructed, the SRF will be located near the SSF and will consist of a 757-liter (200-gallon) reaction vessel and ancillary equipment contained in a concrete and steel structure approximately 19.8 meters (65 feet) long by 17.4 meters (57 feet) wide by 10.7 meters (35 feet) high. The sodium reaction process will consist of injecting molten sodium metal containing trace amounts of potassium and water into the reaction vessel that will be partially filled with 30 to 50 percent sodium hydroxide at approximately 116°C (240°F). Reaction products include sodium hydroxide and hydrogen gas. The hydrogen gas will be removed from the reaction vessel by an inert gas cover purge and maintained at sufficiently low levels so as not to be flammable when mixed with air. The sodium hydroxide solution will be reacted with sulfuric acid to produce sodium sulfate, which will be dried and placed into 208-liter (55-gallon) containers for transfer to an onsite disposal area. The SRF also could receive and treat sodium from other Hanford Facility operations on a case-by-case basis. The total treatment design capacity for the SRF will be 2,700 liters (715 gallons) per day.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	Included with above

 CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	D001	955,000	K	S02	T01			Storage-Tank/Treatment-Tank
2	D003		↓	↓	↓			↓
3	WSC2		↓	↓	↓			Included With Above
4								
5								
6								
7								
8								
9								
10								
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26								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The dangerous and/or mixed waste managed at the SSF and SRF will consist of metallic sodium containing trace amounts of potassium, which designates the waste as an ignitable dangerous waste (D001); state-only, corrosive, dangerous waste (WSC2); and reactive dangerous waste (D003).

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

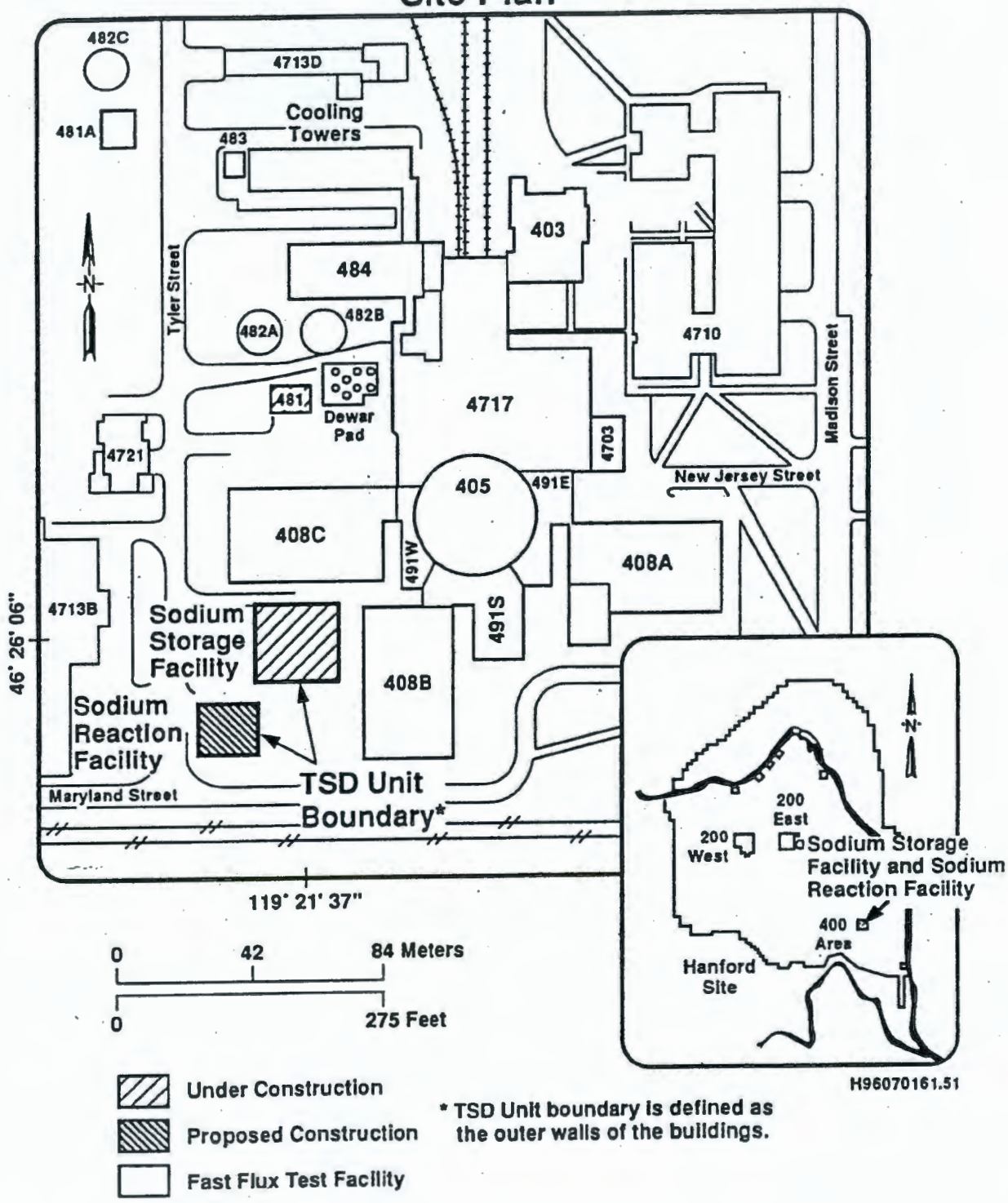
Date

9/13/96

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

Date

Sodium Storage Facility and Sodium Reaction Facility Site Plan



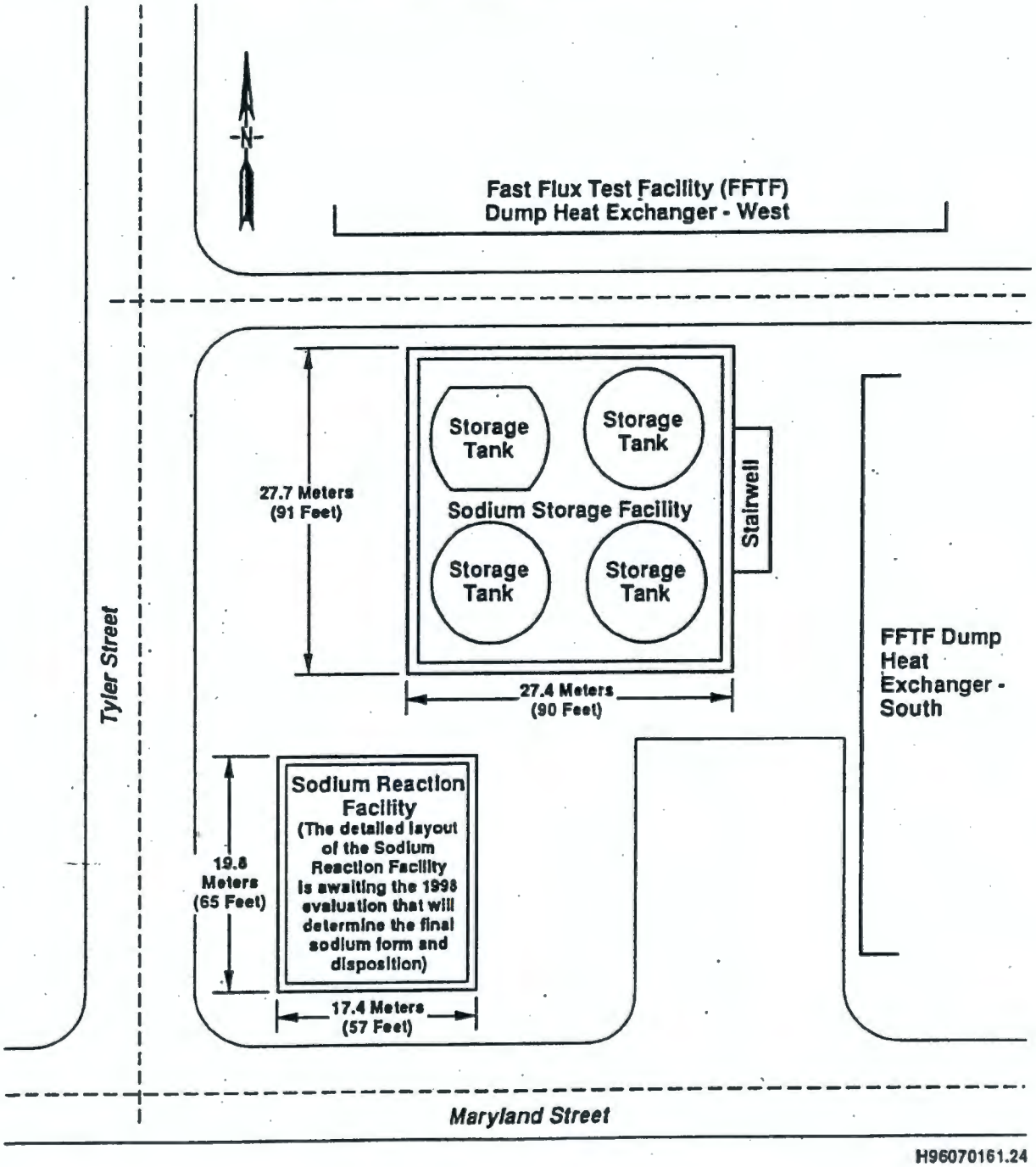
Under Construction

Proposed Construction

Fast Flux Test Facility

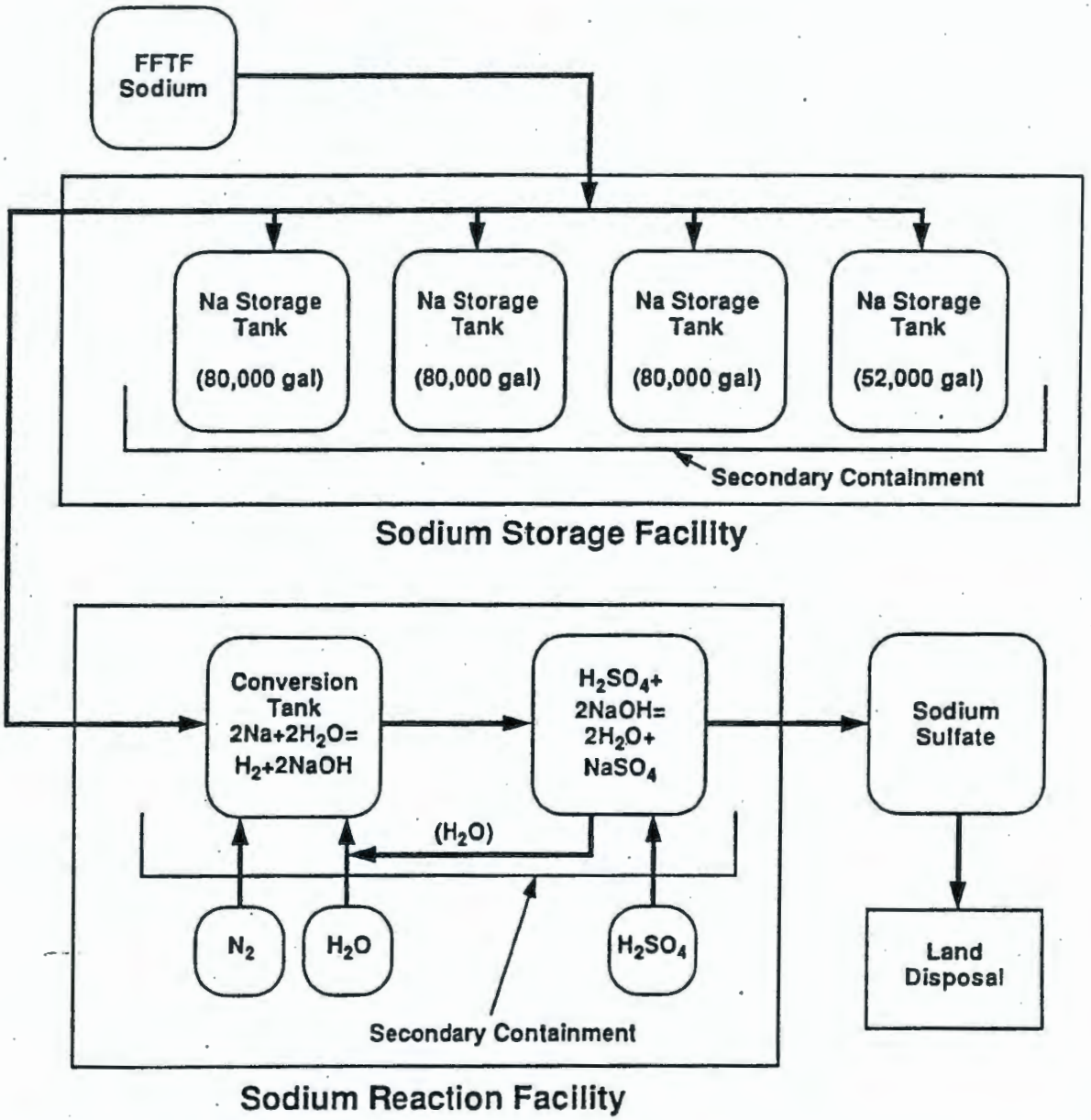
* TSD Unit boundary is defined as the outer walls of the buildings.

Sodium Storage Facility and Sodium Reaction Facility



H96070161.24

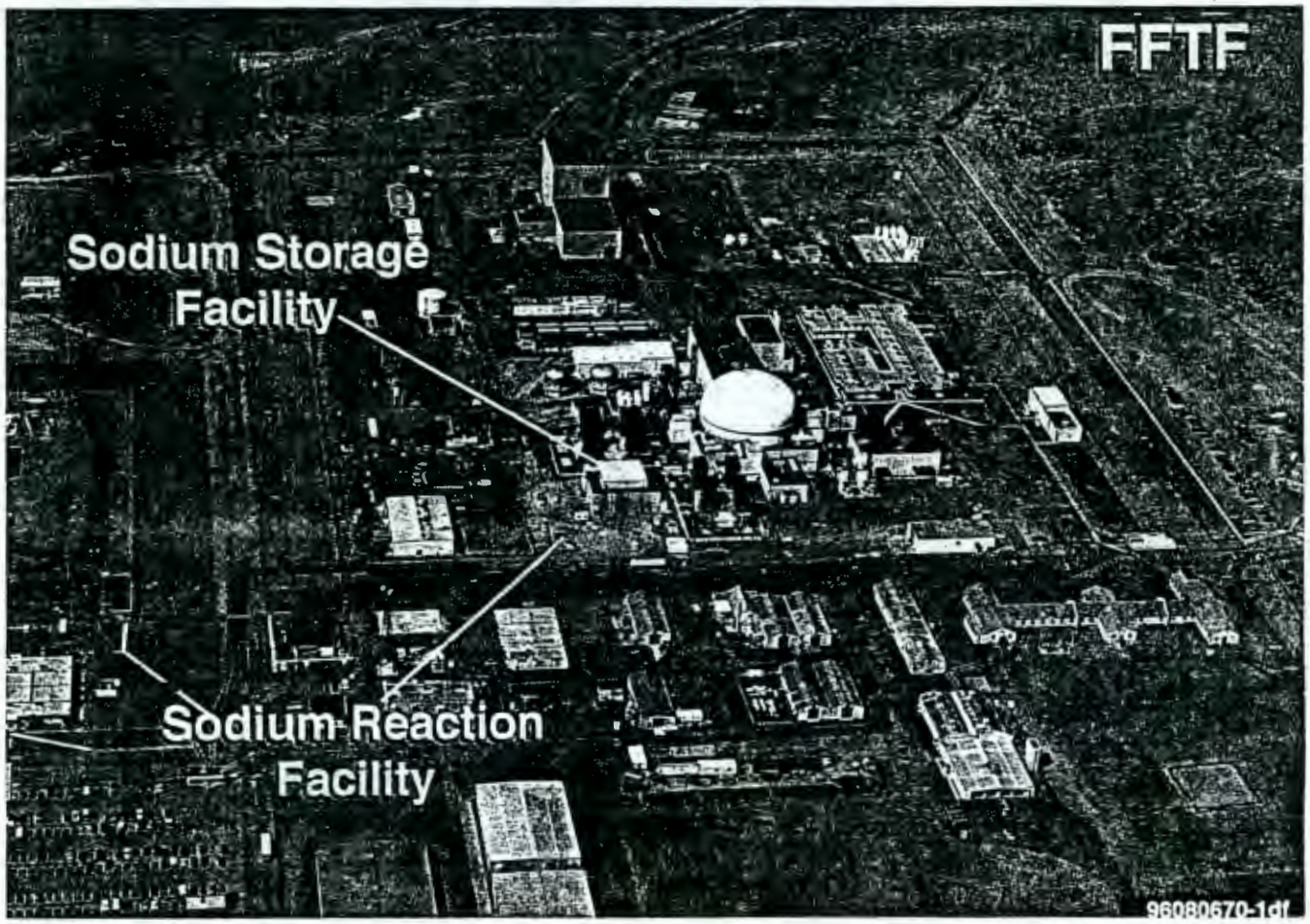
Process Flow Diagram



For conversion, apply the following:
Gallons to liters - multiply gallons by 3.7854

H96070161.25

SODIUM STORAGE FACILITY AND SODIUM REACTION FACILITY



46°26'06"
119°21'37"

96080433-3CN
(PHOTO TAKEN 1996)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3

*FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR.

FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	108,395	L		7				
2					8				
3					9				
4					10				

CONTINUE ON REVERSE

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

S01

The 616 Nonradioactive Dangerous Waste Storage Facility (616 NRDWSF) began waste management operations in September of 1986. The 616 NRDWSF is located between the 200 East and 200 West Areas of the Hanford Facility. The 616 NRDWSF provides container storage for nonradioactive dangerous waste generated in the research and development laboratories, process operations, construction, waste site cleanup/remediation, environmental monitoring, maintenance, and transportation functions throughout the Hanford Facility and approved offsite facilities. Waste is only stored at the 616 NRDWSF until arrangements can be made to ship the waste to an offsite treatment, storage, and/or disposal facility. The 616 NRDWSF stores nonradioactive dangerous waste in containers that meet U.S. Department of Transportation or equivalent requirements.

The maximum process design capacity for container storage at the 616 NRDWSF is 108,395 liters (28,635 gallons).

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)			D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K	0	6	4	900	P	T03	D80		
X-2	D	0	0	2	400	P	T03	D80		
X-3	D	0	0	1	100	P	T03	D80		
X-4	D	0	0	2			T03	D80		Included with above

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	65,000	K	S01	Storage-Container
2	D002	50,000			
3	D003	5,000			
4	D004				
5	D005				
6	D006	20,000			
7	D007	35,000			
8	D008	30,000			
9	D009	17,000			
10	D010	5,000			
11	through				
12	D043				
13	WSC2	1,000			
14	WP01	24,000			
15	WP02	5,000			
16	WP03	4,000			
17	WT01	80,000			
18	WT02	114,000			
19	F001	4,000			
20	F002	13,000			
21	F003	26,000			
22	F004	3,000			
23	F005	26,000			
24	F006	500			
25					
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	F007	500	K	S01	Storage-Container (Cont.)
2	F008				
3	through				
4	F012				
5	F019				
6					
7	F026				
8	F027	800			
9	F028	500			
10	W001	2,500			
11	P001	500			
12	through				
13	P018				
14	P020				
15	through				
16	P024				
17	P026				
18	through				
19	P031				
20	P033				
21	P034				
22	P036				
23	through				
24	P051				
25	P054				
26	P056				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	P060	500	K	S01	Storage-Container (Cont.)
2	P062				
3	through				
4	P078				
5	P081				
6	P082				
7	P084				
8	P085				
9	P087				
10	P088				
11	P089				
12	P092				
13	through				
14	P099				
15	P101				
16	through				
17	P116				
18	P118				
19	through				
20	P123	500			
21	U001	500			
22	U002	1,000			
23	U003	1,000			
24	U004				
25	through				
26	U012				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	U014	500	K	S01	Storage-Container (Cont.)
2	U015				
3	through				
4	U031				
5	U032	1,000			
6	U033	500			
7	through				
8	U039				
9	U041				
10	U042				
11	U043				
12	U044	1,000			
13	U045				
14	through				
15	U050				
16	U051	2,000			
17	U052	500			
18	U053				
19	U055				
20	through				
21	U064				
22	U066				
23	through				
24	U099				
25	U101				
26	U102				

ontinued from page 2.
OTE: Photocopy this page before completing if you have more than 26 wastes to list.

D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	U103	500	K	S01	Storage-Container (Cont.)
2	U105				
3	through				
4	U132				
5	U133	2,000			
6	U134	1,000			
7	U135	500			
8	through				
9	U138				
10	U140				
11	through				
12	U144	1,000			
13	U145	1,000			
14	U146	500			
15	through				
16	U150				
17	U151	3,000			
18	U152	500			
19	U153	500			
20	U154	1,000			
21	U155	500			
22	through				
23	U174				
24	U176				
25	through				
26	U194				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(If a code is not entered in D(1))*
1	U196	500	K	S01	Storage-Container (Cont.)
2	U197				
3	U200				
4	through				
5	U222				
6	U223	1,500			
7	U225	1,500			
8	U226	3,000			
9	U227	500			
10	U228	1,000			
11	U232	500			
12	U233	500			
13	U234	500			
14	U235	1,000			
15	U236	1,000			
16	U237	1,000			
17	U238	500			
18	U239	1,000			
19	U240	5,000			
20	U243	500			
21	U244	1,000			
22	U245	500			
23	through				
24	U249				
25					
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890006967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U328	500	K	S01	Storage-Container (Cont.)
2	U353	↓	↓	↓	↓
3	U359	↓	↓	↓	Included With Above
4					
5					
6					
7					
8					
9					
10					
11					
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Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The 616 NRDWSF is used for the storage of nonradioactive dangerous waste generated on the Hanford Facility and approved offsite facilities. The waste could consist of listed waste, waste from nonspecific sources, characteristic waste, and state-only waste.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/96

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

 CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner

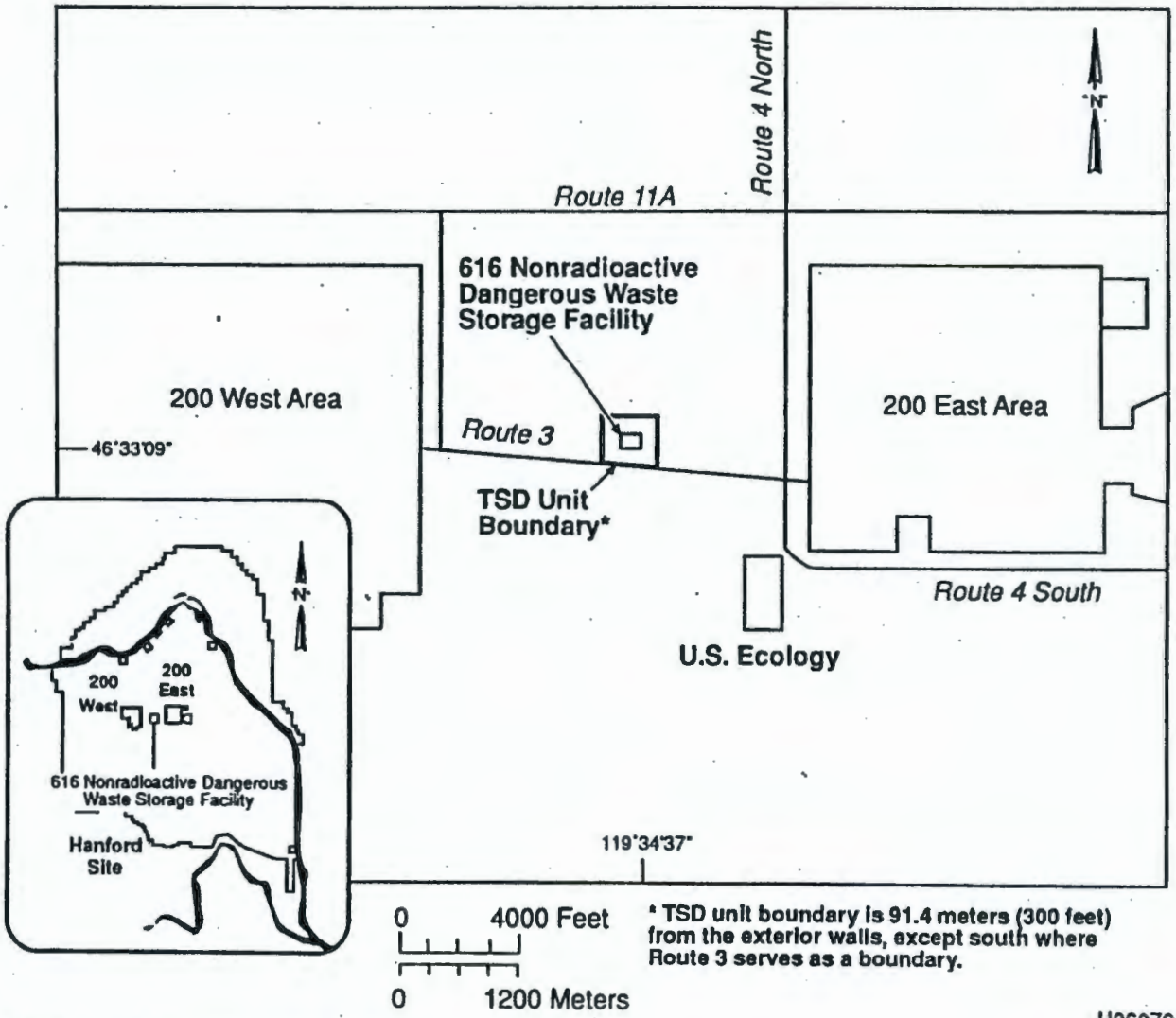
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

9/26/96
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

9/13/96
Date

616 Nonradioactive Dangerous Waste Storage Facility
Site Plan

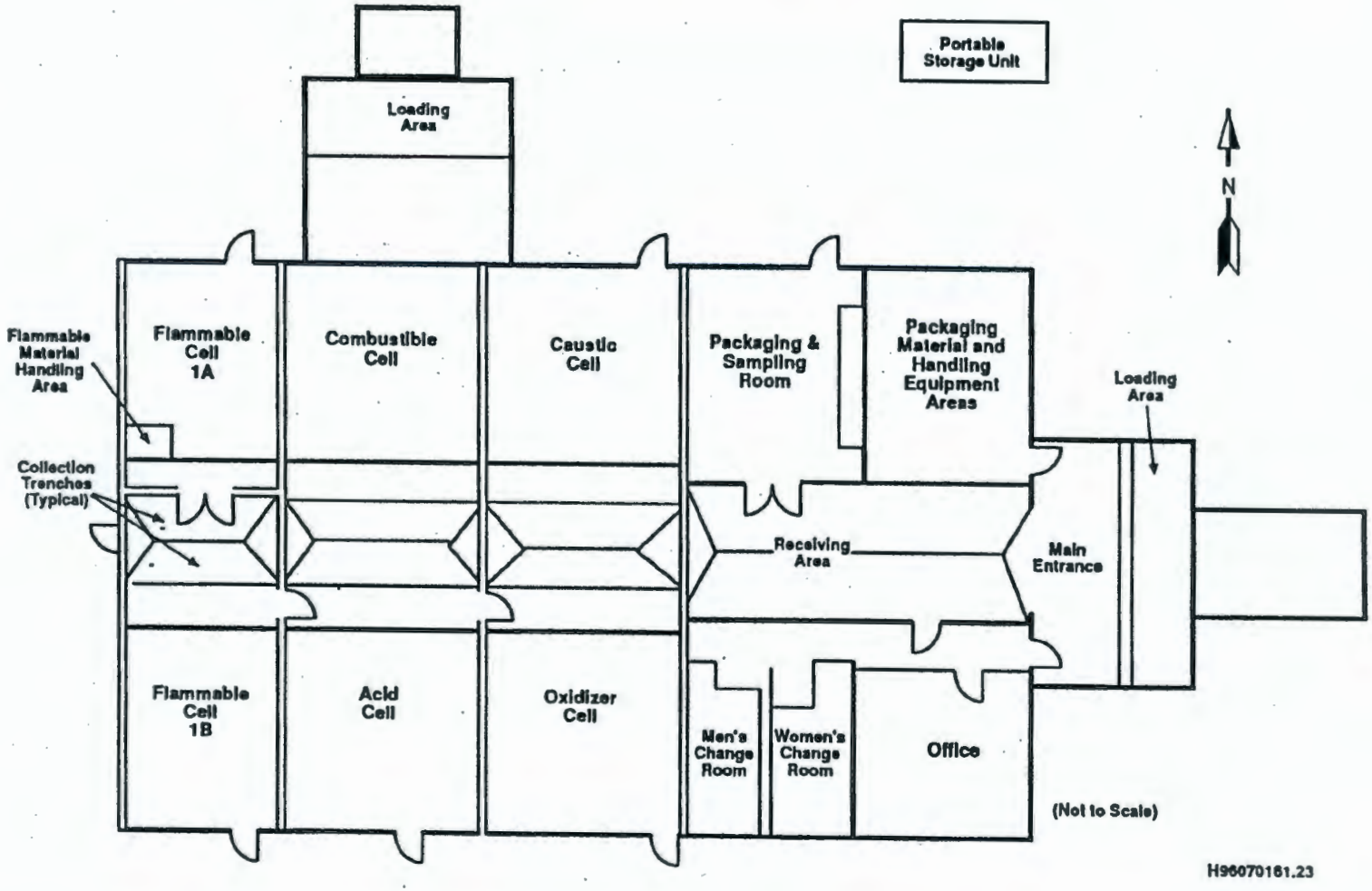


* TSD unit boundary is 91.4 meters (300 feet) from the exterior walls, except south where Route 3 serves as a boundary.

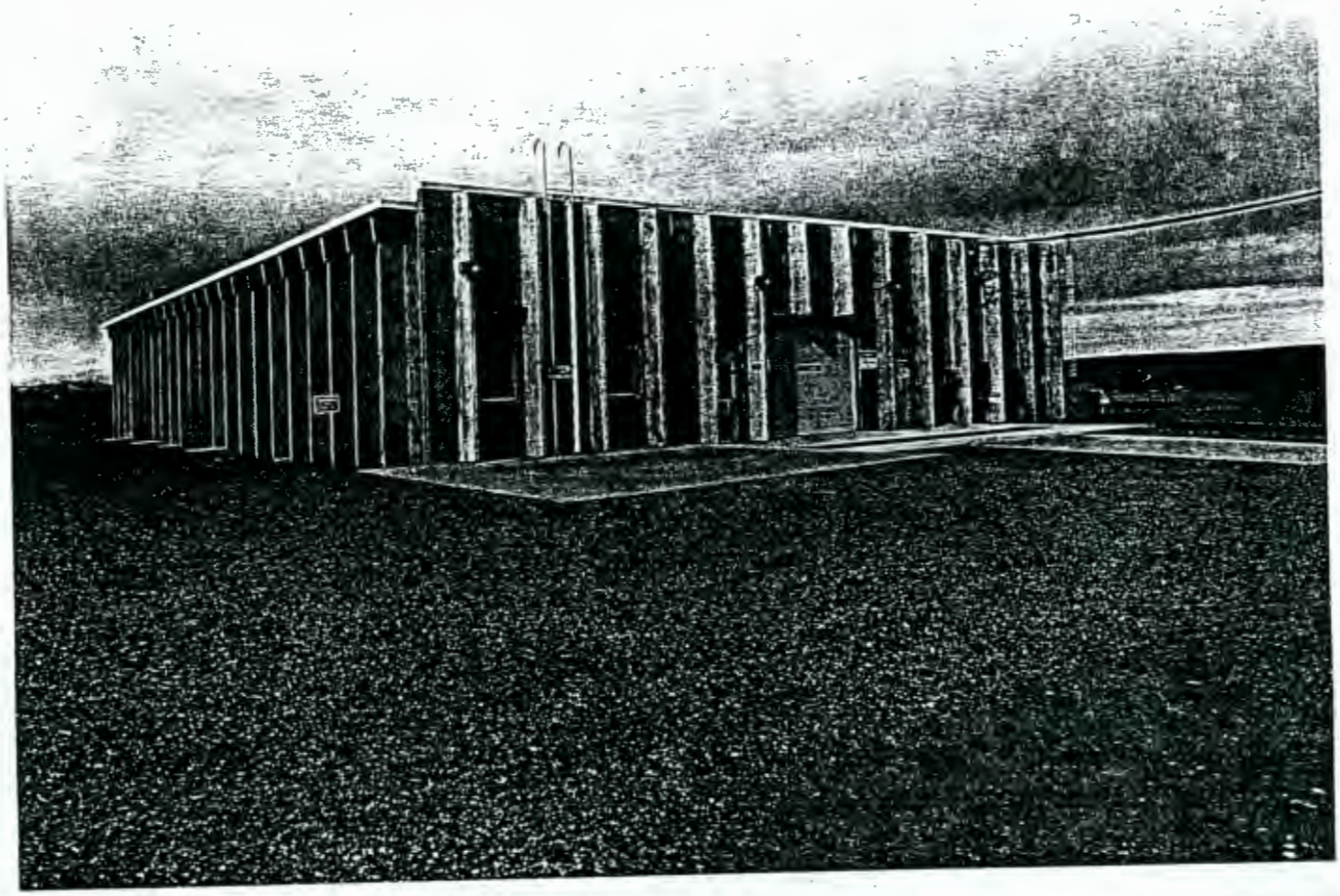
H96070161.8

Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

616 Nonradioactive Dangerous Waste Storage Facility Floor Plan



616 NONRADIOACTIVE DANGEROUS WASTE STORAGE FACILITY



46°33'09"
119°34'37"

8700742-42CN
(PHOTO TAKEN 1987)

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. 0 3 | DAY 2 2 | YR. 4 3 — *FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. — FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 5	* 22,712,400	L		7				
2	T 0 4	52,995	V		8				
3									
4									

* Process Code S05 is being used to designate the 600 Area Purgewater Storage and Treatment Facility as a 'Miscellaneous Unit' per WAC 173-303-680.

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

S05
The 600 Area Purgewater Storage and Treatment Facility (600 PSTF) began waste management operations in January of 1990. The 600 PSTF is located in the 600 Area of the Hanford Facility, north of the 216-B-3 Pond. The 600 PSTF is designated as a miscellaneous unit (S05) and is subject to the requirements of WAC 173-303-680. The 600 PSTF could consist of up to six aboveground 3,785,400-liter (1,000,000-gallon) miscellaneous units. As of August 1996, only two units have been constructed, and only one is used. The miscellaneous units are used for storage and treatment of purgewater generated from groundwater monitoring wells located throughout the Hanford Facility. The purgewater is generated when a groundwater monitoring well is developed or groundwater samples are taken. The purgewater from groundwater monitoring wells is transported by tanker truck and pumped directly into the miscellaneous units. The total process design capacity for the storage of purgewater at the 600 PSTF is 22,712,400 liters (6,000,000 gallons). Currently, only a capacity of 7,570,800 liters (2.000,000 gallons) is available.

T04
Treatment of purgewater by solar evaporation takes place in miscellaneous units. Approximately 52,995 liters (14,000 gallons) per day of purgewater can be treated by solar evaporation based on evaporation rates calculated for the Hanford Facility and assuming all six miscellaneous units are in use. Raw water is added periodically to the miscellaneous units to provide a means for dust control when the units are dry. The current capacity for treatment of purgewater at the 600 PSTF is 17,665 liters (4,666 gallons) per day, although the total process design capacity for treatment is 52,995 liters (14,000 gallons) per day.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*included with above*

CONTINUE ON PAGE 3

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	D019	22,712,434	K	S05	Storage/Miscellaneous
2	F001				
3	F002				
4	F003				Included With Above
5	D019	19,343,423	K	T04	Treatment-Other/Evaporation
6	F001				
7	F002				
8	F003				Included With Above
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

Purgewater that is stored and treated in the 600 Area Purgewater Storage and Treatment Facility comes from groundwater monitoring wells located throughout the Hanford Facility.

The Estimated Annual Quantity of Waste (Section IV.B.) is based on the maximum projected storage and treatment capacities of the miscellaneous units. The volumes of purgewater resulting from well sampling and well development activities can be estimated; however, the volumes resulting from aquifer testing are more difficult to project.

Purgewater stored and treated in the 600 Area Purgewater Storage and Treatment Facility could designate as characteristic waste D019 (carbon tetrachloride).

Materials stored and treated in these units could potentially include nonspecific waste numbers F001, F002, and F003.

The 600 Area Purgewater Storage and Treatment Facility also is used to store and treat nonregulated purgewater.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[x] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	9/26/97

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner — 9/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

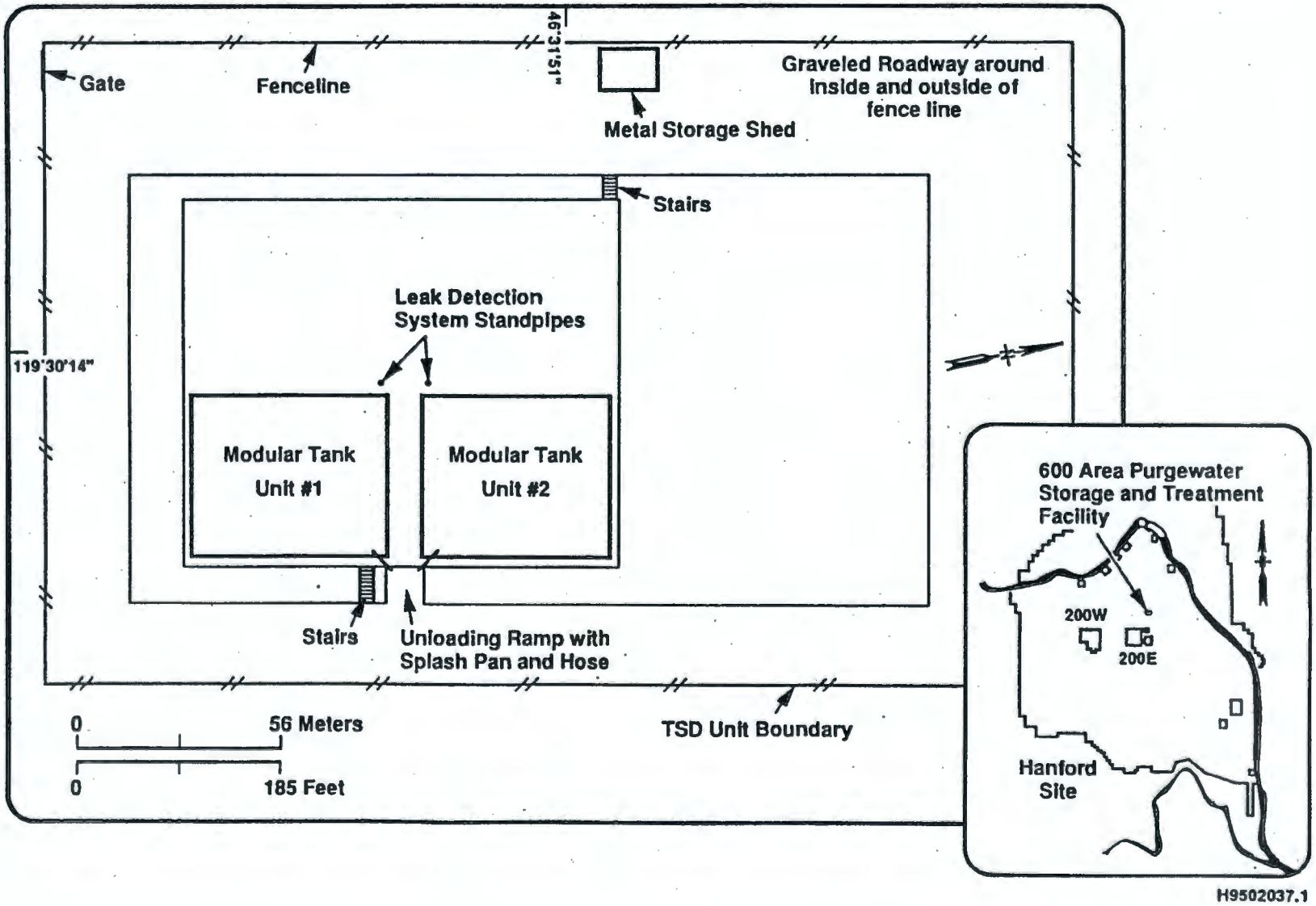
Date

9/13/96

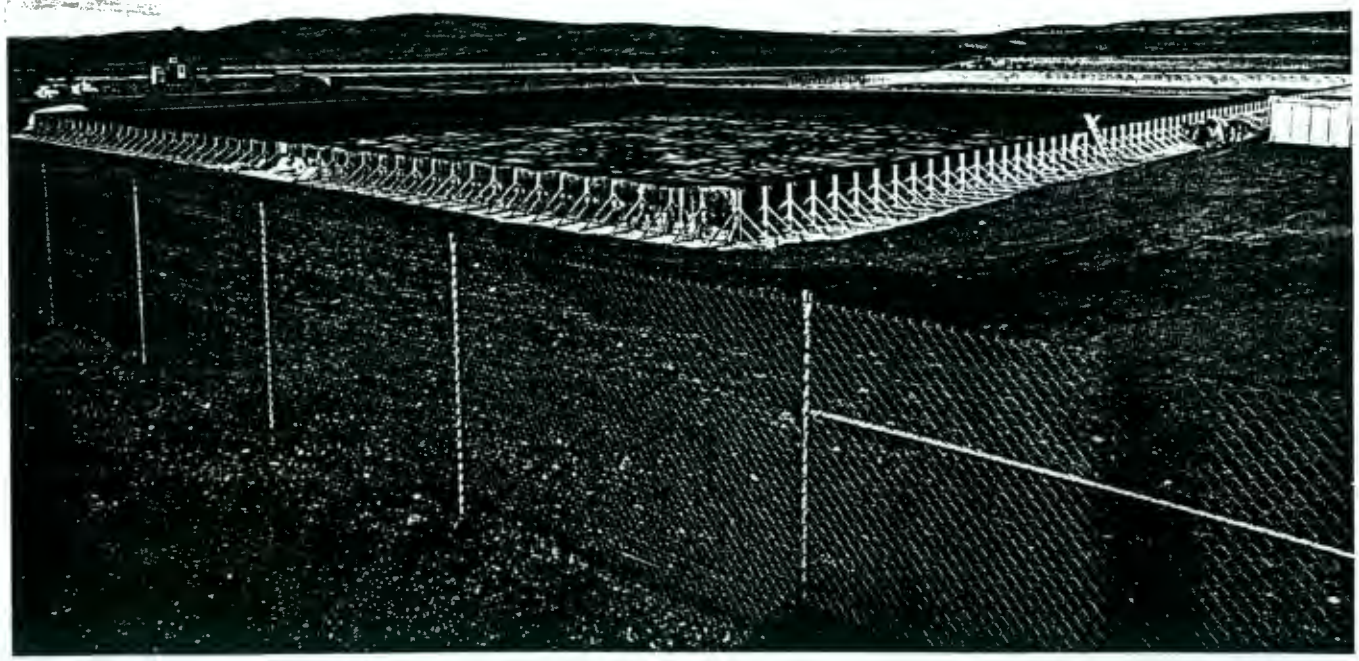
Co-Operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

Date

600 Area Purgewater Storage and Treatment Facility Site Plan



600 AREA PURGEWATER STORAGE AND TREATMENT FACILITY MISCELLANEOUS UNIT (TYPICAL)



46°45'33"
119°45'33"

89122121-3CN
(PHOTO TAKEN 1989)