



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

FEB 09 1996

96-PCA-114

Mr. Moses N. Jaraysi  
 200 Area Unit Supervisor  
 Nuclear Waste Program  
 State of Washington  
 Department of Ecology  
 1315 West Fourth Avenue  
 Kennewick, Washington 99336

Mr. Joseph J. Witczak  
 Unit Supervisor  
 Regulatory and Technical Support  
 State of Washington  
 Department of Ecology  
 P.O. Box 47600  
 Olympia, Washington 98504-7600



Dear Messrs. Jaraysi and Witczak:

HANFORD FACILITY DANGEROUS WASTE PART A PERMIT APPLICATION, FORM 3,  
 REVISION 4, FOR THE LIQUID EFFLUENT RETENTION FACILITY (WA7890008967)  
 (TSD: S-2-8)

Enclosed is the Hanford Facility Dangerous Waste Part A Permit Application (Part A) Form 3, Revision 4, for the Liquid Effluent Retention Facility (LERF). The LERF is located in the 200 East Area of the Hanford Facility and is used to manage process condensate from the 242-A Evaporator.

The LERF Part A, Form 3, has been revised to add treatment capability pursuant to the treatment surface impoundment exemption located in Title 40 Code of Federal Regulations (CFR) Part 268.4. The U.S. Environmental Protection Agency determined that management of the 242-A Evaporator process condensate in the LERF is consistent with the regulatory definition of "treatment" identified at 40 CFR Part 260.10 and, therefore, the 40 CFR Part 268.4 treatment surface impoundment exemption is applicable. In addition, the LERF Part A, Form 3, has been revised to allow the possibility of dilute aqueous waste streams from other Hanford Facility generators to be managed at the LERF until further treatment takes place at the 200 Area Effluent Treatment Facility.

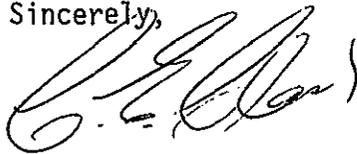
FEB 09 1996

Messrs. Jaraysi and Witczak  
96-PCA-114

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Should you have any questions regarding the LERF Part A, Form 3, please contact Mr. C. E. Clark, U.S. Department of Energy, Richland Operations Office, on (509) 376-9333 or Mr. D. L. Flyckt, Westinghouse Hanford Company, on (509) 372-3142.

Sincerely,



James E. Rasmussen, Director  
Environmental Assurance, Permits,  
and Policy Division  
DOE Richland Operations Office

EAP:EMM



J. DiLiberto, Director  
Liquid Effluents Services  
Westinghouse Hanford Company

Enclosure:  
Liquid Effluent Retention Facility  
Part A Permit Application  
Form 3, Revision 4

cc w/encl:  
R. Jim, YIN  
R. Julian, Ecology  
D. Powaukee, NPT  
S. Price, WHC  
J. Wilkinson, CTUIR

cc w/o encl:  
A. DiLiberto, WHC  
D. Sherwood, EPA

ENCLOSURE

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

<b>FORM</b> <b>3</b>	<b>DANGEROUS WASTE PERMIT APPLICATION</b>	1. EPA/STATE I.D. NUMBER WA 78900089
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FOR OFFICIAL USE ONLY	
APPLICATION APPROVED	COMMENTS
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 style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%; text-align: center;">MO.</td> <td style="width:33%; text-align: center;">DAY</td> <td style="width:33%; text-align: center;">YR.</td> </tr> <tr> <td style="border: 1px solid black; height: 20px;"></td> <td style="border: 1px solid black; height: 20px;"></td> <td style="border: 1px solid black; height: 20px;"></td> </tr> </table> <p>FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, &amp; yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)</p>	MO.	DAY	YR.				<input type="checkbox"/> 2. NEW FACILITY (Complete item below) <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%; text-align: center;">MO.</td> <td style="width:33%; text-align: center;">DAY</td> <td style="width:33%; text-align: center;">YR.</td> </tr> <tr> <td style="border: 1px solid black; text-align: center;">04</td> <td style="border: 1px solid black; text-align: center;">08</td> <td style="border: 1px solid black; text-align: center;">94</td> </tr> </table> <p>FOR NEW FACILITIES, PROVIDE THE DATE (mo., day, &amp; yr.) OPERATION BEGAN OR IS EXPECTED TO BEGIN</p>	MO.	DAY	YR.	04	08	94
MO.	DAY	YR.											
MO.	DAY	YR.											
04	08	94											

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

<input checked="" type="checkbox"/> 1. FACILITY HAS AN INTERIM STATUS PERMIT	<input type="checkbox"/> 2. FACILITY HAS A FINAL PERMIT
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**III. PROCESSES - CODES AND CAPACITIES**

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

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

1. AMOUNT - Enter the amount.

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

PROCESS	PRO-CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PRO-CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
<b>Storage:</b>			<b>Treatment:</b>		
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
<b>Disposal:</b>					
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	S 0 4	73,815,000	L		7				
2	T 0 2	73,815,000	L		8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

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

S04 T02

The Liquid Effluent Retention Facility (LERF) was constructed under interim status in accordance with Washington Administrative Code (WAC) 173-303. The LERF provides interim storage and treatment of the 242-A Evaporator process condensate and possibly dilute aqueous waste streams from other Hanford Facility generators until further treatment is conducted at the 200 Area Effluent Treatment Facility.

The LERF is a retention basin consisting of three cells (surface impoundments) (S04). Treatment consisting of flow and pH equalization takes place in accordance with the treatment surface impoundment exemption located in Title 40 Code of Federal Regulations, Part 268.4 (T02). Each cell has a design capacity of 24,605,000 liters (6,500,000 gallons) with a total capacity of 73,815,000 liters (19,500,000 gallons).

IV. DESCRIPTION OF DANGEROUS WASTES

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

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

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

D. PROCESSES

1. PROCESS CODES:

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

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

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

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

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

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

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

LINE NO	A. DANGEROUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES		
							1. PROCESS CODES (enter)	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.

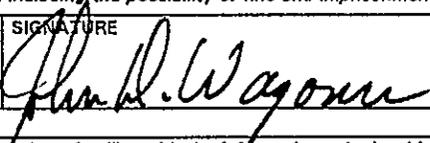
I.D. NUMBER (entered from page 1)

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

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

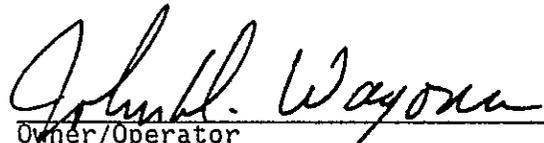
LINE NO.	A. DANGEROUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES								
							1. PROCESS CODES (enter)				2. PROCESS DESCRIPTION (if a code is not entered in D(1))				
1	F	0	0	1	73,812,000	K	S04	T02							Storage/Treatment -
2	F	0	0	2											Surface Impoundment
3	F	0	0	3											
4	F	0	0	4											
5	F	0	0	5											
6	F	0	3	9											
7	W	T	0	2											Included With Above
8															
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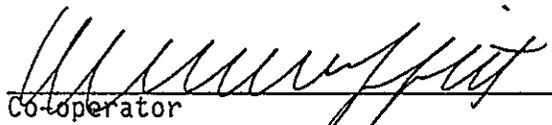
<b>IV. DESCRIPTION OF DANGEROUS WASTES (continued)</b>																																														
<b>E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.</b>																																														
<p>The LERF receives, stores, and treats the 242-A Evaporator process condensate and possibly dilute aqueous waste streams from other Hanford Facility generators until further treatment is conducted at the 200 Area Effluent Treatment Facility. A description of the dangerous waste managed at LERF is as follows.</p> <p>The 242-A Evaporator process condensate is regulated as a mixed waste due to application of the "derived from" rule from treating Double-Shell Tank System waste which is listed for the presence of spent halogenated and nonhalogenated solvents (F001, F002, F003, F004, and F005). The 242-A Evaporator also could display the criteria of toxicity of ammonia (WT02, toxic state-only dangerous waste). Multi-source leachate (F039) is included as a waste derived from nonspecific source wastes F001 through F005.</p> <p>The Estimated Annual Quantity of Dangerous Waste (item IV.B.) of 73,812,000 kilograms (162,728,000 pounds) per year is based on approximately 73,815,000 liters (19,500,000 gallons) of waste, or the total capacity of the LERF.</p>																																														
<b>V. FACILITY DRAWING</b> Refer to attached drawing.																																														
All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).																																														
<b>VI. PHOTOGRAPHS</b> Refer to attached photographs.																																														
All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).																																														
<b>VII. FACILITY GEOGRAPHIC LOCATION</b> This information is provided on the attached drawings and photos.																																														
LATITUDE (degrees, minutes, & seconds)		LONGITUDE (degrees, minutes, & seconds)																																												
<table border="1" style="width:100%; height: 20px;"> <tr> <td style="width: 10%;"> </td> </tr> </table>												<table border="1" style="width:100%; height: 20px;"> <tr> <td style="width: 10%;"> </td> </tr> </table>																																		
<b>VIII. FACILITY OWNER</b>																																														
<input checked="" type="checkbox"/> 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.)																																											
<table border="1" style="width:100%; height: 20px;"> <tr> <td style="width: 10%;"> </td> </tr> </table>													<table border="1" style="width:100%; height: 20px;"> <tr> <td style="width: 10%;"> </td> </tr> </table>																																	
3. STREET OR P.O. BOX		4. CITY OR TOWN		5. ST.	6. ZIP CODE																																									
<table border="1" style="width:100%; height: 20px;"> <tr> <td style="width: 10%;"> </td> </tr> </table>												<table border="1" style="width:100%; height: 20px;"> <tr> <td style="width: 10%;"> </td> </tr> </table>												<table border="1" style="width:100%; height: 20px;"> <tr> <td style="width: 10%;"> </td> </tr> </table>											<table border="1" style="width:100%; height: 20px;"> <tr> <td style="width: 10%;"> </td> </tr> </table>											
<b>IX. OWNER CERTIFICATION</b>																																														
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) John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office		SIGNATURE 	DATE SIGNED 2/9/96																																											
<b>X. OPERATOR CERTIFICATION</b>																																														
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.

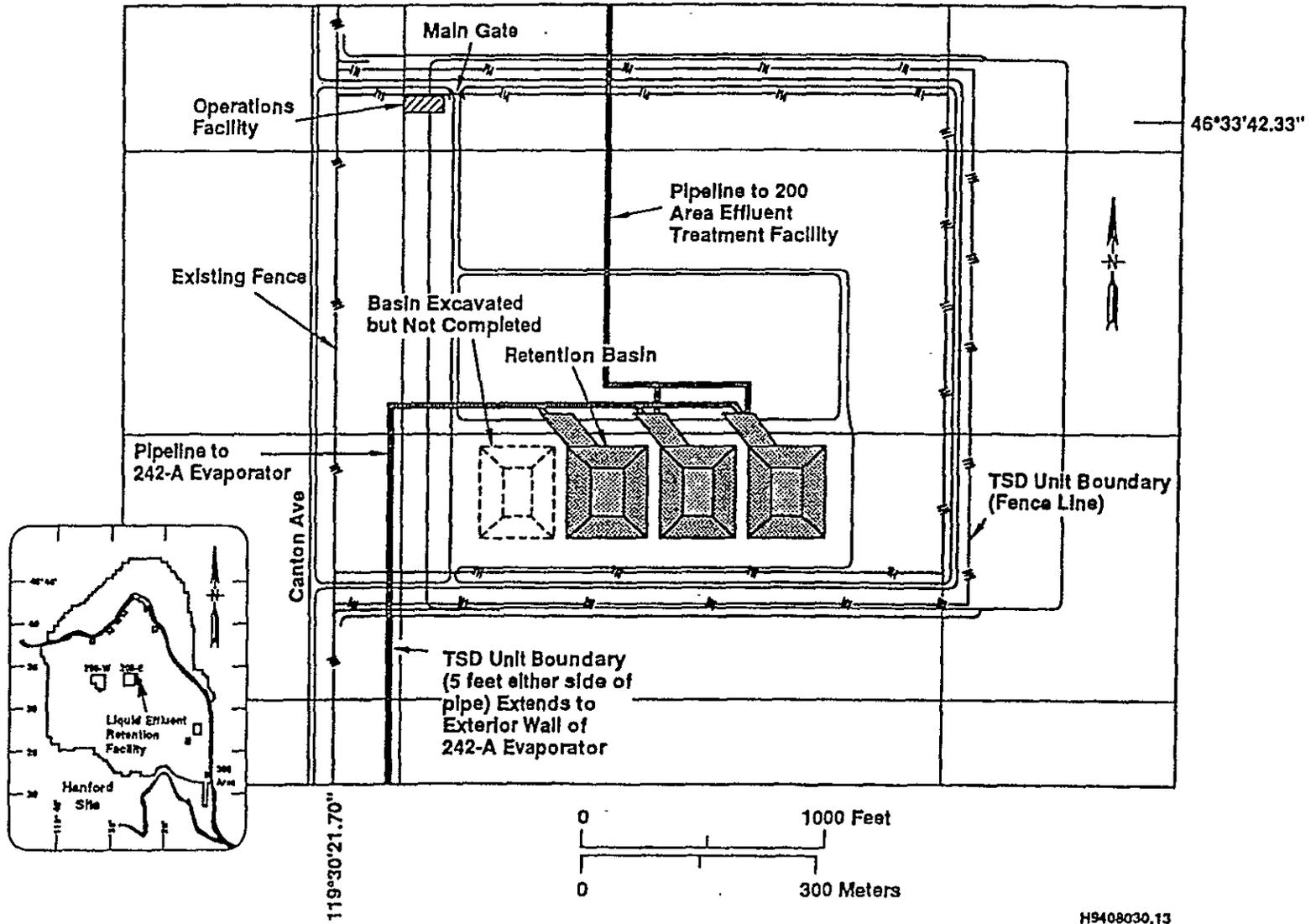
  
\_\_\_\_\_  
Owner/Operator  
John D. Wagoner, Manager  
U.S. Department of Energy  
Richland Operations Office

2/19/96  
Date

  
\_\_\_\_\_  
Co-operator  
A. LaMar Trego, President  
Westinghouse Hanford Company

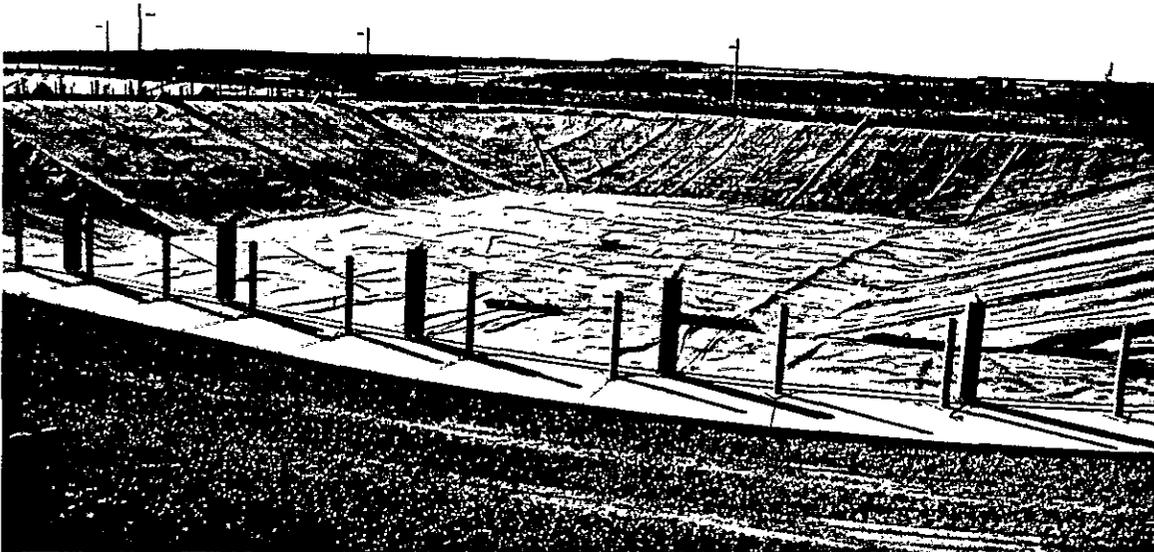
4/12/96  
Date

# Liquid Effluent Retention Facility Site Plan



H9408030.13

# LIQUID EFFLUENT RETENTION FACILITY



TYPICAL BASIN

46°33'42.33"  
119°30'21.70"

92081260-9CN  
(PHOTO TAKEN 1992)