



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

0048503

DEC 19 1997

97-EAP-825

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



Dear Mr. Jaraysi:

HANFORD FACILITY DANGEROUS WASTE PART A PERMIT APPLICATION, FORM 3,  
REVISION 0, FOR THE WASTE ENCAPSULATION AND STORAGE FACILITY (TSD: S-2-10)

Enclosed is the Hanford Facility Dangerous Waste Part A Permit Application (Part A), Form 3, Revision 0, for the Waste Encapsulation and Storage Facility (WESF). Submittal of the WESF Part A, Form 3, meets Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-92-03.

The Part A, Form 3, addresses the storage of Hanford Site cesium-137 and strontium-90 capsules and unencapsulated salts, for which no beneficial use has been identified. A Notice of Intent (NOI) for interim status expansion was submitted for public review on July 14, 1997. A NOI is required to be submitted for public review 150 days before the Part A, Form 3, is submitted in accordance with Washington Administrative Code (WAC) 173-303-281.

Actions over the past few years by the U.S. Department of Agriculture and the Food and Drug Administration, as well as continuing technology developments, have resulted in an increasing number of inquiries from commercial and medical sources regarding the isotope inventory. The U.S. Department of Energy, Richland Operations Office (RL), Fluor Daniel Hanford, Inc. (FDH), and B&W Hanford Company (BWHC) are continuing to explore potential beneficial uses for the inventory, and will be seeking expressions of interest from industry in this regard.

Should viable uses be identified for all or a portion of the inventory, it would be the intent of RL, FDH, and BWHC to exercise the recycling/reuse provisions of WAC 173-303-017 to eliminate the solid waste designation of the useable portion of the inventory. The recycle/reuse provision is permitted under the Tri-Party Agreement change request M-92-96-01, which states "It is also noted that in the instance of the Hanford Site Cs/Sr capsules, such capsules would not be solid wastes when they can be shown to be recycled by being used or reused as effective substitutes for commercial products as provided in chapter 173.303.017 WAC."

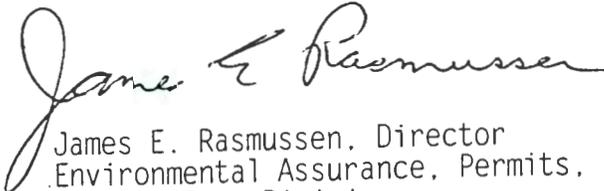
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Mr. Moses N. Jaraysi  
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Should you have any questions regarding the Part A, Form 3, please contact Ellen M. Mattlin, RL, on (509) 376-2385; Susan M. Price, FDH, on (509) 376-1653; or Thomas G. Beam, BWHC, on (509) 372-0019.

Sincerely,



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

EAP:EMM



William D. Adair, Director  
Environmental Protection  
Responsible Party for  
Fluor Daniel Hanford, Inc.

Enclosure:  
Hanford Facility Part A,  
Form 3, Revision 0, for  
the WESF

cc w/encl:  
EDMC, H6-08  
R. Jim, YIN  
D. Powaukee, NPT  
J. R. Wilkinson, CTUIR

cc w/o encl:  
R. E. Heineman, Jr., BWHC  
S. M. Price, FDH  
J. A. Winterhalder, WMH

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)

MO.	DAY	YR.
03	22	43

\* 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.

MO.	DAY	YR.

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

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

1. FACILITY HAS AN INTERIM STATUS PERMIT  2. FACILITY HAS A FINAL PERMIT

**III. PROCESSES - CODES AND CAPACITIES**

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

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

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

PROCESS	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.

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	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)	1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)			1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)			
X-1	S	02	600	G		5					
X-2	T	03	20	E		6					
1	S	99	4,540	L		7					
2						8					
3						9					
4						10					

Continued from the front.

III. PROCESSES (continued)

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

**S99 (Miscellaneous Storage)**

Two areas within WESF will store capsules and/or unencapsulated salts: (1) pool cells 1 through 8 and 12, located within the west side of the 225-B Building, which provides underwater storage for radiological protection from the cesium-137 and strontium-90 capsules; and (2) process cells A through G, located in the south end of the 225-B Building, which provide interim dry storage of capsules and/or unencapsulated salts.

The maximum process design capacity for miscellaneous storage in pool cells 1 through 8 and 12 is approximately 4,484 liters (1,184.55 gallons) and for Process cells A through G is approximately 56 liters (14.79 gallons).

The total maximum process design capacity for miscellaneous storage in the pool cells and process cells is approximately 4,540 liters (1,199.34 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)			
1	D 0 0 5	10,000	K	S99			Other Storage - Misc Storage
2	D 0 0 6						
3	D 0 0 7						
4	D 0 0 8						
5	D 0 1 1						
6	W T 0 2						Included With Above
7							
8							
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25							
26							

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

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

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

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

VI. PHOTOGRAPHS Refer to attached photograph(s).

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

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

LATITUDE (degrees, minutes, & seconds)

LONGITUDE (degrees, minutes, & seconds)

VIII. FACILITY OWNER

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

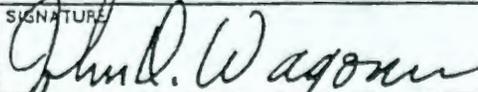
5. ST.

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)  
 John D. Wagoner, Manager  
 U.S. Department of Energy  
 Richland Operations Office

SIGNATURE  


DATE SIGNED  
 12/19/97

X. OPERATOR CERTIFICATION

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

NAME (print or type)

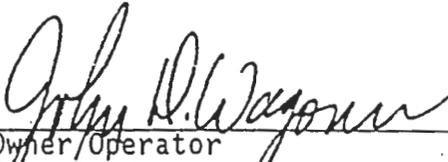
SIGNATURE

DATE SIGNED

SEE ATTACHMENT

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

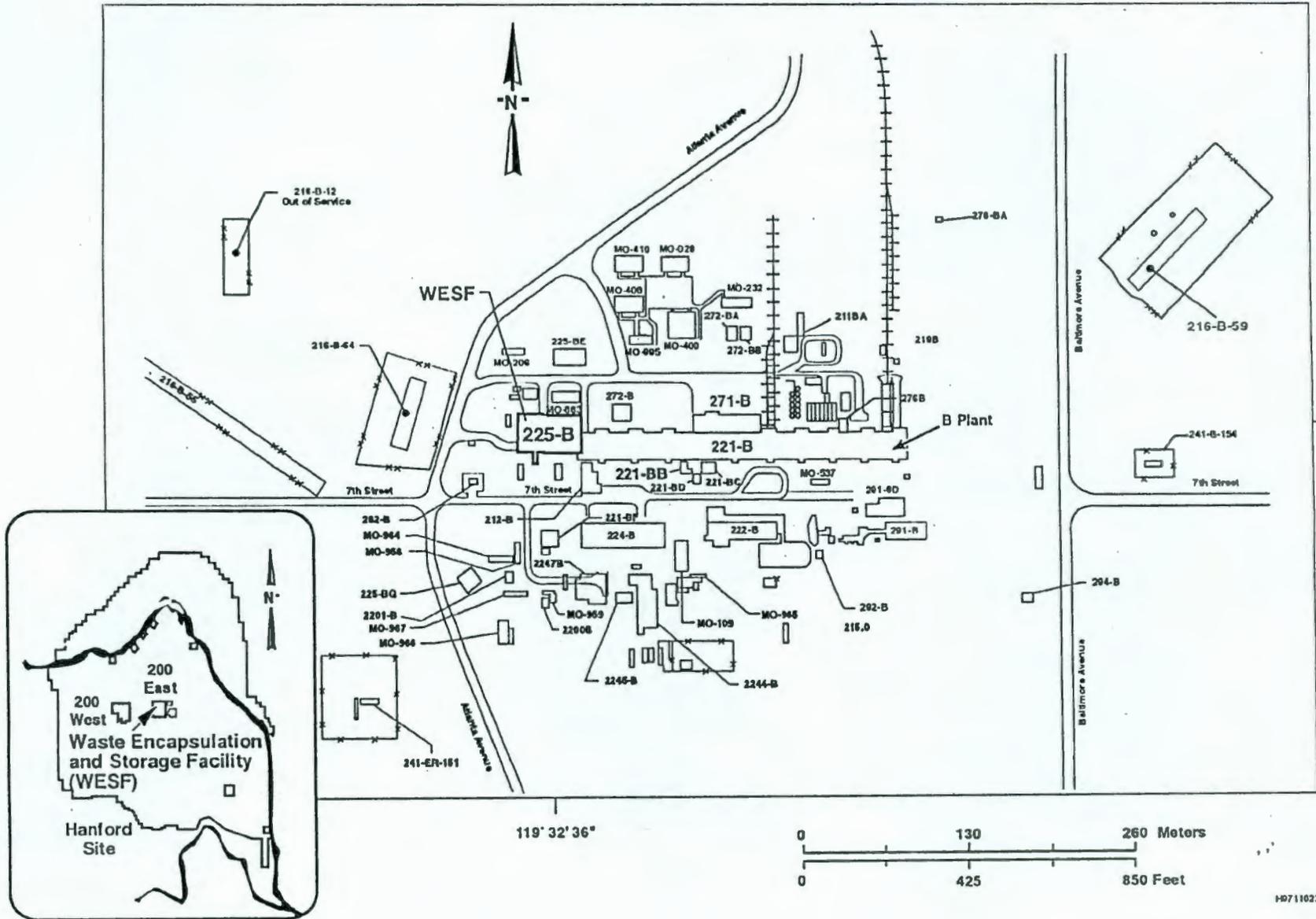
12/19/97  
Date

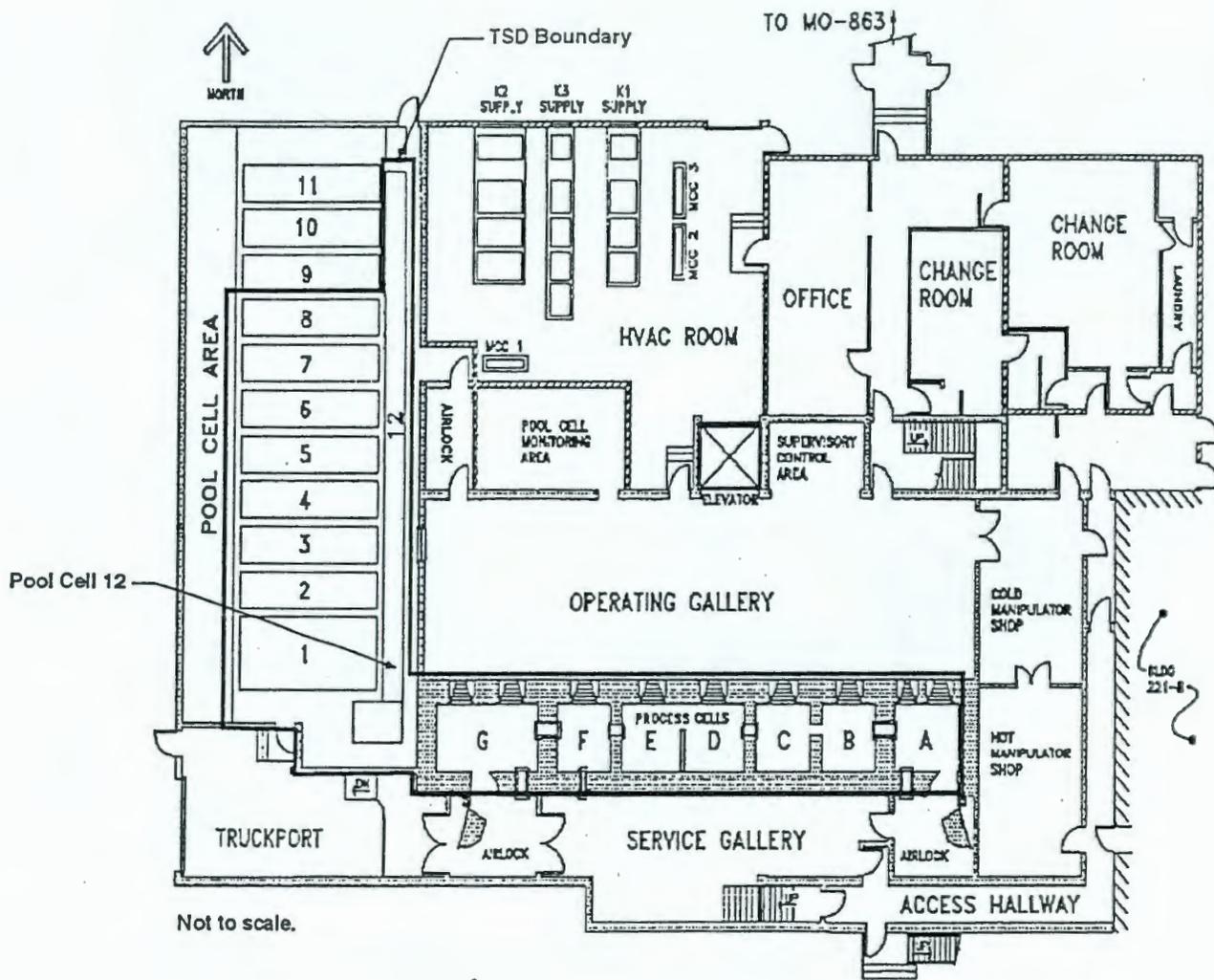


Co-operator  
H. J. Hatch  
President and  
Chief Executive Officer  
Fluor Daniel Hanford, Inc.

12/17/97  
Date

# Waste Encapsulation and Storage Facility Site Plan

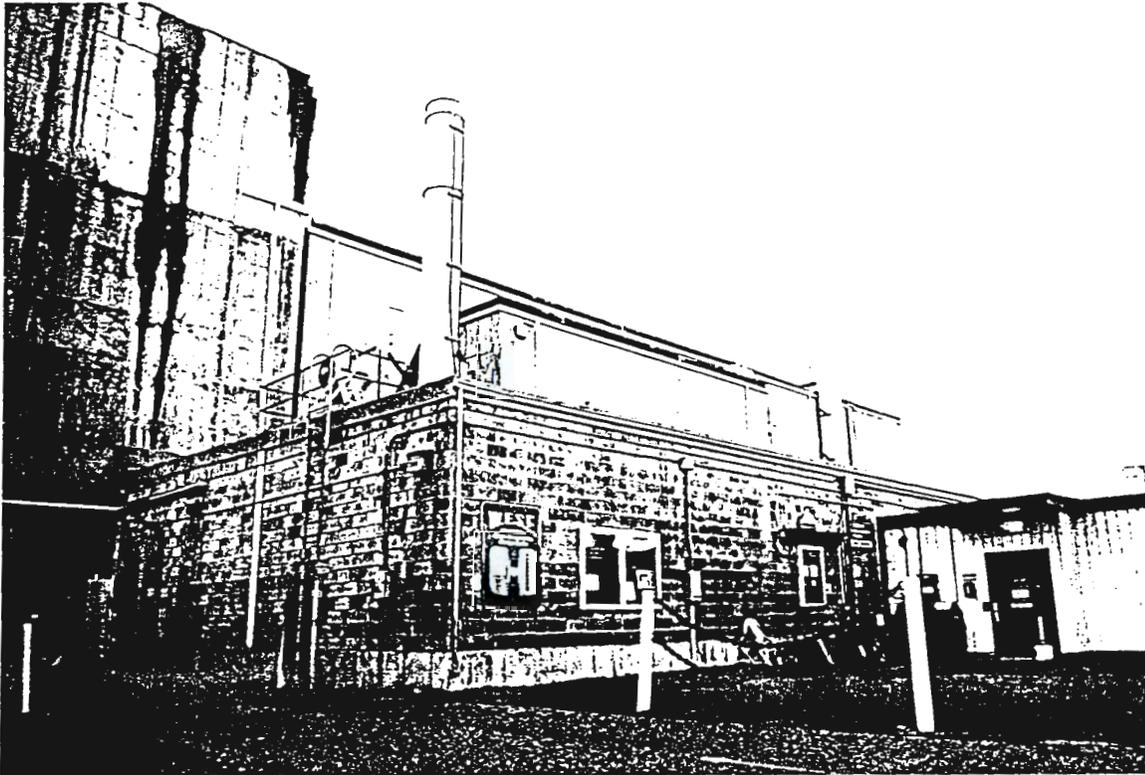




H67110237.2

Waste Encapsulation and Storage Facility Pool and Process Cells  
(not to scale)

# WASTE ENCAPSULATION AND STORAGE FACILITY

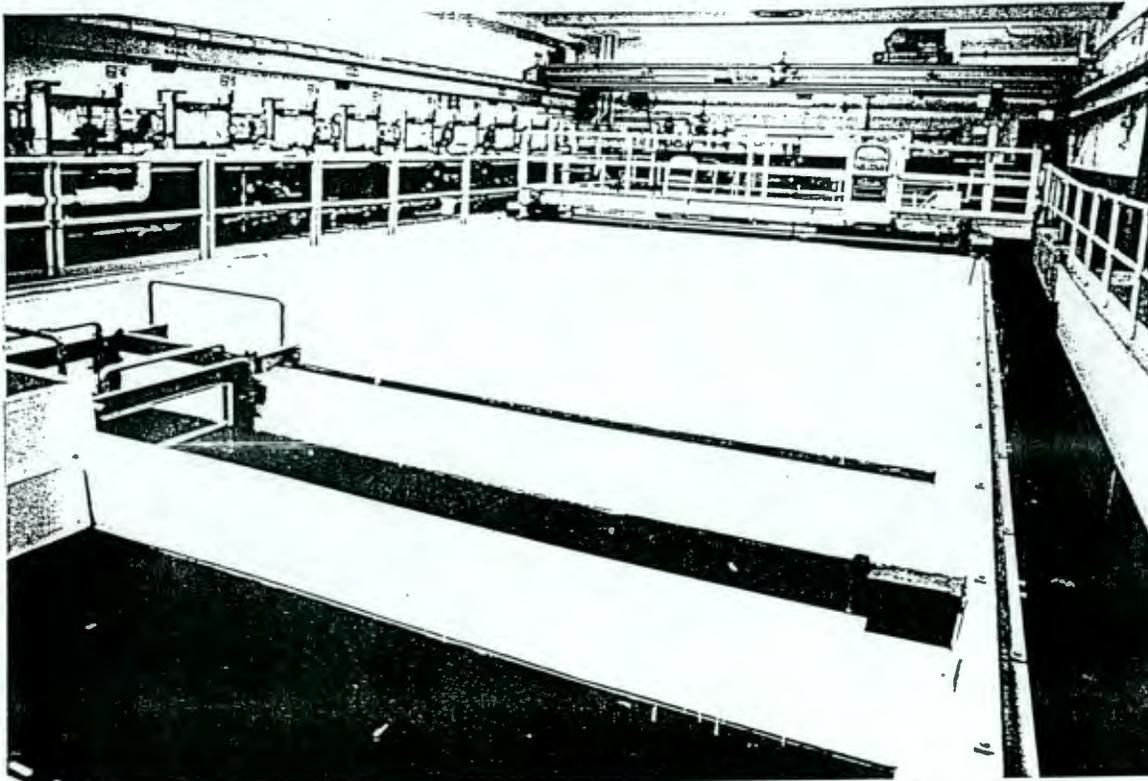


225-B BUILDING

46°33'27"  
119°32'36"

97110265-14CN  
(PHOTO TAKEN 1997)

# WASTE ENCAPSULATION AND STORAGE FACILITY

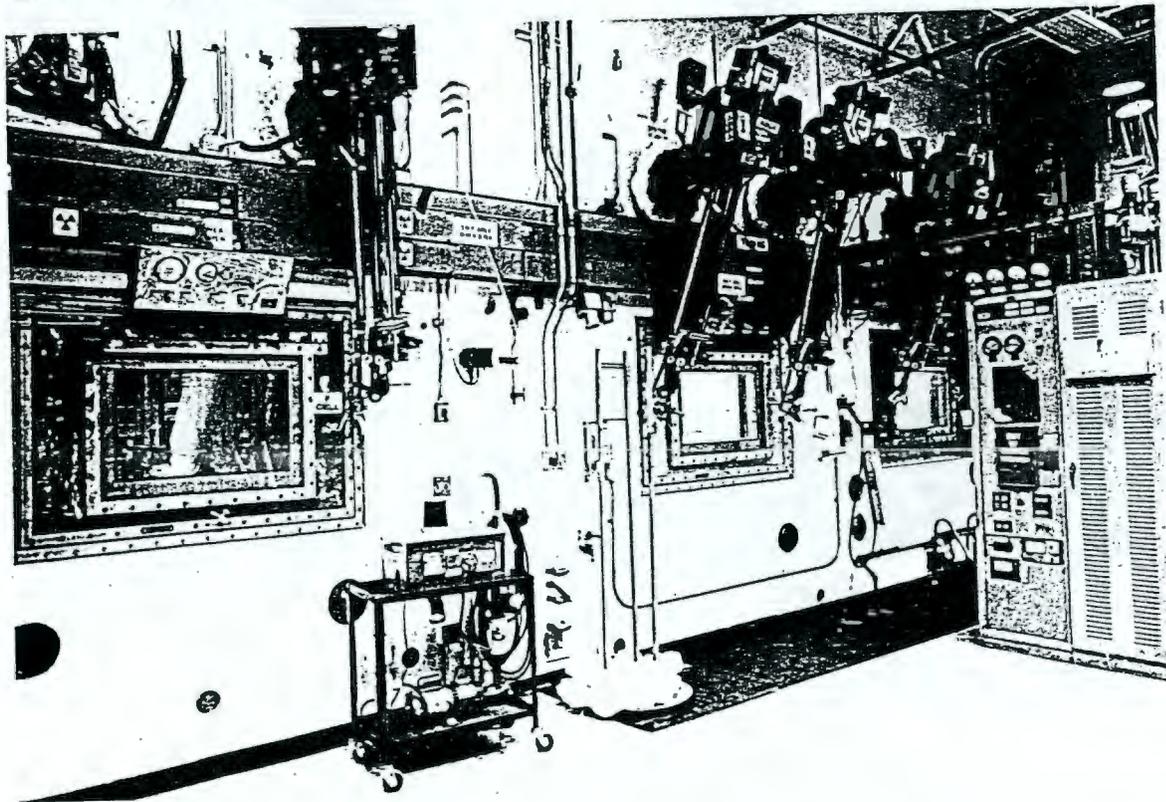


POOL CELLS

46°33'27"  
119°32'36"

97110265-8CN  
(PHOTO TAKEN 1997)

# WASTE ENCAPSULATION AND STORAGE FACILITY



PROCESS CELLS

46°33'27"  
119°32'36"

97110265-2CN  
(PHOTO TAKEN 1997)