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MANUAL REVISION INSTRUCTIONS

Date 02/01/90

To: Custodian

SUSAN J WRAY
H4-22

Document No.: DOE/RL 88-21 VOL 1-3

Title: HANFORD SITE HAZARDOUS WASTE PART A PERMIT APPLICATION

Revision Release No.: 3

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E M Schroeder, Manager Management Standards N/A	Date	I have personally received the revisions identified for release in this package and assume full responsibility for updating my manual in accordance with instructions.	
P.A Thurman, Manager Document Control PAT PA Thurman	Date 2/12/90	Custodian	Date

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Westinghouse
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Internal
Memo

From: RCRA Permits Section 80252-90-019
Phone: 376-1653 H4-57
Date: February 6, 1990
Subject: HANFORD SITE DANGEROUS WASTE PART A PERMIT APPLICATION MANUAL, DOE/RL 88-21

To: Holders of the "Hanford Site Dangerous Waste Part A Permit Application" Manual, DOE/RL 88-21

Attached for inclusion in your Hanford Site Dangerous Waste Part A Permit Application Manual, DOE/RL 88-21, are seven revised Part A permit applications. These permit applications are for the following Waste Management Units:

- 241-Z Treatment Tank (Revision 1)
- B Plant (Revision 1)
- PUREX (Revision 2)
- Hanford Waste Vitrification Plant (Revision 2)
- Double-Shell Tank Farms (Revision 2)
- Low-Level Burial Grounds (Revisions 4 and 5)
- 303-K Storage Facility (Revision 2)

These permit applications supersede the associated permit applications currently found in your manual. There are two revisions of the Low-Level Burial Grounds Part A Permit Application included in the attachment. This is due to the fact that two revisions of this permit application have been completed since the last update of the subject manual. Revision 4 of the Low-Level Burial Grounds Part A Permit Application is provided for your information only. Revision 5 of this permit application should be included in the subject manual.

If you should have any questions regarding these revisions, please contact Mr. R. C. Bowman of my staff at 376-4876.

S. M. Price

S. M. Price
Manager

jid

Attachments 7

HANFORD SITE HAZARDOUS WASTE PART A PERMIT APPLICATION

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2.0 RESOURCE CONSERVATION AND RECOVERY ACT PERMITTING STATUS

This section contains a Resource Conservation and Recovery Act (RCRA) Permitting Status table and an explanation of the contents of the table.

Resource Conservation and Recovery Act (RCRA) Permitting Status (sheet 1 of 2).

UNIT	ORG	AREA	PERMIT	TYPE	INITIAL	LATEST	REV	PART B	CLOSURE	REV1	COM	CLASS
1324-N SURFACE IMPOUNDMENT	WHC	100	A/C	T	08/01/86	11/16/87	2	11/01/86	/ /	0		H
105-DR SODIUM FIRE FACILITY	WHC	100	A/C	TS	11/01/85	11/16/87	2	11/01/85	/ /	0	B/C	H
1706-KE WASTE TREATMENT SYSTEM	WHC	100	A/C	TS	08/01/86	11/16/87	2	04/01/87	/ /	0	B	M
183-H SOLAR EVAPORATION BASINS	WHC	100	A/C	TS	11/01/85	06/08/88	3	/ /	06/01/88	2		M
1301-N LIQUID WASTE DISPOSAL FAC.	WHC	100	A/C	D	08/01/86	02/02/88	3	/ /	04/01/87	0		M
1325-N LIQUID WASTE DISPOSAL FAC.	WHC	100	A/C	D	02/01/87	02/02/88	3	/ /	06/01/87	0		M
1324-NA PERCOLATION POND	WHC	100	A/C	TD	08/01/86	11/16/87	2	/ /	04/24/87	0		H
100-D PONDS	WHC	100	A/C	TD	08/01/86	11/16/87	2	/ /	04/01/87	0		H
221-T CONTAINMENT SYSTEM TEST FAC.	WHC	200W	A/C	T	11/01/85	11/16/87	2	11/01/85	/ /	0	B	H
ASHPIT SITE	WHC	200W	A/C	T	11/01/85	11/16/87	2	11/01/85	/ /	0	A	H
E-8 BORROW PIT	WHC	200E	A/C	T	11/01/85	11/16/87	2	11/01/85	/ /	0	A	H
242-A EVAPORATOR	WHC	200E	A/B	T	09/01/87	11/16/87	1	/ /	/ /			M
GROUT TREATMENT FACILITY	WHC	200E	A/B	TD	09/01/87	11/23/88	3	01/17/90	/ /	1		M
T-PLANT TREATMENT TANK	WHC	200W	A/B	T	12/01/87	12/03/87	0	/ /	/ /		B	M
241-Z TREATMENT TANK	WHC	200W	A/B	T	12/01/87	12/22/89	1	/ /	/ /		B	M
B PLANT	WHC	200E	A/B	TS	12/01/87	12/22/89	1	/ /	/ /			M
222-S LABORATORIES TANK AND PAD	WHC	200W	A/B	TS	12/01/87	12/03/87	0	/ /	/ /		B	M
204-AR WASTE UNLOADING STATION	WHC	200E	A/B	T	12/01/87	12/03/87	0	/ /	/ /		B	M
PUREX	WHC	200E	A/B	TS	12/01/87	10/18/89	2	/ /	/ /		B	M
HANFORD WASTE VITRIFICATION PLANT	WHC	200E	A/B	TS	05/01/88	10/31/89	2	07/31/89	/ /	0		M
2727-S STORAGE FACILITY	WHC	200W	A/C	S	11/01/85	11/16/87	2	/ /	02/10/89	3		H
DBL SHELL TANK FARMS	WHC	200EW	A/B	TS	09/01/87	10/18/89	2	/ /	/ /			M
HEXONE STORAGE AND TREATMENT	WHC	200W	A/C	TS	12/01/87	05/19/88	1	/ /	/ /			M
2727-WA SRE SODIUM STORAGE BUILDING	WHC	200W	A/B	S	12/01/87	12/03/87	0	/ /	/ /		B	M
PUREX TUNNELS 1 AND 2	WHC	200E	A/B	S	12/01/87	12/03/87	0	/ /	/ /			M
TRUSAF	WHC	200W	A/B	S	12/01/87	12/03/87	0	/ /	/ /			M
HANFORD CENTRAL WASTE COMPLEX	WHC	200W	A/B	TS	05/01/88	05/19/88	0	/ /	/ /			M
SINGLE-SHELL TANKS	WHC	200W	A/C	S	02/01/88	02/26/88	0	/ /	/ /			M
LOW-LEVEL BURIAL GROUNDS	WHC	200EW	A/B/C	D	11/01/85	10/20/89	5	12/29/89	/ /	0		M
216-S-10 POND AND DITCH	WHC	200W	A/C	D	02/01/87	11/16/87	2	/ /	06/01/87	0		M
2101-M POND	WHC	200E	A/C	D	08/01/86	11/16/87	2	/ /	09/29/89	0		H

Resource Conservation and Recovery Act (RCRA) Permitting Status (sheet 2 of 2).

UNIT	ORG	AREA	PERMIT	TYPE	INITIAL	LATEST	REV	PART B	CLOSURE	REV1	COM	CLASS
216-A-29 DITCH	WHC	200E	A/C	TD	08/01/86	11/16/87	2	/ /	04/01/87	0		M
216-B-3 POND	WHC	200E	A/C	TD	08/01/86	11/16/87	2	/ /	04/01/87	0		M
216-B-63 TRENCH	WHC	200E	A/C	TD	08/01/86	11/16/87	2	/ /	04/01/87	0		M
216-A-10 CRIB	WHC	200E	A/C	D	08/01/87	02/02/88	2	/ /	/ /		B	M
216-U-12 CRIB	WHC	200W	A/C	D	08/01/87	02/02/88	2	/ /	/ /		B	M
216-A-36B CRIB	WHC	200E	A/C	D	02/01/88	02/02/88	0	/ /	02/01/88	0		M
3718-F ALKALI METAL TREATMENT FAC.	WHC	300	A/B	TS	11/01/85	11/16/87	2	11/06/85	/ /	0		H
324 SODIUM REMOVAL PILOT PLANT	PNL	300	A/B	T	11/01/85	05/19/88	3	11/01/85	/ /	0	B	M
304 CONCRETION FACILITY	WHC	300	A/C	TS	08/01/86	02/22/89	3	/ /	/ /			M
300 AREA SOLVENT EVAPORATOR	WHC	300	A/C	T	11/01/85	02/08/89	3	/ /	02/10/89	3		M
300 AREA WASTE ACID TREATMENT	WHC	300	A/B/C	TS	09/01/87	05/19/88	2	/ /	/ /			M
303-M OXIDE FACILITY	WHC	300	A/B	T	05/01/88	05/19/88	0	/ /	/ /			M
325 WASTE TREATMENT FACILITY	PNL	300	A/B	T	05/01/88	05/19/88	0	/ /	/ /			M
BIOLOGICAL TREATMENT TEST FACS.	PNL	300	A/B	0	05/01/88	05/19/88	0	/ /	/ /			M
PHYSICAL & CHEMICAL TREATMENT FACS.	PNL	300	A/B	0	05/01/88	05/19/88	0	/ /	/ /			M
THERMAL TREATMENT TEST FACILITIES	PNL	300	A/B	0	05/01/88	05/19/88	0	/ /	/ /			M
311 TANKS	WHC	300	A/B	S	/ /	11/16/87	1	/ /	/ /		B	M
303-K STORAGE FACILITY	WHC	300	A/C	S	08/01/87	10/31/89	2	/ /	/ /			M
305-B STORAGE FACILITY	PNL	300	A/B	TS	05/01/88	05/19/88	0	/ /	/ /			M
332 STORAGE FACILITY	PNL	300	A/B	S	05/01/88	05/19/88	0	/ /	/ /			M
300 AREA PROCESS TRENCHES	WHC	300	A/PC	D	11/01/85	11/16/87	2	/ /	11/06/85	0		M
MAINTENANCE AND STORAGE FACILITY	WHC	400	A/B	T	11/01/85	11/16/87	2	11/01/85	/ /	0		M
4843 ALKALI METAL STORAGE FACILITY	WHC	400	A/B	S	09/01/87	11/16/87	1	/ /	/ /			M
HANFORD PAT. ACAD. DEMOLITION SITE	WHC	600	A/B	T	11/01/85	11/16/87	2	11/01/85	/ /	0	A	H
616 STORAGE FACILITY	WHC	600	A/B	S	11/01/85	07/31/89	3	07/31/89	/ /	1		H
NONRAD DANGEROUS WASTE LANDFILL	WHC	600	A/C	D	11/01/85	11/16/87	2	11/06/85	/ /	0		H
SIMULATED HLW TREATMENT STORAGE	PNL	1100	A/C	TS	05/01/88	05/19/88	0	/ /	09/29/89			M

Explanation of 'Permitting Status Table'.

UNIT — Name of unit that is designated for permitting as part of the Hanford Facility (EPA/State Identification Number WA7890008967).

ORG — Name of organization (company) that has a contract to operate unit for the U.S. Department of Energy:

WHC -- Westinghouse Hanford Company.

PNL -- Pacific Northwest Laboratory.

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

100 -- 100 Area, includes N Reactor

200E -- 200 East Area, includes chemical processing such as PUREX

200W -- 200 West Area, includes chemical processing such as REDOX

200EW -- Parts of a unit are located in both the 200 East and the 200 West areas

300 -- 300 Area, includes research, development, and fuel fabrication

400 -- 400 Area, includes the Fast Flux Test Facility (FFTF)

500 -- Unused designation

600 -- 600 Area, includes nonradioactive dangerous waste storage and landfill units

1100 -- 1100 Area, includes maintenance and shipping units

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

A -- Part A

B -- Part B

C -- Closure plan or permit

PC -- Postclosure plan.

TYPE Waste unit RCRA operational classification:

T -- Treatment

S -- Storage

D -- Disposal

O -- Other.

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 that was submitted to the Washington State Department of Ecology.

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.

COMMENTS A Three demolition sites formerly combined into one application.

B Application will be withdrawn.

C Subsequently determined that a closure plan would be prepared.

D Currently in design stage.

E Evaluating treatment by generator.

F Application may be withdrawn.

CLASS M Unit contains mixed radioactive waste and dangerous waste.

H Unit contains no radioactive waste. All units on this list contain dangerous waste.

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

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

I. 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.
11	14	48

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

☐ 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 DESIGN 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	S
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
X-1	S02	600	G	
X-2	T03	20	E	
1	T01	5,300	U	
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
Treatment occurs in a batch process consisting of the addition of sodium hydroxide, ferric nitrate, and sodium nitrite to the 241-Z treatment tank (tank D-5). Tank D-5 receives waste from the Plutonium Finishing Plant (234-5Z).

Sodium hydroxide raises the free hydroxide ion concentration of the treated liquids to greater than 1.5 molar (M). Ferric nitrate solution is added to provide 1% stable solids. Sodium nitrite is added to inhibit corrosion.

Treatment of the mixed wastes assure that the aluminum compounds are solubilized and permits pumping of the treated liquid through double encased lines to the collection tank in the 244-TX receiver building located approximately one mile north of the 241-Z building. The ultimate destination of the waste is the double-shell tanks. Tank D-5 is designed to treat 5,300 gallons per day. Nominal out-flow from tank D-5 is 10,200 gallons per week with a maximum expected out-flow of 14,000 gallons per week.

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	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

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

I.D. NUMBER (*enter from page 1*): WA789000896 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	3.0×10^6	P	T01	Chemical Treatment
2	D007				
3	D008				
4	WT01				
5	WT02				Included With Above
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.

Before treatment, the liquid effluent in tank D-5 is corrosive (pH is less than 2.0) containing predominantly nitric acid. Additional chemical constituents known to be present through process knowledge, modeling, and some process sampling include chromium, lead, aluminum nitrate, aluminum fluoride, and lower concentrations of potassium hydroxide, potassium fluoride, magnesium nitrate, ferric nitrate, calcium nitrate, and other trace metal ions. Depending on the concentration and the actual waste stream being treated, these waste constituents may qualify the waste stream for designation as EP Toxic (D007, D008) and Toxic (WT01 or WT02).

V. FACILITY DRAWING

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

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 attached drawings and photographs

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
Michael J. Lawrence Manager, Richland Operations United States Department of Energy	Michael J. Lawrence	12/22/89

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		

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 E. Nolan — 11/13/89

Co-operator
John E. Nolan, President
Westinghouse Hanford Company

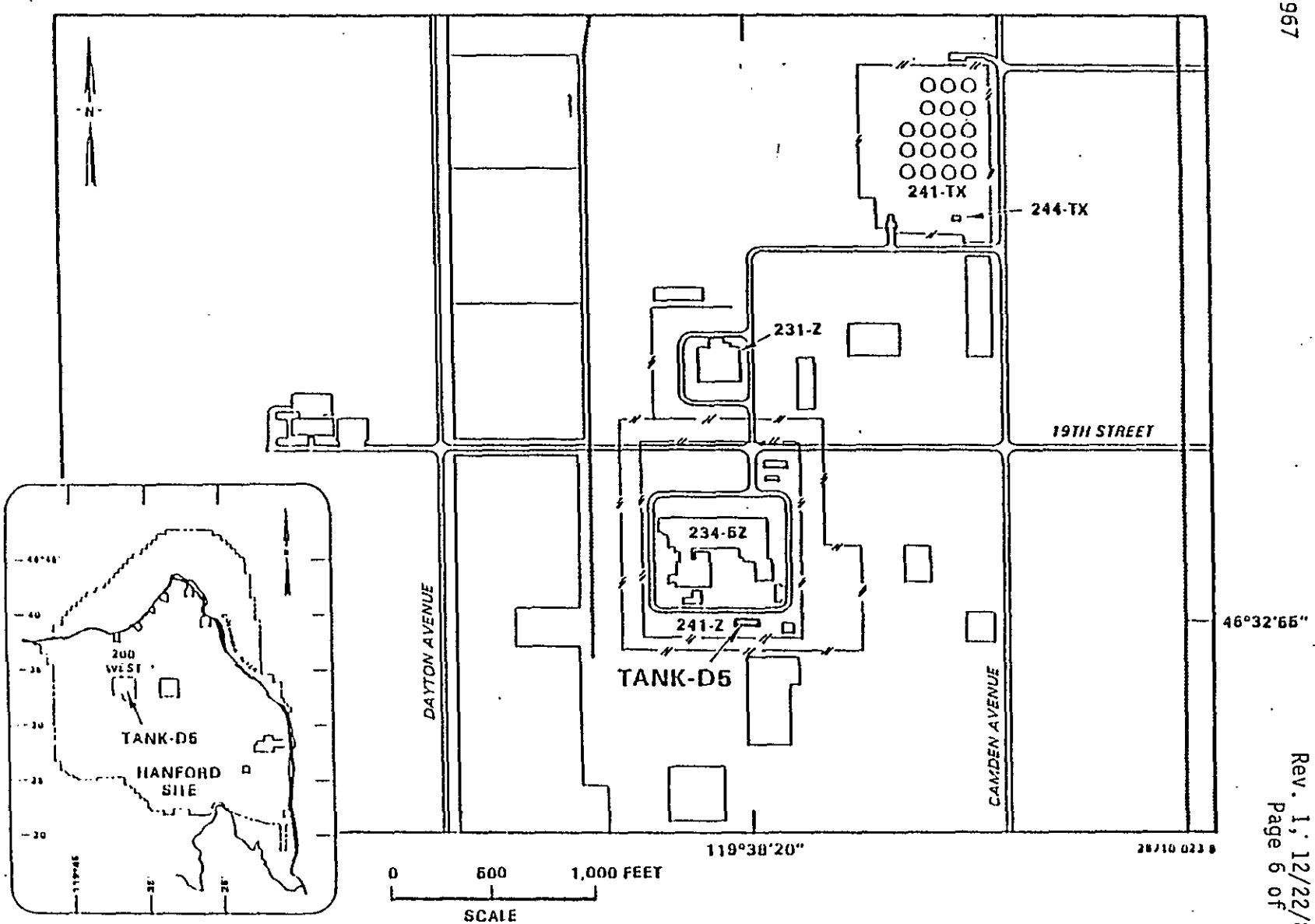
Date

Michael J. Lawrence — 12/22/89

Owner/Operator
Michael J. Lawrence, Manager
U.S. Department of Energy
Richland Operations Office

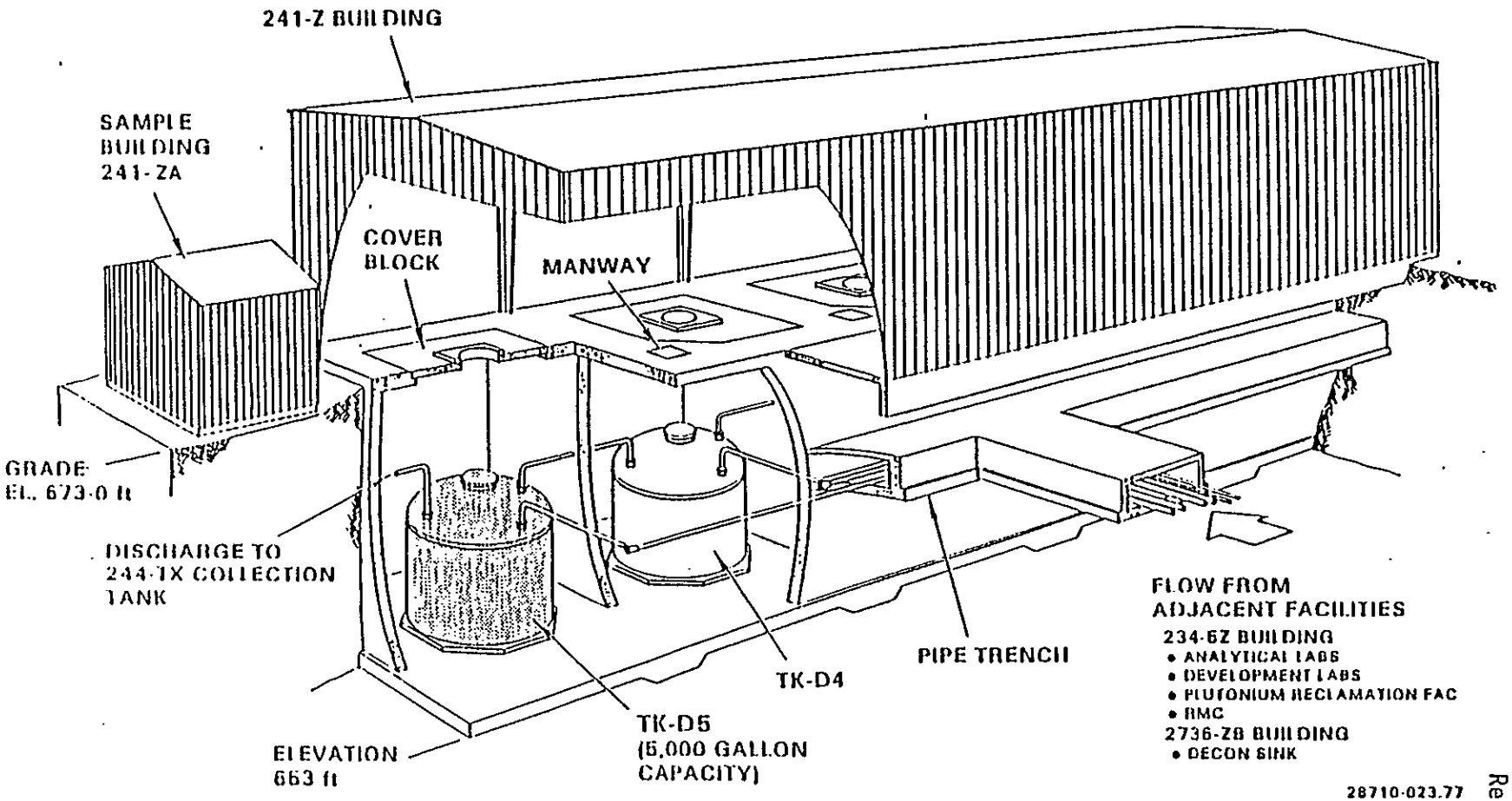
Date

241-Z BUILDING
TANK-D5
SITE PLAN

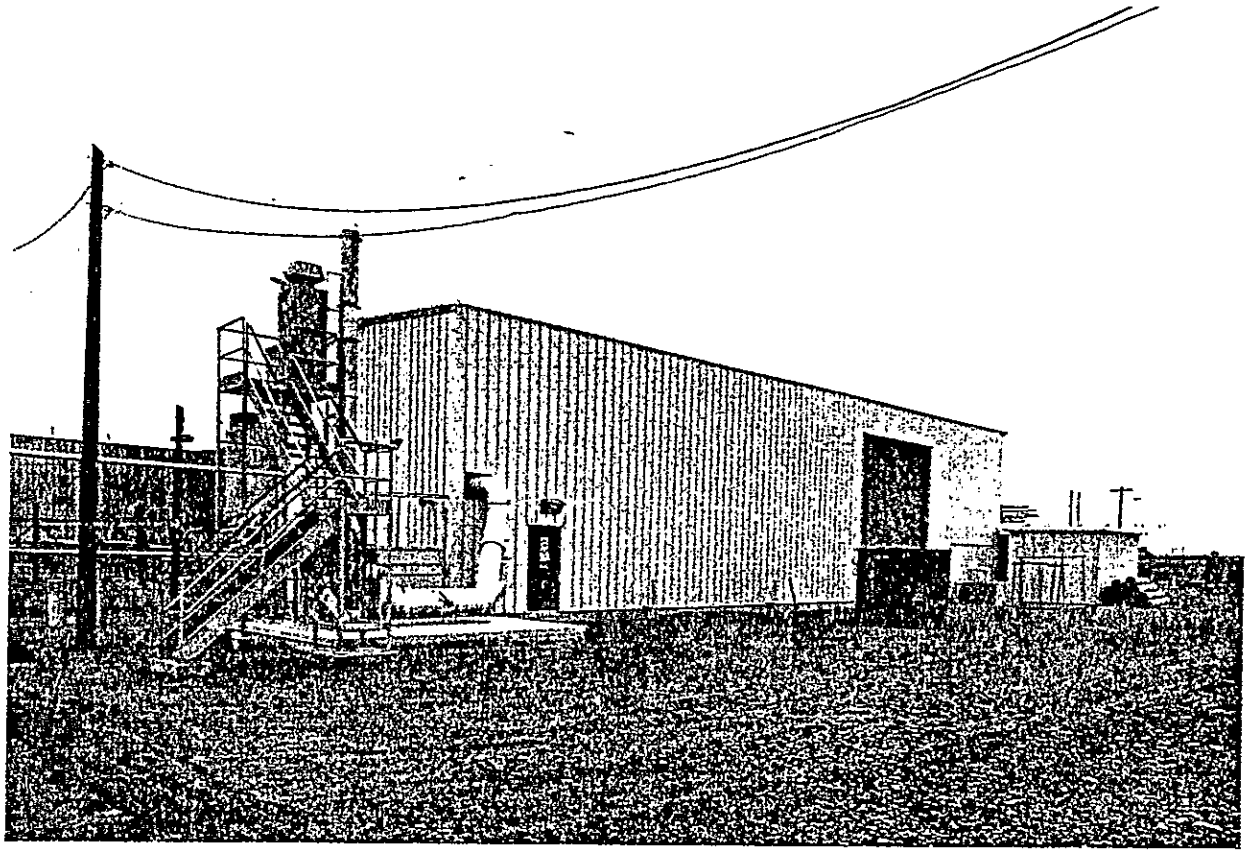


WA7890008967

241-Z BUILDING
TANK D5



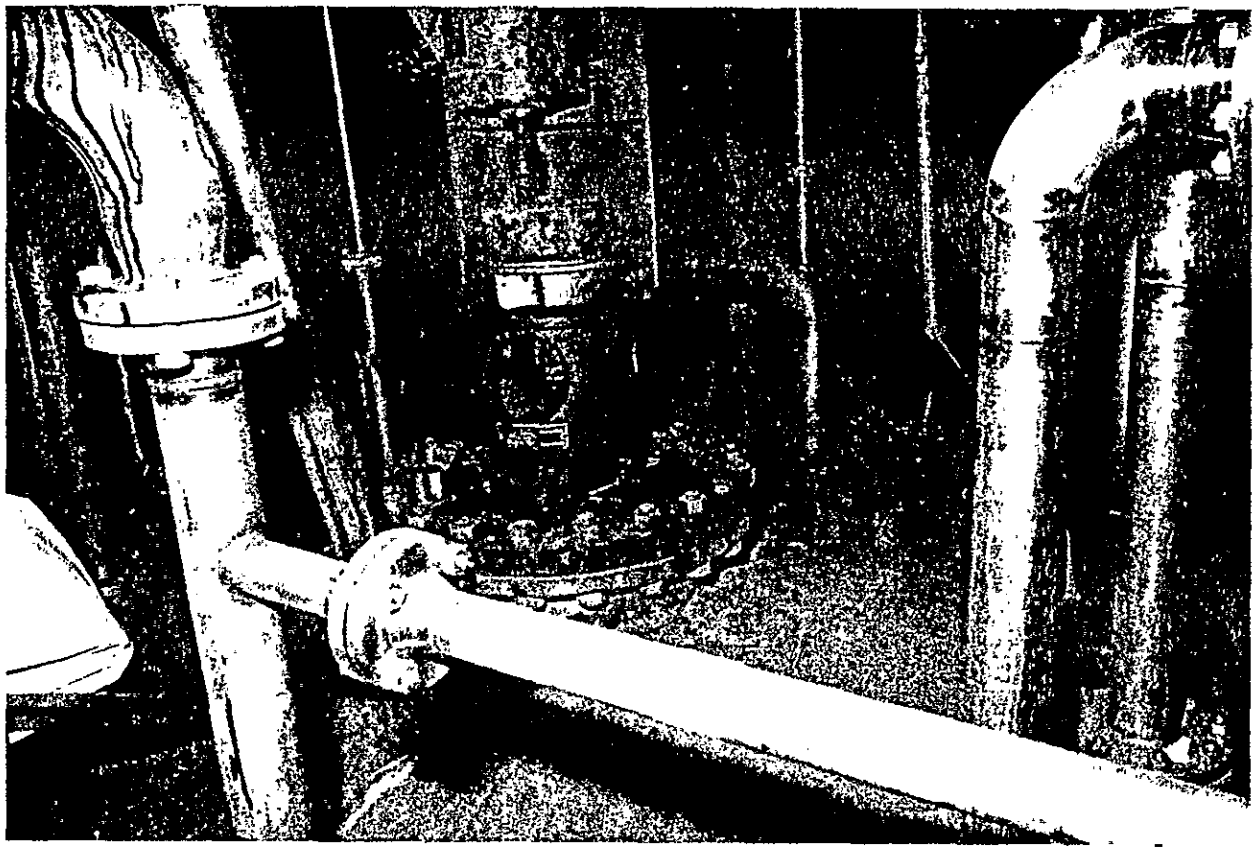
241-Z BUILDING



46°32'55"
119°38'20"

8106219-5CN
(PHOTO TAKEN 1981)

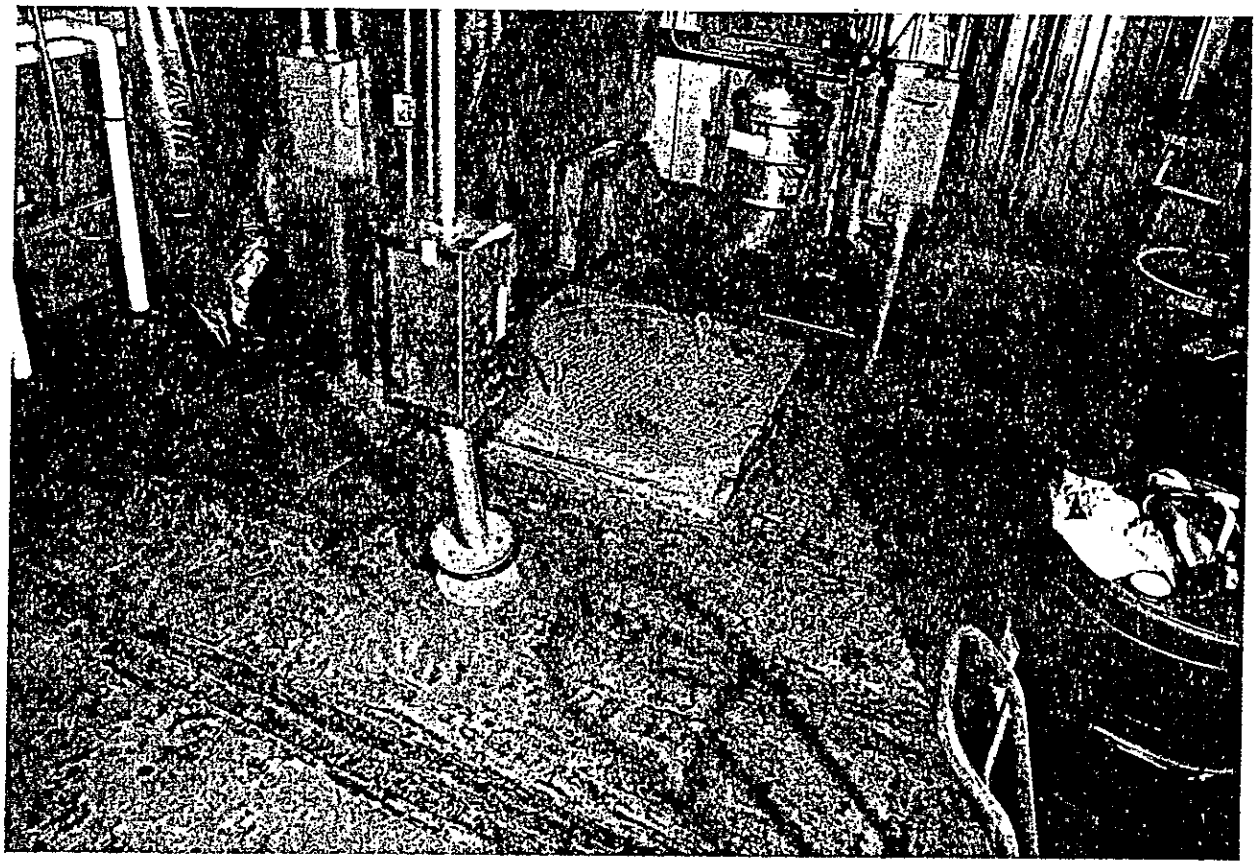
TANK D5



46°32′55"
119°38′20"

8701477-135CN

D5 VAULT COVER



46°32'55"
119°38'20"

8706219-7CN
(PHOTO TAKEN 1987)

(Illegible) areas are allotted for each type, i.e., 12 characters/inch.

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

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

FOR OFFICIAL USE ONLY

APPLICATION RECEIVED	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 4 DAY 1 5 YR. 8 5 — FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (see the owner in the unit)

☐ 2. NEW FACILITY (Complete item below.)

MO. 1 DAY 1 YR. 1 — 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 DESIGN 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	Y
TONS PER HOUR	O
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	S
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
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	T 0 1	70,000	U	
2	T 0 4	3,500	U	
3	S 0 1	13,475	Y	
4	S 0 2	80,000	G	
5	S 0 3	5	C	
6				
7				
8				
9				
10				

Continued from the front

III. PROCESSES (continued)

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

T01 - Neutralized Current Acid Waste (NCAW) feed, a mixed waste from PUREX, is treated at B Plant. Settle-decant tank operations are used for the primary solid/liquid separation and solid washing steps. The decanted solution, solid wash wastes, flush solutions, and process building drainage are concentrated in a single stage thermal siphon reboiler. Waste solutions resulting from operation of the facility are treated by this process also. Liquid wastes from the Waste Encapsulation and Storage Facility (WESF) with the same characterization are treated in the above processes. All wastes are treated with sodium hydroxide to a pH greater than 12 and sodium nitrite to a concentration greater than 600 ppm to inhibit corrosion of the double-shell tanks. Design capacity of processing is 70,000 gallons per day. The interim destination of treated waste is the double-shell tanks.

T04 - Polishing filtration is accomplished with a sintered metal filter, and cesium is removed from the decant stream by ion exchange. The design capacity is 3,500 gallons per day.

S01 - Radioactively contaminated lead and chromium based paint wastes and radioactively contaminated spent sodium and mercury vapor light bulbs are stored in 55-gallon drums. The design capacity is 13,475 gallons.

S02 - NCAW intermediates will be stored at various locations. Radioactive organic waste solvents are stored in seven tanks (TK-26-1, TK-27-3, TK-27-4, TK-28-3, TK-28-4, TK-29-4, and TK-30-3). The design capacity is 80,000 gallons.

S03 - Radioactive process jumpers with lead counterbalances are stored as waste piles on the canyon deck and in process cells. The design capacity is 5 cubic meters.

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

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

I.D. NUMBER (enter from page 1): WA7890001089167

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	1,000	P	S01	Container Storage
2	D007				
3	D008				Included With Above
4	D003	200	P	S01	Container Storage
5	D009				Included With Above
6	WT01	2,750	T	S02 T01 T04	Tank Storage/Tank Treatment/ Filtration/Ion Exchange
7	D002				
8	D004				
9	D005				
10	D006				
11	D007				
12	D008				
13	D009				
14	D010				
15	D011				Included With Above
16	WT02	40,000	P	S02	Tank Storage
17	D008	15,000	P	S03	Storage
18	WT01				Included With Storage
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.

NCAW is a dangerous waste due to corrosivity from 1.0M sodium hydroxide, toxicity from sodium nitrite, and EP Toxicity and toxicity from barium, cadmium, chromium, lead, and silver. EP Toxicity waste codes are also listed for mercury, arsenic, and selenium. Analysis for these three constituents have not been performed, but process knowledge indicates they are present in the waste.

Lead counterbalances are dangerous wastes due to EP Toxicity and toxicity. Contaminated waste paints are dangerous waste due to the EP Toxicity of lead and chromium.

Spent mercury vapor and sodium vapor light bulbs containing mercury and metallic sodium respectively are dangerous waste due to the EP Toxicity of mercury and the reactivity of metallic sodium.

These wastes are mixed wastes.

NOTE: Subsequent modifications may be made to this Dangerous Waste Part A Permit Application based on the results of an evaluation of the potential for listed waste in the B Plant waste stream.

V. FACILITY DRAWING

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

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 attached drawings and photographs

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
Michael J. Lawrence Manager, Richland Operations United States Department of Energy	Michael J. Lawrence	12/22/89

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		

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 E. Nolan

Co-operator
John E. Nolan, President
Westinghouse Hanford Company

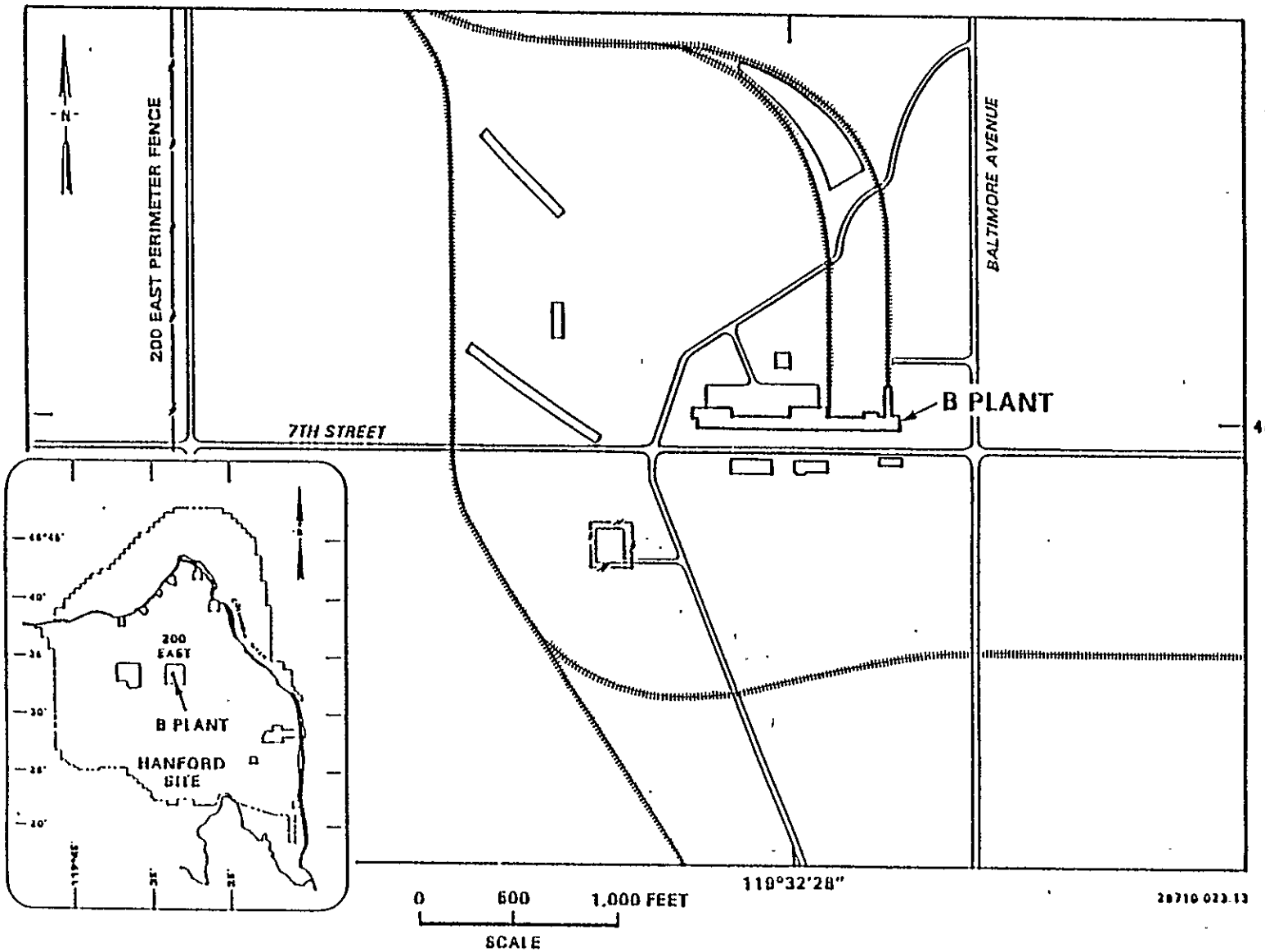
11/13/89
Date

Michael J. Lawrence

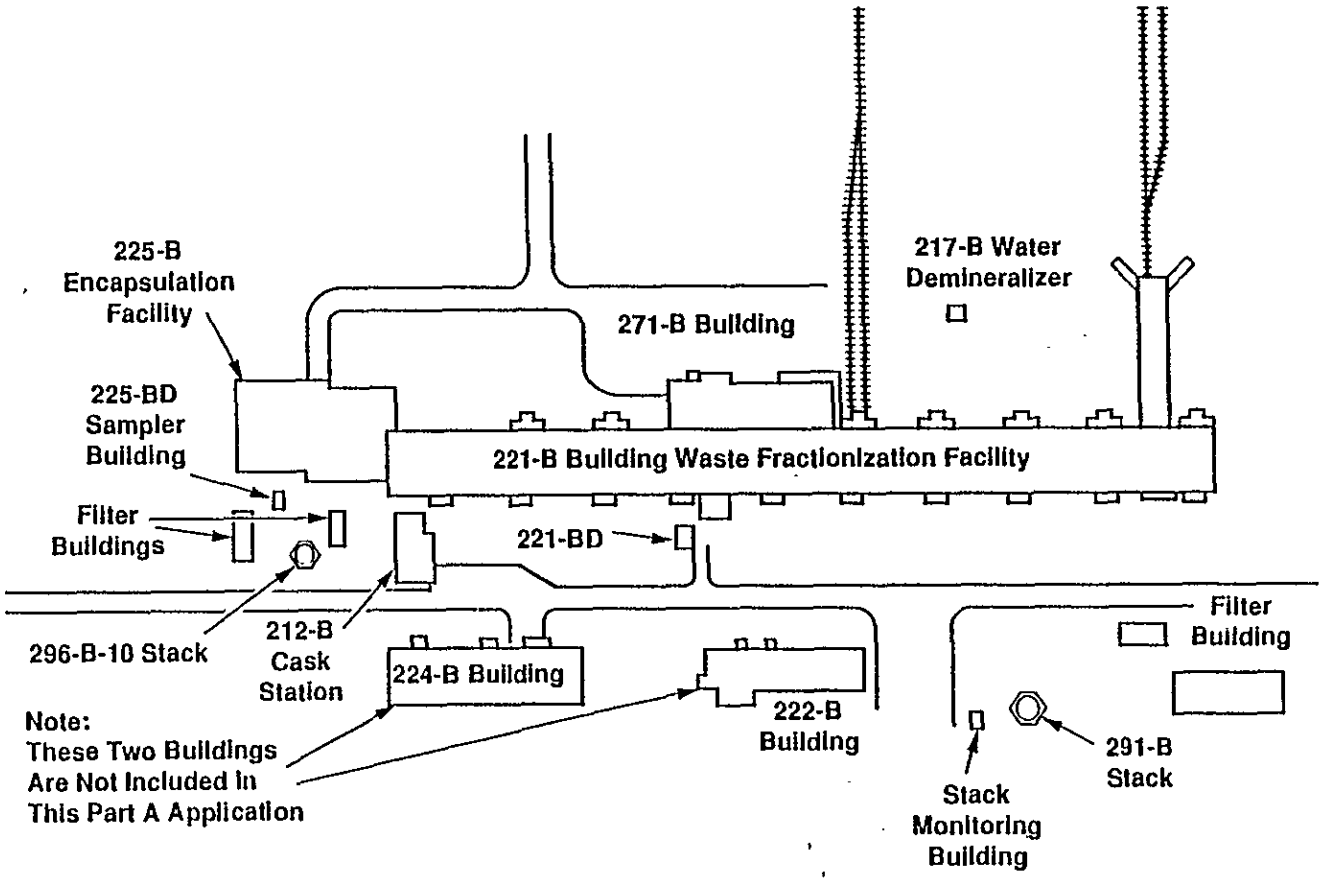
Owner/Operator
Michael J. Lawrence, Manager
U.S. Department of Energy
Richland Operations Office

12/22/89
Date

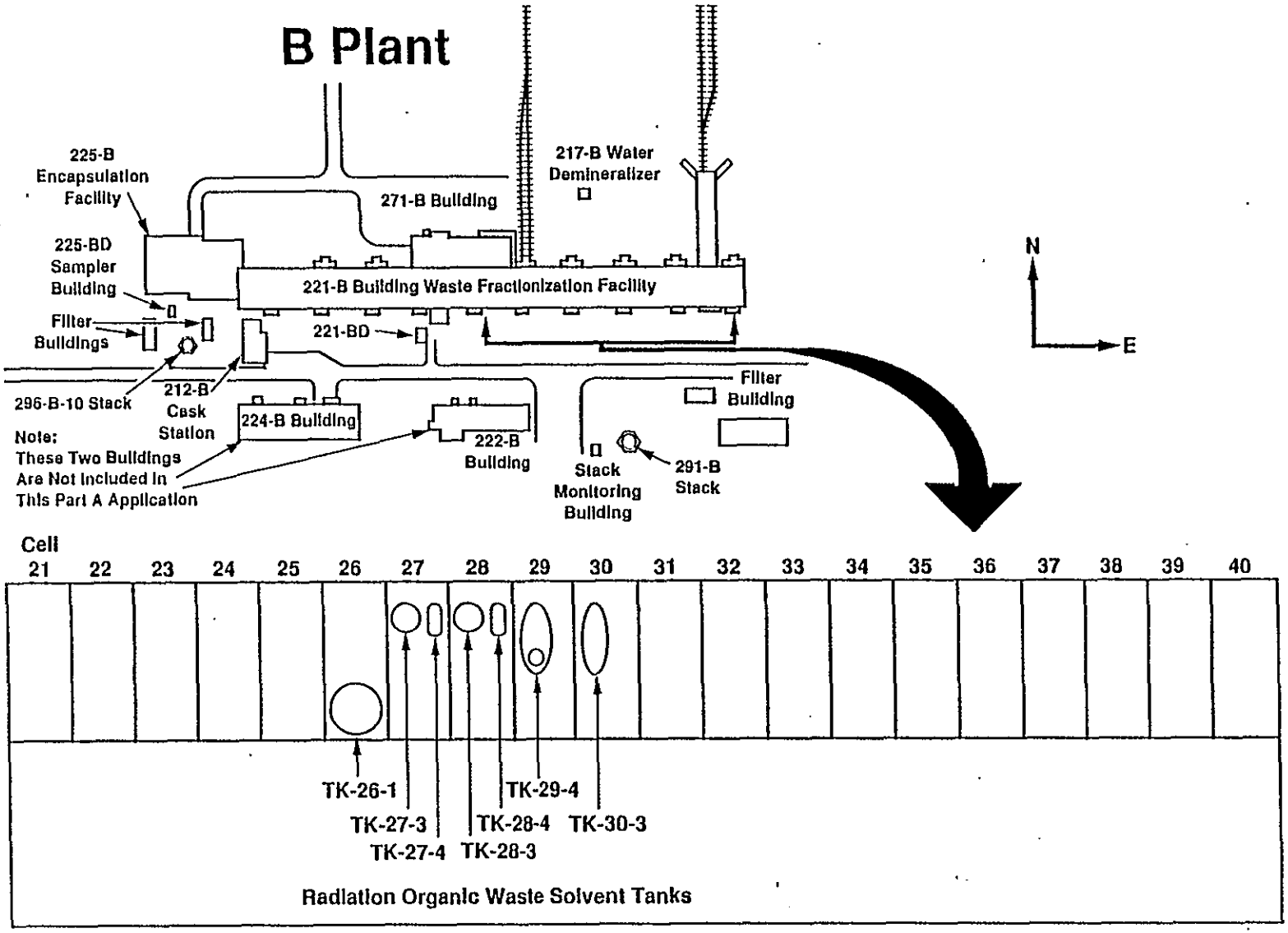
B PLANT
SITE PLAN



B Plant

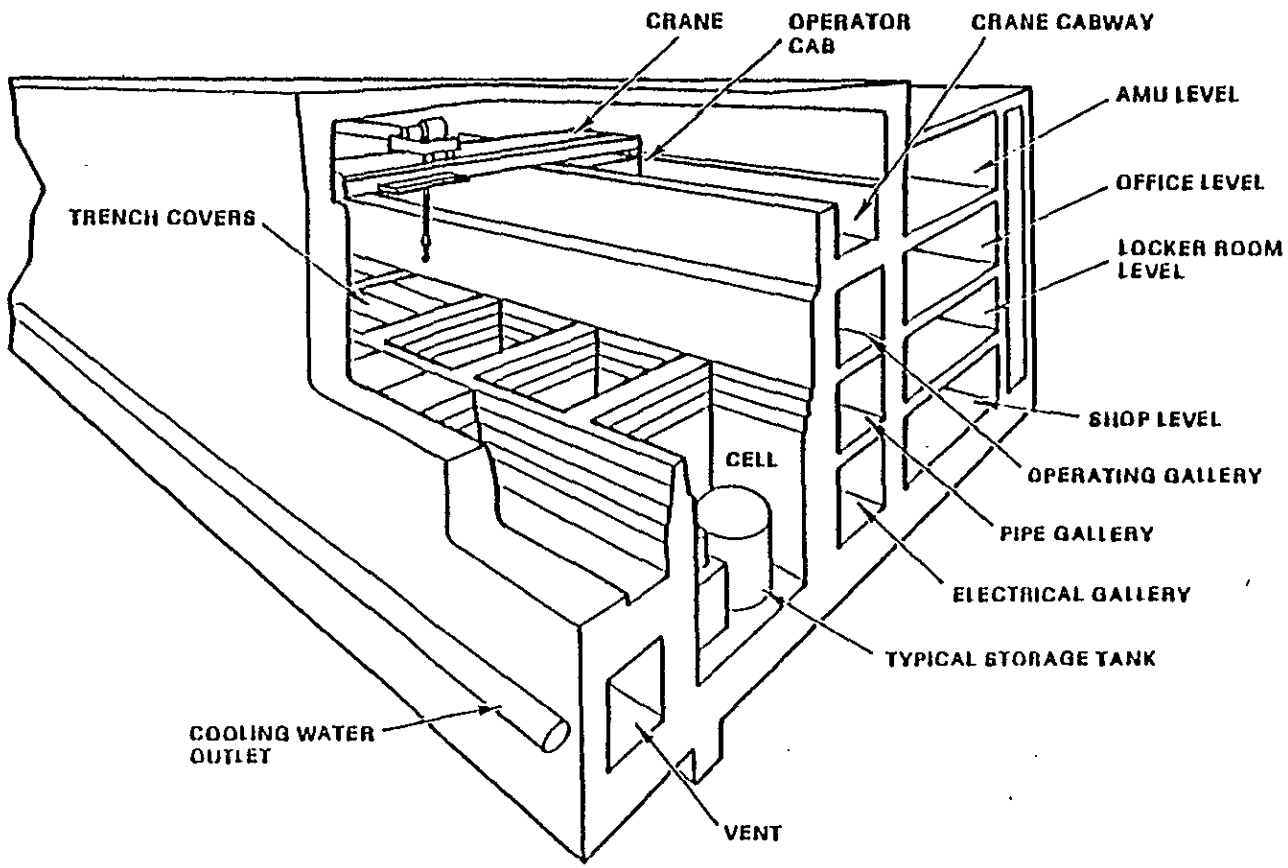


78910127.2


B Plant
225-B Encapsulation Facility
225-BD Sampler Building
Filter Buildings
296-B-10 Stack
212-B Cask Station
Note: These Two Buildings Are Not Included In This Part A Application
224-B Building
222-B Building
221-BD
221-B Building Waste Fractionization Facility
271-B Building
217-B Water Demineralizer
Filter Building
Stack Monitoring Building
291-B Stack
N
E
Cell
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
TK-26-1
TK-27-3
TK-27-4
TK-28-3
TK-28-4
TK-29-4
TK-30-3
Radiation Organic Waste Solvent Tanks

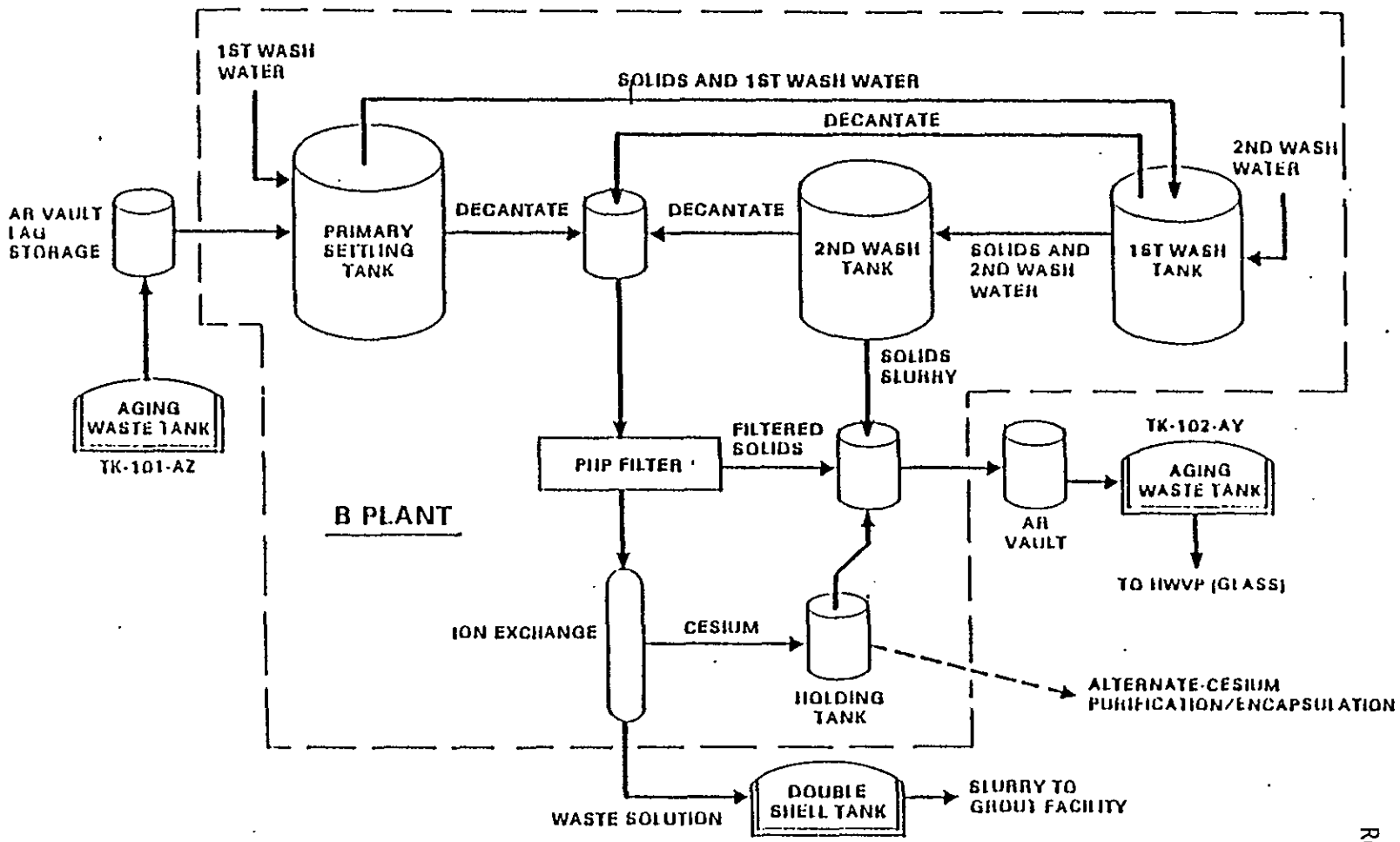
78910127.1

B PLANT
CUTAWAY VIEW

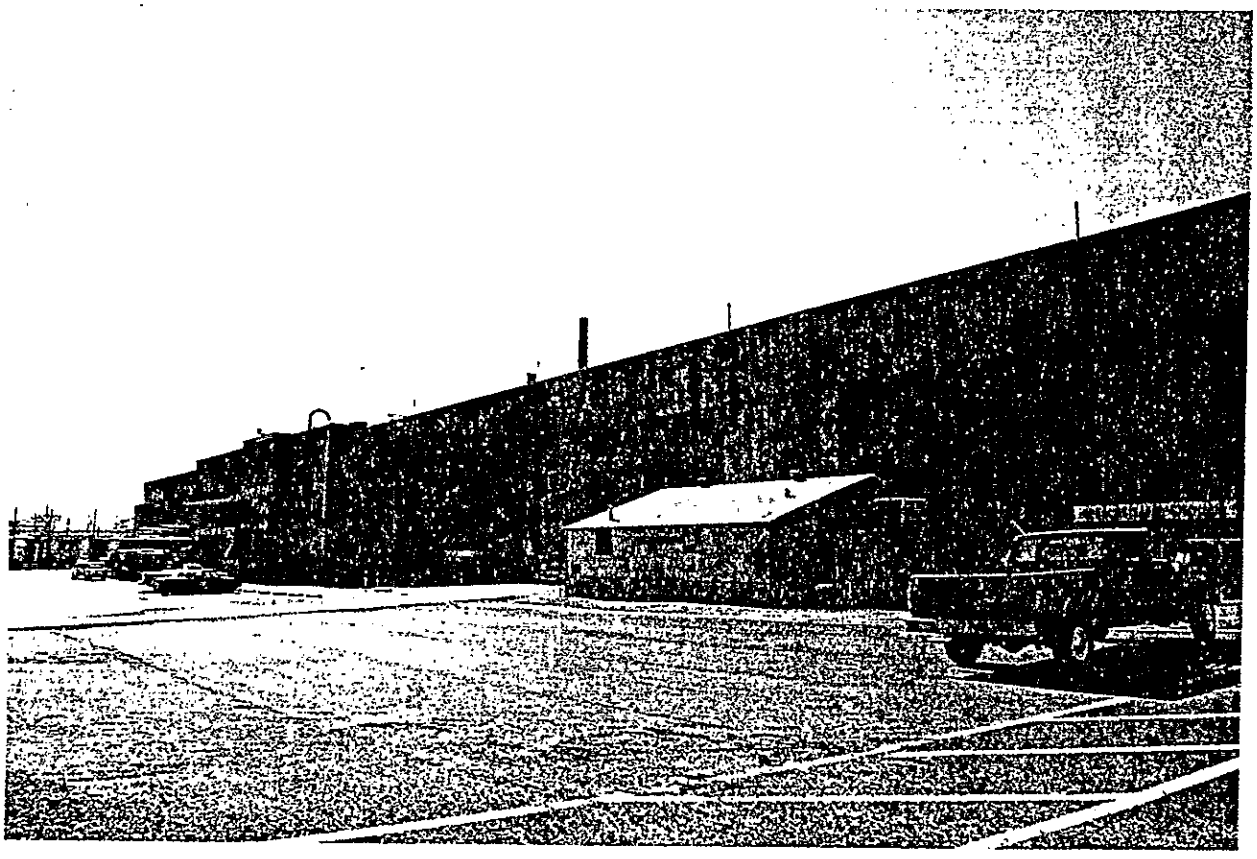


28710 023 16

NCAW PROCESS
B PLANT



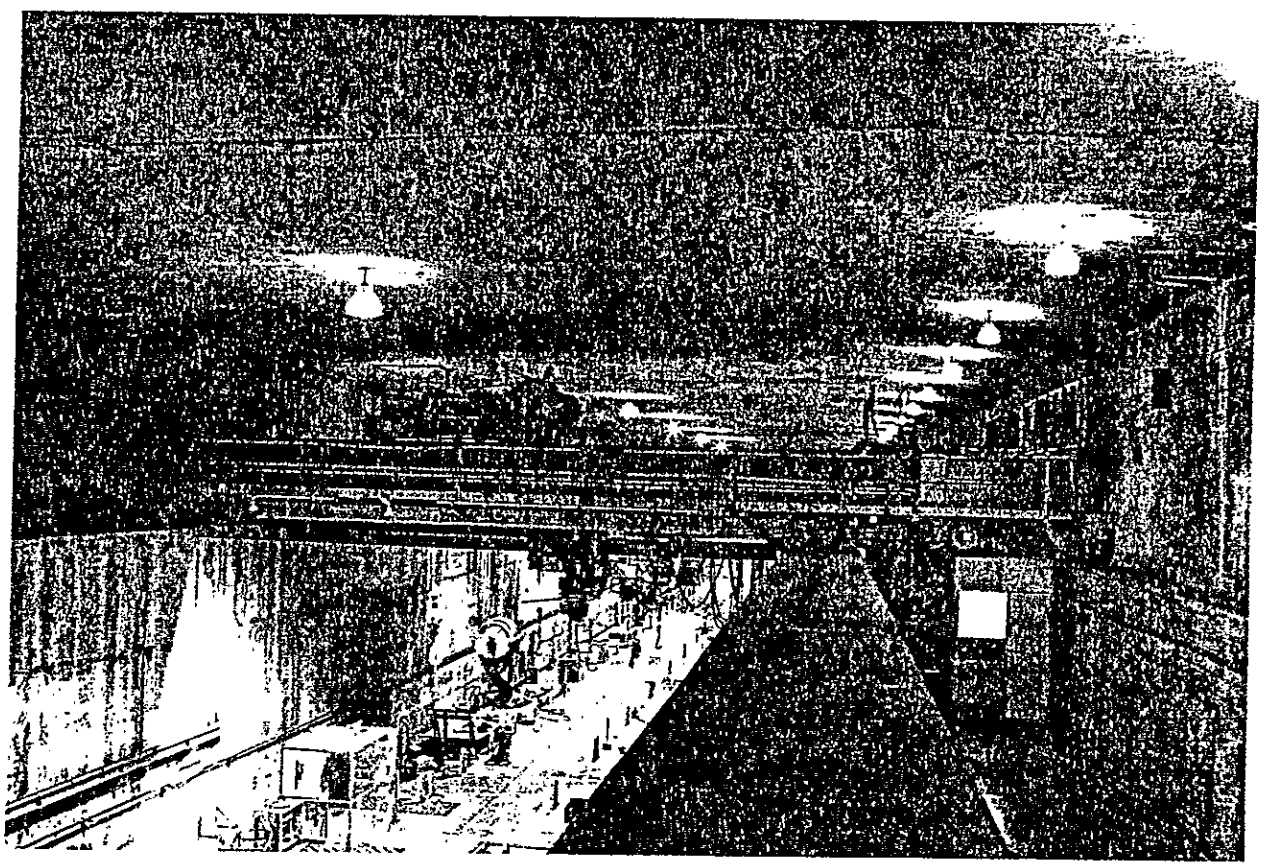
B PLANT



46°33′34"
119°32′28"

8704500-4CN
(PHOTO TAKEN 1987)

B PLANT CANYON



46°33'34"
119°32'28"

8204295-2CN
(PHOTO TAKEN 1982)

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

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

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

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 1 DAY 1 5 YR. 5 6 — FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (see the boxes to the left)

☐ 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 DESIGN 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	S02	600	G		5				
X-2	T03	20	E		6				
1	T01	103,600	U		7				
2	S03	432	C		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.

The following treatment processes and storage are located in the PUREX facility, 200 East Area.

T01 - Tank E5 (5,000 gal) - Mixed waste is treated with NaOH and $NaNO_2$ before sending the waste to double-shell underground storage tanks. The concentrator (E-F11; 2,600 gal) - Ammoniacal mixed waste was processed in the concentrator with the ammonia distillate going to the 216-A-36B Crib prior to September 1987; currently, the ammoniacal waste is treated with NaOH and $NaNO_2$ in Tank G7 (15,000 gal) and sent to a double-shell underground storage tank; in a future process, the ammoniacal waste will be acidified with HNO_3 in a tank (approximately 1,100 gal), treated with $NaNO_2$ to destroy ammonia and concentrated in E-F11. The distillate will be combined with another condensate waste stream which is neutralized with KOH before being discharged. The bottoms concentrate in the E-F11 concentrator is treated with NaOH and NaNO2 in Tank F18 (5,000 gal) before going to double-shell underground storage tanks.

Tanks F15 and F16 (each 5,000 gal) - The mixed waste is denitrated using sugar, and treated with NaOH and $NaNO_2$ before going to double-shell underground storage tanks.

Tank F18 (5,000 gal) and Tanks U3 and U4 (8,000 gal each) - The mixed waste is collected from all sections of the plant (E-F11 bottoms, sumps, sinks, drains, overflows, laboratory waste, etc.) and treated with NaOH and NaNO2 before going to double-shell underground storage tanks.

S03 - Radioactive process jumpers with lead counterweights, equipment containing lead, and lead cut from the jumpers are stored in waste piles on the canyon deck in the PUREX facility.

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 hand 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 cor taminants 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 whic 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 code 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 de sity 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 th 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 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 Ite 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 Wast 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 th 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 shav ings 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 estimate 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 an 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

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

I.D. NUMBER (enter from page 1): WA789000897

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter codes)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter codes)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	WT01	66,000.000	P	T01	Chemical Treatment
2	WT02				
3	WC01				
4	WC02				
5	WP01				
6	WP02				
7	D001				
8	D002				
9	D003				
10	D004				
11	D005				
12	D006				
13	D007				
14	D008				
15	D009				
16	D010				
17	D011				Included with above
18	WT01	2,000	P	S03	Storage
19	D008				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.

T01 - Tank E5 contains 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 including flushes with similar chemical makeups. All streams are treated with $NaNO_2$ and KOH or NaOH to a pH greater than 12.5 consisting mainly of NaF, KF, UO_2, ZrO_2, NH_3, NH_4OH and $NaNO_3$.

The concentrator (E-F11) contains NH_4NO_3 and NH_4OH which are treated with NaOH and $NaNO_2$.

Tanks F15 and F16 contain high level acid waste with HNO_3 and $Al(NO_3)_3$ which are treated with sugar, NaOH, and $NaNO_2$.

Tank F18 and Tanks U3 and U4 receive miscellaneous wastes with a constantly changing composition consisting mainly of water and HNO_3. Corrosive waste is treated with NaOH and $NaNO_2$ to a pH greater than 12.5.

S03 - Equipment and jumpers containing elemental lead are regulated waste due to EP toxicity and toxicity.

NOTE: Subsequent modifications may be made to this Dangerous Waste Part A Permit Application based on the results of an evaluation of the potential for listed waste in the PUREX waste stream.

V. FACILITY DRAWING

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

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 attached drawings and photographs

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

VIII. FACILITY OWNER

[V] 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
Michael J. Lawrence Manager, Richland Operations United States Department of Energy	Michael J. Lawrence	10/18/89

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		

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John E. Nolan

Co-operator
John E. Nolan, President
Westinghouse Hanford Company

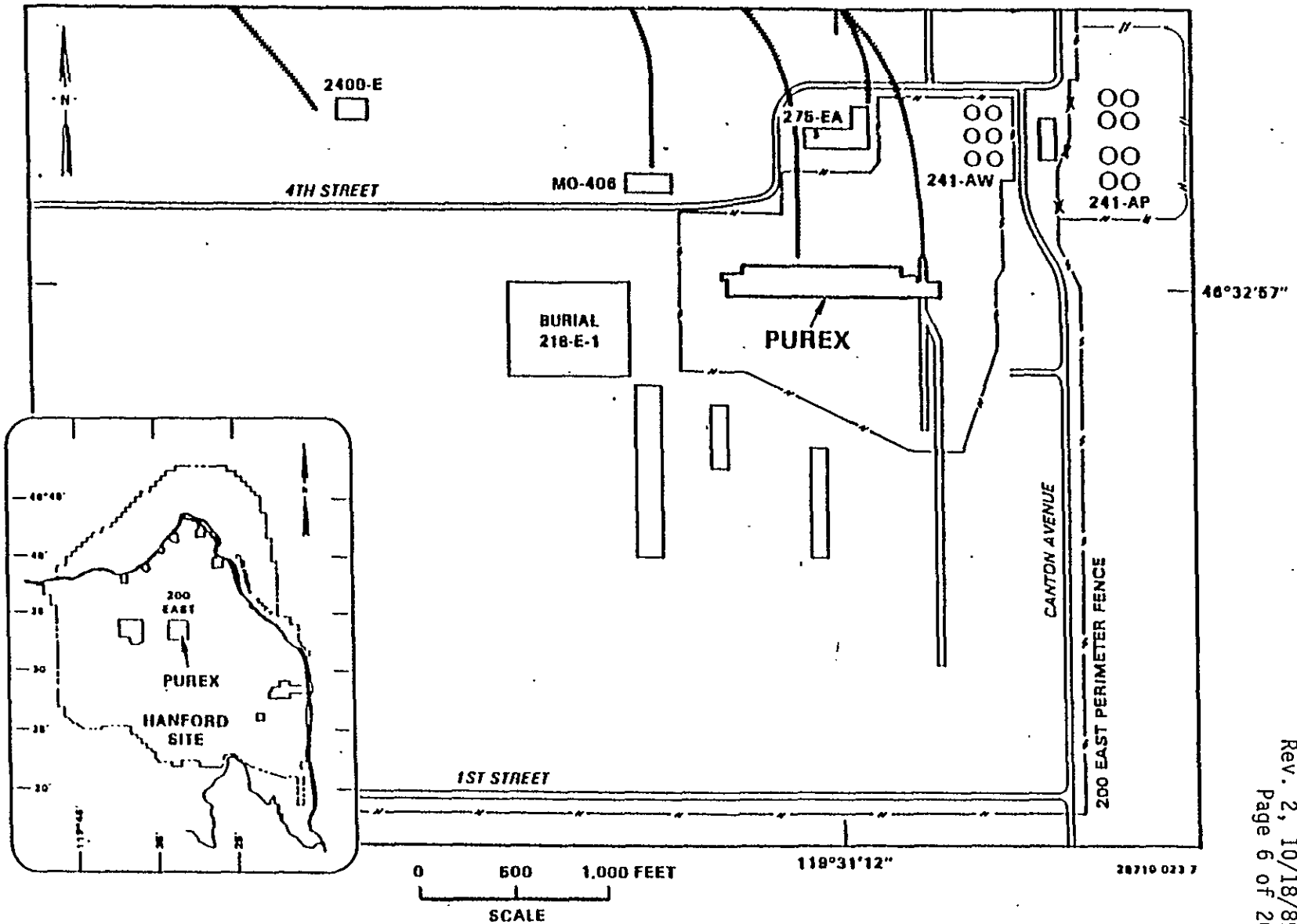
Date 9/20/89

Michael J. Lawrence

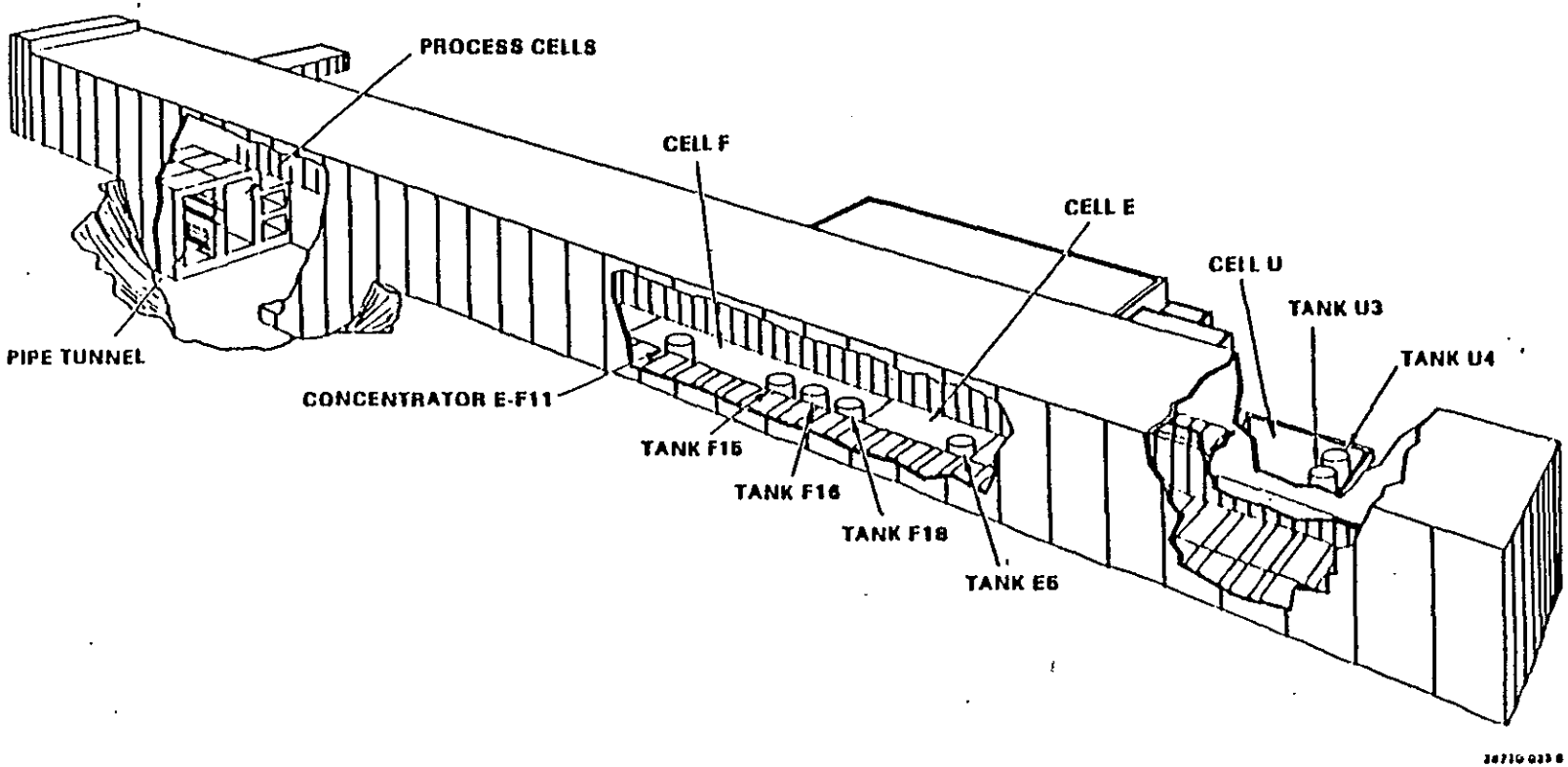
Owner/Operator
Michael J. Lawrence, Manager
U.S. Department of Energy
Richland Operations Office

Date 10/18/89

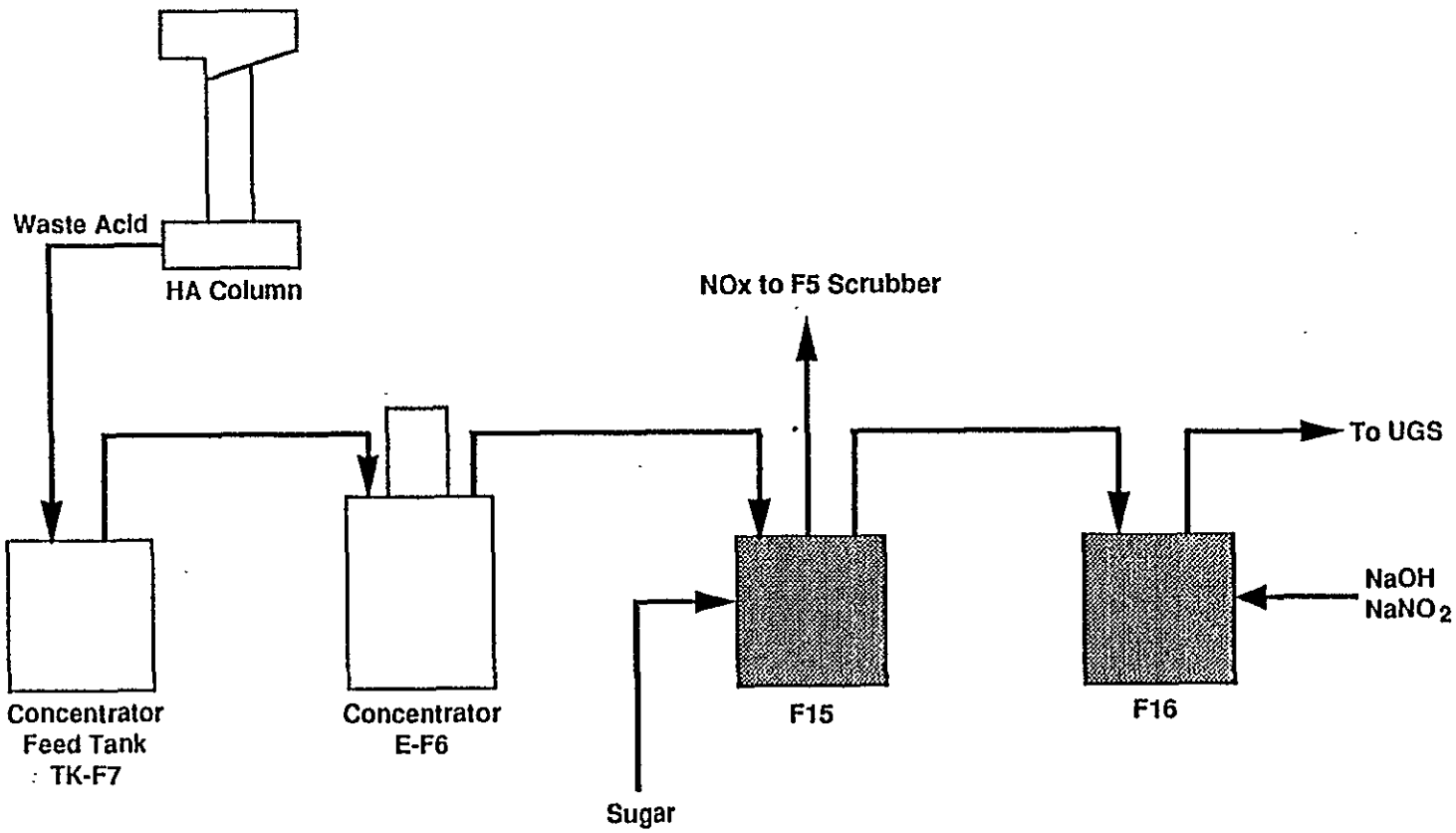
PUREX
SITE PLAN



PUREX
CUTAWAY VIEW

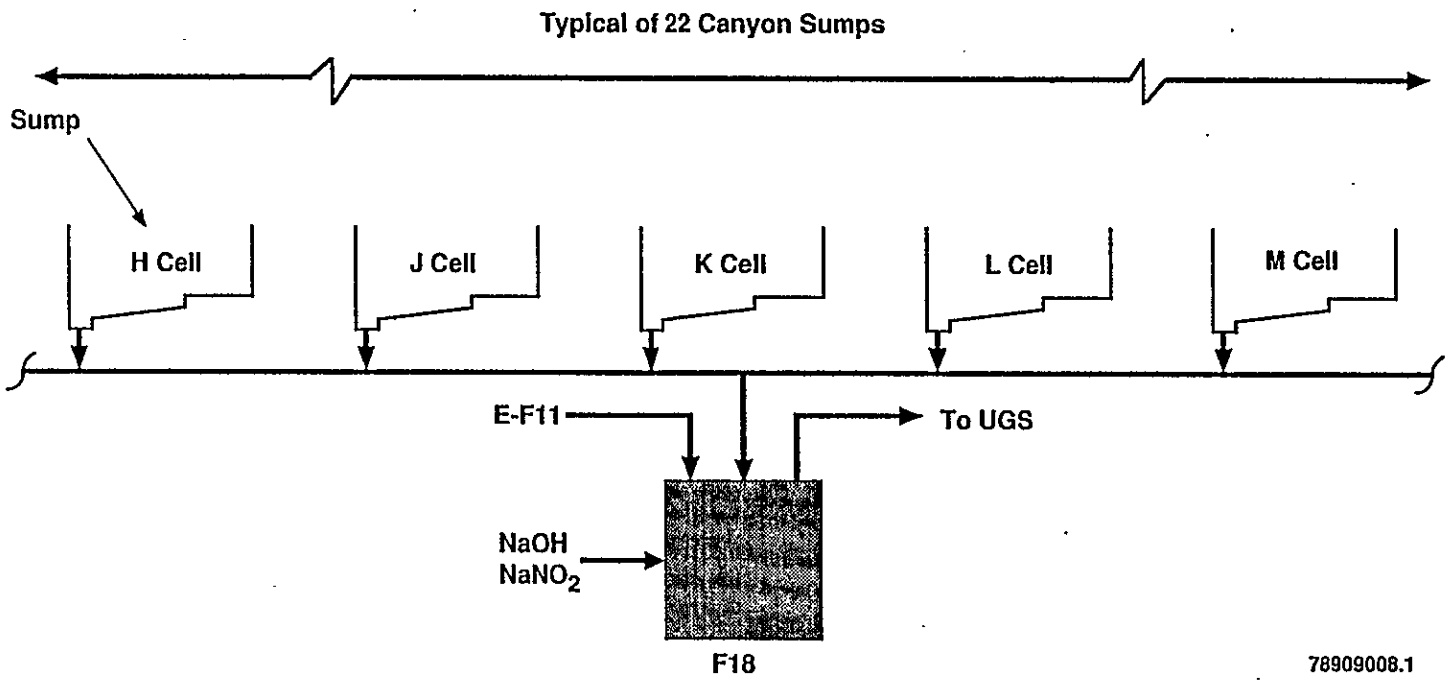


TK-F15/F16 Waste Stream Flow Diagram

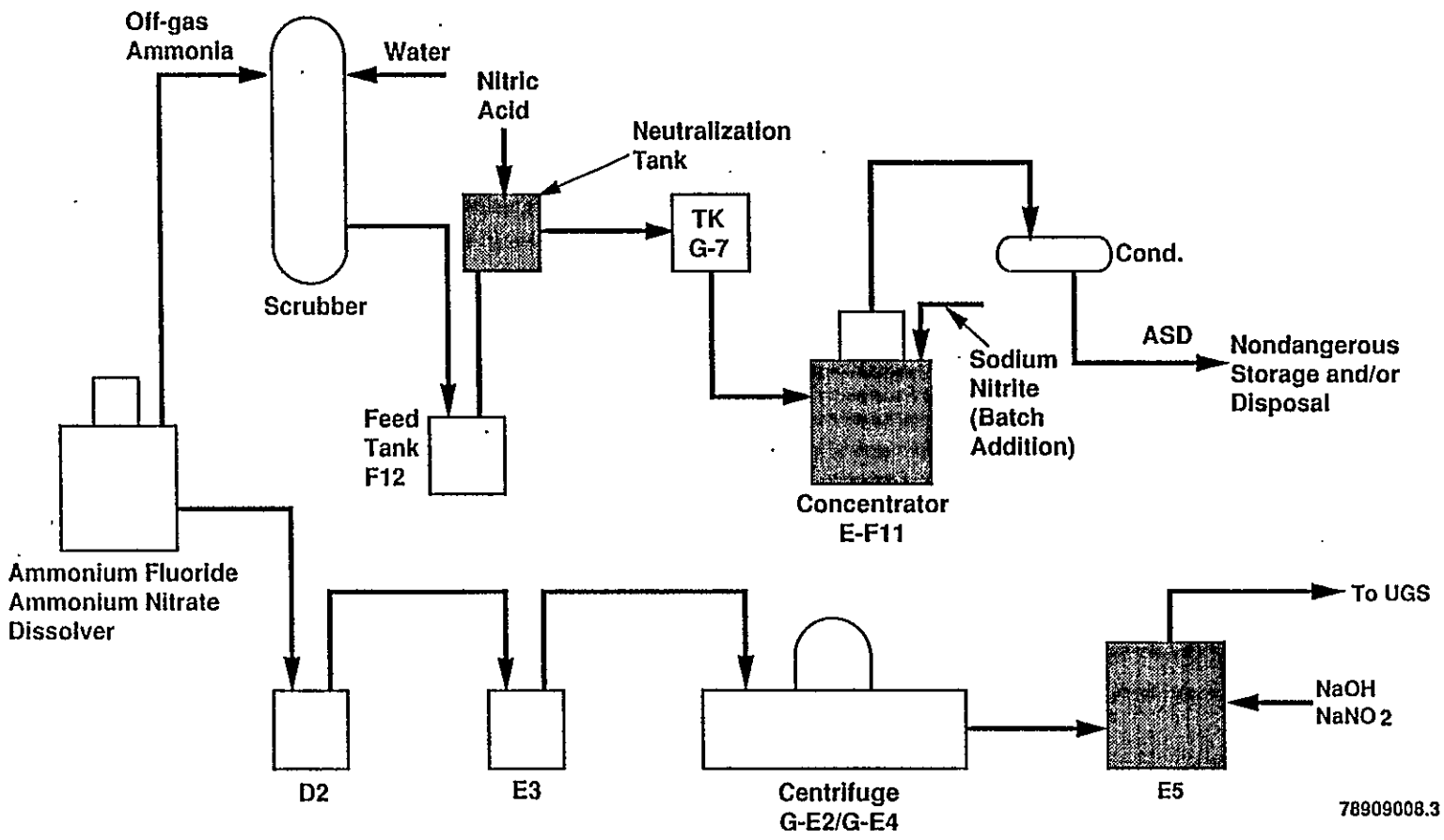


78909008.2

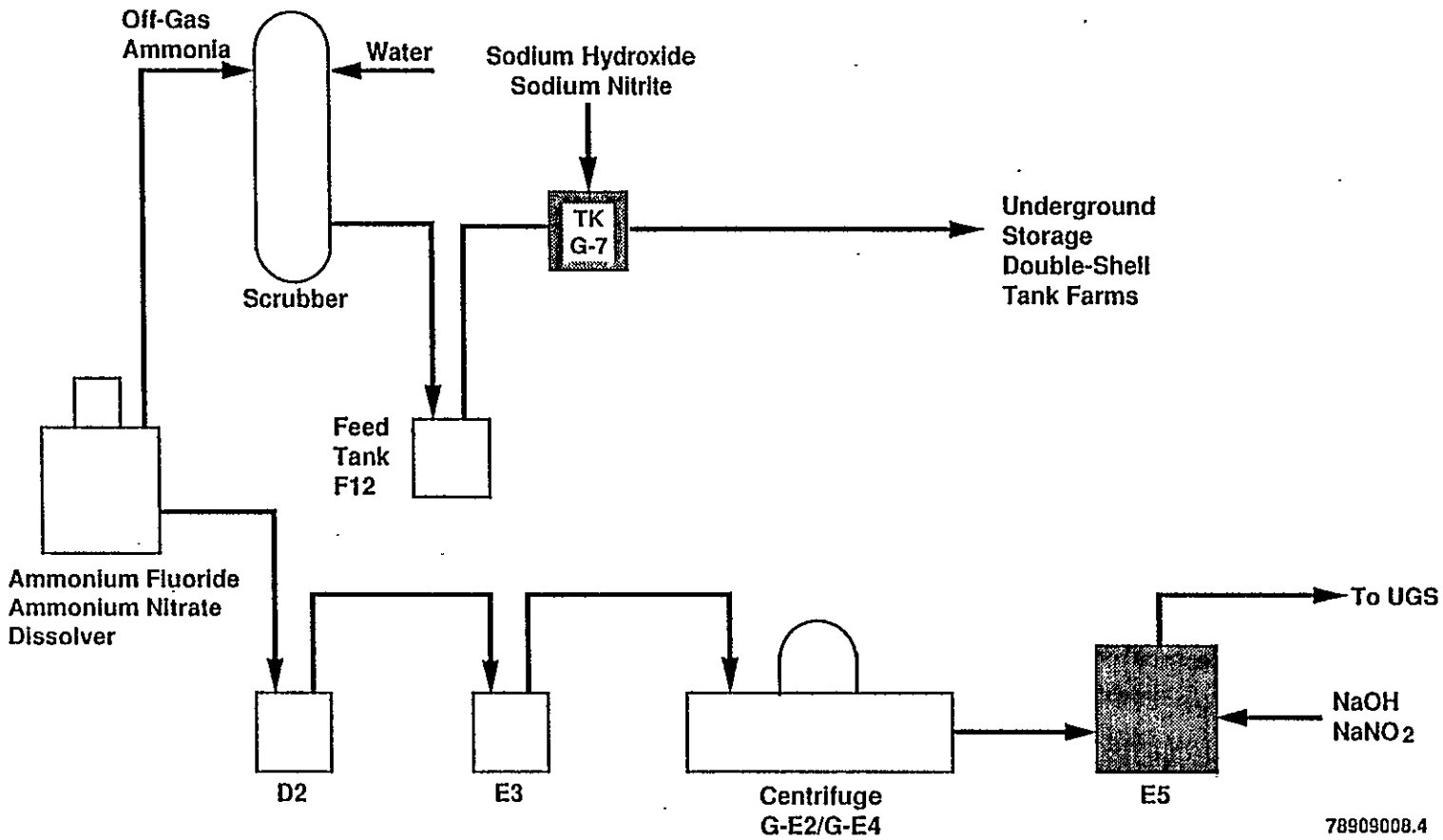
TK-F18 Waste Stream Flow Diagram



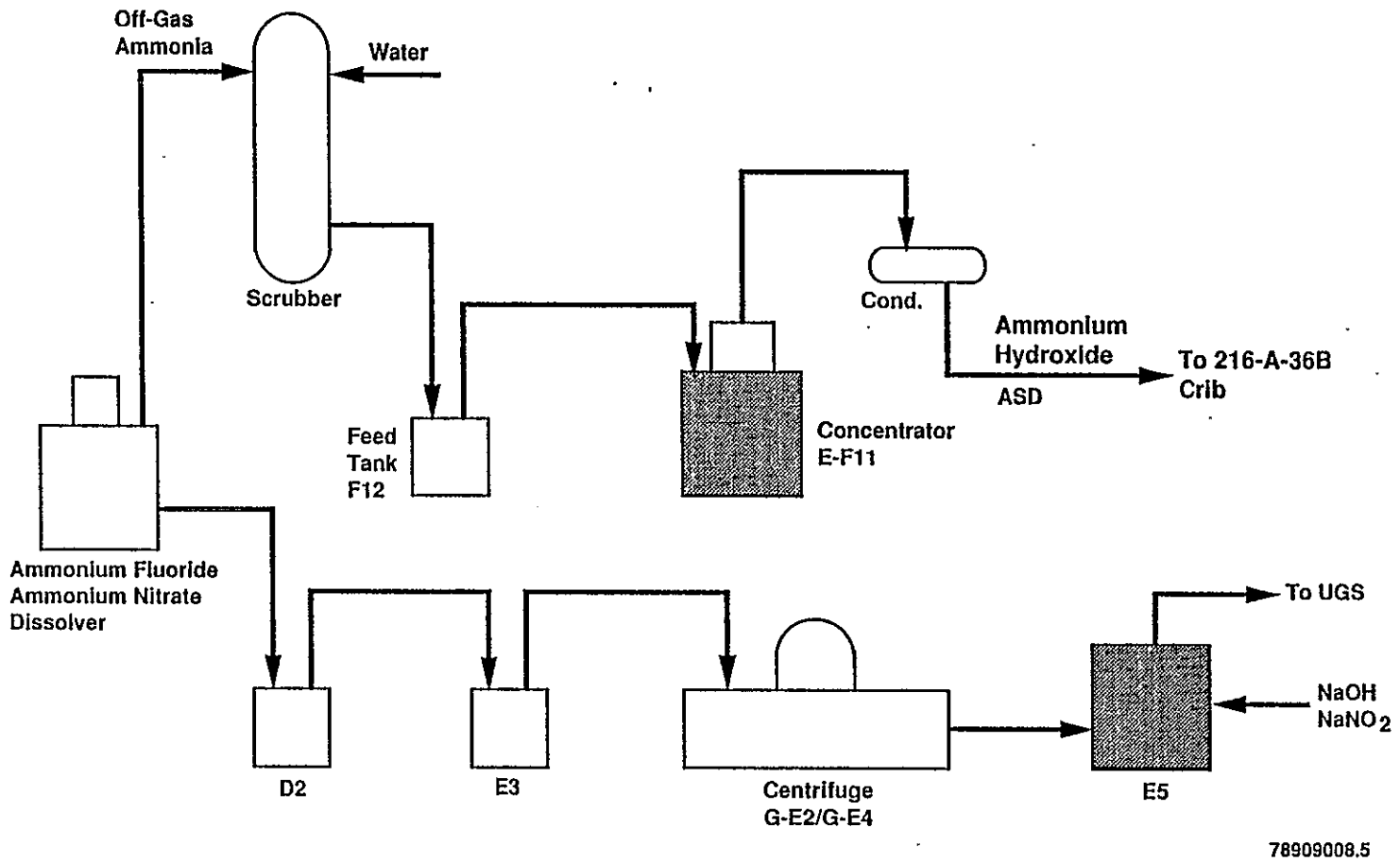
E-F11 and TK-E5 Waste Stream Flow Diagrams
Proposed Process



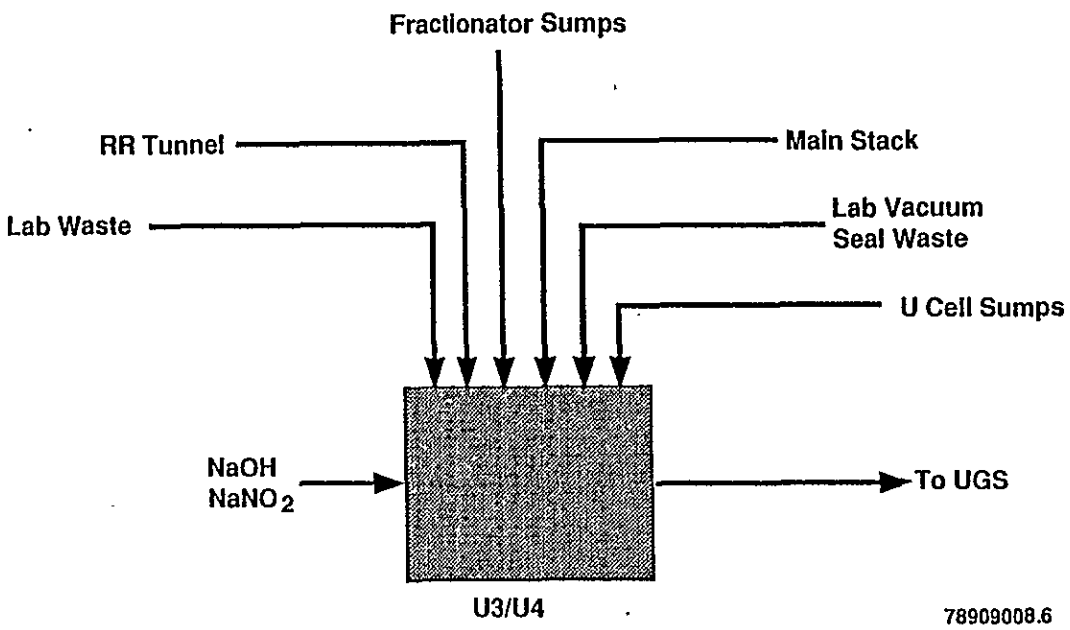
E-F11 and TK-E5 Waste Stream Flow Diagrams
Present Process



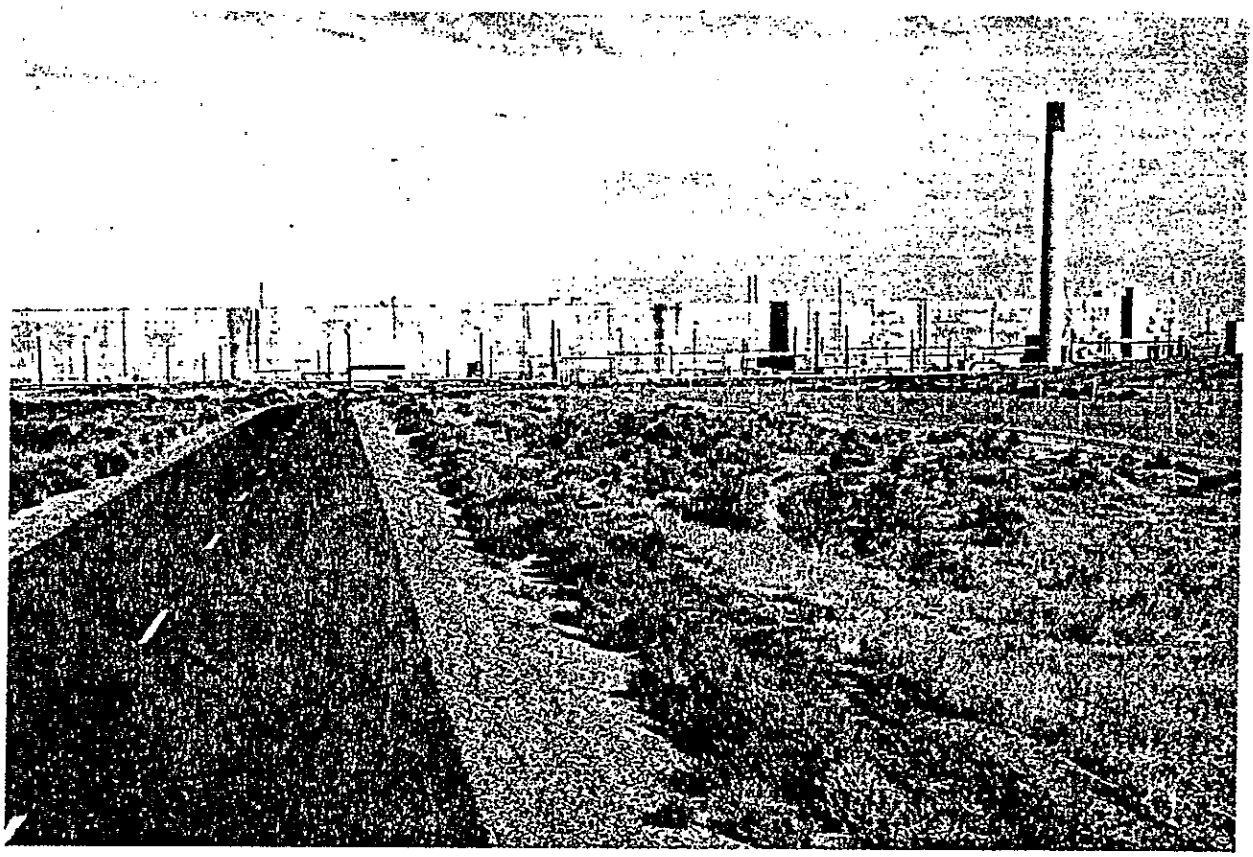
E-F11 and TK-E5 Waste Stream Flow Diagrams
Past Process - Prior to August 1987



TK-U3/U4 Waste Stream Flow Diagram



PUREX BUILDING (SOUTH SIDE)



46°32'57"
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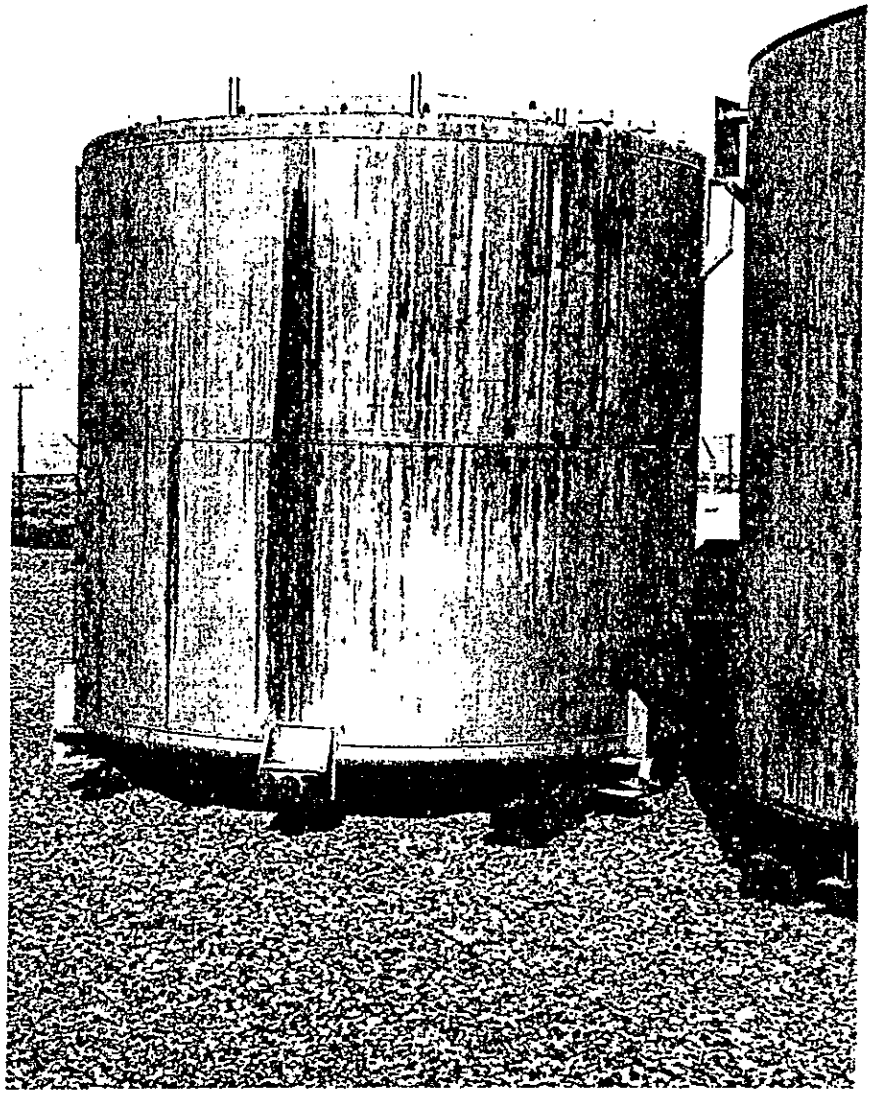
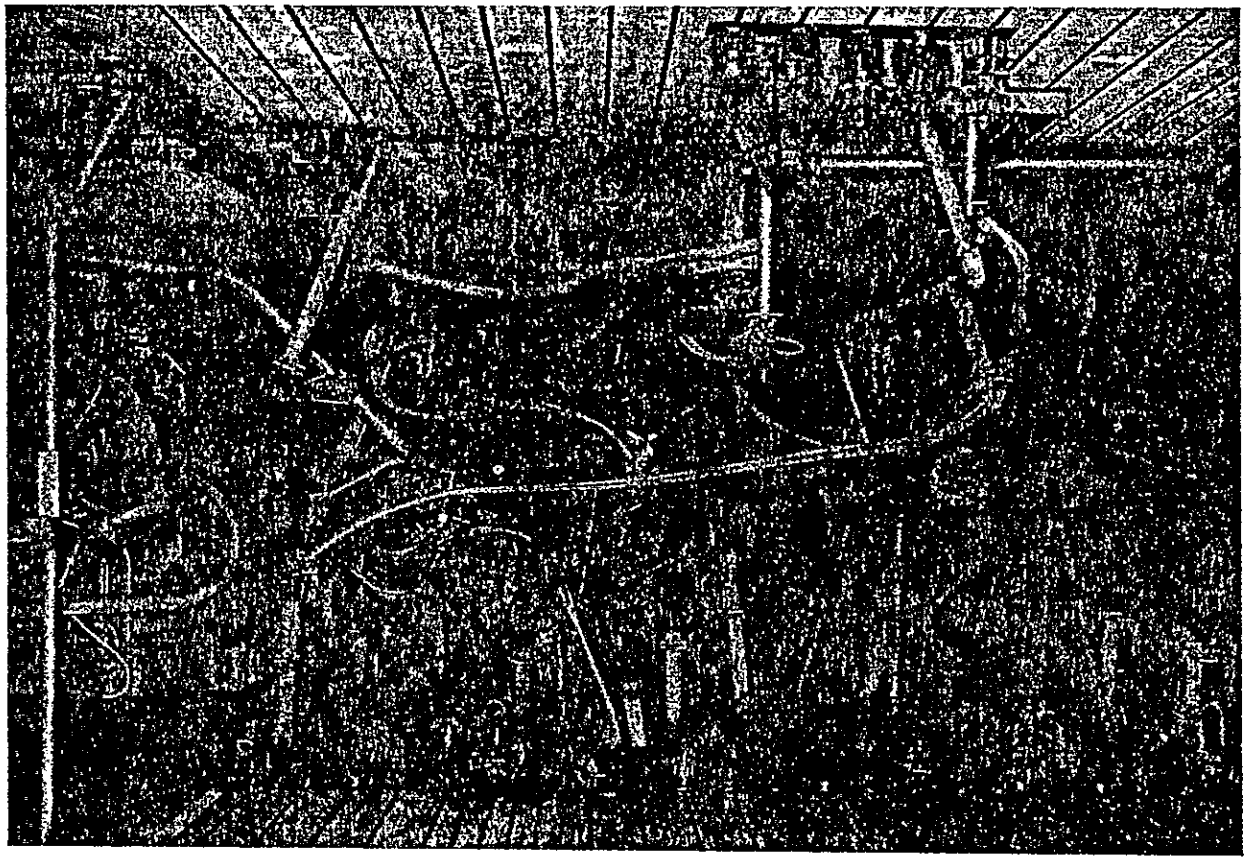
8706243-4CN
(PHOTO TAKEN 1987)

STANDARD 5,000 GALLON TANK (TYPICAL OF E5, F15/F16 AND F18)



8706243-5CN
(PHOTO TAKEN 1987)

TANK E5



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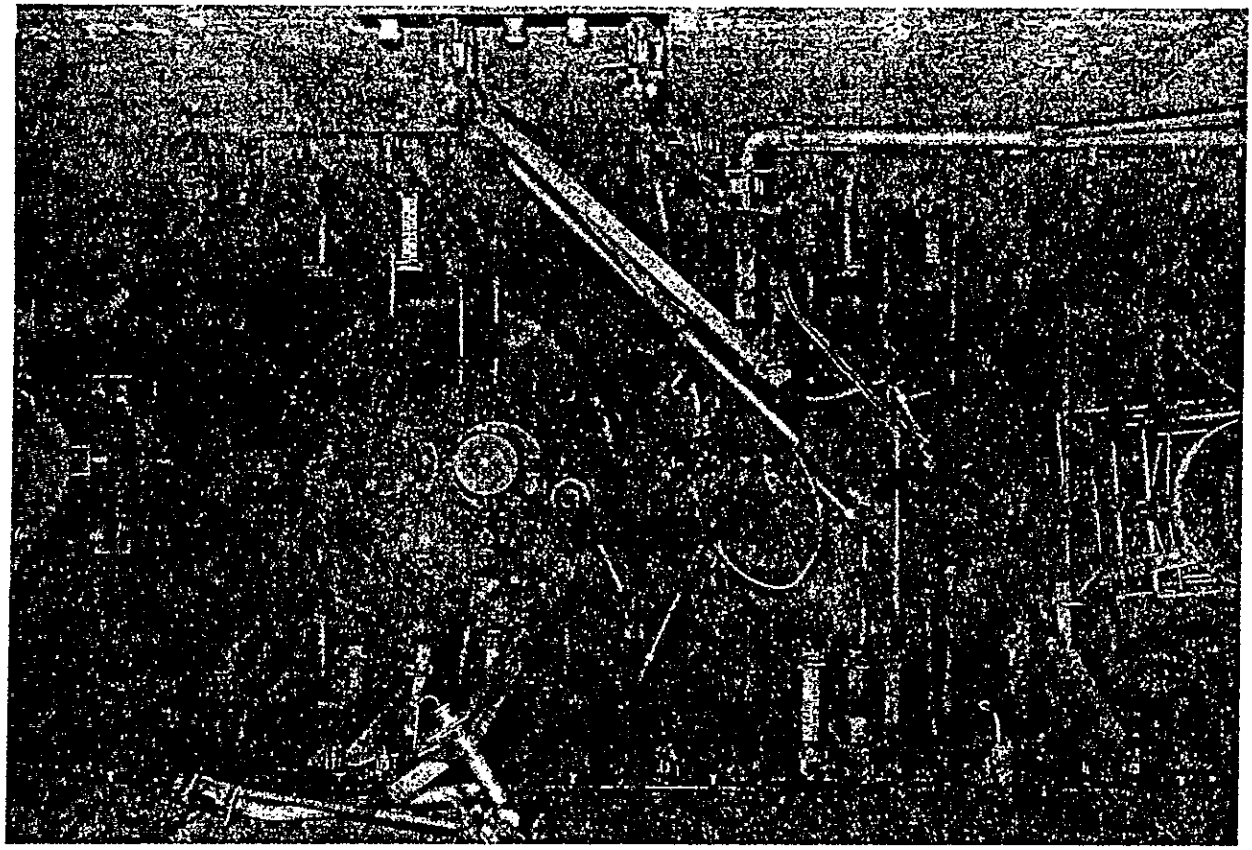
099948-38CN
(PHOTO TAKEN 1982)

TANK F16 AND TANK F15



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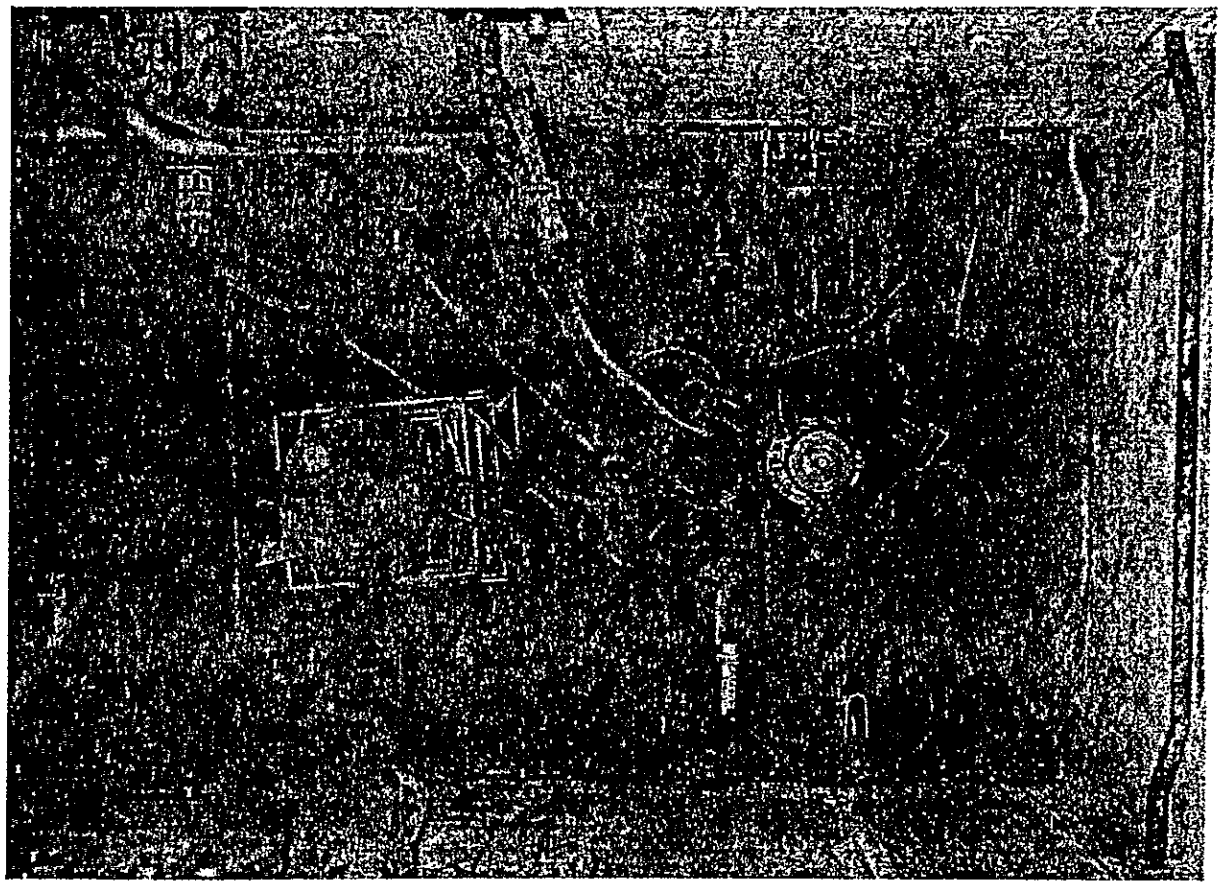
119°08'00"

099948-71CN
(PHOTO TAKEN 1982)

TANK F18



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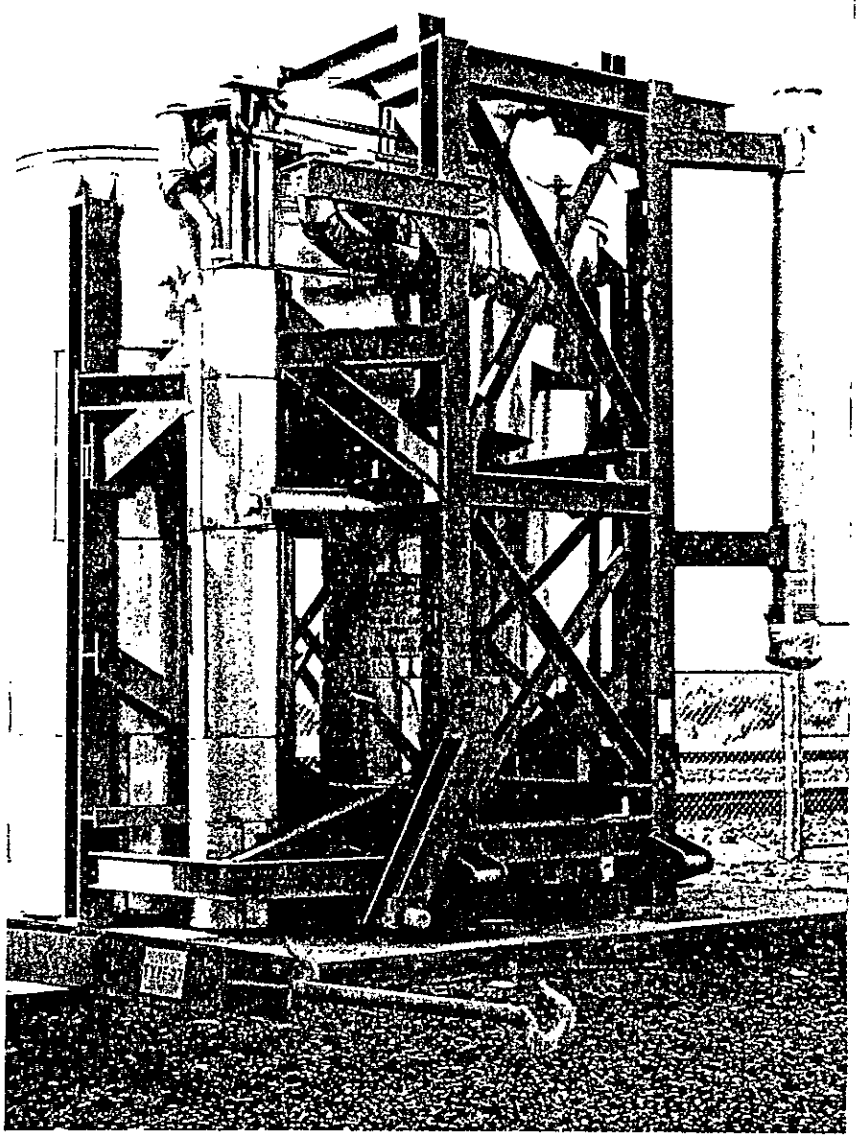
119°08'00"

099948-74CN
(PHOTO TAKEN 1982)

E-F11 CONCENTRATOR



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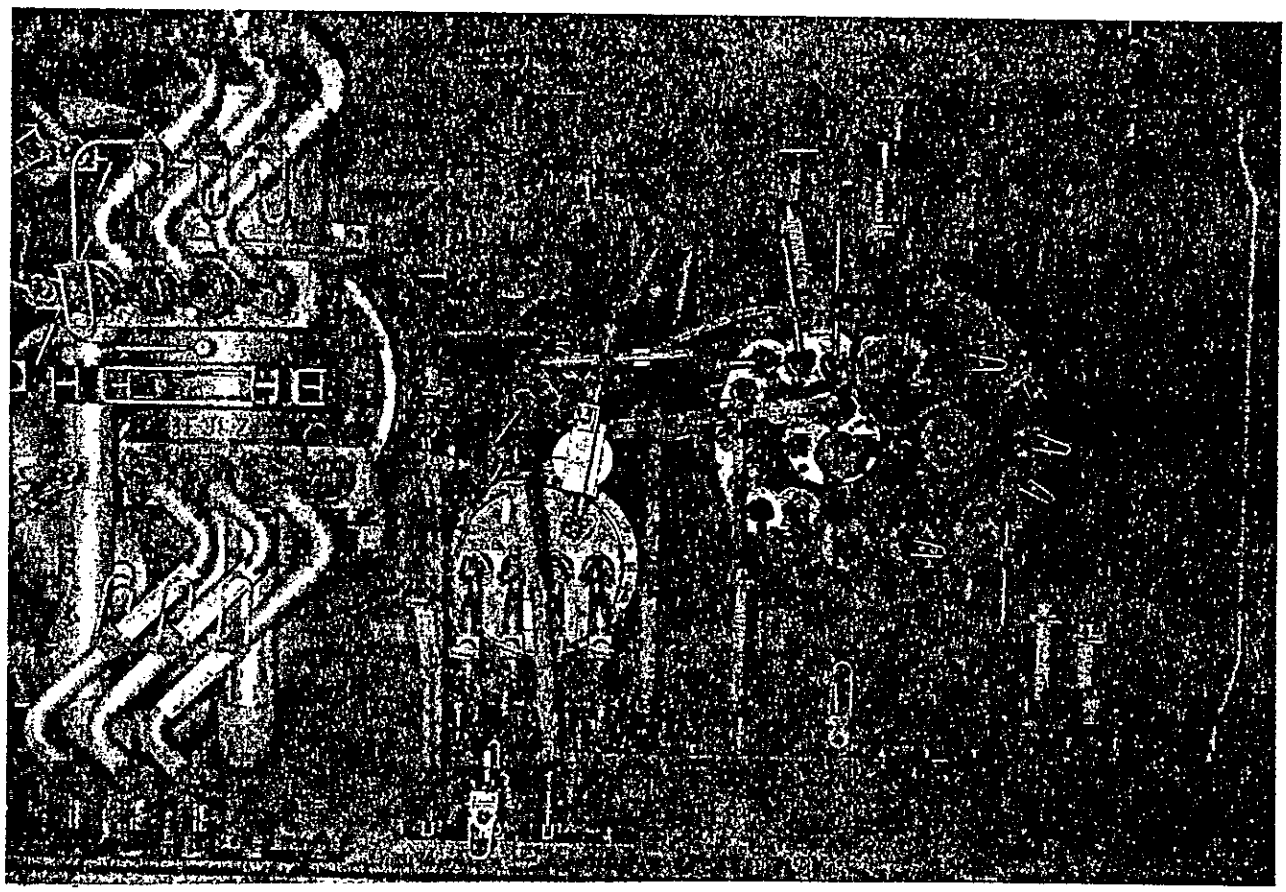
119°07'59"

8706243-8CN
(PHOTO TAKEN 1987)

E-F11 CONCENTRATOR



46°32'46"
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099948-64CN
(PHOTO TAKEN 1982)

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

I. 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 (check 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.
1	1	1

FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the same as the last)

☒ 2. NEW FACILITY (Complete item below.)

MO.	DAY	YR.
1 2	1	9 9

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 DESIGN 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. Two 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	Y
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
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	T 0 1	8,800	U	
2	T 0 1	17,600	U	
3	T 0 1	135	U	
4	S 0 2	106,000	G	
5	S 0 2	138,000	G	
6	S 0 2	112,000	G	
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, S02 (Vitrification and Related Treatment and Storage Processes)
The Hanford Waste Vitrification Plant (HWVP) will be located in the 200 East Area of the Hanford Site. At the HWVP, mixed waste received from a pretreatment facility will be treated in a series of tanks. Treatment (T01) will include concentration by evaporation, adjustment with chemicals and glass forming materials, and immobilization in borosilicate glass (vitrification). The vitrified waste will be cast into stainless steel canisters and stored at the HWVP until they are shipped to a national repository. The HWVP is designed to treat 8,800 gallons of mixed waste per day, producing 220 pounds of glass per hour. The dangerous waste treatment tanks will also be capable of storing dangerous wastes (S02) under off-normal conditions. The total storage capacity of the tanks included in the vitrification process is 106,000 gallons.

(continued on next 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

CONTINUATION OF SECTION III.C. PROCESSES - CODES AND DESIGN CAPACITIES

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, molecular sieve absorption, and evaporation. The high-activity fraction from the treatment process will be recycled. The remainder will be transferred to the double-shell tanks. Treatment design capacity will be 17,600 gallons of mixed waste per day. The dangerous waste treatment tanks also will be capable of storing dangerous wastes (S02) under off-normal conditions. The total storage capacity of tanks handling secondary mixed waste is 138,000 gallons.

T01, S02 (Neutralization, Solar Evaporation, and Tank Storage of Secondary Nonradioactive Dangerous Wastes)
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, and stored (S02) at the HWVP. Treatment (T01) will include neutralization, concentration by solar evaporation, and decomposition of dangerous constituents during storage. Treatment design capacity is 135 gallons per day with a storage design capacity of 112,000 gallons.

Note - Subsequent modifications may be made to the Part A permit application (and Part B permit application, Revision 0, dated July 31, 1989) based on the disposition of the following two items currently under consideration by the Washington State Department of Ecology: (1) qualification of the HWVP as an interim status expansion facility, and (2) evaluation of the potential for listed waste in the double-shell tanks.

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

I.D. NUMBER (enter from page 1): WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE	A. DANGEROUS WASTE NO. (enter codes)	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	19,000,000	P	T01 S02	Vitrification and related treatment and storage processes
2	D002				
3	D005				
4	D006				
5	D007				
6	D008				
7	D010				
8	D011				Included With Above
9	WT01	38,000,000	P	T01 S02	Tank treatment and storage of secondary mixed waste
10	D002				
11	D005				
12	D006				
13	D007				
14	D008				
15	D010				
16	D011				Included With Above
17	WT02	409,500	P	T01 S02	Neutralization, solar evaporation, and tank storage of secondary nonradioactive dangerous waste
18	D002				Included With Above
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 HWVP will consist of existing and future high-activity Defense Waste stored in the double-shell tanks. This waste is expected to be designated as an Extremely Hazardous Waste (EHW) due to toxicity, and also designated as a Dangerous Waste (DW) due to the corrosivity and EP toxicity.

Secondary liquid mixed waste is expected to be designated a Dangerous Waste (DW) or an Extremely Hazardous Waste (EHW) due to the toxicity, corrosivity, and EP toxicity. Treatment is expected to eliminate the characteristics that result in an EHW designation before the waste is transferred out of the facility.

Secondary nonradioactive chemical waste treated and stored at the HWVP is expected to include waste that is EHW or DW due to the toxicity and corrosivity. Treatment at the HWVP is expected to eliminate the characteristics that result in an EHW designation before the waste is treated further and stored in the Solar Evaporation Tank.

V. FACILITY DRAWING

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

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 attached drawings and photographs

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
Michael J. Lawrence Manager, Richland Operations United States Department of Energy	Edward D. Zulder	10/31/89

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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.

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SEE ATTACHMENT		

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John E. Nolan

Co-operator
John E. Nolan, President
Westinghouse Hanford Company

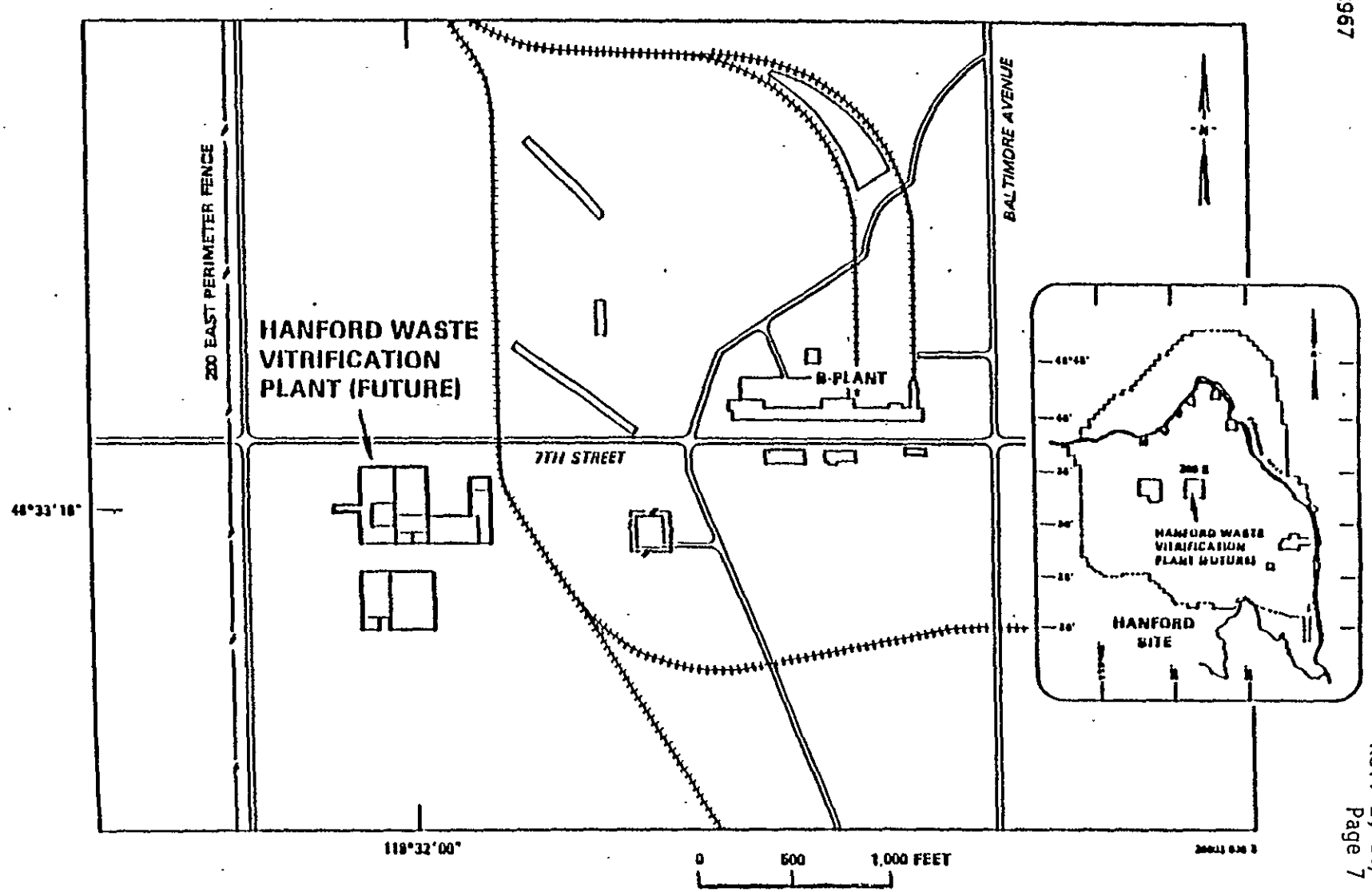
10/17/89
Date

Edward J. Dudley

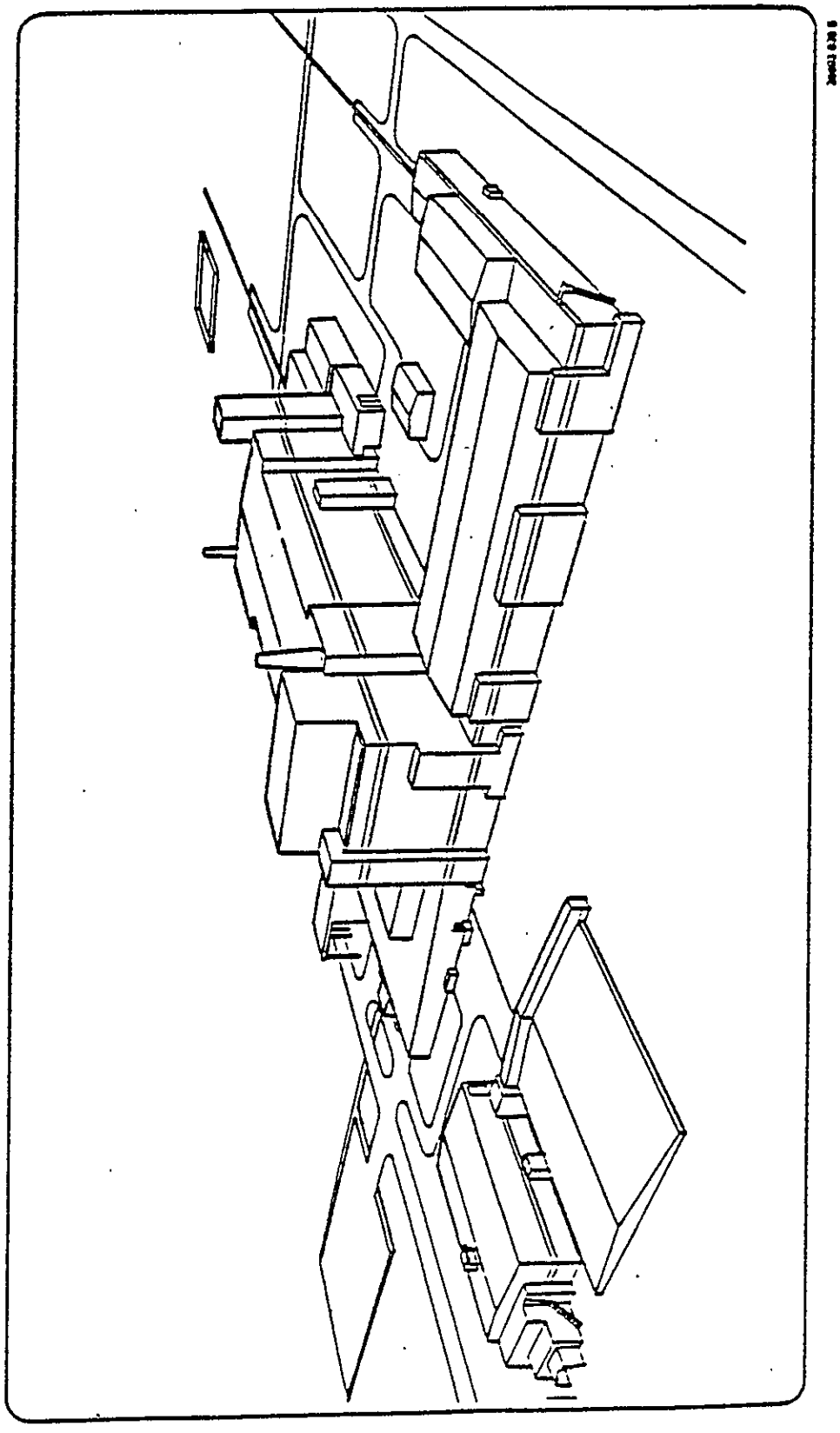
Owner/Operator
Michael J. Lawrence, Manager
U.S. Department of Energy
Richland Operations Office

10/31/89
Date

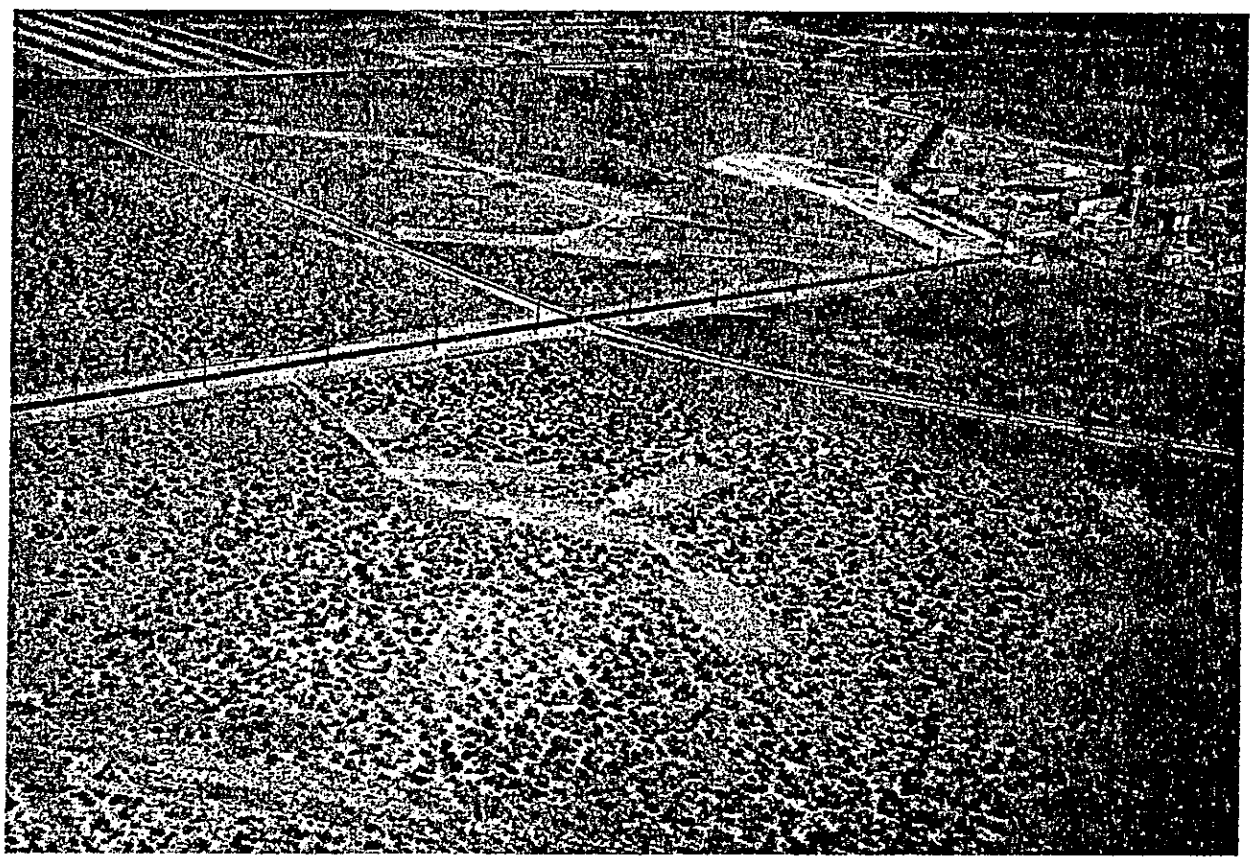
HANFORD WASTE VITRIFICATION PLANT
FUTURE SITE PLAN



HANFORD WASTE VITRIFICATION PLANT
FUTURE FACILITY LAYOUT



HANFORD WASTE VITRIFICATION PLANT PROPOSED LOCATION



46°33′18"
119°32′00"

8600906-13CN
(PHOTO TAKEN 1986)

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

I. 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 (yrs., mo., & dy.)	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 dates)

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

☐ 2. NEW FACILITY (Complete item below.)

* MO. | DAY | YR. — FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (see instructions in the kit)

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 *See Attached Tank List Table

☐ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES — CODES AND DESIGN 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	S 0 2	33,400,000	G		7				
2	T 0 1	33,400,000	U		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

Hanford Site Double-Shell Tanks are used for the interim storage (S02) of mixed wastes from the Hanford facilities. Several operating plants in the 200 East and 200 West areas of the Hanford Site transfer mixed wastes from the facility through buried double-encased transfer lines to the million gallon double-shell underground tanks. The liquid waste is accumulated in the million gallon double-shell tanks until it is transferred for treatment to the Grout Treatment Facility and then disposed of in a Near-Surface Vault. In the future the waste from the double-shell tanks will be also treated at the Hanford Waste Vitrification Plant (HWVP) then shipped for disposal to the proposed national repository. Interim treatment may also be performed at B Plant and the 242-A Evaporator.

Other types of liquid mixed wastes are received in the double-shell tanks from rail car transfers, tank truck transfers, single-shell tanks, and smaller temporary storage tanks.

A list of these tanks is shown in the attached Tank List Table. The tank numbers, locations, design capacities, and operational dates are included in this table.

The tanks are considered treatment units (T01) since chemicals can be added for corrosion control and/or water can be evaporated from the aging waste tanks by adding heat. It is possible that up to 33,400,000 gallons can be treated in a 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	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 LIST TABLE

1. There are twenty-four 1,200,000 million gallon non-aging double-shell tanks.

TANK NUMBER	LOCATION	DESIGN CAPACITY (GALLONS)	OPERATION DATE
241-AN-101	200 East Area	1,200,000	09/81
241-AN-102	200 East Area	1,200,000	09/81
241-AN-103	200 East Area	1,200,000	09/81
241-AN-104	200 East Area	1,200,000	09/81
241-AN-105	200 East Area	1,200,000	09/81
241-AN-106	200 East Area	1,200,000	09/81
241-AN-107	200 East Area	1,200,000	09/81
241-AP-101	200 East Area	1,200,000	10/86
241-AP-102	200 East Area	1,200,000	10/86
241-AP-103	200 East Area	1,200,000	10/86
241-AP-104	200 East Area	1,200,000	10/86
241-AP-105	200 East Area	1,200,000	10/86
241-AP-106	200 East Area	1.200,000	10/86
241-AP-107	200 East Area	1,200,000	10/86
241-AP-108	200 East Area	1,200,000	10/86
241-AW-101	200 East Area	1,200,000	08/80
241-AW-102	200 East Area	1,200,000	08/80
241-AW-103	200 East Area	1,200,000	08/80
241-AW-104	200 East Area	1,200,000	08/80
241-AW-105	200 East Area	1,200,000	08/80
241-AW-106	200 East Area	1,200,000	08/80
241-SY-101	200 West Area	1,200,000	04/77
241-SY-102	200 West Area	1,200,000	04/77
241-SY-103	200 West Area	1,200,000	04/77

2. There are four 1,000,000 million gallon aging waste double-shell tanks.

TANK NUMBERS	LOCATION	DESIGN CAPACITY (GALLONS)	OPERATION DATE
241-AY-101	200 East Area	1,000,000	04/71
241-AY-102	200 East Area	1,000,000	04/76*
241-AZ-101	200 East Area	1,000,000	11/76
241-AZ-102	200 East Area	1,000,000	11/76

* Estimated date the tank became operational.

3. There are six tanks in the waste transfer vaults.

TANK NUMBER	LOCATION	DESIGN CAPACITY (GALLONS)	OPERATION DATE
244-AR-001	200 East Area	40,000	1977
244-AR-002	200 East Area	41,230	1977
244-AR-003	200 East Area	4,530	1977
244-AR-004	200 East Area	4,472	1977
244-CR-003	200 East Area	14,660	1946
244-CR-011	200 East Area	45,000	1946

4. There is one 800 gallon tank in a transfer building.

TANK NUMBER	LOCATION	DESIGN CAPACITY (GALLONS)	OPERATION DATE
241-EW-151	200 East-West Vent Station	800	11/55*

* Estimated date the tank became operational.

5. There are five double-contained receiver tanks.

TANK NUMBER	LOCATION	DESIGN CAPACITY (GALLONS)	OPERATION DATE
244-TX	200 West Area	31,000	12/81
244-BX	200 East Area	31,000	1983
244-U	200 West Area	31,000	1987
244-S	200 West Area	20,280	1987
244-A	200 East Area	16,280	1975

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

I.D. NUMBER (enter 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	720,000.000	P	S02 T01	Storage/Chemical Treatment/ Evaporation
2	D002				
3	D003				
4	D004				
5	D005				
6	D006				
7	D007				
8	D008				
9	D009				
10	D010				
11	D011				
12	WT01				
13	WT02				
14	WC01				
15	WC02				
16	WP01				
17	WP02				Included With Above
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

SEE ATTACHMENT

V. FACILITY DRAWING

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

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 attached drawings and photographs

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
Michael J. Lawrence Manager, Richland Operations United States Department of Energy	Michael J. Lawrence	10/12/89

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		

DANGEROUS WASTE PERMIT APPLICATION
EPA/STATE IDENTIFICATION NUMBER WA7890008967

Section IV.E, Description of Dangerous Wastes Listed in Section IV.D.

The types of mixed wastes that are stored, chemically treated, and evaporated in the double-shell tanks are as follows:

1. Dilute miscellaneous waste generated at the 100-N, 200 East, 200 West, 300 Area,and 400 Area of the Hanford Site;

2. Supernate and transuranic sludge that consist of neutralized cladding removal waste generated during PUREX headend operations, and waste generated during Plutonium Finishing Plant processing;

3. Double-shell slurry and double-shell slurry feed, which is dilute waste that has been concentrated in the 242-A Evaporator;

4. Concentrated complexed wastes and complexed wastes generated from B-Plant processing; and

5. Neutralized Current Acid Waste from the first extraction column at PUREX.

It is possible that any of the above waste types could be stored/treated in any of the non-aging or aging double-shell tanks.

The list of dangerous wastes under item IV.A includes the EP Toxic constituents of cadmium and silver. These constituents have not been detected in the wastes, but knowledge of the processes providing wastes to the double-shell tanks indicates the strong possibly that these constituents will be in the wastes. All other wastes listed on this form are based upon actual analytical data.

NOTE: Subsequent modifications may be made to this Dangerous Waste Part A Permit Application based on the results of an evaluation of the potential for listed waste in the double-shell tanks waste stream.

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 E. Nolan

Co-operator
John E. Nolan, President
Westinghouse Hanford Company

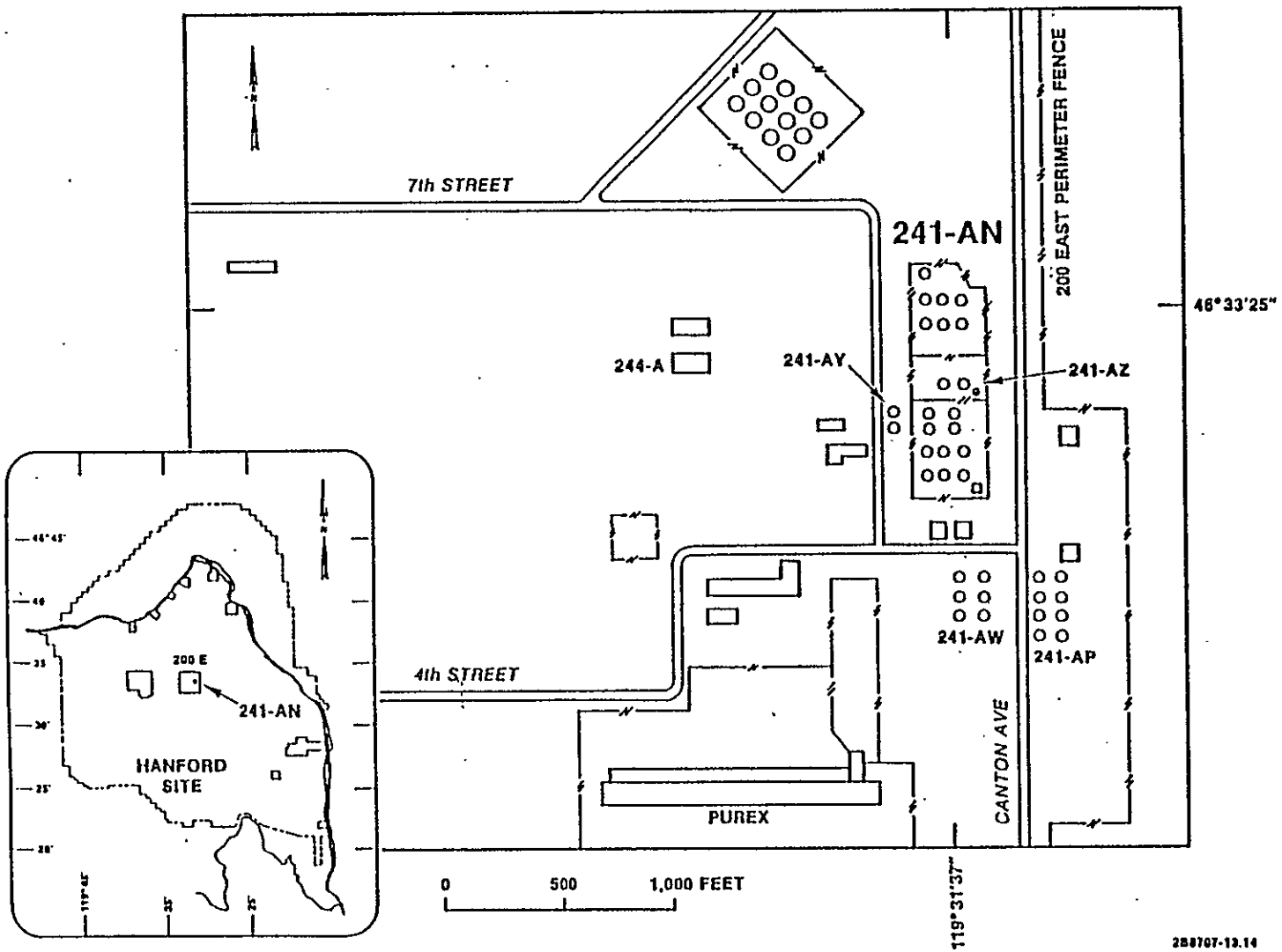
9/20/89
Date

Michael J. Lawrence

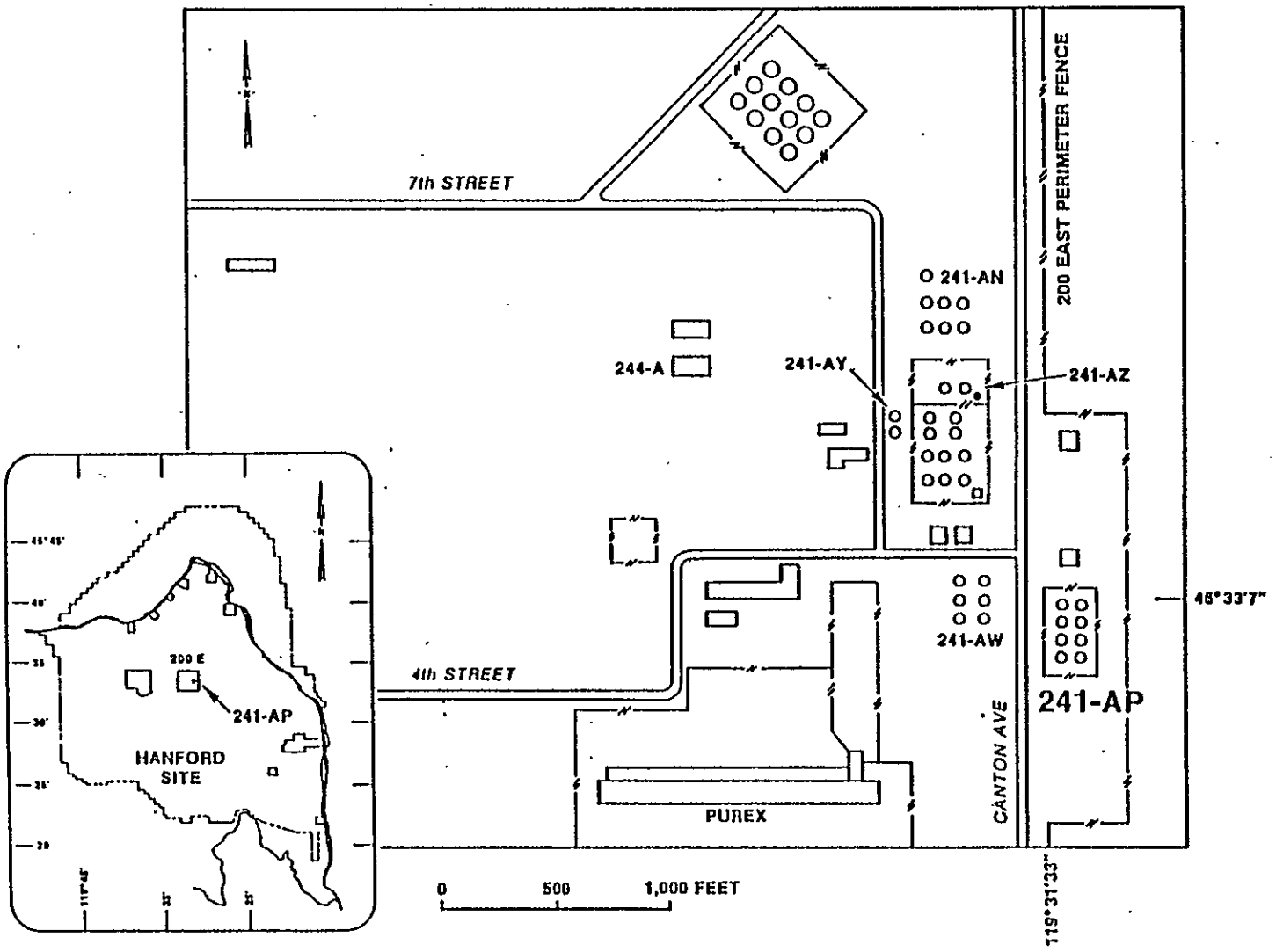
Owner/Operator
Michael J. Lawrence, Manager
U.S. Department of Energy
Richland Operations Office

10/18/89
Date

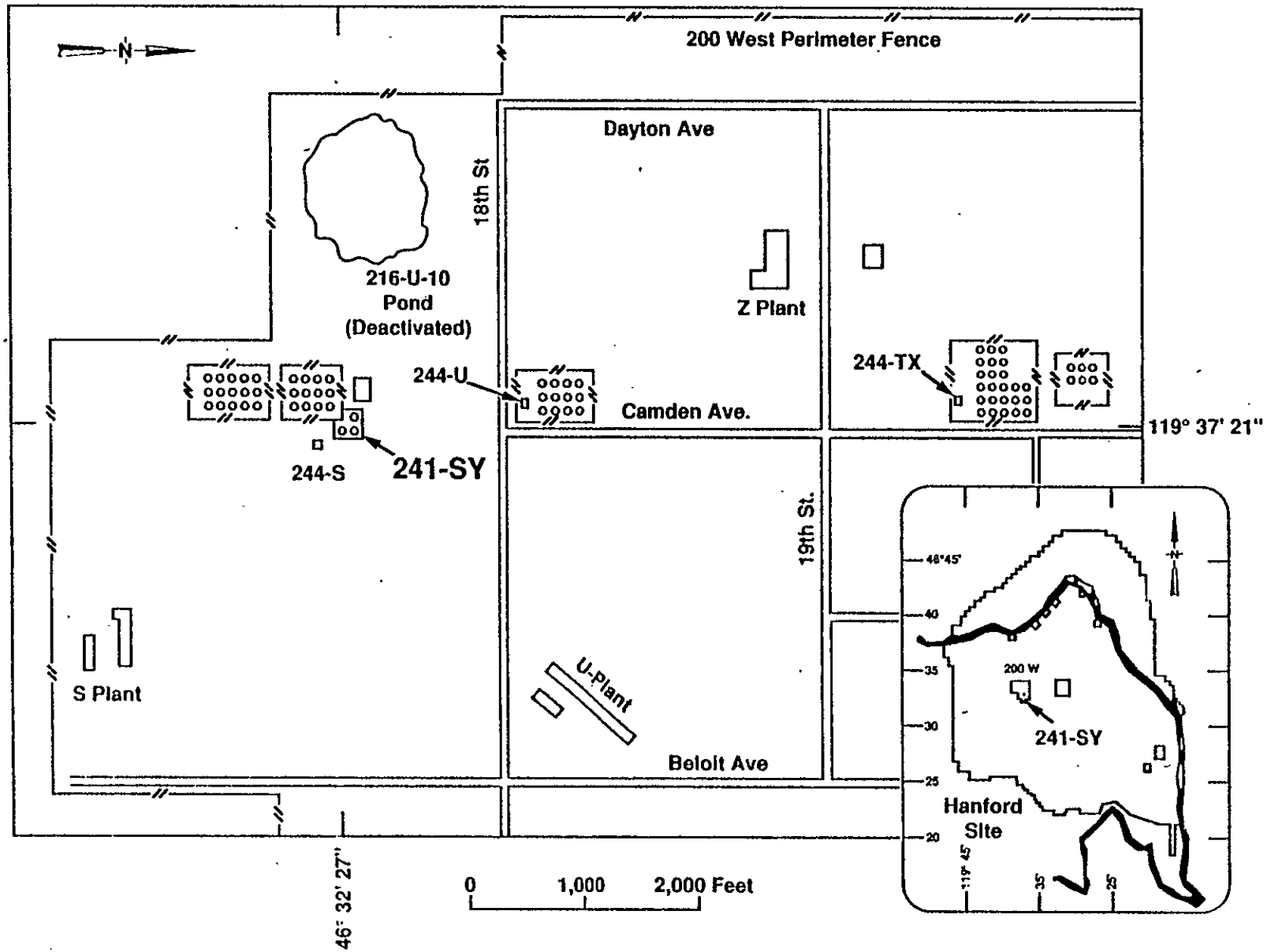
241-AN DOUBLE SHELL TANK
SITE PLAN



241-AP DOUBLE SHELL TANK
SITE PLAN

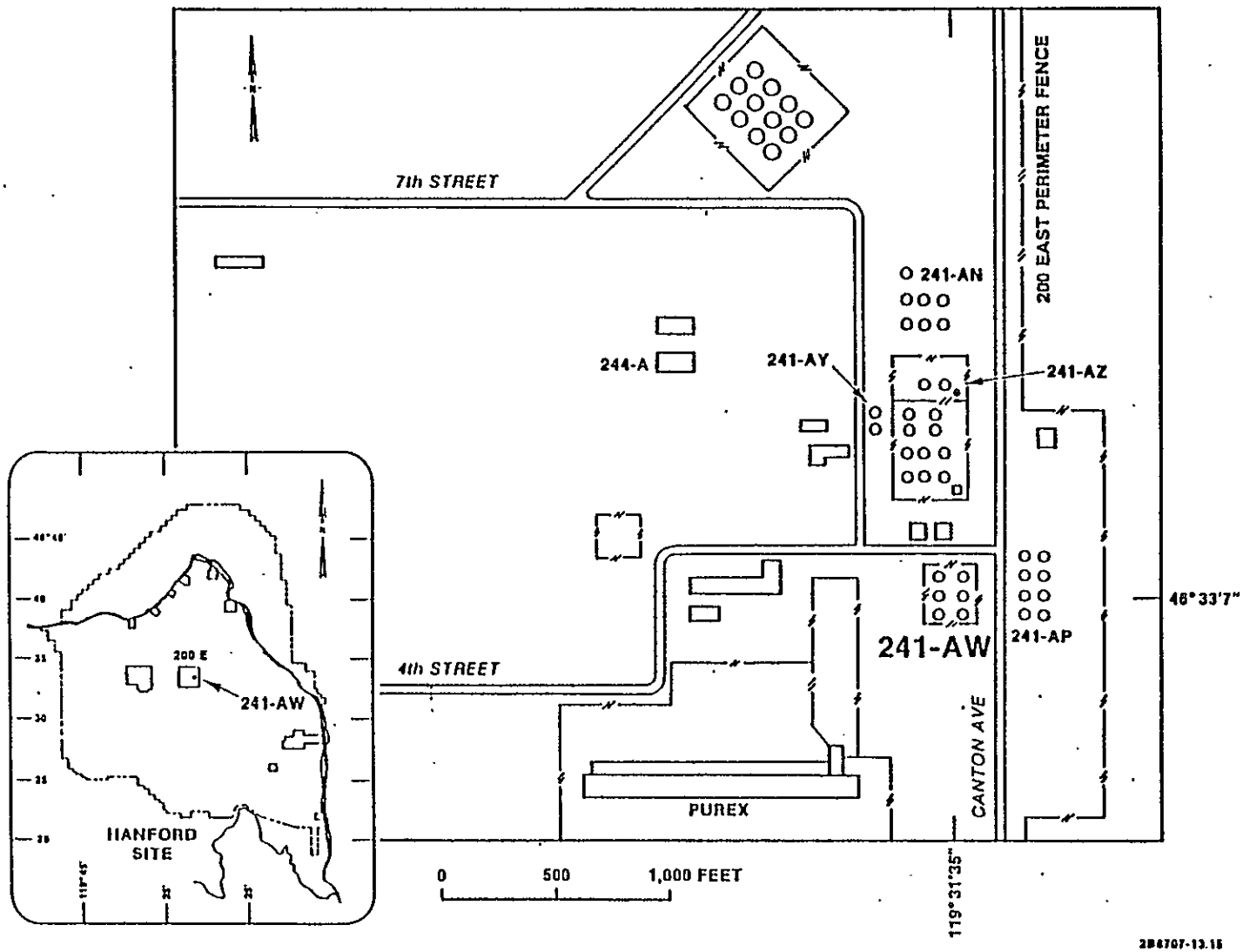


241-SY Double Shell Tank
Site Plan

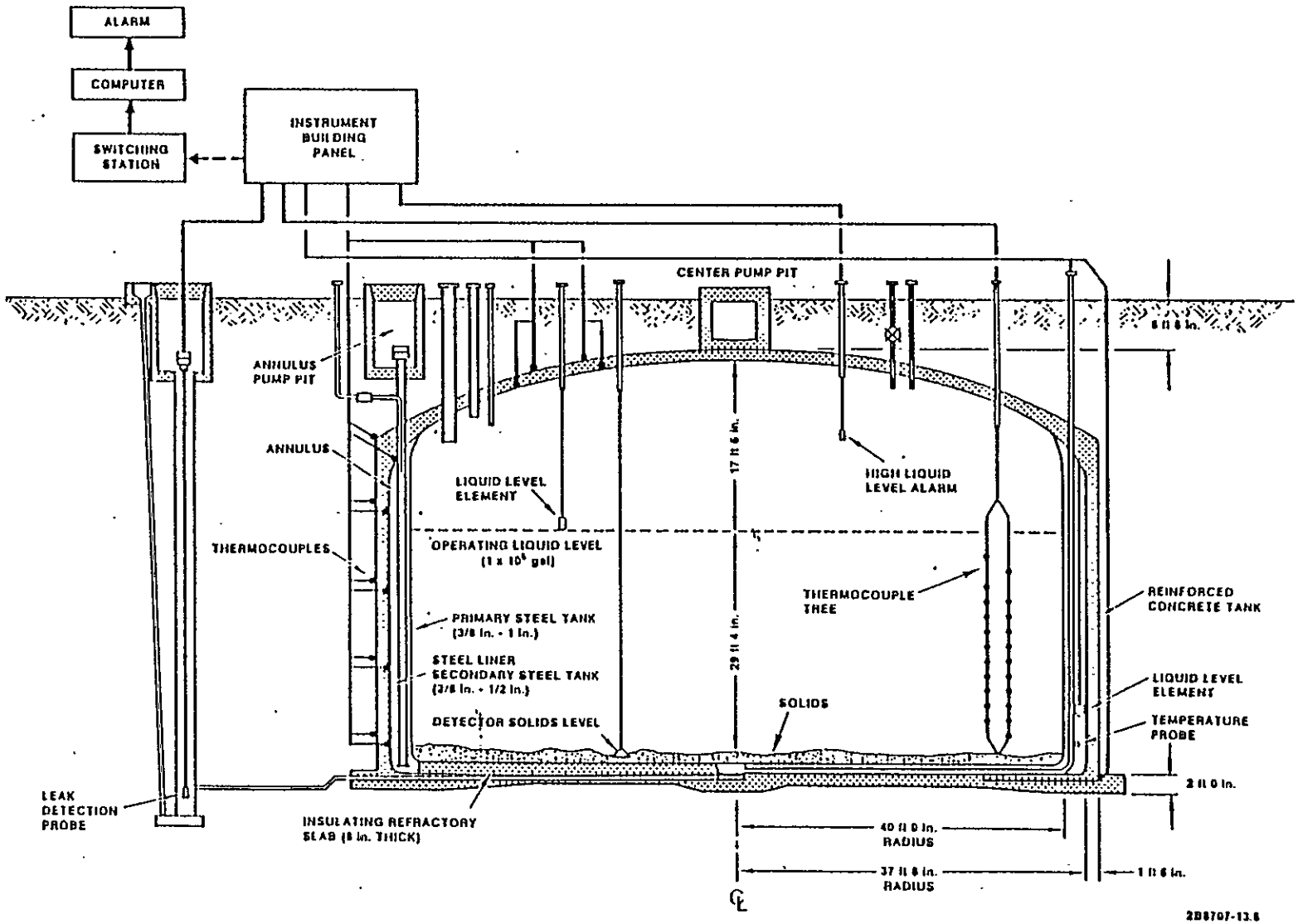


78910127.3

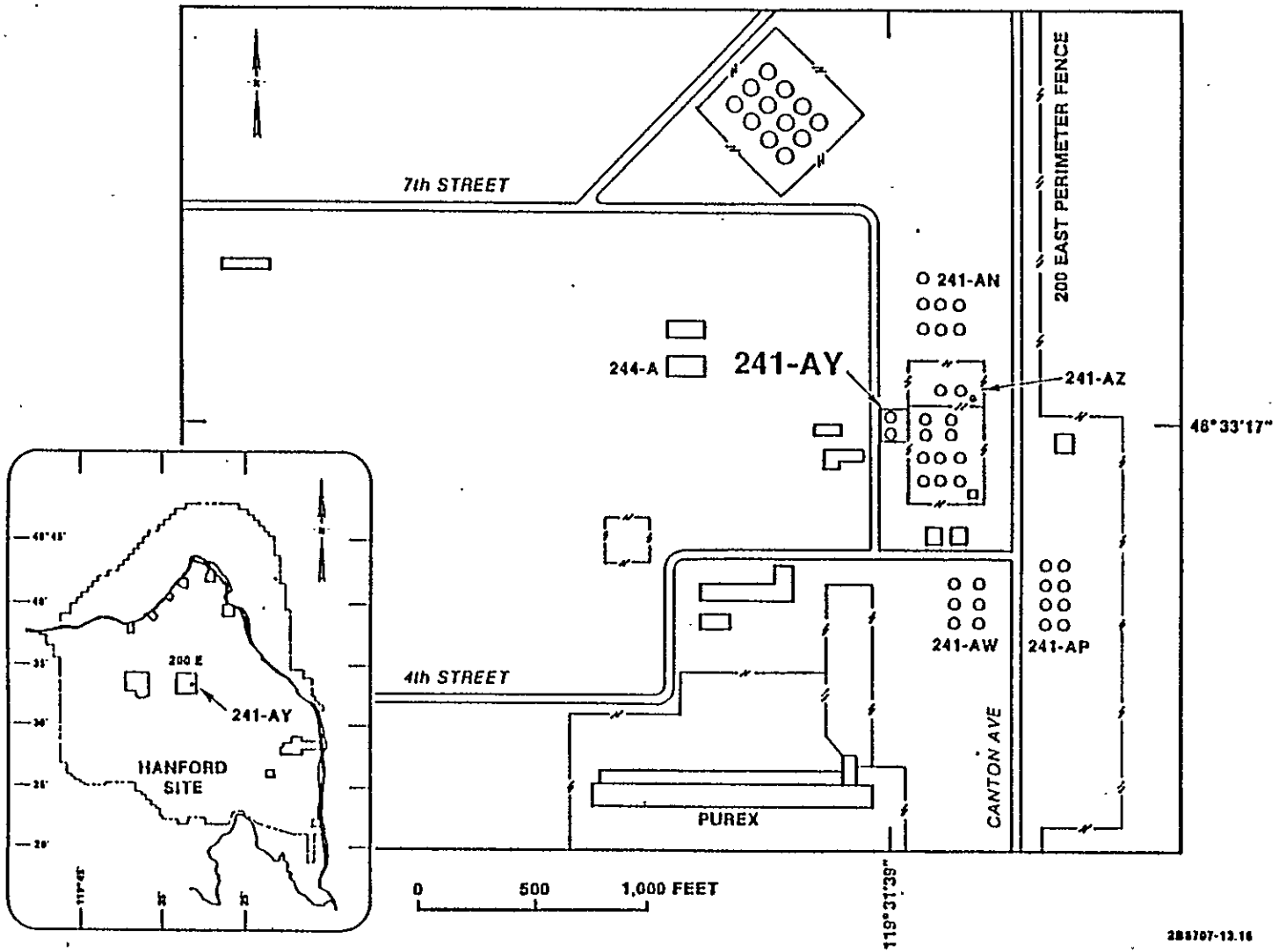
241-AW DOUBLE SHELL TANK
SITE PLAN



TYPICAL DOUBLE SHELL TANK

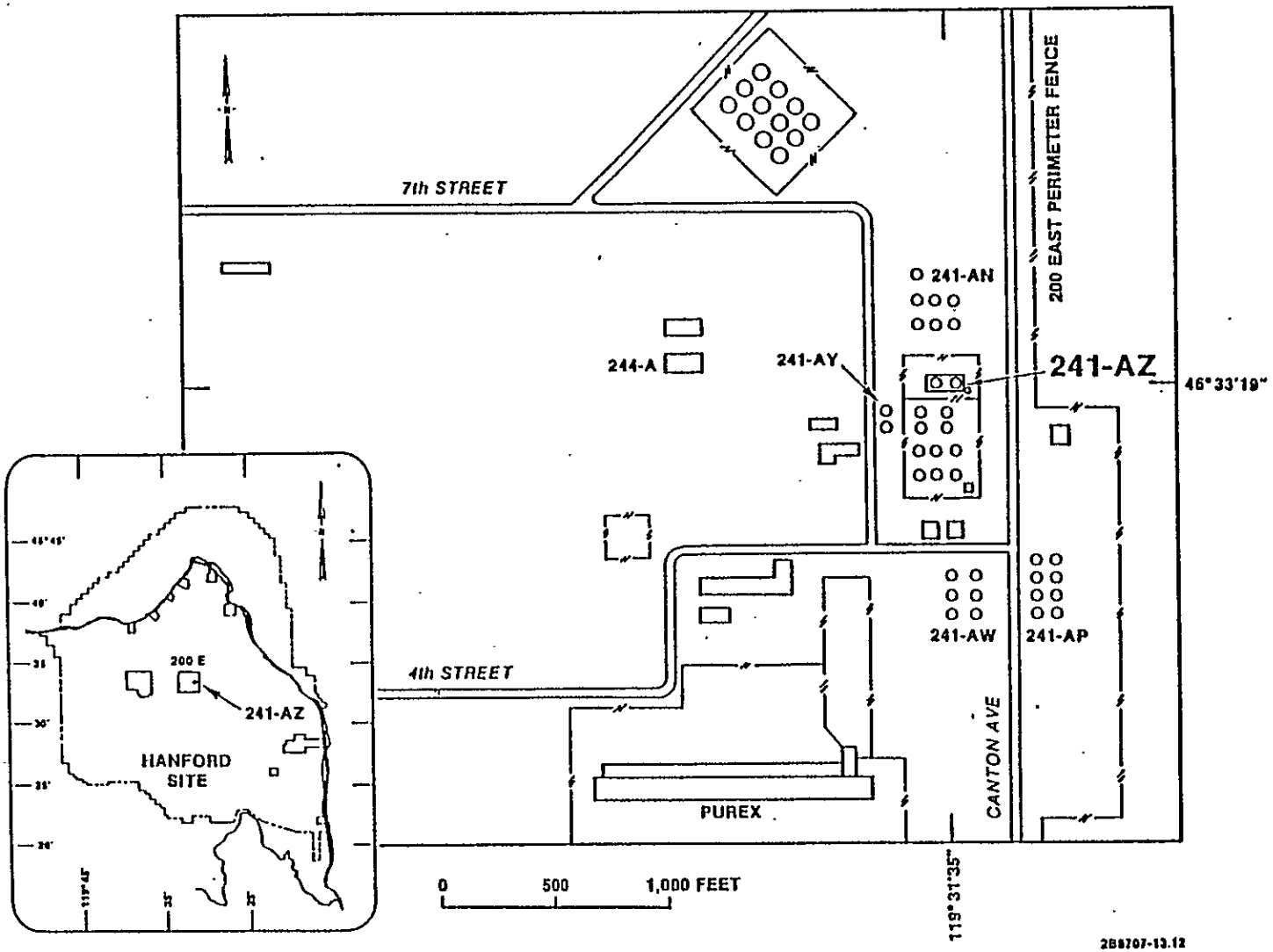


241-AY AGING WASTE DOUBLE SHELL TANK
SITE PLAN

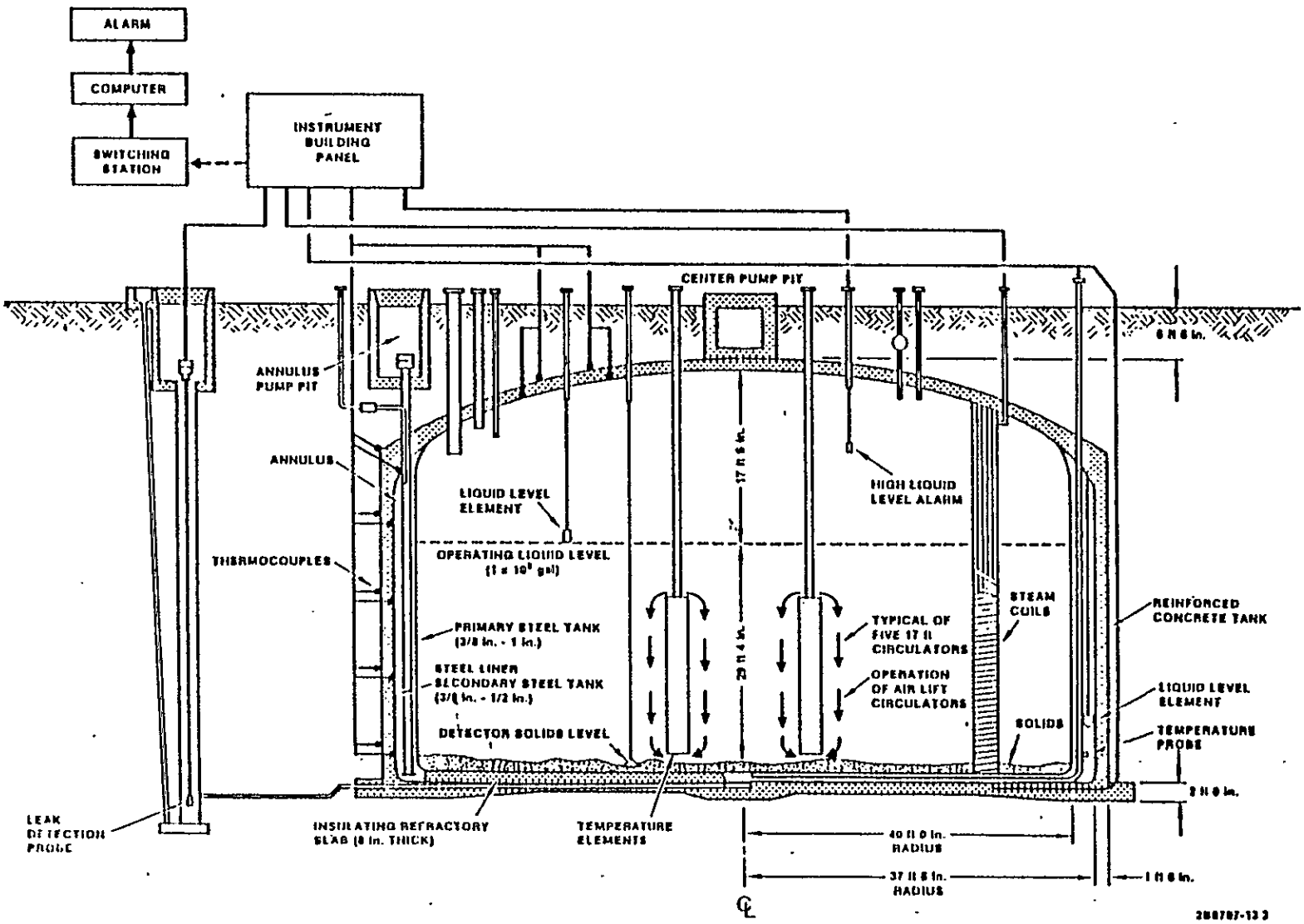


241-AZ AGING WASTE DOUBLE SHELL TANK

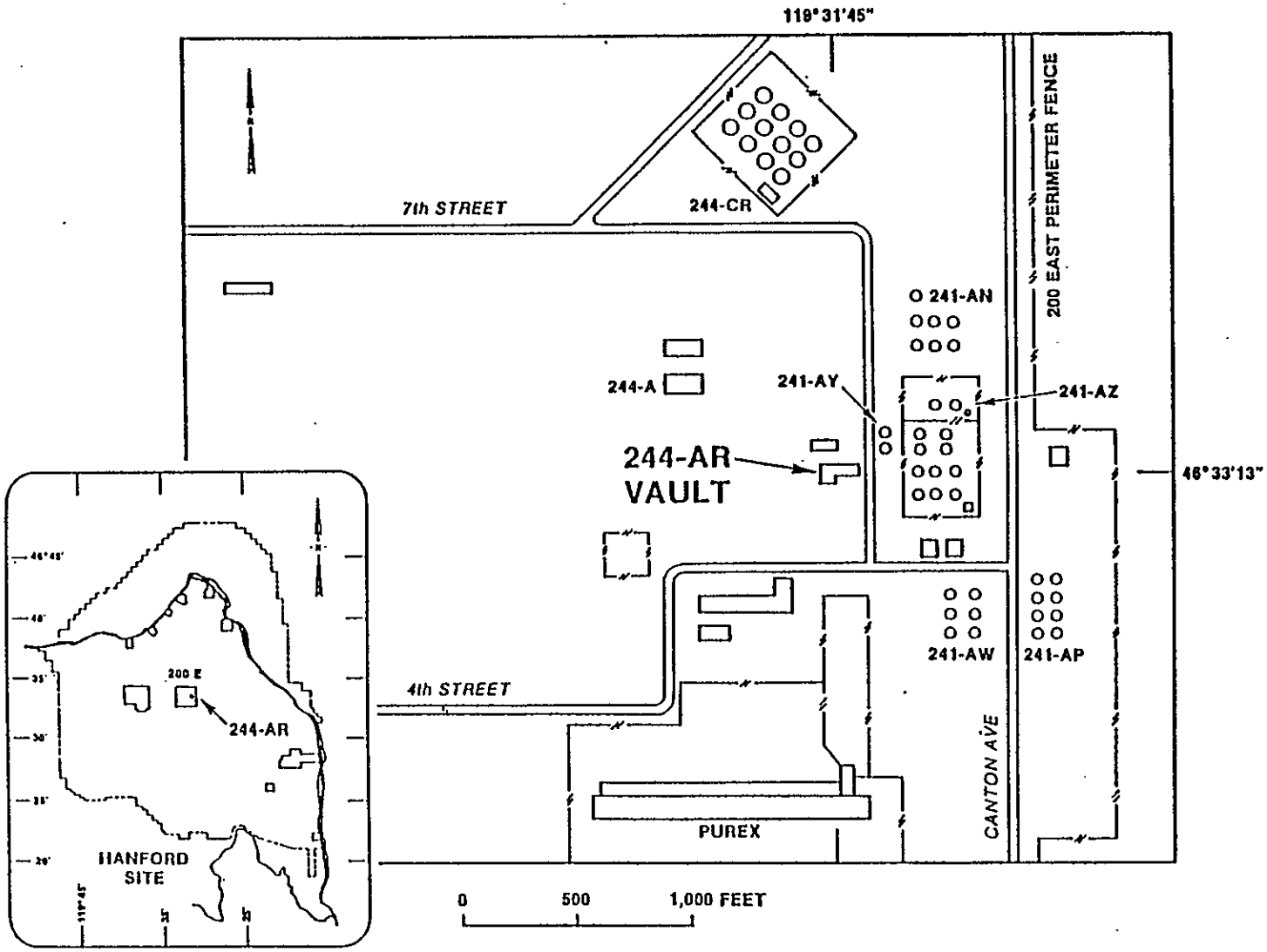
SITE PLAN



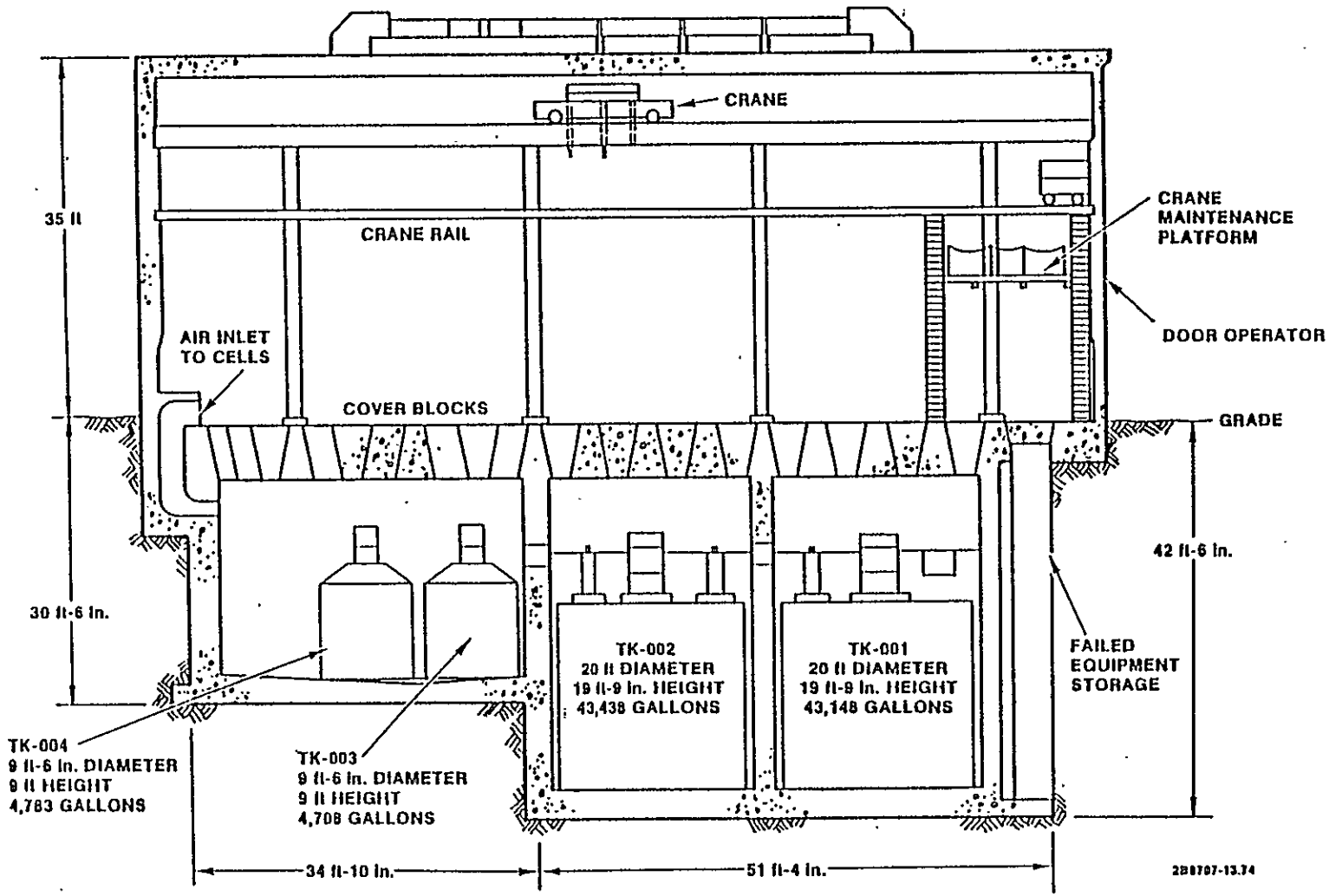
TYPICAL AGING WASTE DOUBLE SHELL TANK



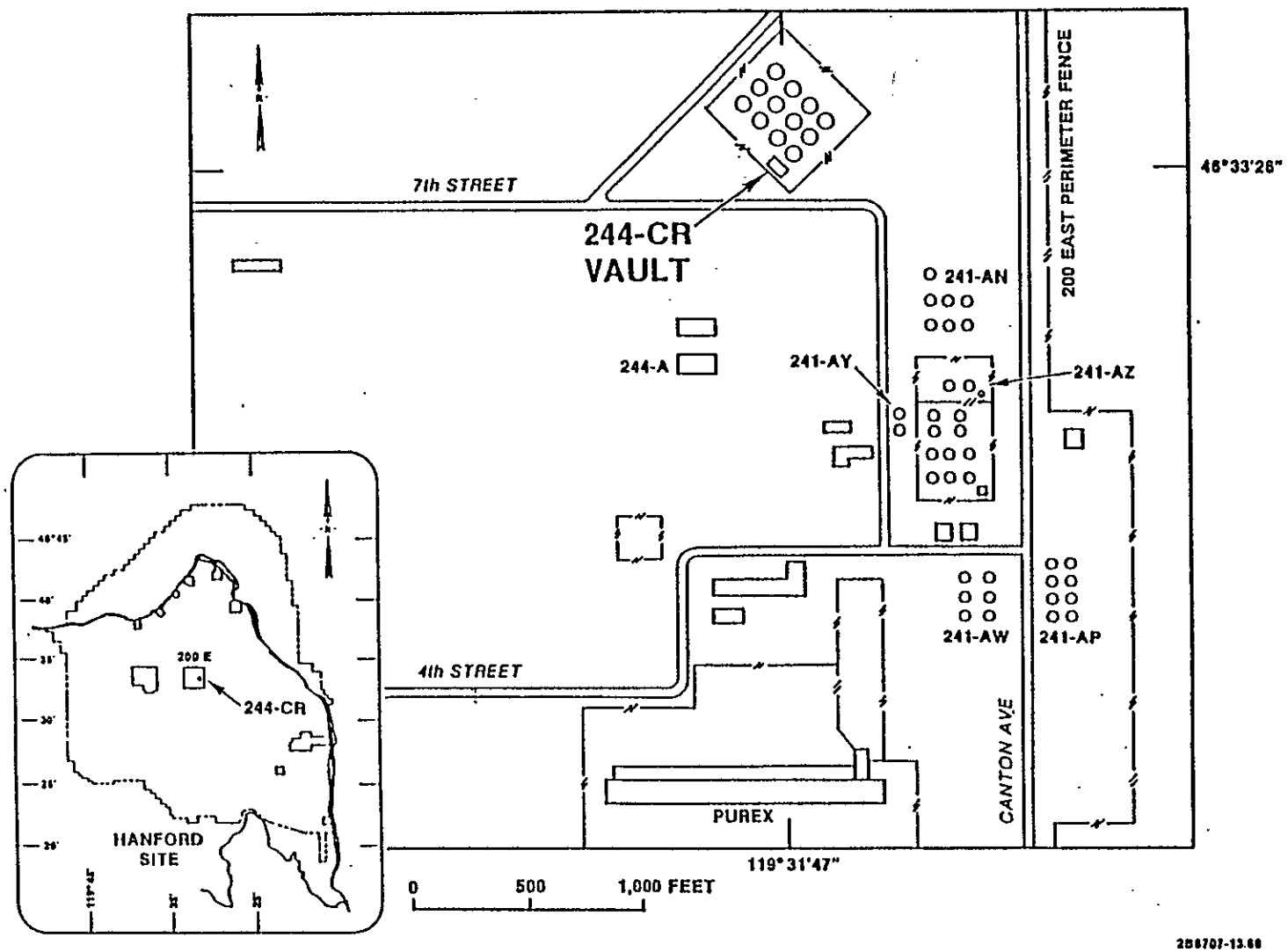
244-AR VAULT
SITE PLAN



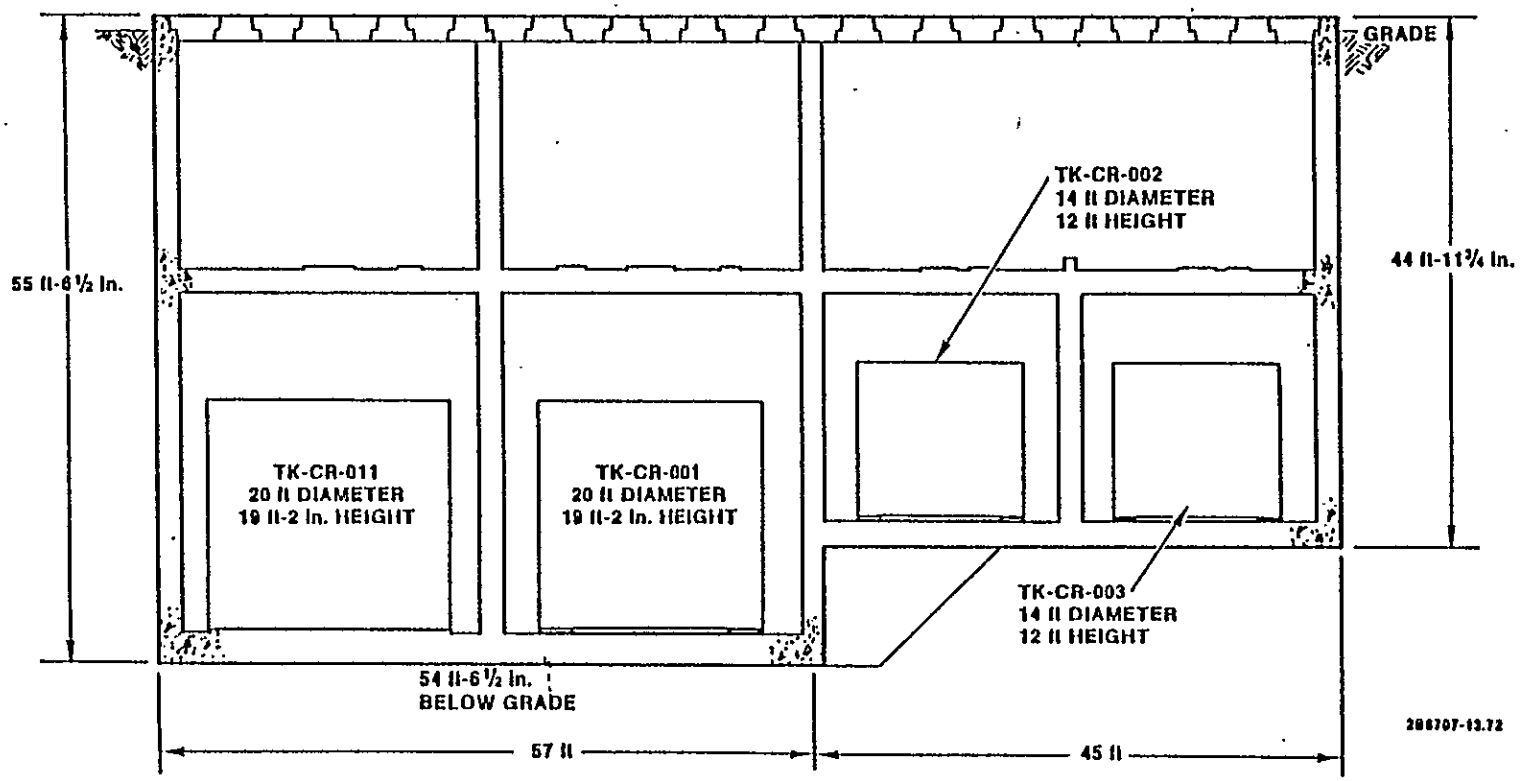
244-AR VAULT


CRANE
CRANE RAIL
CRANE MAINTENANCE PLATFORM
DOOR OPERATOR
35 ft
AIR INLET TO CELLS
COVER BLOCKS
GRADE
42 ft-6 in.
30 ft-6 in.
TK-002
20 ft DIAMETER
19 ft-9 in. HEIGHT
43,438 GALLONS
TK-001
20 ft DIAMETER
19 ft-9 in. HEIGHT
43,148 GALLONS
FAILED EQUIPMENT STORAGE
TK-004
9 ft-6 in. DIAMETER
9 ft HEIGHT
4,783 GALLONS
TK-003
9 ft-6 in. DIAMETER
9 ft HEIGHT
4,708 GALLONS
34 ft-10 in.
51 ft-4 in.
2B8707-13.74

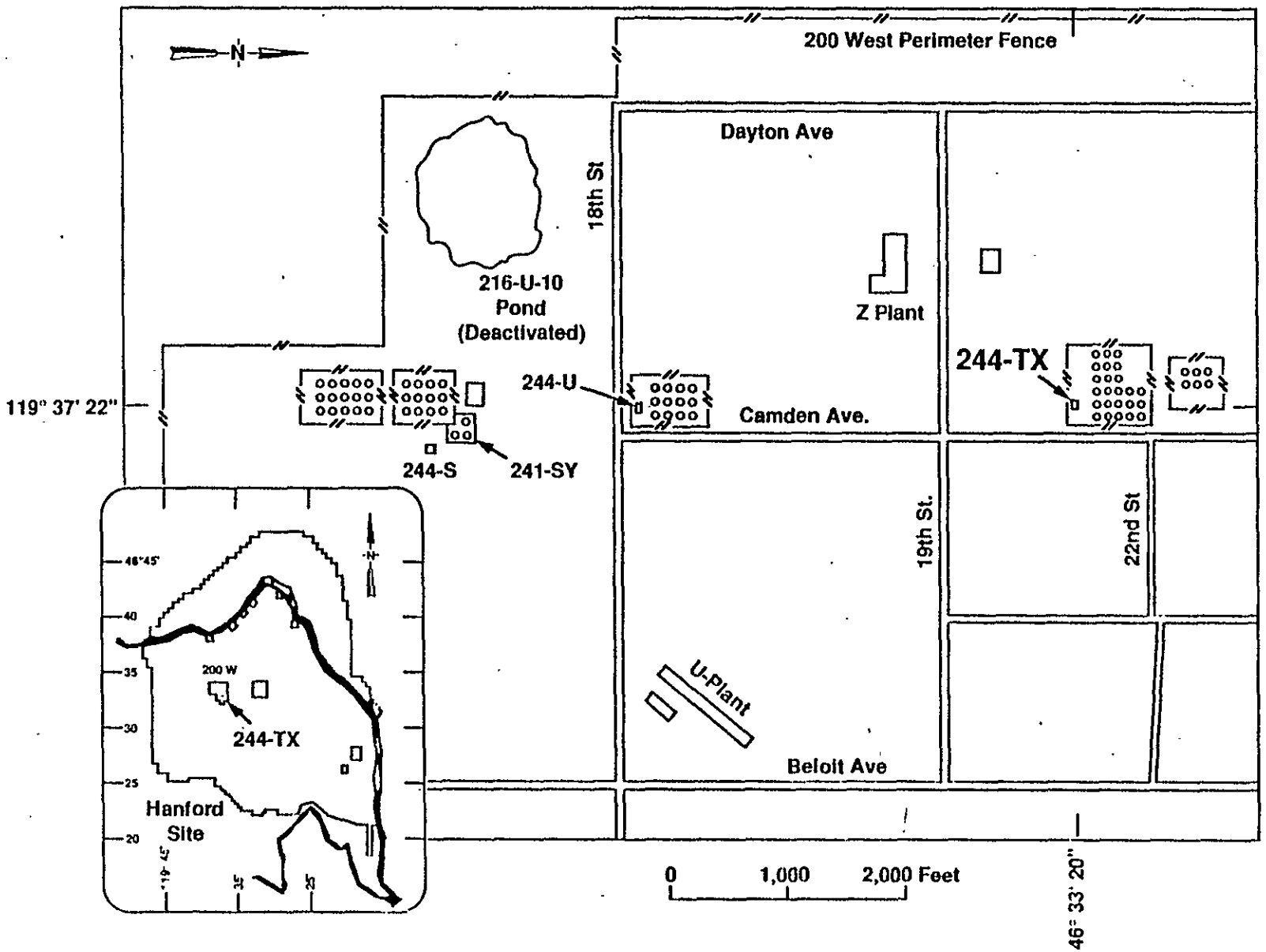
244-CR VAULT
SITE PLAN



244-CR VAULT

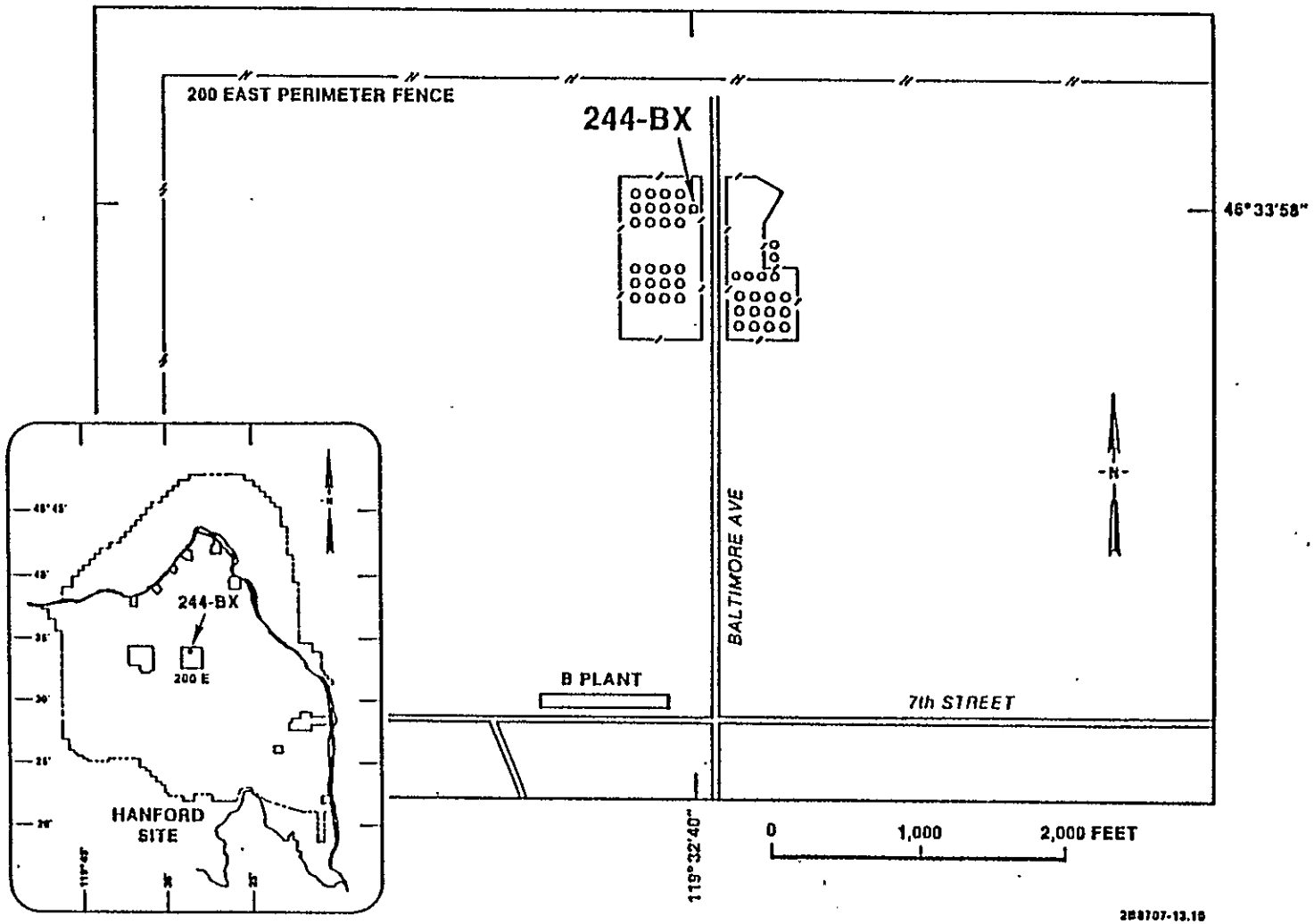

GRADE
TK-CR-002
14 ft DIAMETER
12 ft HEIGHT
55 ft-6½ in.
44 ft-11¾ in.
TK-CR-011
20 ft DIAMETER
19 ft-2 in. HEIGHT
TK-CR-001
20 ft DIAMETER
19 ft-2 in. HEIGHT
TK-CR-003
14 ft DIAMETER
12 ft HEIGHT
54 ft-6½ in.
BELOW GRADE
57 ft
45 ft
206707-13.72

244-TX Double Contained Receiver Tank
Site Plan

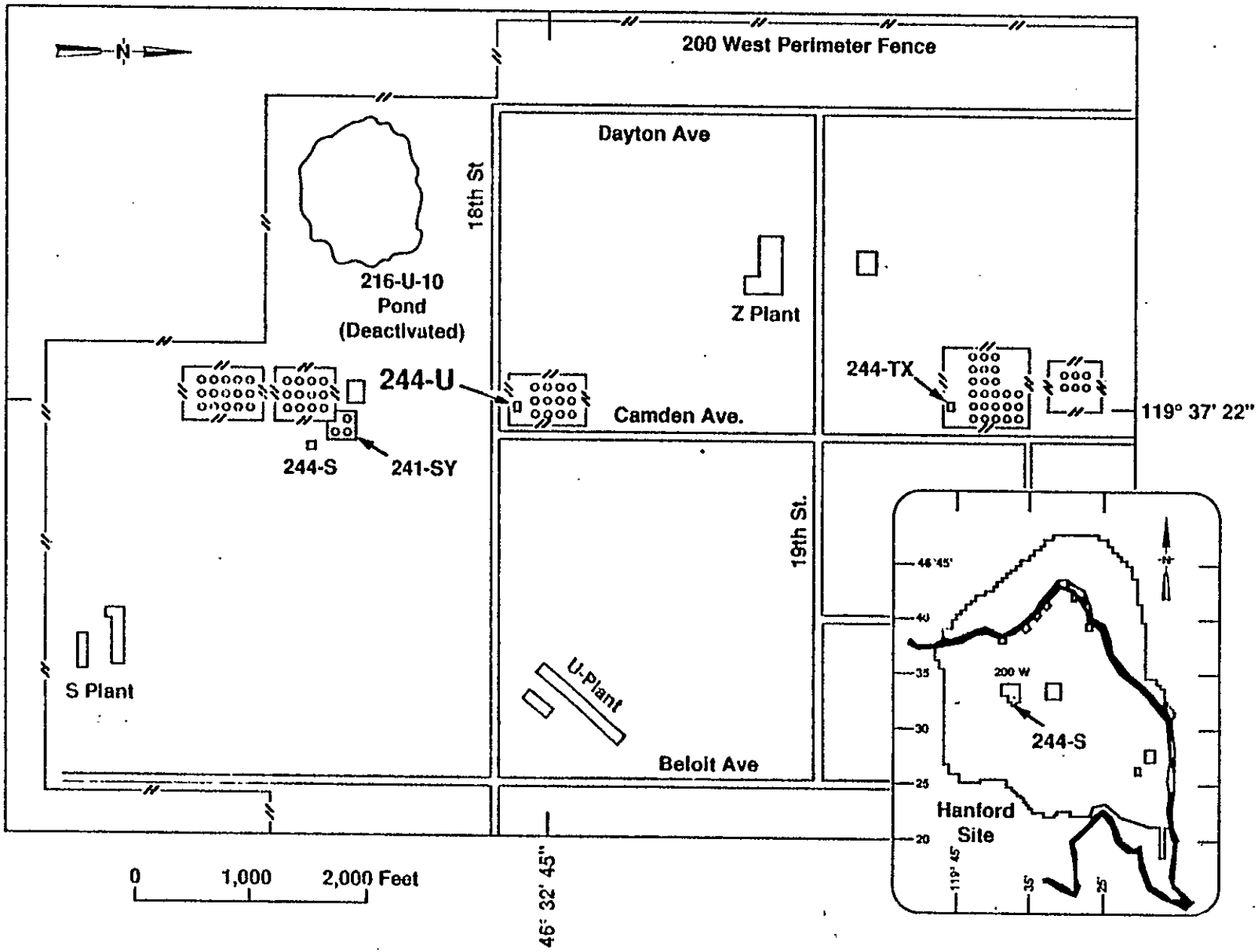


78910127.6

244-BX DOUBLE CONTAINED RECEIVER TANK
SITE PLAN

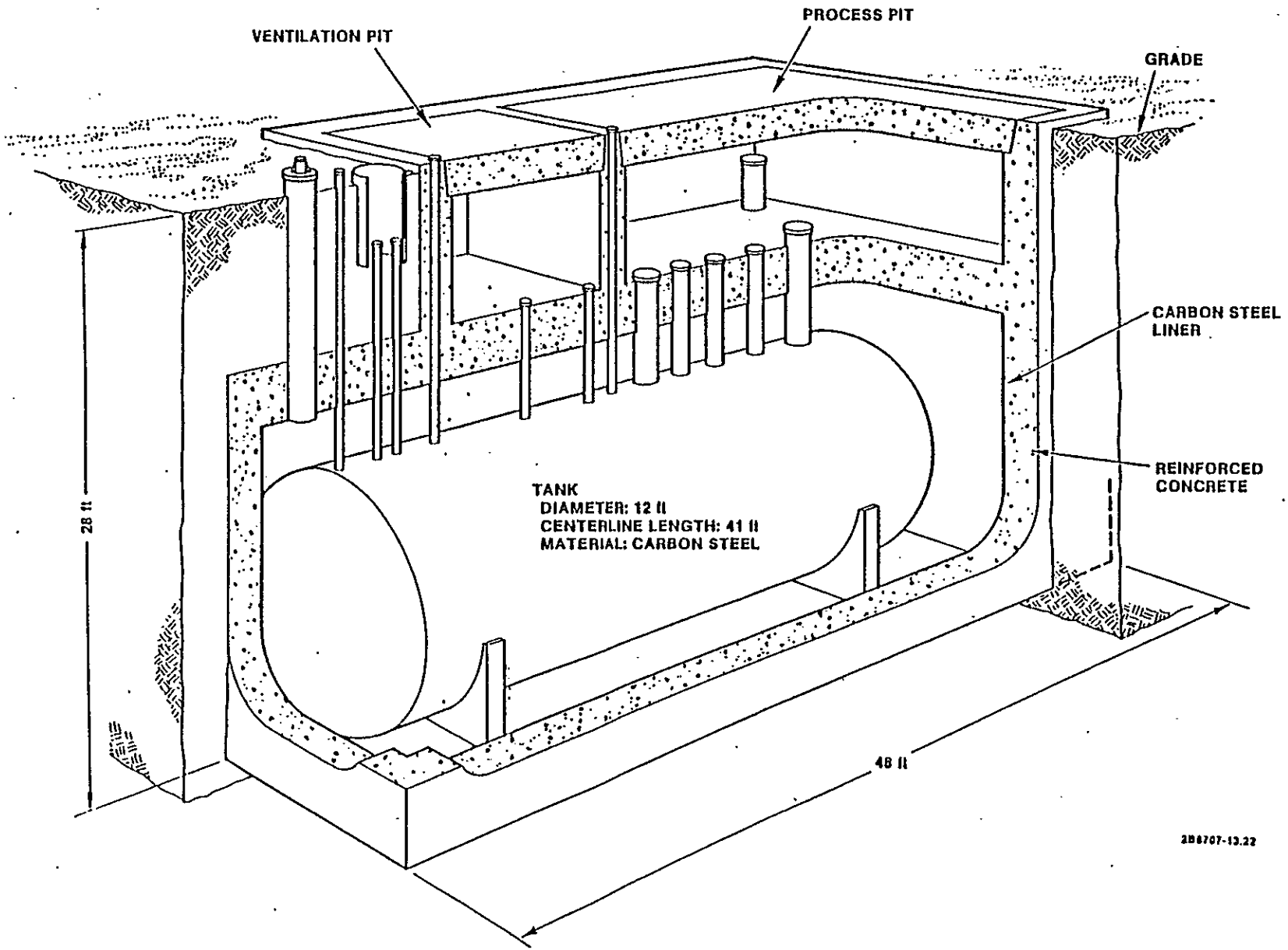


244-U Double Contained Receiver Tank
Site Plan

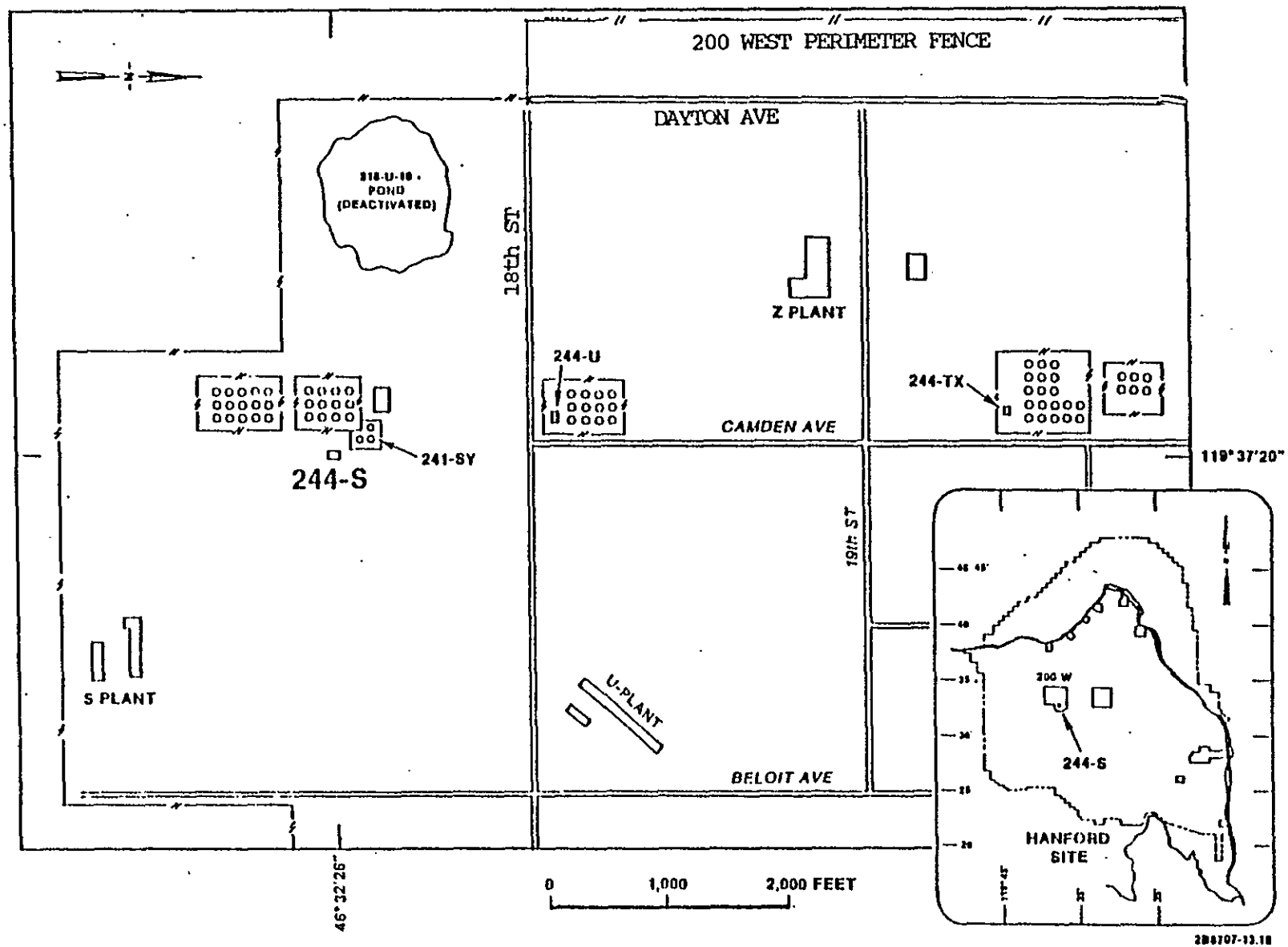


78910127.5

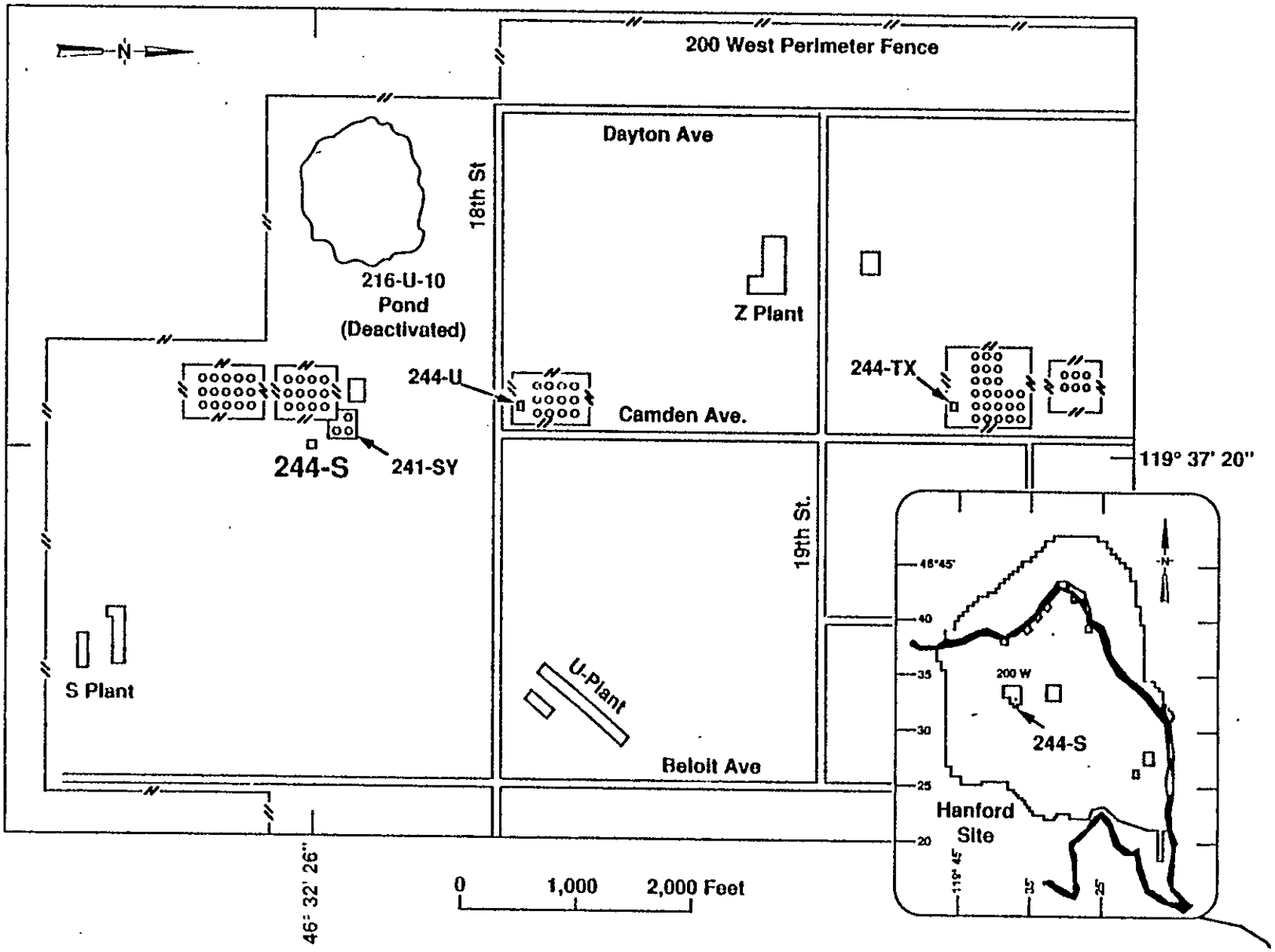
TYPICAL DOUBLE CONTAINED RECEIVER TANK



244-S DOUBLE CONTAINED RECEIVER TANK
SITE PLAN

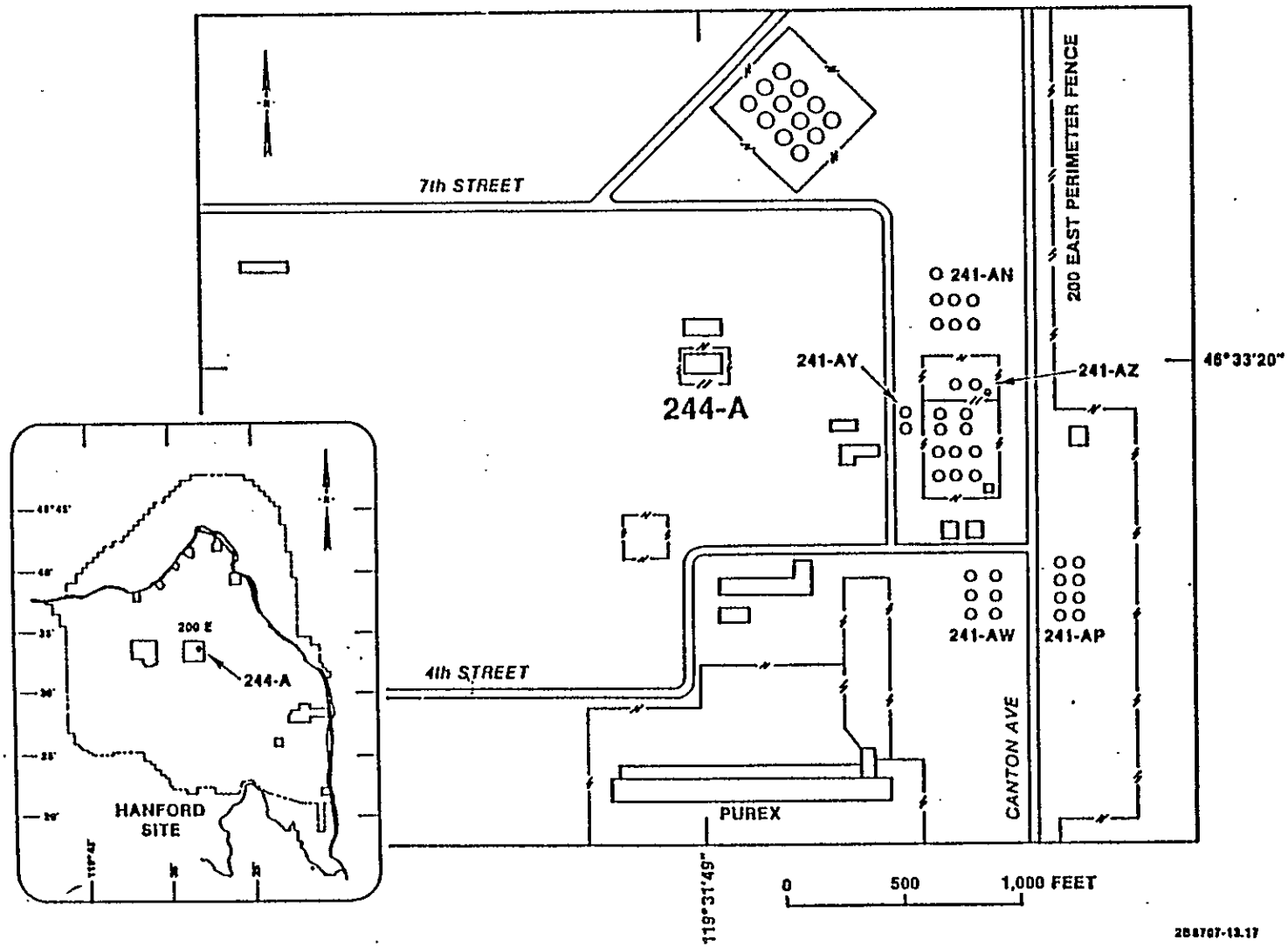


244-S Double Contained Receiver Tank
Site Plan

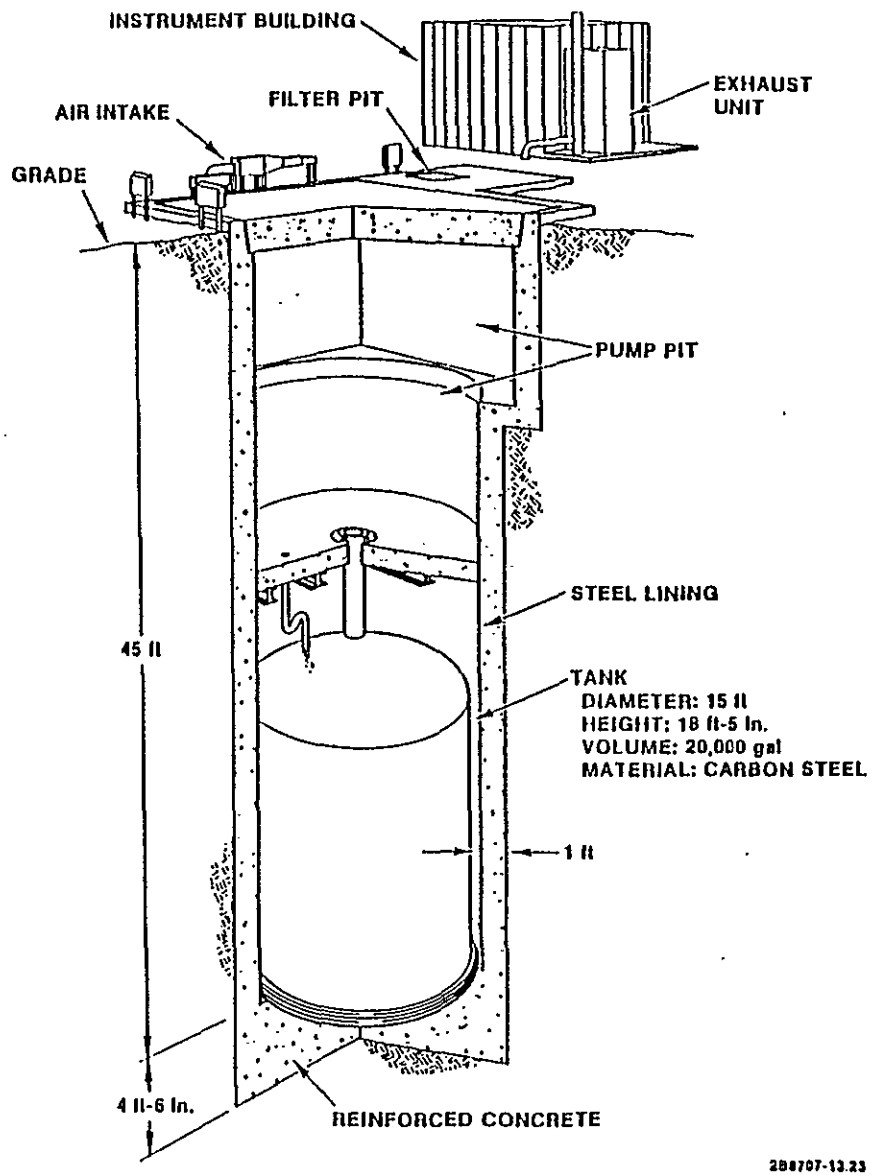


78910127.4

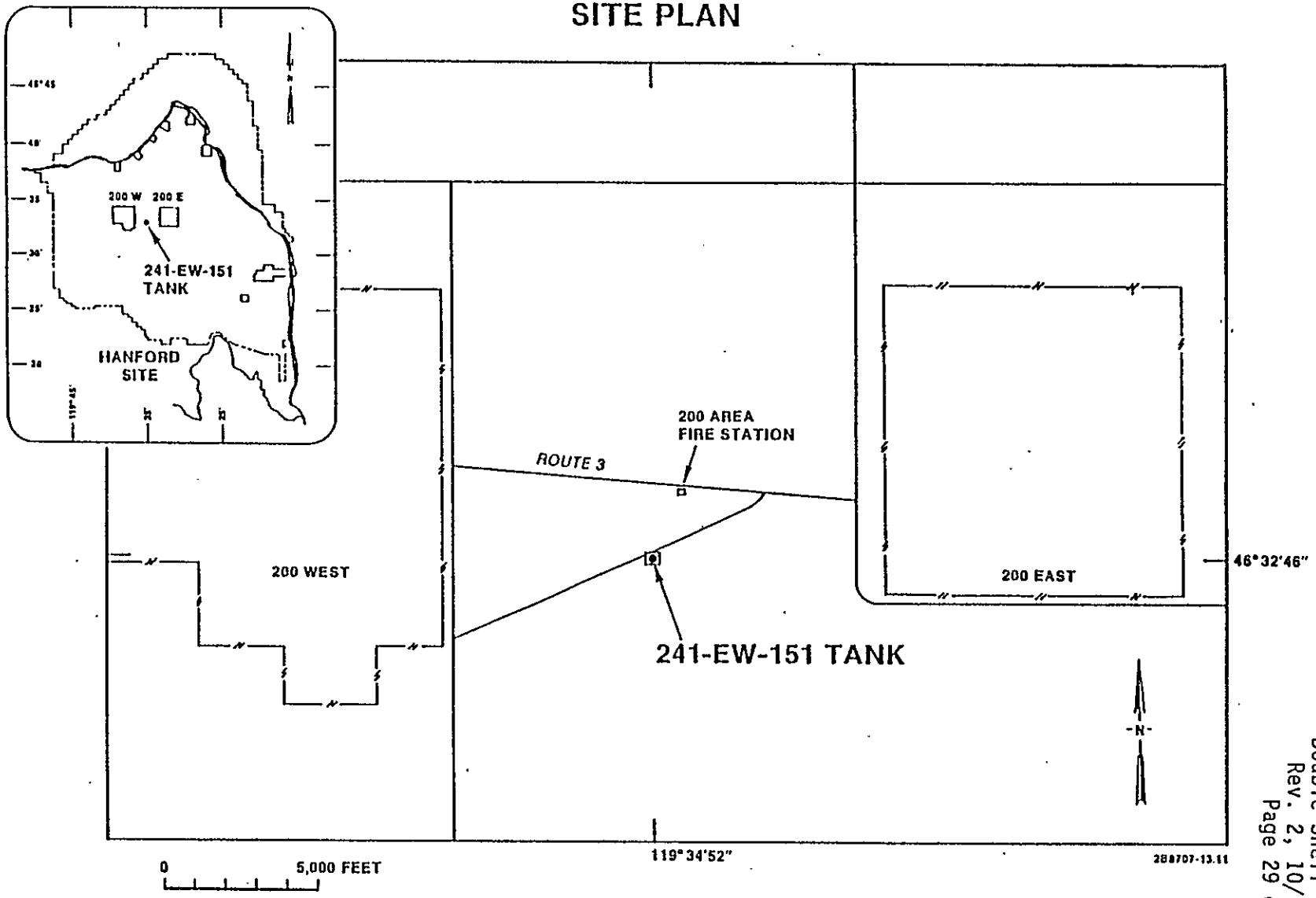
244-A DOUBLE CONTAINED RECEIVER TANK
SITE PLAN



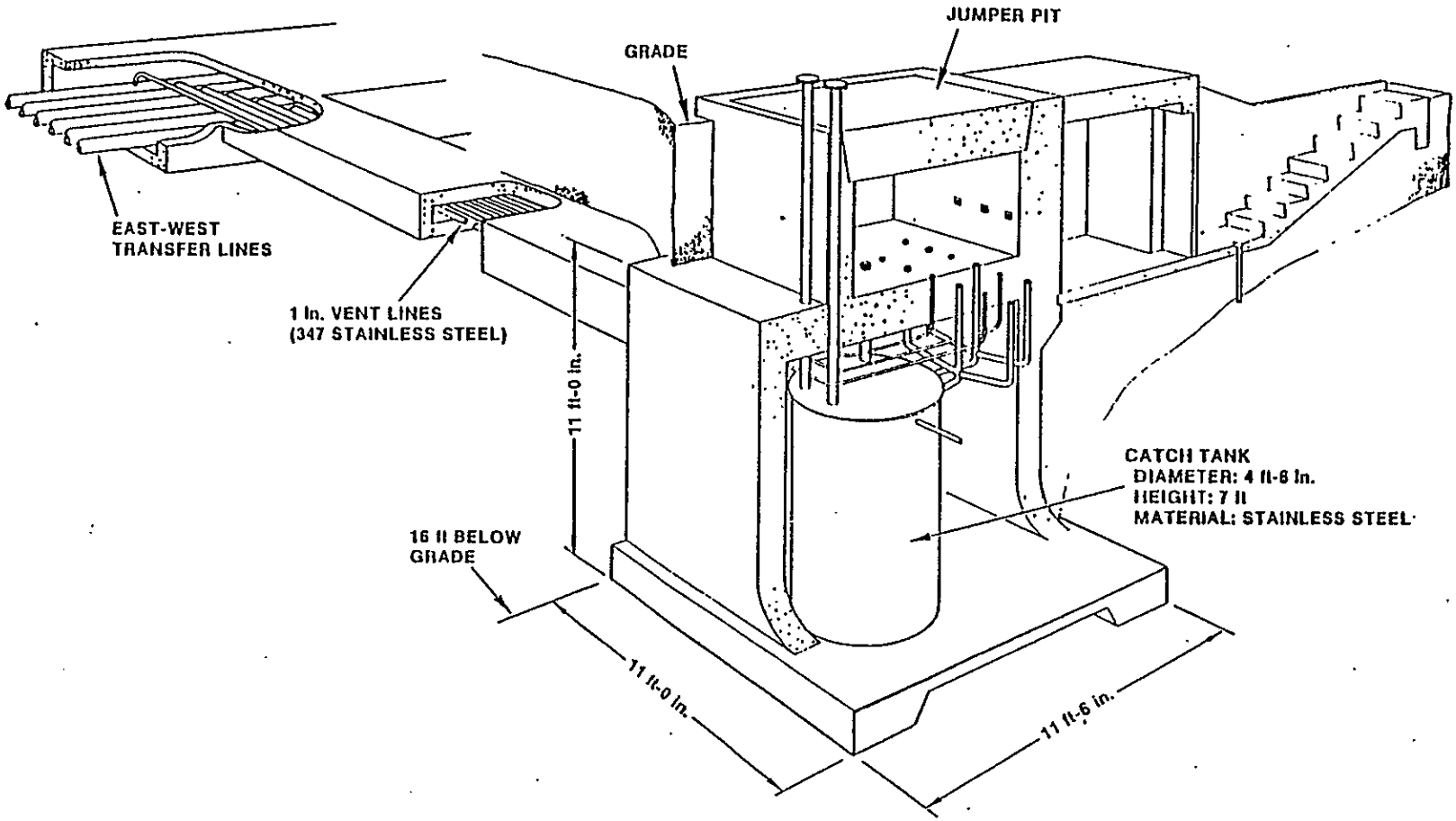
TYPICAL DOUBLE CONTAINED RECEIVER TANK



241-EW-151 TANK
(200 AREA EAST-WEST VENT STATION)
SITE PLAN

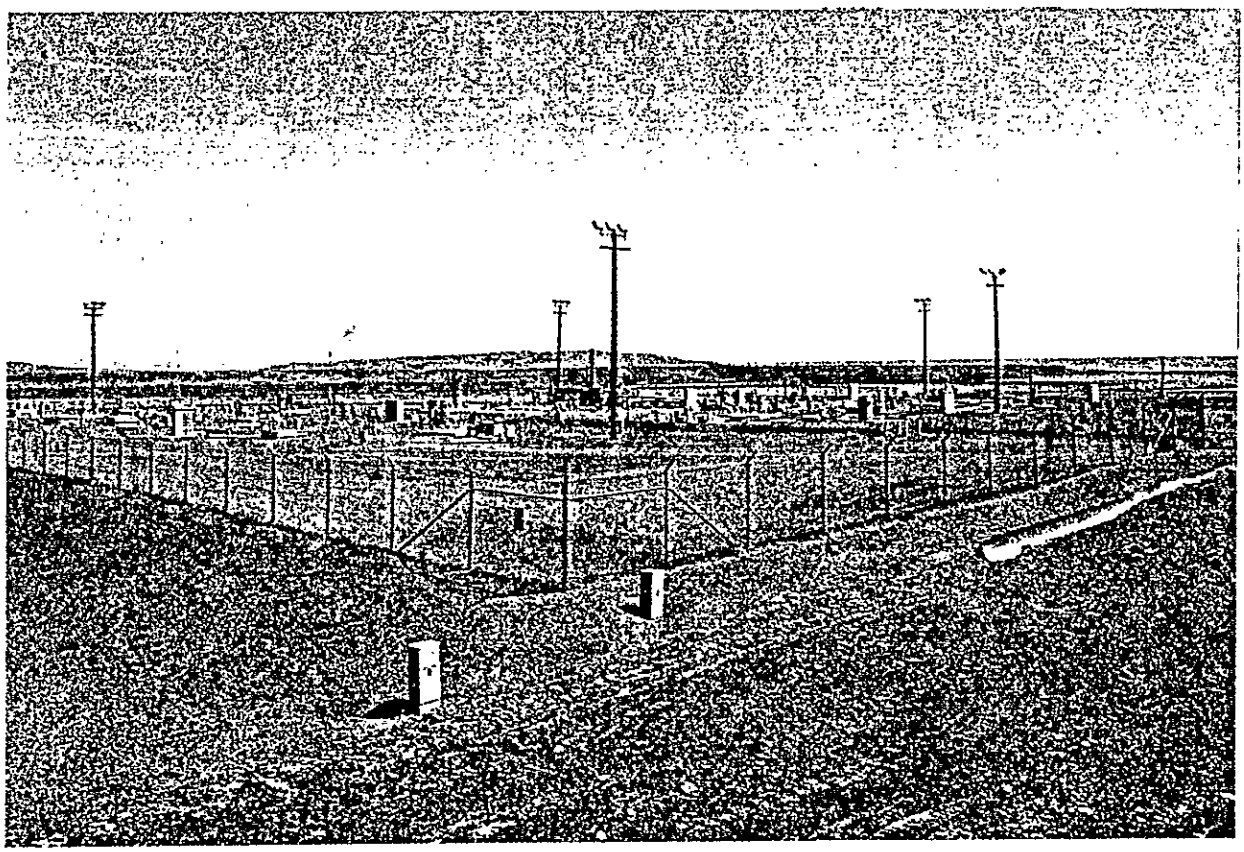


241-EW-151 TANK
(200 AREA EAST-WEST VENT STATION)



2B8707-13.42

241-AN DOUBLE SHELL TANK



46°33'25"
119°31'37"

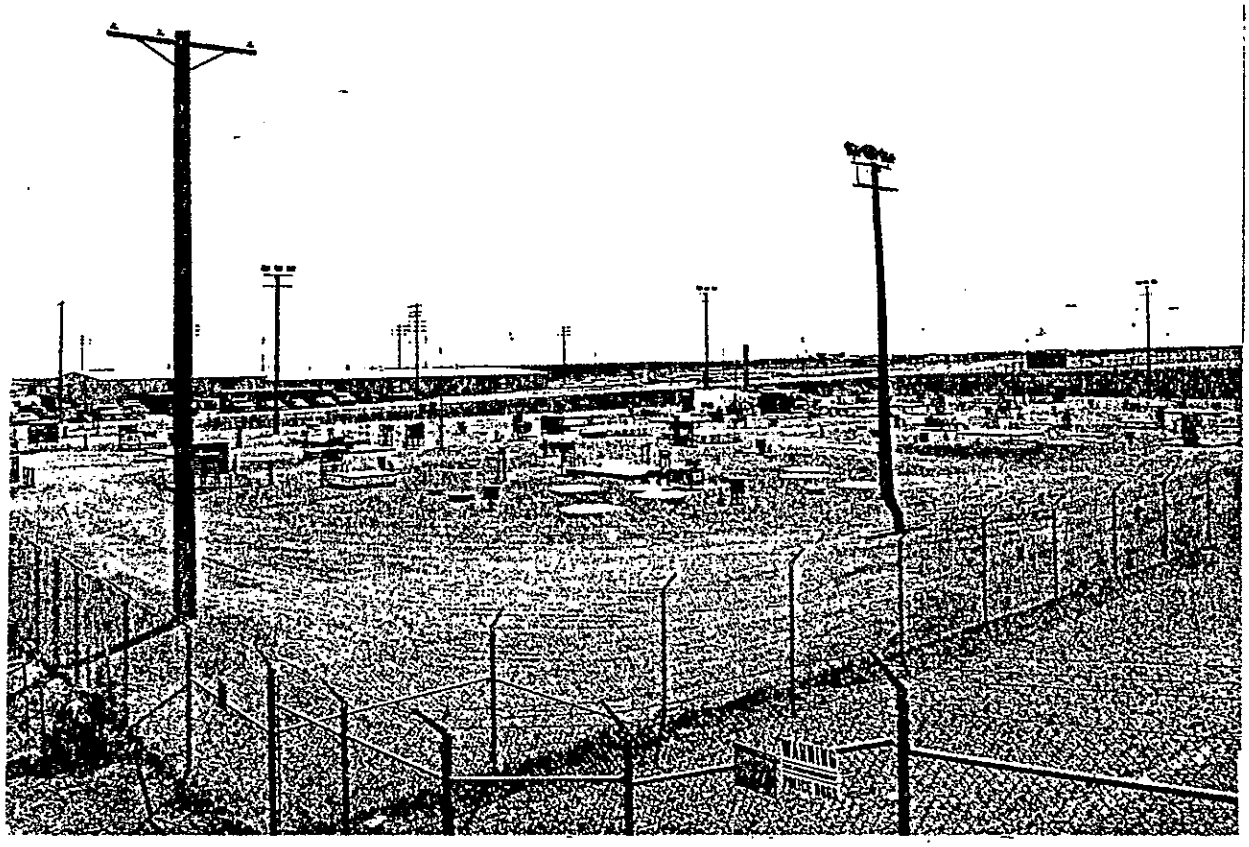
8704135-8CN
(PHOTO TAKEN 1987)

241-AP DOUBLE SHELL TANK

46°33'7"
119°31'38"

8704135-12CN
(PHOTO TAKEN 1987)

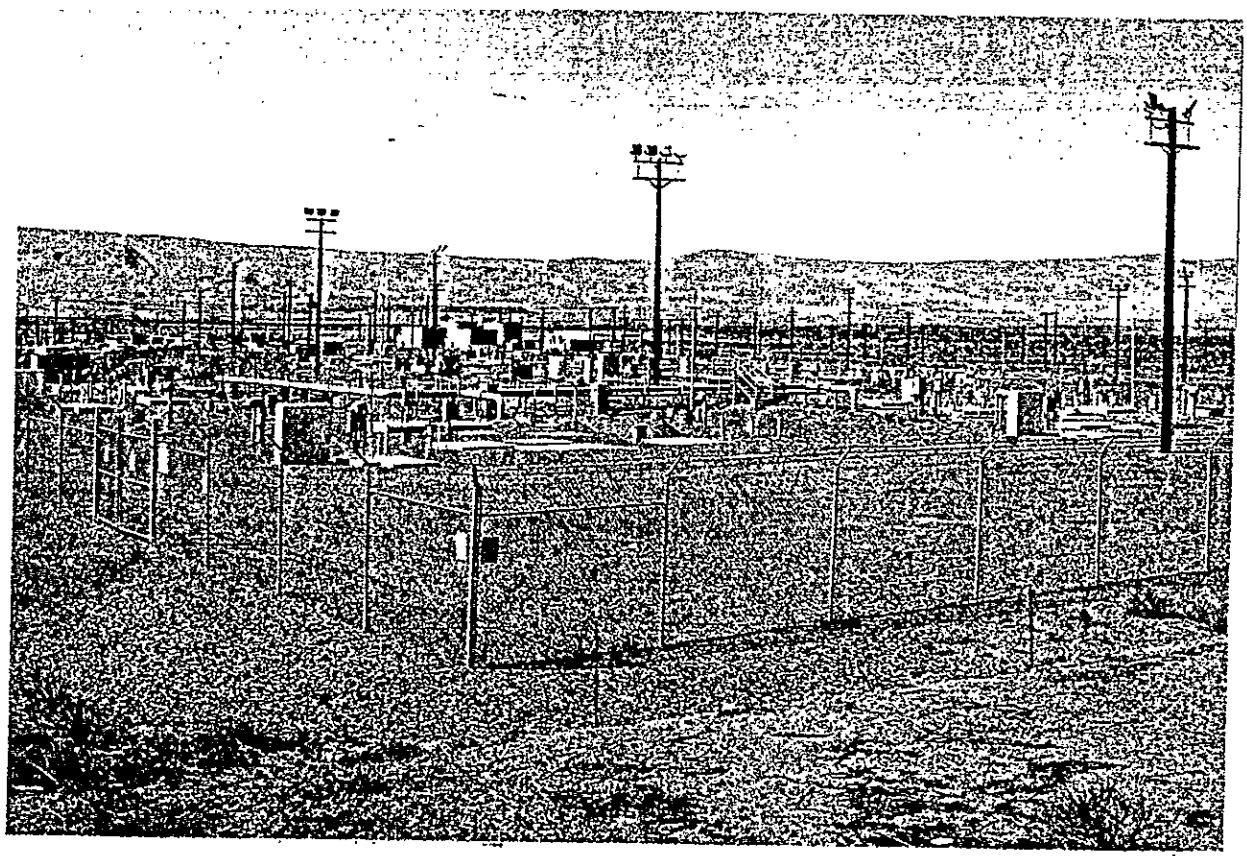
241-AW DOUBLE SHELL TANK



46°33′7"
119°31′35"

8704135-11CN
(PHOTO TAKEN 1987)

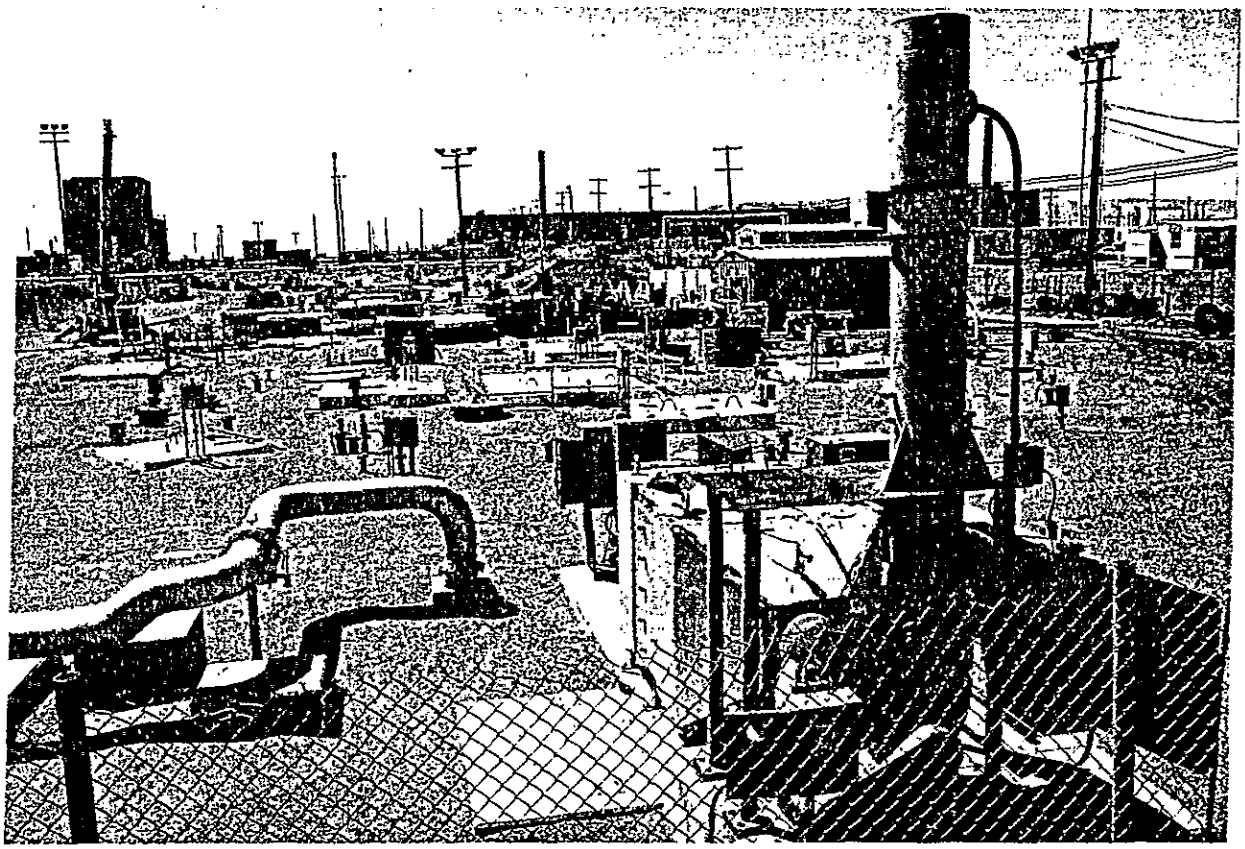
241-SY DOUBLE SHELL TANK



46°32'27"
119°37'21"

8704135-2CN
(PHOTO TAKEN 1987)

241-AY AGING WASTE DOUBLE SHELL TANK



46°33'17"
119°31'39"

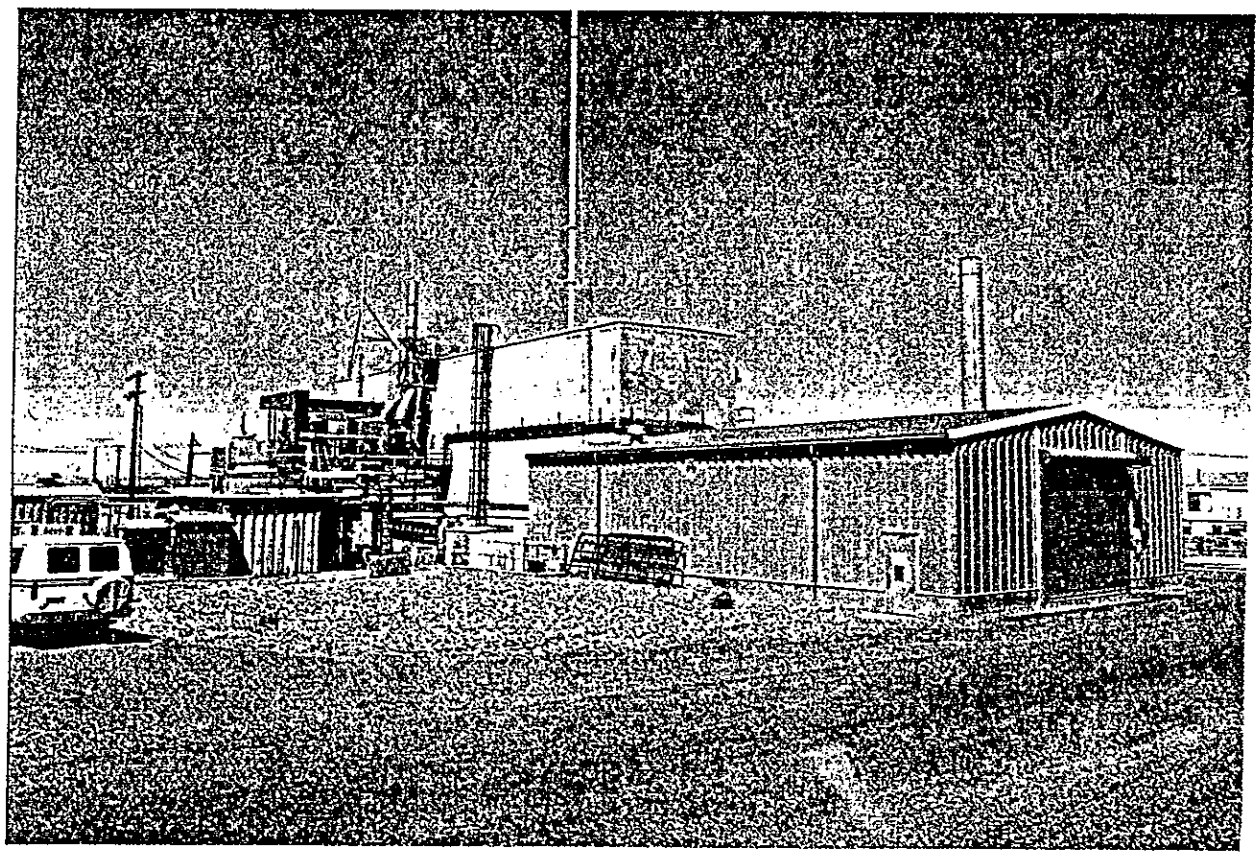
8704135-10CN
(PHOTO TAKEN 1987)

241-AZ AGING WASTE DOUBLE SHELL TANK

46°33'19"
119°31'35"

8704135-9CN
(PHOTO TAKEN 1987)

244-AR VAULT



46°33'13"
119°31'45"

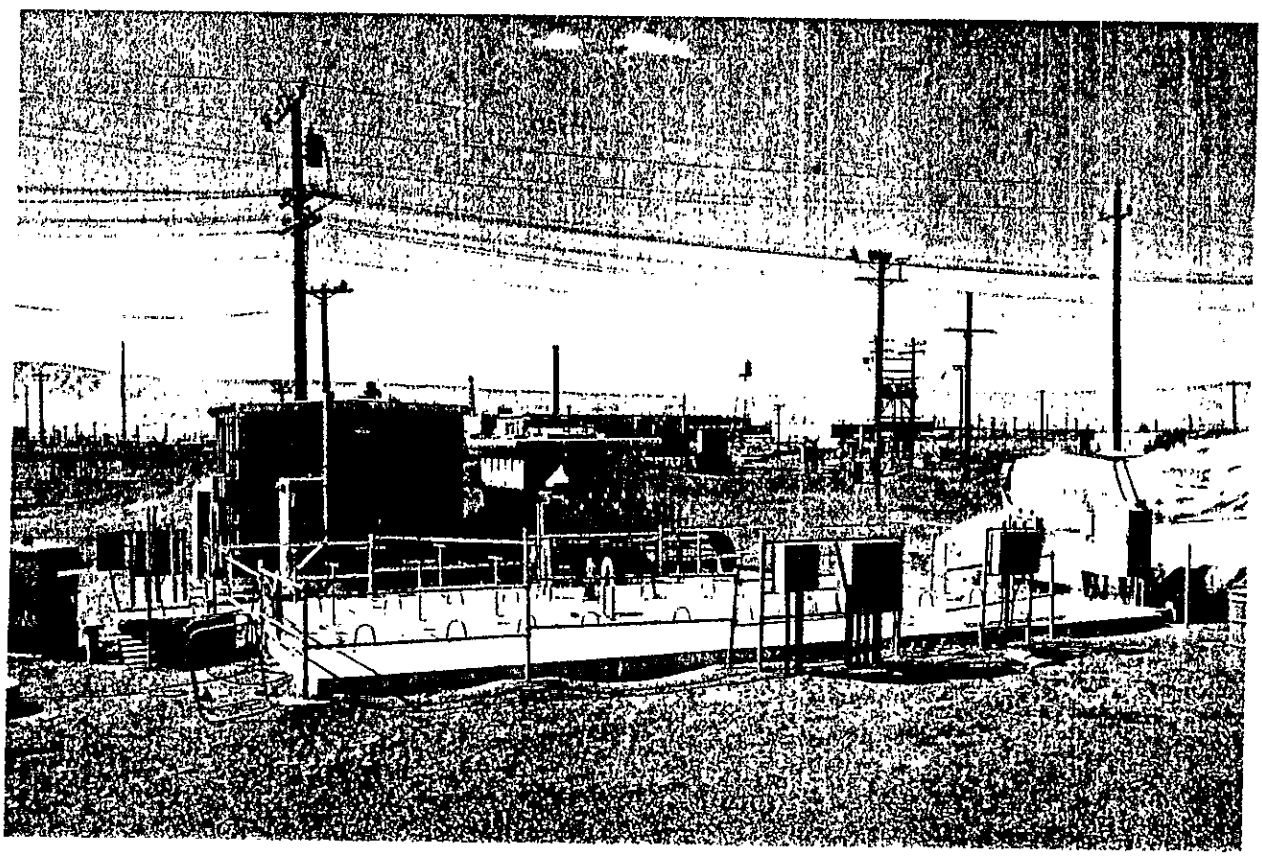
8704135-16CN
(PHOTO TAKEN 1987)

244-CR VAULT

46°33'26"
119°31'47"

8704135-14CN
(PHOTO TAKEN 1987)

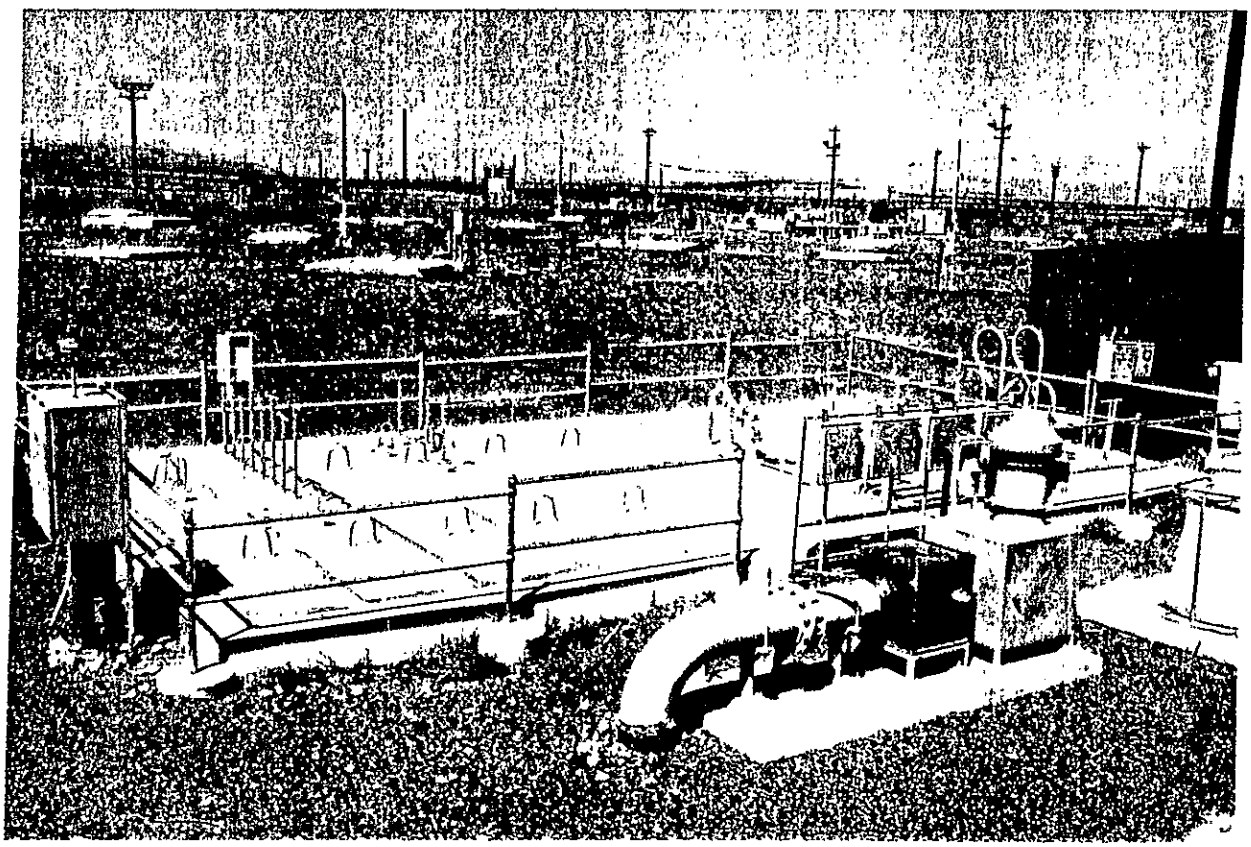
244-TX DOUBLE CONTAINED RECEIVER TANK



46°33'20"
119°37'22"

8704433-7CN
(PHOTO TAKEN 1987)

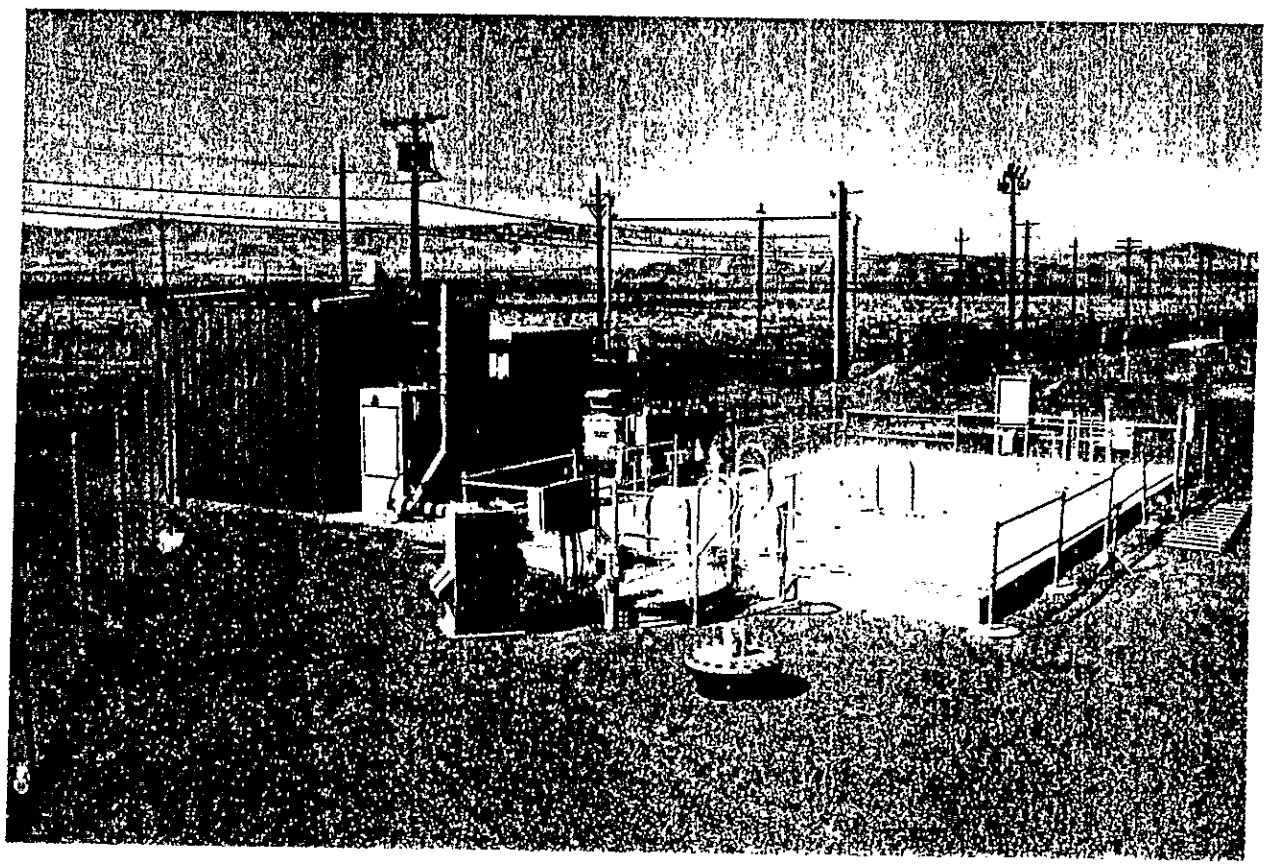
244-BX DOUBLE CONTAINED RECEIVER TANK



46°33'58"
119°32'40"

8704433-18CN
(PHOTO TAKEN 1987)

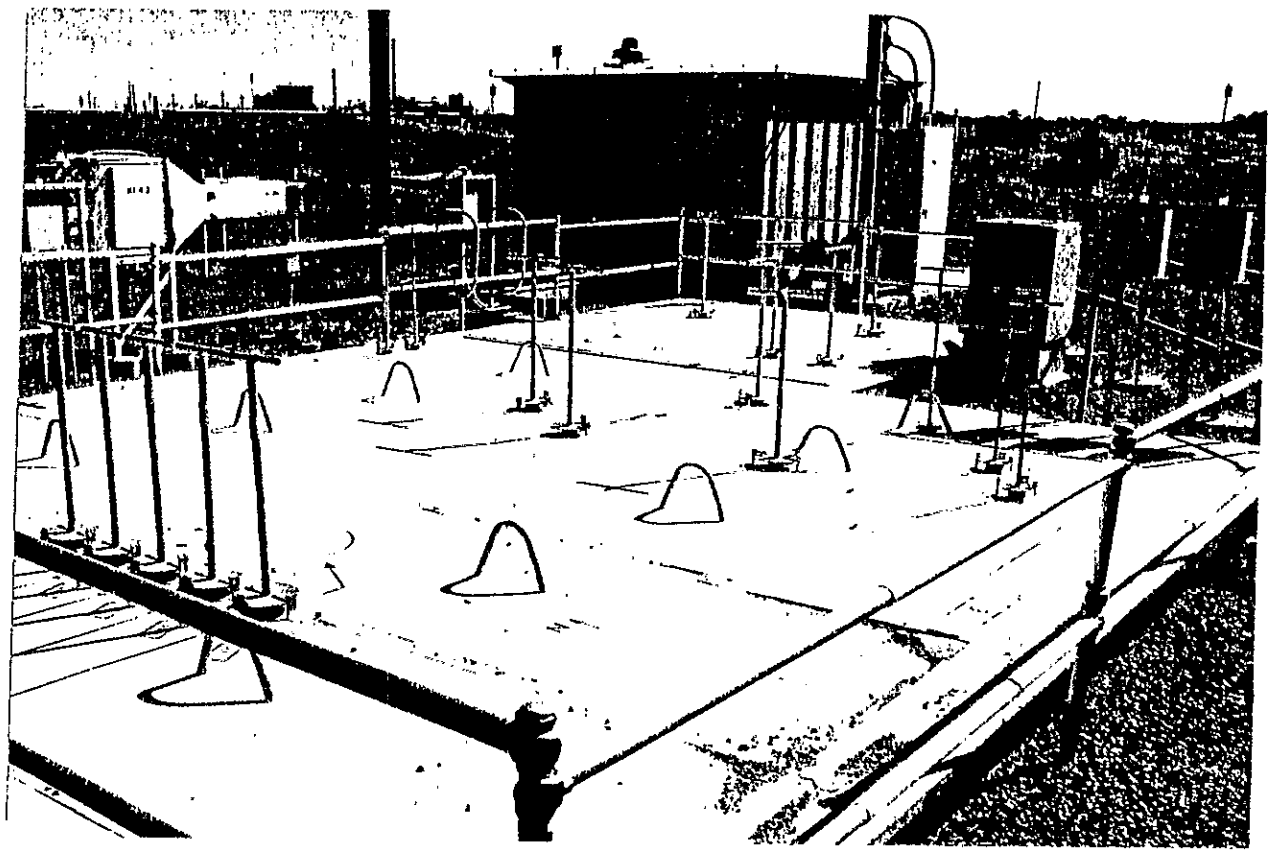
244-U DOUBLE CONTAINED RECEIVER TANK



46°32′45"
119°37′22"

8704433-4CN
(PHOTO TAKEN 1987)

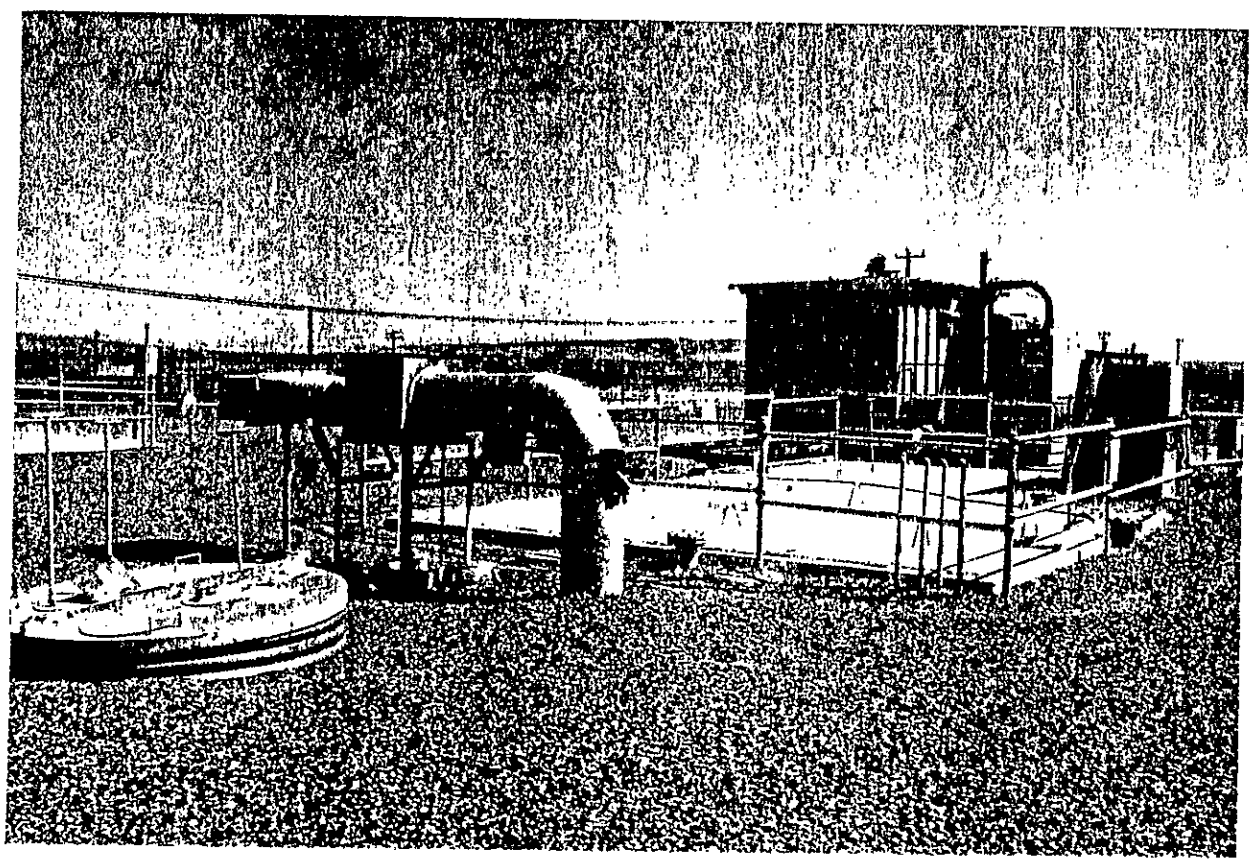
244-S DOUBLE CONTAINED RECEIVER TANK



46°32'26"
119°37'20"

8704433-2CN
(PHOTO TAKEN 1987)

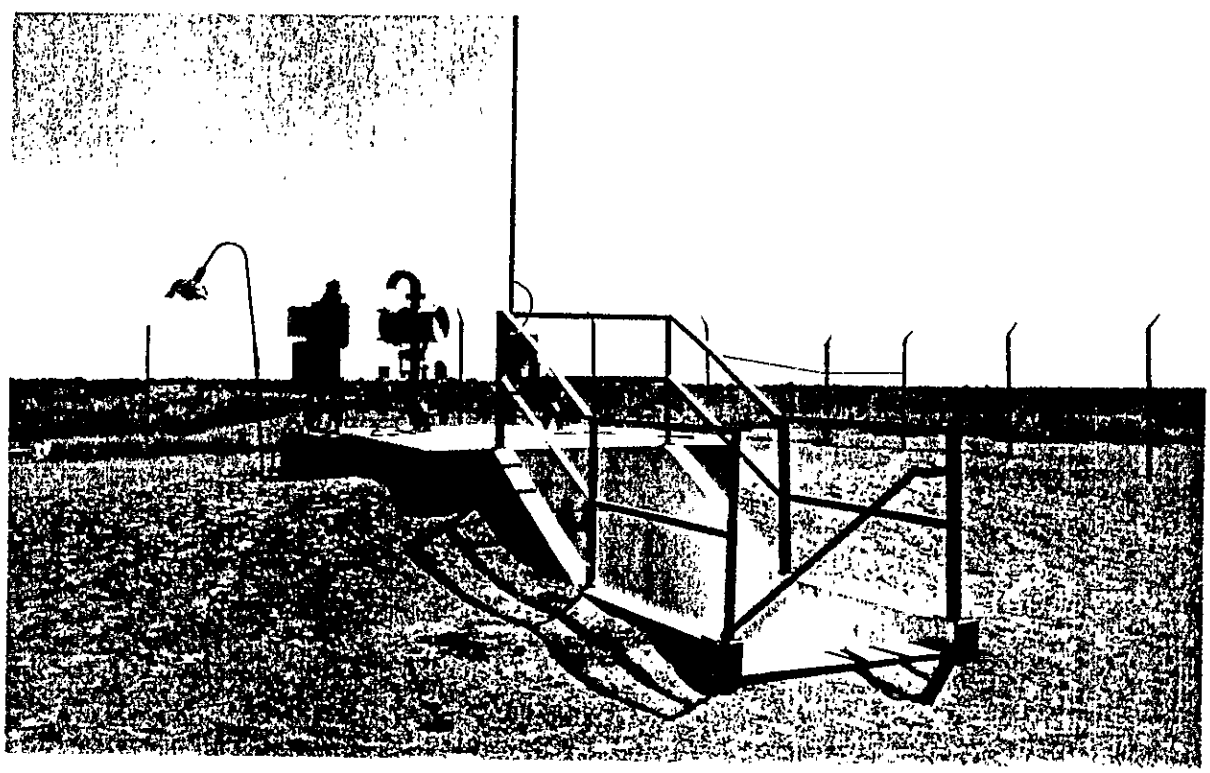
244-A DOUBLE CONTAINED RECEIVER TANK



46°33'20"
119°31'49"

8704433-15CN
(PHOTO TAKEN 1987)

241-EW-151 TANK



46°32'46"
119°34'52"

8704433-17CN
(PHOTO TAKEN 1987)

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

I. 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

Please place an "X" in the appropriate box in A or B below (check 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 (Please place an "X" below and provide the appropriate dates)

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

FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (see the glossary in the back): MO 01 DAY 11 YR 80

☐ 2. NEW FACILITY (Complete item below.)

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

B. REVISED APPLICATION (Please 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 DESIGN 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. Two 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 represented on the list of codes below, then describe the process (including its design capacity) in the space provided on the back (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 OR 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 in 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	S
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
X-1	S02	600	G	
X-2	T03	20	E	
1	D81	950	A	
2				
3				
4				
5				
6				
7				
8				
9				
10				

Continued from the front

II. PROCESSES (continued)

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

D81

The Low-level Radioactive Retrievable Storage Units (D81) were storage facilities which were used to store 55-gallon drums or boxes containing radioactive mixed wastes. Waste containers were stored on underground asphalt pads and plywood-lined underground trenches. An earthen cover over the trenches provided radiological protection.

The Low-level Burial Grounds (D81) were designed to dispose of solid low-level radioactive mixed wastes. The wastes are packaged in steel, concrete, or wood containers and then placed into burial trenches. Trench 94 of burial ground 218-E-12B contains submarine reactor compartments.

The Radioactive Mixed Waste (RMW) Disposal Facility (D81) may consist of trenches or other systems equipped with liners and leachate collection. Approved alternative technologies which may include high integrity containers in lieu of liner-leachate collection systems may also be used.

The waste handled at the above-mentioned facilities are generated by many different operations, both on and off the Hanford Site.

The design capacity of the entire Low-level Burial Grounds is 950 acre-feet.

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

7 8 9 0 0 0 8 9 8 7

V. DESCRIPTION OF DANGEROUS WASTES (continued)

	A. Dangerous Waste No.	B. Estimated Annual Quantity of Waste	C. Unit of Measure	D. Processes 1. Process Codes	2. Process Description
1	D001	10,000	P	D81	Disposal/Storage
2	D002	500			
3	D003	500			
4	D004	500			
5	D005	500			
6	D006	500			
7	D007	500			
8	D008	18,000,000*			
9	D009	500			
10	D010	500			
11	D011	500			
12	WT01	18,800,000*			
13	WT02	80,000			
14	WP01	8,000			
15	WP02	8,000			
16	WP03	8,000			
17	WC01	8,000			
18	WC02	8,000			
19					
20					
21					
22					
23					
24					
25					
26					

* D008 total is included in WT01

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

I.D. NUMBER (enter from page 1): WA789000897

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	8,000	P	D81	Retrievable Storage
2	F002				
3	F003				
4	F004				
5	F005				
6	F028				
7	U001	500	P	D81	Disposal/Storage
8	U002				Retrievable Storage
9	U003				Disposal/Storage
10	U004				
11	U005				
12	U006				
13	U007				
14	U008				
15	U009				
16	U010				
17	U011				
18	U012				
19	U013				Retrievable Storage
20	U014				Disposal/Storage
21					
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 (enter from page 1): WA7890001896 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	U015	500	P	D81	Disposal/Storage
2	U016				
3	U017				
4	U018				
5	U019				
6	U020				
7	U021				
8	U022				
9	U023				
10	U024				
11	U025				
12	U026				
13	U027				
14	U028				
15	U029				
16	U030				↓
17	U031				Retrievable Storage
18	U032				Disposal/Storage
19	U033				
20	U034				
21	U035				
22	U036				↓
23	U037				Retrievable Storage
24	U038				Disposal/Storage
25	U039				
26	U041				↓

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

I.D. NUMBER (enter from page 1): WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE	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	U042	500	P	D81	Disposal/Storage
2	U043				
3	U044				
4	U045				
5	U046				
6	U047				
7	U048				
8	U049				
9	U050				
10	U051				
11	U052				Retrievable Storage
12	U053				Disposal/Storage
13	U055				
14	U056				
15	U057				Retrievable Storage
16	U058				Disposal/Storage
17	U059				
18	U060				
19	U061				
20	U062				
21	U063				
22	U064				
23	U066				
24	U067				
25	U058				
26	U069				

Continued from page 2.

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

I.D. NUMBER (enter from page 1): WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter codes)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	U070	500	P	D81	Retrievable Storage
2	U071				
3	U072				↓
4	U073				Disposal/Storage
5	U074				
6	U075				
7	U076				
8	U077				
9	U078				
10	U079				↓
11	U080				Retrievable Storage
12	U081				Disposal/Storage
13	U082				
14	U083				
15	U084				
16	U085				
17	U086				
18	U087				
19	U088				
20	U089				
21	U090				
22	U091				
23	U092				
24	U093				
25	U094				
26	U095		↓	↓	↓

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

I.D. NUMBER (enter from page 1): WA7890001896 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	U096	500	P	D81	Disposal/Storage
2	U097				
3	U098				
4	U101				
5	U102				
6	U107				
7	U108				
8	U112				Retrievable Storage
9	U113				Disposal/Storage
10	U116				
11	U117				Retrievable Storage
12	U118				Disposal/Storage
13	U119				
14	U120				
15	U123				
16	U124				
17	U134				
18	U136				
19	U137				
20	U139				
21	U140				Retrievable Storage
22	U141				Disposal/Storage
23	U145				
24	U146				
25	U148				
26	U149				

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

I.D. NUMBER (enter from page 1): WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter codes)	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	U151	500	P	D81	Disposal/Storage
2	U152				↓
3	U153				↓
4	U154				Retrievable Storage
5	U155				Disposal/Storage
6	U156				↓
7	U157				↓
8	U158				↓
9	U159				Retrievable Storage
10	U160				Disposal/Storage
11	U161				Retrievable Storage
12	U162				Disposal/Storage
13	U163				↓
14	U164				↓
15	U165				↓
16	U166				↓
17	U167				↓
18	U168				↓
19	U169				Retrievable Storage
20	U170				Disposal/Storage
21	U171				↓
22	U172				↓
23	U173				↓
24	U174				↓
25	U175				Retrievable Storage
26	U176				Disposal/Storage

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

I.D. NUMBER (enter from page 1): WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE	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	U177	500	P	D81	Disposal/Storage
2	U178				
3	U179				
4	U180				
5	U181				
6	U182				
7	U183				
8	U184				
9	U185				
10	U186				
11	U187				
12	U188				
13	U189				
14	U190				
15	U191				
16	U192				
17	U193				
18	U194				↓
19	U196				Retrievable Storage
20	U197				Disposal/Storage
21	U200				
22	U201				
23	U202				
24	U203				
25	U204				
26	U205				

CONTINUE ON REVERSE

Continued from the front

V. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 2.

The mixed wastes handled consist of listed wastes, characteristic wastes and state-only wastes (designation of Extremely Hazardous Waste due to toxicity (WT01) results from lead content in waste), and wastes from nonspecific sources. The submarine reactor compartments in trench 94 of burial ground 218-E-12B contain metallic lead designated as EP toxic (D008) and toxic (WT01).

V. FACILITY DRAWING

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

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 attached drawings and photographs

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. STATE	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
Michael J. Lawrence Manager, Richland Operations United States Department of Energy	Michael J. Lawrence	10/12/89

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		

Continued from page 2

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

I.D. NUMBER (enter from page 1): WA 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	P116	500	P	D81	Disposal
2	P118				
3	P119				
4	P120				
5	P121				
6	P122				
7	P123				
8	P057				
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

CONTINUE ON PAGE 4

Continued from page 2.

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

I.D. NUMBER (enter from page 1): WA7890001899 67

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	P087	500	P	D81	Disposal/Storage
2	P088				
3	P089				
4	P092				
5	P093				
6	P094				
7	P095				
8	P096				
9	P097				
10	P098				
11	P099				
12	P101				
13	P102				
14	P103				
15	P104				
16	P105				
17	P106				
18	P107				
19	P108				
20	P109				
21	P110				
22	P111				
23	P112				
24	P113				
25	P114				
26	P115				

Continued from page 2.

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

I.D. NUMBER (enter from page 1): WA7890010319 67

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	P052	500	P	081	Retrievable Storage
2	P058				Disposal/Storage
3	P059				
4	P060				
5	P062				
6	P063				
7	P064				
8	P065				
9	P066				
10	P067				
11	P068				
12	P069				
13	P070				
14	P071				
15	P072				
16	P073				
17	P074				
18	P075				
19	P076				
20	P077				
21	P078				
22	P079				
23	P081				
24	P082				
25	P084				
26	P085				

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

I.D. NUMBER (enter 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	P028	500	P	D80	Disposal/Storage
2	P029				
3	P030				
4	P031				
5	P033				
6	P034				
7	P035				
8	P036				
9	P037				
10	P038				
11	P039				
12	P040				
13	P041				
14	P042				
15	P043				
16	P044				
17	P045				
18	P046				
19	P047				
20	P048				
21	P049				
22	P050				
23	P051				
24	P054				
25	P056				
26					

Continued from page 2.

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

I.D. NUMBER (enter from page 1): WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE	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	P	081	Disposal/Storage
2	P002				
3	P003				
4	P004				
5	P005				↓
6	P006				Retrievable Storage
7	P007				Disposal/Storage
8	P008				
9	P009				
10	P010				
11	P011				
12	P012				
13	P013				
14	P014				
15	P015				
16	P016				
17	P017				
18	P018				
19	P020				
20	P021				↓
21	P022				Retrievable Storage
22	P023				Disposal/Storage
23	P024				
24	P025				
25	P026				
26	P027				

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

I.D. NUMBER (enter from page 1): WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE	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	U234	500	P	D81	Disposal/Storage
2	U235				
3	U236				
4	U237				
5	U238				
6	U239				Retrievable Storage
7	U240				Disposal/Storage
8	U241				
9	U242				
10	U243				
11	U244				
12	U245				
13	U246				
14	U247				
15					
16					
17					
18					
19					
20					
21					
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 (enter from page 1): WA7890001896 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	U206	500	P	D81	Disposal/Storage
2	U207				↓
3	U208				↓
4	U209				↓
5	U210				Retrievable Storage
6	U211				↓
7	U212				Disposal/Storage
8	U213				↓
9	U214				↓
10	U215				↓
11	U216				↓
12	U217				↓
13	U218				↓
14	U219				↓
15	U220				Retrievable Storage
16	U221				Disposal/Storage
17	U222				↓
18	U223				↓
19	U225				↓
20	U226				Retrievable Storage
21	U227				Disposal/Storage
22	U228				Retrievable Storage
23	U230				Disposal/Storage
24	U231				↓
25	U232				↓
26	U233				↓

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 E. Nolan

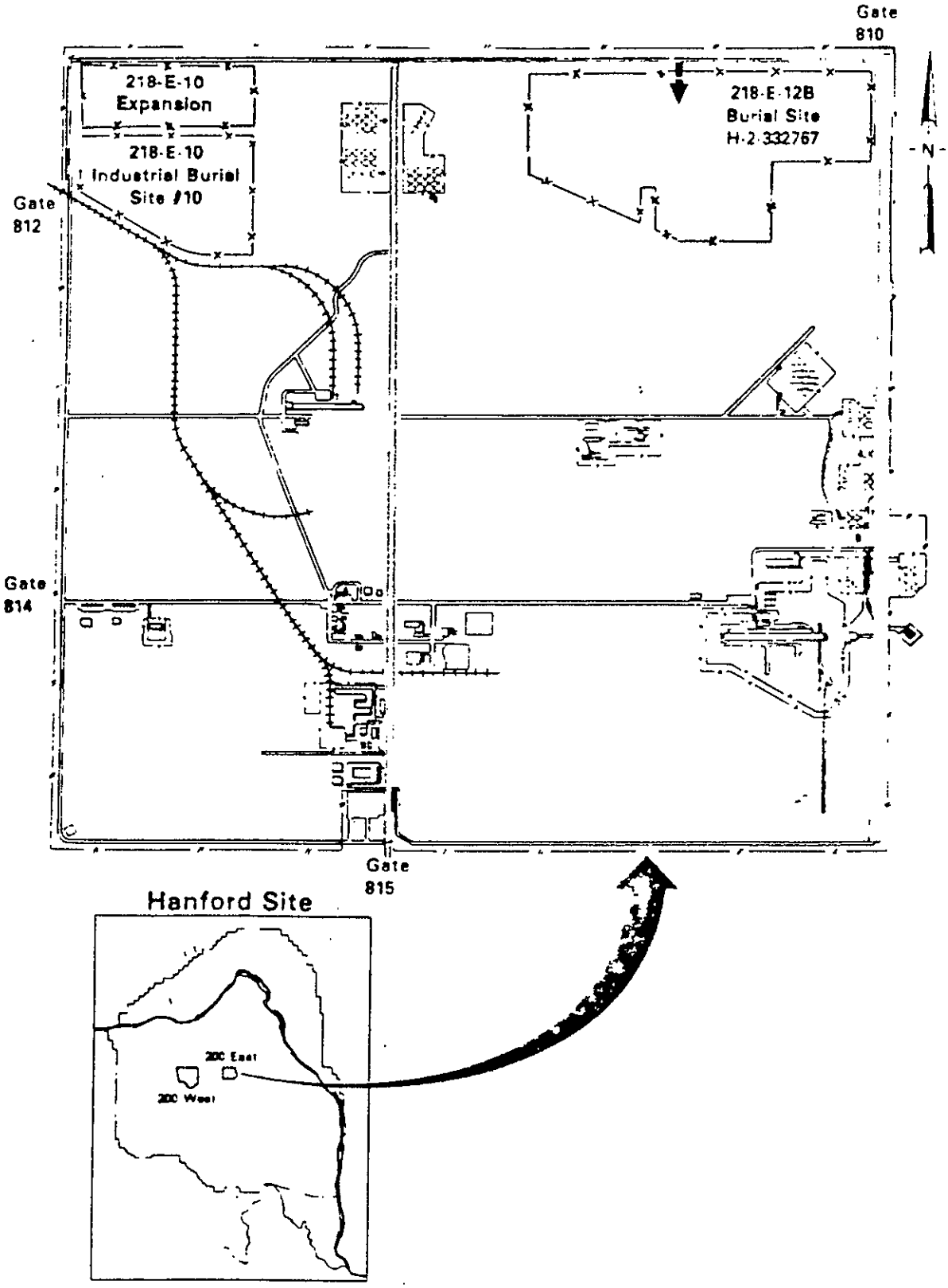
Co-operator
John E. Nolan, President
Westinghouse Hanford Company

10/17/89
Date

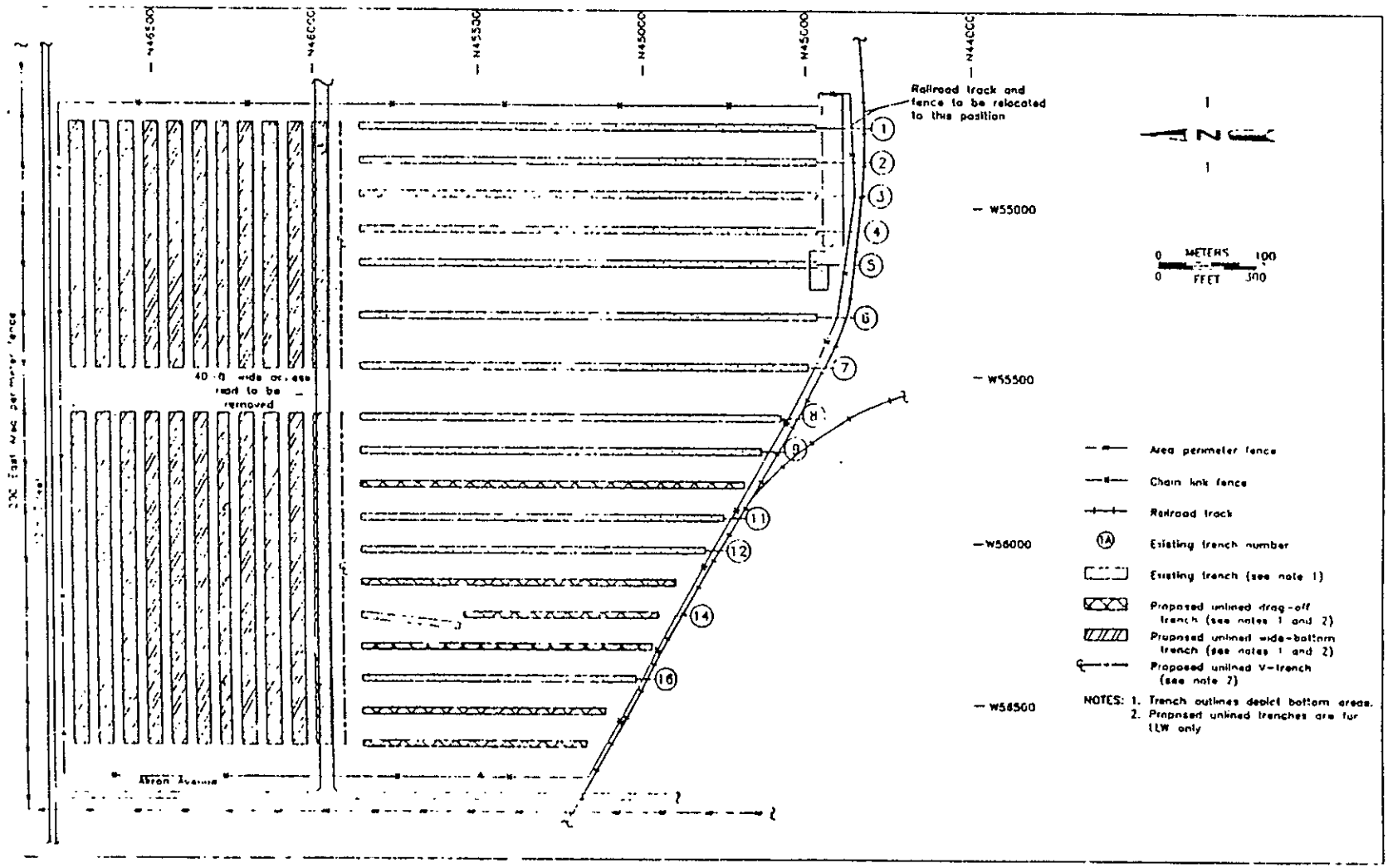
Michael J. Lawrence

Owner/Operator
Michael J. Lawrence, Manager
U.S. Department of Energy
Richland Operations Office

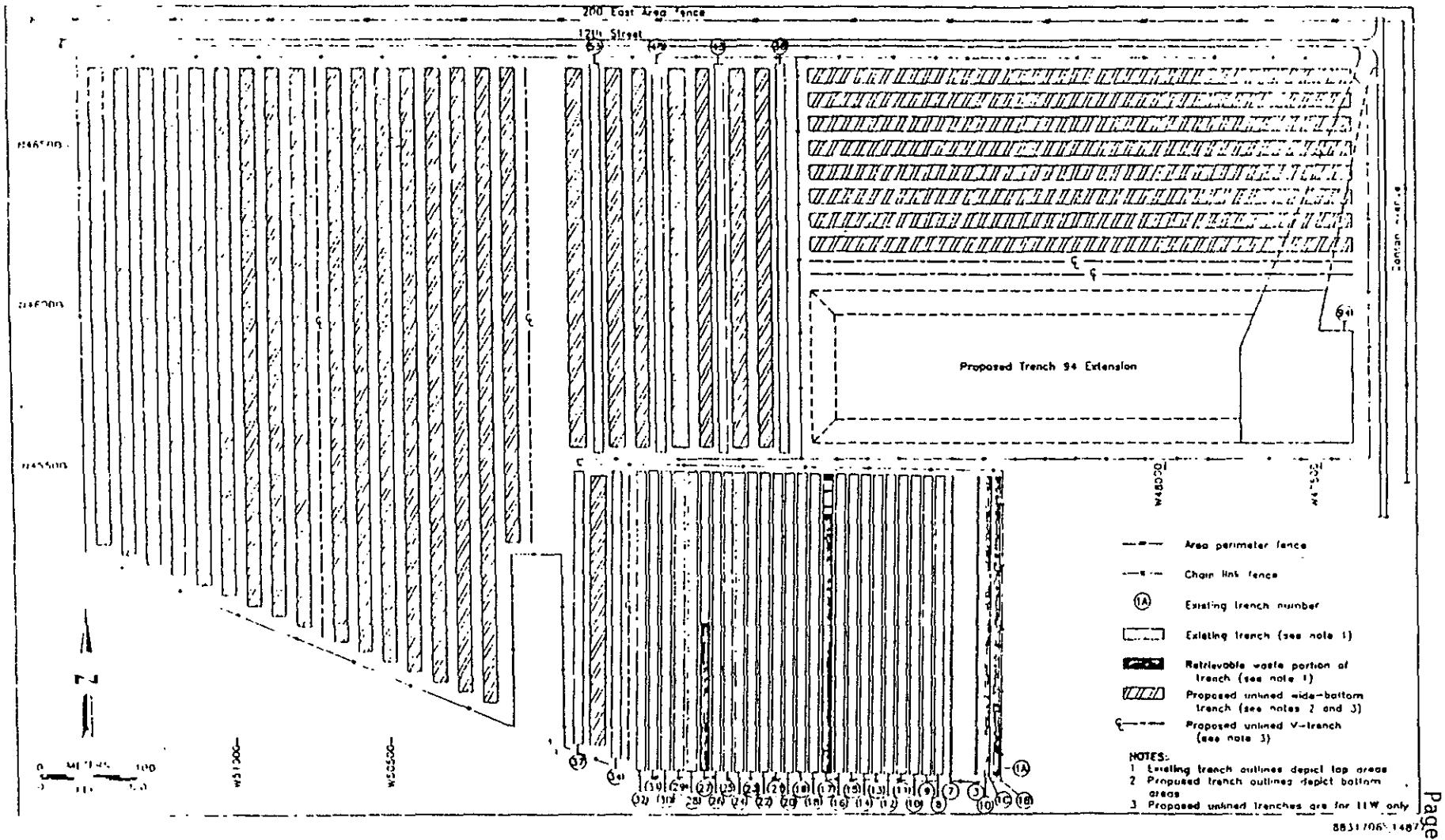
10/18/89
Date



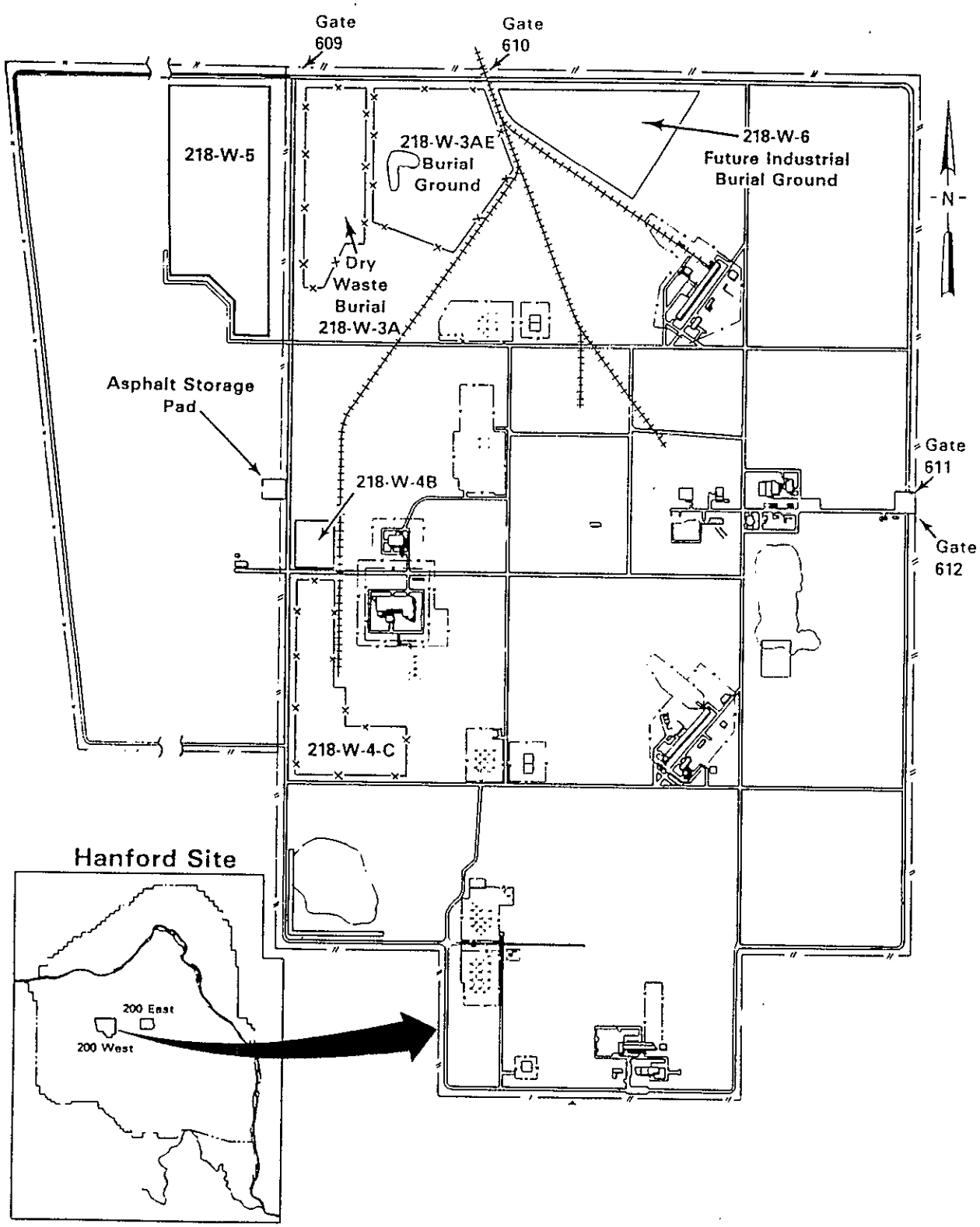
200 East Area Burial Grounds.



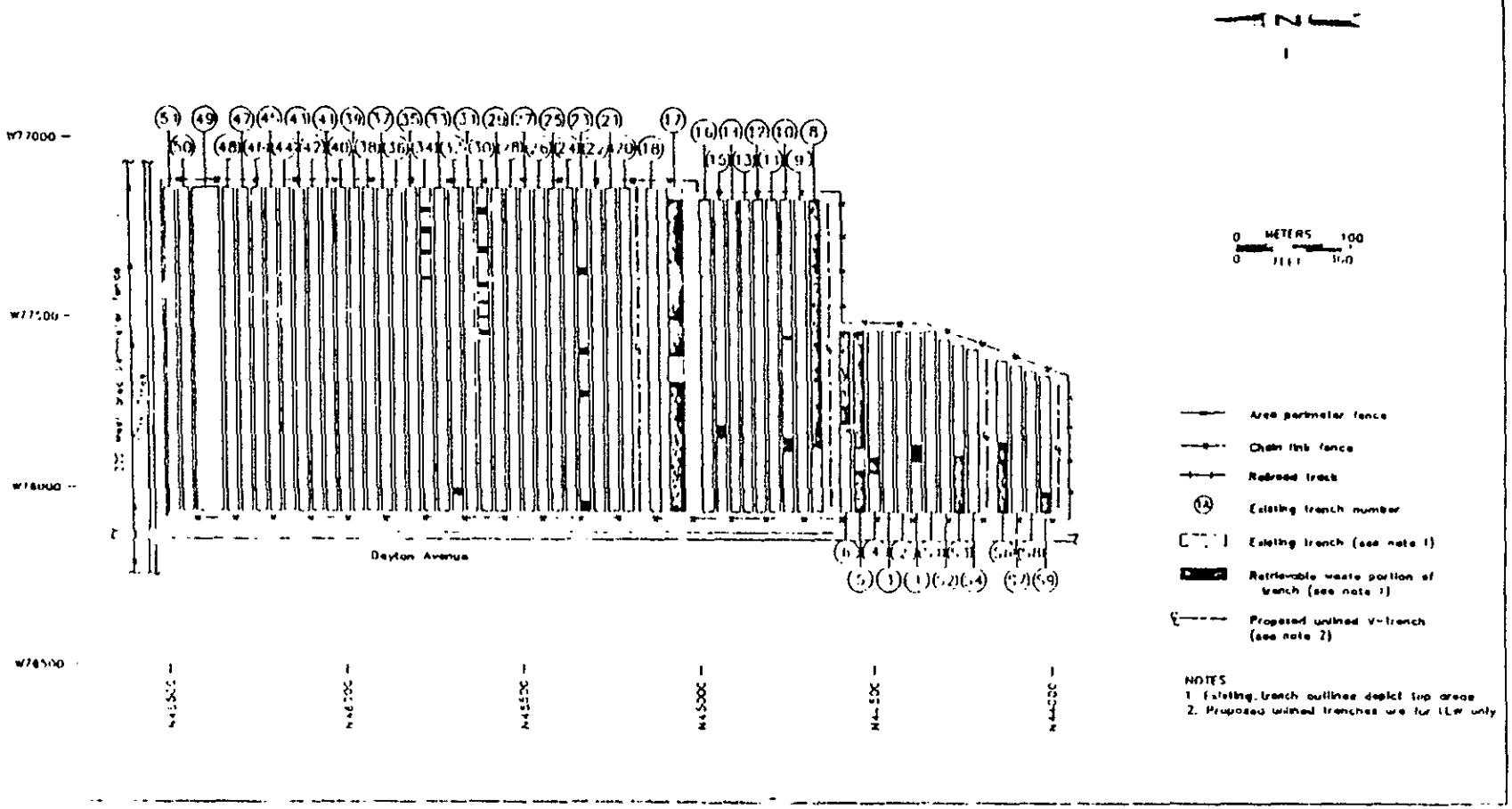
Burial Ground 218-E-10.



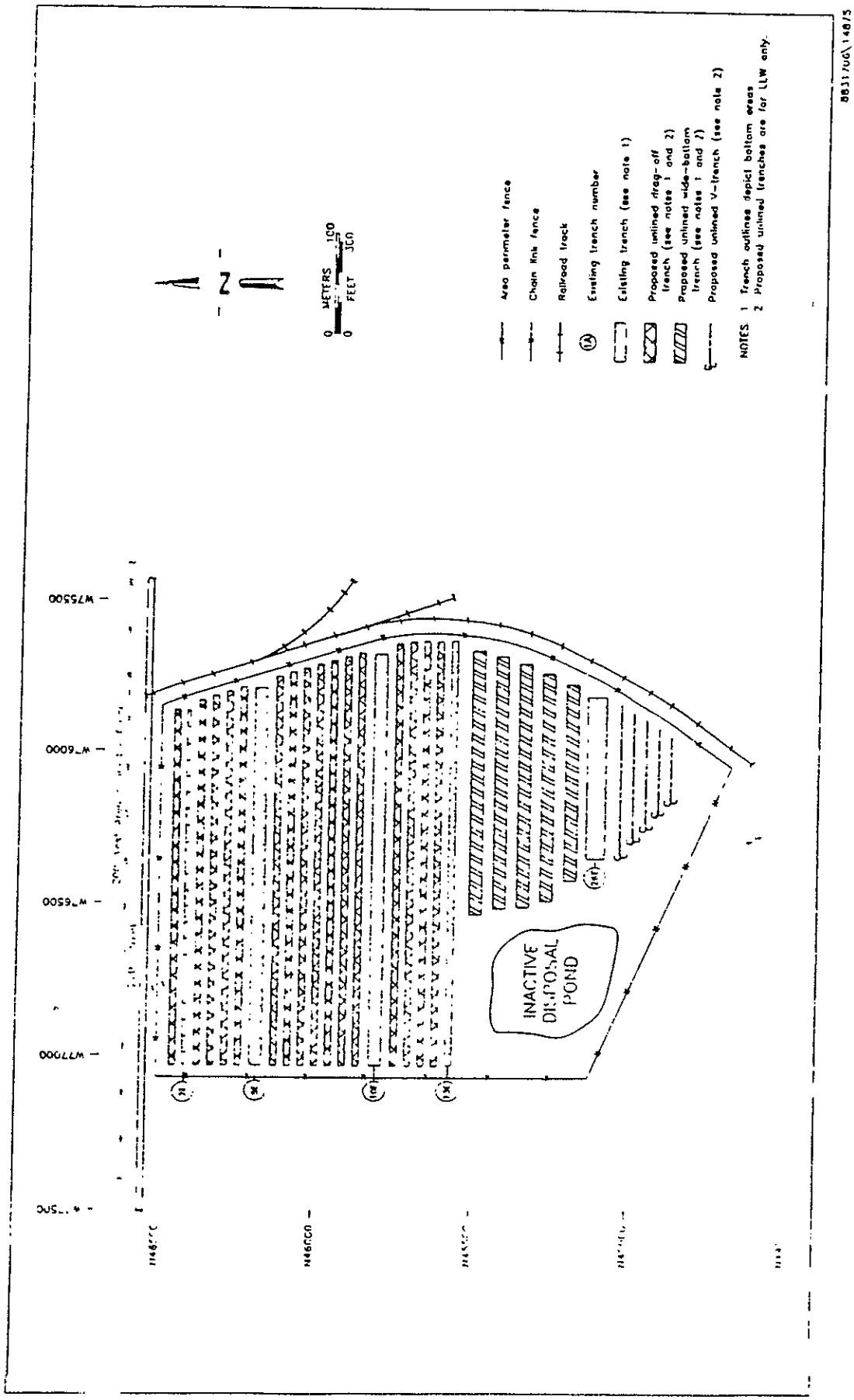
Burial Ground 218-E-12B.



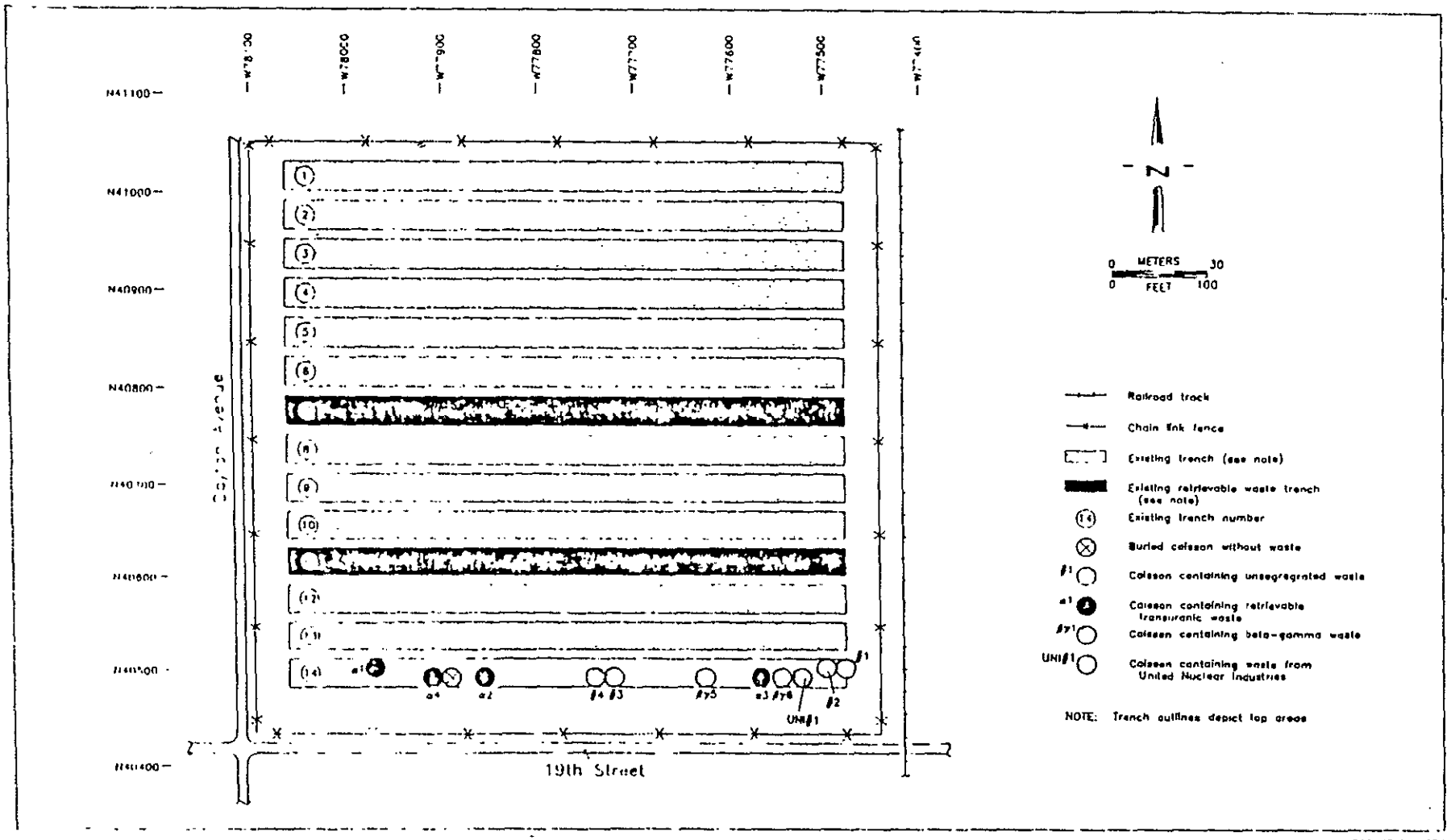
200 West Area Burial Grounds



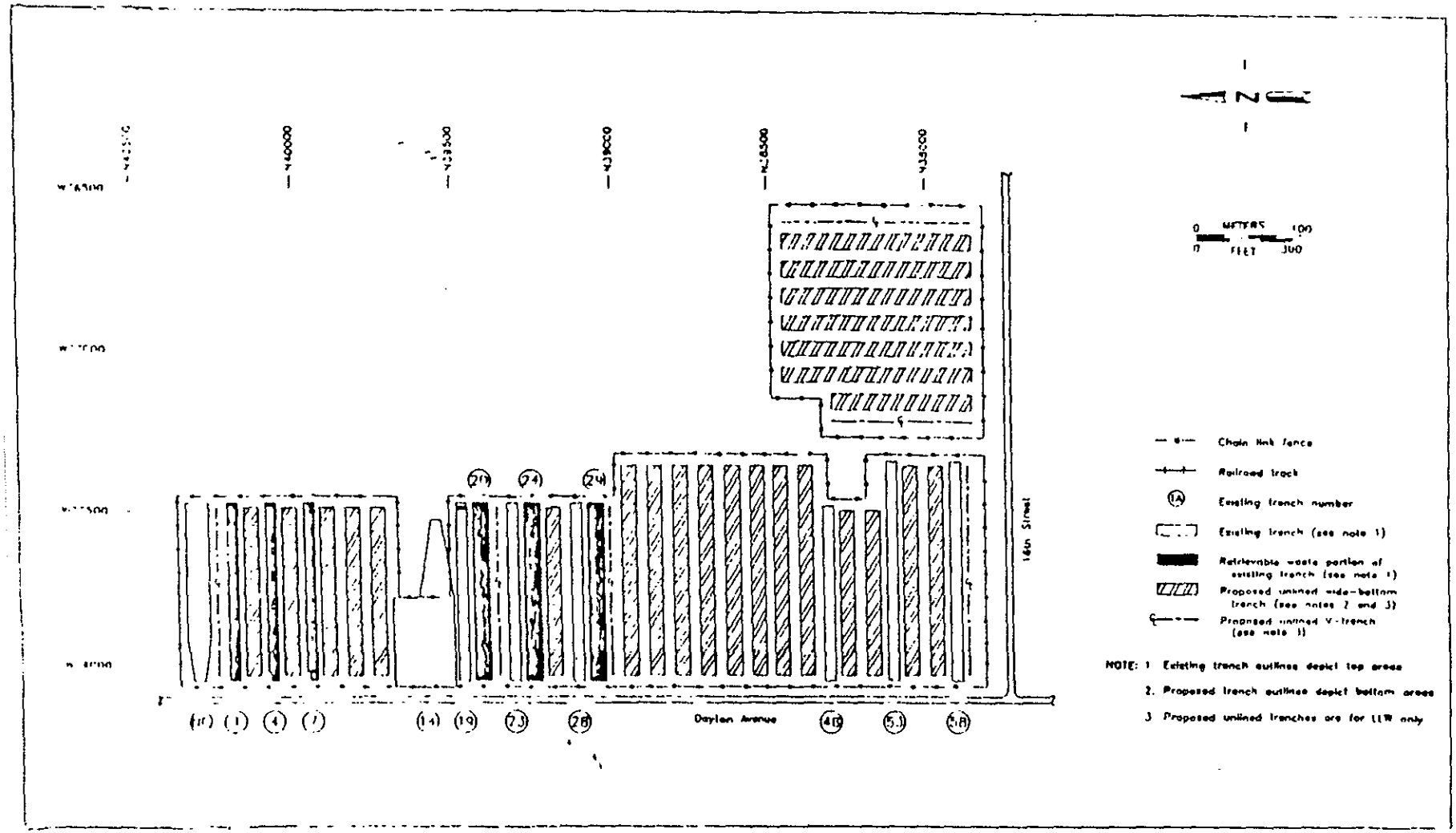
Burial Ground and Retrievable Storage Unit 218-W-3A.



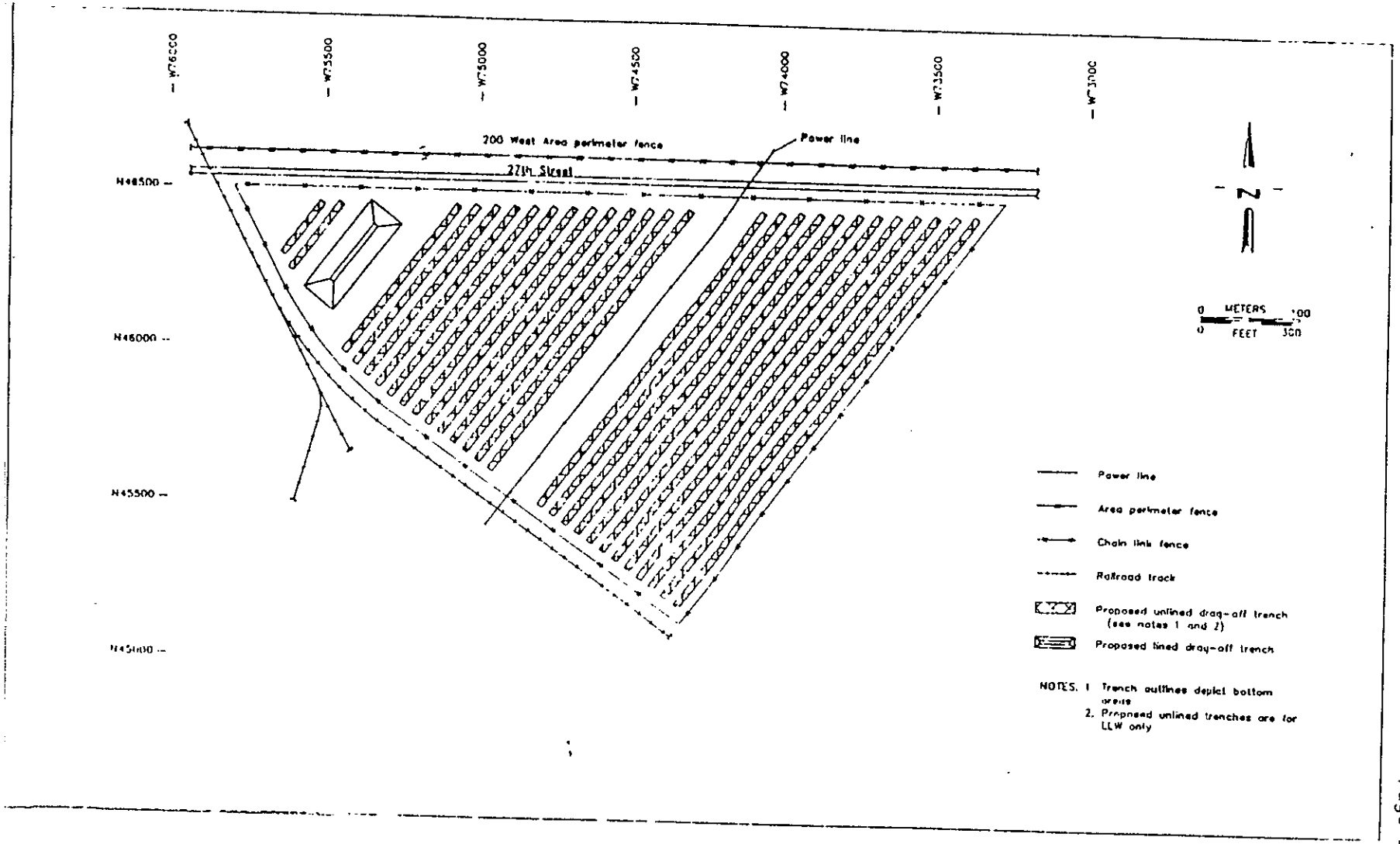
Burial Ground 218-W3AF



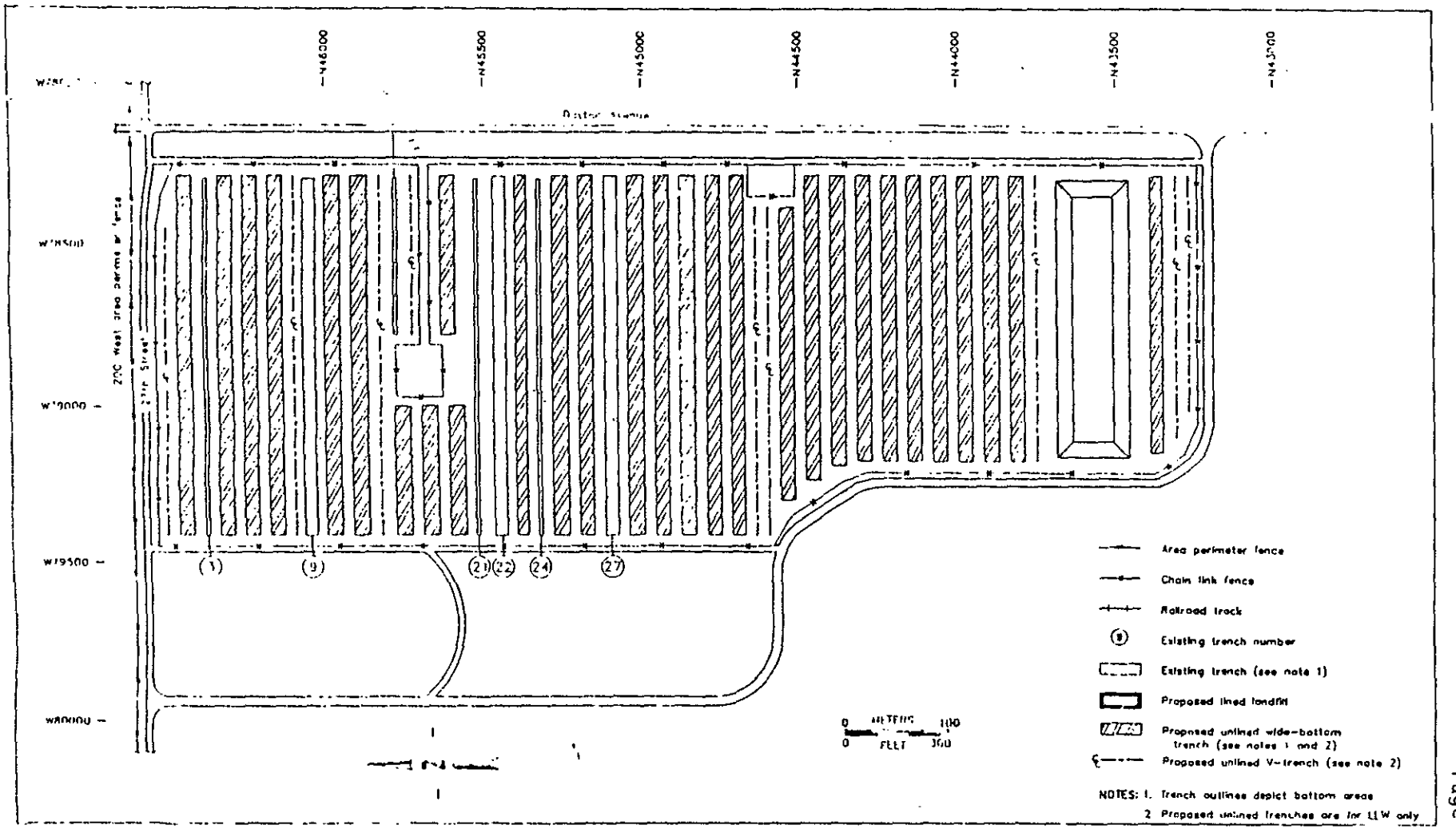
Burial Ground 218-W-4B.



Burial Ground and Retrievable Storage Unit 218-W-4C.

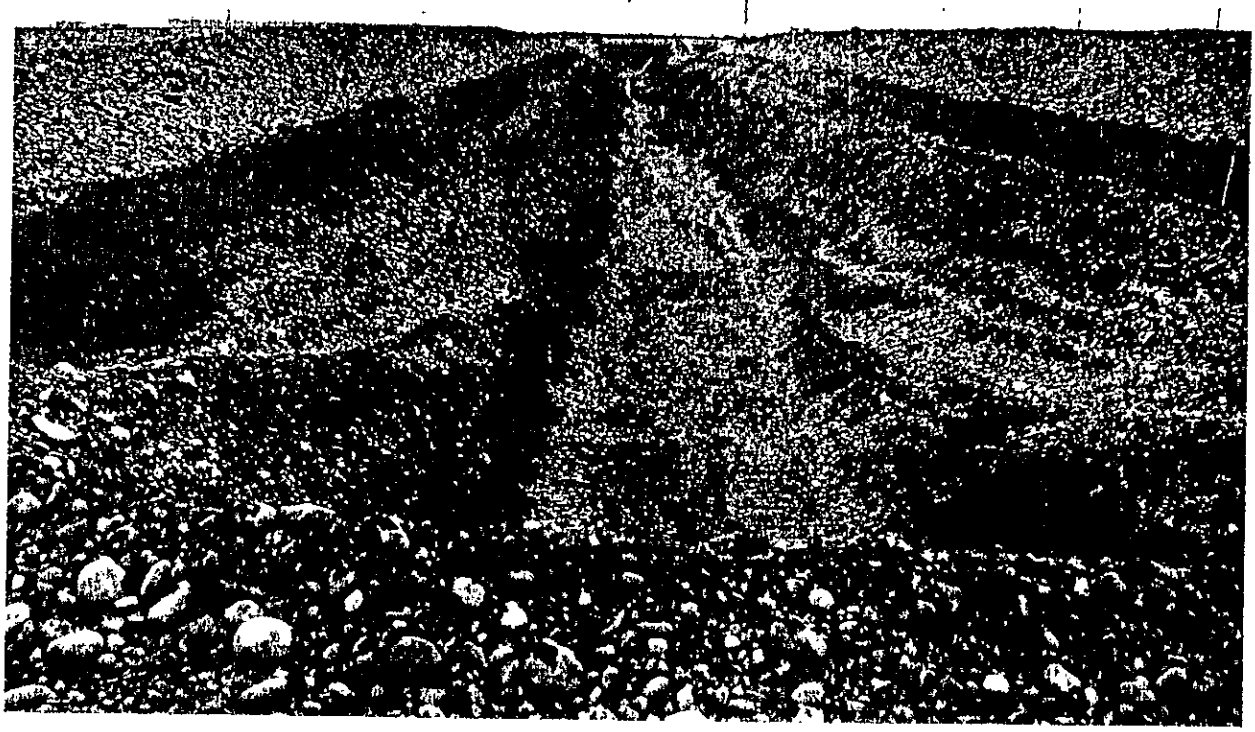


Burial Ground 218 W 6 Future Site.



Burial Ground 218-W 5.

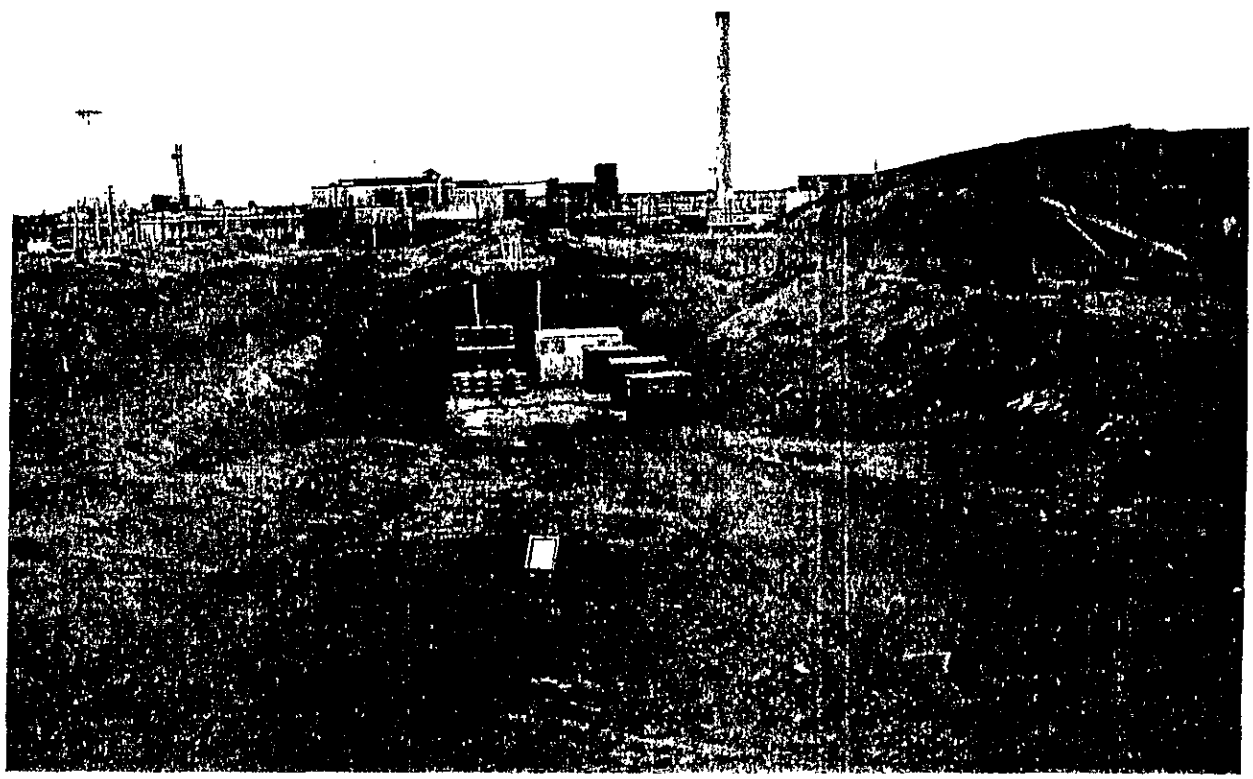
TYPICAL LOW-LEVEL RADIOACTIVE BURIAL GROUND 218-W-3A/200 WEST AREA



46°33'41.318"
119°38'6.440"

8301108-40CN
(PHOTO TAKEN 1983)

TYPICAL RADIOACTIVE RETRIEVABLE STORAGE FACILITY-LIQUID ORGANICS 218-W-4C/200 WEST AREA



46°33′5.892"
119°38′3.981"

8505779-30CN
(PHOTO TAKEN 1985)

SUBMARINE REACTOR COMPARTMENT TRENCH-94

46°34'05"
119°31'31"

89060807-25CN
(PHOTO TAKEN 1989)

(Please print or type in the unshaded areas only.)

(Pica type is preferred. Avoid writing in the margins.)

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

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

FOR OFFICIAL USE ONLY

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

II. FIRST OR REVISED APPLICATION

Please place an "X" in the appropriate box in A or B below (check 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 (Please place an "X" below and provide the appropriate dates)

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

☐ 2. NEW FACILITY (Complete item below.)

FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (see the items in the left): MO. 0 1 DAY 1 1 YR. 6 0

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

B. REVISED APPLICATION (Please 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 DESIGN 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. Two 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	Y
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	S

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
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	D 8 1	950	A	
2				
3				
4				

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
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

D81

The Low-level Radioactive Retrievable Storage Units (D81) were storage facilities which were used to store 55-gallon drums or boxes containing radioactive mixed wastes. Waste containers were stored on underground asphalt pads and plywood-lined underground trenches. An earthen cover over the trenches provided radiological protection.

The Low-level Burial Grounds (D81) were designed to dispose of solid low-level radioactive mixed wastes. The wastes are packaged in steel, concrete, or wood containers and then placed into burial trenches. Trench 94 of burial ground 218-E-12B contains submarine reactor compartments.

The Radioactive Mixed Waste (RMW) Disposal Facility (D81) may consist of trenches or other systems equipped with liners and leachate collection. Approved alternative technologies which may include high integrity containers in lieu of liner-leachate collection systems may also be used.

The waste handled at the above-mentioned facilities are generated by many different operations, both on and off the Hanford Site.

The design capacity of the entire Low-level Burial Grounds for mixed waste is 950 acre-feet of which 750 acre-feet is solely dedicated for the submarine reactor compartments

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

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 25 wastes to list.

D. NUMBER (enter from page 1)

A 7 8 9 0 0 0 3 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)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	10,000	P	D 8 1	Disposal/Storage
2	D002	500			
3	D003	500			
4	D004	500			
5	D005	500			
6	D006	500			
7	D007	500			
8	D008	2,000,000*			
9	D009	500			
10	D010	500			
11	D011	500			
12	WT01	18,800,000*			
13	WT02	80,000			
14	WP01	8,000			
15	WP02	8,000			
16	WP03	8,000			
17	WC01	8,000			
18	WC02	8,000			
19					
20					
21					
22					
23					
24					
25					

* D008 total is included in WT01

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 25 wastes to list.

I.D. NUMBER (enter from page 1): WA7890010039567

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter codes)	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	8,000	P	D93	Retrievable Storage
2	F002				
3	F003				
4	F004				
5	F005				
6	F028	↓	↓	↓	↓
7	U001	500	P	D83	Disposal/Storage
8	U002				Retrievable Storage
9	U003				Disposal/Storage
10	U004				
11	U005				
12	U006				
13	U007				
14	U008				
15	U009				
16	U010				
17	U011				
18	U012				↓
19	U013				Retrievable Storage
20	U014	↓	↓	↓	Disposal/Storage
21					
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 (enter from page 1): WA7890010019567

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	U015	500	P	D81	Disposal/Storage
2	U016				
3	U017				
4	U018				
5	U019				
6	U020				
7	U021				
8	U022				
9	U023				
10	U024				
11	U025				
12	U026				
13	U027				
14	U028				
15	U029				
16	U030				↓
17	U031				Retrievable Storage
18	U032				Disposal/Storage
19	U033				
20	U034				
21	U035				
22	U036				↓
23	U037				Retrievable Storage
24	U038				Disposal/Storage
25	U039				
26	U041				

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

I.D. NUMBER (enter from page 1): WA7890001896 7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter codes)	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 2	500	P	D 8 1	Disposal/Storage
2	U014 3				
3	U014 4				
4	U014 5				
5	U014 6				
6	U014 7				
7	U014 8				
8	U014 9				
9	U050				↓
10	U051				
11	U052				Retrievable Storage
12	U053				Disposal/Storage
13	U055				
14	U056				↓
15	U057				Retrievable Storage
16	U058				Disposal/Storage
17	U059				
18	U060				
19	U061				
20	U062				
21	U063				
22	U064				
23	U066				
24	U067				
25	U068				
26	U069	↓	↓	↓	↓

Continued from page 2.

NOTE: Photocopy this page before continuing if you have more than 25 wastes to list.

I.D. NUMBER (enter from page 1): WA7890001899 67

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE	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	U070	500	P	D81	Retrievable Storage
2	U071				
3	U072				↓
4	U073				Disposal/Storage
5	U074				
6	U075				
7	U076				
8	U077				
9	U078				
10	U079				↓
11	U080				Retrievable Storage
12	U081				Disposal/Storage
13	U082				
14	U083				
15	U084				
16	U085				
17	U086				
18	U087				
19	U088				
20	U089				
21	U090				
22	U091				
23	U092				
24	U093				
25	U094				
26	U095				↓

Continued from page 2.

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

I.D. NUMBER (enter 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.	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE	D. PROCESSES 1. PROCESS CODES	D. PROCESSES 2. PROCESS DESCRIPTION
1	U096	500	P	D 8 11	Disposal/Storage
2	U097				
3	U098				
4	U110				
5	U102				
6	U107				↓
7	U108				
8	U112				Retrievable Storage
9	U113				Disposal/Storage
10	U116				↓
11	U117				Retrievable Storage
12	U118				Disposal/Storage
13	U119				
14	U120				
15	U123				
16	U124				
17	U134				
18	U136				
19	U137				
20	U139				↓
21	U140				Retrievable Storage
22	U141				Disposal/Storage
23	U145				
24	U146				
25	U149				
26					

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

I.D. NUMBER (enter from page 1): WA7890009967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE	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	U151	500	P	D81	Disposal/Storage
2	U152				↓
3	U153				↓
4	U154				Retrievable Storage
5	U155				Disposal/Storage
6	U156				↓
7	U157				↓
8	U158				↓
9	U159				Retrievable Storage
10	U160				Disposal/Storage
11	U161				Retrievable Storage
12	U162				Disposal/Storage
13	U163				↓
14	U164				↓
15	U165				↓
16	U166				↓
17	U167				↓
18	U168				↓
19	U169				Retrievable Storage
20	U170				Disposal/Storage
21	U171				↓
22	U172				↓
23	U173				↓
24	U174				↓
25	U175				Retrievable Storage
26	U176				Disposal/Storage

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

I.D. NUMBER (enter from page 1): WA7890001899167

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	U177	500	P	081	Disposal/Storage
2	U178				
3	U179				
4	U180				
5	U181				
6	U182				
7	U183				
8	U184				
9	U185				
10	U186				
11	U187				
12	U188				
13	U189				
14	U190				
15	U191				
16	U192				
17	U193				
18	U194				↓
19	U196				Retrievable Storage
20	U197				Disposal/Storage
21	U200				
22	U201				
23	U202				
24	U203				
25	U204				
26	U205				

Continued from page 2.

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

I.D. NUMBER (enter from page 1): WA7890000897

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE	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	U206	500	P	03	Disposal/Storage
2	U207				
3	U208				
4	U209				
5	U210				Retrievable Storage
6	U211				
7	U212				Disposal/Storage
8	U213				
9	U214				
10	U215				
11	U216				
12	U217				
13	U218				
14	U219				
15	U220				Retrievable Storage
16	U221				Disposal/Storage
17	U222				
18	U223				
19	U225				
20	U226				Retrievable Storage
21	U227				Disposal/Storage
22	U228				Retrievable Storage
23	U230				Disposal/Storage
24	U231				
25	U232				
26	U233				

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

I.D. NUMBER (enter from page 1): WA7890001089167

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	U234	500	pl	D81	Disposal/Storage
2	U235				
3	U236				
4	U237				
5	U238				↓
6	U239				Retrievable Storage
7	U240				Disposal/Storage
8	U241				
9	U242				
10	U243				
11	U244				
12	U245				
13	U246				
14	U247	↓	↓	↓	↓
15					
16					
17					
18					
19					
20					
21					
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 (enter from page 1): WA7890001896 7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE	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	P	08	Disposal/Storage
2	P002				
3	P003				
4	P004				
5	P005				↓
6	P006				Retrievable Storage
7	P007				Disposal/Storage
8	P008				
9	P009				
10	P010				
11	P011				
12	P012				
13	P013				
14	P014				
15	P015				
16	P016				
17	P017				
18	P018				
19	P020				
20	P021				↓
21	P022				Retrievable Storage
22	P023				Disposal/Storage
23	P024				
24	P025				
25	P026				
26	P027				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 25 wastes to list.

I.D. NUMBER (enter from page 1): WA7890001591667

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	P028	500	P	D80	Disposal/Storage
2	P029				
3	P030				
4	P031				
5	P033				
6	P034				
7	P035				
8	P036				
9	P037				
10	P038				
11	P039				
12	P040				
13	P041				
14	P042				
15	P043				
16	P044				
17	P045				
18	P046				
19	P047				
20	P048				
21	P049				
22	P050				
23	P051				
24	P054				
25	P056				
26					

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 25 wastes to list.

I.D. NUMBER (enter on page 1): WA7890001890567

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO.	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE	D. PROCESSES 1. PROCESS CODES	D. PROCESSES 2. PROCESS DESCRIPTION
1	P052	500	P	081	Retrievable Storage
2	P058				Disposal/Storage
3	P059				
4	P060				
5	P062				
6	P063				
7	P064				
8	P065				
9	P066				
10	P067				
11	P068				
12	P069				
13	P070				
14	P071				
15	P072				
16	P073				
17	P074				
18	P075				
19	P076				
20	P077				
21	P078				
22	P079				
23	P081				
24	P082				
25	P084				
26	P085				

Continued from page 2.

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

I.D. NUMBER (enter from page 1): WA7890010019967

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	P087	500	P	T01	Disposal/Storage
2	P088				
3	P089				
4	P092				
5	P093				
6	P094				
7	P095				
8	P096				
9	P097				
10	P098				
11	P099				
12	P101				
13	P102				
14	P103				
15	P104				
16	P105				
17	P106				
18	P107				
19	P108				
20	P109				
21	P110				
22	P111				
23	P112				
24	P113				
25	P114				
26	P115				

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 25 wastes to list.

I.D. NUMBER (enter from page 1): WA7890000396 7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter codes)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	P116	500	P	D 8 0	Disposal
2	P118				
3	P119				
4	P120				
5	P121				
6	P122				
7	P123				
8	P057	↓	↓	↓	↓
9					
10					
11					
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26					

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 25 wastes to list.

I.D. NUMBER (enter from page 1): WA 7 8 9 0 0 0 3 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)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	P116	500	P	08	Disposal
2	P118				
3	P119				
4	P120				
5	P121				
6	P122				
7	P123				
8	P057				
9					
10					
11					
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Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 25 wastes to list.

I.D. NUMBER (enter from page 1): WA7890010839567

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	P116	500	P	D 8 1	Disposal
2	P118				
3	P119				
4	P120				
5	P121				
6	P122				
7	P123				
8	P057	↓	↓	↓	↓
9					
10					
11					
12					
13					
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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 wastes handled consist of listed wastes, characteristic wastes and state-only wastes (designation of Extremely Hazardous Waste due to toxicity (WT01) results from lead content in waste), and wastes from nonspecific sources. The submarine reactor compartments in trench 94 of burial ground 218-E-12B contain metallic lead.

V. FACILITY DRAWING

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

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 attached drawings and photographs

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
Michael J. Lawrence Manager, Richland Operations United States Department of Energy	Michael J. Lawrence	10-20-89

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		

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 E. Nolan

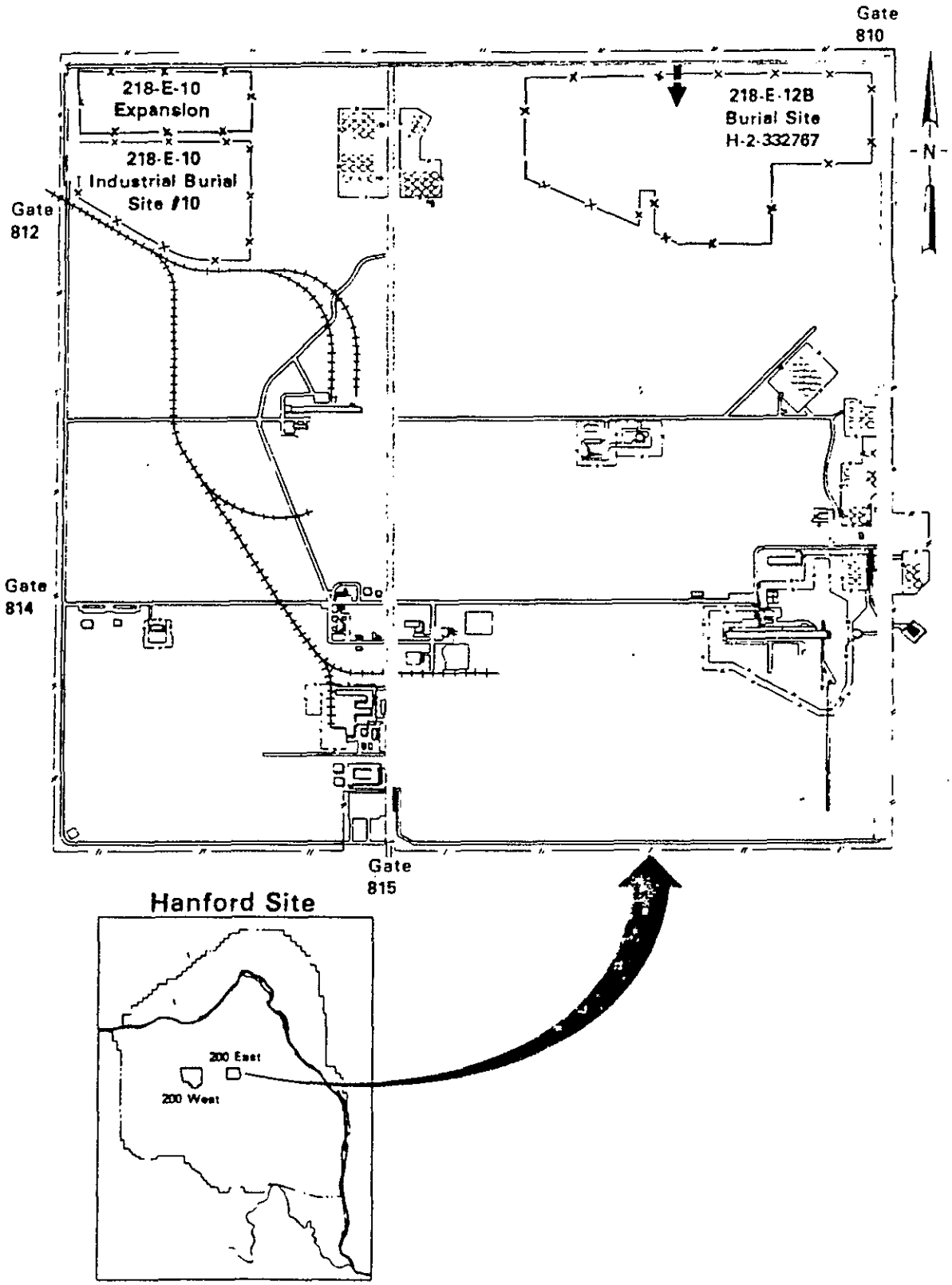
Co-operator
John E. Nolan, President
Westinghouse Hanford Company

10/20/89
Date

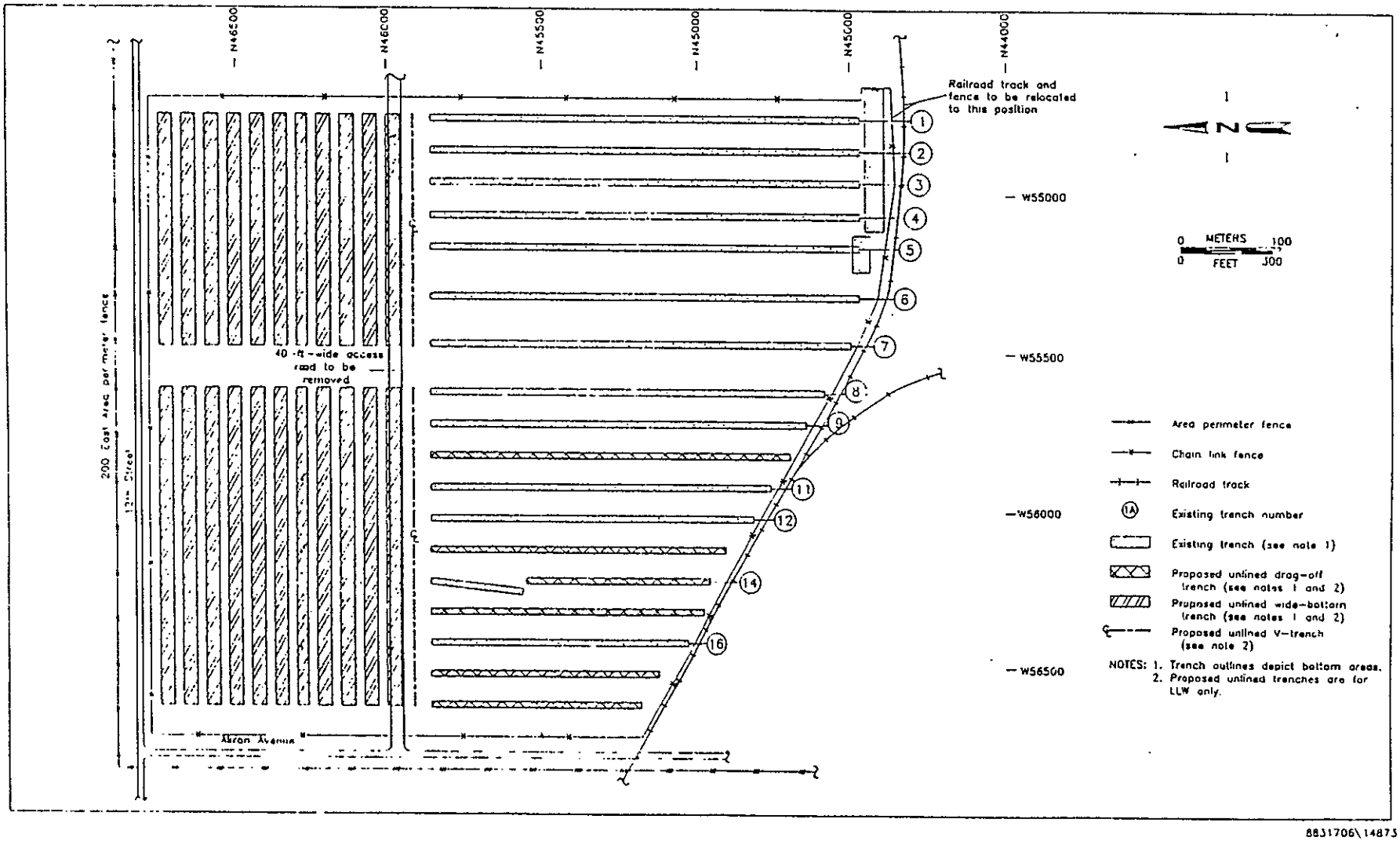
Michael J. Lawrence

Owner/Operator
Michael J. Lawrence, Manager
U.S. Department of Energy
Richland Operations Office

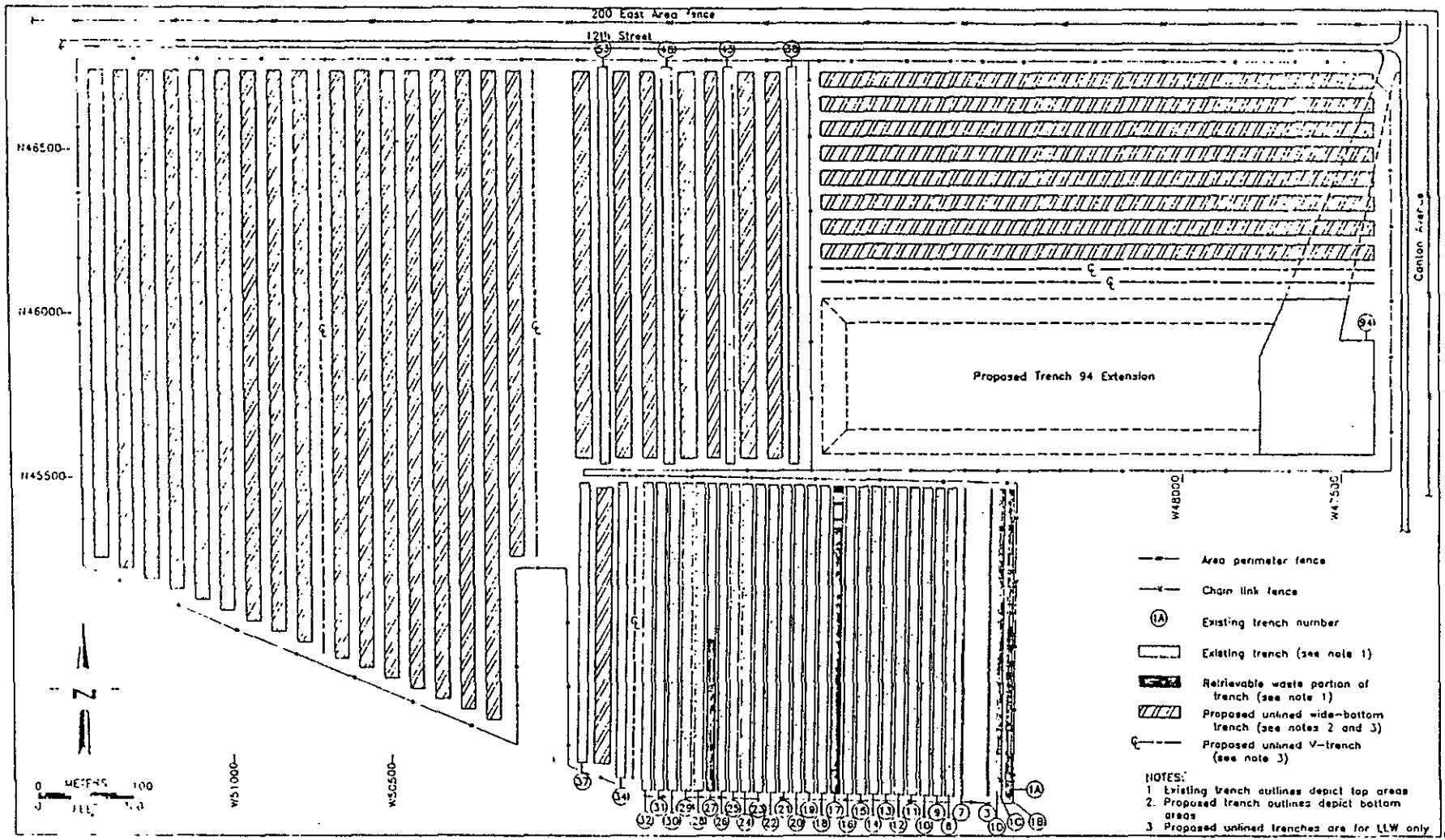
10/20/89
Date



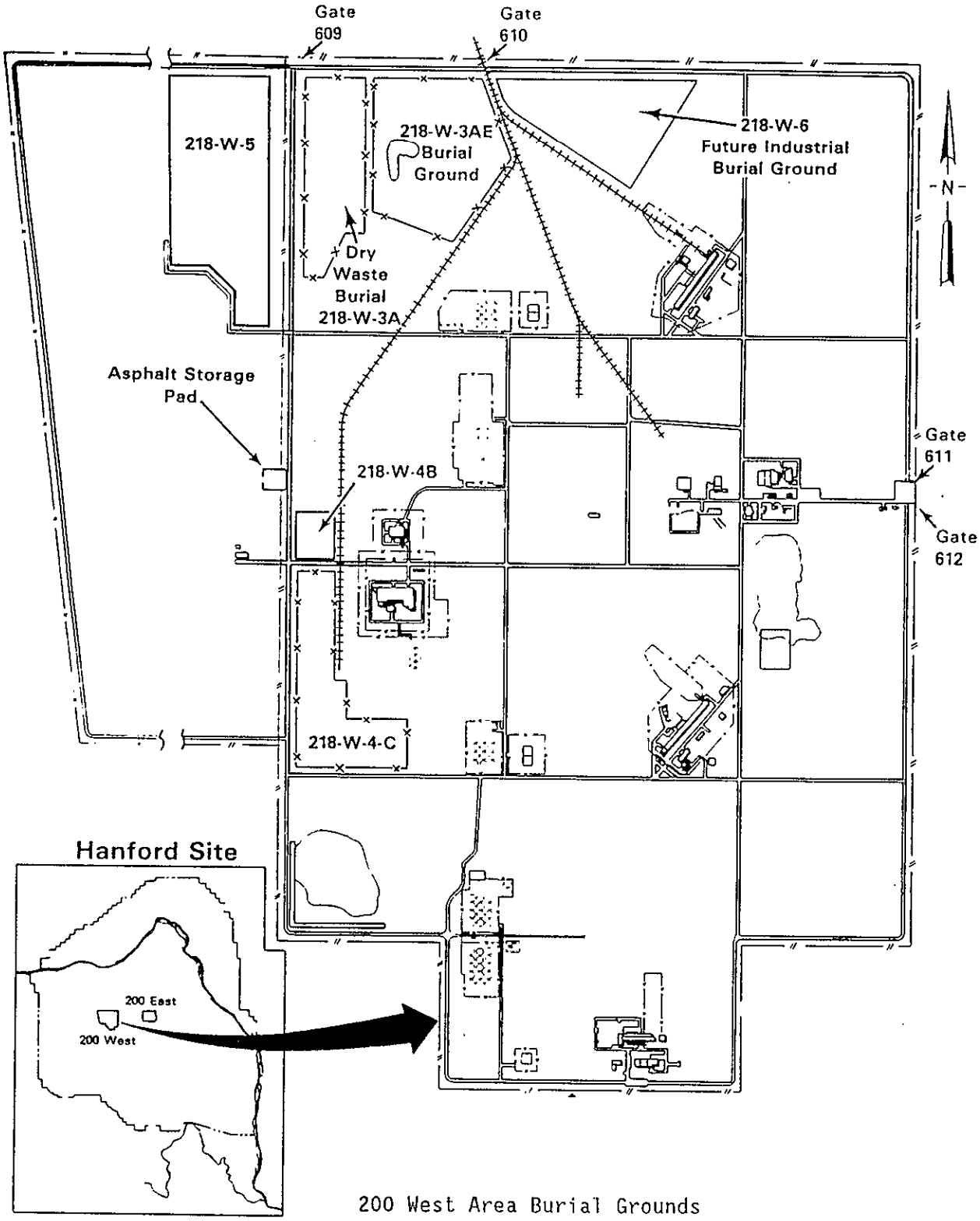
200 East Area Burial Grounds.



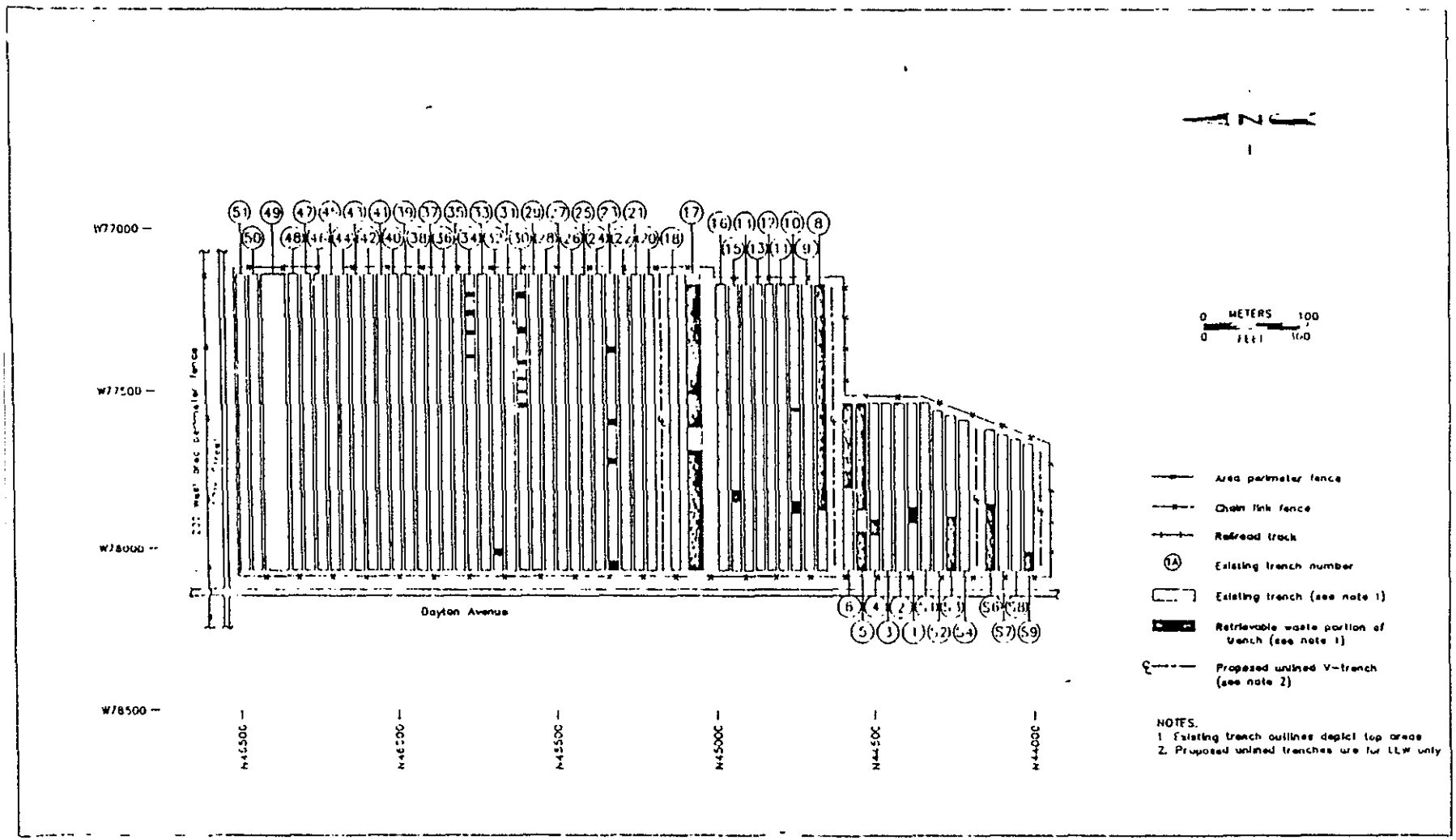
Burial Ground 218-E-10.



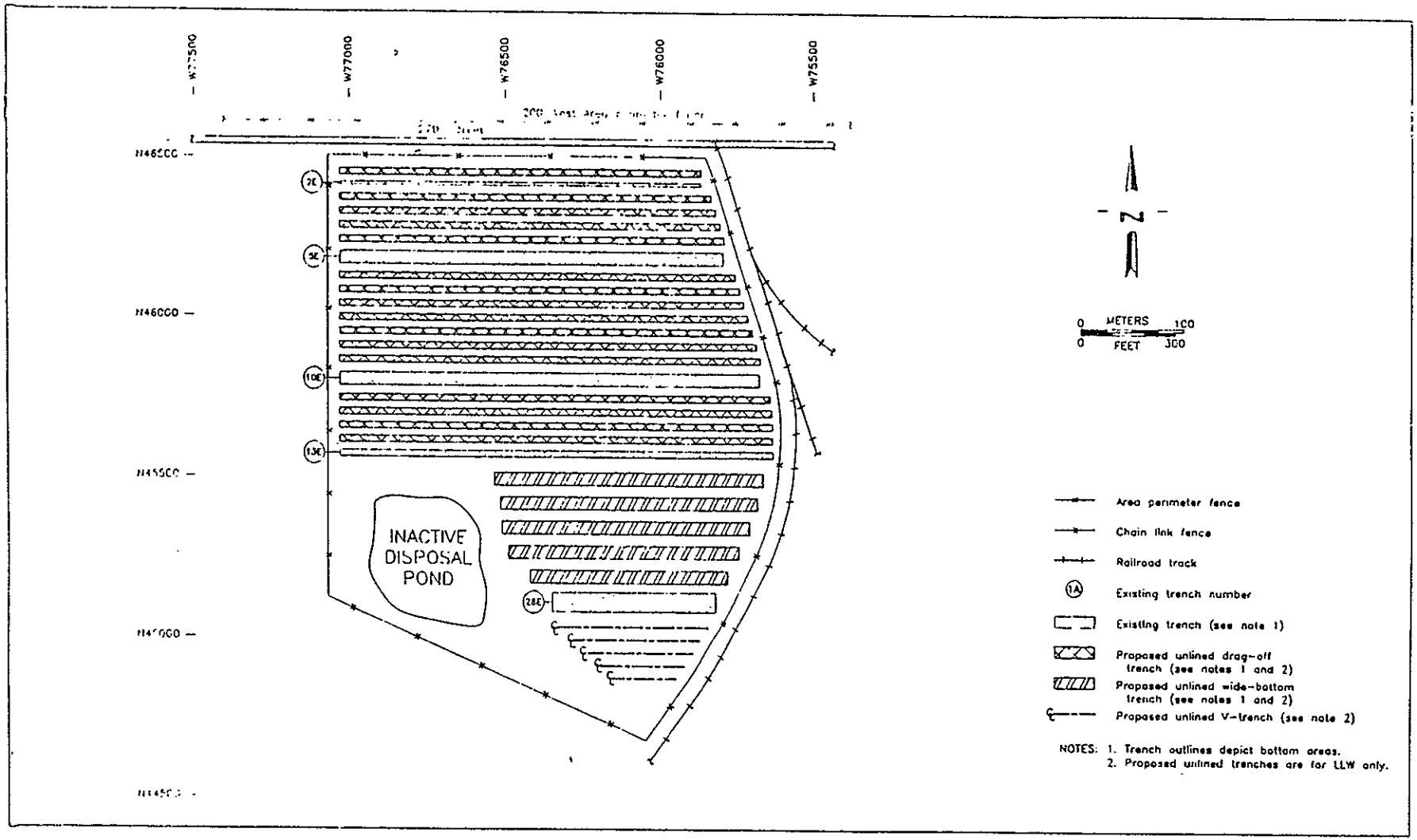
Burial Ground 218-E-12B.



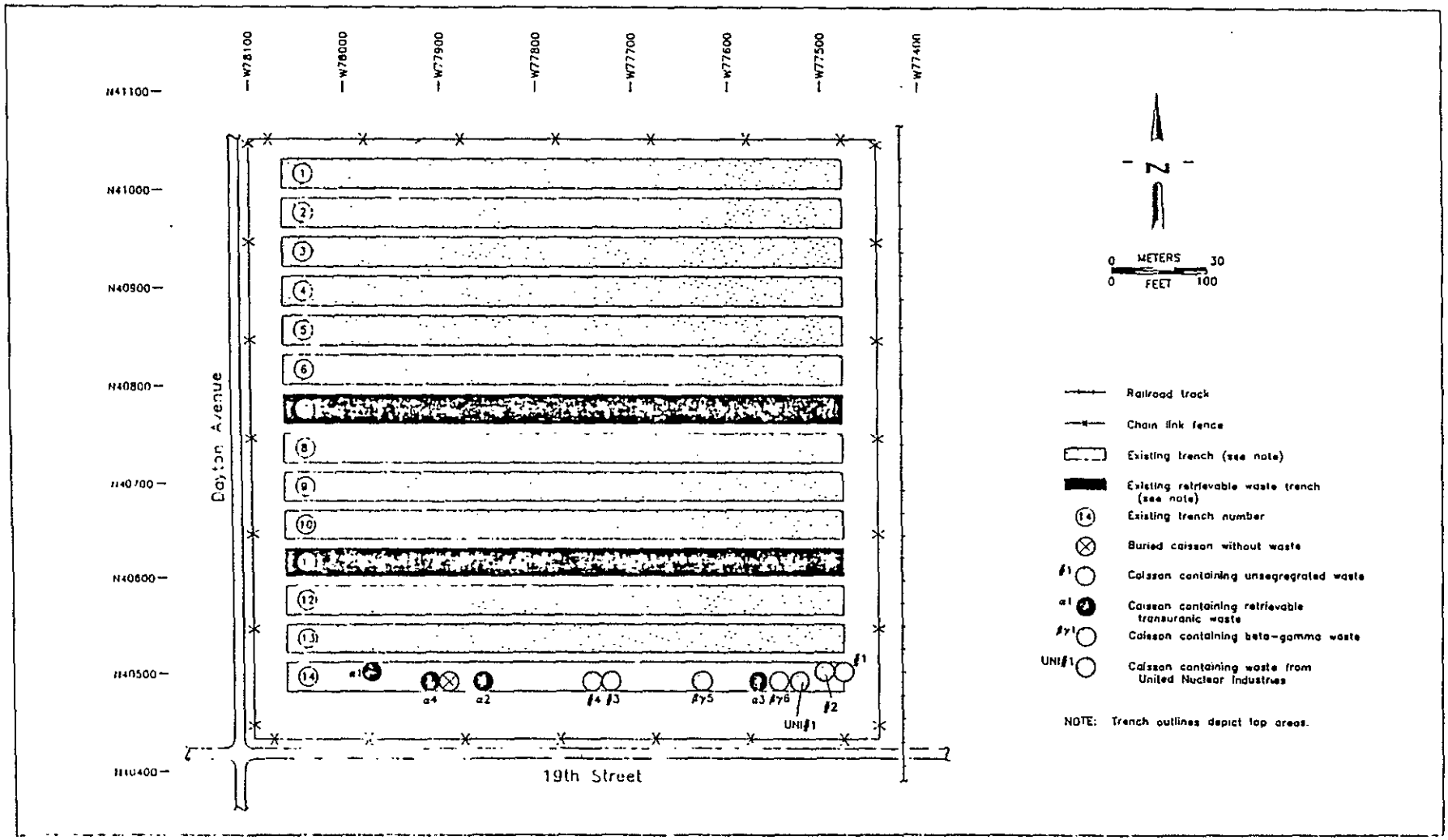
200 West Area Burial Grounds



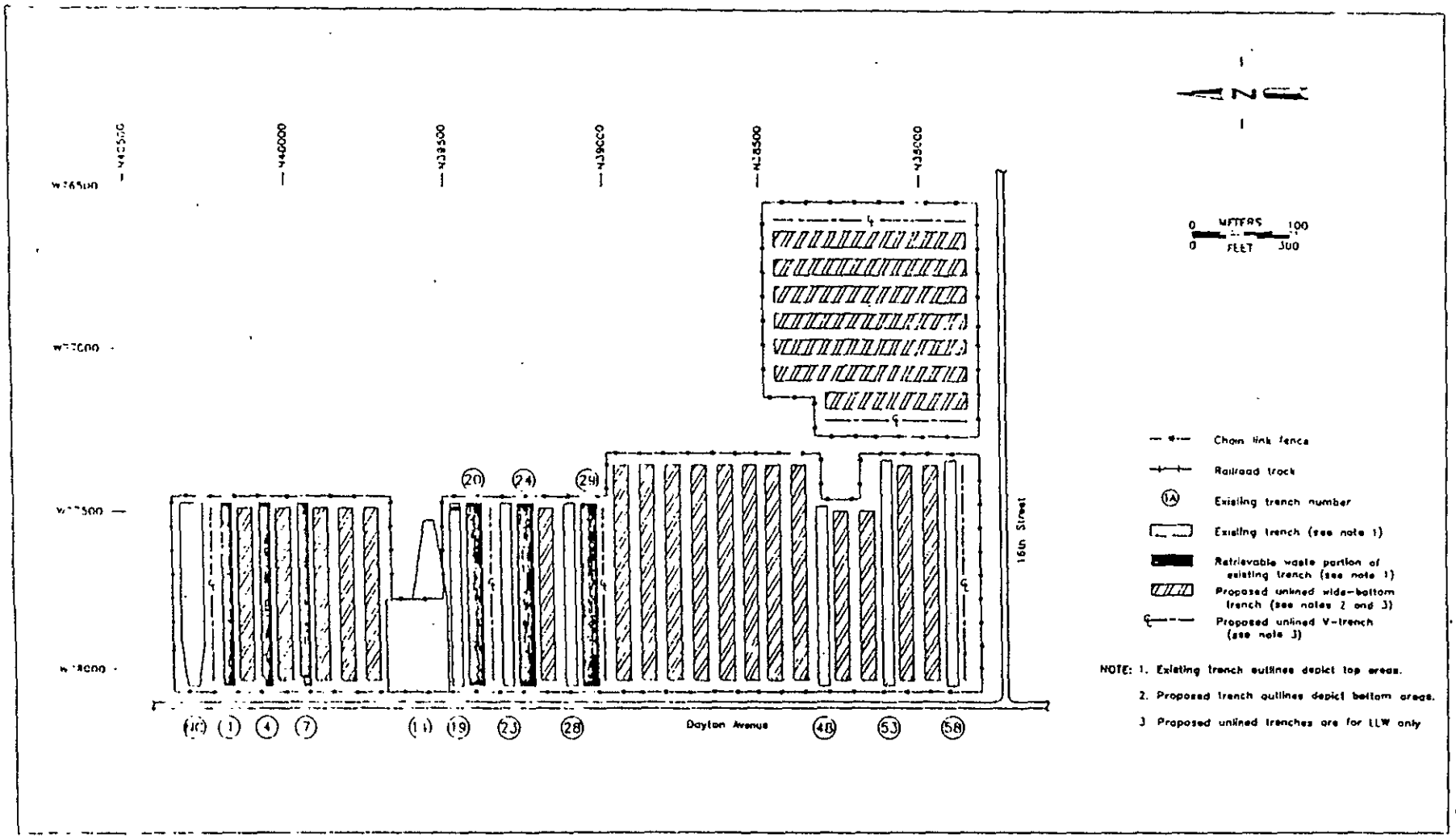
Burial Ground and Retrievable Storage Unit 218-W-3A.



Burial Ground 218-W3AF

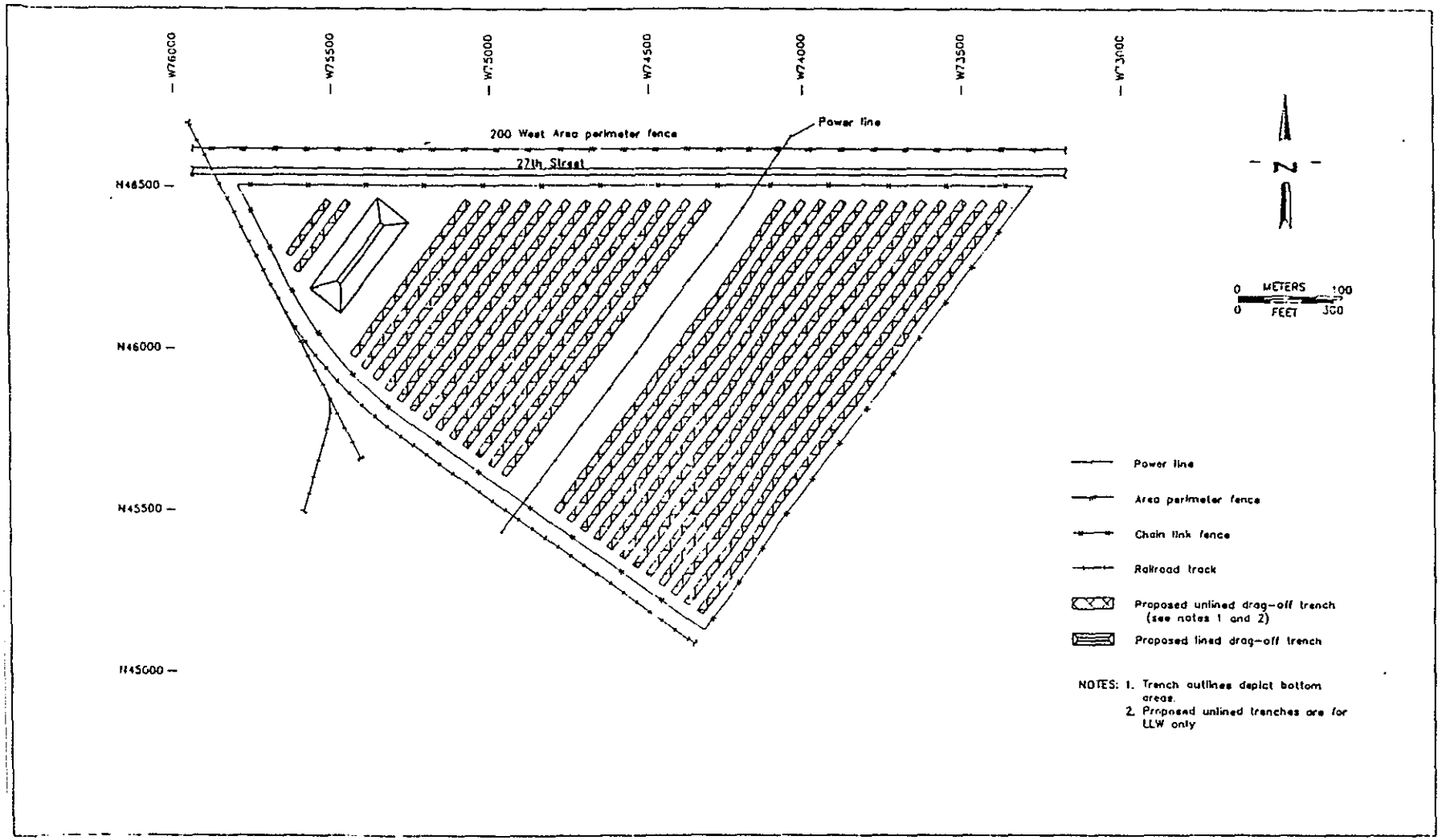


Burial Ground 218-W-4B.

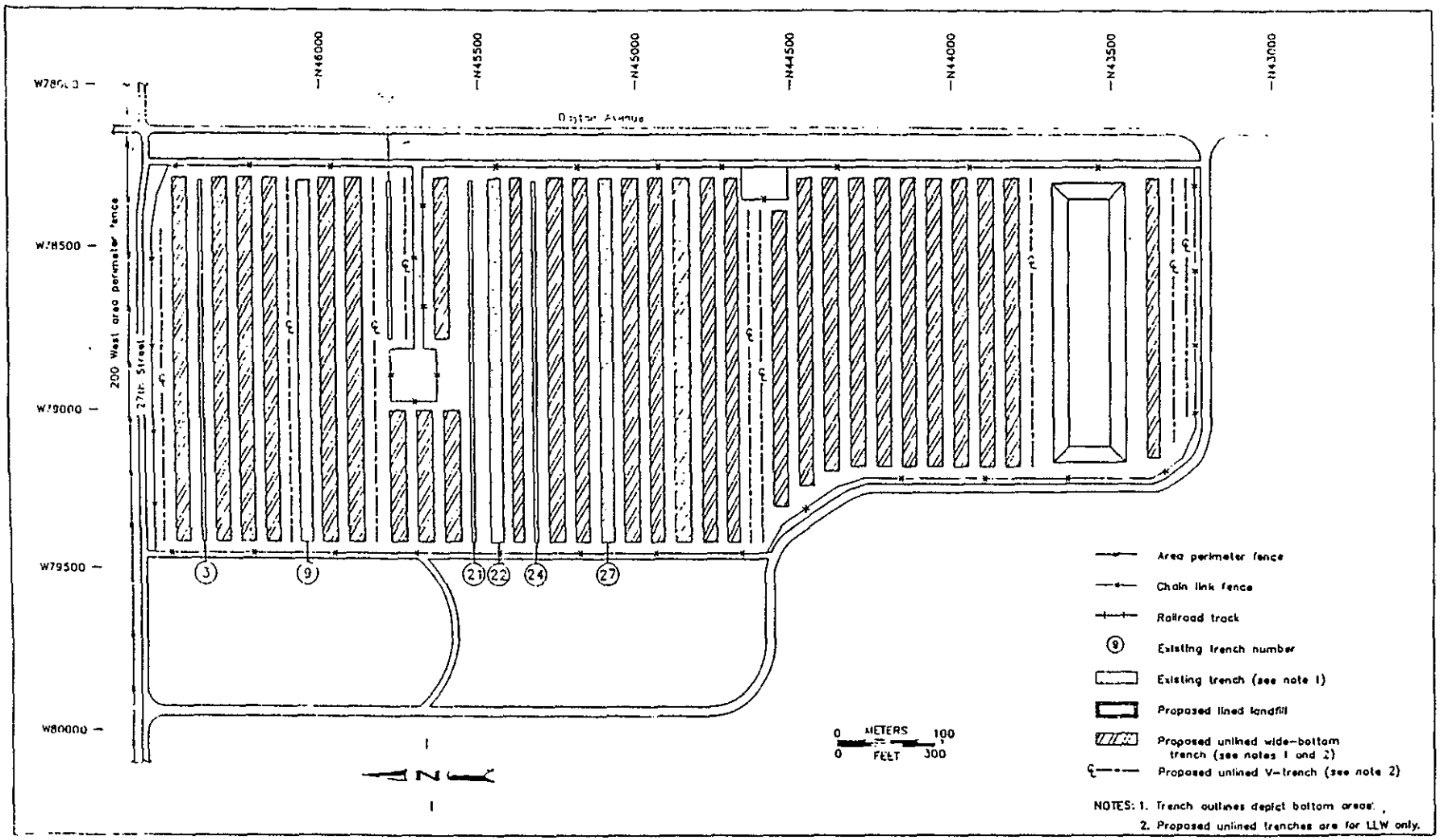


8831706\14884

Burial Ground and Retrievable Storage Unit 218-W-4C.

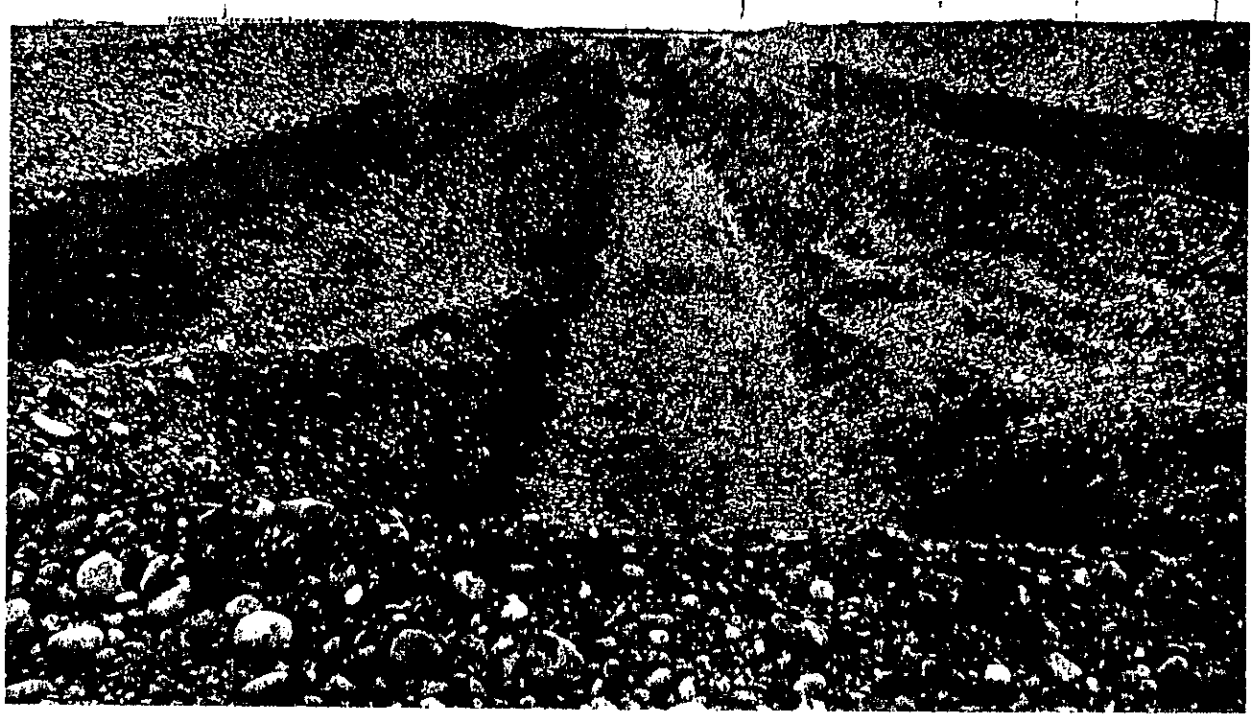


Burial Ground 218-W-6 Future Site.



Burial Ground 218-W-5.

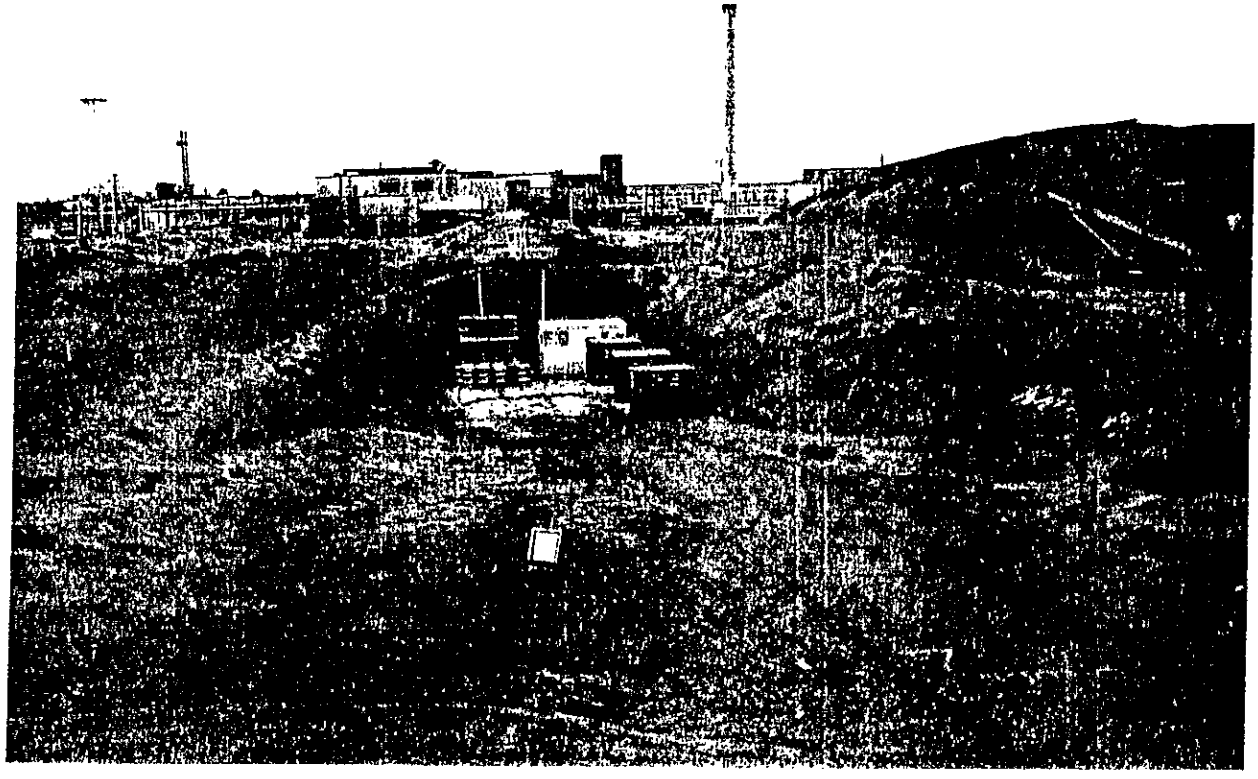
TYPICAL LOW-LEVEL RADIOACTIVE BURIAL GROUND 218-W-3A/200 WEST AREA



46°33′41.318"
119°38′6.440"

8301108-40CN
(PHOTO TAKEN 1983)

TYPICAL RADIOACTIVE RETRIEVABLE STORAGE FACILITY-LIQUID ORGANICS 218-W-4C/200 WEST AREA



46°33′5.892"
119°38′3.981"

8505779-30CN
(PHOTO TAKEN 1985)

SUBMARINE REACTOR COMPARTMENT TRENCH-94

46°34'05"
119°31'31"

89060807-25CN
(PHOTO TAKEN 1989)

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

I. EPA/STATE I.D. NUMBER: WA 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION NUMBER	DATE RECEIVED	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 1 DAY ___ YR 8 6 — FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)

☐ 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 DESIGN 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
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	S 0 1	11,000	G	
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.

S01
The 303-K Storage Facility is used for the storage of radioactive mixed wastes in DOT-specification steel drums. Both liquid and solid wastes are stored in this 303-K Storage Facility. The liquid wastes are stored on a 600 square foot pad within the building. The building provides secondary containment for the contents of the containers. The solid wastes are stored outside the building on a 3500 square foot asphalt and concrete pad. The storage area is surrounded by a chain link fence. Approximately 200 55-gallon containers (or more containers if smaller sized) can be stored at the 303-K Storage Facility.

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*

Continued from page 2.

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

I.D. NUMBER *(enter from page 1)*: WA789000897

IV. DESCRIPTION OF DANGEROUS WASTES *(continued)*

LINE	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	15,000	P	S01	Container Storage
2	F003		↓	↓	Included with above
3	WC01		↓	↓	Included with above
4	WP01		↓	↓	Included with above
5	WT01		↓	↓	Included with above
6	D001	40,000	P	S01	Container Storage
7	WT01		↓	↓	Included with above
8	WT02	40,000	P	S01	Container Storage
9	D002	1,700	P	S01	Container Storage
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 303-K storage area is used for the storage of radioactive mixed wastes in DOT-specification steel drums. These wastes consist of the following:

1) approximately 15,000 pound per year of spent degreasing solvents (occasionally mixed with ethyl acetate).

2) approximately 80,000 pounds per year of waste heat treat salts contaminated with naturally occurring levels of potassium-40. The heat treat salts are generated from both the main bath (40,000 pound per year) and the quench bath (40,000 pounds per year). The main bath salts consist of potassium chloride and sodium chloride, and are toxic dangerous wastes. The quench bath salts consist of potassium nitrate, sodium nitrate, sodium nitrite, potassium chloride, and sodium chloride. The quench bath salts are toxic extremely hazardous wastes.

3) approximately 1,700 pounds per year of copper-flurozirconate waste acid crystals from the bottom of the waste acid tanks in the 334-A Building.

V. FACILITY DRAWING

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

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 and pho

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

VIII. FACILITY OWNER

☒ 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
Michael J. Lawrence Manager, Richland Operations United States Department of Energy	Edward D. Goldberg	10/31/89

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		

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 E. Nolan — 8/23/89

Co-operator
John E. Nolan, President
Westinghouse Hanford Company

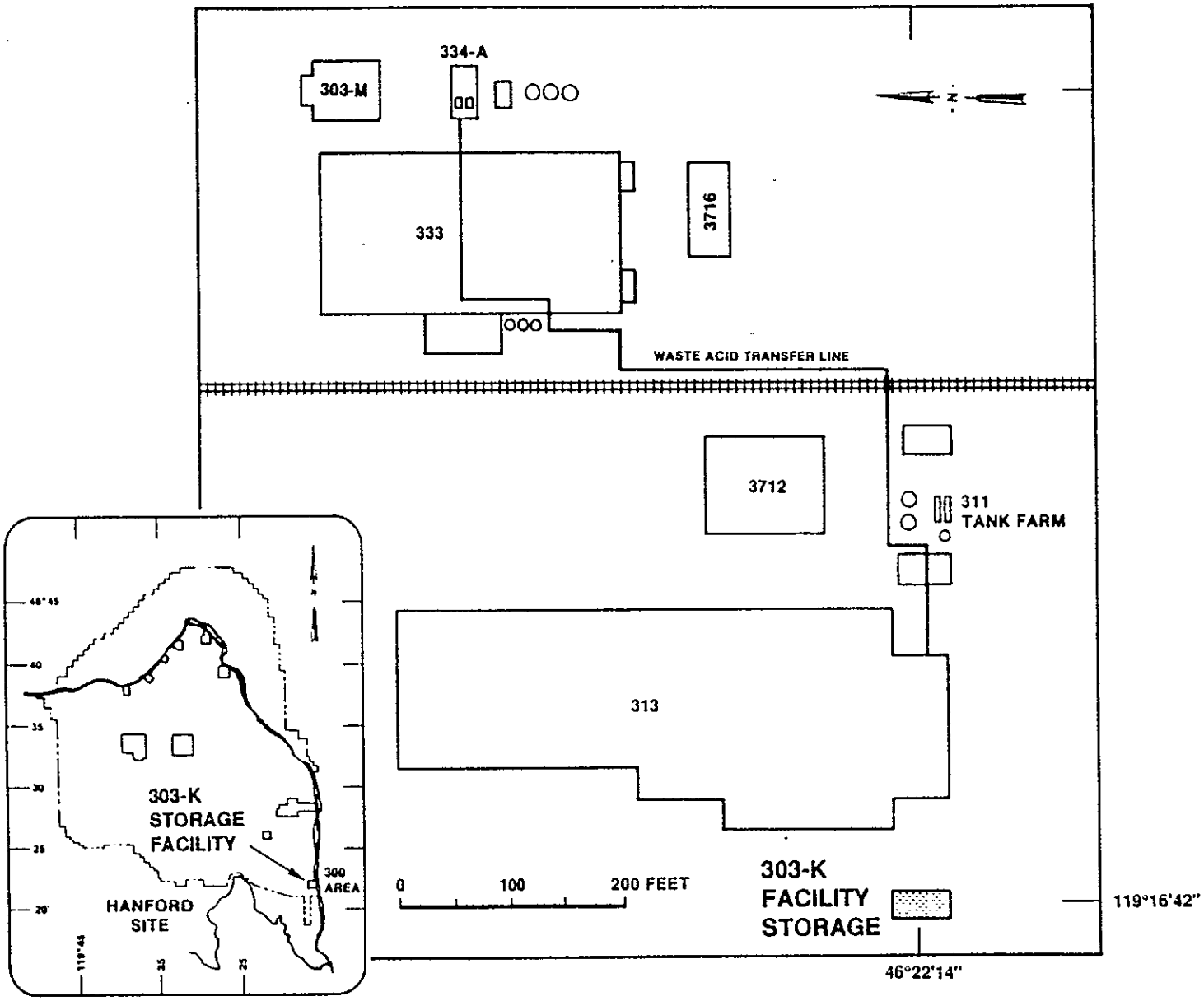
Date

Edward D. Goldberg — 10/31/89

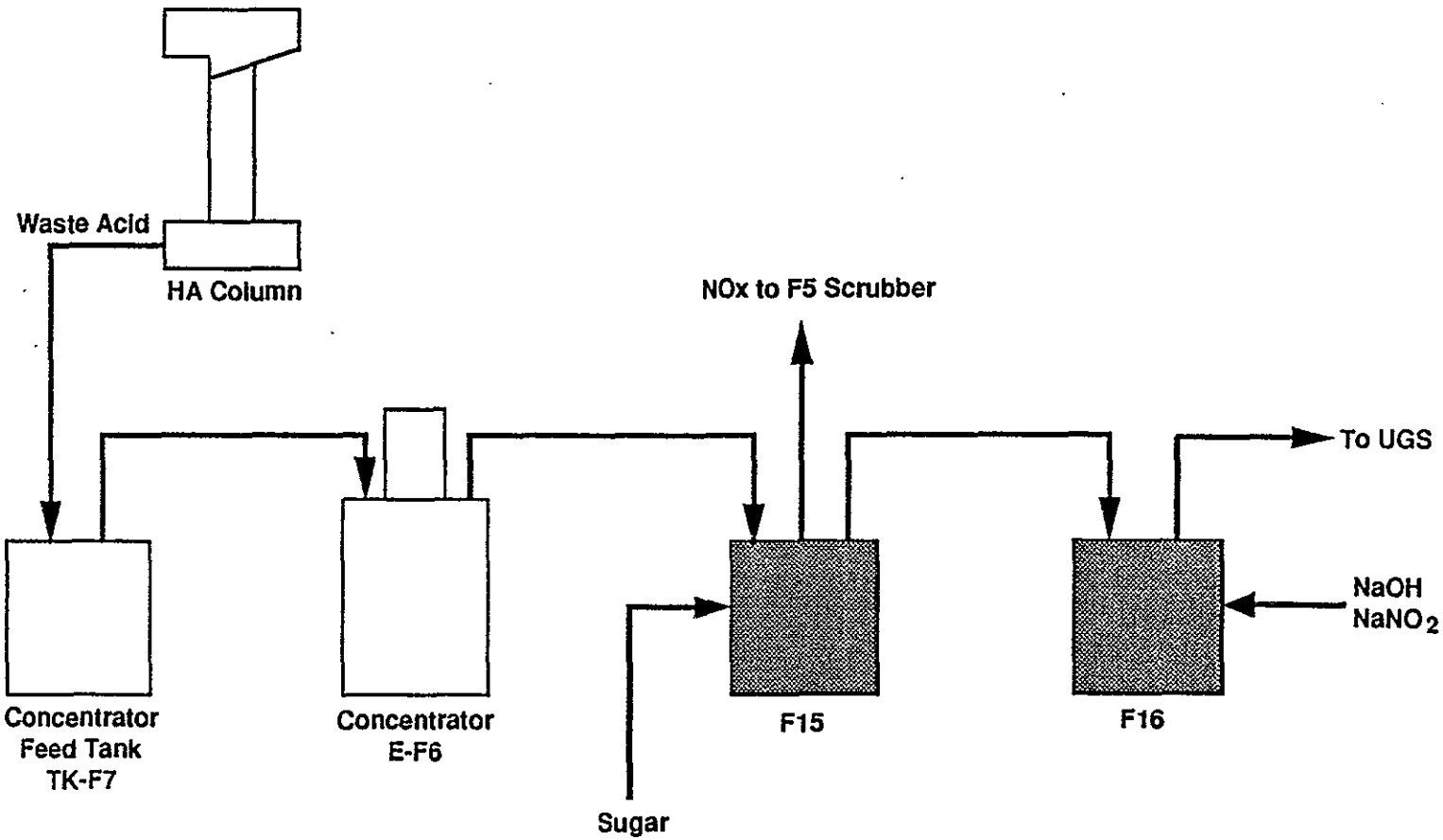
Owner/Operator
Michael J. Lawrence, Manager
U.S. Department of Energy
Richland Operations Office

Date

303-K STORAGE FACILITY SITE PLAN

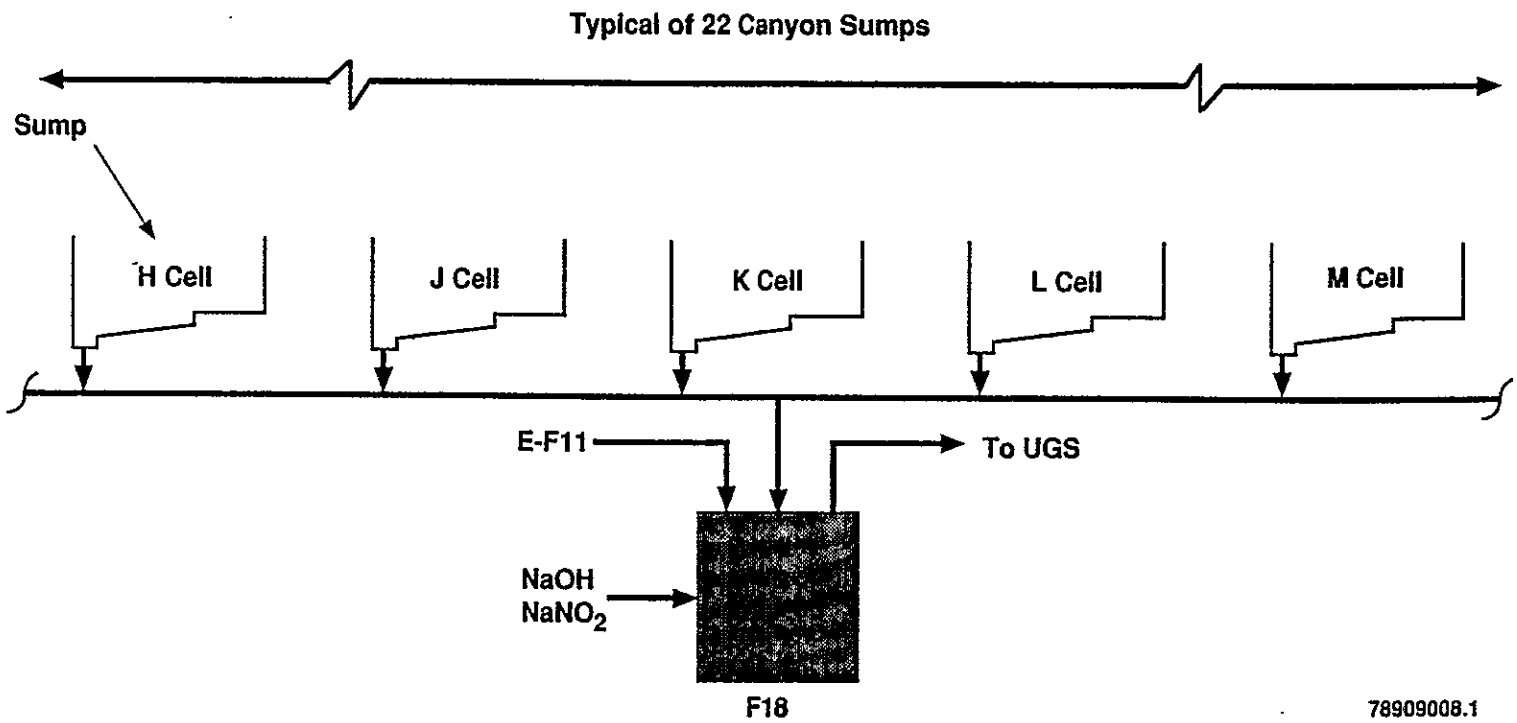


TK-F15/F16 Waste Stream Flow Diagram

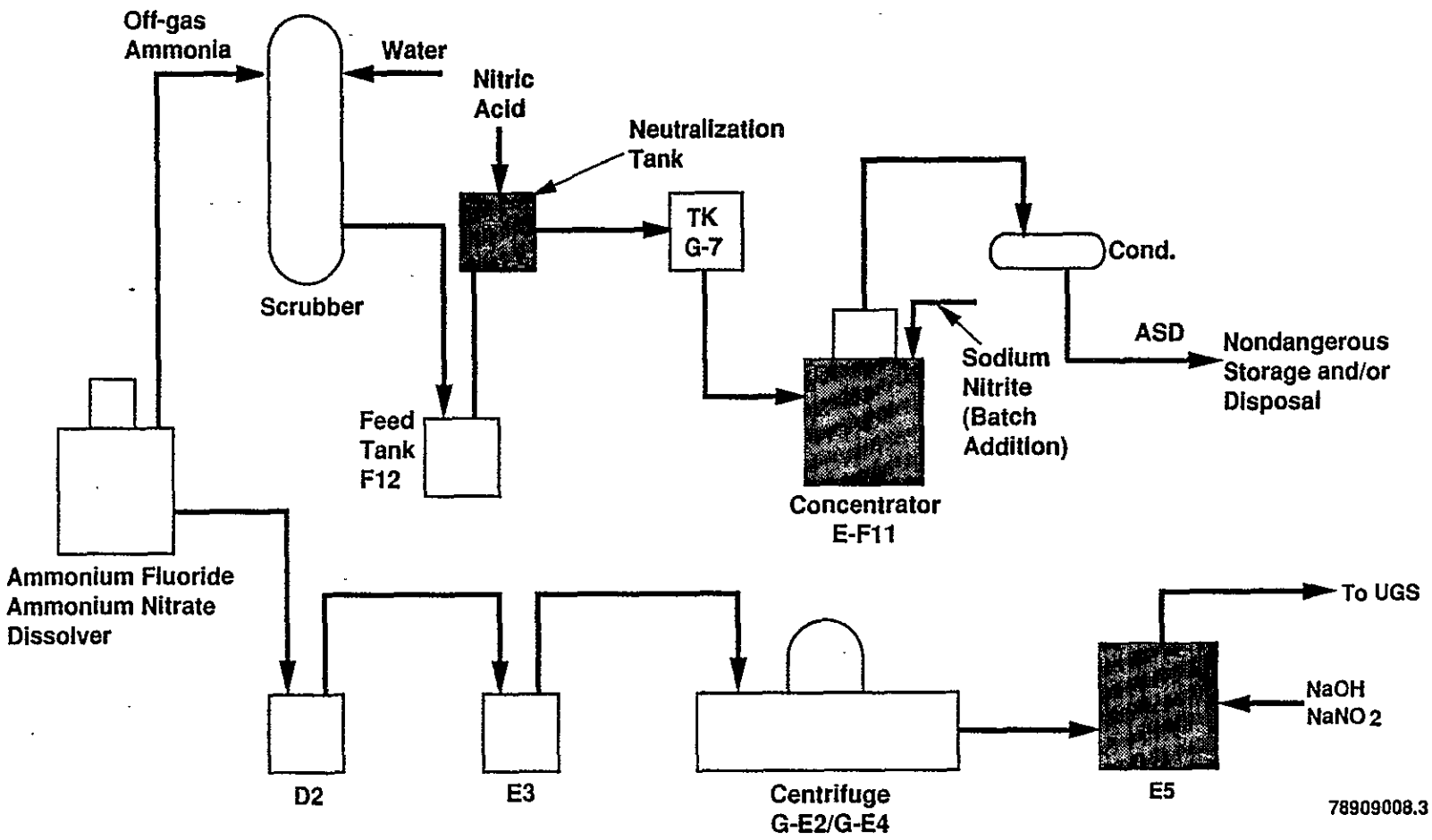


78909008.2

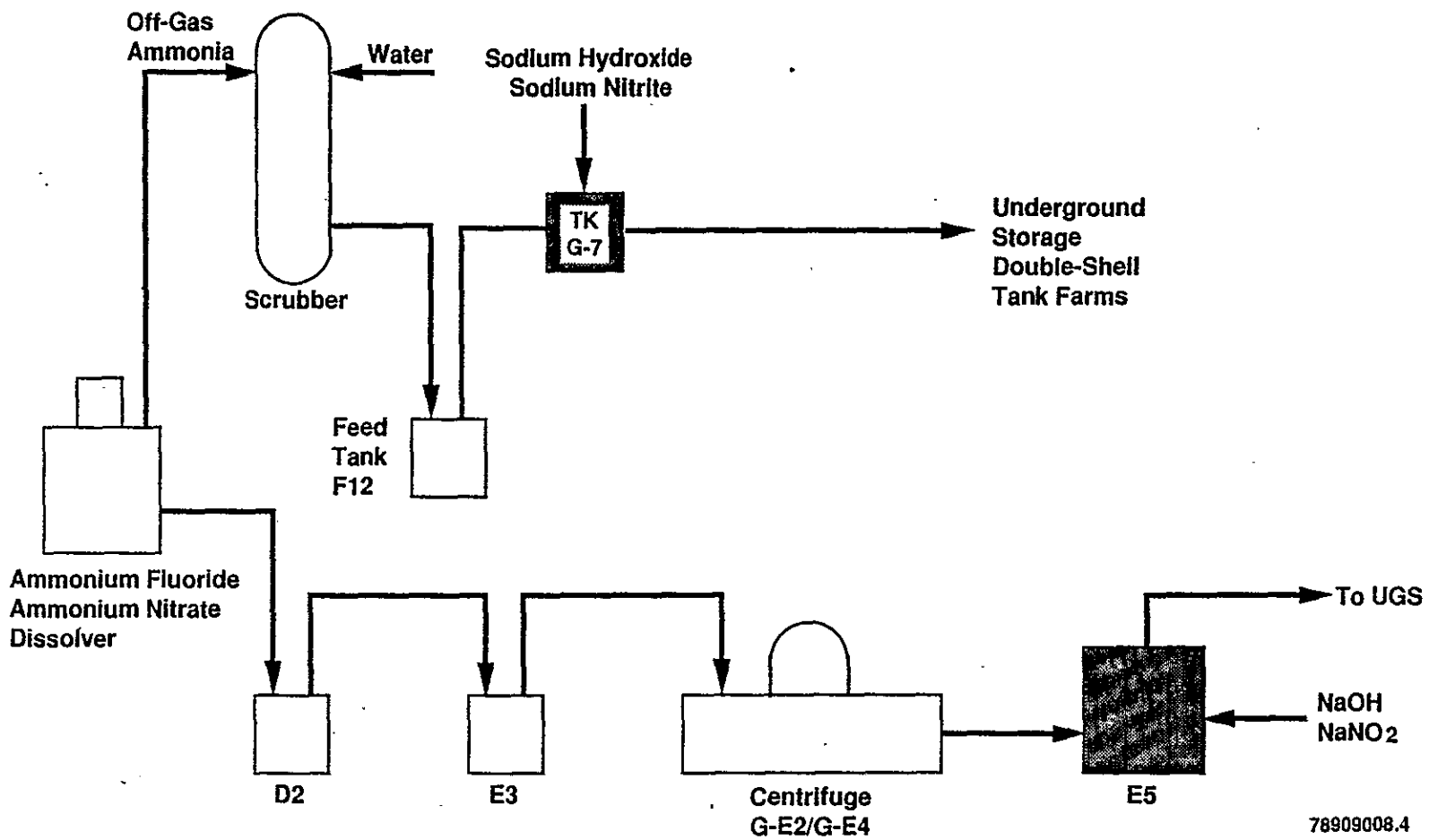
TK-F18 Waste Stream Flow Diagram



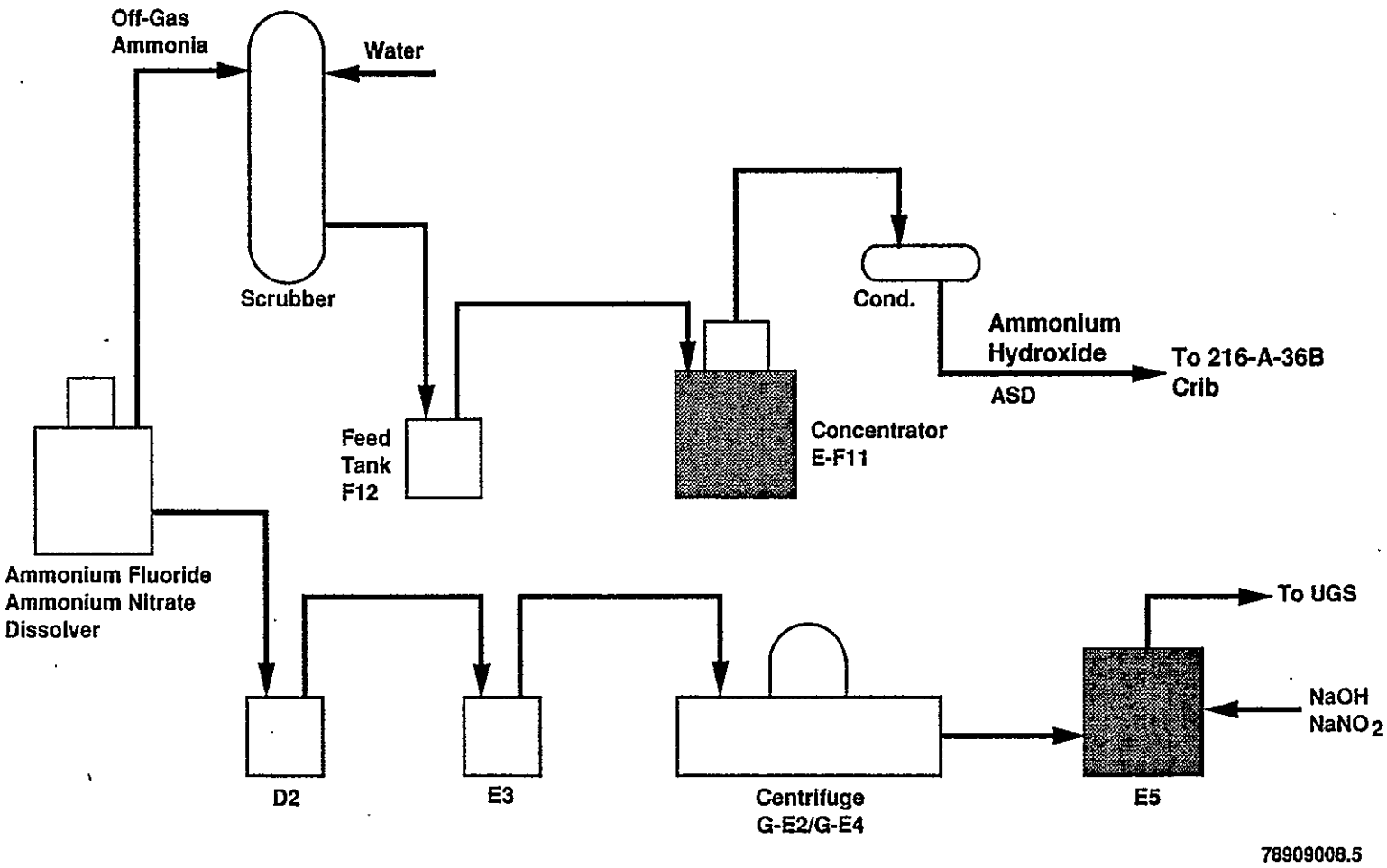
E-F11 and TK-E5 Waste Stream Flow Diagrams
Proposed Process



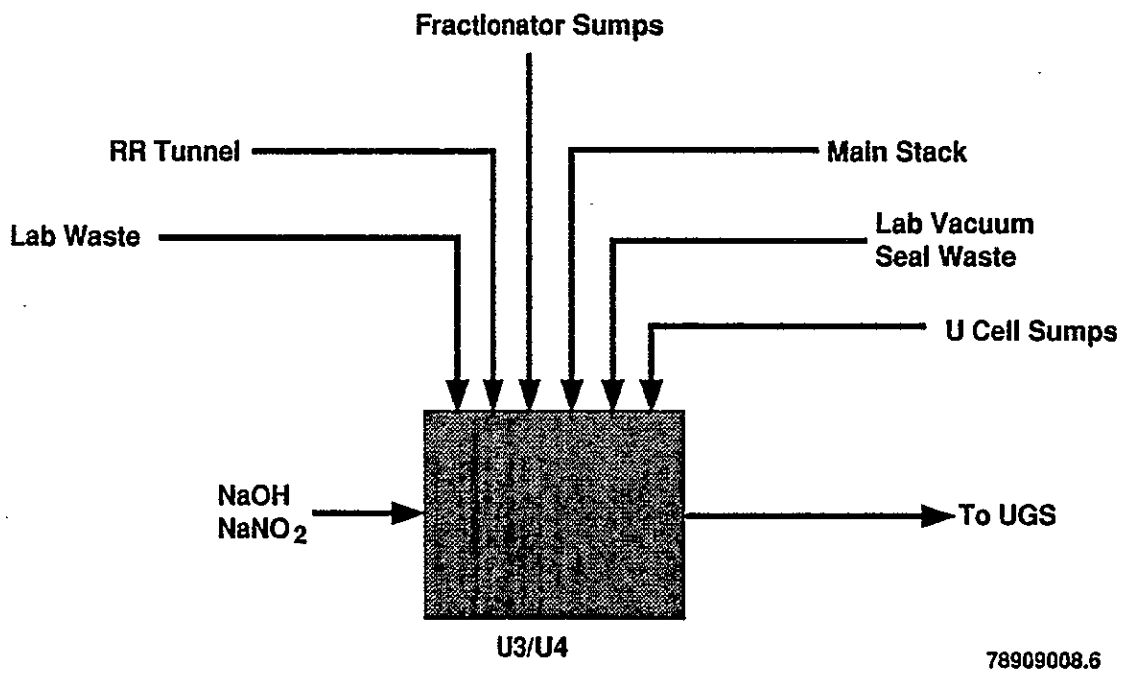
E-F11 and TK-E5 Waste Stream Flow Diagrams
Present Process



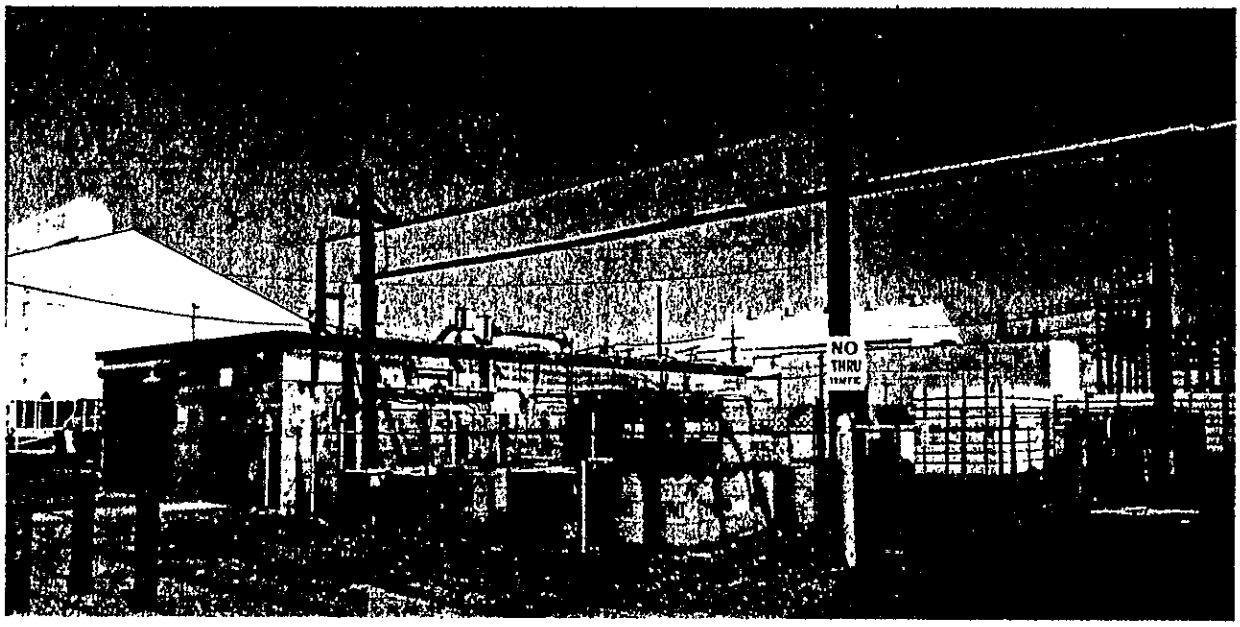
E-F11 and TK-E5 Waste Stream Flow Diagrams
Past Process - Prior to August 1987



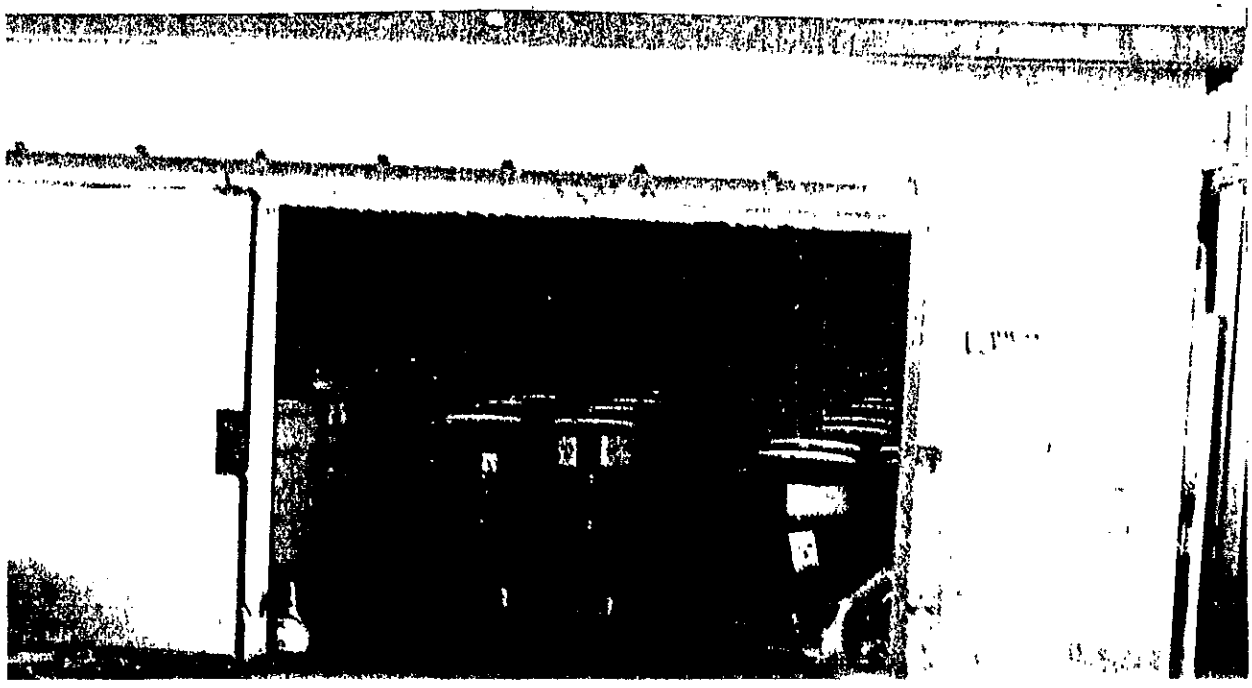
TK-U3/U4 Waste Stream Flow Diagram



303-K STORAGE FACILITY



8704479-10CN



46°22'14"
119°16'42"

8704479-11CN
(PHOTO TAKEN 1987)