



0051836

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

99-EAP-516

SEP 30 1999

Ms. Valarie Peery, Librarian
Nuclear Waste Program
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504



Dear Ms. Peery:

TRANSMITTAL OF ONE PART A, FORM 1 AND FOUR PART A, FORM 3s TO DOCUMENT THE CHANGE IN CO-OPERATOR FROM FLUOR DANIEL HANFORD, INC. (FDH) TO LOCKHEED MARTIN HANFORD CORPORATION (LMHC) FOR FOUR TREATMENT, STORAGE AND/OR DISPOSAL (TSD) UNITS

This letter transmits one Part A, Form 1 and four Part A, Form 3s which have been revised to document the change in co-operator from FDH to LMHC for four TSD units (Enclosure). These four TSD units are the Double Shell Tank System (DST), Single Shell Tank System (SST), 204-AR Waste Unloading Station, and Grout Treatment Facility (GTF). These documents are being submitted per agreements reached with the State of Washington Department of Ecology.

The enclosed Part A, Form 1 and Part A, Form 3s have been modified to replace FDH with LMHC as the co-operator of these TSD units. Two other changes have been made to ensure that these permitting documents are "true, accurate, and complete" for certification purposes. The first change is the SST Part A, Form 3 has been modified to indicate that diversion box 241-AX-155 is active, rather than inactive and sealed as indicated in earlier revisions of this Part A. The second change concerns the DST Part A, Form 3 in which the 244-U Double-Contained Receiver Tank Site Plan has been modified to show the correct location of 244-U.

If you have any questions or concerns, please contact Clifford E. Clark at (509) 376-9333 or Tony C. McKarns at (509) 376-8981.

Sincerely,

James E. Rasmussen, Director
Environmental Assurance, Permits,
and Policy Division

EAP:EMM

Enclosure

cc: See page 2.

Ms. Valarie Peery
99-EAP-516

-2-

cc w/encl:

Administrative Record, H6-08
HF Operating Record, H6-08
Ecology NWP Kennewick Library
J. R. Wilkinson, CTUIR
L. J. Cusack, Ecology
L. E. Ruud, Ecology
A. Valero, Ecology
J. J. Wallace, Ecology
M. A. Wilson, Ecology
D. R. Sherwood, EPA
W. D. Adair, FDH
S. M. Price, FDH
S. A. Thompson, FDH
W. T. Dixon, LMHC
B. G. Erlandson, LMHC
E. E. Mayer, LMHC
D. L. Parker, LMHC
Environmental Portal, LMSI
P. Sobotta, NPT
R. Jim, YN

IX. MAP

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

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

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

XI. CERTIFICATION *(see instructions)*

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

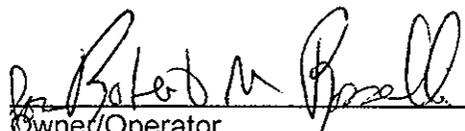
<p>A. Name & Official Title (Type or print) SEE ATTACHMENT</p>	<p>B. Signature</p>	<p>C. Date Signed</p>
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FORM 1

DANGEROUS WASTE PERMIT GENERAL INFORMATION

XI. OPERATOR CERTIFICATION

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



Owner/Operator
Keith A. Klein, Manager
U.S. Department of Energy

9/30/99

Date

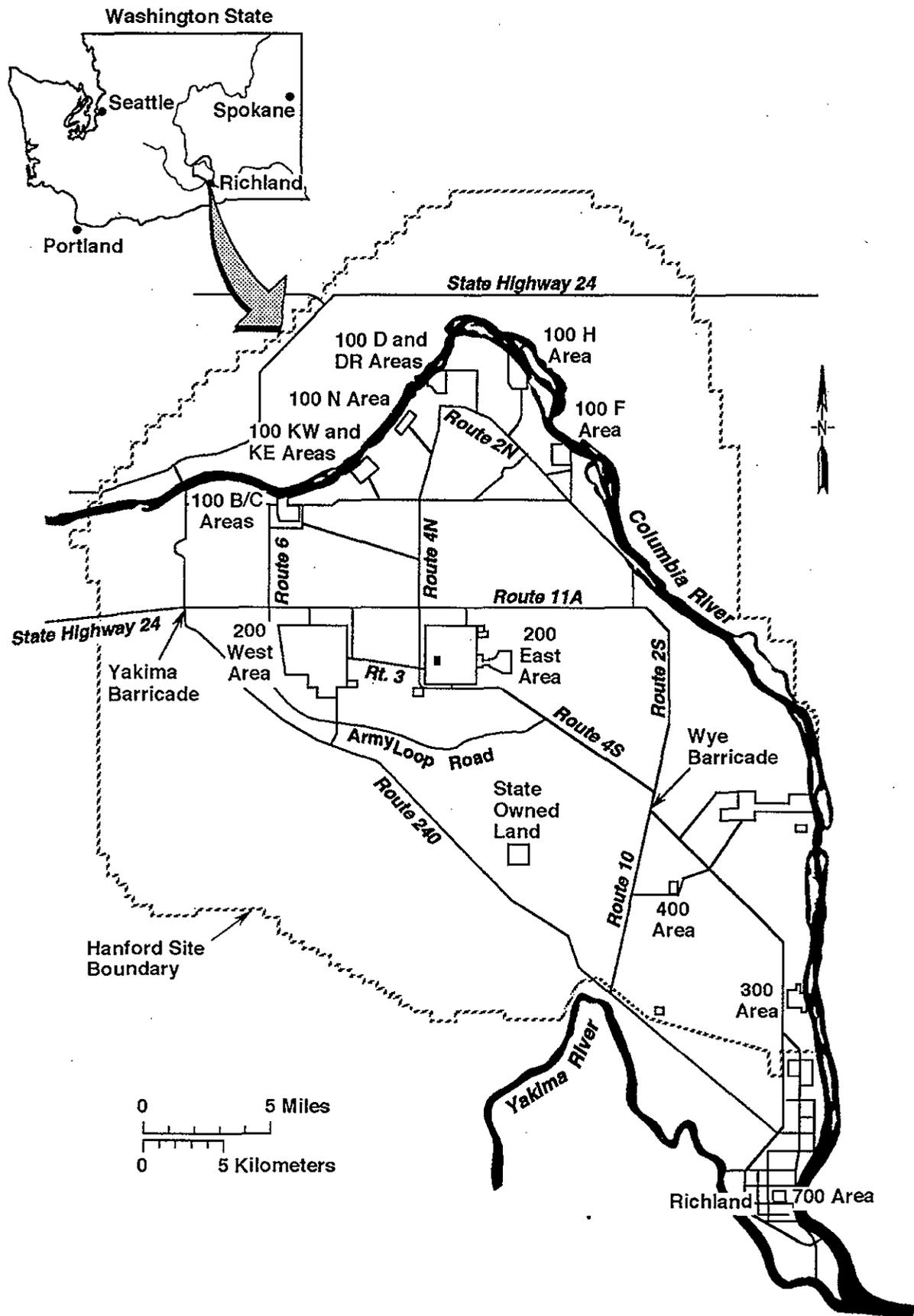


Co-operator*
M. P. DeLozier
President and RPP General Manager
Lockheed Martin Hanford Corporation

24 Sept 99

Date

* Co-operator under Department of Energy Office of River Protection Contract #DE-AC06-99L14047.



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.)

2. NEW FACILITY (Complete item below.)

<table border="1" style="width:100%; border-collapse: collapse;"> <tr><th>MO.</th><th>DAY</th><th>YR.</th></tr> <tr><td style="text-align: center;">03</td><td style="text-align: center;">22</td><td style="text-align: center;">43</td></tr> </table>	MO.	DAY	YR.	03	22	43	<p>* FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)</p> <p>* The date construction of the Hanford Facility commenced.</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><th>MO.</th><th>DAY</th><th>YR.</th></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	MO.	DAY	YR.				<p>FOR NEW FACILITIES, PROVIDE THE DATE, (mo., day, & yr.) OPERATION BEGAN OR IS EXPECTED TO BEGIN</p>
MO.	DAY	YR.													
03	22	43													
MO.	DAY	YR.													

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 codes(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	PRO-CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PRO-CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:			Treatment:		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS	TANK	T01	GALLONS PER DAY OR LITERS PER DAY
TANK	S02	GALLONS OR LITERS	SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS	INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS	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
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			

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

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

LINE NUMBER	A. PRO-CESS CODE (from list above)	B. PROCESS DESIGN CAPACITY			FOR OFFICIAL USE ONLY	LINE NUMBER	A. PRO-CESS CODE (from list above)	B. PROCESS DESIGN CAPACITY			FOR OFFICIAL USE ONLY
		1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)					1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)		
X-1	S 0 2	600	G			5					
X-2	T 0 3	20	E			6					
1	S02	124,654,500	L			7					
2	T01	124,654,500	V			8					
3						9					
4						10					

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "TO4"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

The Double-Shell Tank (DST) System began operations between November 1955 and October 1986 (refer to the Tank Table on pages 3 and 4). The DST System is used for the interim storage (S02) of liquid mixed waste generated on the Hanford Facility. Several operating units in the 200 East and 200 West Areas transfer liquid mixed waste through buried double-encased transfer lines to designated underground DSTs. Other types of liquid mixed waste in the DST System are received from railroad tank car transfers, tank truck transfers, the Single-Shell Tank (SST) System, and smaller temporary storage tanks.

Pretreatment will be performed as necessary at a future unit and/or at the 242-A Evaporator. The low-level liquid mixed waste is accumulated in the DST System until the waste is transferred for treatment to a proposed low-level vitrification plant in preparation for final disposal. The high-level liquid mixed waste from the DST System could be treated at the proposed Hanford Waste Vitrification Plant (HWVP) and shipped to a national repository for disposal. The HWVP could be superseded by another high-level waste immobilization facility.

The tanks in the DST System are considered treatment units (T01) because chemicals can be added for corrosion control, the waste can be mixed using equipment such as airlift circulators or pumps, and water can be evaporated from the aging waste tanks by adding heat.

The tanks in the DST System are shown on the Tank Table (pages 3 and 4), which includes tank numbers, locations, design capacities, and operational dates. The specific TSD unit boundaries will be defined in the DST System Dangerous Waste Part B permit application documentation.

The maximum process design capacity for tank storage at the DST System is approximately 124,654,500 liters (32,930,230 gallons). The maximum process design capacity for tank treatment at the DST System is approximately 124,654,500 liters (32,930,230 gallons).

IV. DESCRIPTION OF DANGEROUS WASTES

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

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

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

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

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

D. PROCESSES

1. PROCESS CODES:

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

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

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

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

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

- 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.
- 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.
- 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)	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

Tank Table (sheet 1 of 2).

1. There are 24 nonaging* DSTs.

Tank number	Location	Design capacity (liters)	Operation date
241-AN-101	200 East Area	4,542,480	09/81
241-AN-102	200 East Area	4,542,480	09/81
241-AN-103	200 East Area	4,542,480	09/81
241-AN-104	200 East Area	4,542,480	09/81
241-AN-105	200 East Area	4,542,480	09/81
241-AN-106	200 East Area	4,542,480	09/81
241-AN-107	200 East Area	4,542,480	09/81
241-AP-101	200 East Area	4,542,480	10/86
241-AP-102	200 East Area	4,542,480	10/86
241-AP-103	200 East Area	4,542,480	10/86
241-AP-104	200 East Area	4,542,480	10/86
241-AP-105	200 East Area	4,542,480	10/86
241-AP-106	200 East Area	4,542,480	10/86
241-AP-107	200 East Area	4,542,480	10/86
241-AP-108	200 East Area	4,542,480	10/86
241-AW-101	200 East Area	4,542,480	08/80
241-AW-102	200 East Area	4,542,480	08/80
241-AW-103	200 East Area	4,542,480	08/80
241-AW-104	200 East Area	4,542,480	08/80
241-AW-105	200 East Area	4,542,480	08/80
241-AW-106	200 East Area	4,542,480	08/80
241-SY-101	200 West Area	4,542,480	04/77
241-SY-102	200 West Area	4,542,480	04/77
241-SY-103	200 West Area	4,542,480	04/77

*Nonaging is a waste that is not neutralized current acid waste.

TANK TABLE (sheet 2 of 2)

2. There are four aging* DSTs.

Tank number	Location	Design capacity (liters)	Operation date
241-AY-101	200 East Area	3,785,400	04/71
241-AY-102	200 East Area	3,785,400	04/76**
241-AZ-101	200 East Area	3,735,400	11/76
241-AZ-102	200 East Area	3,735,400	11/76

*Aging waste is neutralized current acid waste generated from the PUREX Plant.

**Estimated operational date.

3. There is one tank in a transfer building.

Tank number	Location	Design capacity (liters)	Operation date
241-EW-151	200 East Area Vent Station	3,028	11/55*

*Estimated operational date.

4. There are five double-contained receiver tanks..

Tank number	Location	Design capacity (liters)	Operation date
244-BX	200 East Area	117,347	1983
244-TX	200 West Area	117,347	12/81
244-U	200 West Area	117,347	N/A
244-A	200 East Area	61,626	1975
244-S	200 West Area	76,768	1987

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

I. D. NUMBER (entered from page 1)

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

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

L I N E	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEA- SURE (enter code)	D. PROCESSES			
				1. PROCESS CODES (enter)			2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	426,850,108*	K	S02	T01		Storage - Tank/Treatment - Tank
2	through						
3	D011						
4	D018						
5	D019						
6	D022						
7	D028						
8	D029						
9	D030						
10	D033						
11	through						
12	D036						
13	D038						
14	D039						
15	D040						
16	D041						
17	D043						
18	WT01						
19	WT02						
20	WP01						
21	WP02						
22	F001						
23	through						
24	F005						
25	F039						Included with above.
26							

* All dangerous waste numbers listed are included in this quantity.

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTE (continued)

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

The types of liquid mixed waste that could be stored, chemically treated, and evaporated in the DST System are as follows:

- Dilute miscellaneous waste generated on the Hanford Facility (100, 200, 300, 400 Areas, and the 340 Complex)
- Supernate and transuranic sludges that consist of neutralized cladding removal waste generated during Plutonium-Uranium Extraction (PUREX) Plant headend operations, and waste generated during the Plutonium Finishing Plant processing
- Concentrated DST waste (slurry) from the 242-A Evaporator
- Concentrated complexed waste and complexed waste generated from B Plant processing
- Neutralized current acid waste from the first extraction column at the PUREX Plant
- Liquid waste from the SST System
- Waste from the Grout Treatment Facility
- T Plant Complex decontamination activities
- Waste from the 204-AR Waste Unloading Station
- Leachate resulting from Hanford Facility land disposal and surface impoundment operations.

It is possible that any of these waste types could be stored and/or treated in any of the nonaging or aging DSTS.

The list of dangerous waste under Section IV.A. includes constituents that have not been detected in the waste; however, knowledge of processes providing the waste to the DST System indicates the strong possibility that these constituents will be in the waste. Other constituents listed under Section IV.A. have not been detected in the waste; however, the DST System has the potential to store these constituents. Multi-source leachate (F039) is included as a waste derived from nonspecific source wastes F001 through F005.

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

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

VI. PHOTOGRAPHS Refer to attached photograph(s).

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

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawings and photos.

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

VIII. FACILITY OWNER

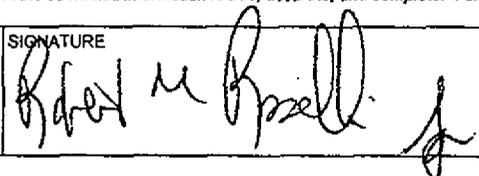
A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information," place an "X" in the box to the left and skip to Section IX below.

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) Keith A. Klein, Manager U.S. Department of Energy	SIGNATURE 	DATE SIGNED 9/30/99
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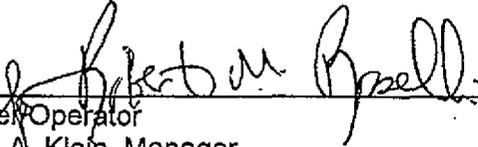
X. OPERATOR CERTIFICATION

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) SEE ATTACHMENT	SIGNATURE	DATE SIGNED
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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.



Owner/Operator
Keith A. Klein, Manager
U.S. Department of Energy

9/30/99

Date



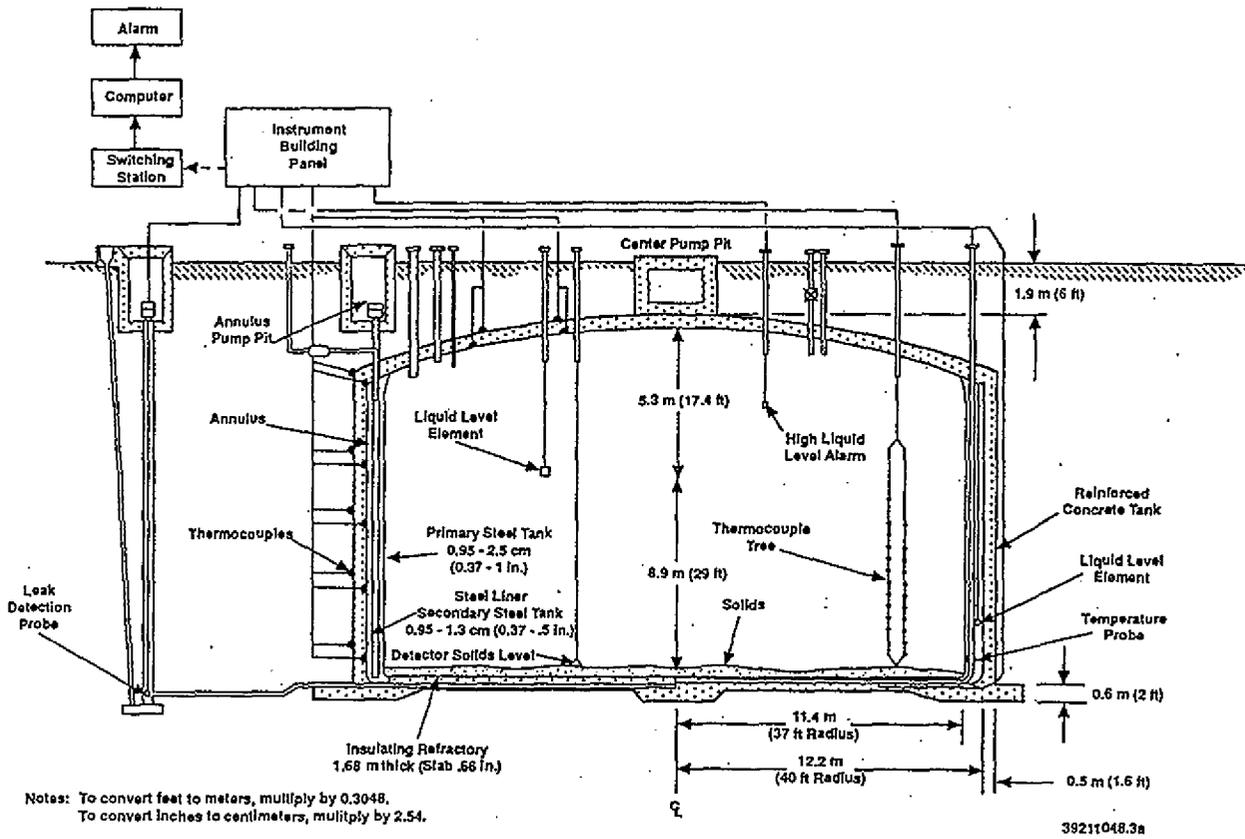
Co-operator*
M. P. DeLozier
President and RPP General Manager
Lockheed Martin Hanford Corporation

24 Sept 99

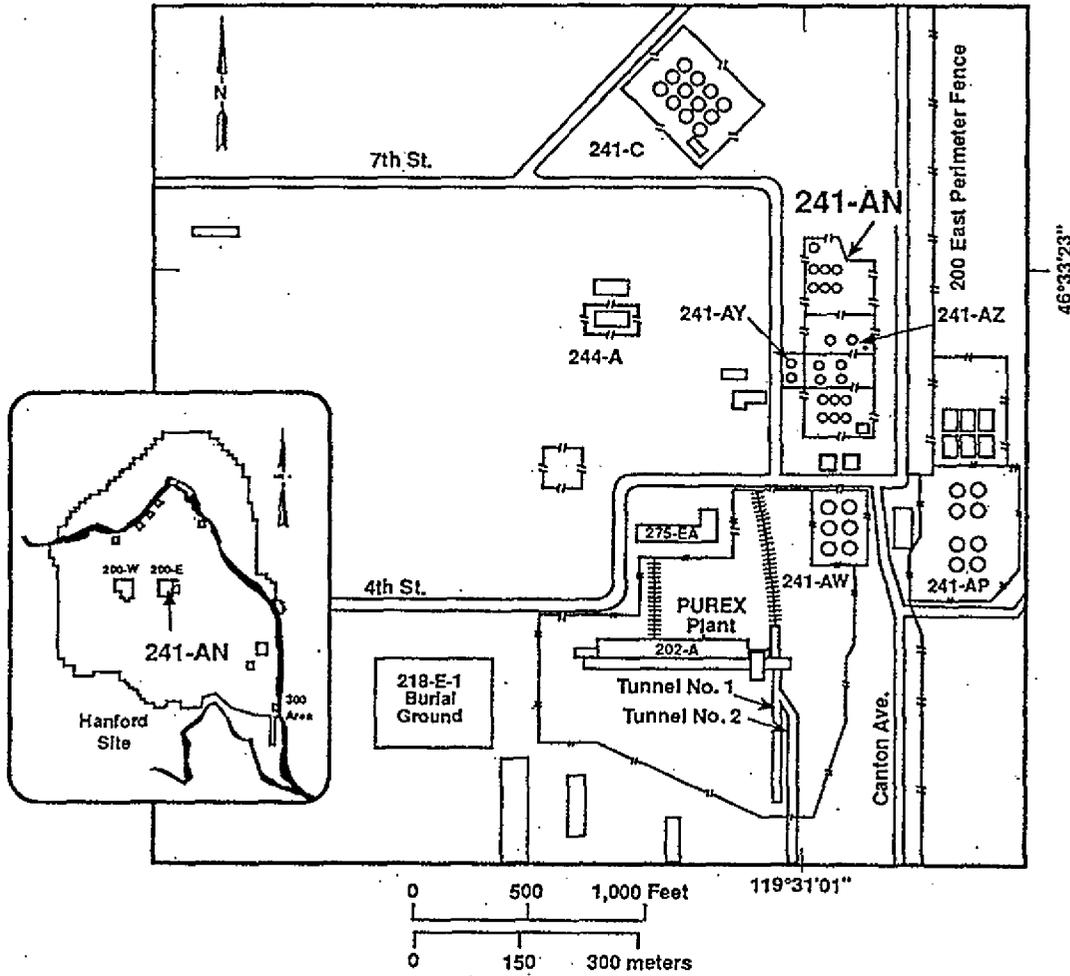
Date

* Co-operator under Department of Energy Office of River Protection Contract #DE-AC06-99L14047.

Typical Nonaging Waste Double-Shell Tank

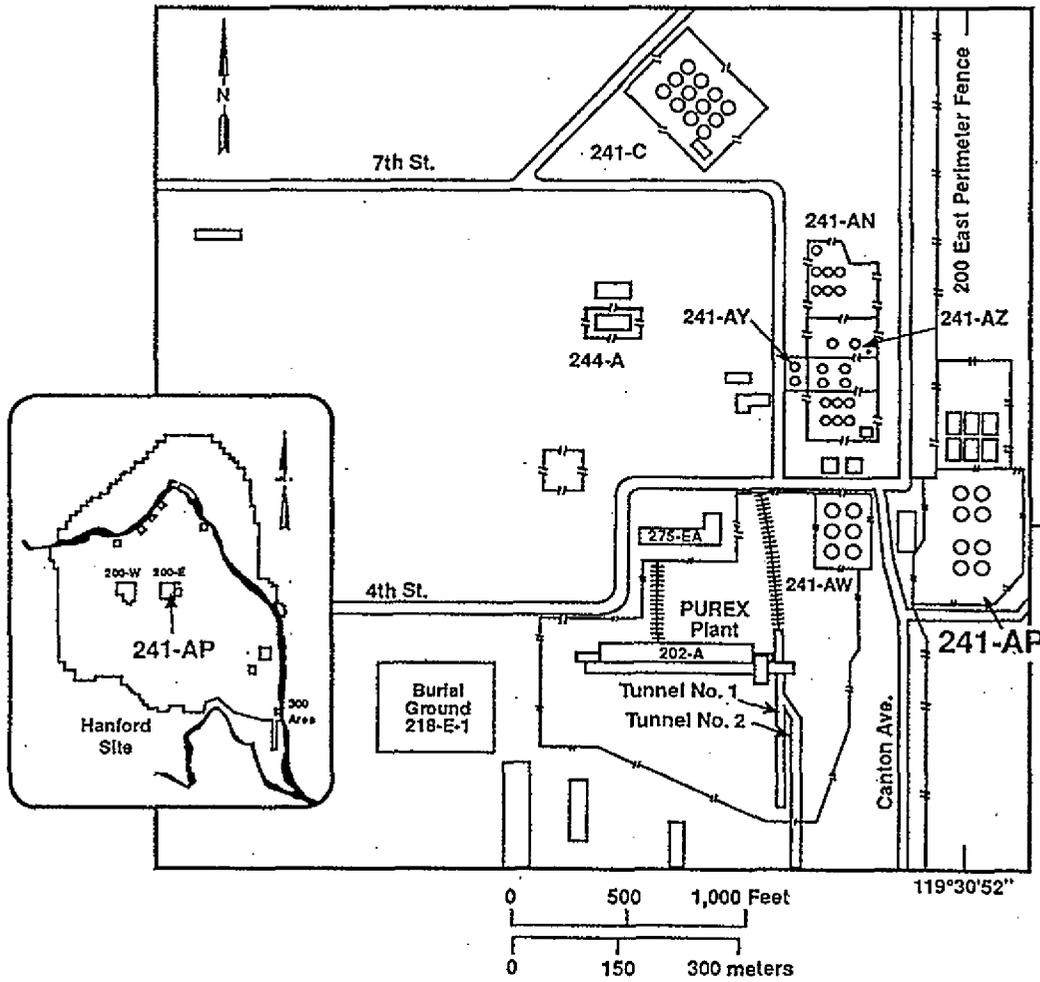


241-AN Double-Shell Tank Site Plan



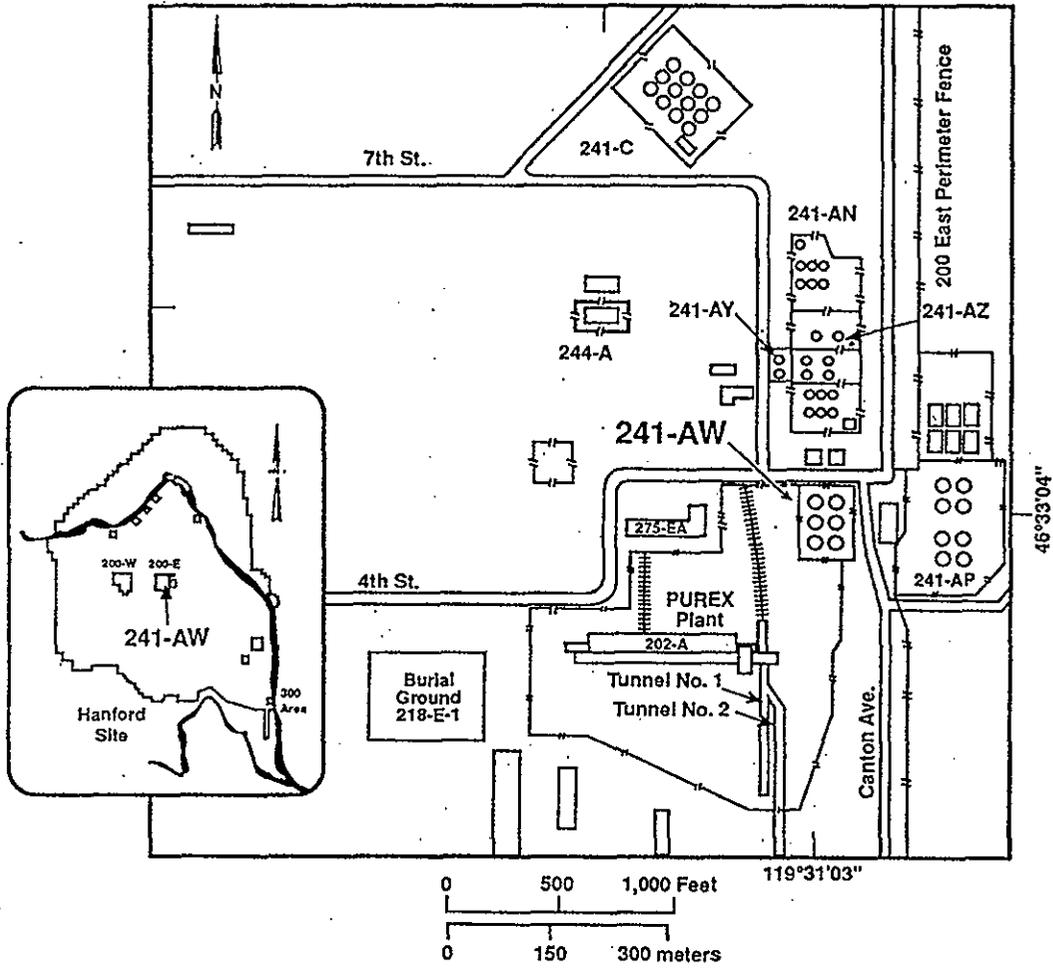
H96070161.27b

241-AP Double-Shell Tank Site Plan



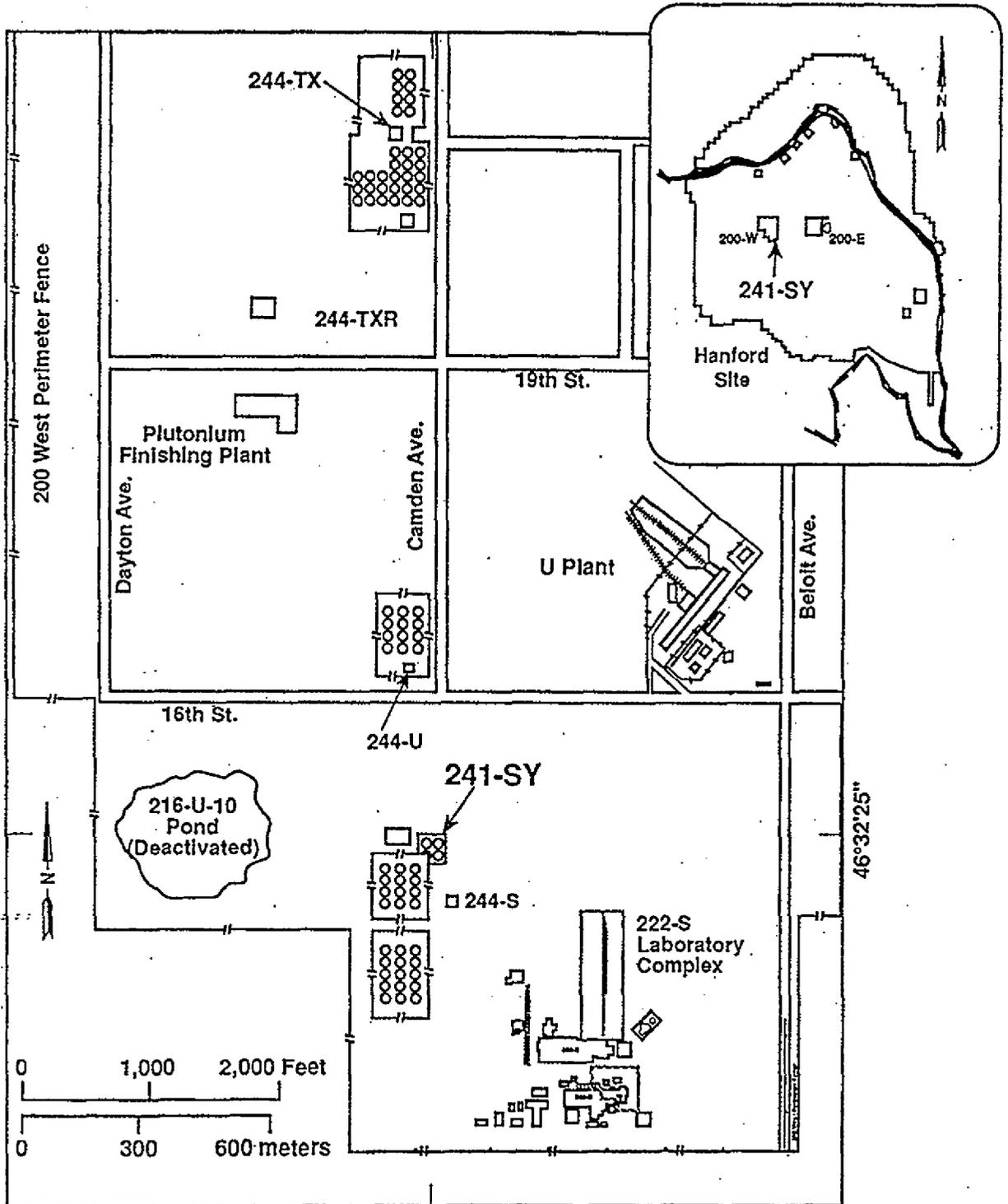
H96070161.27c

241-AW Double-Shell Tank Site Plan



H96070161.27d

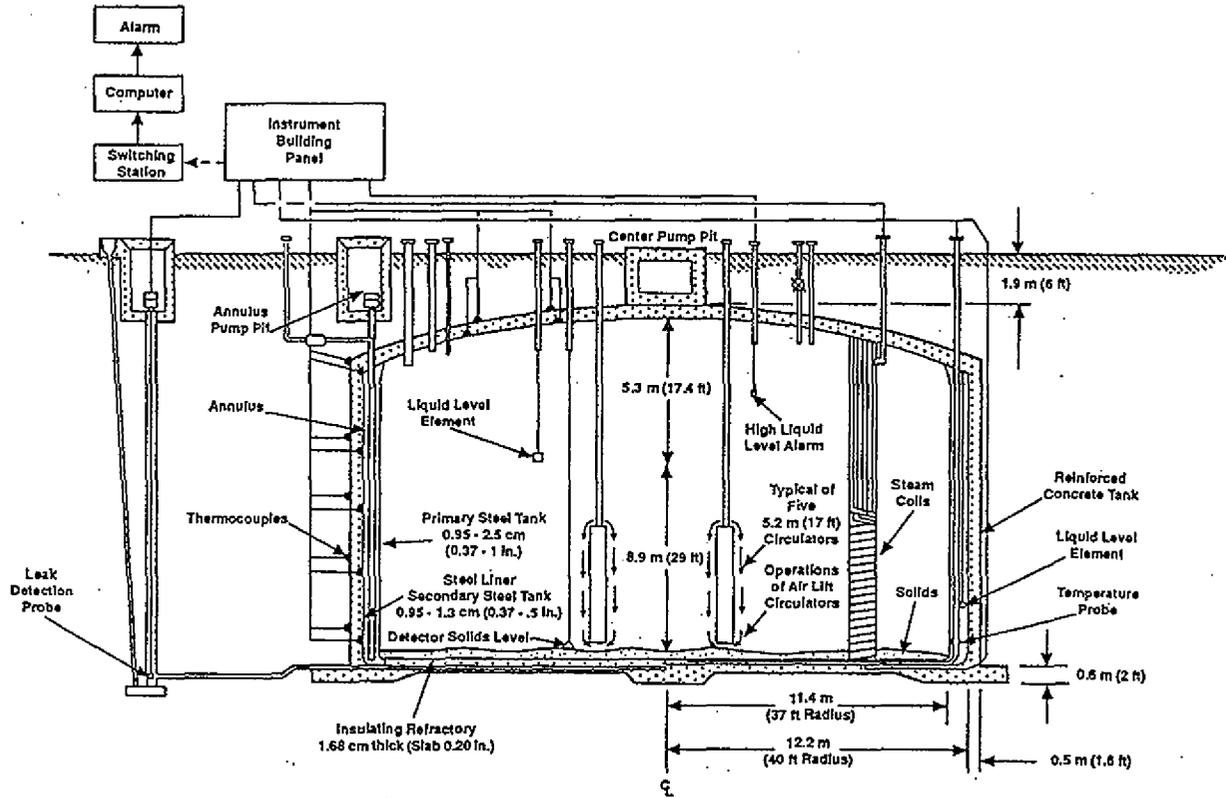
241-SY Double Shell Tank Site Plan



119°37'41"

H96070161.34a

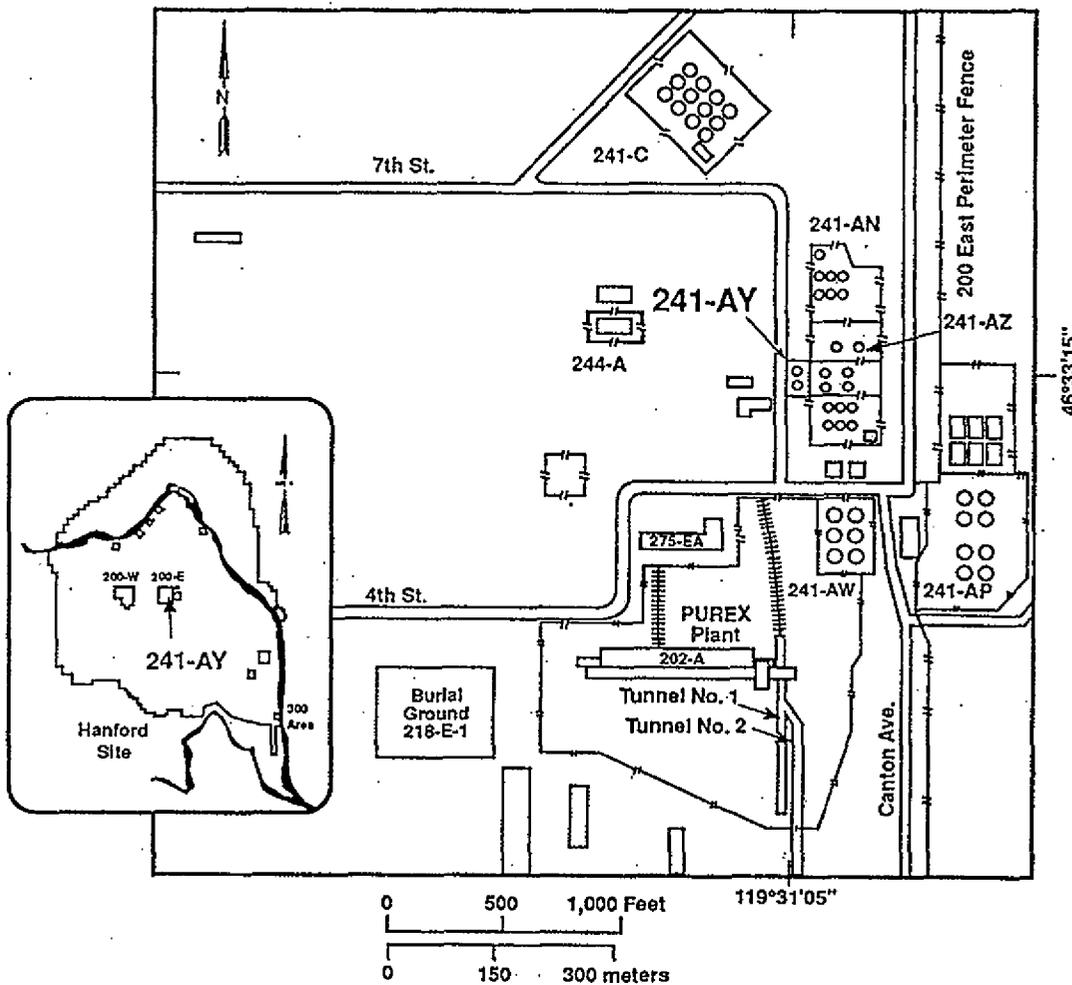
Typical Aging Waste Double-Shell Tank



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

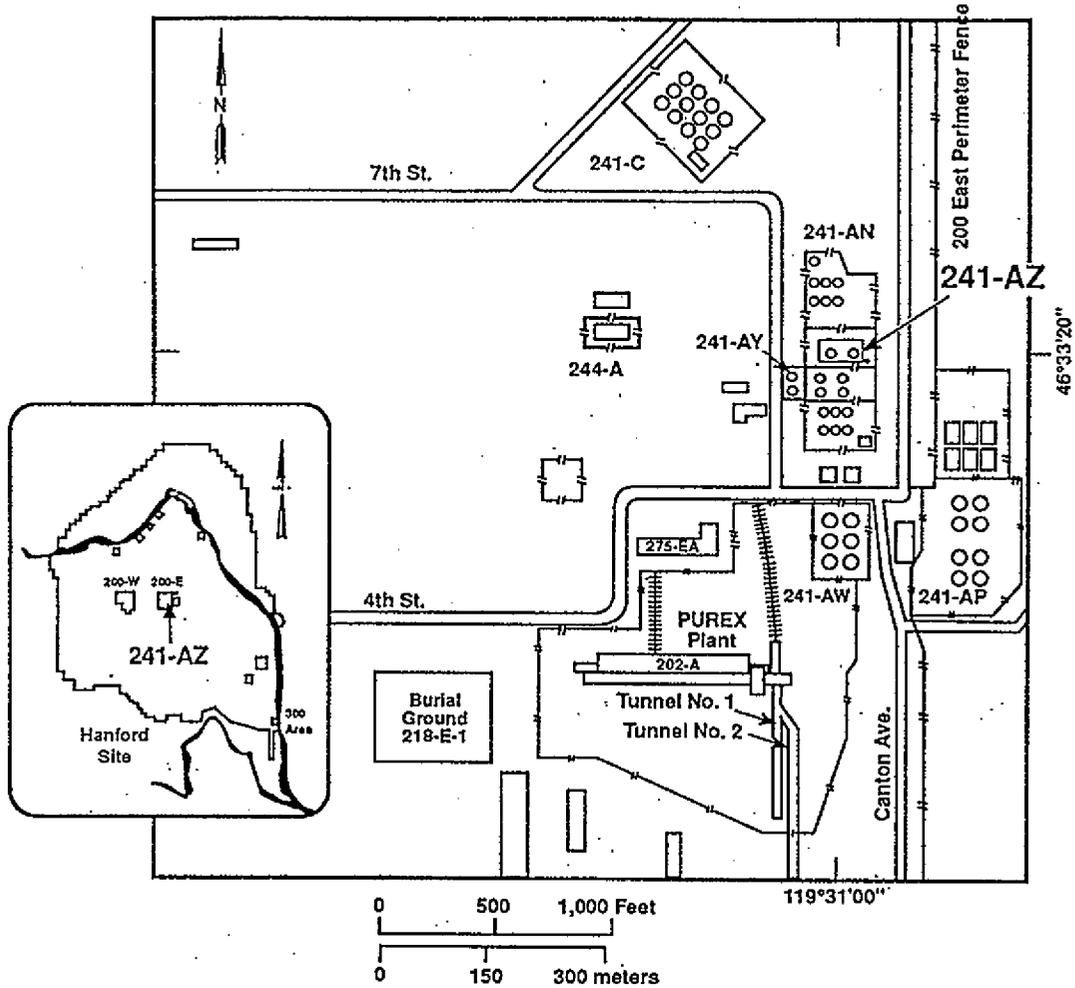
39211048.4a

241-AY Aging Waste Double-Shell Tank Site Plan



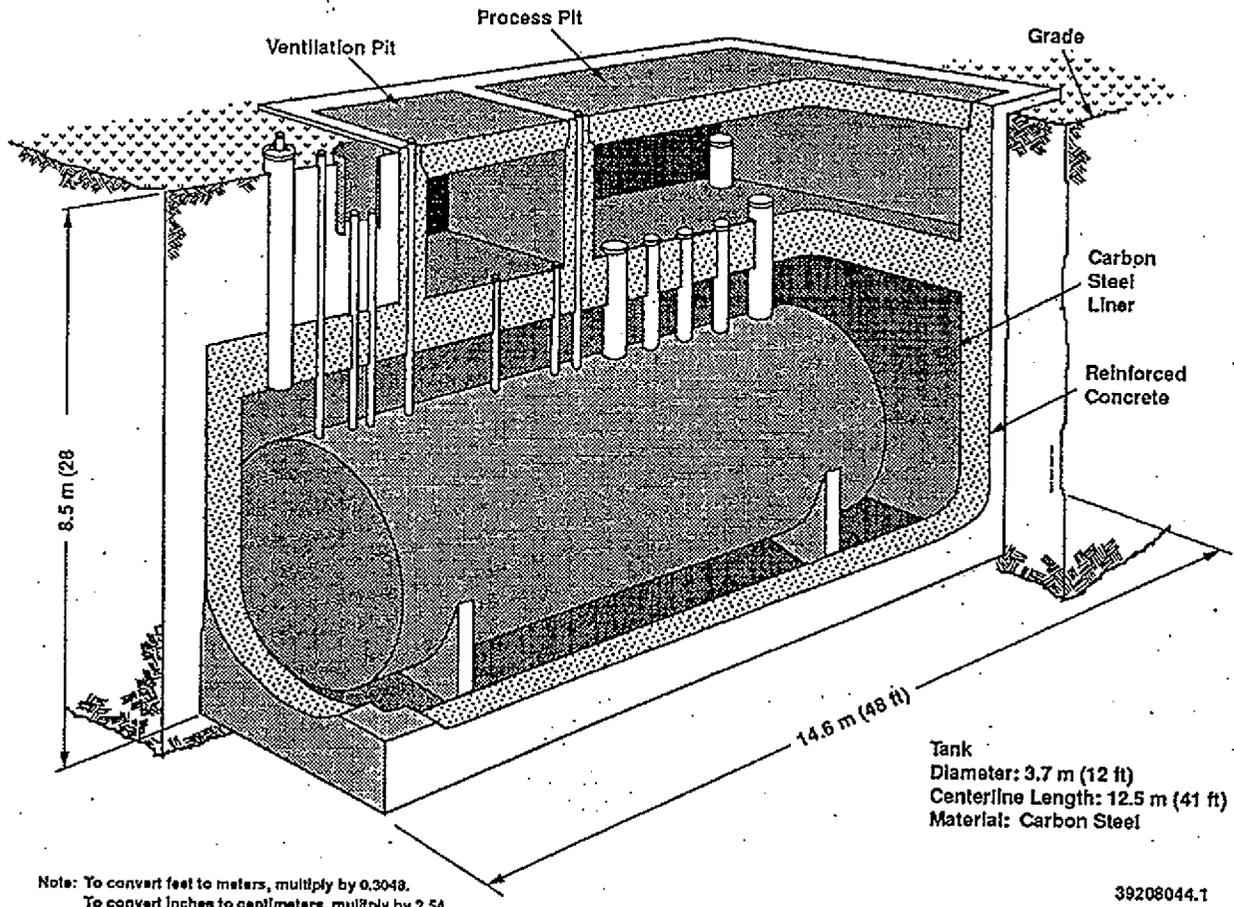
H96070161.27e

241-AZ Aging Waste Double-Shell Tank Site Plan



H96070161.271

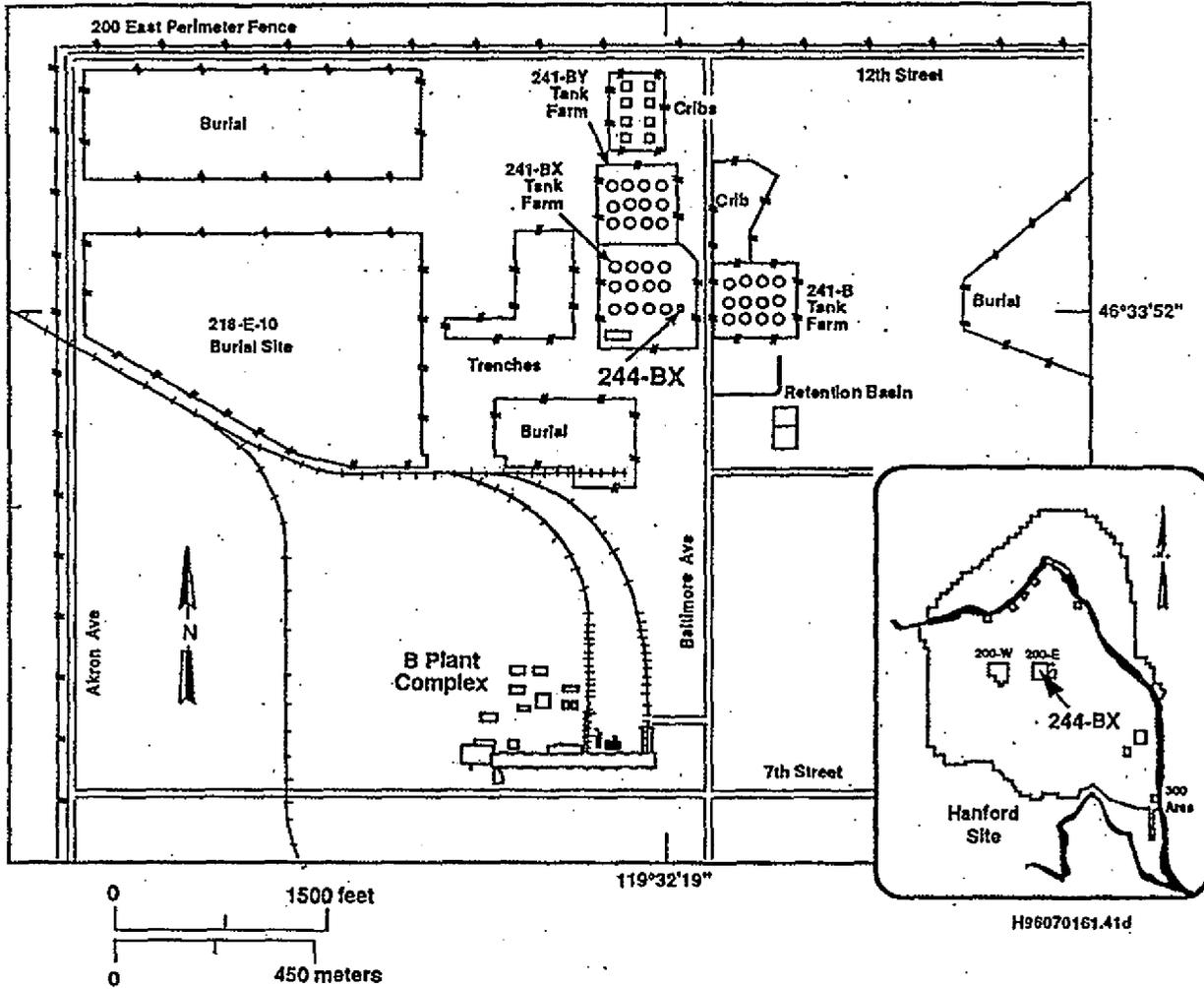
TYPICAL DOUBLE-CONTAINED RECEIVER TANK (244-BX, 244-TX, and 244-U)



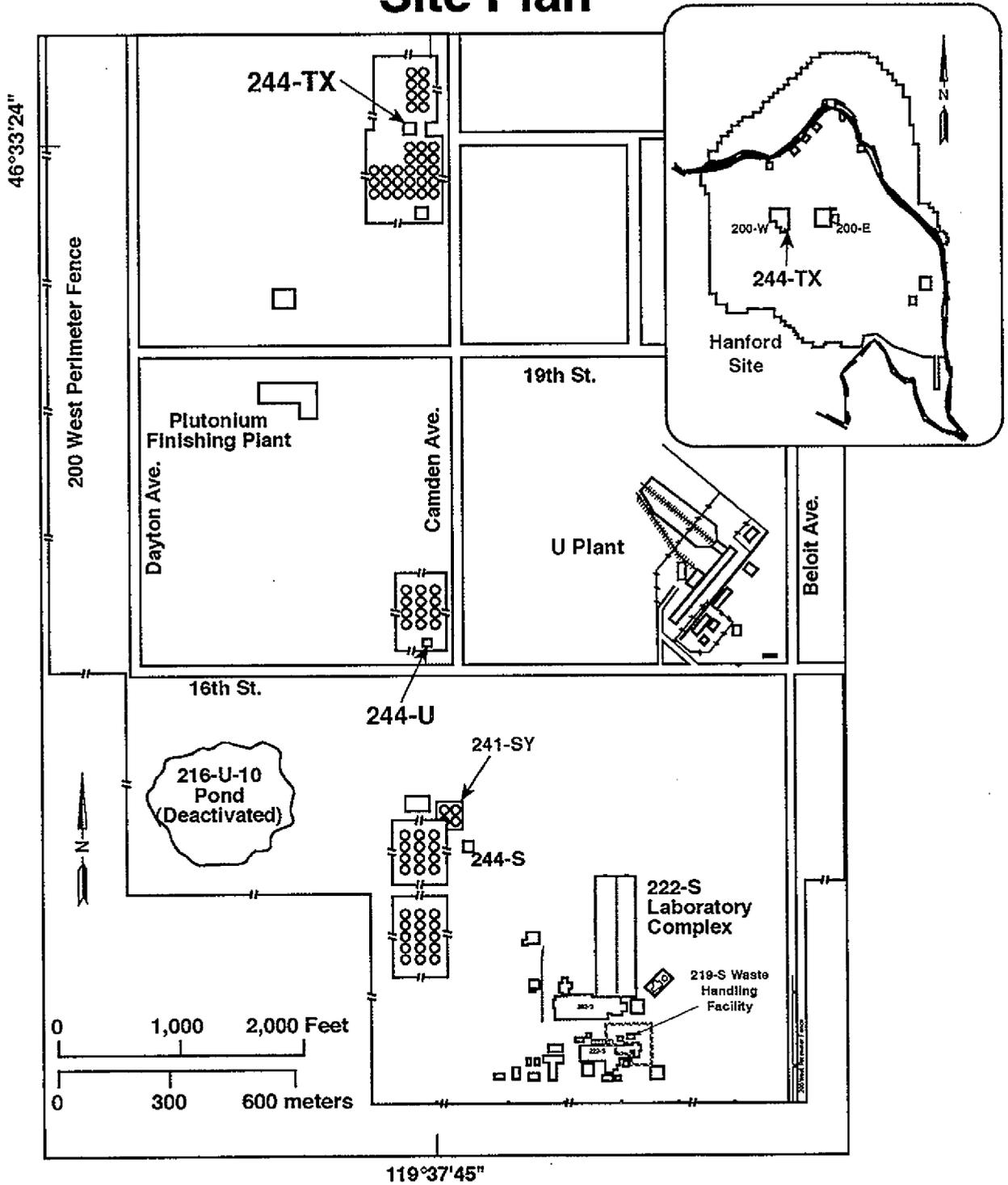
Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

39208044.1

244-BX Double-Contained Receiver Tank Site Plan



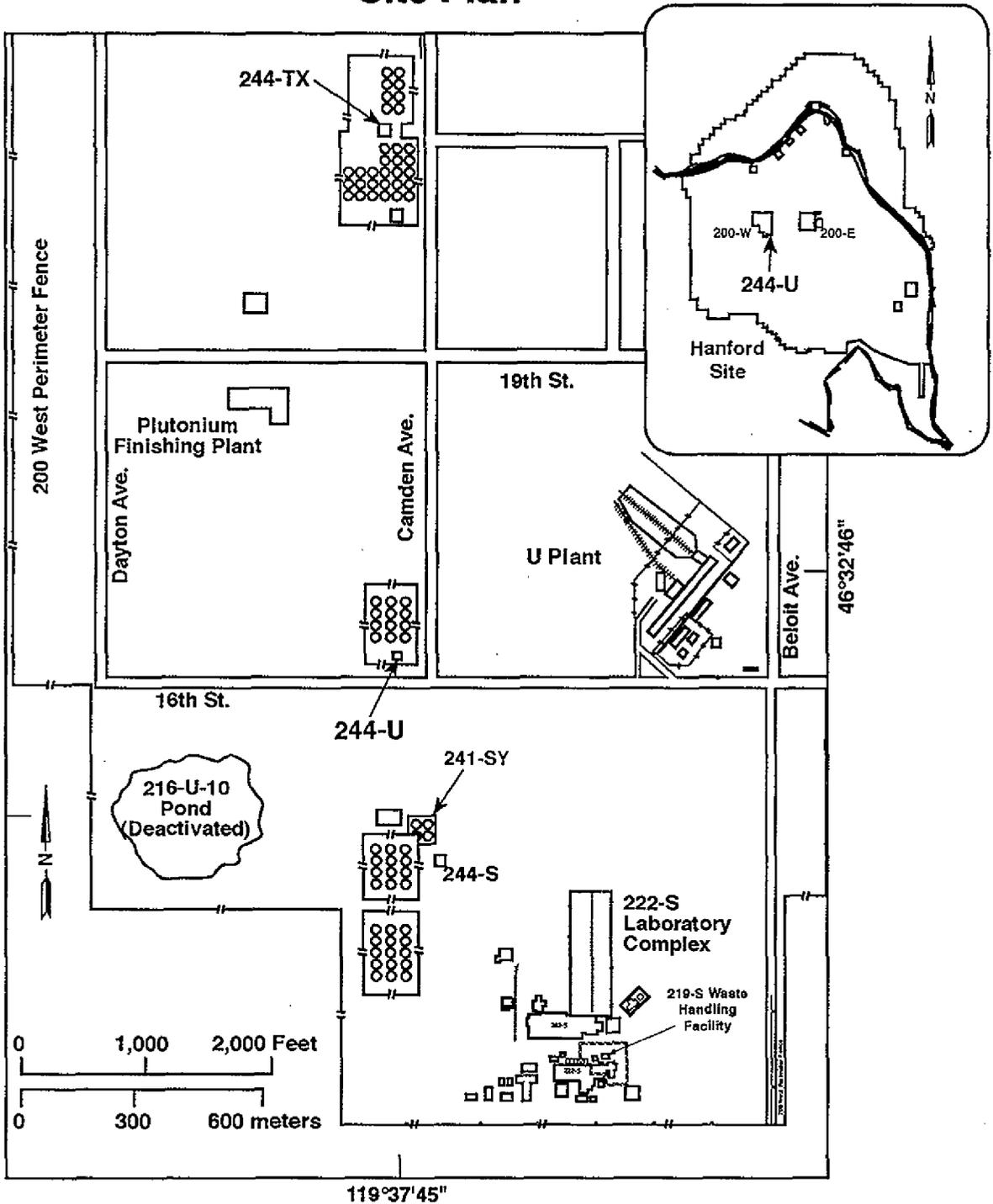
244-TX Double-Contained Receiver Tank Site Plan



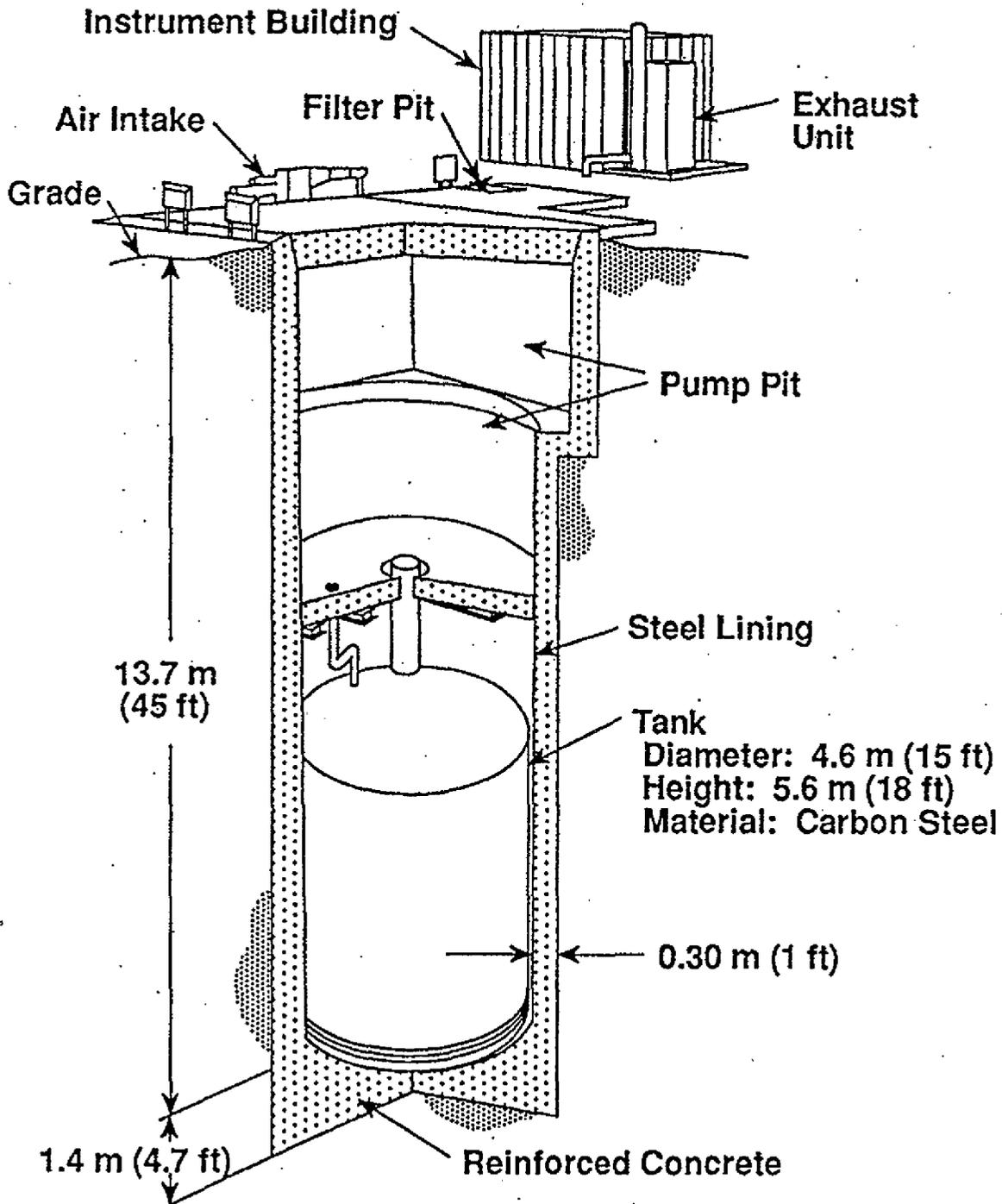
119°37'45"

H96070161.34b R1

244-U Double-Contained Receiver Tank Site Plan



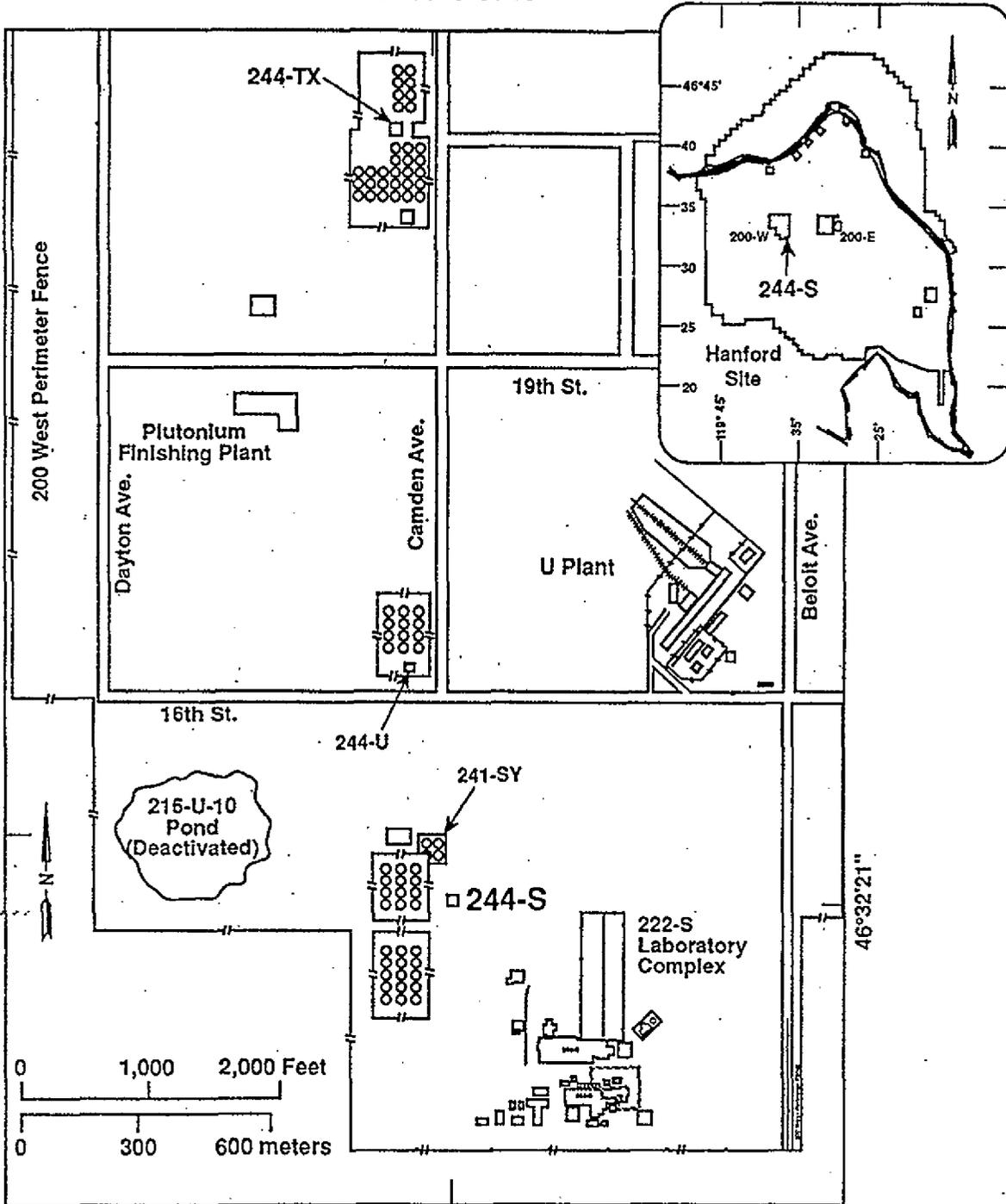
Typical Double-Contained Receiver Tank (244-A and 244-S)



Notes: To convert feet to meters, multiply by 0.3048.

39208044.21

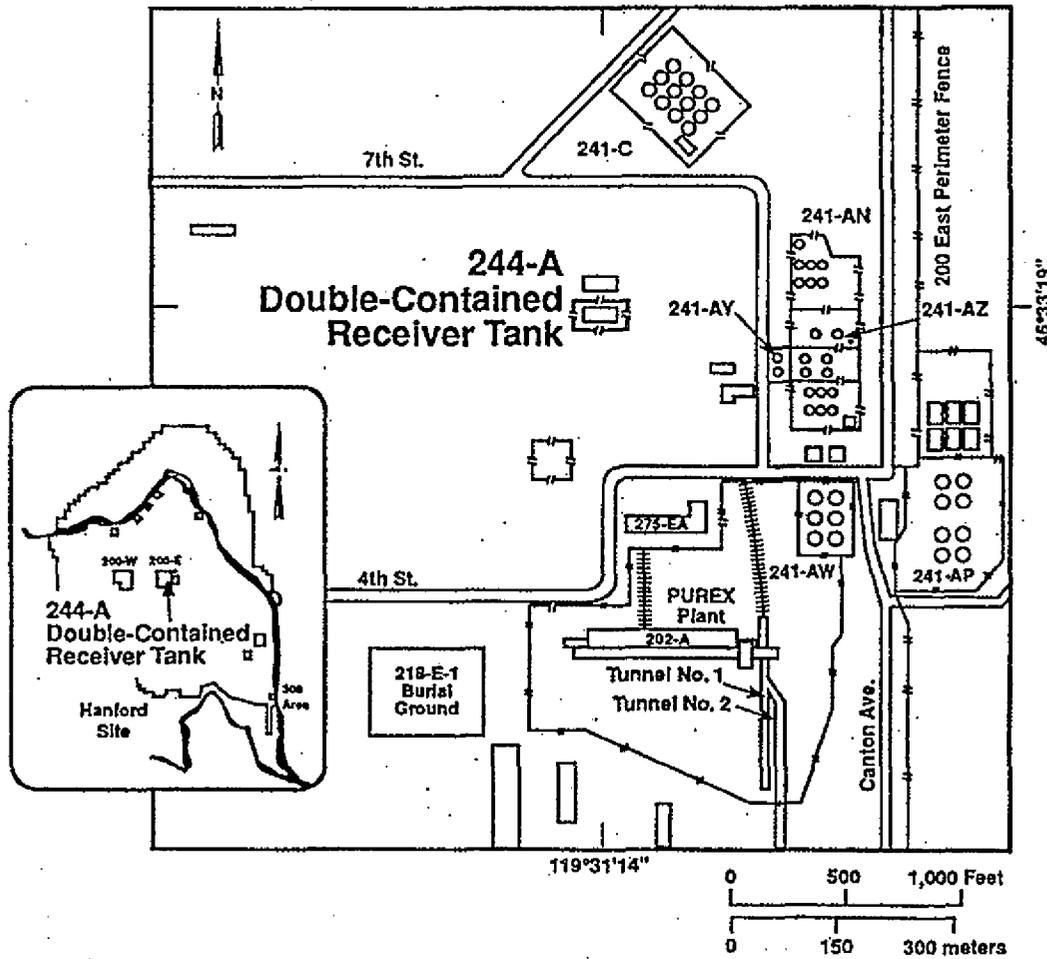
244-S Double-Contained Receiver Tank Site Plan



119°37'42"

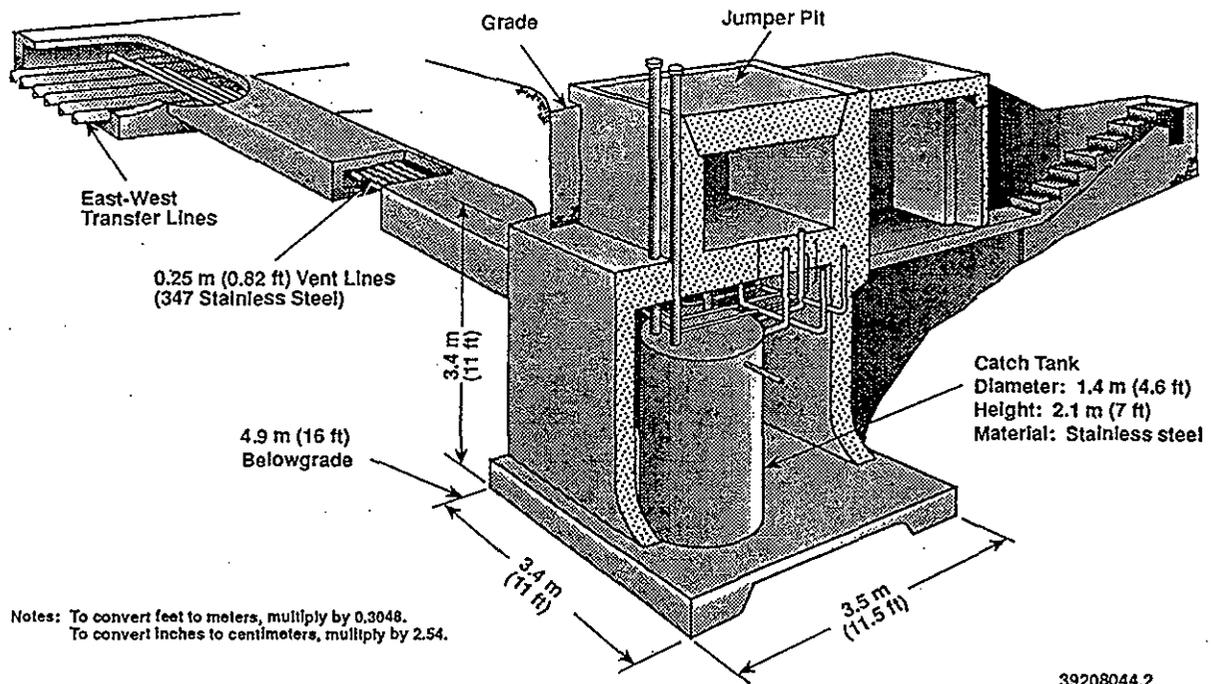
H96070161.34d

244-A Double-Contained Receiver Tank Site Plan



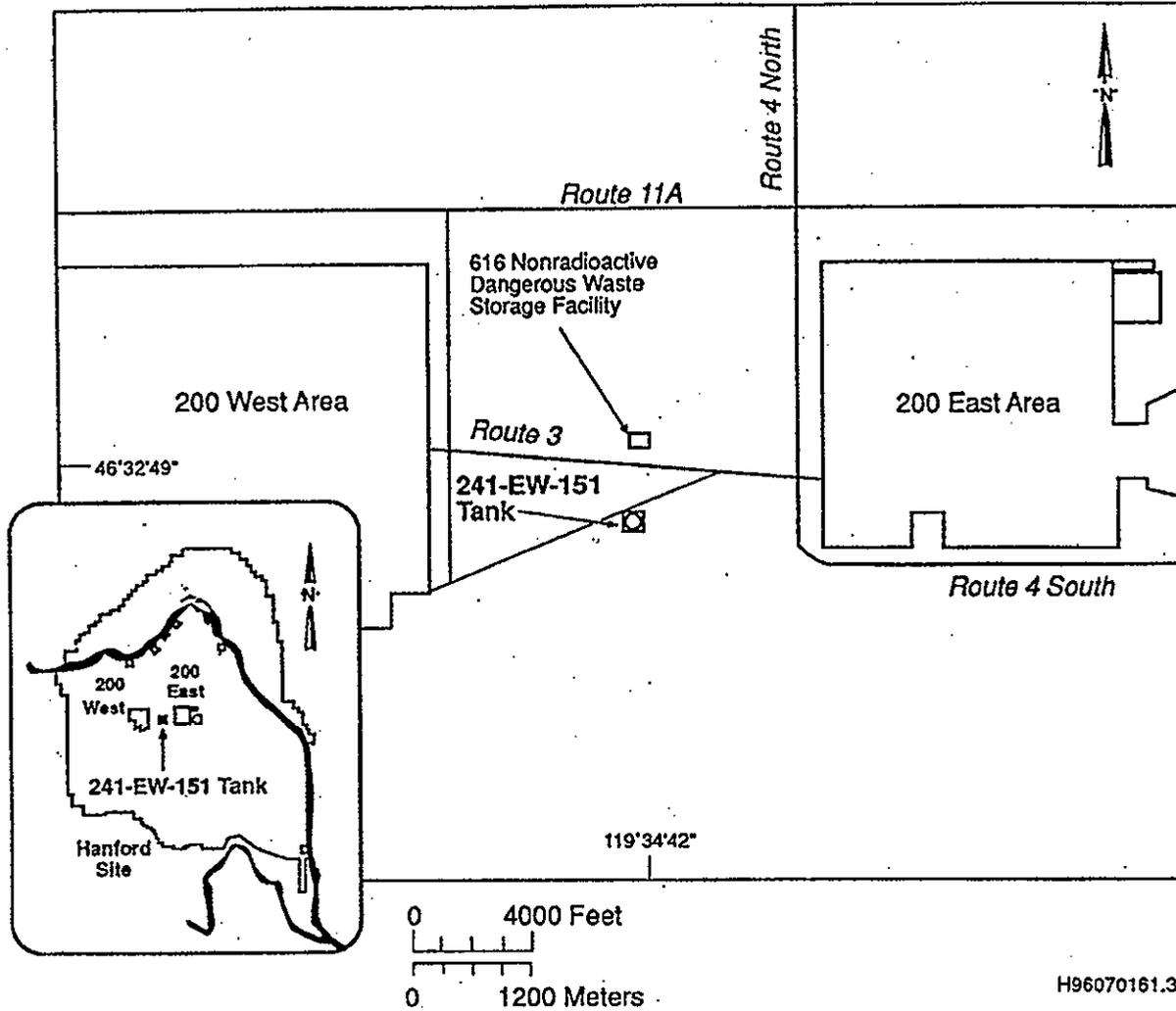
H96070161.27*

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



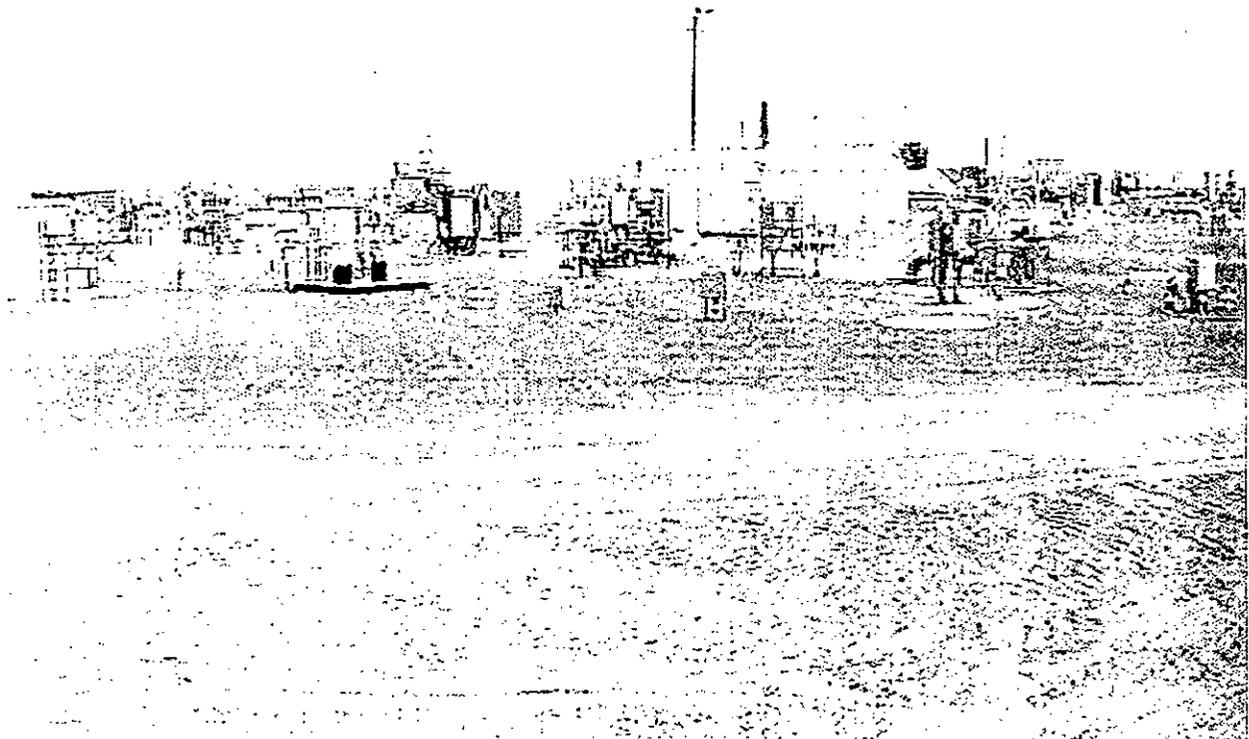
39208044.2

241-EW-151 Tank (200 Area East/West Vent Station) Site Plan



H96070161.33

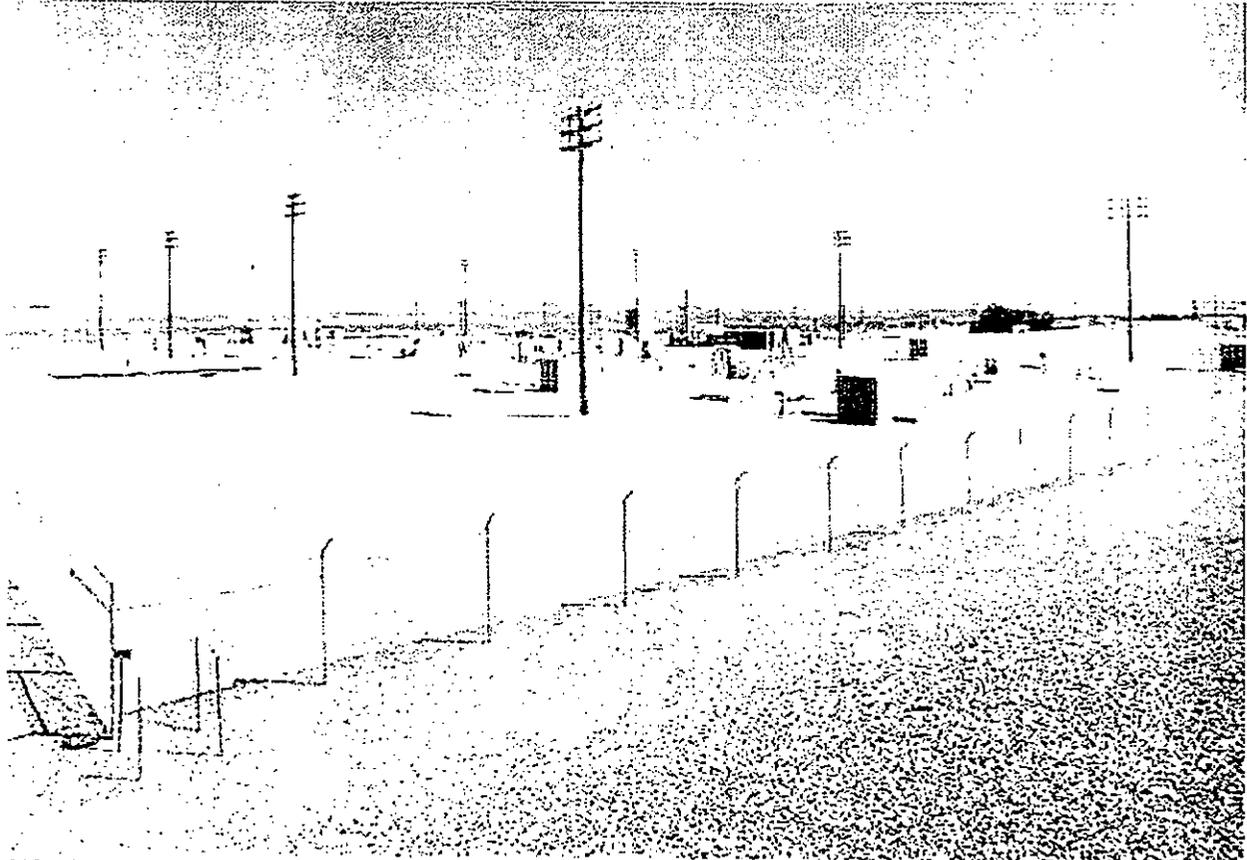
241-AN DOUBLE-SHELL TANKS



46°33'23"
119°31'01"

96080579-24CN
(PHOTO TAKEN 1996)

241-AP DOUBLE-SHELL TANKS



46°33'04"
119°30'52"

8704135-12CN
(PHOTO TAKEN 1987)

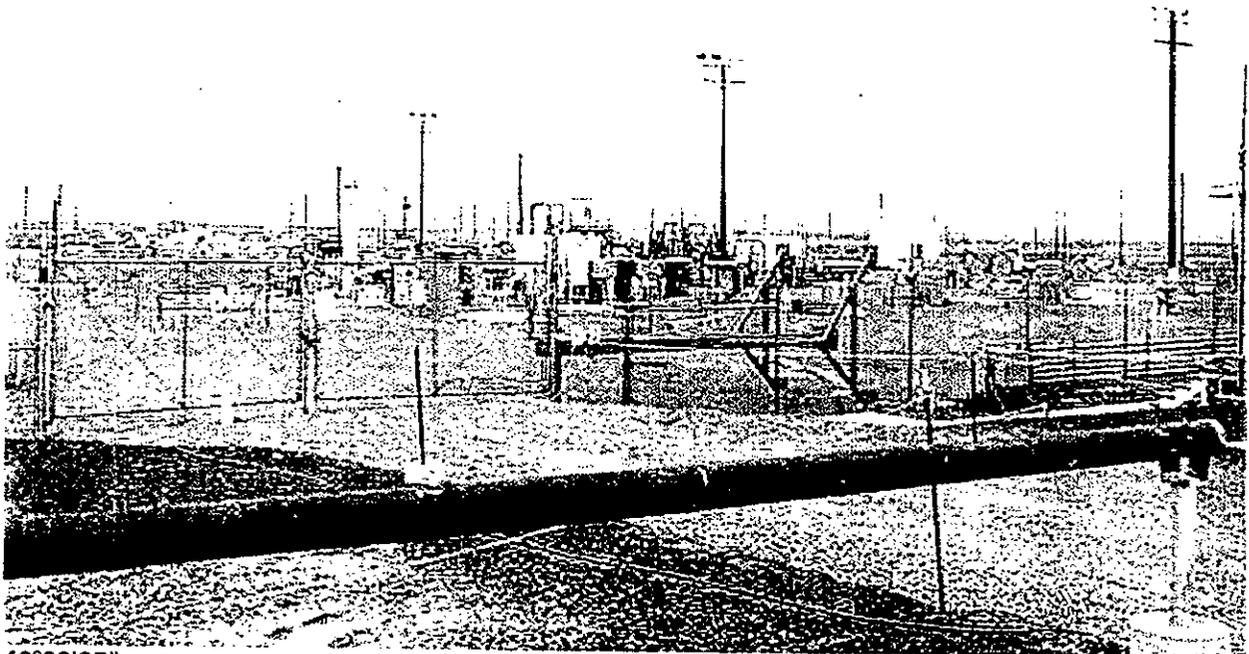
241-AW DOUBLE-SHELL TANKS



46°33'04"
119°31'03"

8704135-11CN
(PHOTO TAKEN 1987)

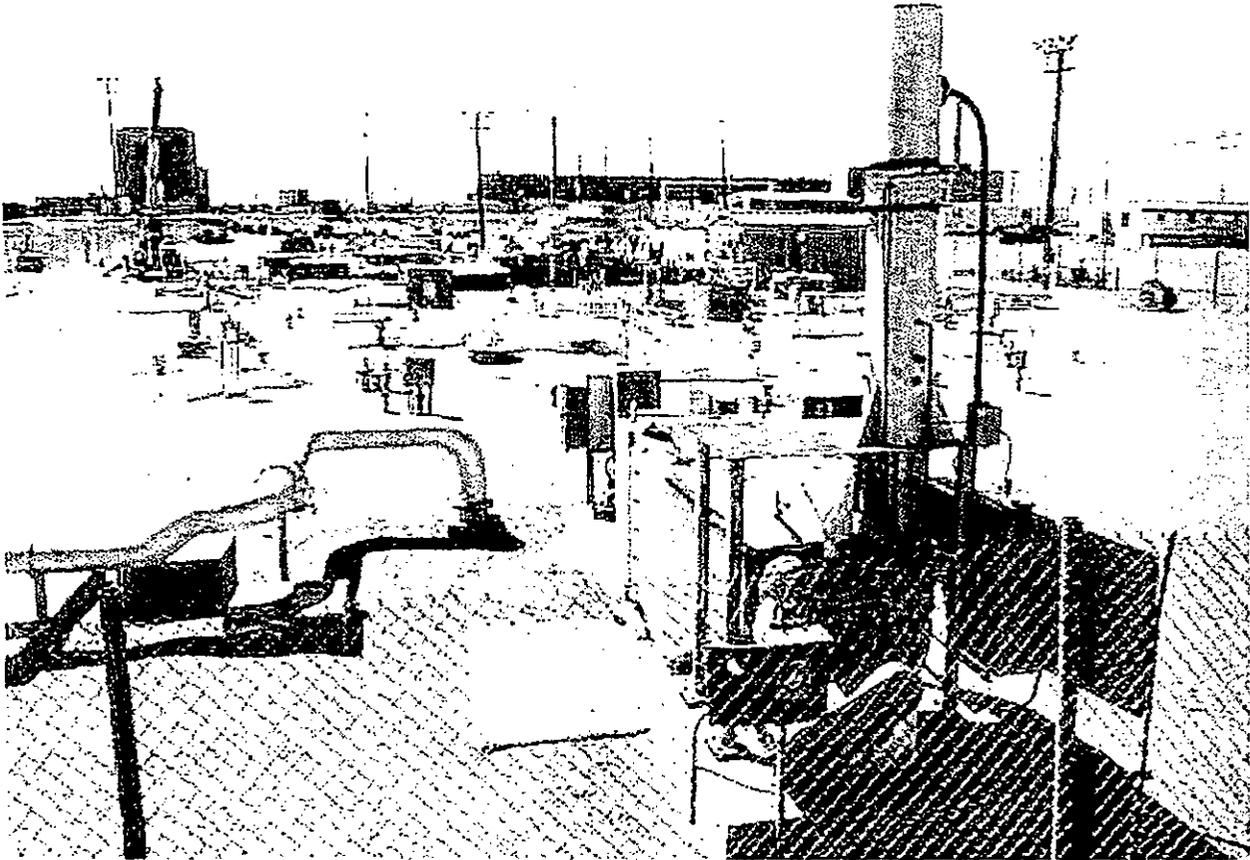
241-SY DOUBLE-SHELL TANKS



46°32'25"
119°37'41"

96080579-1CN
(PHOTO TAKEN 1996)

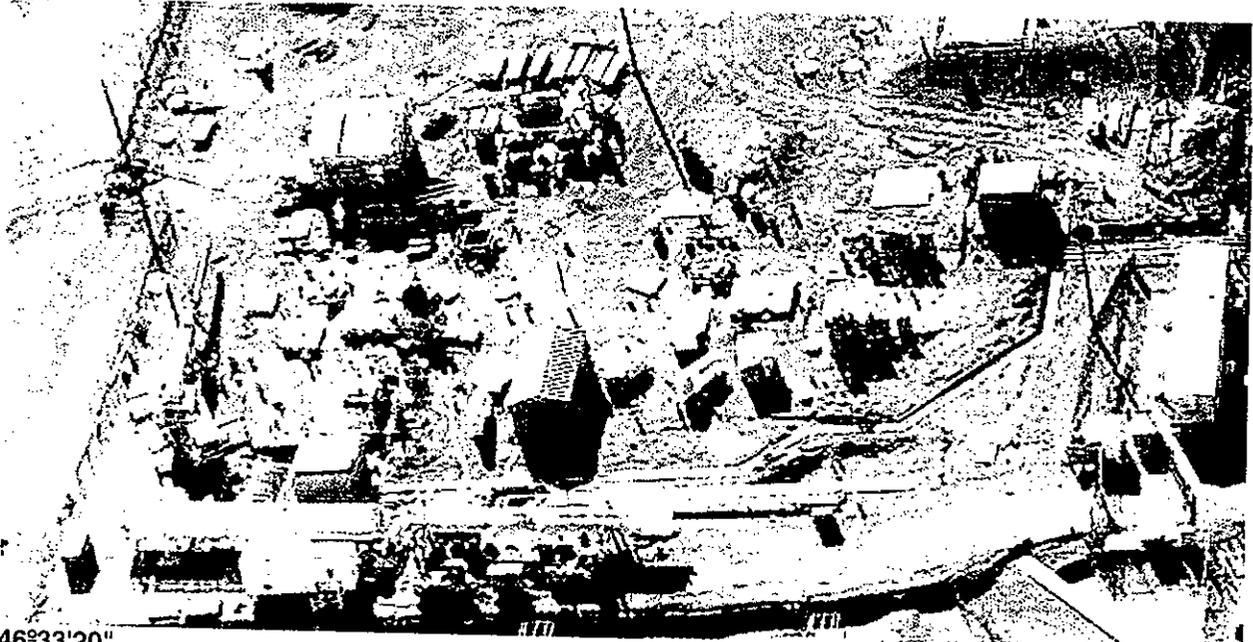
241-AY AGING WASTE DOUBLE-SHELL TANKS



46°33'15"
119°31'05"

8704135-10CN
(PHOTO TAKEN 1987)

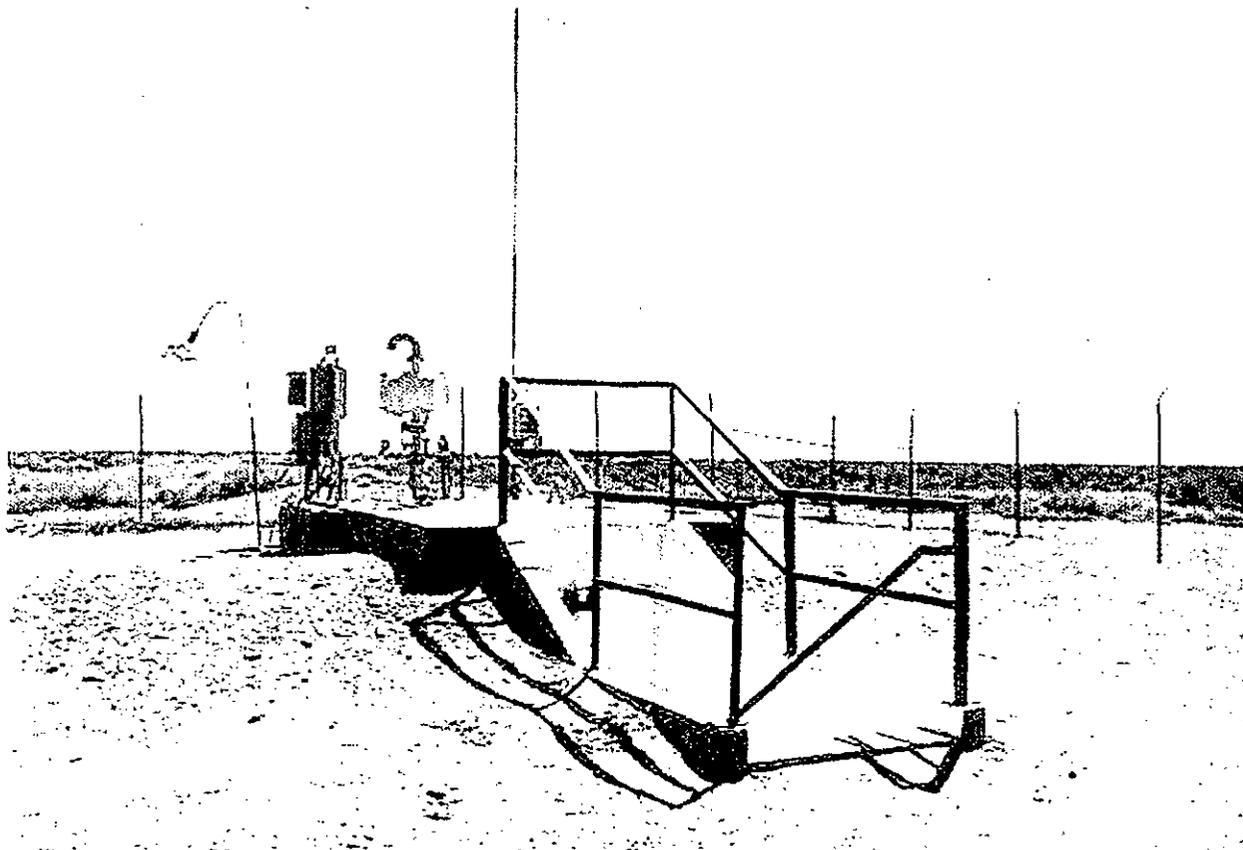
241-AZ AGING WASTE DOUBLE-SHELL TANKS



46°33'20"
119°31'00"

96020361-17CN
(PHOTO TAKEN 1996)

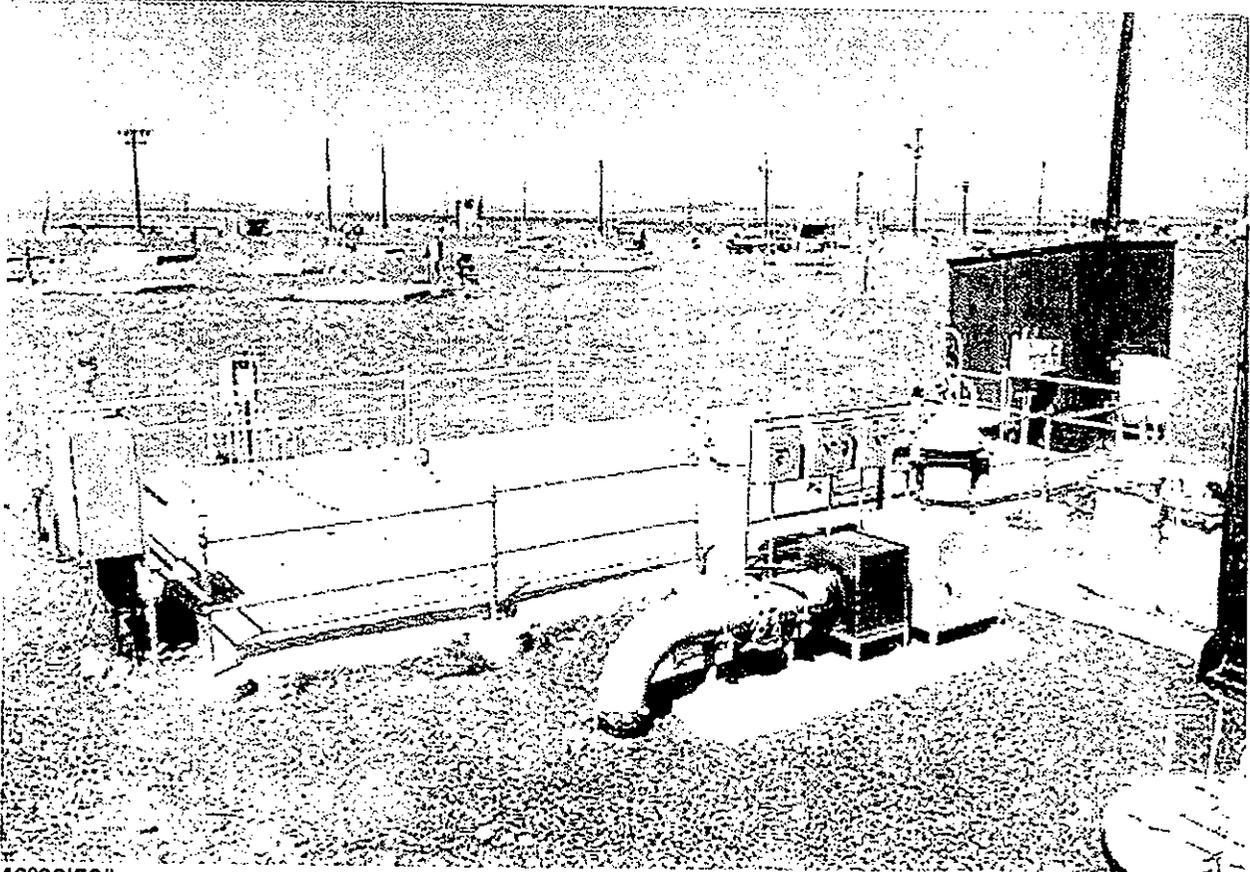
241-EW-151 TANK



46°32'49"
119°34'52"

8704433-17CN
(PHOTO TAKEN 1996)

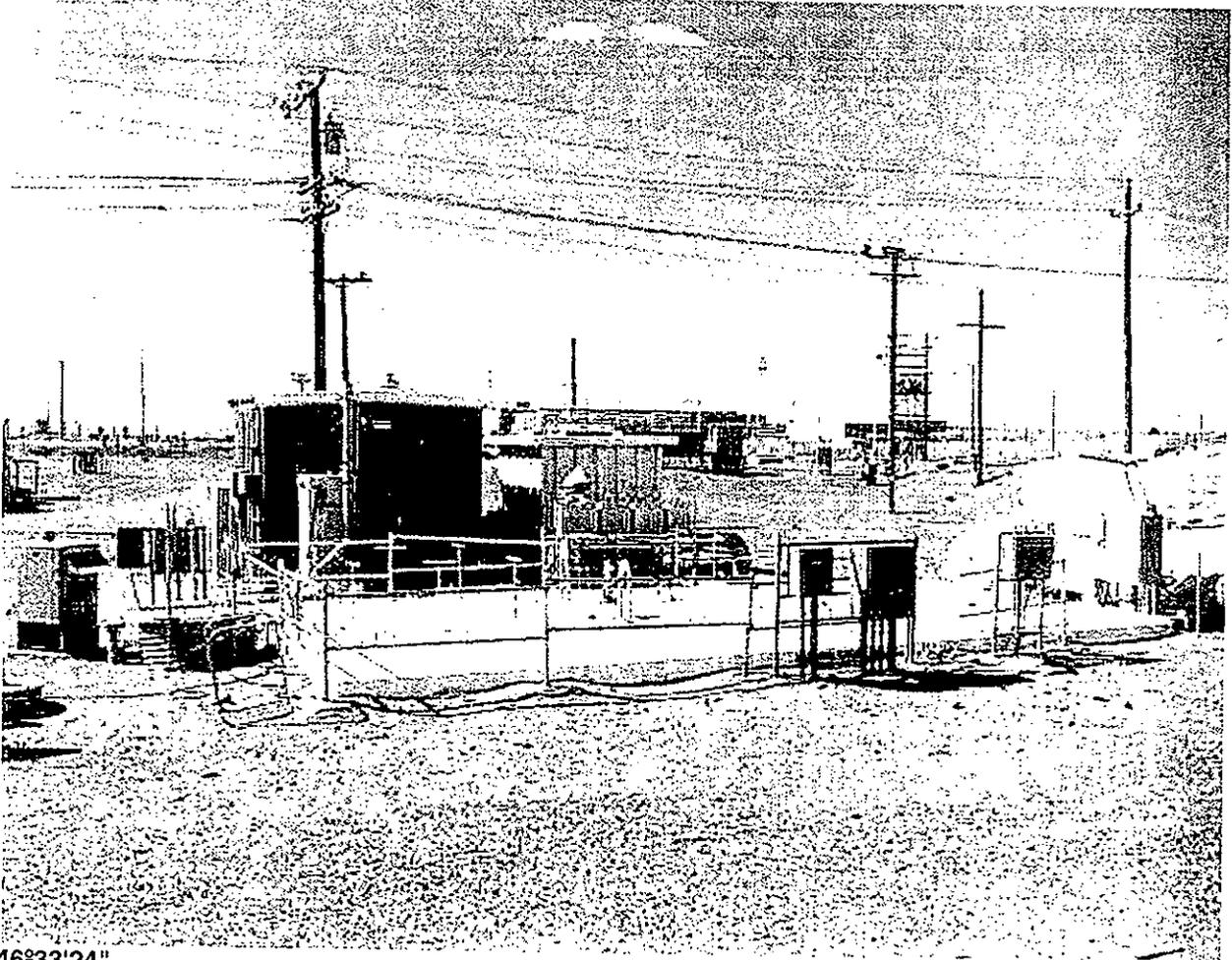
244-BX DOUBLE-CONTAINED RECEIVER TANK



46°33'52"
119°32'19"

8704135-18CN
(PHOTO TAKEN 1987)

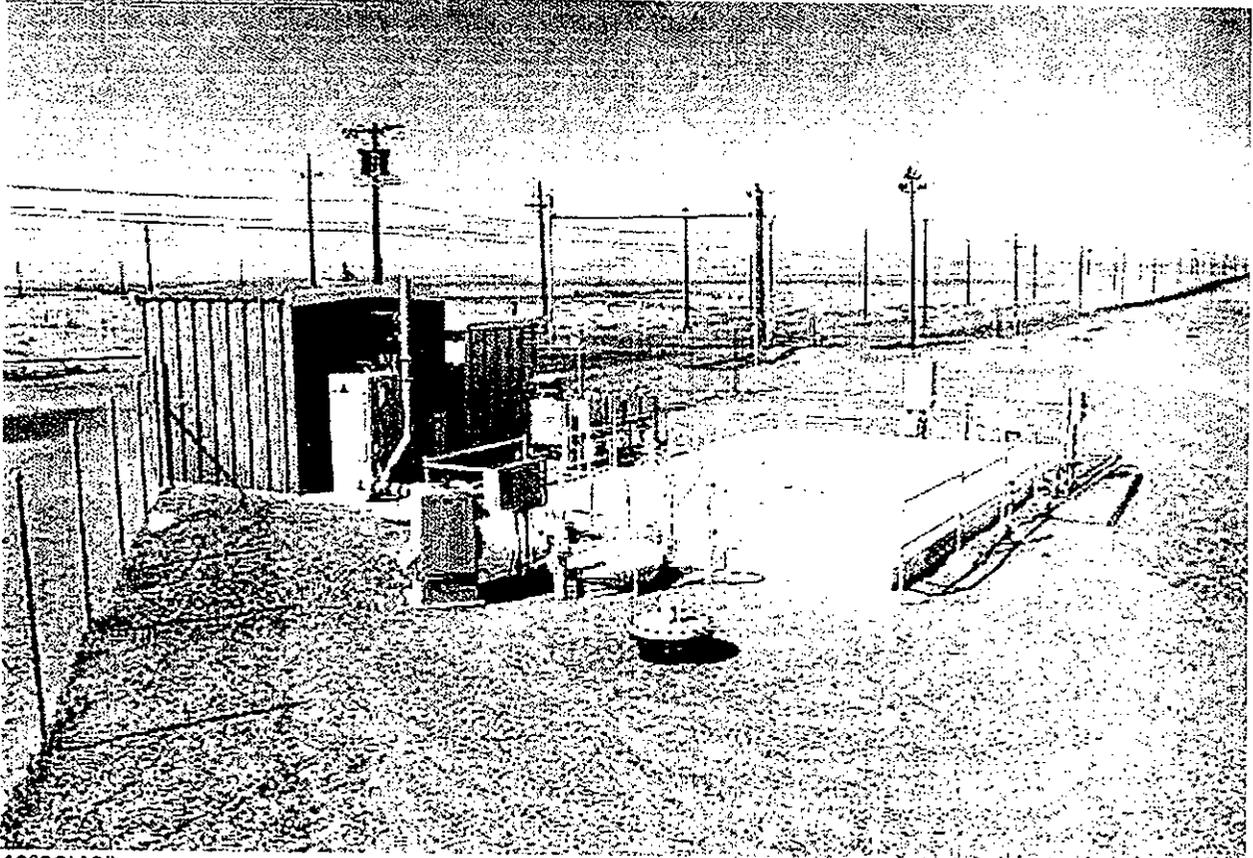
244-TX DOUBLE-CONTAINED RECEIVER TANK



46°33'24"
119°37'45"

8704433-7CN
(PHOTO TAKEN 1987)

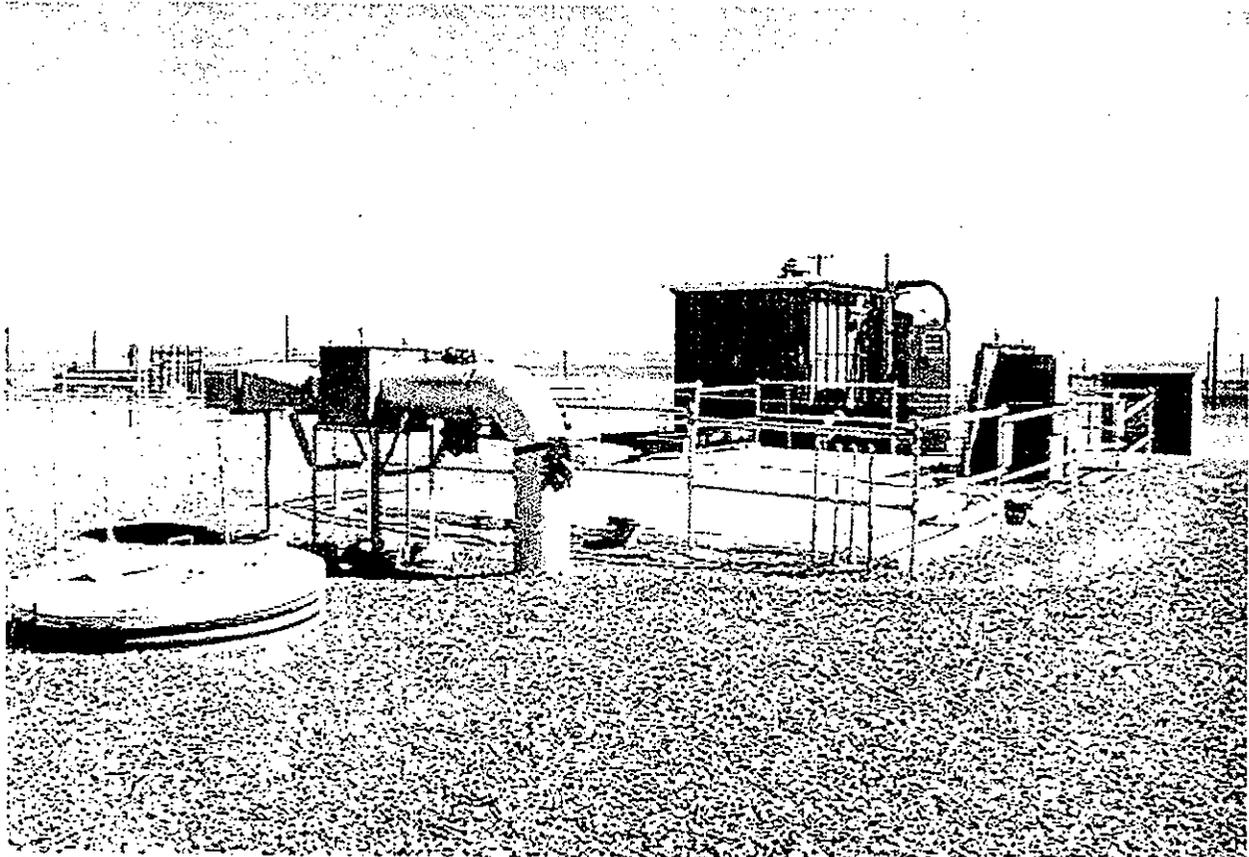
244-U DOUBLE-CONTAINED RECEIVER TANK



46°32'46"
119°37'45"

8704433-4CN
(PHOTO TAKEN 1987)

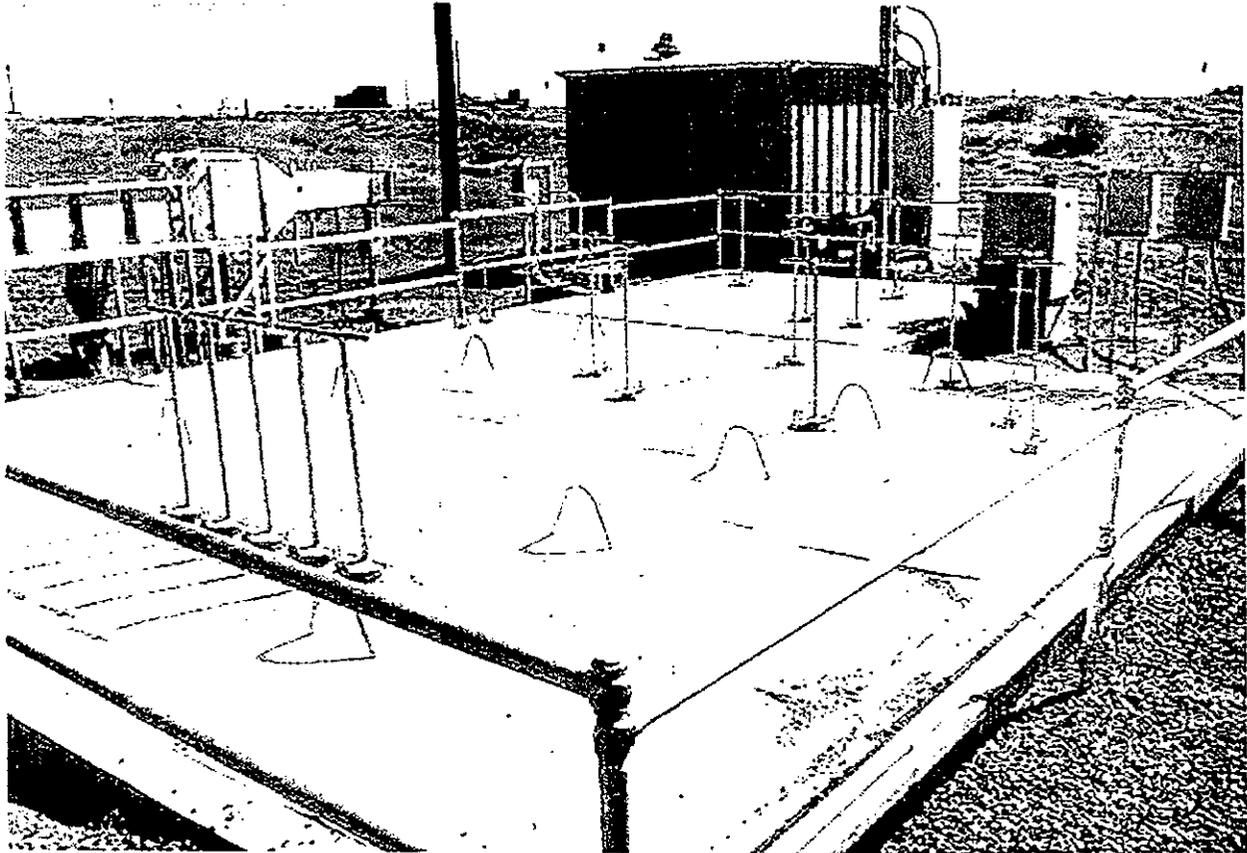
244-A DOUBLE-CONTAINED RECEIVER TANK



46°33'19"
119°31'14"

8704433-15
(PHOTO TAKEN 1987)

244-S DOUBLE-CONTAINED RECEIVER TANK



46°32'21"
119°37'42"

8704433-2CN
(PHOTO TAKEN 1987)

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

FORM 3	DANGEROUS WASTE PERMIT APPLICATION	1. EPA/STATE I.D. NUMBER
		W A 7 8 9 0 0 0 8 9 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)

<input type="checkbox"/> 1. EXISTING FACILITY (See instructions for definition of "existing" facility. Complete item below.)	<input type="checkbox"/> 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 (use the boxes to the left)
03	22	43	

* The date construction of the Hanford Facility commenced.

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)

<input checked="" type="checkbox"/> 1. FACILITY HAS AN INTERIM STATUS PERMIT	<input checked="" type="checkbox"/> 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 codes(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	PRO-CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PRO-CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:			Treatment:		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS	TANK	T01	GALLONS PER DAY OR LITERS PER DAY
TANK	S02	GALLONS OR LITERS	SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS	INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS	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
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			

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

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

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY
		1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)				1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S02	348,390,160	L		7				
2	T01	2,271,240	V		8				
3	S03	0.11	C		9				
4					10				

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

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

S02, T01

The Single-Shell Tank (SST) System consists of 149 tanks that were built between the years 1943 and 1964 to store mixed waste (S02) generated on the Hanford Site. There are two types of tanks in the SST System, the 100 series and the 200 series. The 133 100-series SSTs are 23 meters (75 feet) in diameter with operating capacities of 1,892,700 to 3,785,400 liters (500,000 to 1,000,000 gallons). The sixteen 200-series SSTs are smaller and of a similar design with a 6 meter (20 foot) diameter and a capacity of 208,197 liters (55,000 gallons). The SST System also includes two waste transfer vault systems, the 244-AR and 244-CR Vault. The 244-AR Vault contains four permitted tanks and the 244-CR Vault contains two permitted tanks. Table 1 lists tank numbers, year of construction, year removed from service, and operating capacity.

The maximum process design capacity for tank storage at the SST System is 348,390,160 liters (92,035,230 gallons).

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

The maximum process design capacity for tank treatment at the SST System is 2,271,240 liters (600,000 gallons) per day.

S03

Associated with the SST System are 54 diversion boxes designated as waste piles (S03). A summary of the SST System and corresponding diversion boxes is provided in Table 2. All but one of the diversion boxes (241-AX-155) used within the SST System are inactive and presently isolated (weather covered). "Isolated" as used here means exterior water intrusion has been restricted.

The maximum process design capacity for waste pile storage at the SST System is approximately 23 kilograms (50 pounds) of waste lead stored in each diversion box (worst-case scenario) accounting for a total of 1,202 kilograms (2,650 pounds) or 0.11 cubic meter (0.14 cubic yard) of waste lead in storage.

Table 1. Single-Shell Tank System Summary*
 (sheet 1 of 3)

Tank number	Year of construction	Year removed from service	Operating capacity (liters)
241-A-101	1954-1955	1980	3,785,400
241-A-102	1954-1955	1980	3,785,400
241-A-103	1954-1955	1980	3,785,400
241-A-104	1954-1955	1975	3,785,400
241-A-105	1954-1955	1963	3,785,400
241-A-106	1954-1955	1980	3,785,400
241-AX-101	1963-1964	1980	3,785,400
241-AX-102	1963-1964	1980	3,785,400
241-AX-103	1963-1964	1980	3,785,400
241-AX-104	1963-1964	1978	3,785,400
241-B-101	1943-1944	1974	1,892,700
241-B-102	1943-1944	1978	1,892,700
241-B-103	1943-1944	1977	1,892,700
241-B-104	1943-1944	1972	1,892,700
241-B-105	1943-1944	1972	1,892,700
241-B-106	1943-1944	1977	1,892,700
241-B-107	1943-1944	1969	1,892,700
241-B-108	1943-1944	1977	1,892,700
241-B-109	1943-1944	1977	1,892,700
241-B-110	1943-1944	1971	1,892,700
241-B-111	1943-1944	1976	1,892,700
241-B-112	1943-1944	1977	1,892,700
241-B-201	1943-1944	1971	208,197
241-B-202	1943-1944	1977	208,197
241-B-203	1943-1944	1977	208,197
241-B-204	1943-1944	1977	208,197
241-BX-101	1946-1947	1972	1,892,700
241-BX-102	1946-1947	1971	1,892,700
241-BX-103	1946-1947	1977	1,892,700
241-BX-104	1946-1947	1980	1,892,700
241-BX-105	1946-1947	1980	1,892,700
241-BX-106	1946-1947	1971	1,892,700
241-BX-107	1946-1947	1977	1,892,700
241-BX-108	1946-1947	1974	1,892,700
241-BX-109	1946-1947	1974	1,892,700
241-BX-110	1946-1947	1977	1,892,700
241-BX-111	1946-1947	1977	1,892,700
241-BX-112	1946-1947	1977	1,892,700
241-BY-101	1948-1949	1971	2,839,050
241-BY-102	1948-1949	1977	2,839,050
241-BY-103	1948-1949	1973	2,839,050
241-BY-104	1948-1949	1977	2,839,050
241-BY-105	1948-1949	1974	2,839,050
241-BY-106	1948-1949	1977	2,839,050
241-BY-107	1948-1949	1974	2,839,050
241-BY-108	1948-1949	1972	2,839,050
241-BY-109	1948-1949	1979	2,839,050
241-BY-110	1948-1949	1979	2,839,050
241-BY-111	1948-1949	1977	2,839,050
241-BY-112	1948-1949	1978	2,839,050
241-C-101	1943-1944	1970	1,892,700
241-C-102	1943-1944	1976	1,892,700
241-C-103	1943-1944	1979	1,892,700
241-C-104	1943-1944	1980	1,892,700
241-C-105	1943-1944	1979	1,892,700
241-C-106	1943-1944	1979	1,892,700
241-C-107	1943-1944	1978	1,892,700
241-C-108	1943-1944	1976	1,892,700
241-C-109	1943-1944	1976	1,892,700
241-C-110	1943-1944	1976	1,892,700
241-C-111	1943-1944	1978	1,892,700
241-C-112	1943-1944	1976	1,892,700
241-C-201	1943-1944	1977	208,197
241-C-202	1943-1944	1977	208,197
241-C-203	1943-1944	1977	208,197
241-C-204	1943-1944	1977	208,197

Table 1. Single-Shell Tank System Summary*
 (sheet 2 of 2)

Tank number	Year of construction	Year removed from service	Operating capacity (liters)
241-S-101	1950-1951	1980	2,839,050
241-S-102	1950-1951	1980	2,839,050
241-S-103	1950-1951	1980	2,839,050
241-S-104	1950-1951	1968	2,839,050
241-S-105	1950-1951	1974	2,839,050
241-S-106	1950-1951	1979	2,839,050
241-S-107	1950-1951	1980	2,839,050
241-S-108	1950-1951	1979	2,839,050
241-S-109	1950-1951	1979	2,839,050
241-S-110	1950-1951	1979	2,839,050
241-S-111	1950-1951	1972	2,839,050
241-S-112	1950-1951	1974	2,839,050
241-SX-101	1953-1954	1980	3,785,400
241-SX-102	1953-1954	1980	3,785,400
241-SX-103	1953-1954	1980	3,785,400
241-SX-104	1953-1954	1980	3,785,400
241-SX-105	1953-1954	1980	3,785,400
241-SX-106	1953-1954	1980	3,785,400
241-SX-107	1953-1954	1964	3,785,400
241-SX-108	1953-1954	1962	3,785,400
241-SX-109	1953-1954	1965	3,785,400
241-SX-110	1953-1954	1976	3,785,400
241-SX-111	1953-1954	1974	3,785,400
241-SX-112	1953-1954	1969	3,785,400
241-SX-113	1953-1954	1958	3,785,400
241-SX-114	1953-1954	1972	3,785,400
241-SX-115	1953-1954	1965	3,785,400
241-T-101	1943-1944	1979	1,892,700
241-T-102	1943-1944	1976	1,892,700
241-T-103	1943-1944	1974	1,892,700
241-T-104	1943-1944	1974	1,892,700
241-T-105	1943-1944	1976	1,892,700
241-T-106	1943-1944	1973	1,892,700
241-T-107	1943-1944	1976	1,892,700
241-T-108	1943-1944	1974	1,892,700
241-T-109	1943-1944	1974	1,892,700
241-T-110	1943-1944	1976	1,892,700
241-T-111	1943-1944	1974	1,892,700
241-T-112	1943-1944	1977	1,892,700
241-T-201	1943-1944	1976	208,197
241-T-202	1943-1944	1976	208,197
241-T-203	1943-1944	1976	208,197
241-T-204	1943-1944	1976	208,197
241-TX-101	1947-1948	1980	2,839,050
241-TX-102	1947-1948	1977	2,839,050
241-TX-103	1947-1948	1980	2,839,050
241-TX-104	1947-1948	1977	2,839,050
241-TX-105	1947-1948	1977	2,839,050
241-TX-106	1947-1948	1977	2,839,050
241-TX-107	1947-1948	1977	2,839,050
241-TX-108	1947-1948	1977	2,839,050
241-TX-109	1947-1948	1977	2,839,050
241-TX-110	1947-1948	1977	2,839,050
241-TX-111	1947-1948	1977	2,839,050
241-TX-112	1947-1948	1974	2,839,050
241-TX-113	1947-1948	1971	2,839,050
241-TX-114	1947-1948	1081	2,839,050
241-TX-115	1947-1948	1977	2,839,050
241-TX-116	1947-1948	1969	2,839,050
241-TX-117	1947-1948	1969	2,839,050
241-TX-118	1947-1948	1980	2,839,050
241-TY-101	1951-1952	1973	2,839,050
241-TY-102	1951-1952	1979	2,839,050
241-TY-103	1951-1952	1973	2,839,050
241-TY-104	1951-1952	1974	2,839,050
241-TY-105	1951-1952	1980	2,839,050
241-TY-106	1951-1952	1959	2,839,050

Table 1. Single-Shell Tank System Summary*
 (sheet 3 of 3)

Tank number	Year of construction	Year removed from service	Operating capacity (liters)
241-U-101	1943-1944	1960	
241-U-102	1943-1944	1979	1,892,700
241-U-103	1943-1944	1978	1,892,700
241-U-104	1943-1944	1951	1,892,700
241-U-105	1943-1944	1978	1,892,700
241-U-106	1943-1944	1977	1,892,700
241-U-107	1943-1944	1980	1,892,700
241-U-108	1943-1944	1979	1,892,700
241-U-109	1943-1944	1978	1,892,700
241-U-110	1943-1944	1975	1,892,700
241-U-111	1943-1944	1980	1,892,700
241-U-112	1943-1944	1970	1,892,700
241-U-201	1943-1944	1977	208,197
241-U-202	1943-1944	1977	208,197
241-U-203	1943-1944	1977	208,197
241-U-204	1943-1944	1977	208,197

Waste Transfer Vaults

Tank number	Year of construction	Year removed from service	Operating capacity (liters)
244-AR-001	1976	NA	162,772
244-AR-002	1976	NA	162,772
244-AR-003	1976	NA	18,113
244-AR-004	1976	NA	18,113
244-CR-003	1946	NA	55,494
244-CR-011	1946	NA	170,343

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

Table 2. Single-Shell Tank system Diversion Box Matrix.

Unit	SSTs	Diversion box	Construction date
A	241-A-101 through 241-A-106	241-A-152	1955
	241-AX-101 through 241-AX-104	241-A-153	1966
		241-AX-151	1963
		241-AX-152	1962
		241-AX-155	1983
		241-AY-151	1975
		241-AY-152	1970
B	241-B-101 through 241-B-112	241-B-151	1951
	241-B-201 through 241-B-204	241-B-152	1951
	241-BX-101 through 241-BX-112	241-B-153	1951
		241-B-154	1951
		241-B-252	1951
		241-BR-152	1952
		241-BX-153	1951
		241-BX-154	1951
		241-BX-155	1951
		241-BXR-151	1952
		241-BXR-152	1952
		241-BXR-153	1952
		241-BYR-152	1952
		241-BYR-153	1952
		241-BYR-154	1952
C	241-C-101 through 241-C-112	241-C-151	1951
	241-C-201 through 241-C-204	241-C-152	1951
		241-C-153	1951
		241-C-154	1965
		241-C-252	1951
		241-CR-151	1952
		241-CR-152	1952
		241-CR-153	1952
S	241-S-101 through 241-S-152	240-S-151	1952
	241-SX-101 through 241-SX-115	240-S-152	1952
		241-S-152	1975
		241-SX-151	1953
		241-SX-152	1957
T	241-T-101 through 241-T-112	241-T-151	1950
	241-T-201 through 241-T-204	241-T-152	1951
	241-TX-101 through 241-TX-118	241-T-153	1951
	241-TY-101 through 241-TY-106	241-T-252	1951
		242-T-151	1951
		241-TR-152	1951
		241-TR-153	1952
		241-TX-153	1951
		241-TX-155	1951
		241-TXR-151	1951
		241-TXR-152	1952
		241-TXR-153	1952
		241-TY-153	1952
U	241-U-101 through 241-U-112	241-U-153	1951
	241-U-201 through 241-U-204	241-U-252	1951
		241-UR-151	1951
		241-UR-152	1952
		241-UR-153	1952
	241-UR-154	1952	

Continued from page 2.

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

I. D. NUMBER (entered from page 1)

W A 7 8 9 0 0 0 8 9 6 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)			2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	204,116,566*	K	S02	T01		Storage-Tank/Treatment-Tank
2	through						
3	D011						
4	D018						
5	D019						
6	D022						
7	D028						
8	D029						
9	D030						
10	D033						
11	through						
12	D036						
13	D038						
14	D039						
15	D040						
16	D041						
17	D043						
18	WP01						
19	WP02						
20	WT01						
21	WT02						
22	F001						
23	through						
24	F005		▼	▼	▼		Included with above.
25	D008	1,202	K	S03			Storage-Waste Pile
26							

* All dangerous waste numbers listed are included in this quantity.

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTE (continued)

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

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

The dangerous waste numbers listed under the description of dangerous waste are based on a computer model and past process knowledge rather than on chemical analysis of waste. The Estimated Annual Quantity of Dangerous Waste (Section IV.B.) listed is 204,116,556 kilograms (450,000,000 pounds) and is based on an average density of the waste calculated from the densities of 26 core samples taken of waste stored in various SSTs. The average density [1.4 kilograms/liter (12 pounds per gallon)] was multiplied by 139,440,000 liters (36,836,000 gallons) and rounded-up to 204,116,556 kilograms (450,000,000 pounds). The figure 139,440,000 liters (36,836,000 gallons) represents the estimated volume of liquid mixed waste remaining in the SST System.

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

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

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

VI. PHOTOGRAPHS Refer to attached photograph(s).

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

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawings and photos.

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) Keith A. Klein, Manager U.S. Department of Energy	SIGNATURE 	DATE SIGNED 9/30/99
--	---	------------------------

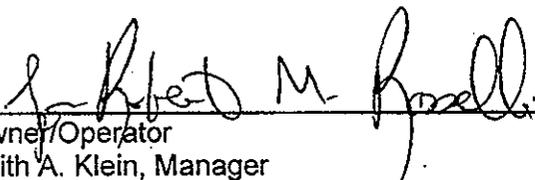
X. OPERATOR CERTIFICATION

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) SEE ATTACHMENT	SIGNATURE	DATE SIGNED
--	-----------	-------------

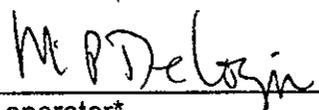
X. OPERATOR CERTIFICATION

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.



Owner/Operator
Keith A. Klein, Manager
U.S. Department of Energy

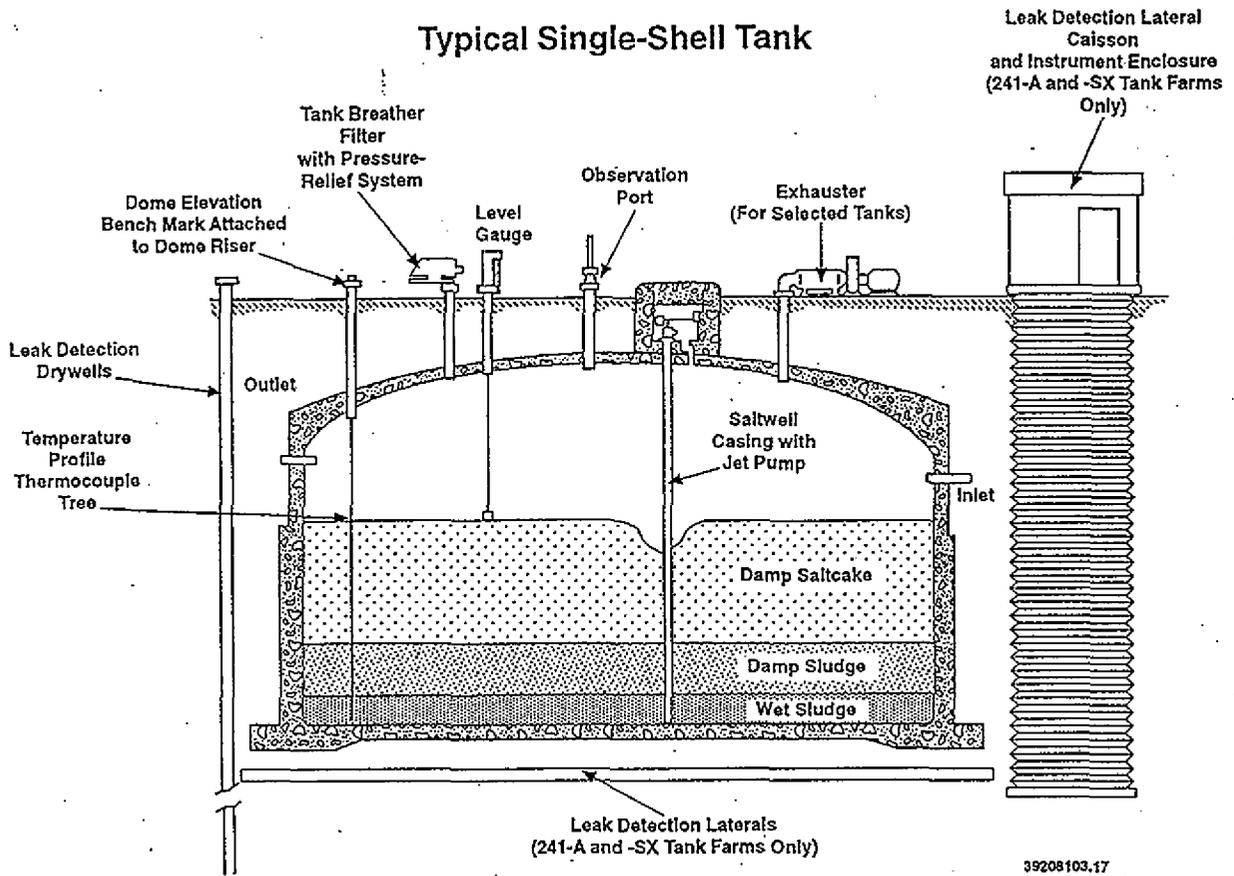
Date 9/30/99



Co-operator*
M. P. DeLozier
President and RPP General Manager
Lockheed Martin Hanford Corporation

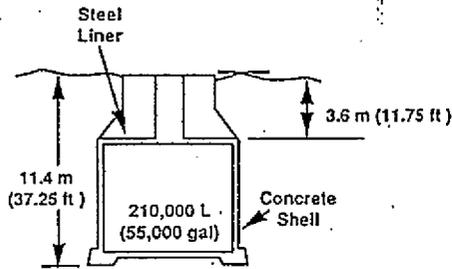
Date 24 Sept 99

Typical Single-Shell Tank

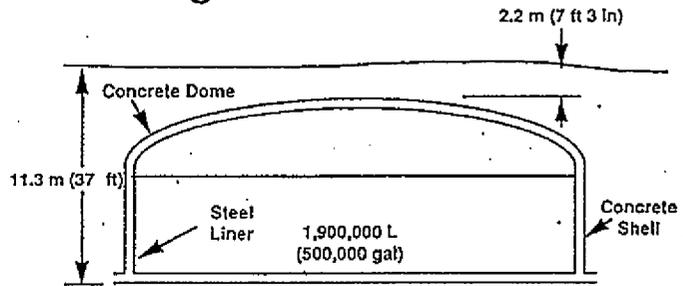


39208103.17

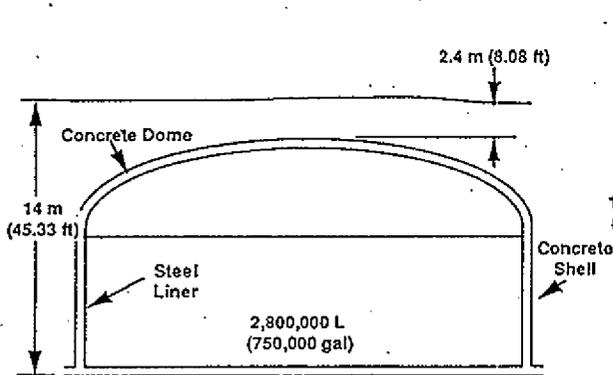
Cross-Sectional Views of Single-Shell Tanks



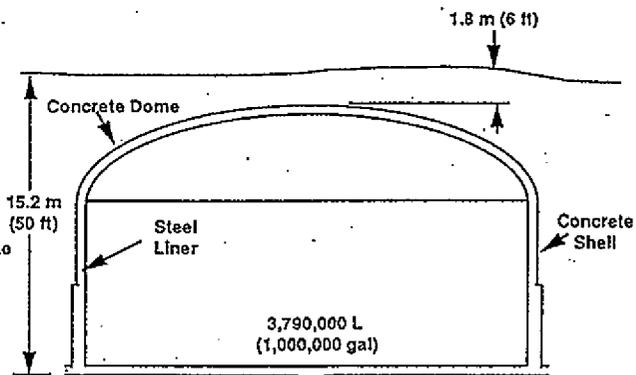
6 m (20 ft) Diameter Single-Shell Tank



22.9 m (75 ft) Diameter Single-Shell Tank



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

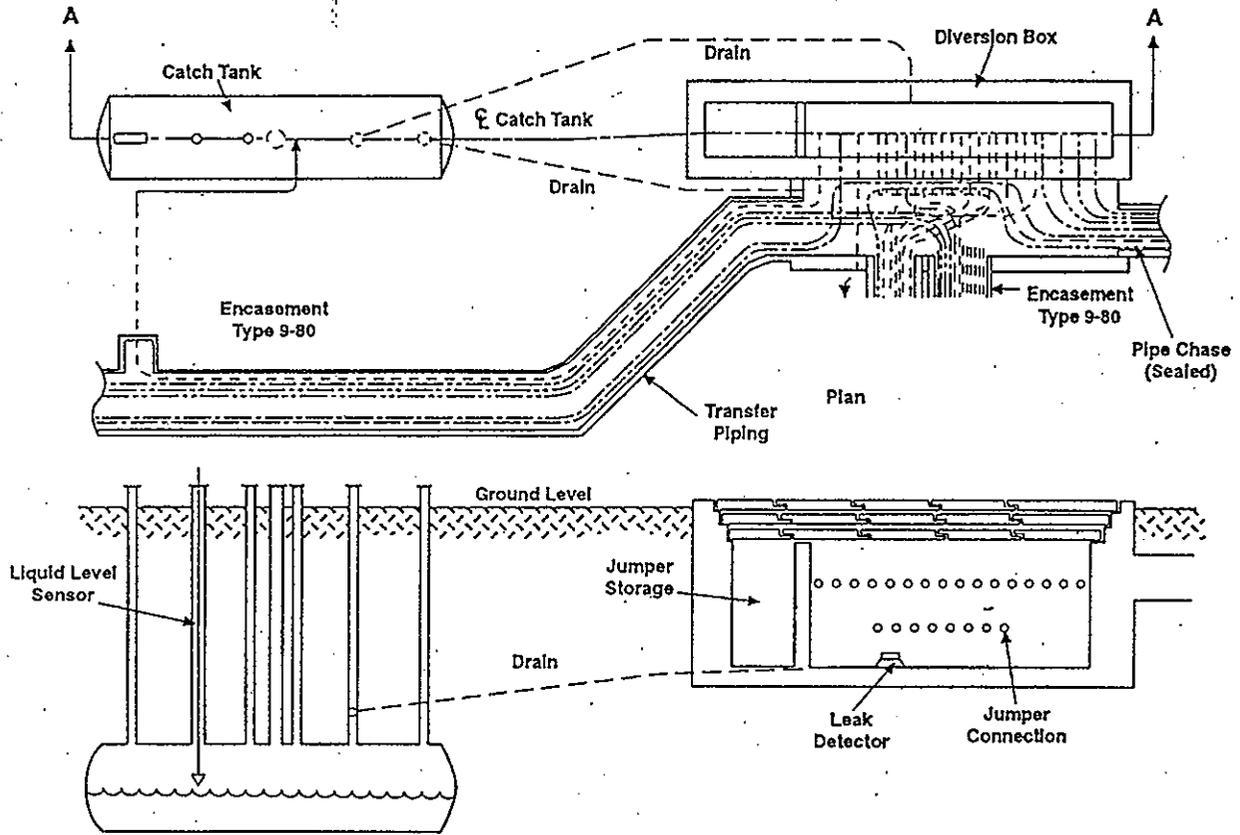


22.9 m (75 ft) Diameter Single-Shell Tank

Note: To convert feet to meters, multiply by 0.3048.
 To convert inches to centimeters, multiply by 2.54.
 To convert gallons to liters, multiply by 3.7854.

39211048.5a

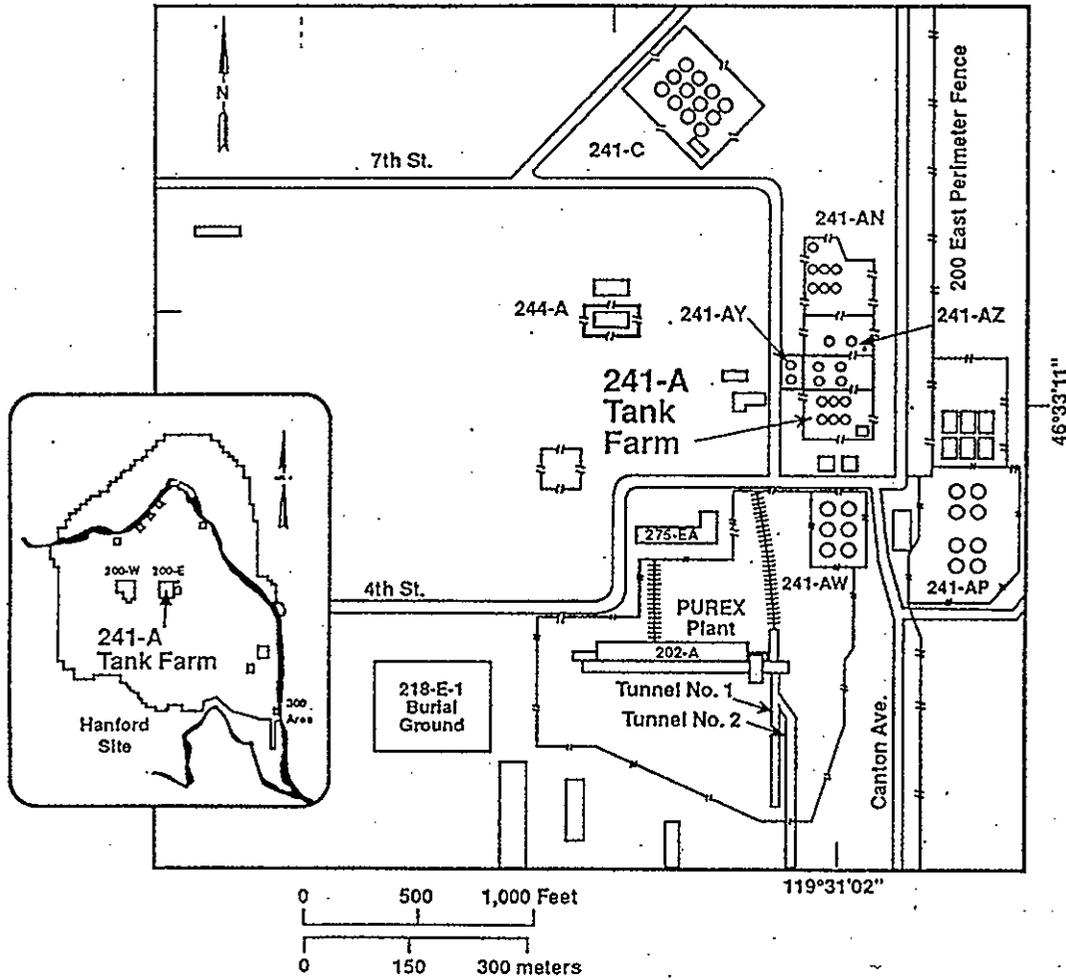
Typical Transfer System



Section A-A

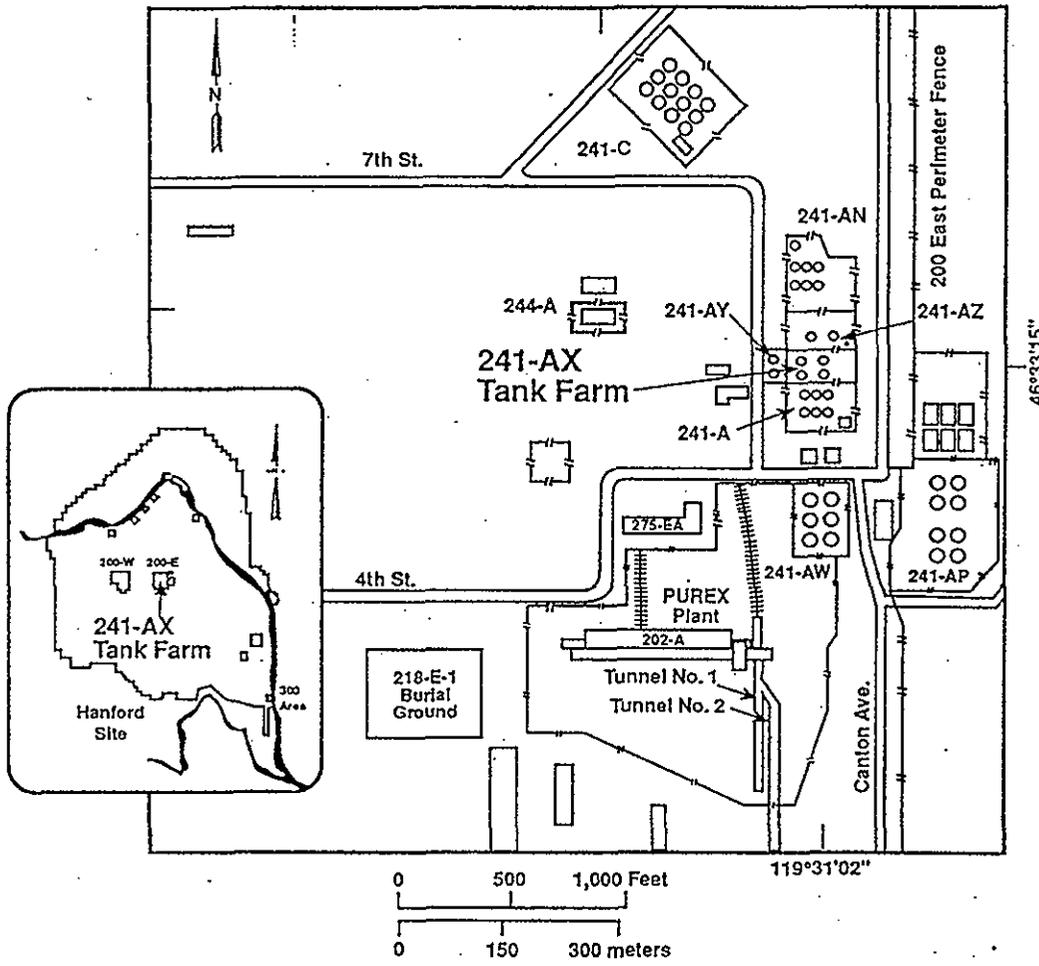
39211048.2a

241-A Single-Shell Tank Farm Site Plan



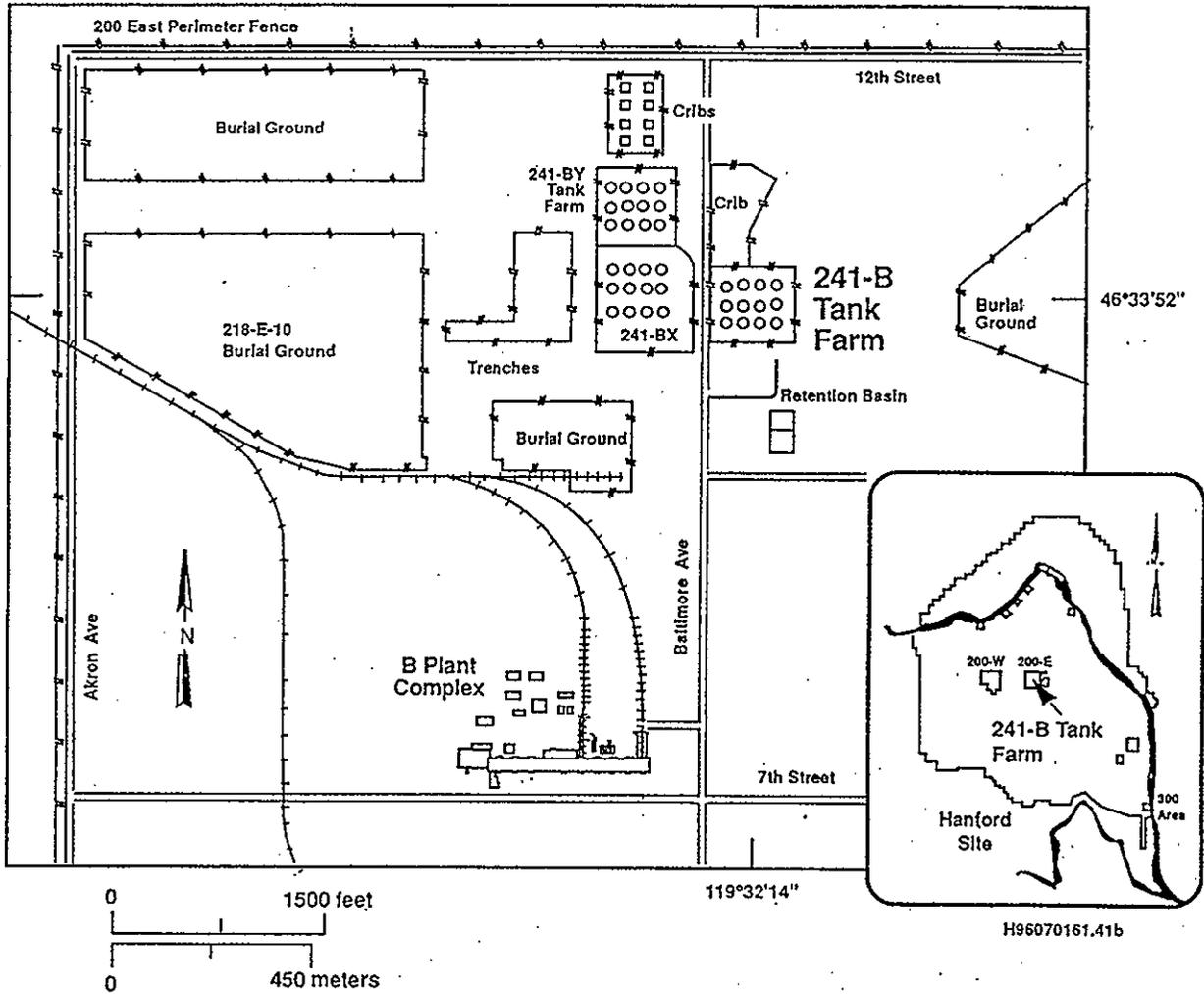
H96070161.35a

241-AX Single-Shell Tank Farm Site Plan

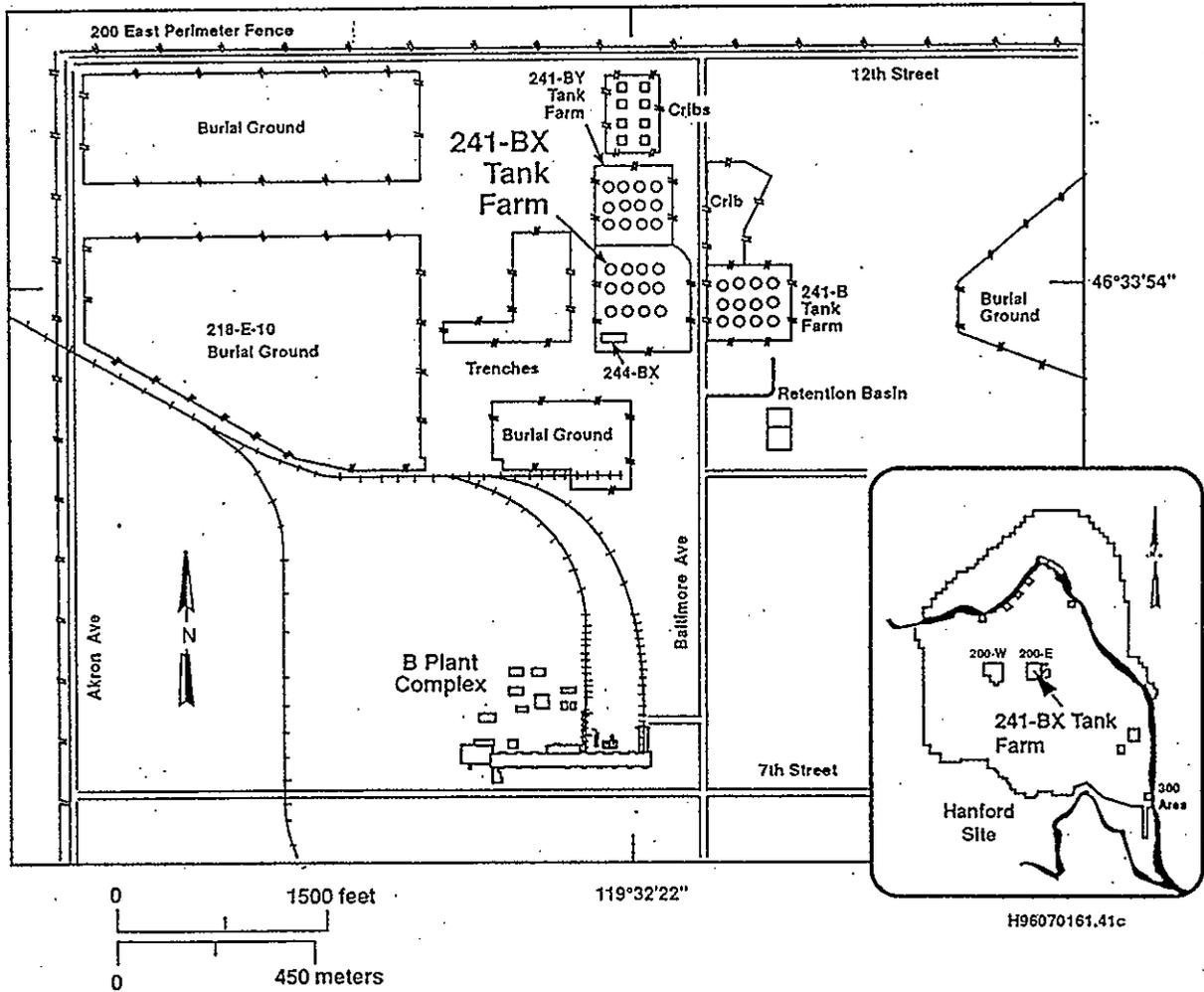


H96070161.35b

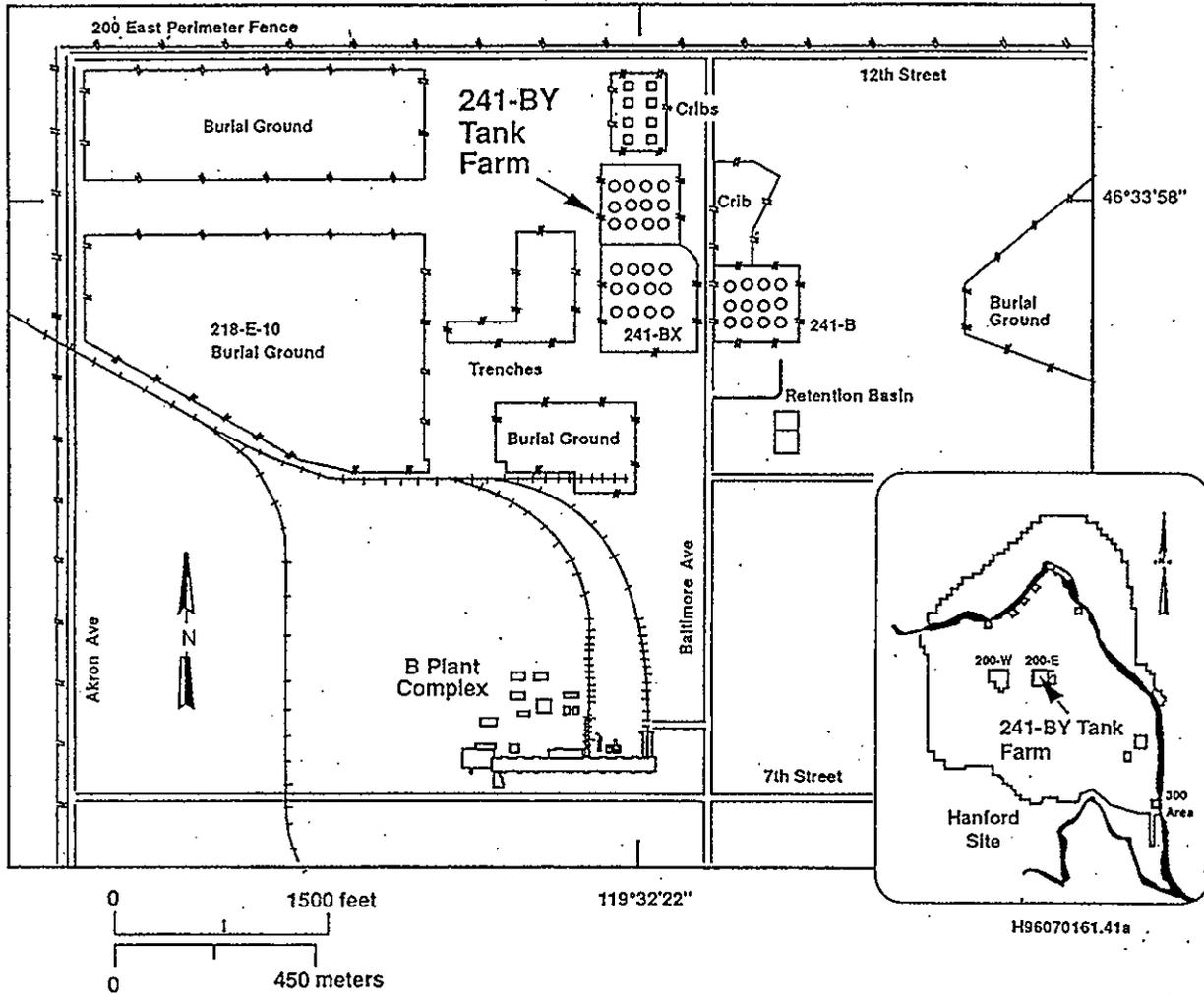
241-B Single-Shell Tank Farm Site Plan



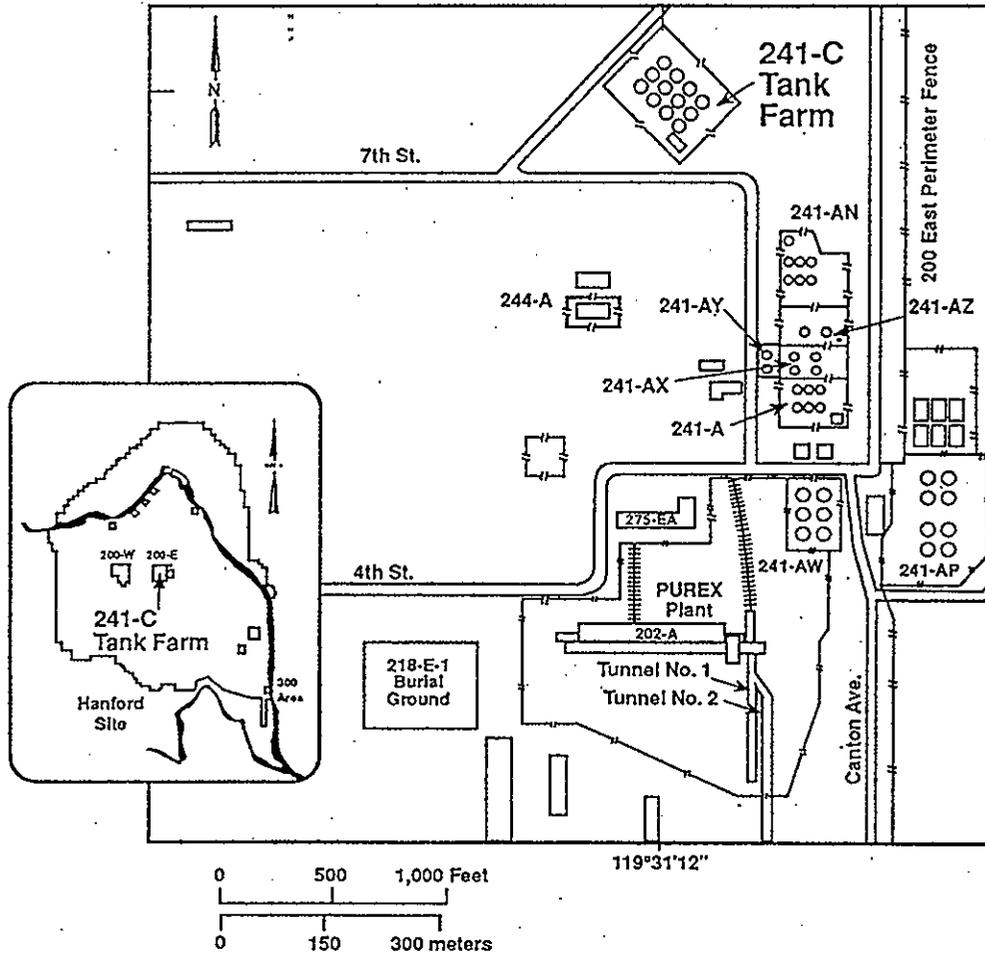
241-BX Single-Shell Tank Farm Site Plan



241-BY Single-Shell Tank Farm Site Plan

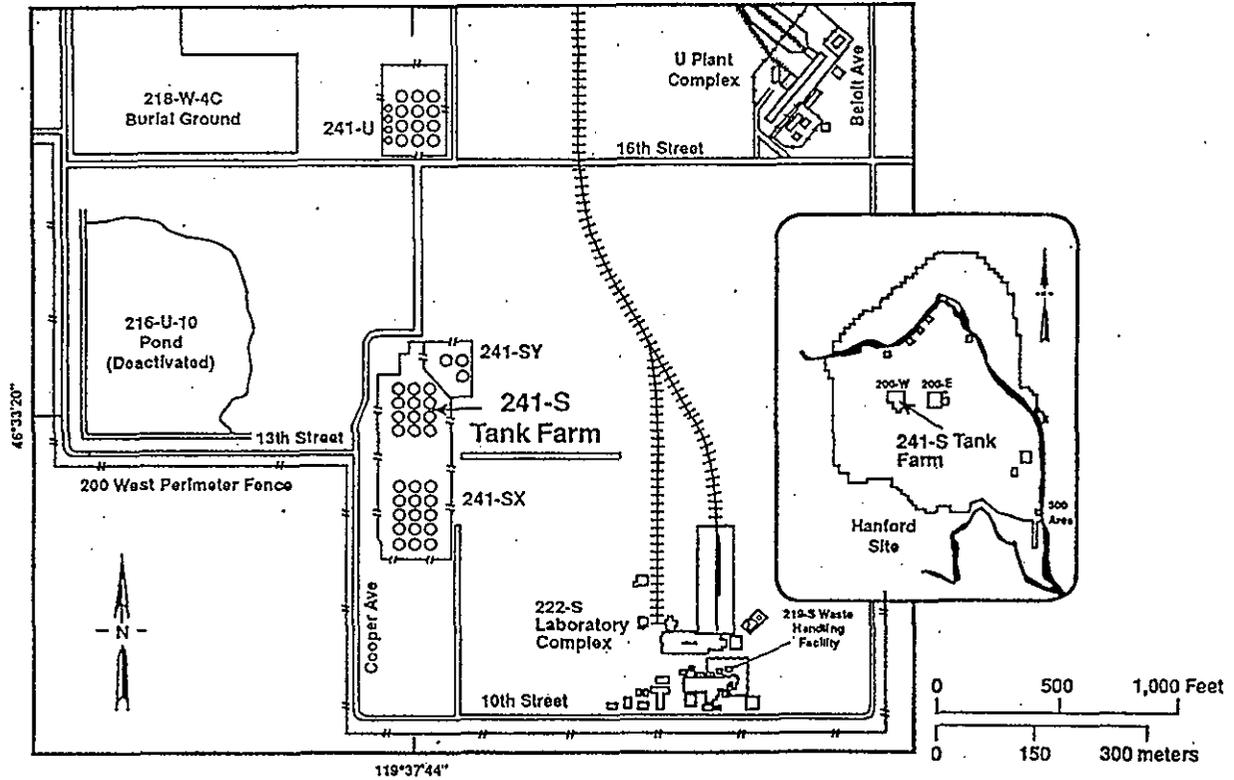


241-C Single-Shell Tank Farm Site Plan



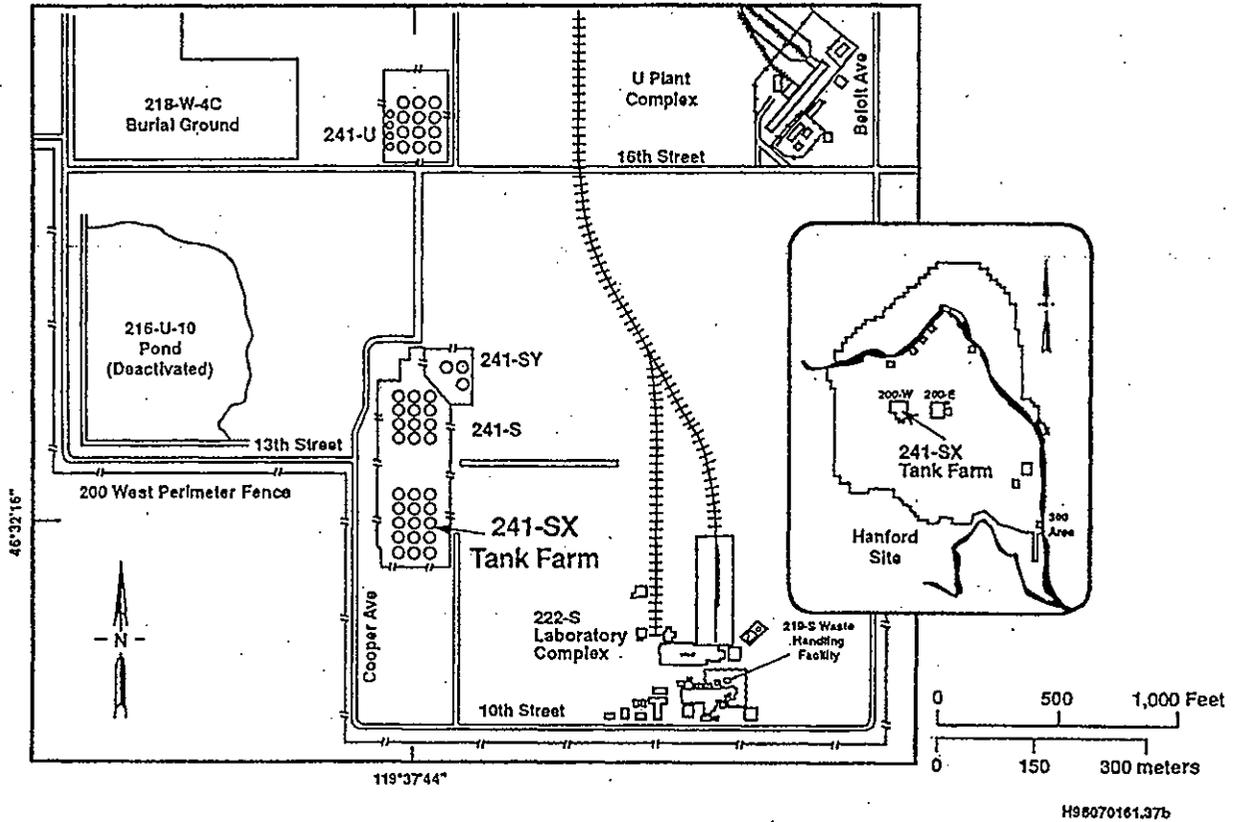
H96070161.35c

241-S Single-Shell Tank Farm Site Plan

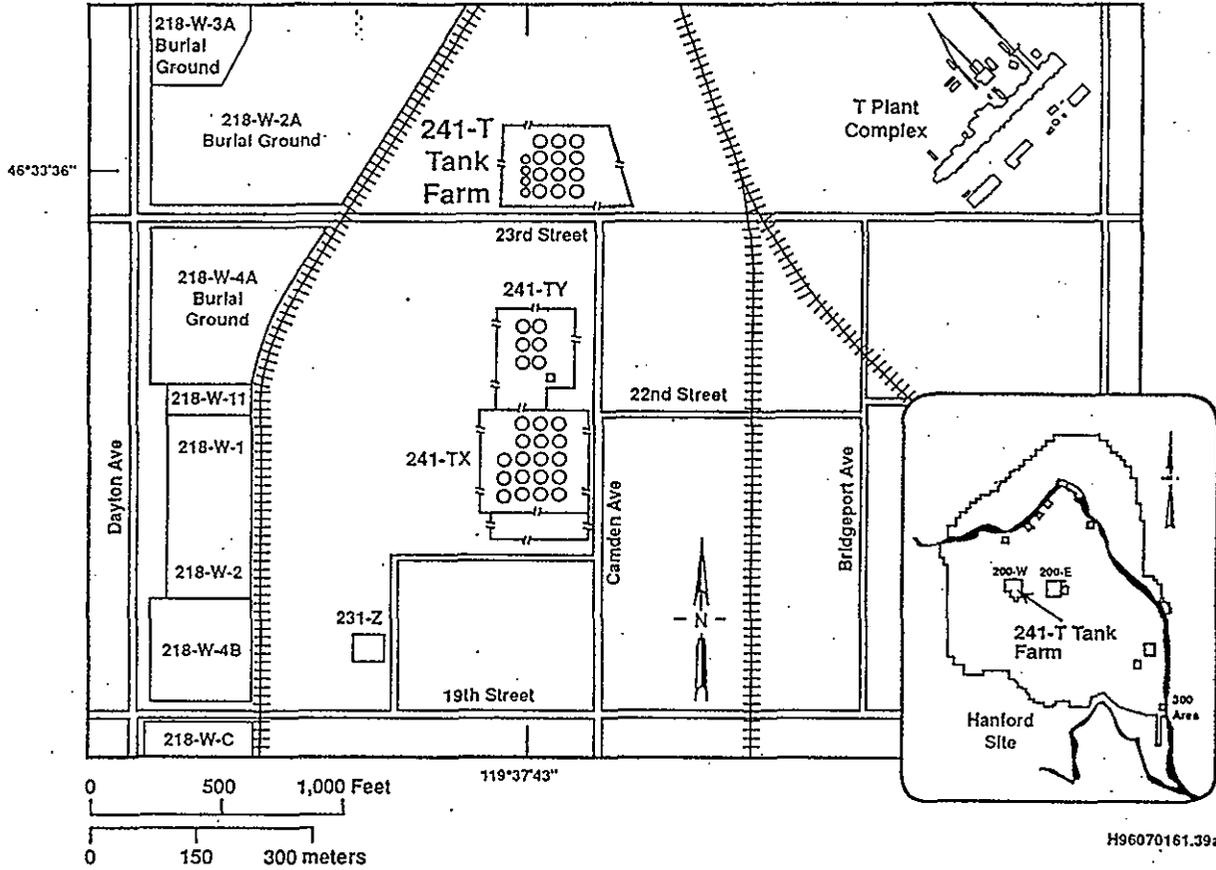


H96070161.37a

241-SX Single-Shell Tank Farm Site Plan

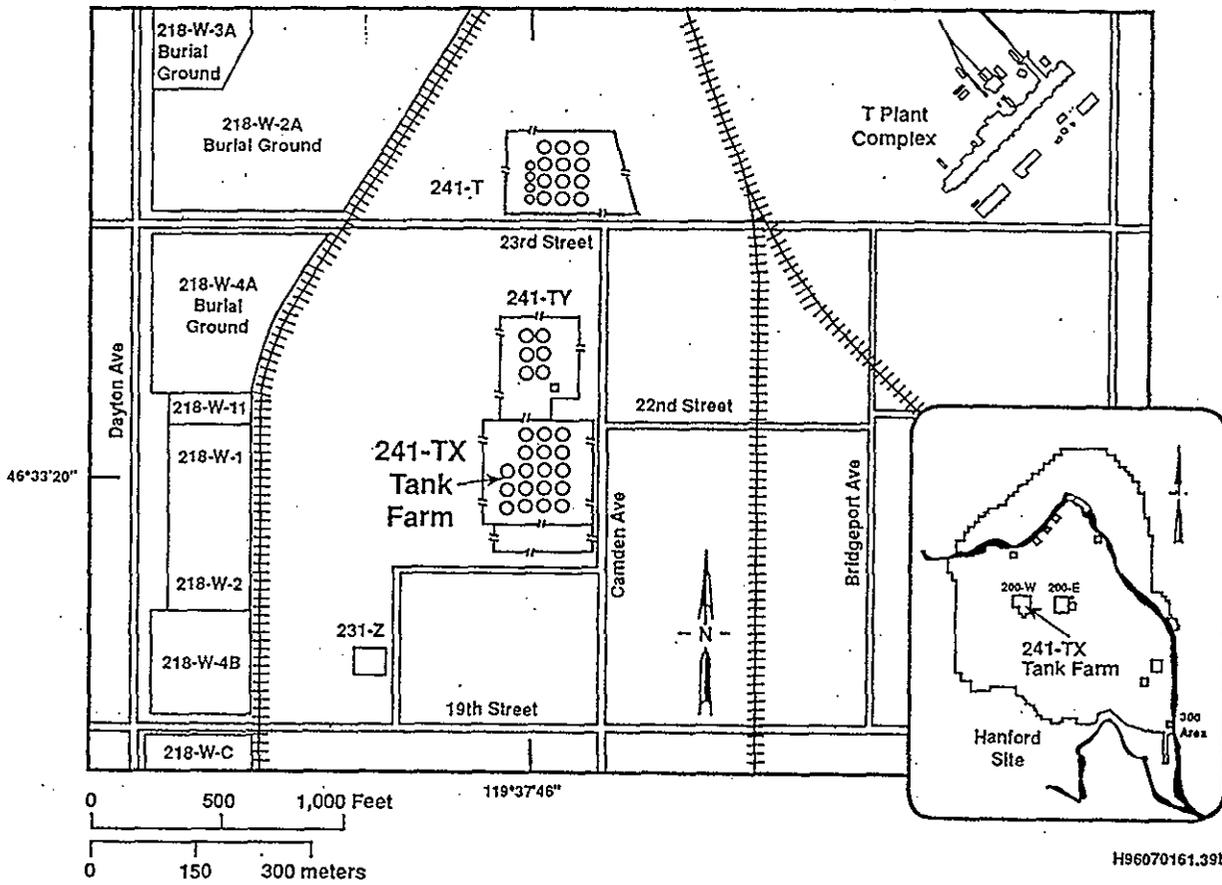


241-T Single-Shell Tank Farm Site Plan

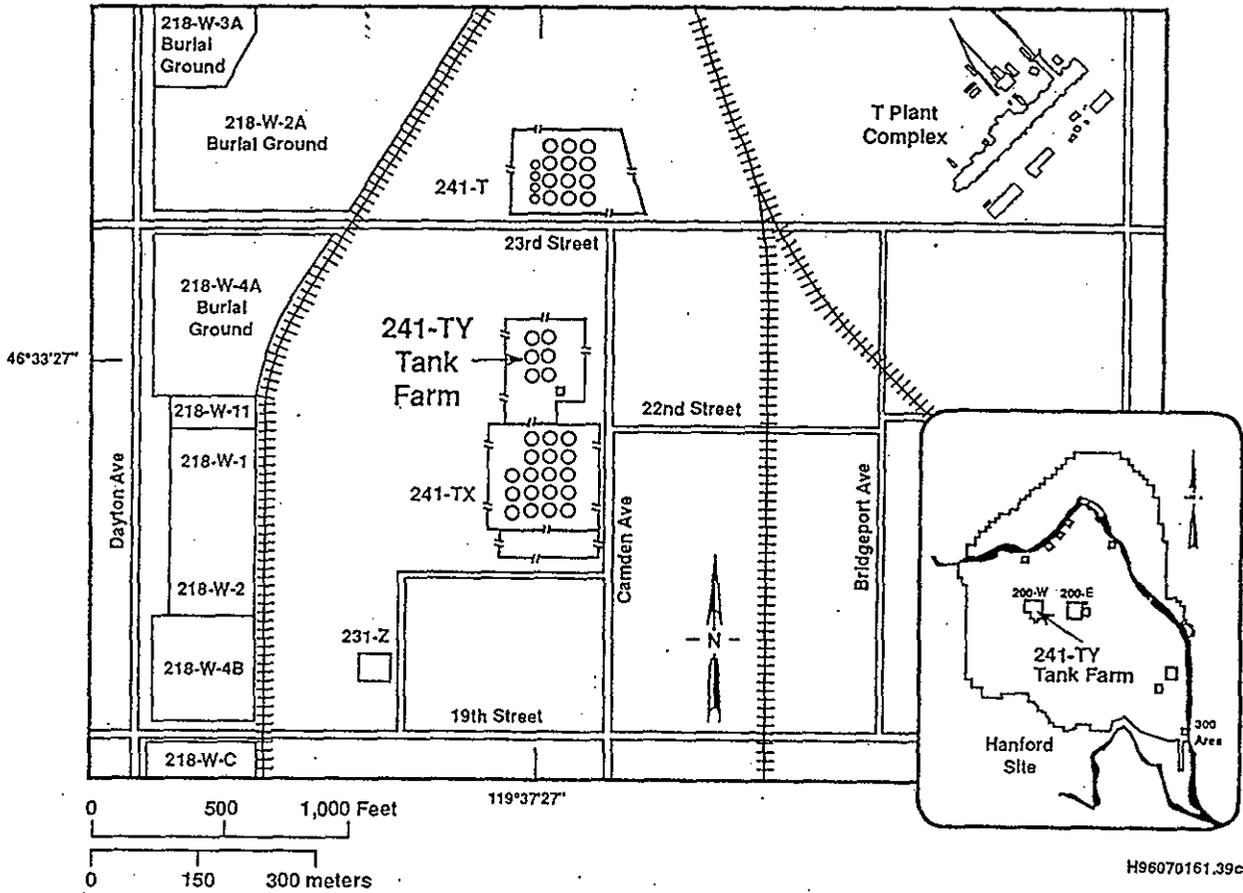


H96070161.39a

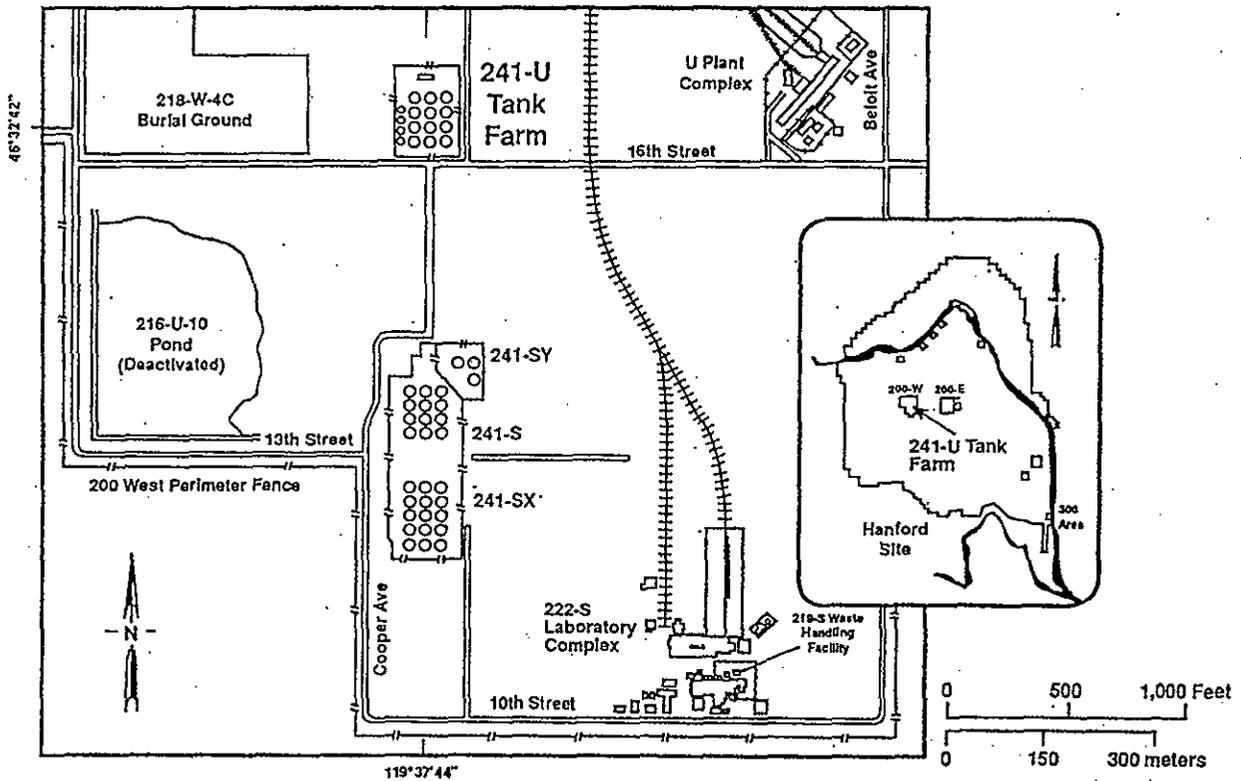
241-TX Single-Shell Tank Farm Site Plan



241-TY Single-Shell Tank Farm Site Plan

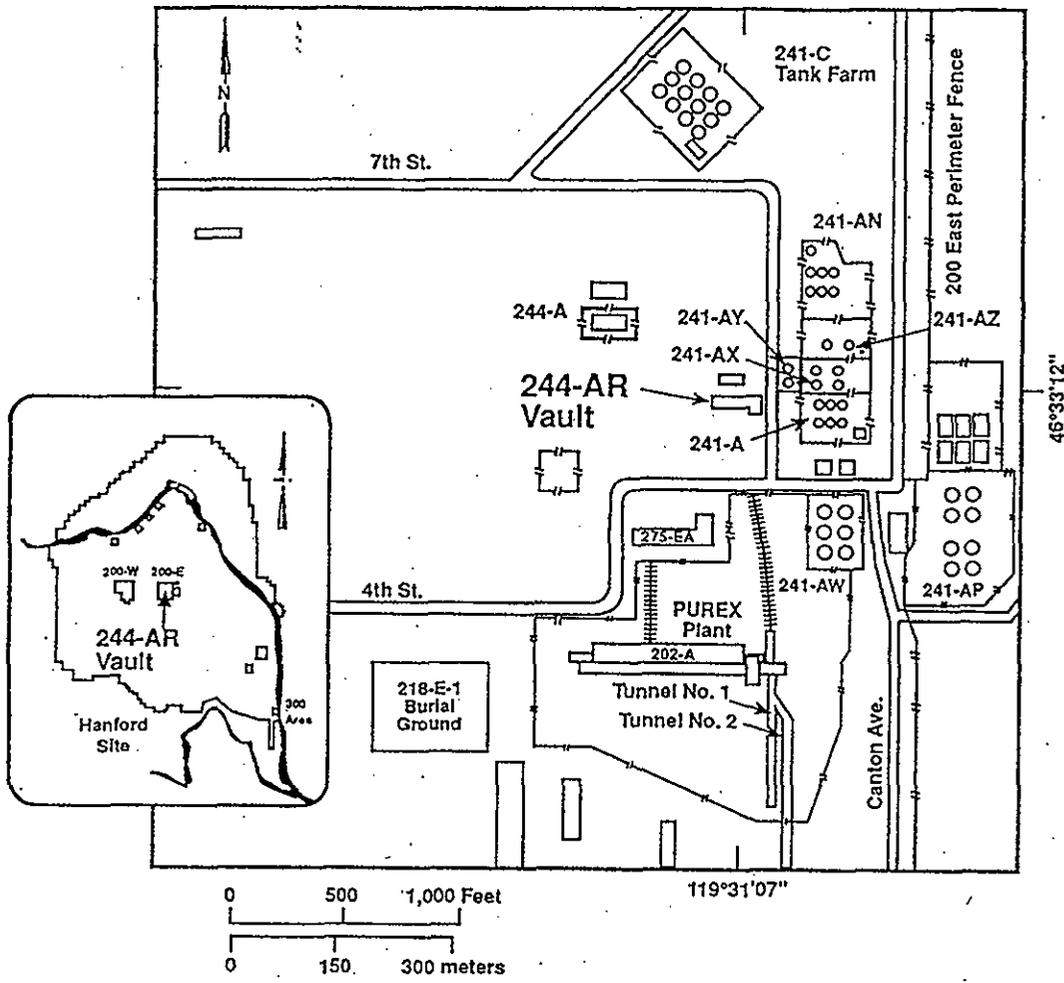


241-U Single-Shell Tank Farm Site Plan



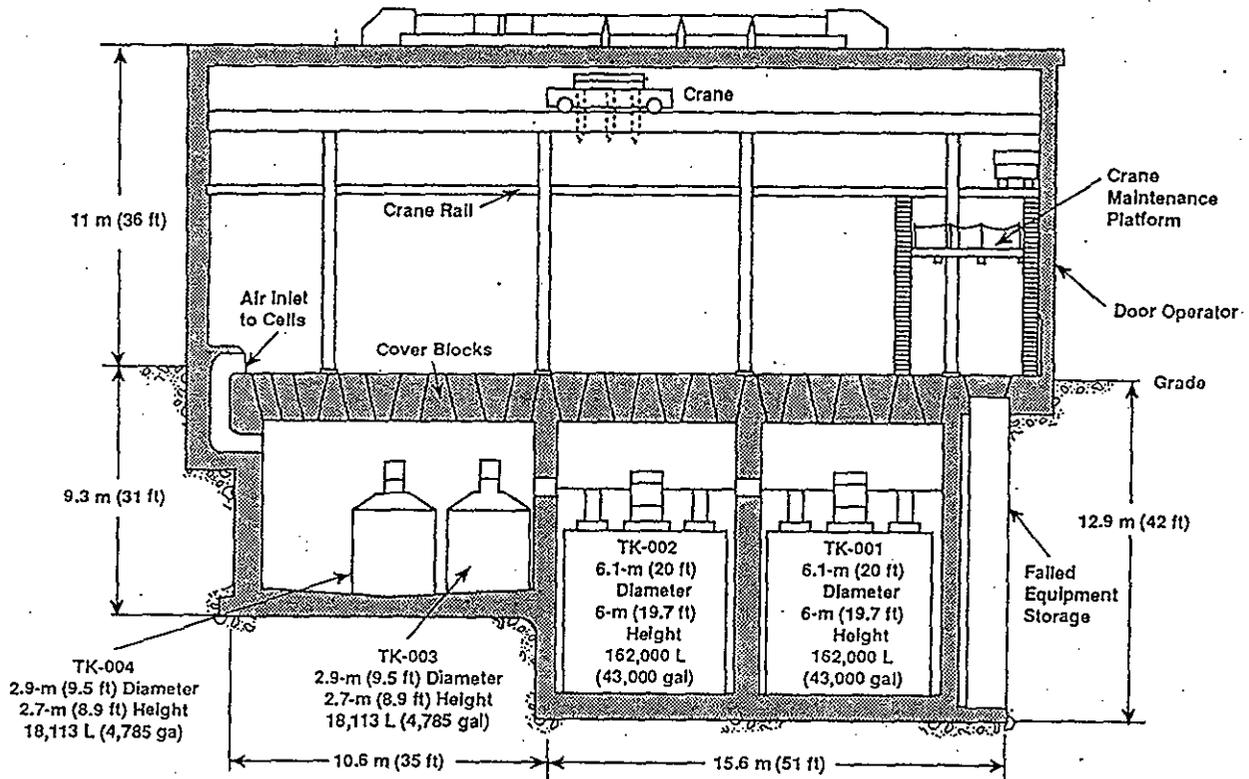
H96070161.37c

244-AR Vault Site Plan



H96070161.35d

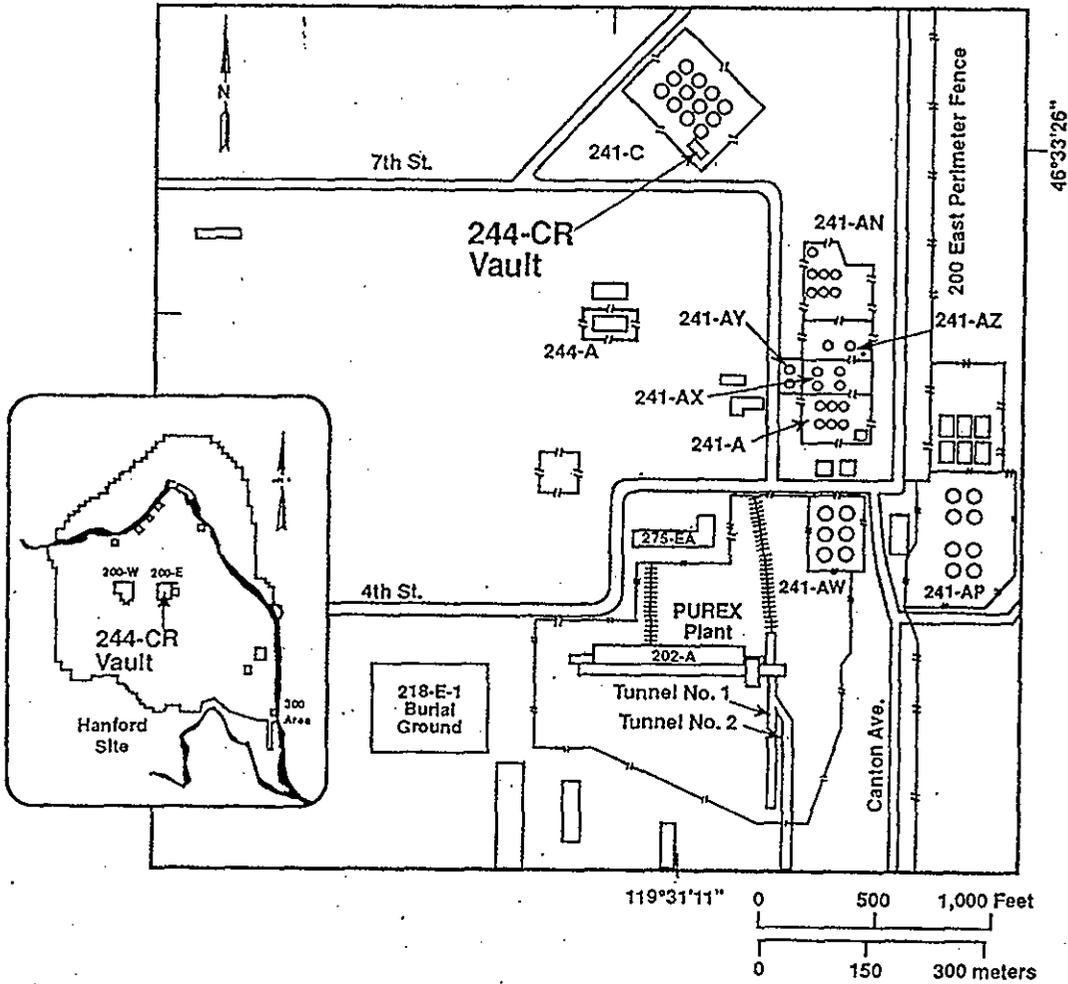
244-AR Vault



Notes: To convert feet to meters, multiply by 0.3048.
 To convert inches to centimeters, multiply by 2.54.
 To convert gallons to liters, multiply by 3.7854.

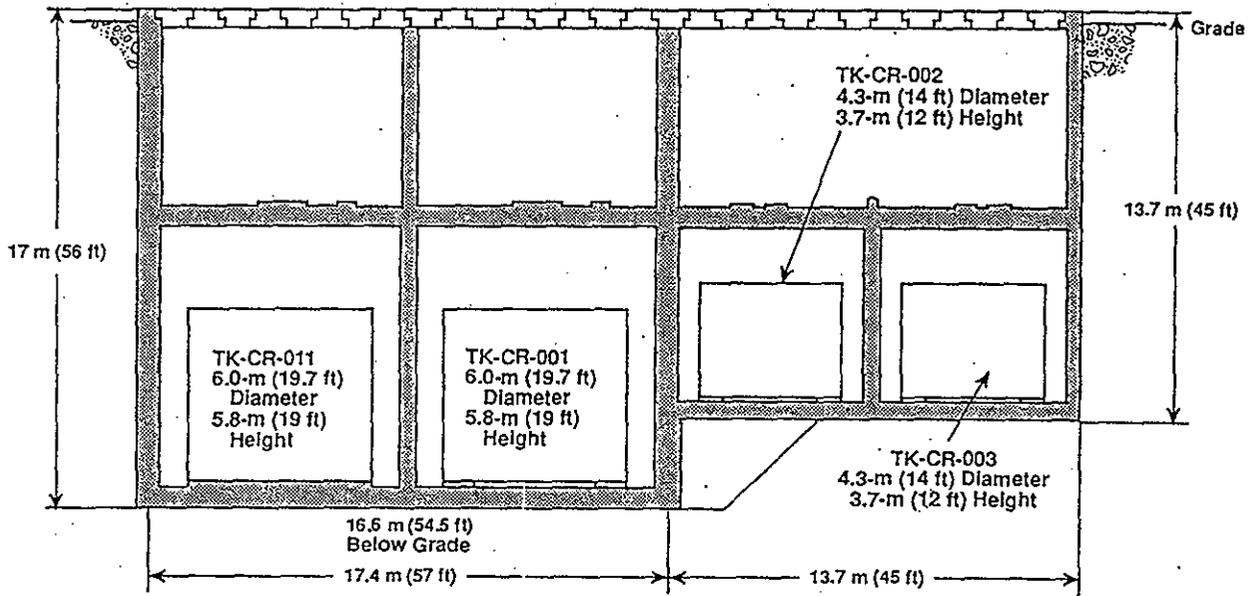
39208044.23

244-CR Vault Site Plan



H96070161.35e

244-CR Vault



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

39208044.22

241-A SINGLE-SHELL TANK FARMS



46°33'11"
119°31'02"

8800284-1CN
(PHOTO TAKEN 1988)

241-AX SINGLE-SHELL TANK FARMS



8800284-2CN
(PHOTO TAKEN 1988)



46°33'15"
119°31'02"

8800284-3CN
(PHOTO TAKEN 1988)

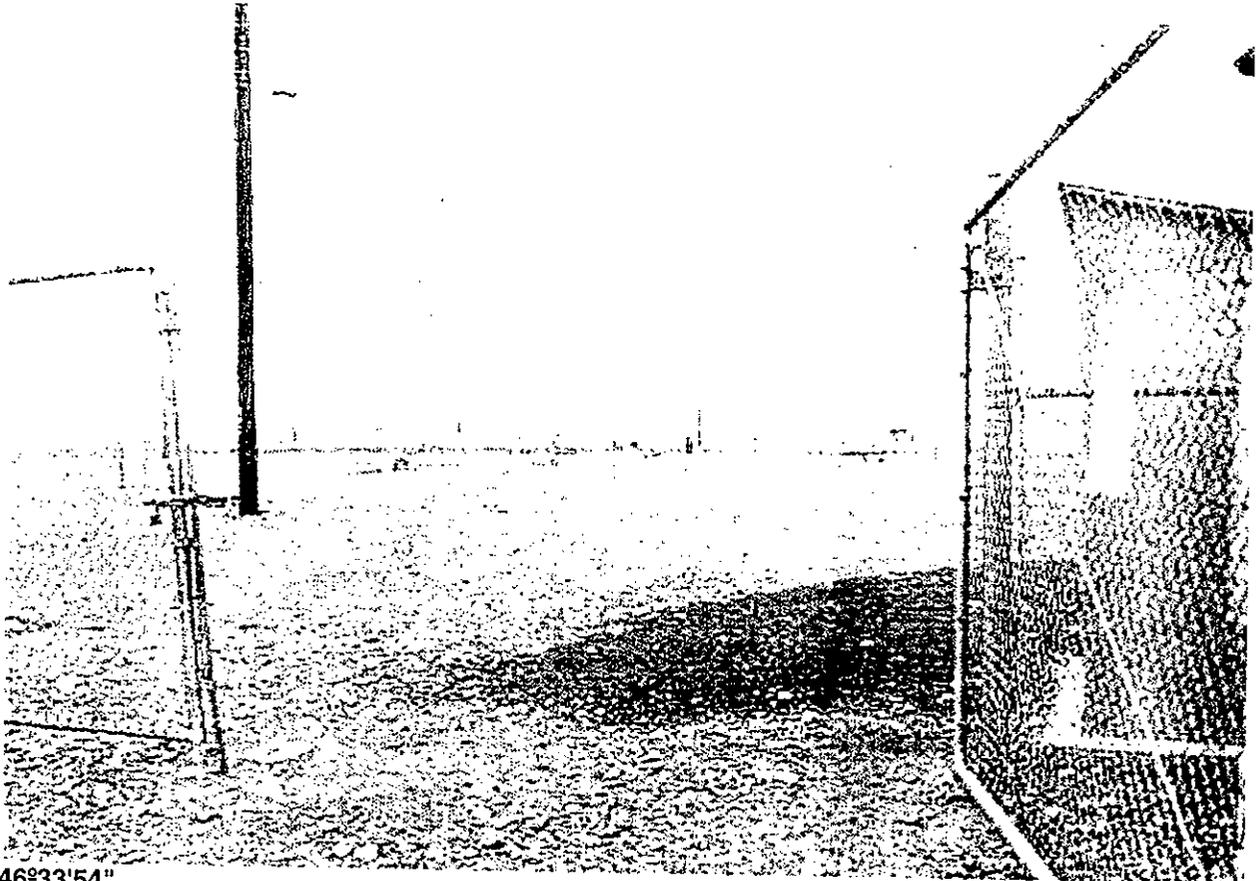
241-B SINGLE-SHELL TANK FARM



46°33'52"
119°32'14"

8800284-6CN
(PHOTO TAKEN 1988)

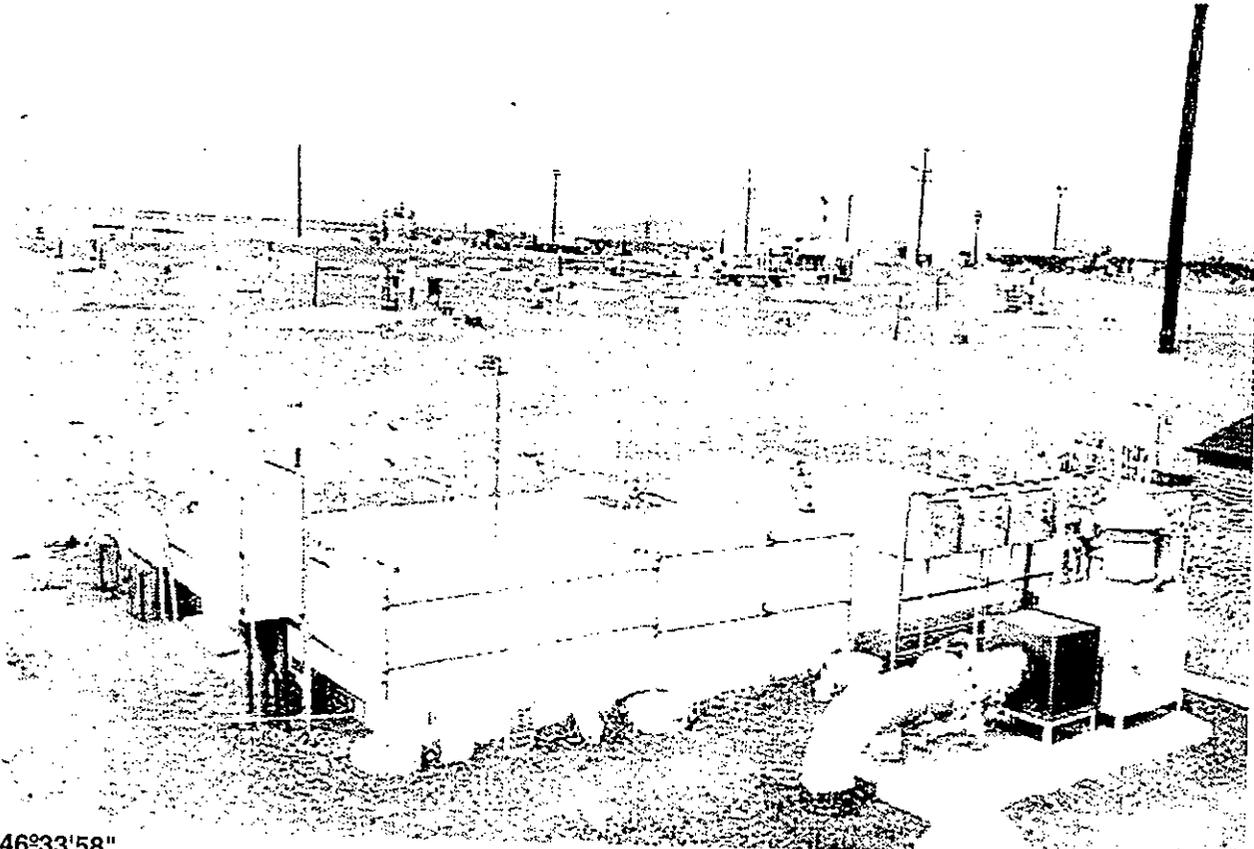
241-BX SINGLE-SHELL TANK FARM



46°33'54"
119°32'22"

8800284-7CN
(PHOTO TAKEN 1988)

241-BY SINGLE-SHELL TANK FARM



46°33'58"
119°32'22"

96080579-27CN
(PHOTO TAKEN 1996)

241-C SINGLE-SHELL TANK FARM



46°33'27"
119°31'12"

8800284-5CN
(PHOTO TAKEN 1988)

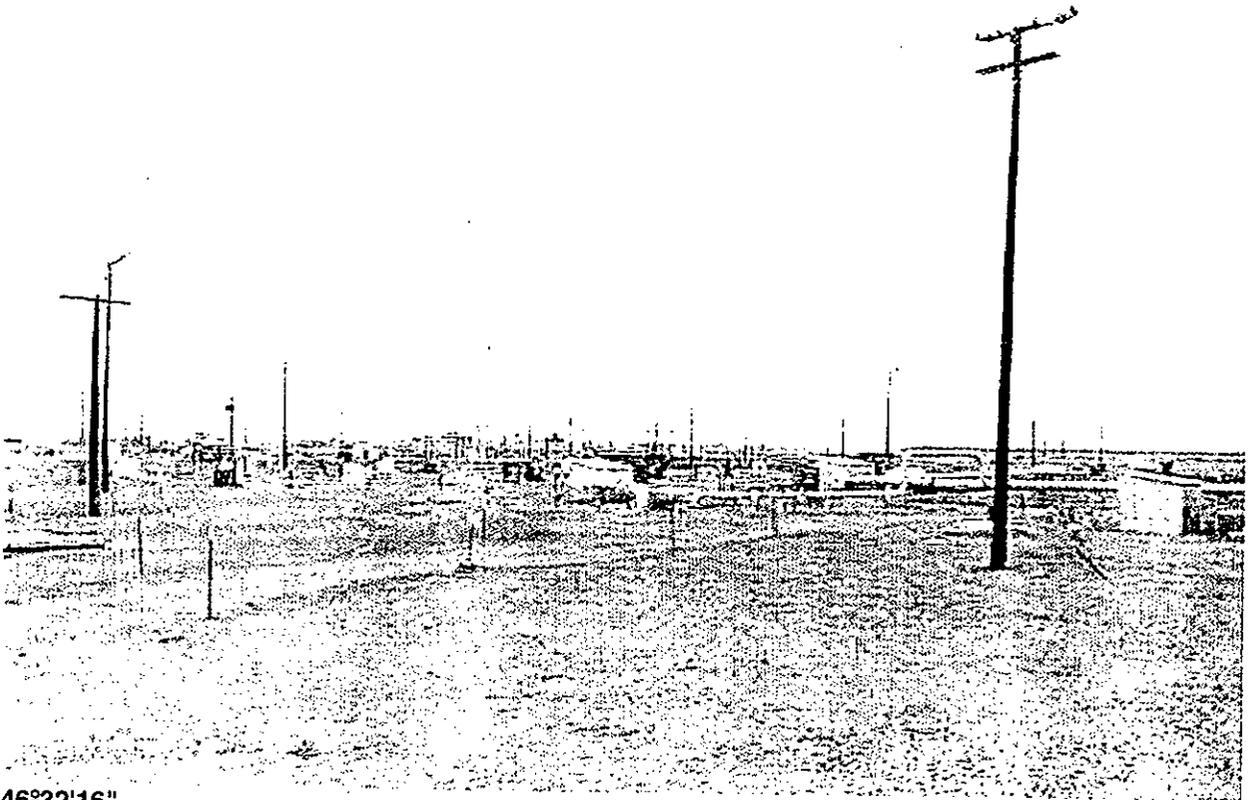
241-S SINGLE-SHELL TANK FARMS



46°33'20"
119°37'44"

96080579-3CN
(PHOTO TAKEN 1996)

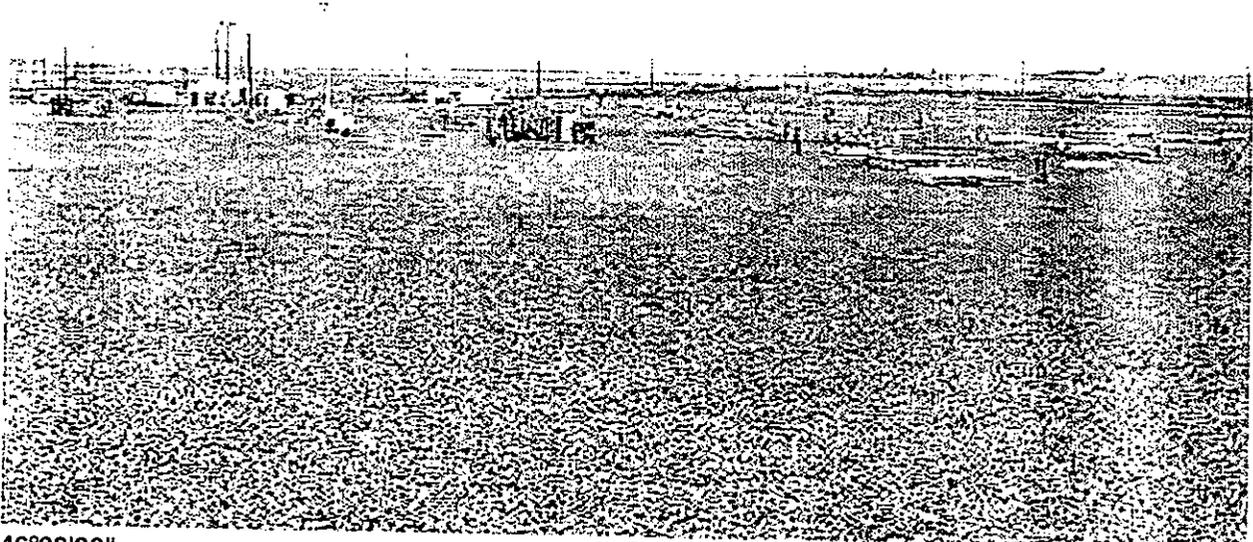
241-SX SINGLE-SHELL TANK FARM



46°32'16"
119°37'44"

96080579-6CN
(PHOTO TAKEN 1996)

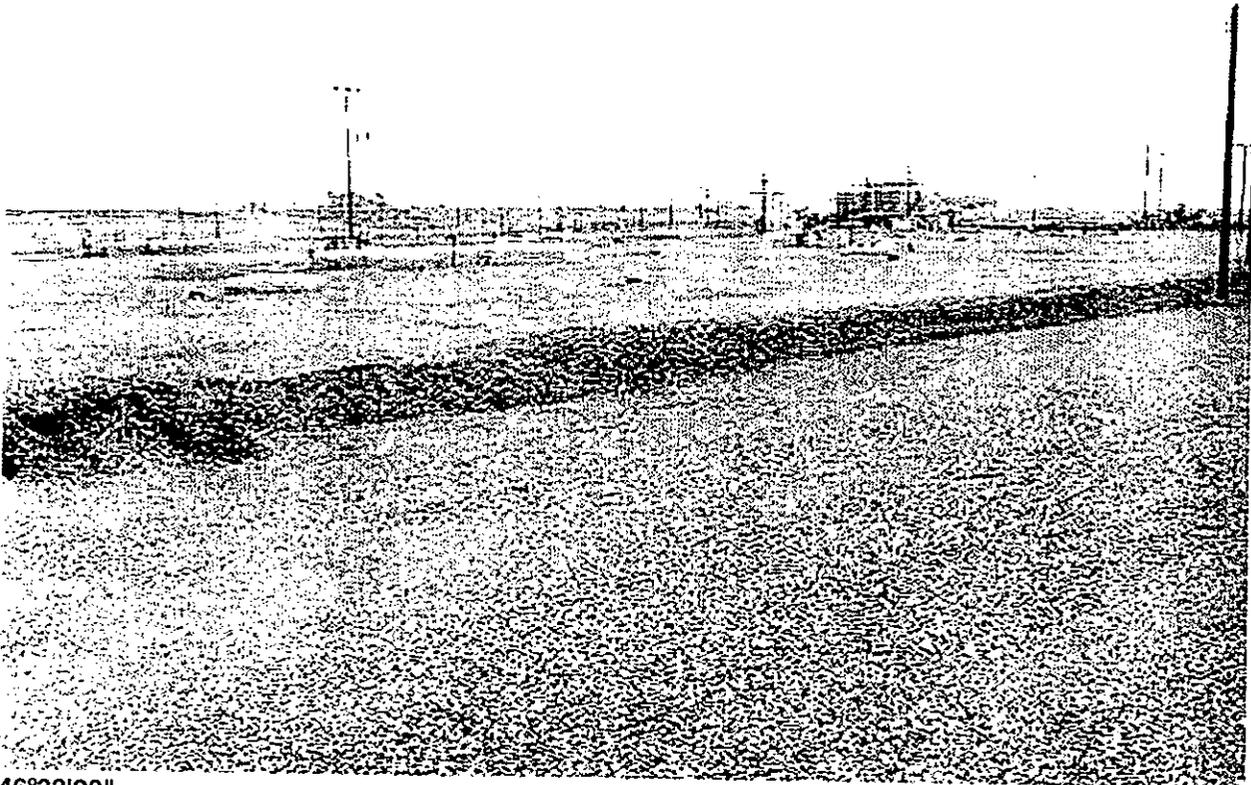
241-T SINGLE-SHELL TANK FARM



46°33'36"
119°37'43"

96080579-13CN
(PHOTO TAKEN 1996)

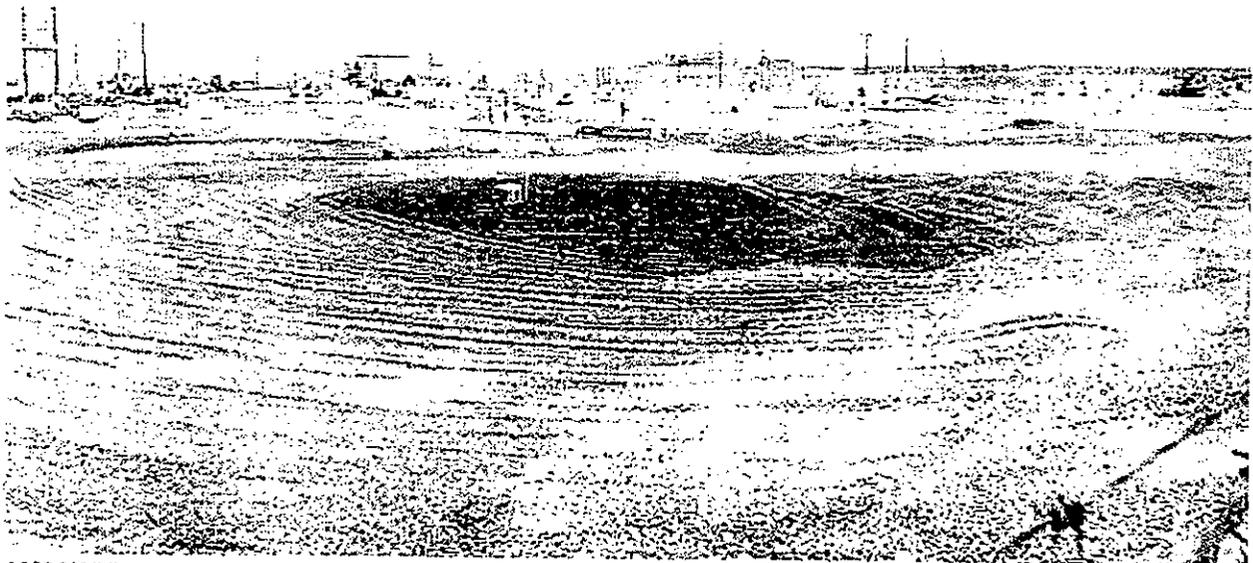
241-TX SINGLE-SHELL TANK FARM



46°33'20"
119°37'46"

96080579-15CN
(PHOTO TAKEN 1996)

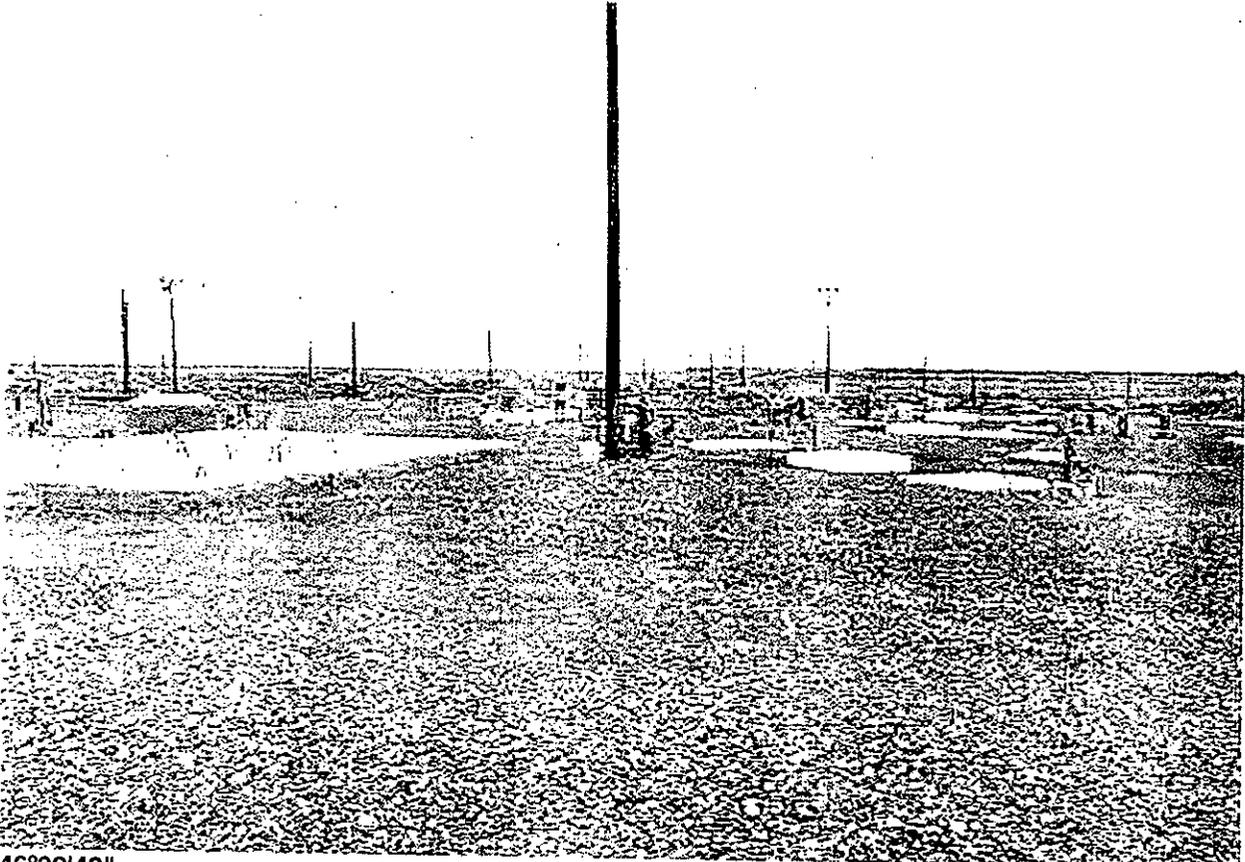
241-TY SINGLE-SHELL TANK FARM



46°33'27"
119°37'27"

96080579-18CN
(PHOTO TAKEN 1996)

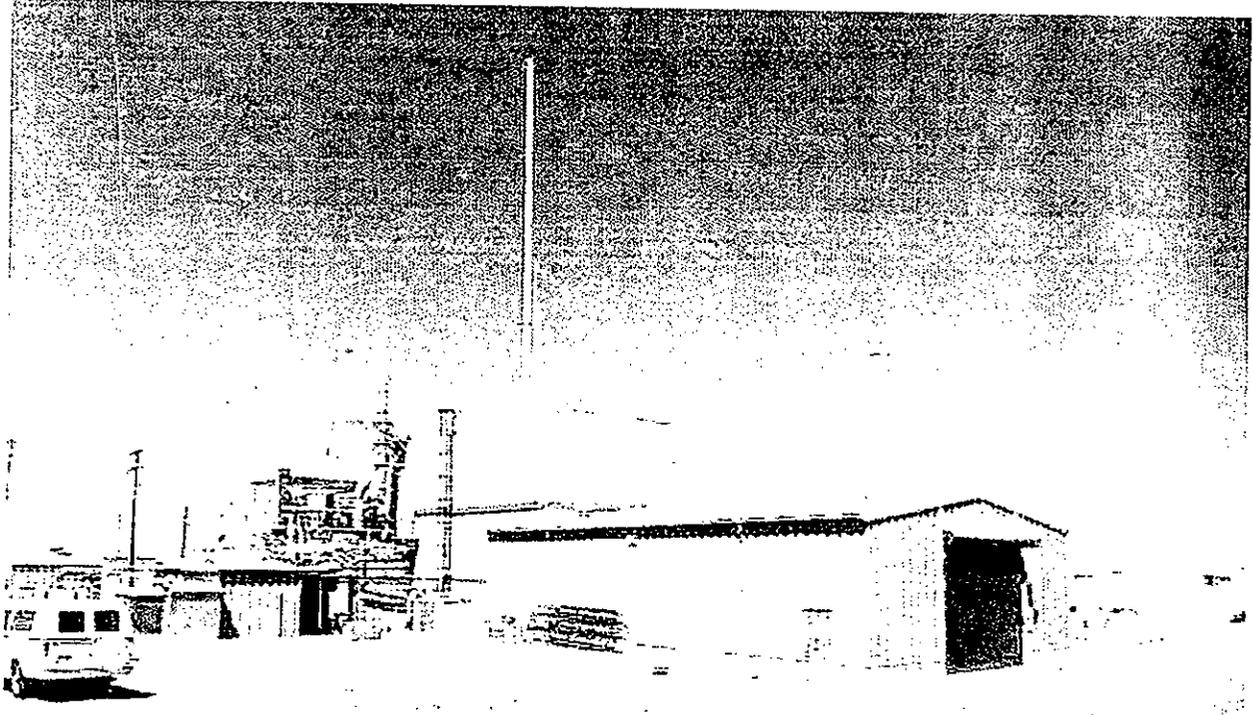
241-U SINGLE-SHELL TANK FARM



46°32'42"
119°37'44"

96080579-9CN
(PHOTO TAKEN 1996)

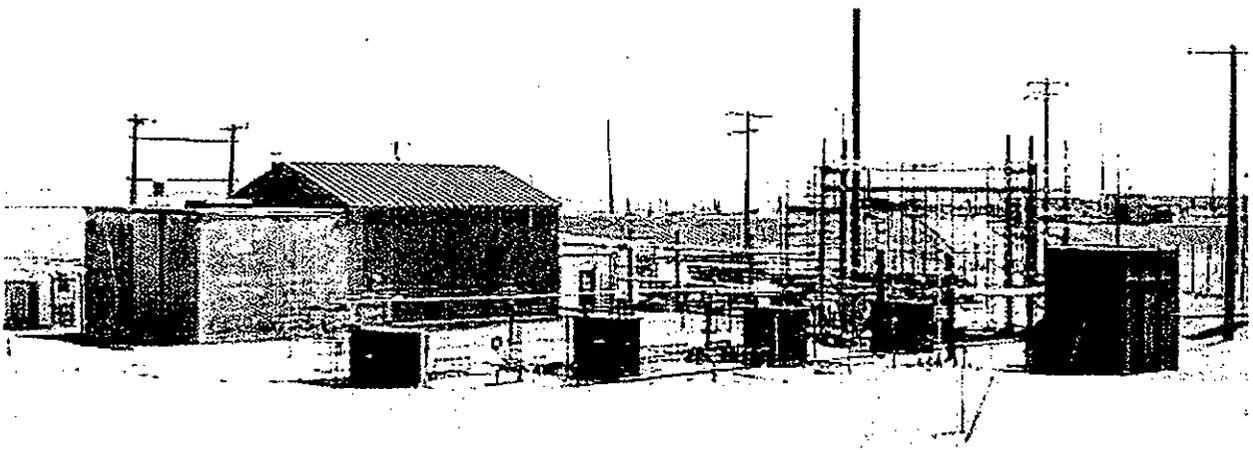
244-AR VAULTS



46°33'12"
119°31'07"

8704135-16CN
(PHOTO TAKEN 1987)

244-CR VAULTS



46°33'26"
119°31'11"

8704135-14CN
(PHOTO TAKEN 1987)

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

FORM 3	DANGEROUS WASTE PERMIT APPLICATION	1. EPA/STATE I.D. NUMBER <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:20px; text-align: center;">W</td> <td style="width:20px; text-align: center;">A</td> <td style="width:20px; text-align: center;">7</td> <td style="width:20px; text-align: center;">8</td> <td style="width:20px; text-align: center;">9</td> <td style="width:20px; text-align: center;">0</td> <td style="width:20px; text-align: center;">0</td> <td style="width:20px; text-align: center;">0</td> <td style="width:20px; text-align: center;">8</td> <td style="width:20px; text-align: center;">9</td> <td style="width:20px; text-align: center;">6</td> <td style="width:20px; text-align: center;">7</td> </tr> </table>	W	A	7	8	9	0	0	0	8	9	6	7
W	A	7	8	9	0	0	0	8	9	6	7			

FOR OFFICIAL USE ONLY		
APPLICATION APPROVED	DATE RECEIVED <i>(mo., day, & yr.)</i>	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)

<input type="checkbox"/> 1. EXISTING FACILITY (See instructions for definition of "existing" facility. Complete item below.) <table border="1" style="display: inline-table; margin-right: 10px;"> <tr><td style="width:30px;">MO.</td><td style="width:30px;">DAY</td><td style="width:30px;">YR.</td></tr> <tr><td style="text-align: center;">03</td><td style="text-align: center;">22</td><td style="text-align: center;">43</td></tr> </table> <p>* FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left) * The date construction of the Hanford Facility commenced.</p>	MO.	DAY	YR.	03	22	43	<input type="checkbox"/> 2. NEW FACILITY (Complete item below.) <table border="1" style="display: inline-table; margin-right: 10px;"> <tr><td style="width:30px;">MO.</td><td style="width:30px;">DAY</td><td style="width:30px;">YR.</td></tr> <tr><td style="height: 20px;"></td><td style="height: 20px;"></td><td style="height: 20px;"></td></tr> </table> <p>FOR NEW FACILITIES, PROVIDE THE DATE, (mo., day, & yr.) OPERATION BEGAN OR IS EXPECTED TO BEGIN</p>	MO.	DAY	YR.			
MO.	DAY	YR.											
03	22	43											
MO.	DAY	YR.											

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

<input checked="" type="checkbox"/> 1. FACILITY HAS AN INTERIM STATUS PERMIT	<input checked="" type="checkbox"/> 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 codes(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	PRO-CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PRO-CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:			Treatment:		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS	TANK	T01	GALLONS PER DAY OR LITERS PER DAY
TANK	S02	GALLONS OR LITERS	SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS	INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS	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
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			

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

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

N U M B E R	A. PRO-CESS CODE (from list above)	B. PROCESS DESIGN CAPACITY			L I N E N U M B E R	A. PRO-CESS CODE (from list above)	B. PROCESS DESIGN CAPACITY			FOR OFFICIAL USE ONLY
		1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY			1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	
-1	S 0 2	600	G		5					
-2	T 0 3	20	E		6					
1	T04	189,270	V		7					
2					8					
3					9					
4					10					

Continued from the front.

III. PROCESSES (continued)

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

T04

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

IV. DESCRIPTION OF DANGEROUS WASTES

- A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.
- B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.
- C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

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

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

D. PROCESSES

1. PROCESS CODES:

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

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

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

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

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

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

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

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))																	
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 (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)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	7,076,040*	K	T04	Treatment-Other/Chemical Treatment
2	through				
3	D011				
4	D018				
5	D019				
6	D022				
7	D028				
8	D029				
9	D030				
10	D033				
11	through				
12	D036				
13	D038				
14	D039				
15	D040				
16	D041				
17	D043				
18	WT01				
19	WT02				
20	WP01				
21	WP02				
22	F001				
23	through				
24	F005				
25	F039				Included with above.
26					

All dangerous waste numbers listed are included in this quantity.

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTE (continued)

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

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

The waste identified in Section IV.A. has the potential for being transported to the 204-AR Waste Unloading Station, treated, and transferred to the DST System. The mixed waste consists of listed waste, characteristic waste (D001, D002, and D003), toxic constituents (D004 through D011, D018, D019, D022, D028 through D030, D033 through D036, D038 through D041, and D043), nonspecific source waste (F001 through F005 and F039), and state-only waste (WT01, WT02, WP01, and WP02). Multi-source leachate (F39) is included as a waste derived from nonspecific source wastes F001 through F005.

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

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

VI. PHOTOGRAPHS Refer to attached photograph(s).

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

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawings and photos.

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

VIII. FACILITY OWNER

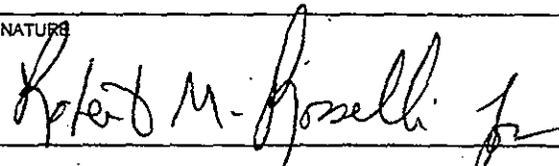
A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information," place an "X" in the box to the left and skip to Section IX below.

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) Keith A. Klein, Manager U.S. Department of Energy	SIGNATURE 	DATE SIGNED 9/30/99
--	---	------------------------

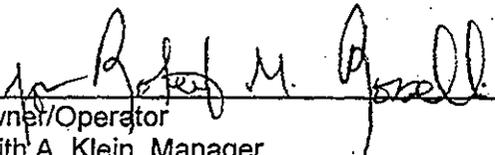
X. OPERATOR CERTIFICATION

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) SEE ATTACHMENT	SIGNATURE	DATE SIGNED
--	-----------	-------------

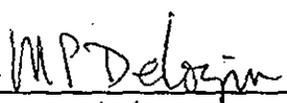
X. OPERATOR CERTIFICATION

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.



Owner/Operator
Keith A. Klein, Manager
U.S. Department of Energy

9/30/99
Date

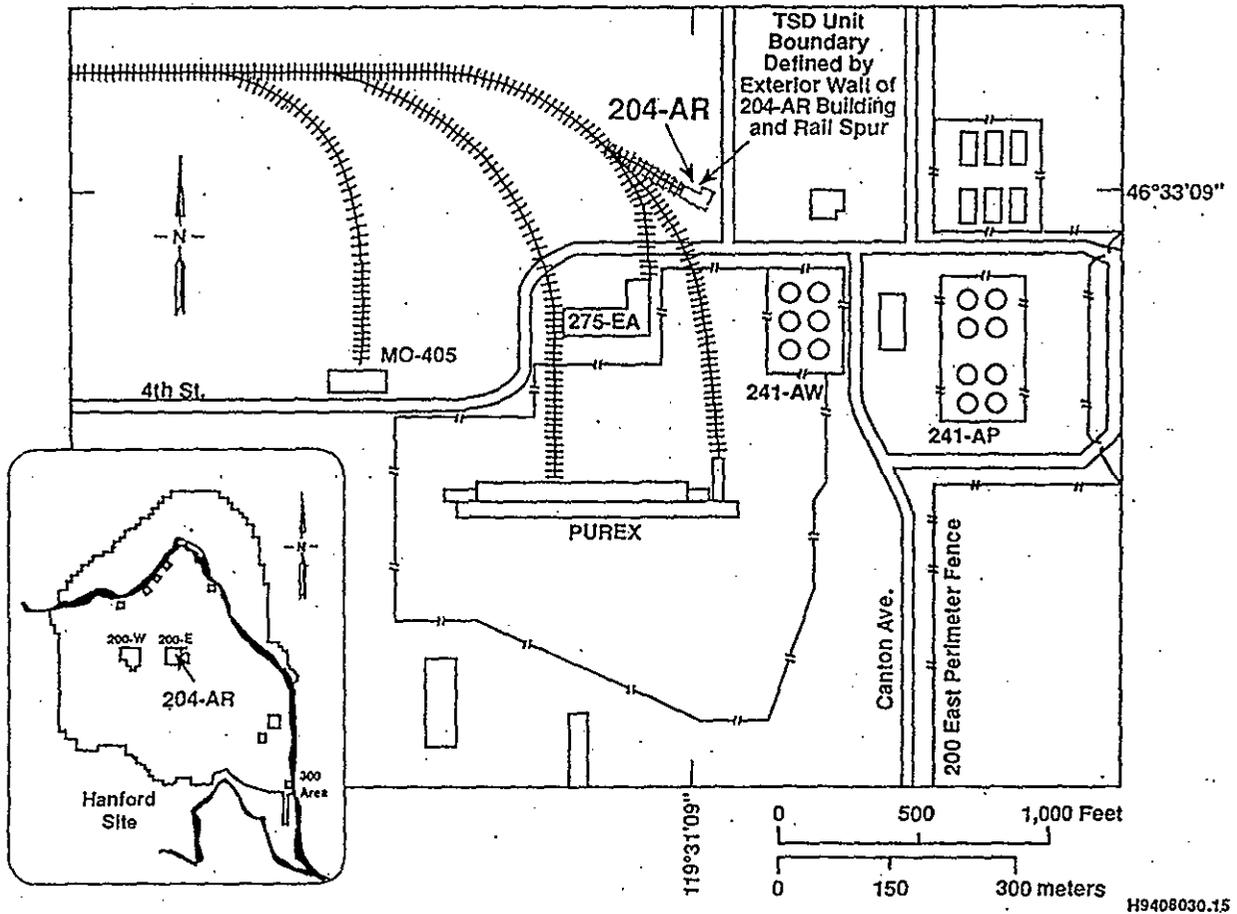


Co-operator*
M. P. DeLozier
President and RPP General Manager
Lockheed Martin Hanford Corporation

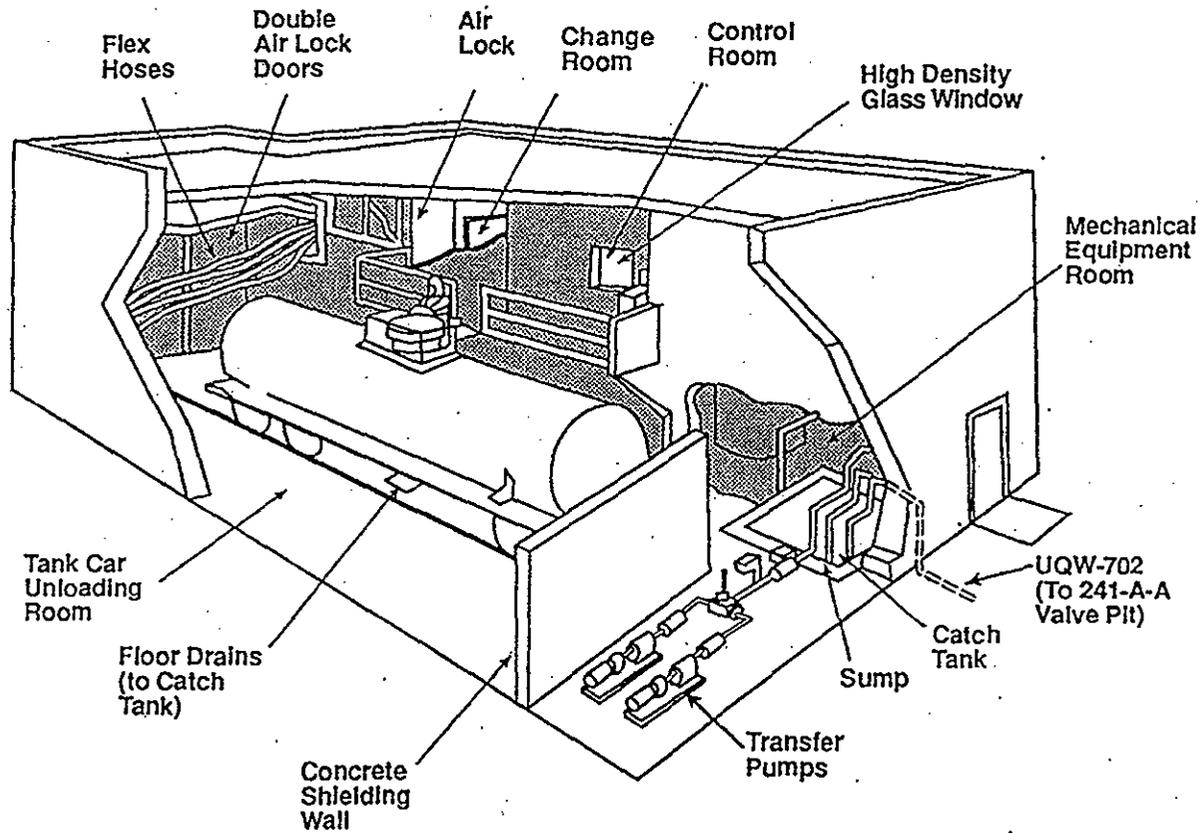
24 Sept 99
Date

* Co-operator under Department of Energy Office of River Protection Contract #DE-AC06-99L14047.

204-AR Building Waste Unloading Station Site Plan



204-AR Waste Unloading Station Cutaway View



H96070161.25

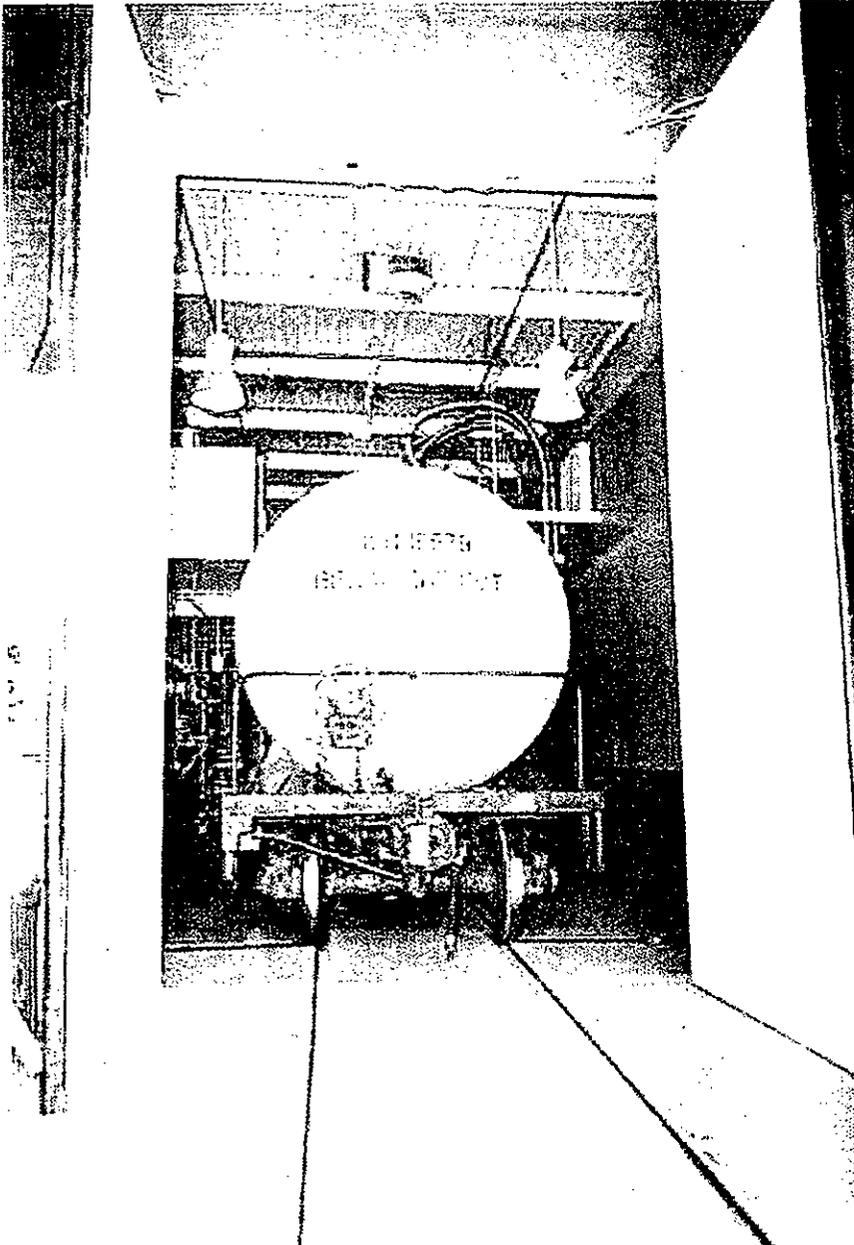
204-AR WASTE UNLOADING STATION



46°33'09"
119°31'09"

8706421-18CN
(PHOTO TAKEN 1987)

204-AR WASTE UNLOADING STATION INTERNAL VIEW



TYPICAL RAILROAD TANK CAR UNLOADING

46°33'09"
119°31'09"

8706421-16CN
(PHOTO TAKEN 1987)

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

FORM 3	DANGEROUS WASTE PERMIT APPLICATION	1. EPA/STATE I.D. NUMBER <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>W</td><td>A</td><td>7</td><td>8</td><td>9</td><td>0</td><td>0</td><td>0</td><td>8</td><td>9</td><td>6</td><td>7</td></tr> </table>	W	A	7	8	9	0	0	0	8	9	6	7
W	A	7	8	9	0	0	0	8	9	6	7			

FOR OFFICIAL USE ONLY		COMMENTS
APPLICATION APPROVED	DATE RECEIVED (mo., day, & yr.)	

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)

<input type="checkbox"/> 1. EXISTING FACILITY (See instructions for definition of "existing" facility. Complete item below.) <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>MO.</td><td>DAY</td><td>YR.</td></tr> <tr><td>03</td><td>22</td><td>43</td></tr> </table> <p><small>* FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left) * The date construction of the Hanford Facility commenced.</small></p>	MO.	DAY	YR.	03	22	43	<input type="checkbox"/> 2. NEW FACILITY (Complete item below.) <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>MO.</td><td>DAY</td><td>YR.</td></tr> <tr><td> </td><td> </td><td> </td></tr> </table> <p><small>FOR NEW FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR IS EXPECTED TO BEGIN</small></p>	MO.	DAY	YR.			
MO.	DAY	YR.											
03	22	43											
MO.	DAY	YR.											

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

<input checked="" type="checkbox"/> 1. FACILITY HAS AN INTERIM STATUS PERMIT	<input checked="" type="checkbox"/> 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 codes(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	PRO-CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PRO-CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:			Treatment:		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS	TANK	T01	GALLONS PER DAY OR LITERS PER DAY
TANK	S02	GALLONS OR LITERS	SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS	INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS	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
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			

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

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

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY			LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY			FOR OFFICIAL USE ONLY
		1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY			1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	
X-1	S 0 2	600	G		5	D81	22.8		F	
X-2	7 0 3	20	E		6					
1	T04	382,325	V		7					
2	T02	382,325	V		8					
3	S02	3,028	L		9					
4	T01	4,978	V		10					

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "TO4"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

Refer to the following page.

IV. DESCRIPTION OF DANGEROUS WASTES

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

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

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

<u>ENGLISH UNIT OF MEASURE</u>	<u>CODE</u>	<u>METRIC UNIT OF MEASURE</u>	<u>CODE</u>
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:

- 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.
- 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.
- 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)						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

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

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

T04, T02, S02, T01, D81

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

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

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

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

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

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

I. D. NUMBER (entered from page 1)

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

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

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

* All dangerous waste numbers listed are included in this quantity.

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTE (continued)

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

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

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

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

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

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

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

VI. PHOTOGRAPHS Refer to attached photograph(s).

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

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawings and photos.

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

VIII. FACILITY OWNER

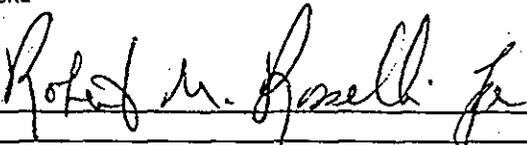
A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information," place an "X" in the box to the left and skip to Section IX below.

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) Keith A. Klein, Manager U.S. Department of Energy	SIGNATURE 	DATE SIGNED 9/30/99
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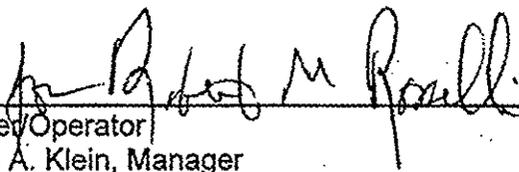
X. OPERATOR CERTIFICATION

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.

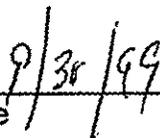
NAME (print or type) SEE ATTACHMENT	SIGNATURE	DATE SIGNED
--	-----------	-------------

X. OPERATOR CERTIFICATION

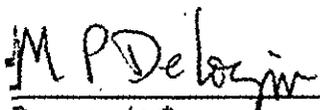
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true,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



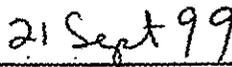
Owner/Operator
Keith A. Klein, Manager
U.S. Department of Energy



Date

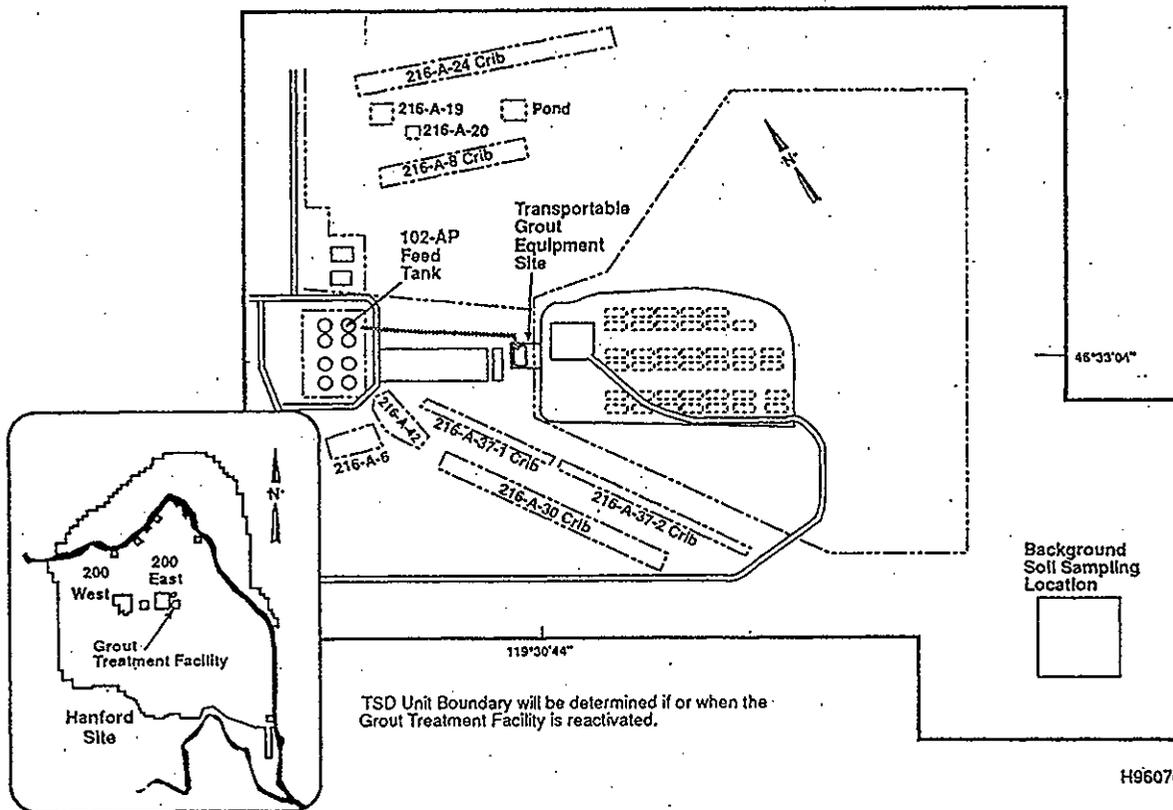


Co-operator*
M. P. DeLozier
Resident and RPP General Manager
Lockheed Martin Hanford Corporation

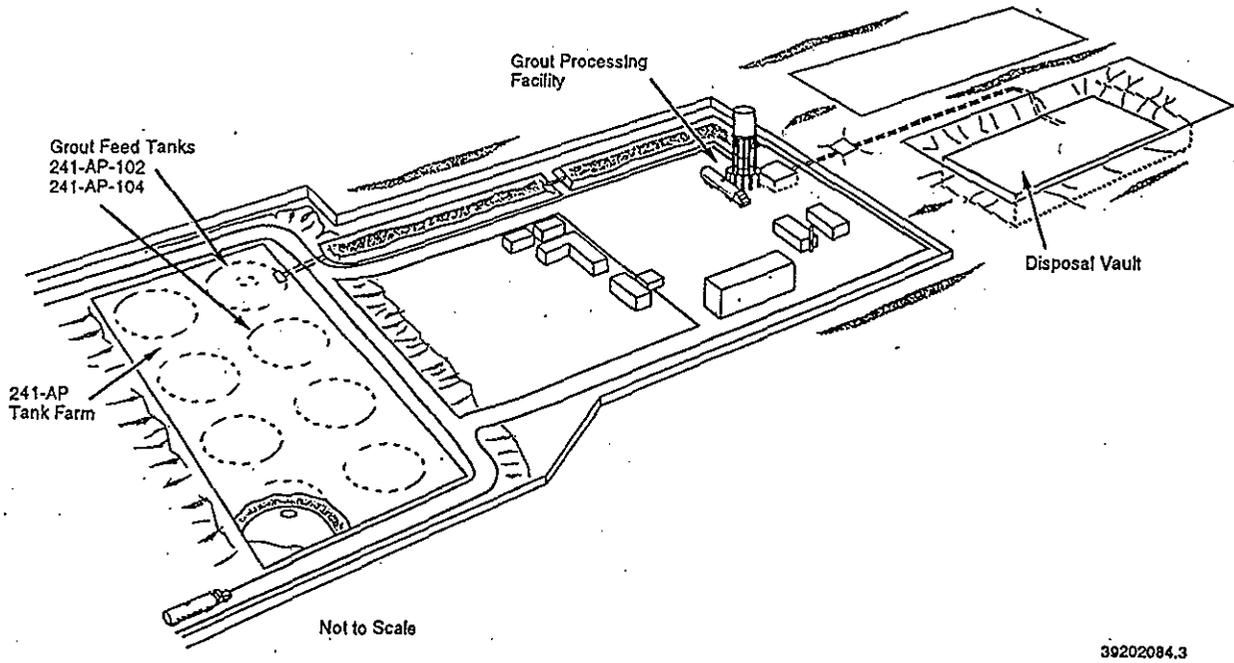


Date

Grout Treatment Facility Site Plan

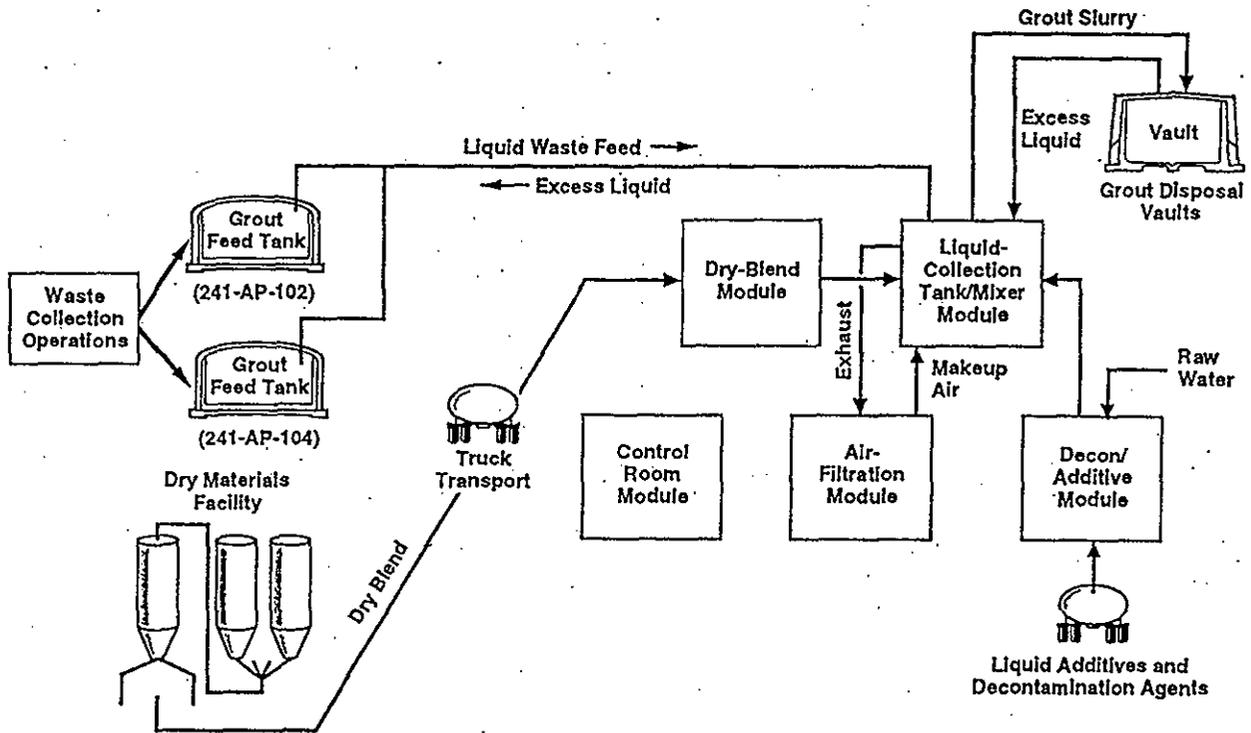


Grout Treatment Facility Layout



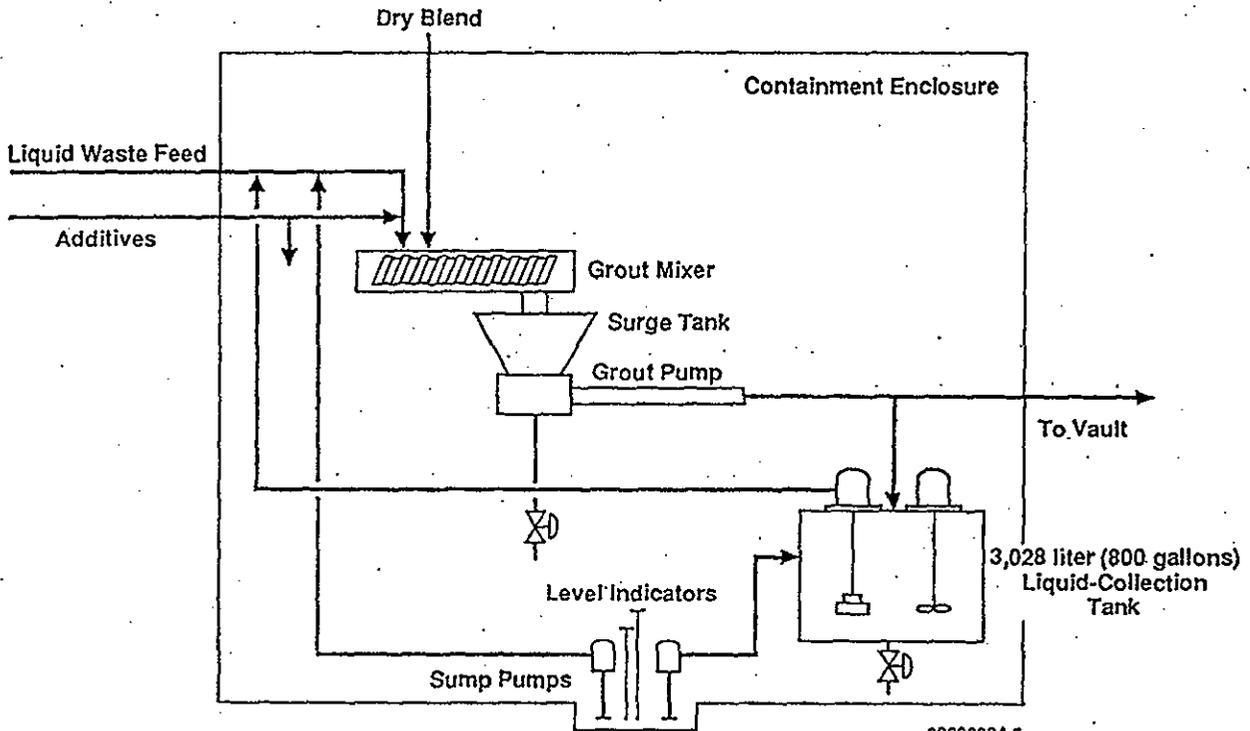
39202084.3

Grout Treatment Facility Material Flow Diagram



39202054.6

Grout Treatment Facility Liquid-Collection Tank/Mixer Module

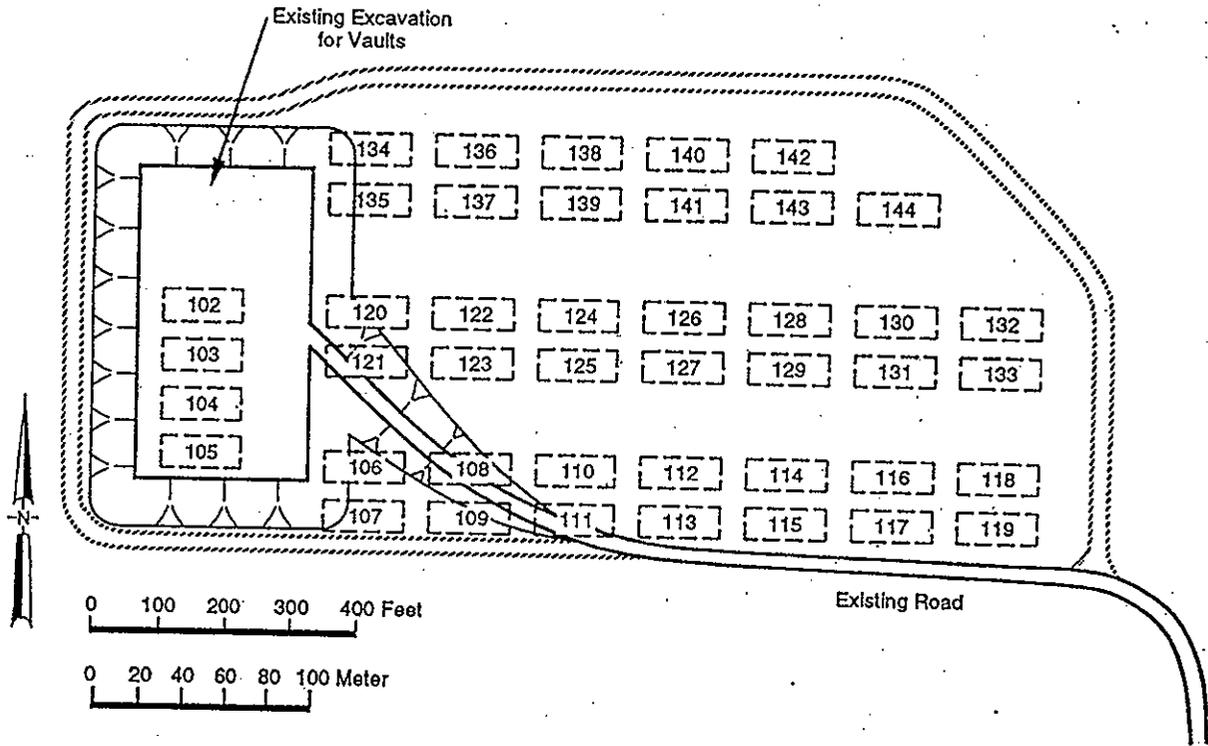


39202084.5

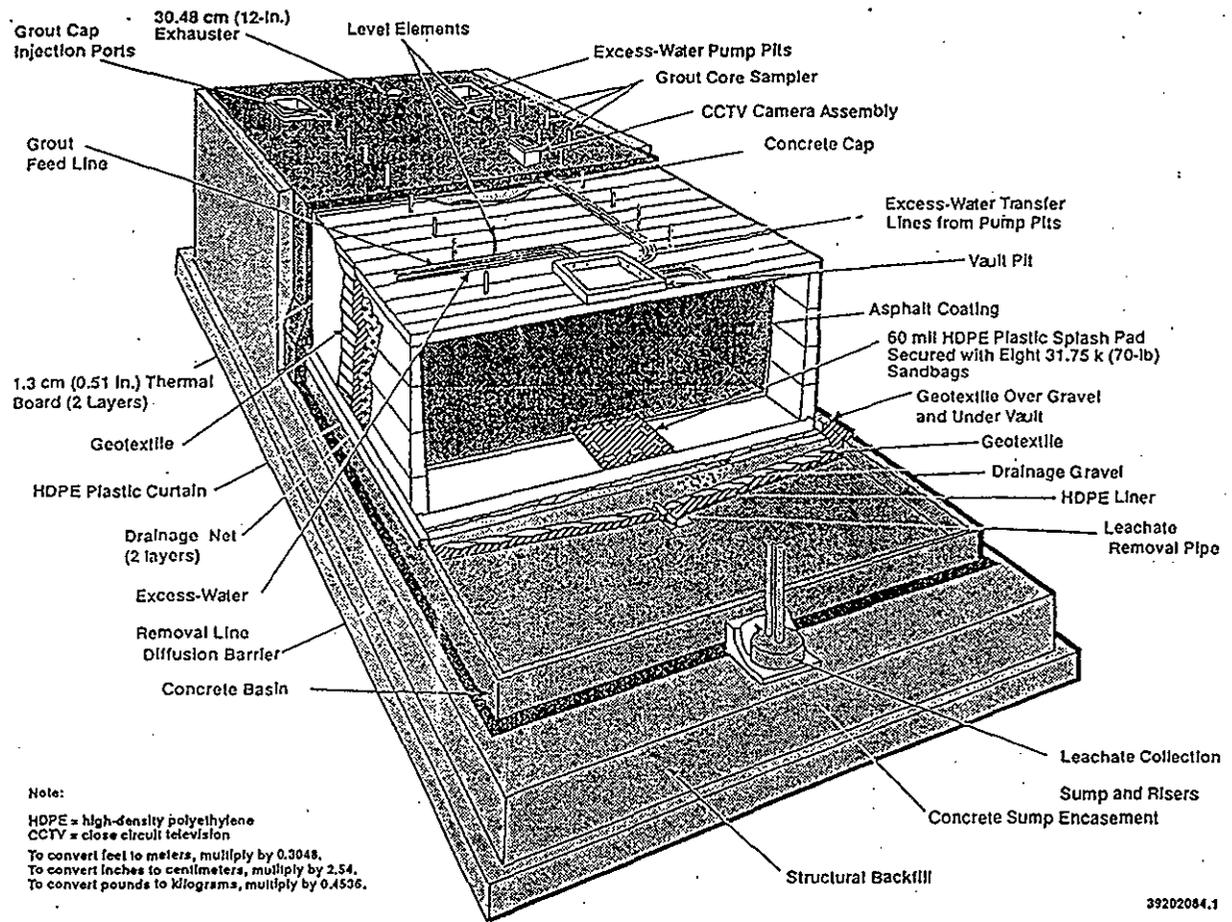
 - diaphragm-operated valve

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

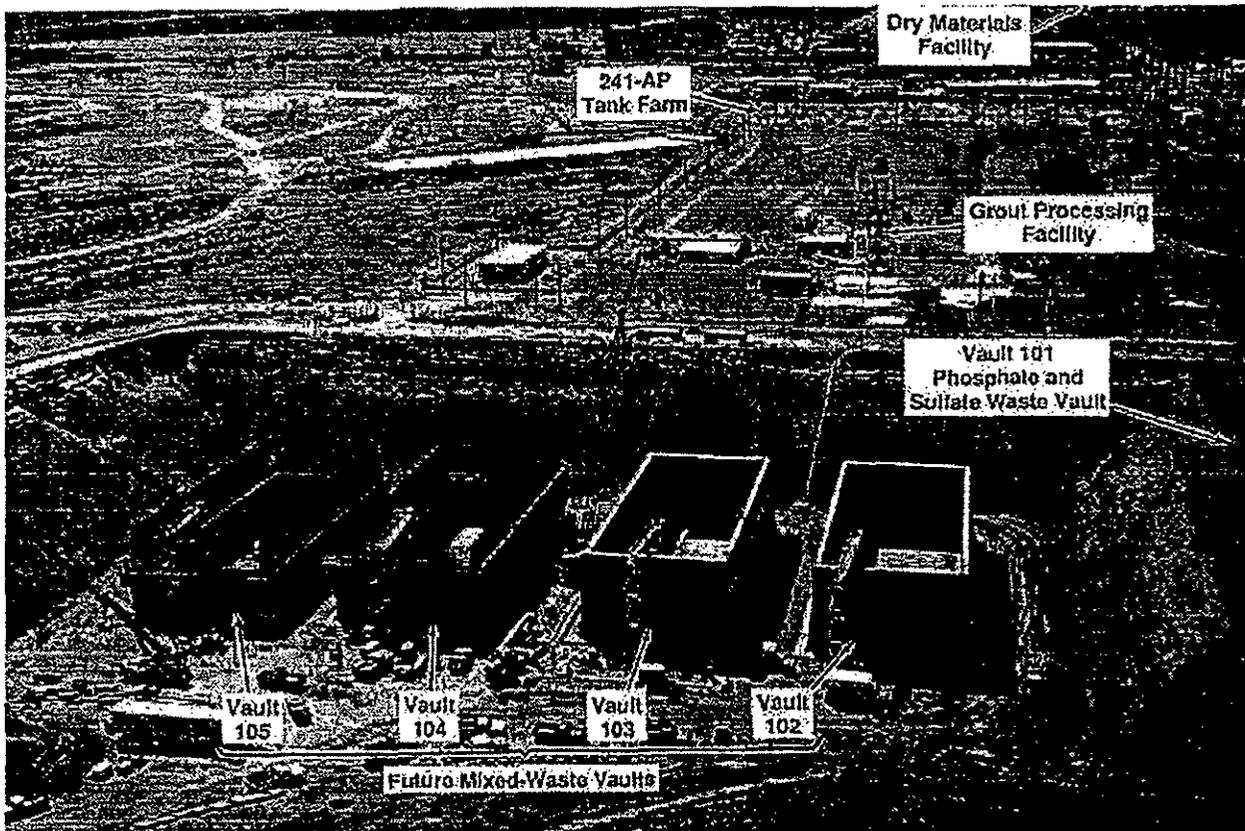
Grout Treatment Facility Vault Arrangement



39202084.4



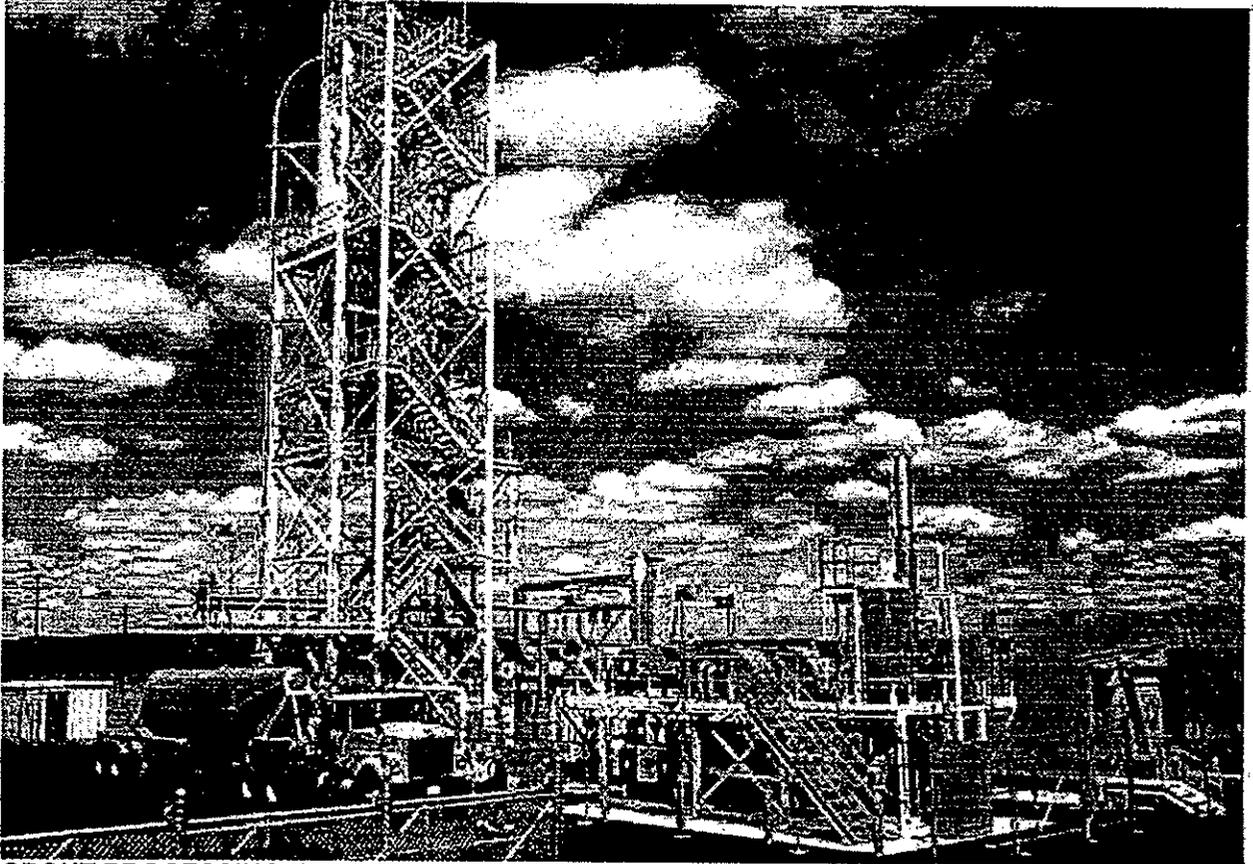
GROUT TREATMENT FACILITY AERIAL VIEW



46°33'04"
119°30'44"

39202084.2
(PHOTO TAKEN 1991)

GROUT TREATMENT FACILITY



GROUT PROCESSING FACILITY

46°33'04"
119°30'44"

8802516-9CN
(PHOTO TAKEN 1988)

GROUT TREATMENT FACILITY

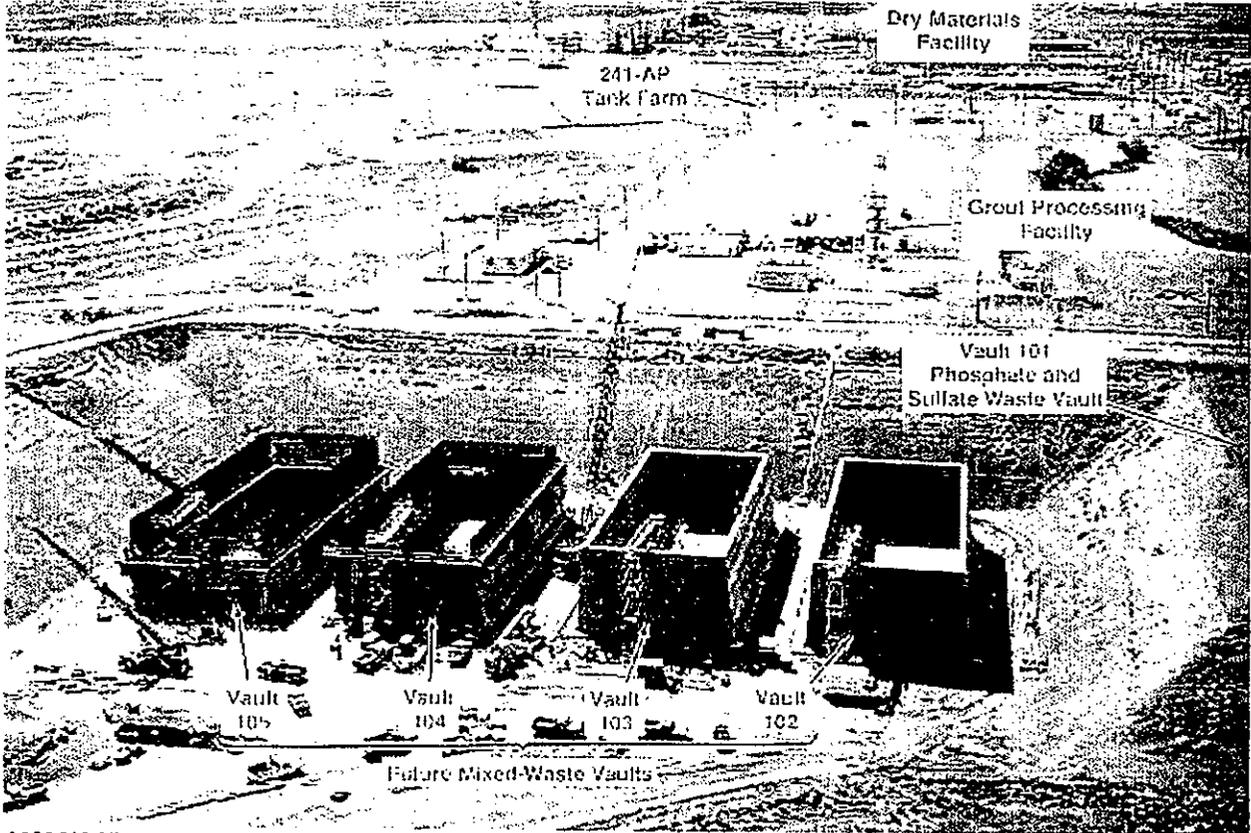


LIQUID COLLECTION TANK

46°33'04"
119°30'44"

8800284-1CN
(PHOTO TAKEN 1988)

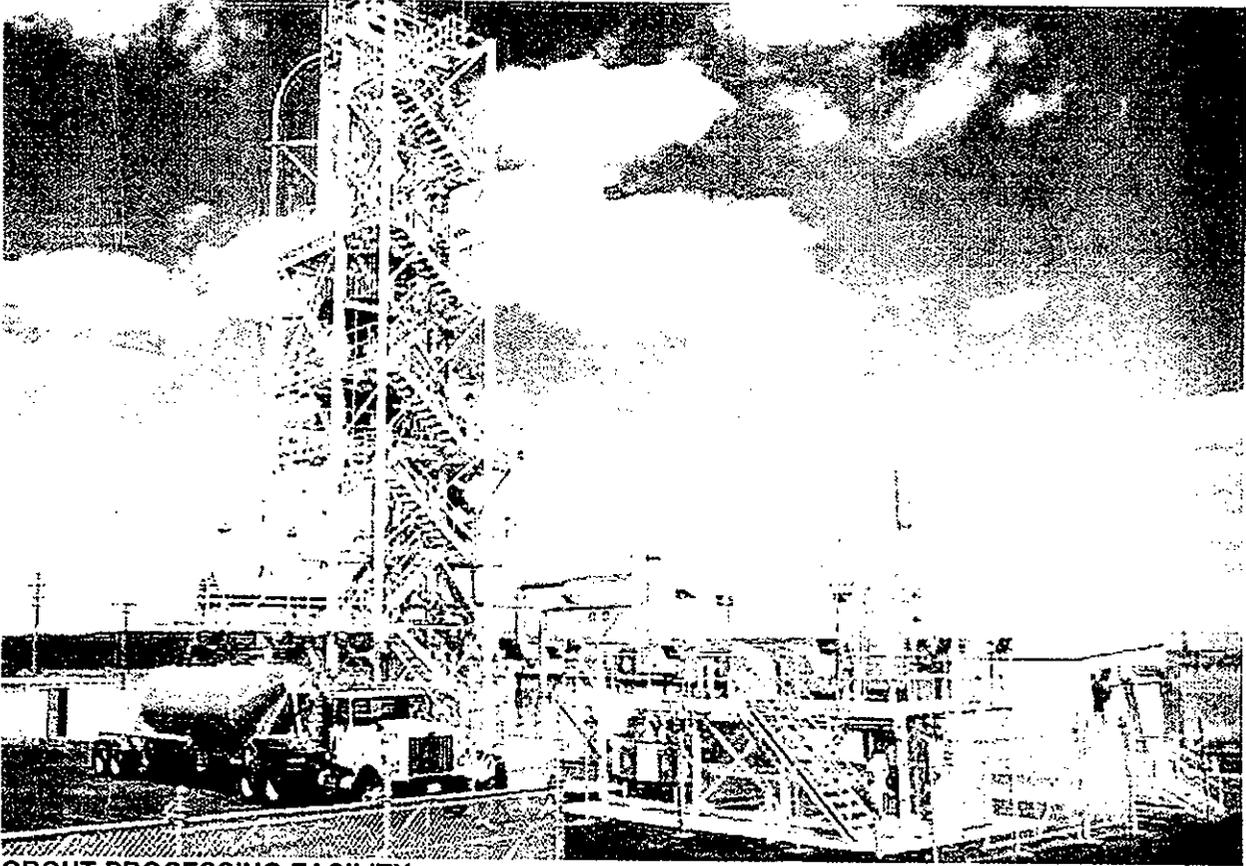
GROUT TREATMENT FACILITY AERIAL VIEW



46°33'04"
119°30'44"

39202084.2
(PHOTO TAKEN 1991)

GROUT TREATMENT FACILITY

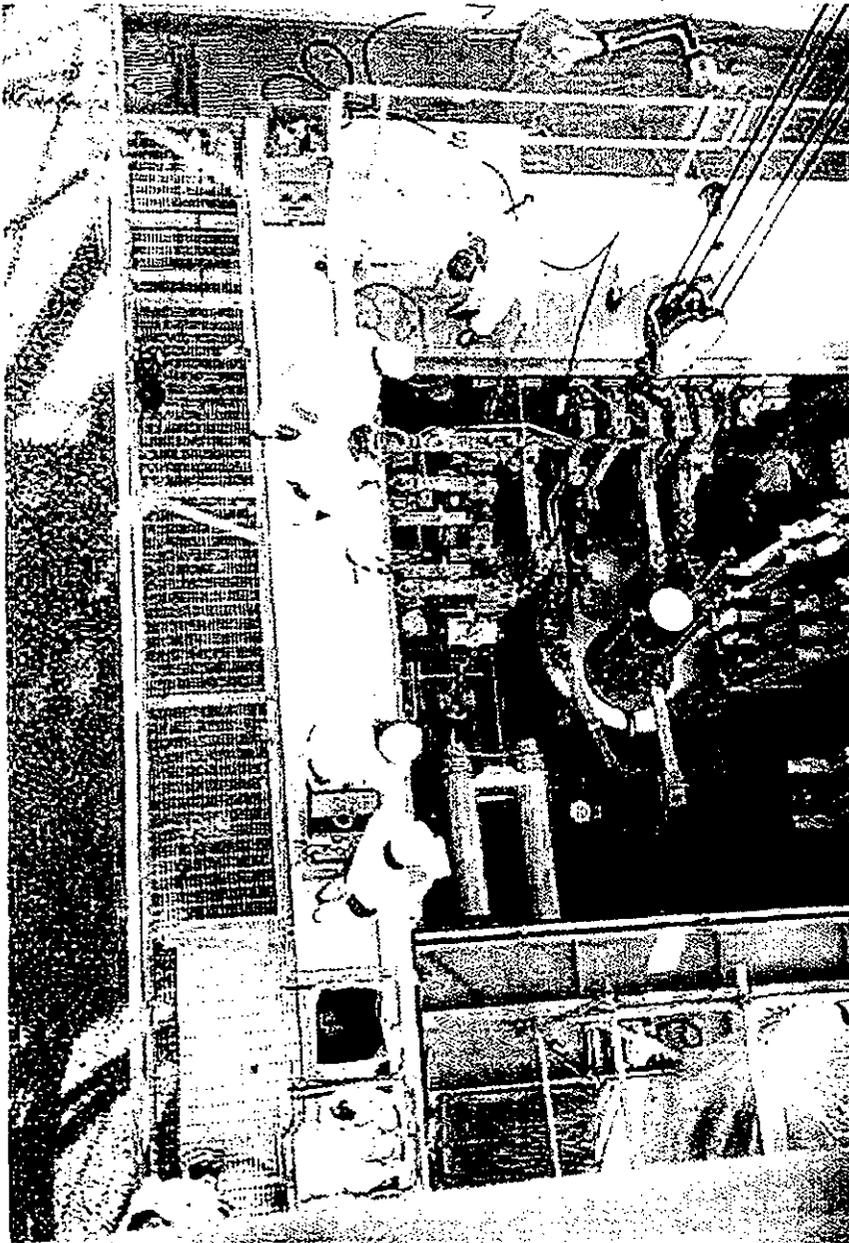


GROUT PROCESSING FACILITY

46°33'04"
119°30'44"

8802516-9CN
(PHOTO TAKEN 1988)

GROUT TREATMENT FACILITY



LIQUID COLLECTION TANK

46°33'04"
119°30'44"

8800284-1CN
(PHOTO TAKEN 1988)