START

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

December 27, 1993

94-RPS-073

Mr. David B. Jansen
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Dear Mr. Jansen:

HANFORD FACILITY DANGEROUS WASTE PART A PERMIT APPLICATION FORM 3, REVISION 3, FOR THE SINGLE-SHELL TANK SYSTEM (WA7890008967) (TSD: S-2-4)

Enclosed is the Hanford Facility Dangerous Waste Part A Permit Application (Part A) Form 3, Revision 3, for the Single-Shell Tank (SST) System. The Single-Shell Tank System is located in the 200 Areas of the Hanford Facility. This Part A was revised to support the SST System's waste retrieval efforts and to correct diversion box numbering (Diversion Box 241-BX-152 was changed to 241-BR-152, and Diversion Box 240-S-151 was added).

Should you have any questions regarding the SST System Part A, Revision 3, please contact Mr. C. E. Clark, U.S. Department of Energy, Richland Operations Office on (509) 376-9333 or Mr. R. C. Bowman, Westinghouse Hanford Company on (509) 376-4876.

Sincerely,

James D. Bauer

James D. Bauer, Program Manager
Office of Environmental Assurance,
Permits, and Policy
DOE Richland Operations Office

R E Lerch

R. E. Lerch, Deputy Manager
Restoration and Remediation
Westinghouse Hanford Company

Enclosure

cc: R. C. Bowman, WHC (w/o enclosure)
D. L. Duncan, EPA (w/enclosure)
R. E. Lerch, WHC (w/o enclosure)
S. E. McKinney, Ecology (w/enclosure)
T. M. Michelena, Ecology (w/enclosure)
D. C. Nylander, Ecology (w/enclosure)

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

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

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

FOR OFFICIAL USE ONLY

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

II. FIRST OR REVISED APPLICATION

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

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

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

MO. | DAY | YR. — FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
*SEE ATTACHED TANK LIST TABLE

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

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

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

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☐ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

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

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

1. AMOUNT - Enter the amount.

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

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

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

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U

UNIT OF MEASURE	UNIT OF MEASURE CODE
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H

UNIT OF MEASURE	UNIT OF MEASURE CODE
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	C

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	S02	91,880,000	G		7				
2	T01	600,000	U		8				
3	S03	0.14	Y		9				

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.

See attached sheet.

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	

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

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

S02, T01

The Single-Shell Tank (SST) System consists of 149 tanks that were built between the years 1943 and 1964 to store mixed waste (S02) generated at the Hanford Site. There are two types of tanks in the SST System: 133 of the SSTs (100 series) are 75 feet (23 meters) in diameter with nominal capacities of 500,000 to 1,000,000 gallons (1,900,000 to 3,800,000 liters), while 16 of the SSTs (200 series) are smaller and of a similar design with a 20-foot (6-meter) diameter and a capacity of 55,000 gallons (208,000 liters). Table 1 lists tank numbers, year of construction, year removed from service, and operating capacity. The SST System has a total storage design capacity of 91,880,000 gallons (347,800,000 liters).

Treatment of the mixed waste in the SST System occurs when solids, interstitial liquids, or cooling liquid waste are retrieved (T01). These treatment processes involve but are not limited to mechanical retrieval, sluicing, and saltwell pumping the mixed waste from the SST System at the design limited rate of 600,000 gallons (2,271,240 liters) per day. These design capacity rates are based on the simultaneous pumping of two SSTs in a 24-hour period. Ancillary equipment used for the transfer of liquid mixed waste consists of: (1) centrifugal pumps capable of pumping liquid mixed waste at 400 gallons (1,514 liters) per minute, (2) induction pumps capable of pumping liquid waste from the salt well at 5 gallons (19 liters) per minute, and (3) associated valves and piping to the DST System. Mechanical equipment, sluicing equipment, and similar treatment/processes will not be limited to the processes described above.

S03

Associated with the SST System are 54 inactive diversion boxes acting as waste piles (S03). It is estimated that approximately 50 pounds (23 kilograms) of waste lead is stored in each diversion box (worst-case scenario) accounting for a total of 2,700 pounds (1,225 kilograms) or 0.14 cubic yards (0.11 cubic meters) of waste lead in storage. A summary of the SST System and corresponding diversion boxes is provided in Table 2. All diversion boxes used with the SST System are inactive and presently are isolated (weather covered).

Table 1 — Single-Shell Tank System Summary
(Sheet 1 of 4)

Tank Number	Year of Construction	Year Removed from Service[1]	Operating Capacity (Gallons)
241-A-101	1954-1955	1980	1,000,000
241-A-102	1954-1955	1980	1,000,000
241-A-103	1954-1955	1980	1,000,000
241-A-104	1954-1955	1975	1,000,000
241-A-105	1954-1955	1963	1,000,000
241-A-106	1954-1955	1980	1,000,000
241-AX-101	1963-1964	1980	1,000,000
241-AX-102	1963-1964	1980	1,000,000
241-AX-103	1963-1964	1980	1,000,000
241-AX-104	1963-1964	1978	1,000,000
241-B-101	1943-1944	1974	500,000
241-B-102	1943-1944	1978	500,000
241-B-103	1943-1944	1977	500,000
241-B-104	1943-1944	1972	500,000
241-B-105	1943-1944	1972	500,000
241-B-106	1943-1944	1977	500,000
241-B-107	1943-1944	1969	500,000
241-B-108	1943-1944	1977	500,000
241-B-109	1943-1944	1977	500,000
241-B-110	1943-1944	1971	500,000
241-B-111	1943-1944	1976	500,000
241-B-112	1943-1944	1977	500,000
241-B-201	1943-1944	1971	55,000
241-B-202	1943-1944	1977	55,000
241-B-203	1943-1944	1977	55,000
241-B-204	1943-1944	1977	55,000
241-BX-101	1946-1947	1972	500,000
241-BX-102	1946-1947	1971	500,000
241-BX-103	1946-1947	1977	500,000
241-BX-104	1946-1947	1980	500,000
241-BX-105	1946-1947	1980	500,000
241-BX-106	1946-1947	1971	500,000
241-BX-107	1946-1947	1977	500,000
241-BX-108	1946-1947	1974	500,000
241-BX-109	1946-1947	1974	500,000
241-BX-110	1946-1947	1977	500,000
241-BX-111	1946-1947	1977	500,000
241-BX-112	1946-1947	1977	500,000

Table 1 — Single-Shell Tank System Summary
(Sheet 2 of 4)

Tank Number	Year of Construction	Year Removed from Service[1]	Operating Capacity (Gallons)
241-BY-101	1948-1949	1971	750,000
241-BY-102	1948-1949	1977	750,000
241-BY-103	1948-1949	1973	750,000
241-BY-104	1948-1949	1977	750,000
241-BY-105	1948-1949	1974	750,000
241-BY-106	1948-1949	1977	750,000
241-BY-107	1948-1949	1974	750,000
241-BY-108	1948-1949	1972	750,000
241-BY-109	1948-1949	1979	750,000
241-BY-110	1948-1949	1979	750,000
241-BY-111	1948-1949	1977	750,000
241-BY-112	1948-1949	1978	750,000
241-C-101	1943-1944	1970	500,000
241-C-102	1943-1944	1976	500,000
241-C-103	1943-1944	1979	500,000
241-C-104	1943-1944	1980	500,000
241-C-105	1943-1944	1979	500,000
241-C-106	1943-1944	1979	500,000
241-C-107	1943-1944	1978	500,000
241-C-108	1943-1944	1976	500,000
241-C-109	1943-1944	1976	500,000
241-C-110	1943-1944	1976	500,000
241-C-111	1943-1944	1978	500,000
241-C-112	1943-1944	1976	500,000
241-C-201	1943-1944	1977	55,000
241-C-202	1943-1944	1977	55,000
241-C-203	1943-1944	1977	55,000
241-C-204	1943-1944	1977	55,000
241-S-101	1950-1951	1980	750,000
241-S-102	1950-1951	1980	750,000
241-S-103	1950-1951	1980	750,000
241-S-104	1950-1951	1968	750,000
241-S-105	1950-1951	1974	750,000
241-S-106	1950-1951	1979	750,000
241-S-107	1950-1951	1980	750,000
241-S-108	1950-1951	1979	750,000
241-S-109	1950-1951	1979	750,000
241-S-110	1950-1951	1979	750,000
241-S-111	1950-1951	1972	750,000
241-S-112	1950-1951	1974	750,000

Table 1 — Single-Shell Tank System Summary
(Sheet 3 of 4)

Tank Number	Year of Construction	Year Removed from Service[1]	Operating Capacity (Gallons)
241-SX-101	1953-1954	1980	1,000,000
241-SX-102	1953-1954	1980	1,000,000
241-SX-103	1953-1954	1980	1,000,000
241-SX-104	1953-1954	1980	1,000,000
241-SX-105	1953-1954	1980	1,000,000
241-SX-106	1953-1954	1980	1,000,000
241-SX-107	1953-1954	1964	1,000,000
241-SX-108	1953-1954	1962	1,000,000
241-SX-109	1953-1954	1965	1,000,000
241-SX-110	1953-1954	1976	1,000,000
241-SX-111	1953-1954	1974	1,000,000
241-SX-112	1953-1954	1969	1,000,000
241-SX-113	1953-1954	1958	1,000,000
241-SX-114	1953-1954	1972	1,000,000
241-SX-115	1953-1954	1965	1,000,000
241-T-101	1943-1944	1979	500,000
241-T-102	1943-1944	1976	500,000
241-T-103	1943-1944	1974	500,000
241-T-104	1943-1944	1974	500,000
241-T-105	1943-1944	1976	500,000
241-T-106	1943-1944	1973	500,000
241-T-107	1943-1944	1976	500,000
241-T-108	1943-1944	1974	500,000
241-T-109	1943-1944	1974	500,000
241-T-110	1943-1944	1976	500,000
241-T-111	1943-1944	1974	500,000
241-T-112	1943-1944	1977	500,000
241-T-201	1943-1944	1976	55,000
241-T-202	1943-1944	1976	55,000
241-T-203	1943-1944	1976	55,000
241-T-204	1943-1944	1976	55,000

Table I — Single-Shell Tank System Summary
(Sheet 4 of 4)

Tank Number	Year of Construction	Year Removed from Service[1]	Operating Capacity (Gallons)
241-TX-101	1947-1948	1980	750,000
241-TX-102	1947-1948	1977	750,000
241-TX-103	1947-1948	1980	750,000
241-TX-104	1947-1948	1977	750,000
241-TX-105	1947-1948	1977	750,000
241-TX-106	1947-1948	1977	750,000
241-TX-107	1947-1948	1977	750,000
241-TX-108	1947-1948	1977	750,000
241-TX-109	1947-1948	1977	750,000
241-TX-110	1947-1948	1977	750,000
241-TX-111	1947-1948	1977	750,000
241-TX-112	1947-1948	1974	750,000
241-TX-113	1947-1948	1971	750,000
241-TX-114	1947-1948	1971	750,000
241-TX-115	1947-1948	1977	750,000
241-TX-116	1947-1948	1969	750,000
241-TX-117	1947-1948	1969	750,000
241-TX-118	1947-1948	1980	750,000
241-TY-101	1951-1952	1973	750,000
241-TY-102	1951-1952	1979	750,000
241-TY-103	1951-1952	1973	750,000
241-TY-104	1951-1952	1974	750,000
241-TY-105	1951-1952	1980	750,000
241-TY-106	1951-1952	1959	750,000
241-U-101	1943-1944	1960	500,000
241-U-102	1943-1944	1979	500,000
241-U-103	1943-1944	1978	500,000
241-U-104	1943-1944	1951	500,000
241-U-105	1943-1944	1978	500,000
241-U-106	1943-1944	1977	500,000
241-U-107	1943-1944	1980	500,000
241-U-108	1943-1944	1979	500,000
241-U-109	1943-1944	1978	500,000
241-U-110	1943-1944	1975	500,000
241-U-111	1943-1944	1980	500,000
241-U-112	1943-1944	1970	500,000
241-U-201	1943-1944	1977	55,000
241-U-202	1943-1944	1977	55,000
241-U-203	1943-1944	1977	55,000
241-U-204	1943-1944	1977	55,000

[1]The last year the tank was capable of receiving waste; actual date of last waste receipt might have been earlier.

Table 2 - Single-Shell Tank System Diversion Box Matrix
(sheet 1 of 2)

Unit	SSTs	Diversion Boxes
A	241-A-101 through 241-A-106	241-A-152
	241-AX-101 through 241-AX-104	241-A-153
		241-AX-151
		241-AX-152
		241-AX-155
		241-AY-151
		241-AY-152
B	241-B-101 through 241-B-112	241-B-151
	241-B-201 through 241-B-204	241-B-152
	241-BX-101 through 241-BX-112	241-B-153
	241-BY-101 through 241-BY-112	241-B-154
		241-B-252
		241-BR-152
		241-BX-153
		241-BX-154
		241-BX-155
		241-BXR-151
		241-BXR-152
		241-BXR-153
		241-BYR-152
		241-BYR-153
		241-BYR-154
C	241-C-101 through 241-C-112	241-C-151
	241-C-201 through 241-C-204	241-C-152
		241-C-153
		241-C-154
		241-C-252
		241-CR-151
		241-CR-152
		241-CR-153
S	241-S-101 through 241-S-152	240-S-151
	241-SX-101 through 241-SX-115	240-S-152
		241-S-152
		241-SX-151
		241-SX-152

Table 2 - Single-Shell Tank System Diversion Box Matrix
(sheet 2 of 2)

Unit	SSTs	Diversion Boxes
T	241-T-101 through 241-T-112	241-T-151
	241-T-201 through 241-T-204	241-T-152
	241-TX-101 through 241-TX-118	241-T-153
	241-TY-101 through 241-TY-106	241-T-252
		242-T-151
		241-TR-152
		241-TR-153
		241-TX-153
		241-TX-155
		241-TXR-151
		241-TXR-152
		241-TXR-153
		241-TY-153
U	241-U-101 through 241-U-112	241-U-153
	241-U-201 through 241-U-204	241-U-252
		241-UR-151
		241-UR-152
		241-UR-153
		241-UR-154

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

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

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D001	450,000.000	P	S02 T01	Storage - Tank/Treatment - Tank
2	D002				
3	D003				
4	D004				
5	D005				
6	D006				
7	D007				
8	D008				
9	D009				
10	D010				
11	D011				
12	D018				
13	D019				
14	D022				
15	D028				
16	D029				
17	D030				
18	D033				
19	D034				
20	D035				
21	D036				
22	D038				
23	D039				
24	D040				
25	D041				

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

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

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

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	WT01	450,000,000	P	S02	T01			Storage - Tank/Treatment - Tank
2	WT02							
3	WC01							
4	WC02							
5	WP01							
6	WP02							
7	F001							
8	F002							
9	F003							
10	F004							
11	F005							Included with above
12	D008	2,650	P	S03				Storage - Waste Pile
13	WT01							Included with above
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

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

The mixed waste stored in the SST System was generated by four major chemical reprocessing operations: the bismuth phosphate (BiPo) process, the reduction-oxidation (REDOX) process, the plutonium-uranium extraction (PUREX) process, and the tributyl phosphate (TBP) process.

The dangerous waste codes listed under the description of dangerous waste are based on a computer model and past process knowledge rather than on chemical analysis of waste. The Estimated Annual Quantity of Dangerous Waste (item III.B.1) listed is 450,000,000 pounds and is based on an average density of the waste calculated from the densities of 26 core samples taken of waste stored in various SSTs. The average density (12 pounds/gallon [1.4 kilograms/liter]) was multiplied by (36,836,000 gallons [139,440,000 liters]) and then rounded-up to 450,000,000 pounds (204,115,500 kilograms).

The quantity of waste lead stored in the diversion boxes is based on previous research of historical records. Because of the radiological hazards associated with individual inspection of the diversion boxes, a quantity of 50 pounds (23 kilograms) of waste lead was estimated for each box. This represents a conservative estimate, as 50 pounds (23 kilograms) is the maximum quantity of waste lead known to be in any one diversion box.

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 drawings and photos.

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

VIII. FACILITY OWNER

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

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

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

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

IX. OWNER CERTIFICATION

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

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office		12/22/93

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

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.

9413139.1905

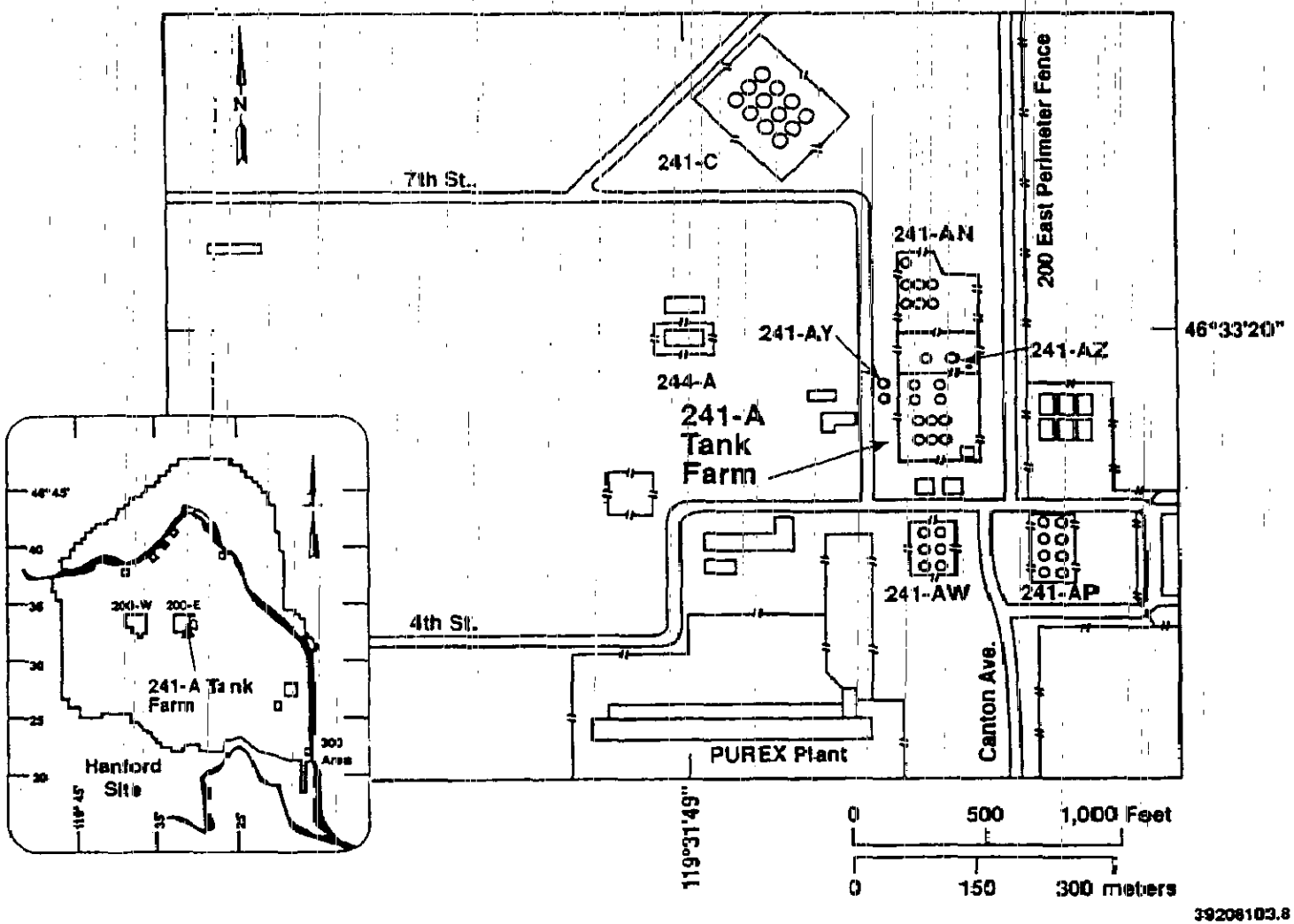
John D. Wagoner — 12/22/93
Date

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

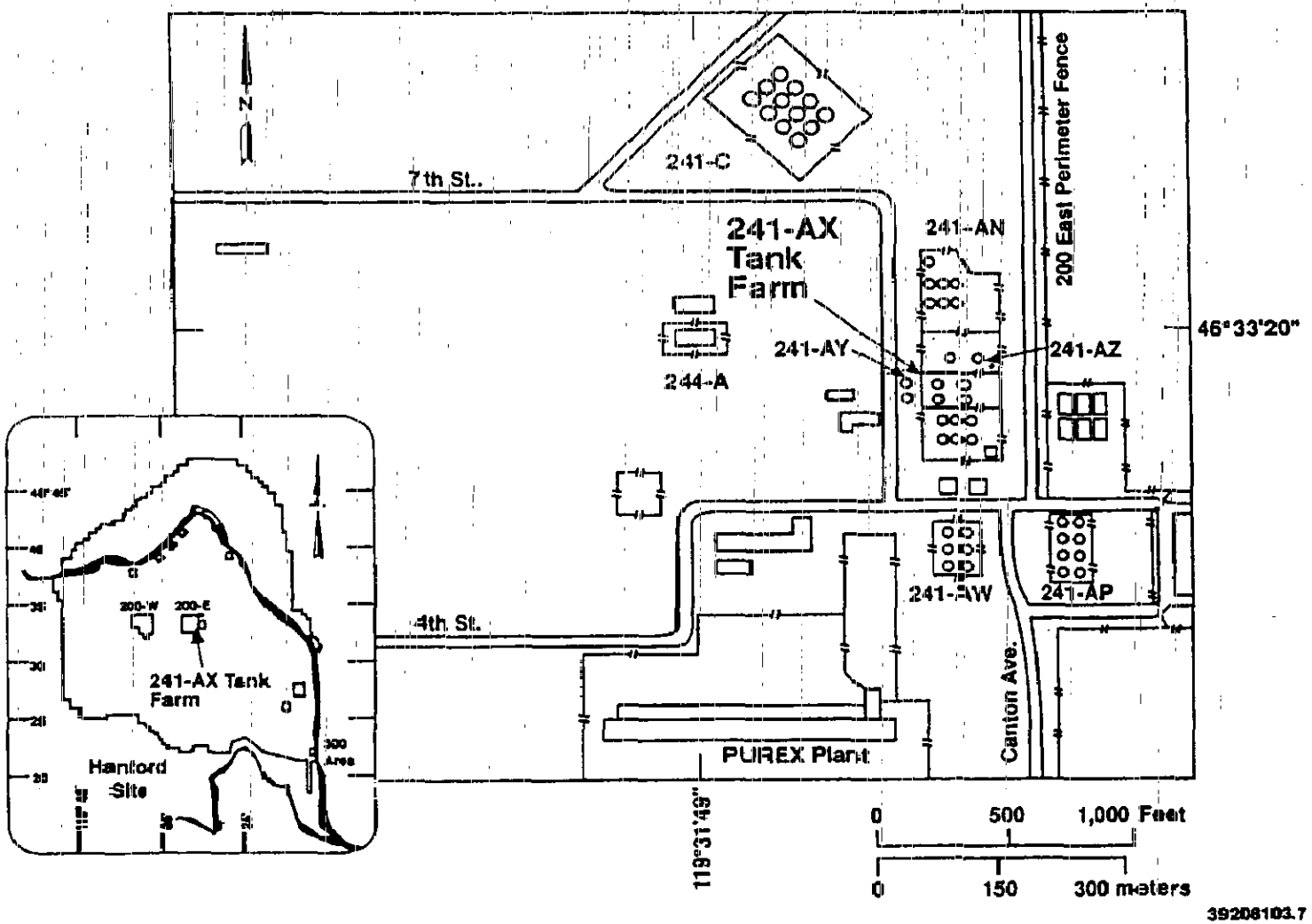
Thomas M. Anderson — 12/1/93
Date

Co-operator
Thomas M. Anderson, President
Westinghouse Hanford Company

241-A Single-Shell Tank Farm
Site Plan

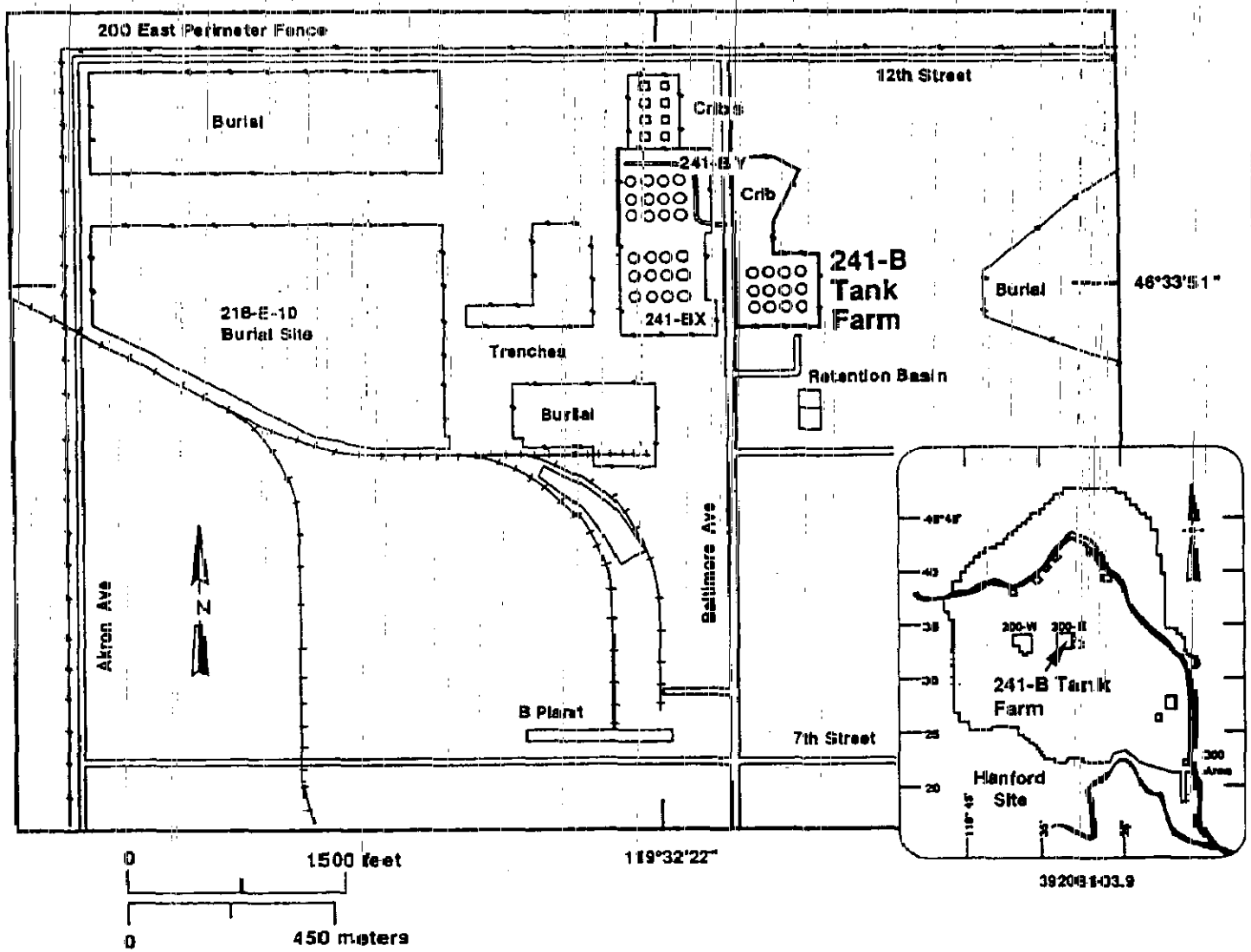


241-AX Single-Shell Tank Farm
Site Plan



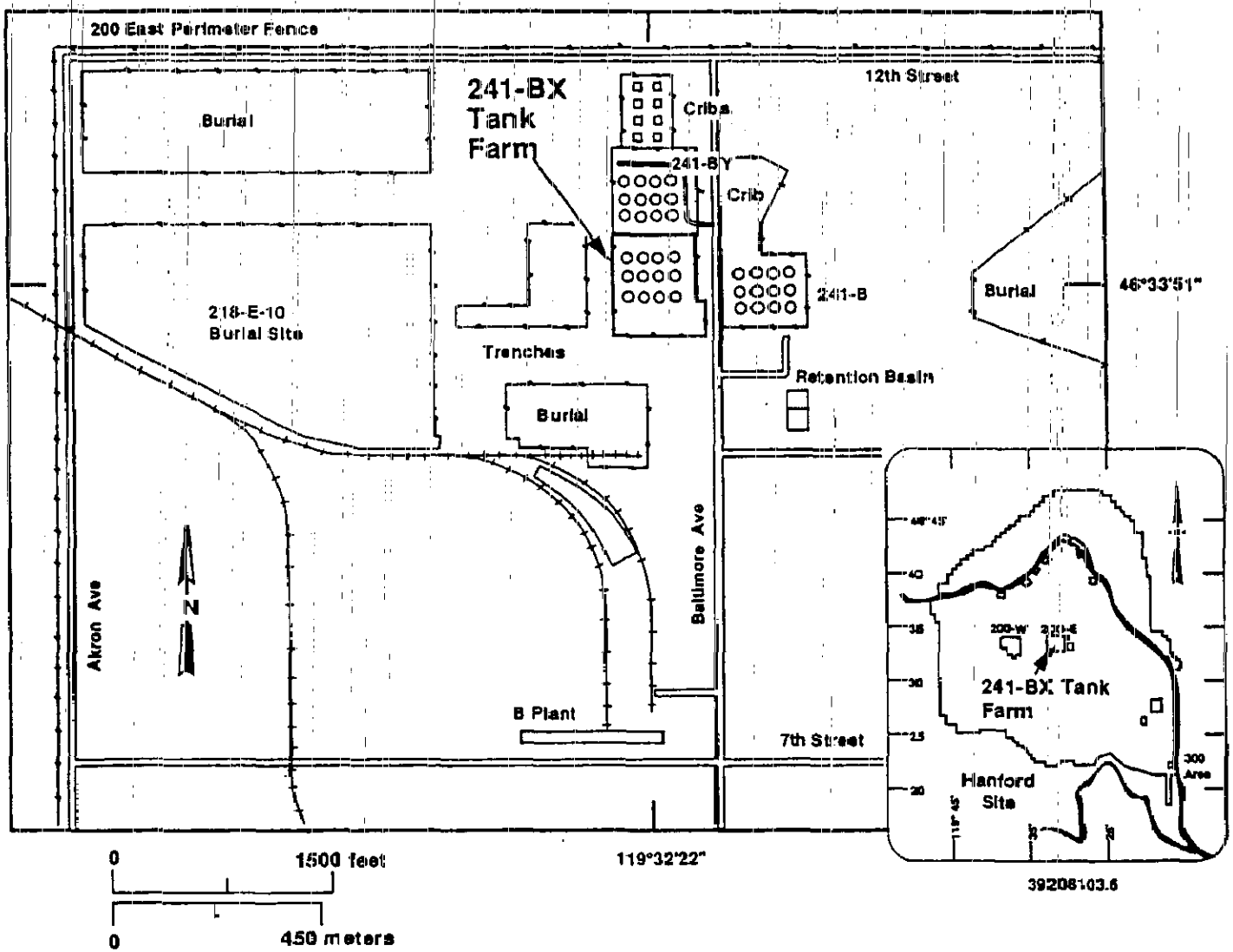
9413139.1909

241-B Single-Shell Tank Farm
Site Plan



9413139.1909

241-BX Single-Shell Tank Farm
Site Plan



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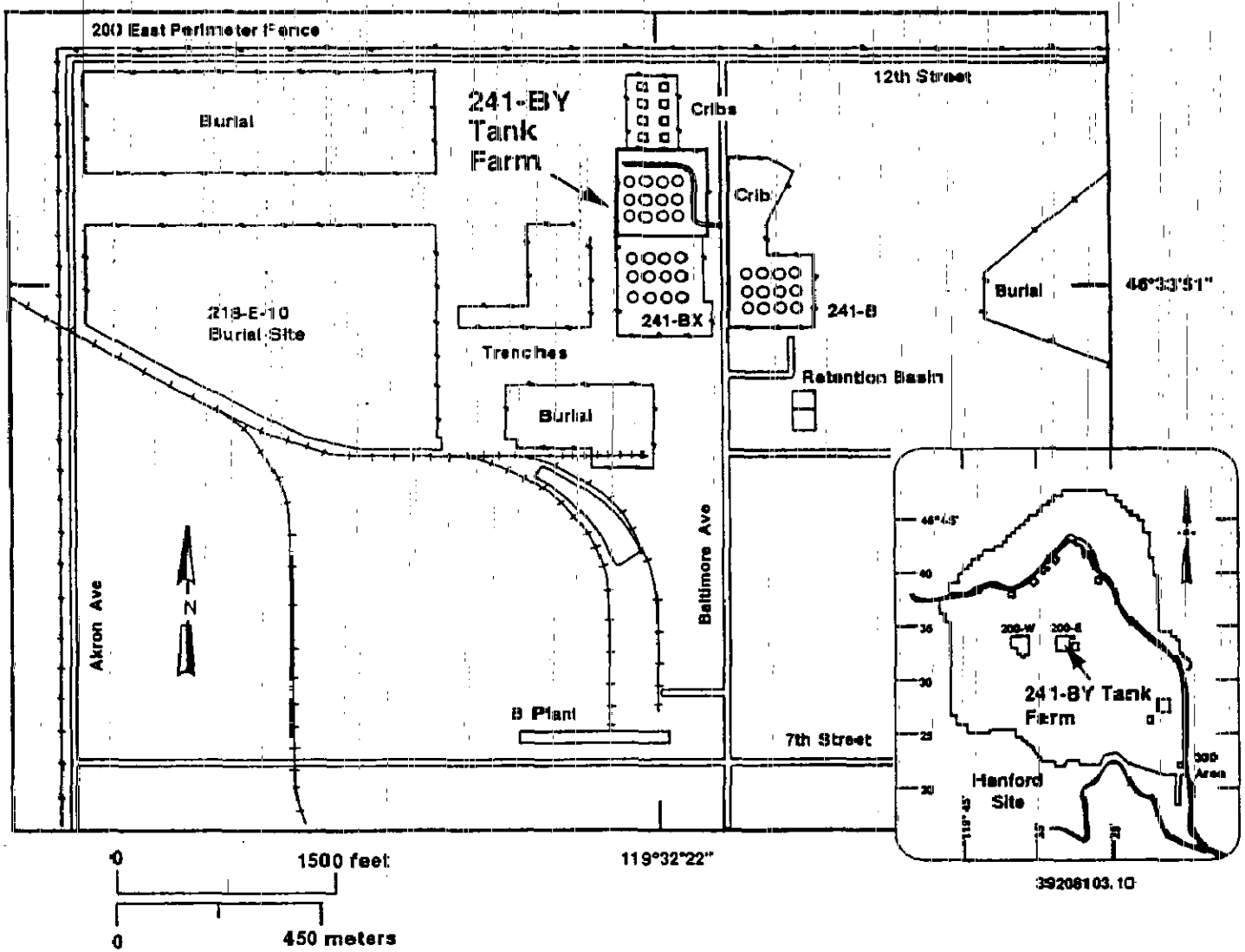
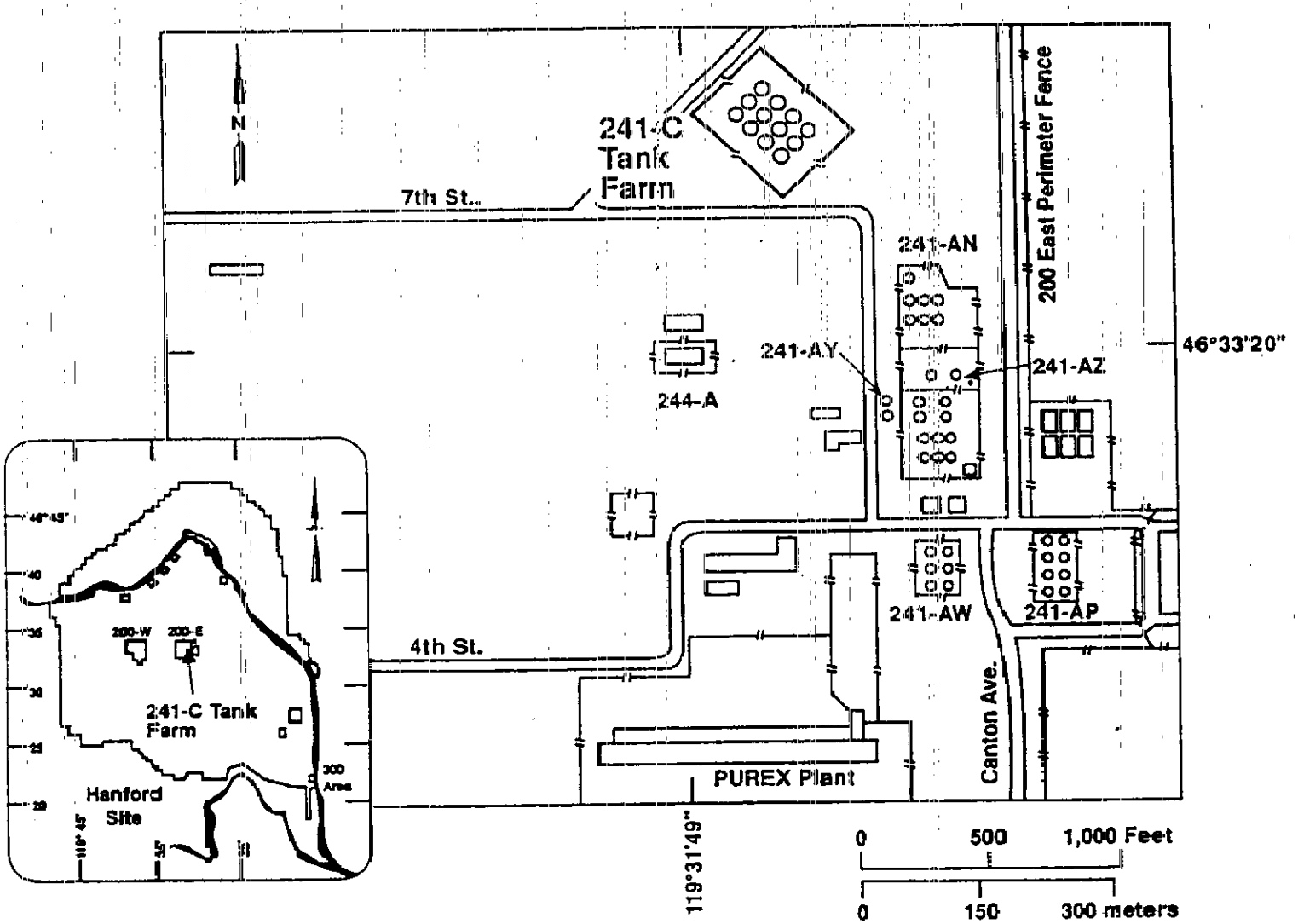
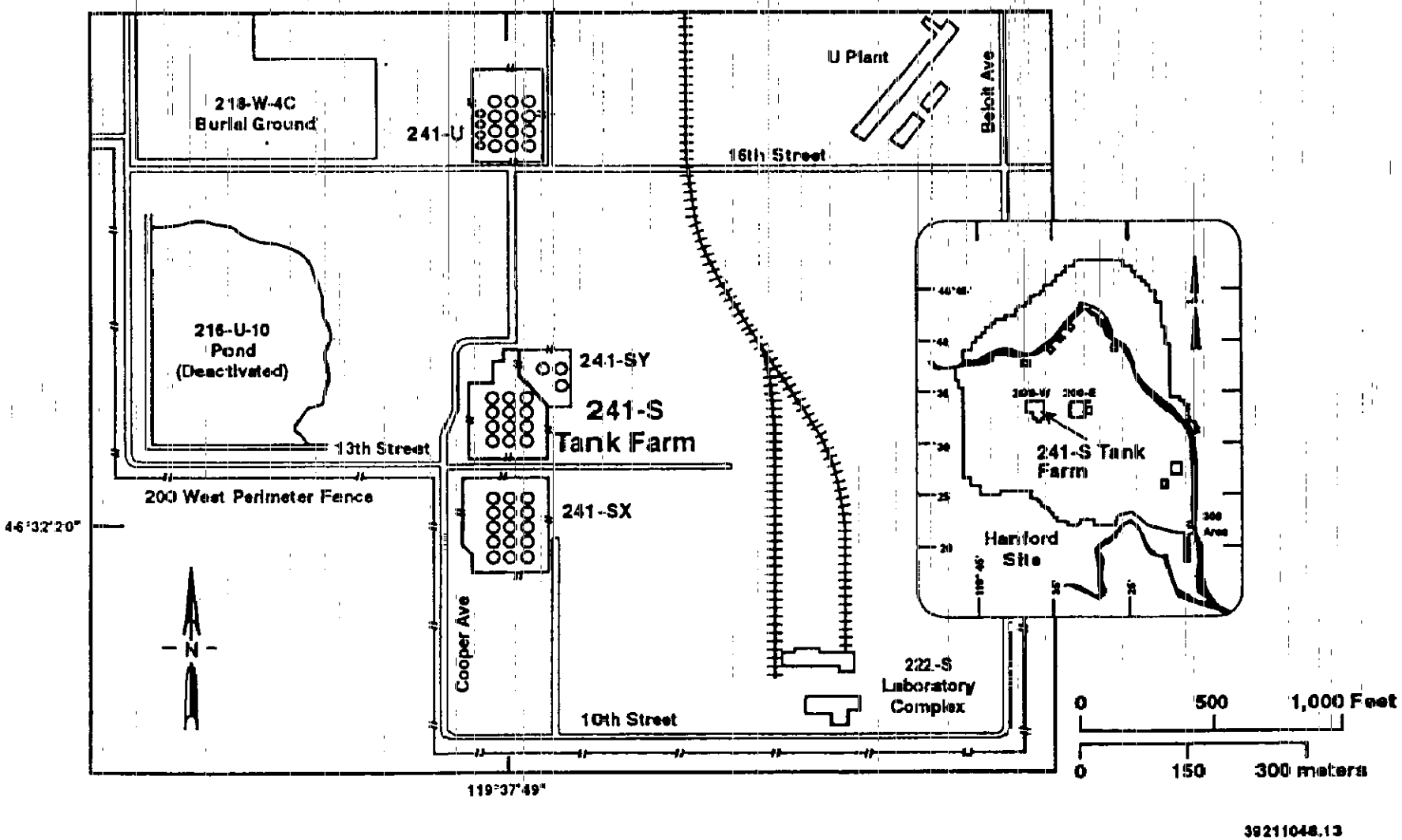
241-BY Single-Shell Tank Farm
Site Plan



241-C Single-Shell Tank Farm
Site Plan



241-S Single-Shell Tank Farm
Site Plan



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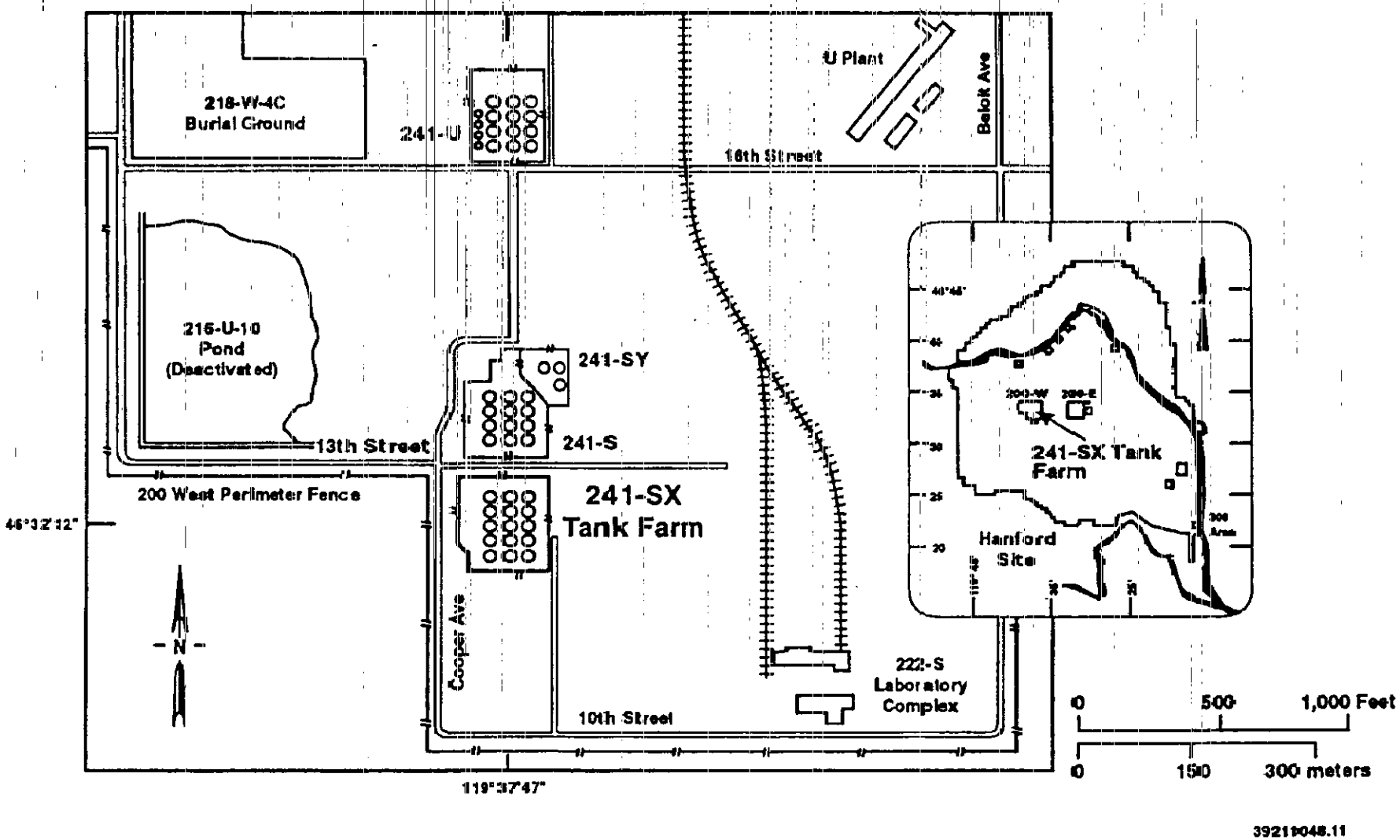
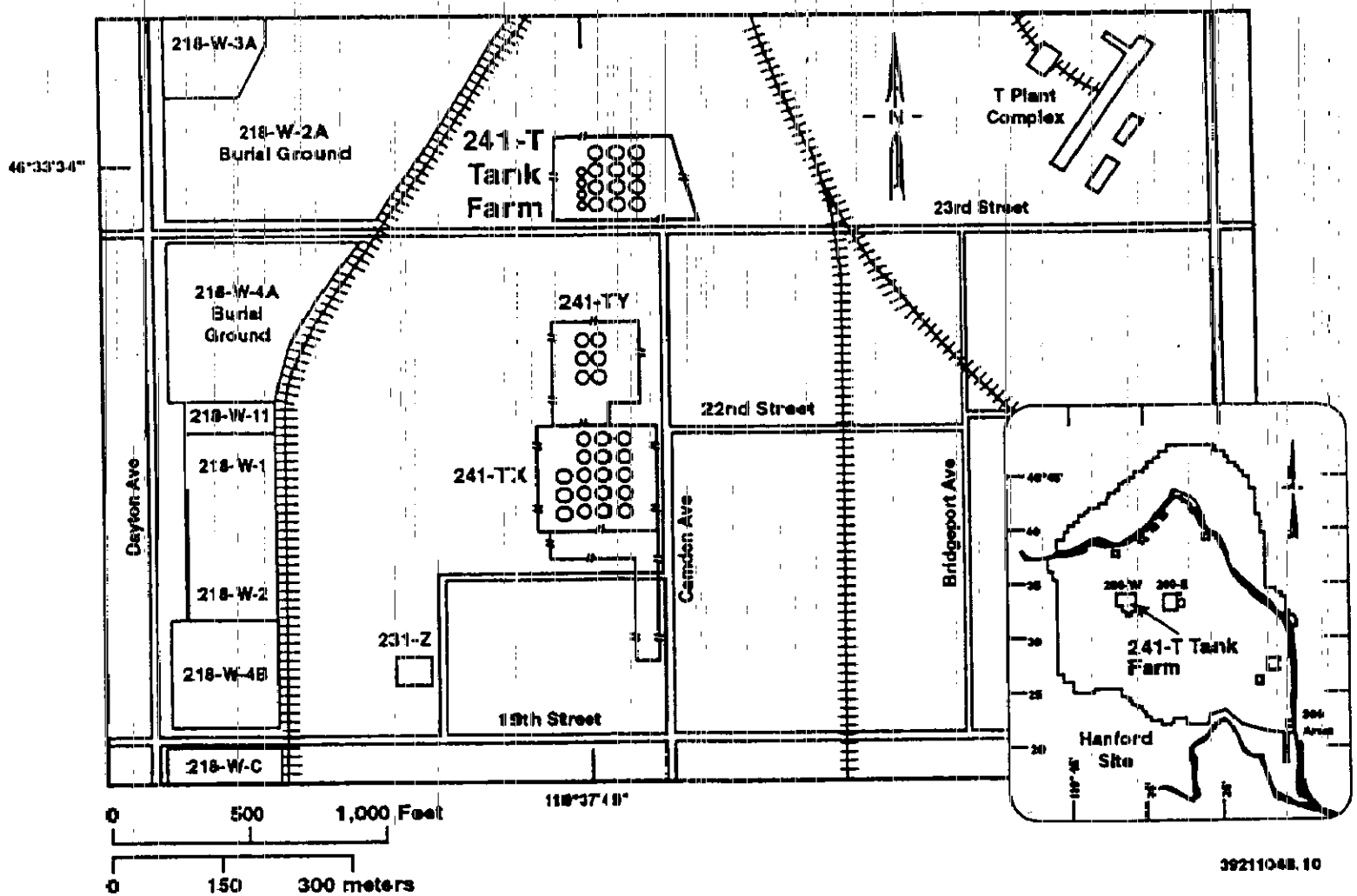
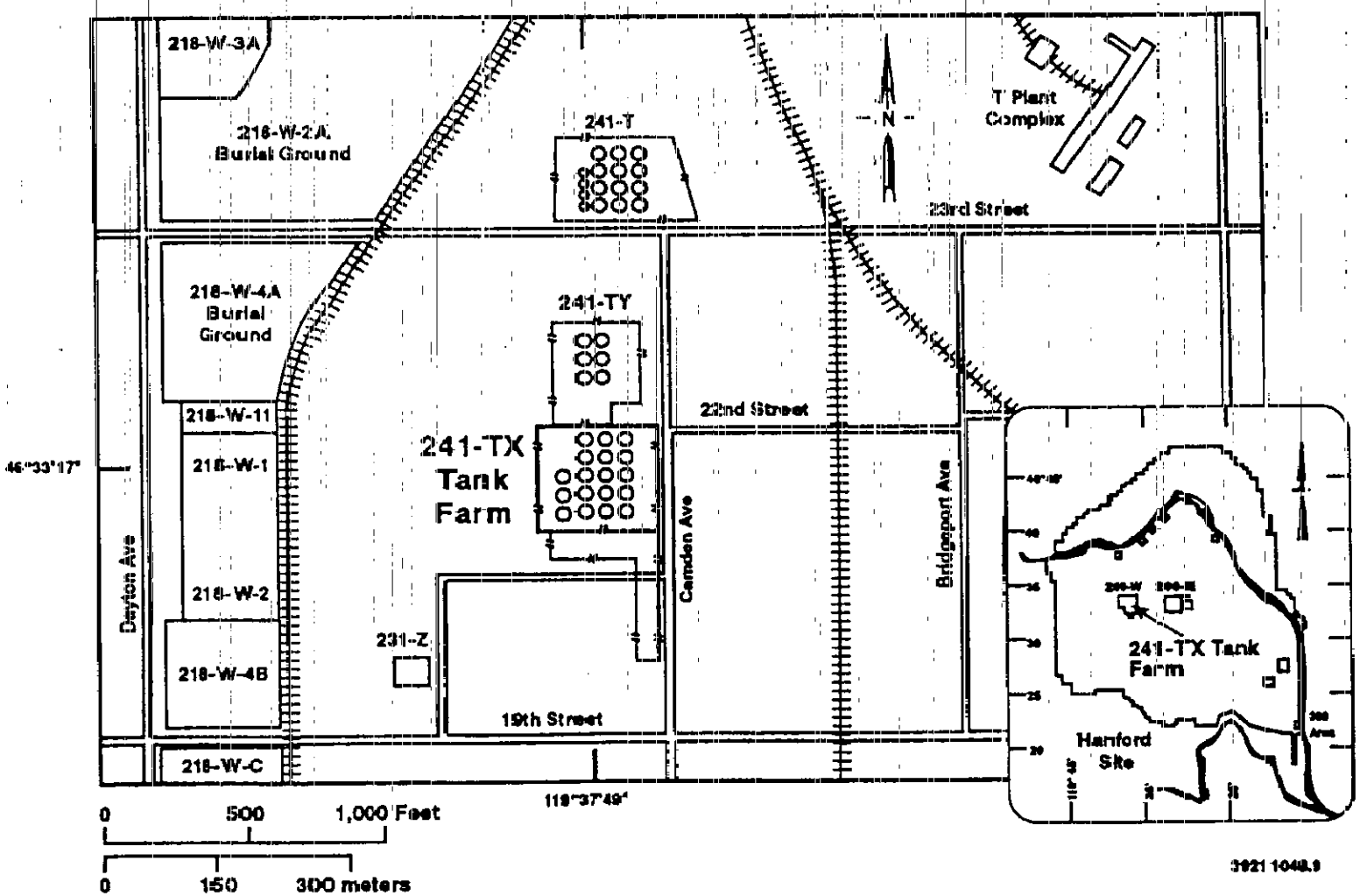
241-SX Single-Shell Tank Farm
Site Plan



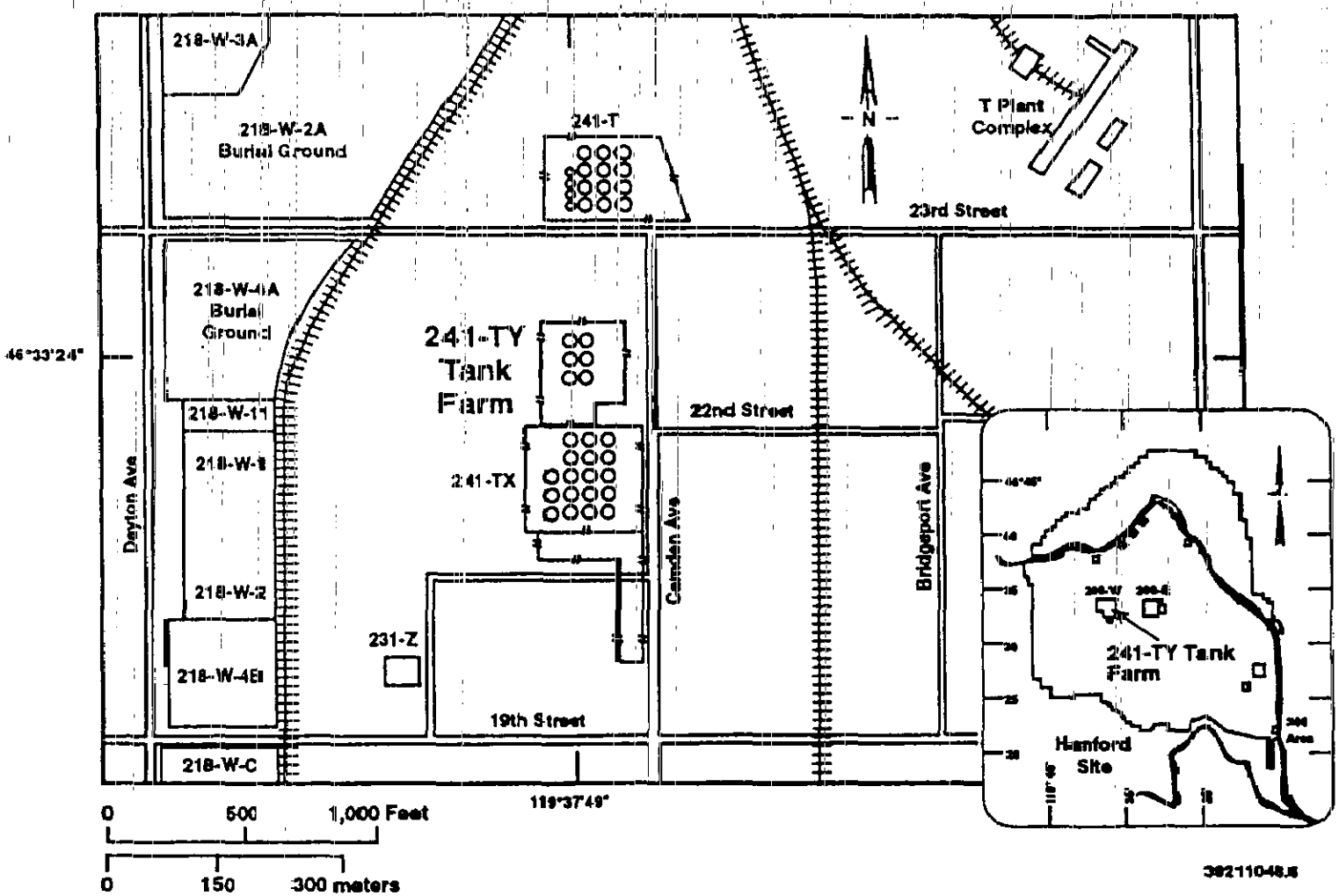
241-T Single-Shell Tank Farm
Site Plan



241-TX Single-Shell Tank Farm
Site Plan

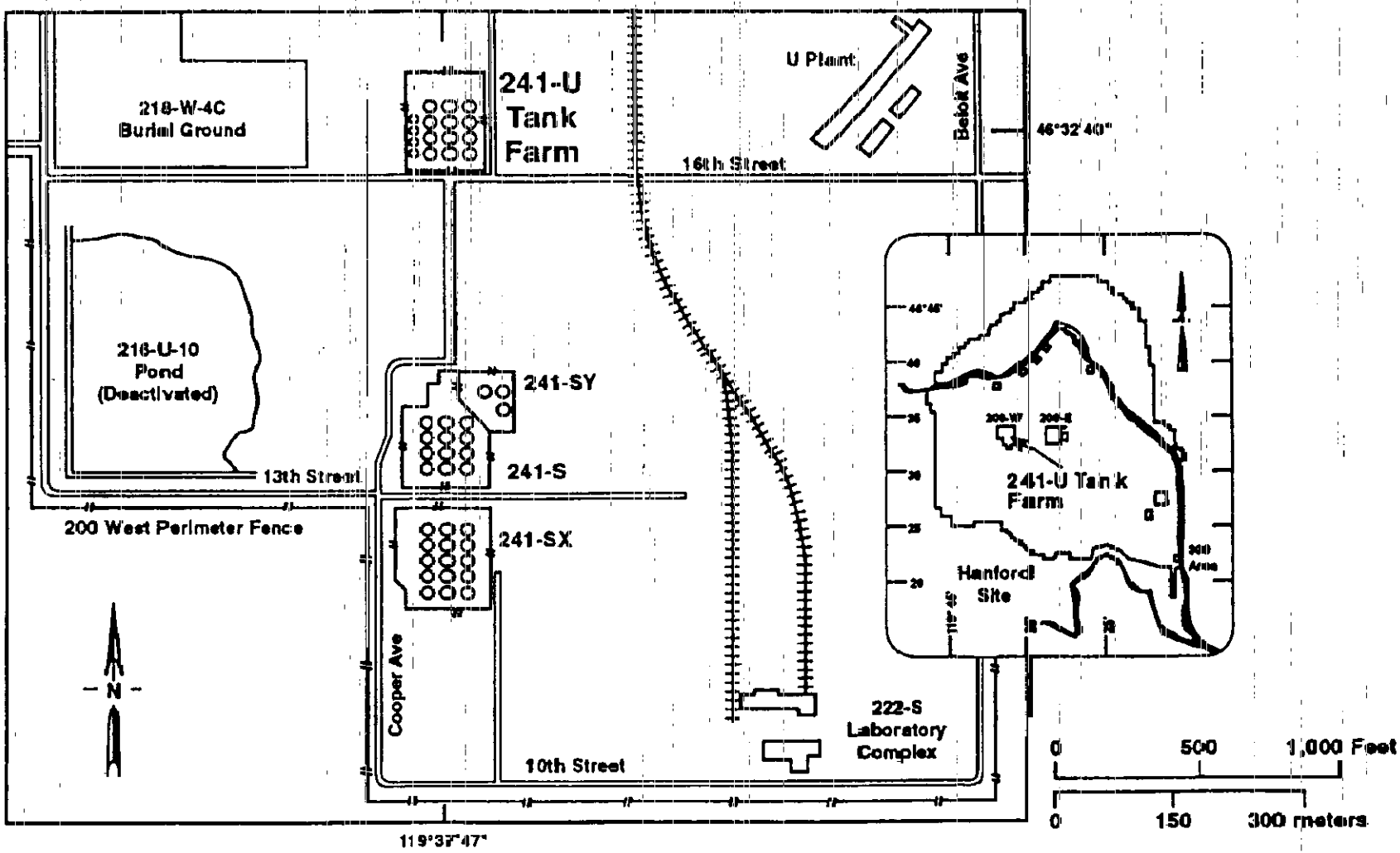


241-TY Single-Shell Tank Farm
Site Plan



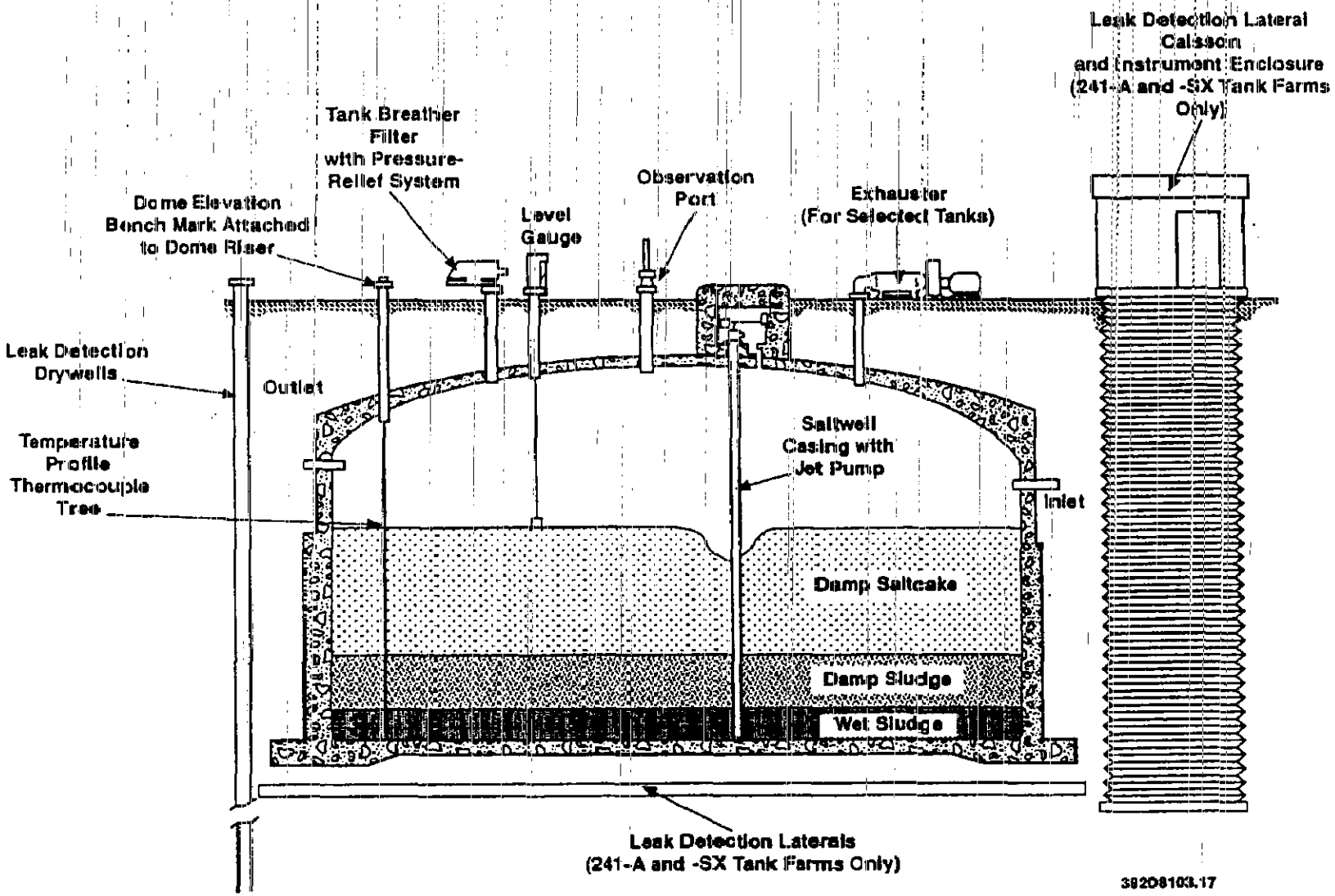
9413139.1912

241-U Single-Shell Tank Farm
Site Plan

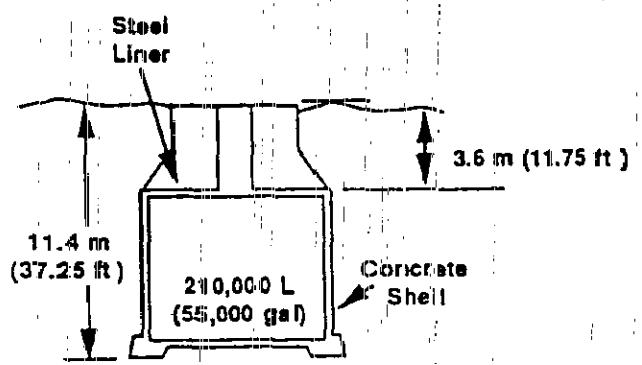


39211048.12

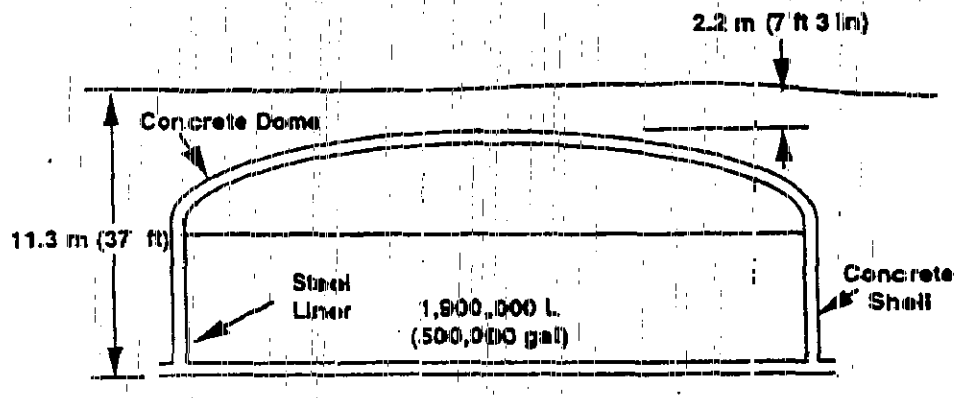
Typical Single-Shell Tank



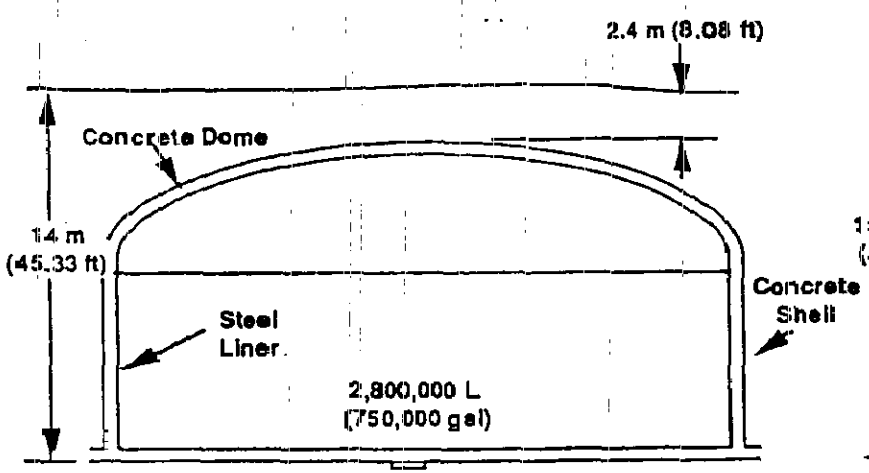
Cross-Sectional Views of Hanford Single-Shell Tanks



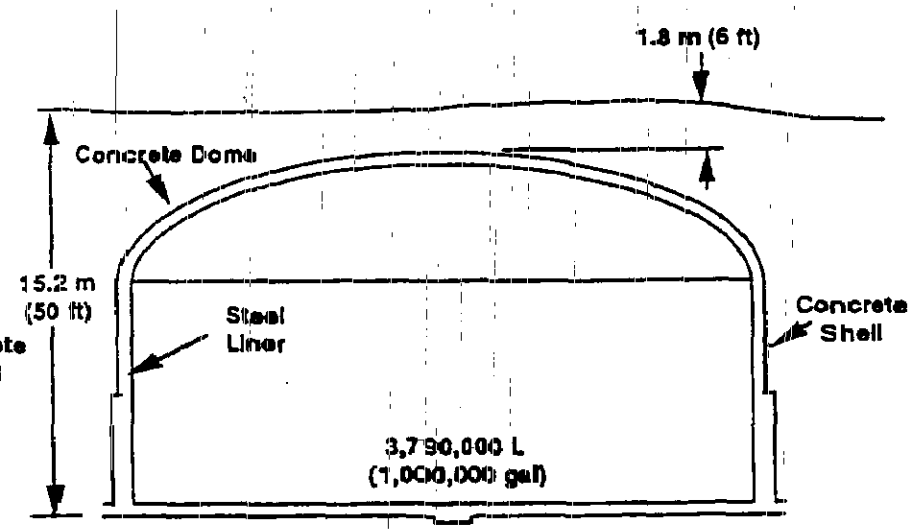
6 m (20 ft) Diameter Single-Shell Tank



22.9 m (75 ft) Diameter Single-Shell Tank



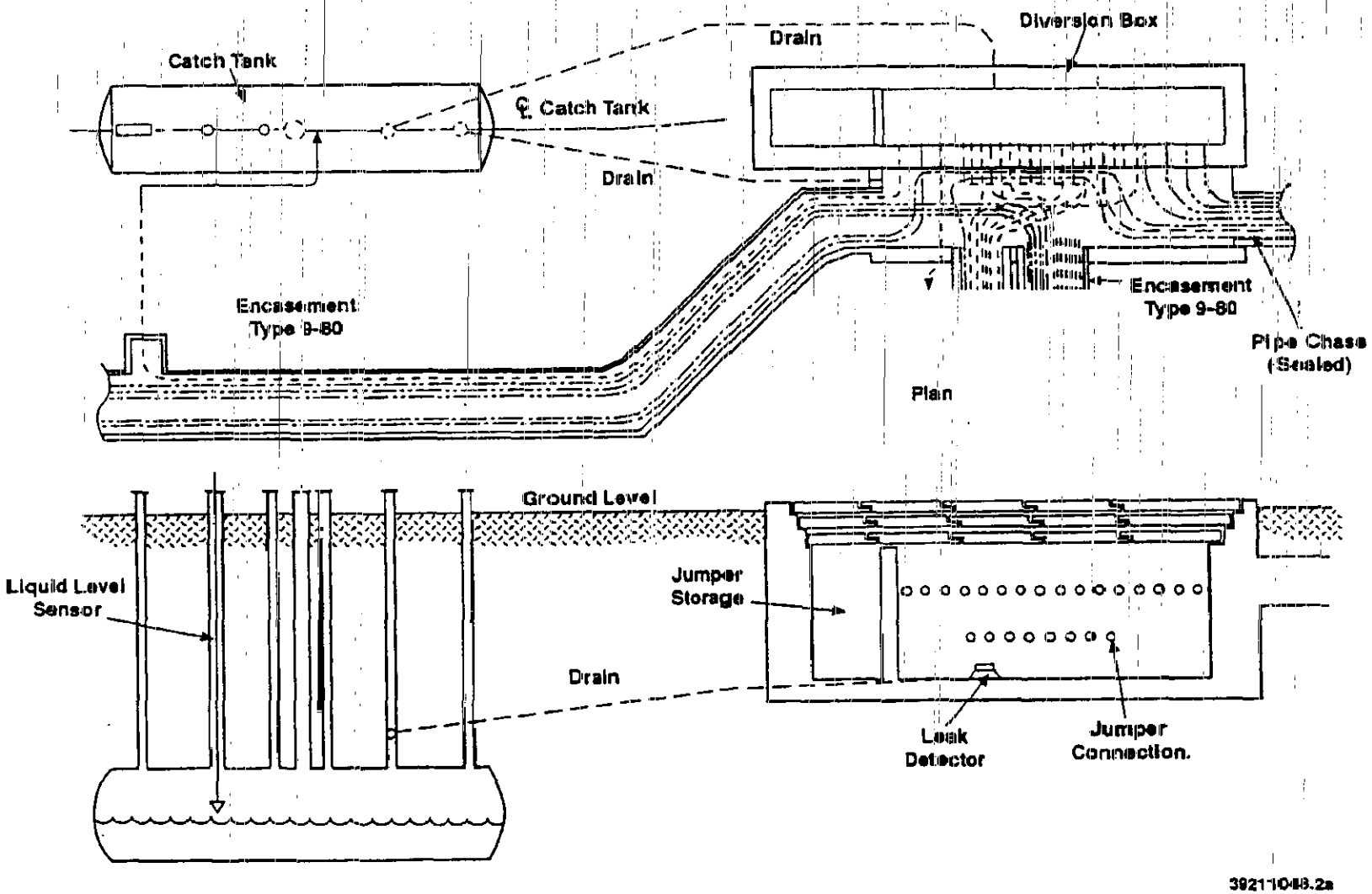
22.9-m (75 ft) Diameter Single-Shell Tank



22.9 m (75 ft) Diameter Single-Shell Tank

3.9211048.5a

Typical Transfer System

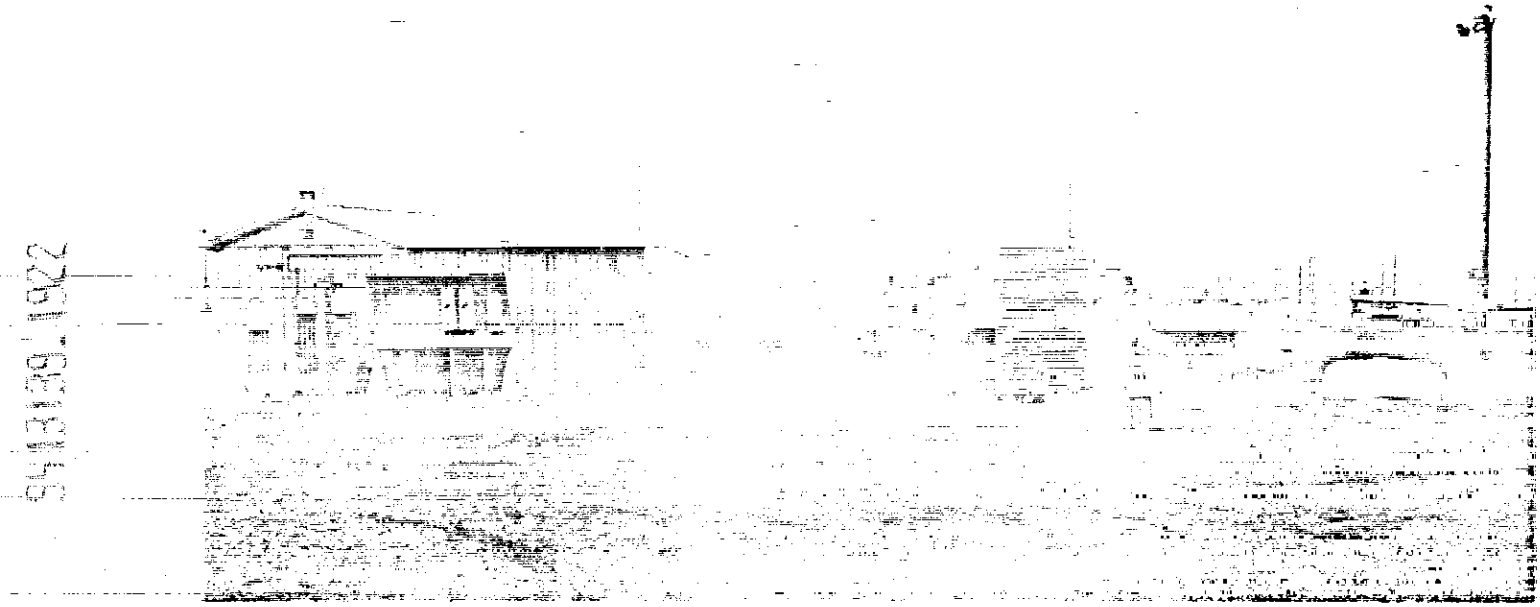


241-A SINGLE-SHELL TANK FARMS

46°33'11"
119°31'02"

8800284-1CN
(PHOTO TAKEN 1988)

241-AX SINGLE-SHELL TANK FARM

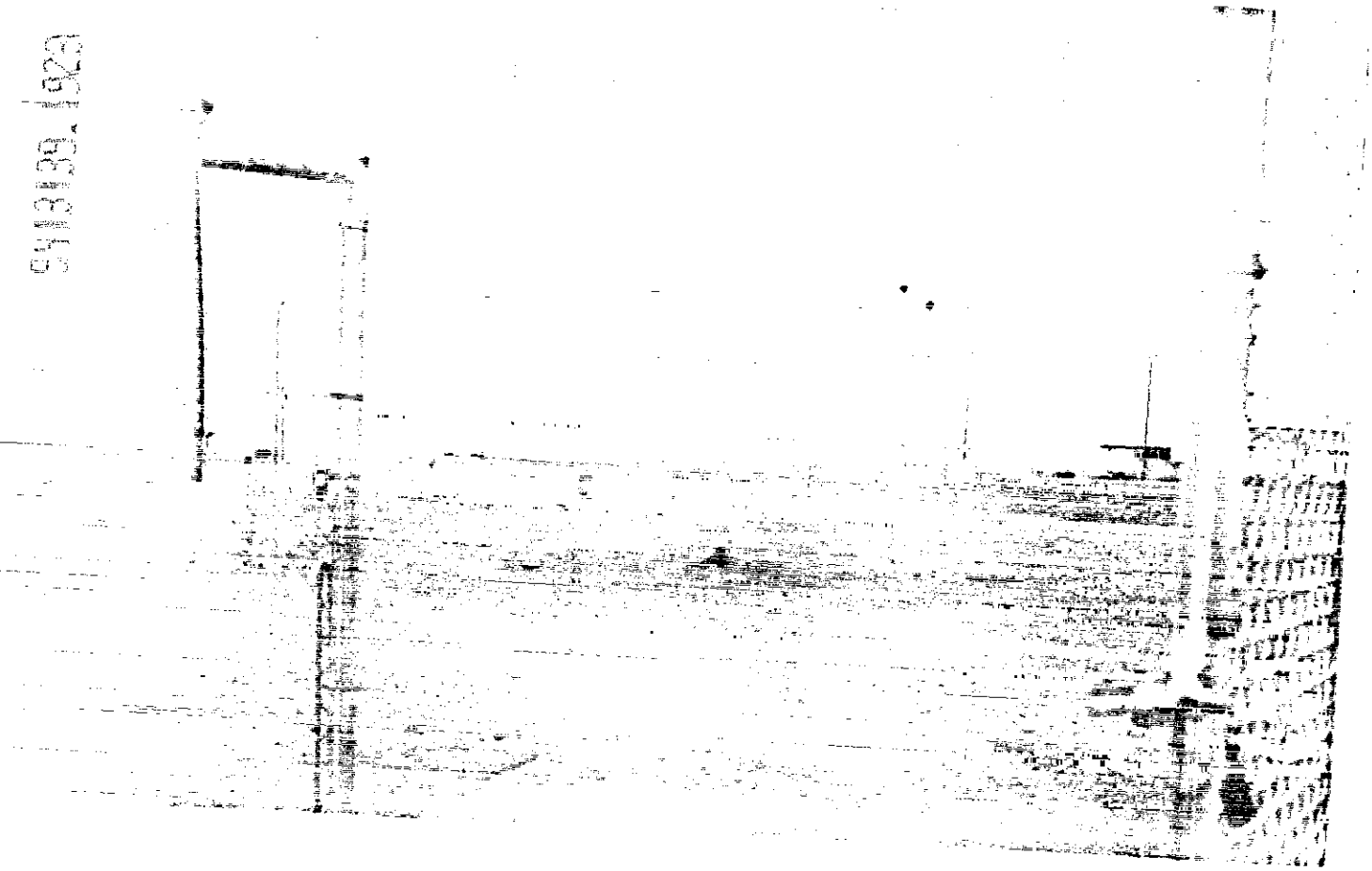


8800284-2CN
(PHOTO TAKEN 1988)

46°33'15"

8800284-3CN

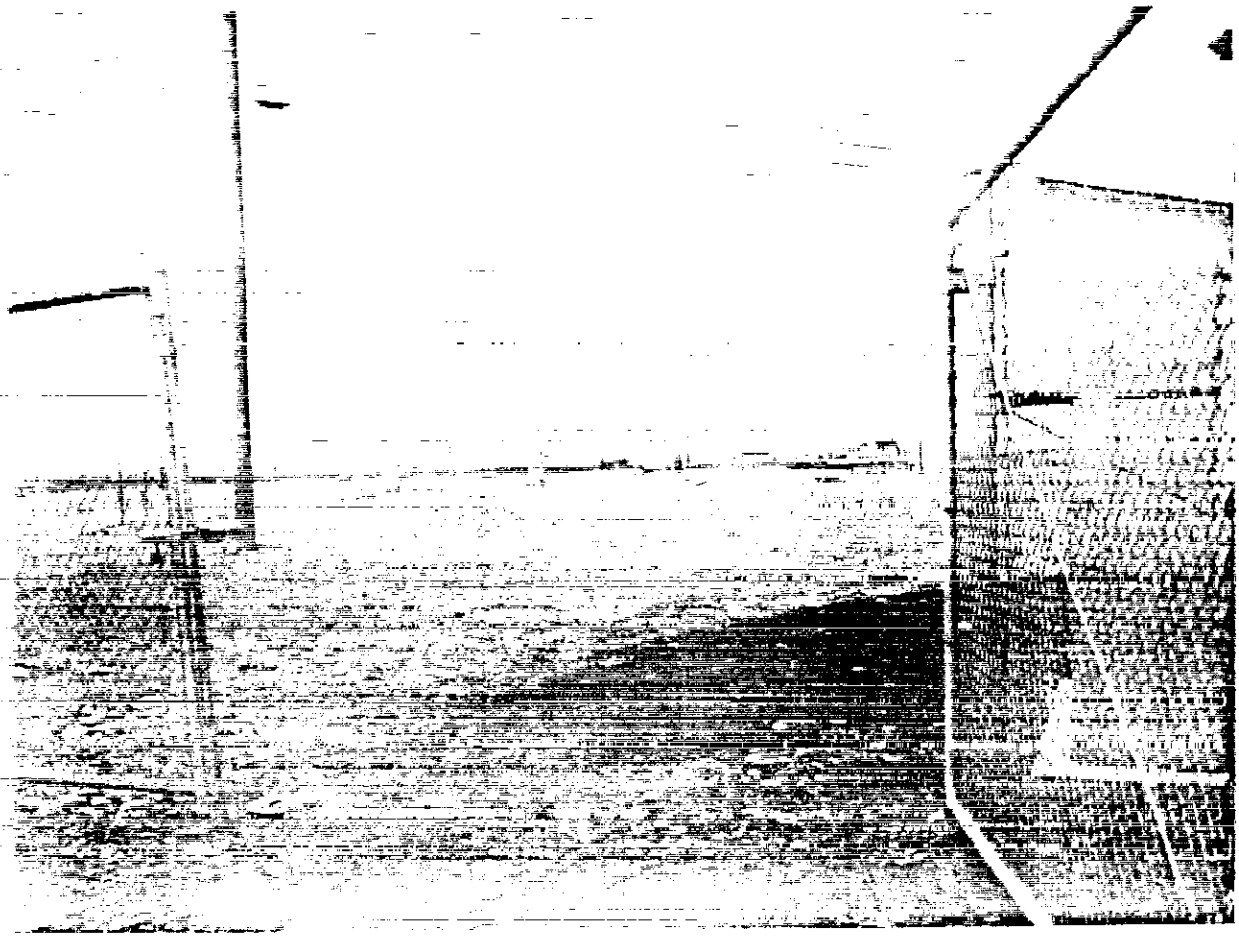
241-B SINGLE-SHELL TANK FARM



46°33'52"
119°32'12"

8800284-6CN
(PHOTO TAKEN 1988)

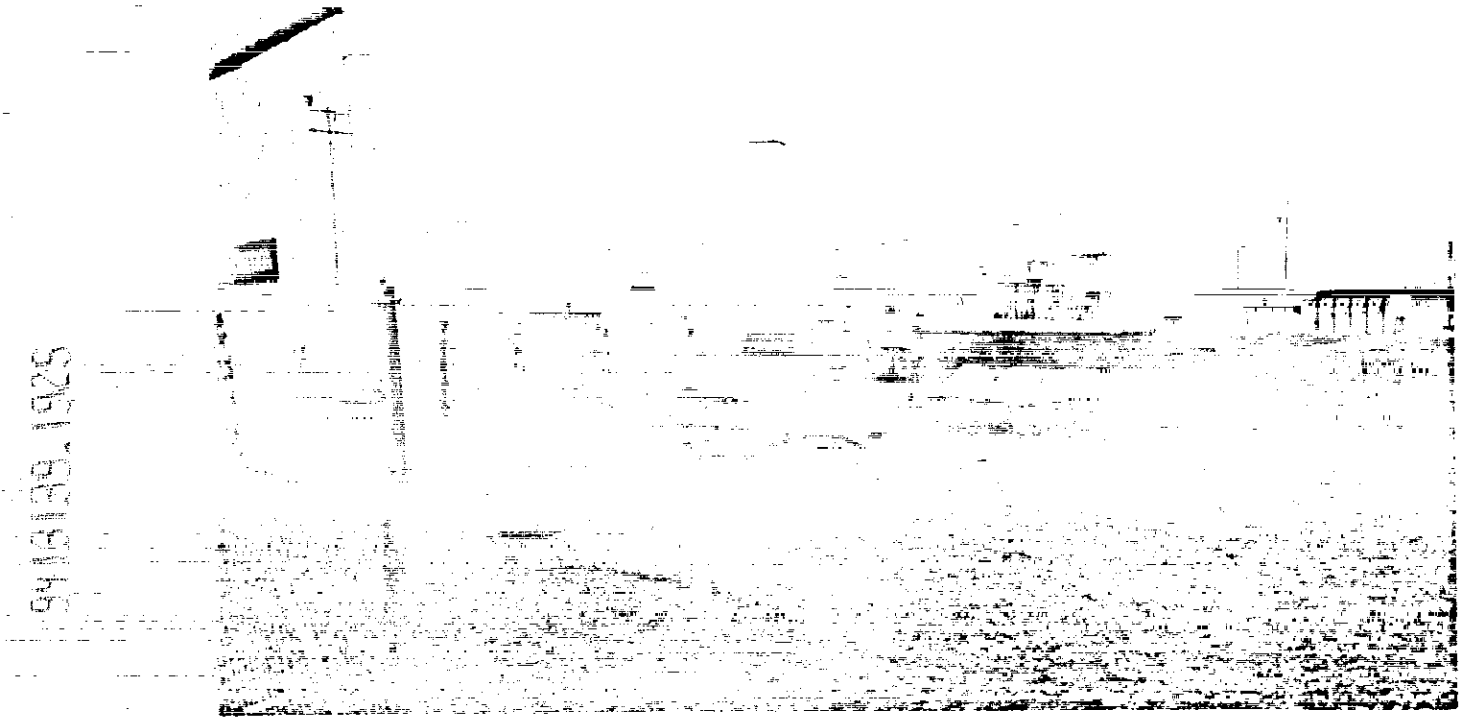
241-BX SINGLE-SHELL TANK FARM



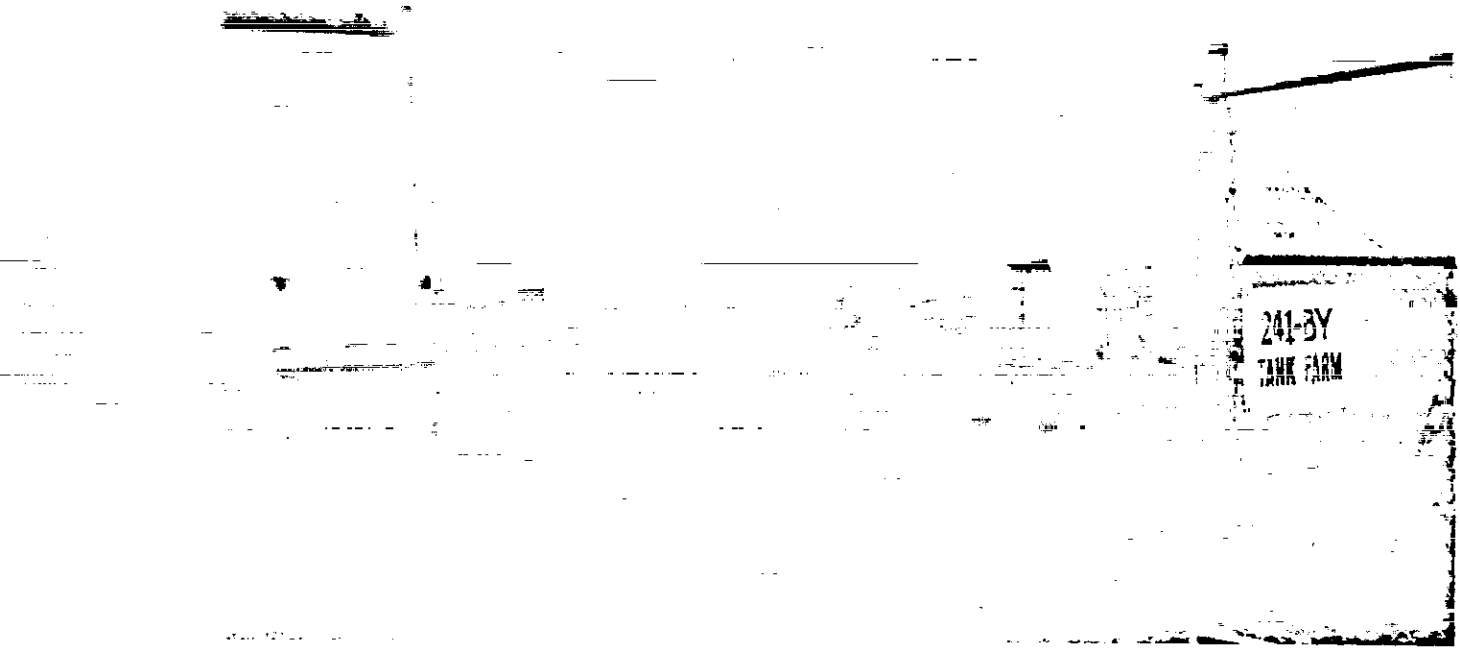
46°33'51"
119°32'22"

3800284-7CN
(PHOTO TAKEN 1988)

241-BY SINGLE-SHELL TANK FARM



8800284-8CN
(PHOTO TAKEN 1988)



46°33'53"

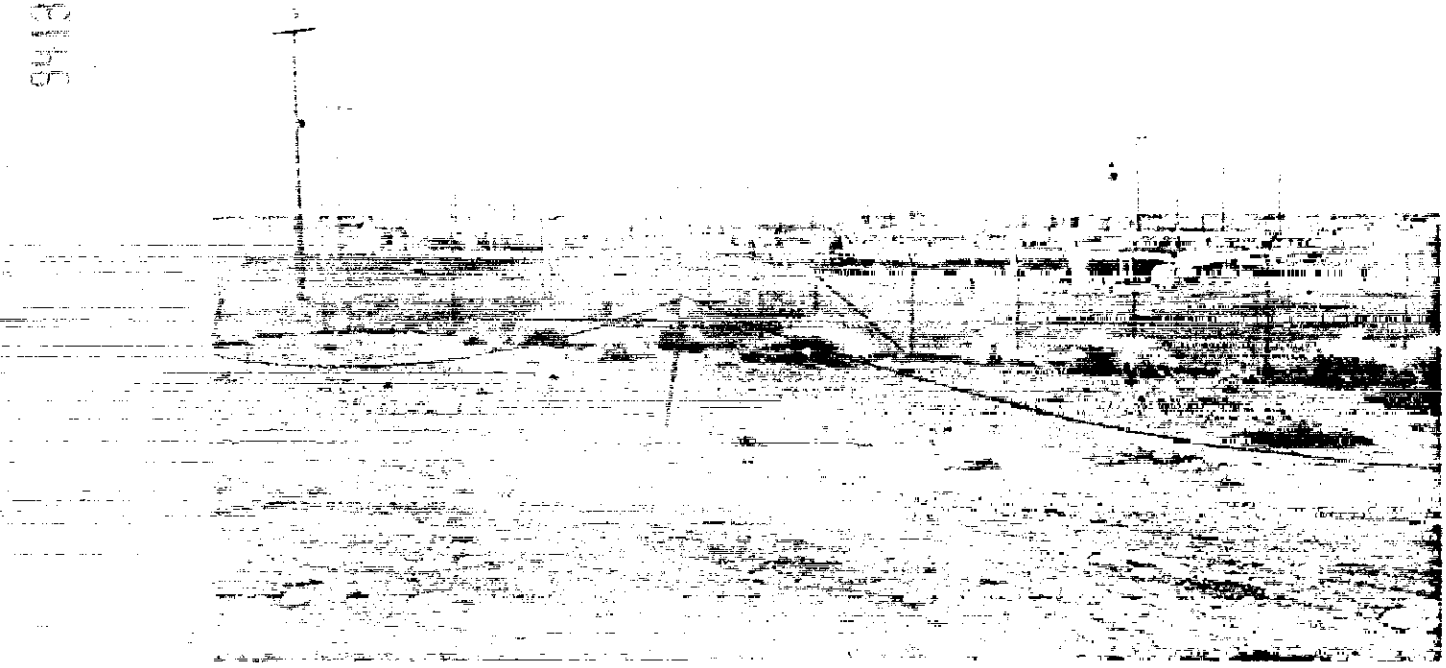
8800284-9CN

241-C SINGLE-SHELL TANK FARM

46°33'27"
119°31'13"

8800284-5CN
(PHOTO TAKEN 1988)

241-S SINGLE-SHELL TANK FARM



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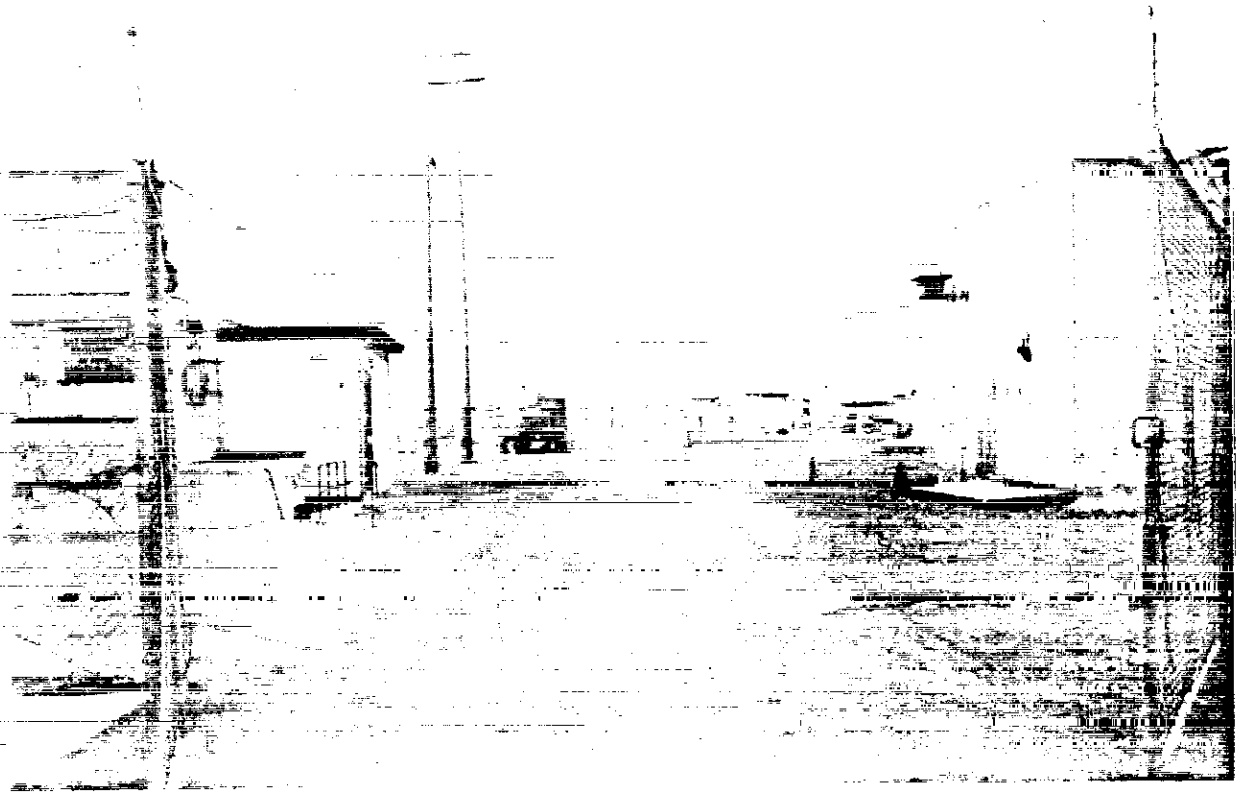
8800284-15CN
(PHOTO TAKEN 1988)

241-SX SINGLE-SHELL TANK FARM



46°32'12"
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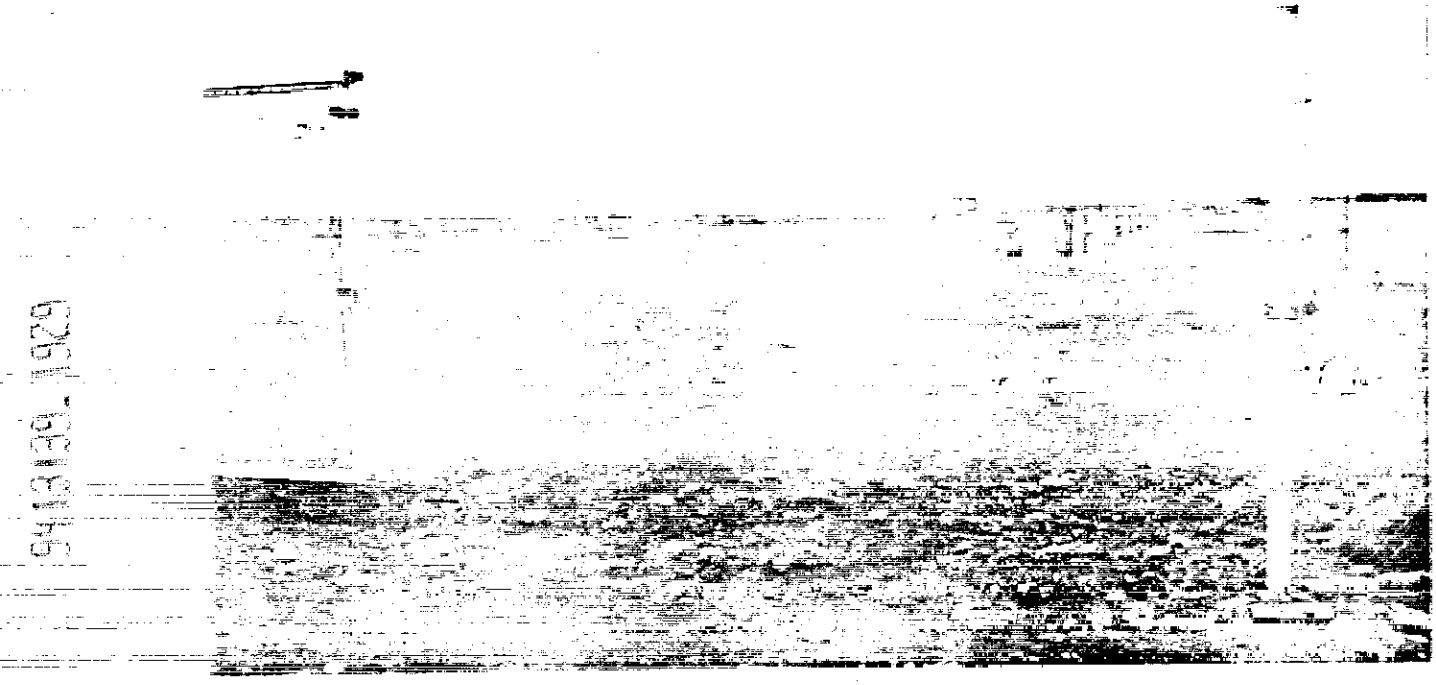
8800284-16CN
(PHOTO TAKEN 1988)

241-T SINGLE-SHELL TANK FARM



8800284-10CN
(PHOTO TAKEN 1988)

46°33'34"

8800284-11CN

241-TX SINGLE-SHELL TANK FARM

46°33'17"
119°37'49"

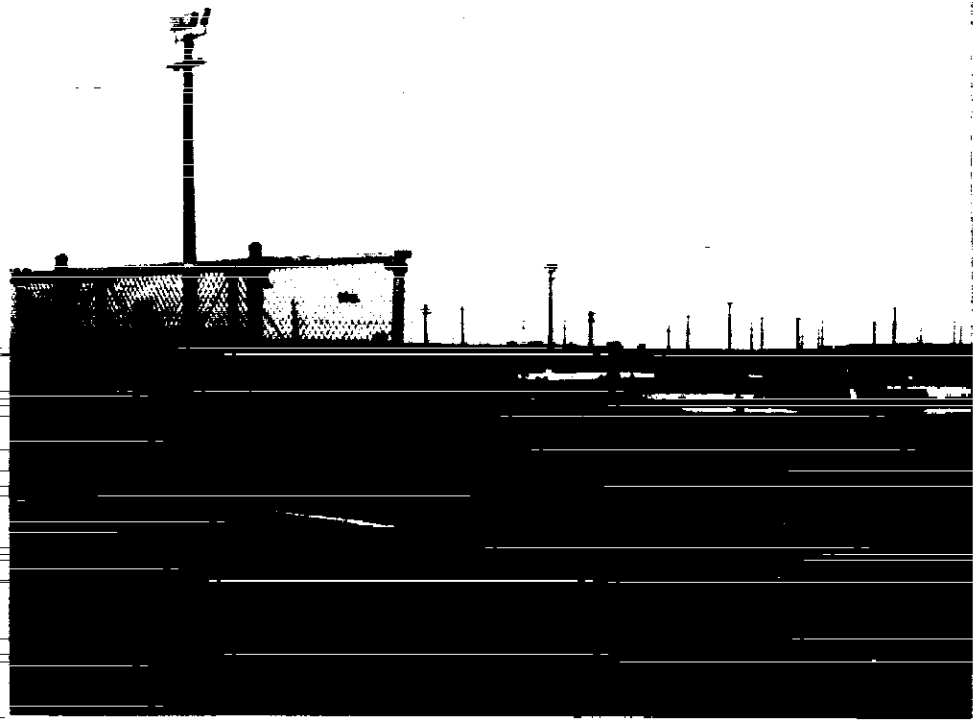
8800284-13CN
(PHOTO TAKEN 1988)

241-TY SINGLE-SHELL TANK FARM

46°33'24"
119°37'49"

8800284-12CN
(PHOTO TAKEN 1988)

241-U SINGLE-SHELL TANK FARM



46°32'40"
119°37'47"

8800284-14CN
(PHOTO TAKEN 1988)

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Author	Addressee	Correspondence No.
J. D. Bauer, RL R. E. Lerch, WHC (S. A. Thompson, WHC)	D. B. Jansen, Ecology	Incoming 9305746 Xref 9360105D

Subject: HANFORD FACILITY DANGEROUS WASTE PART A PERMIT APPLICATION FORM 3, REVISION 3, FOR THE SINGLE-SHELL TANK SYSTEM (WA7890008967) (TSD: S-2-4)

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