WASHINGTON STATE DEPARTMENT OF ECOLOGY

Dangerous Waste Permit Application Part A Form

Date Received	Reviewed by:	Date:	0	9	2	2	2	0	0	8
Month Day Year	Approved by:	Date:	0	9	2	2	2	0	0	8
0 9 1 9 2 0 0 8										

I. This form is submitted to: (place an "X" in the appropriate box)

☒	**Request modification to a final status permit (commonly called a "Part B" permit)**
☐	**Request a change under interim status**
☐	**Apply for a final status permit. This includes the application for the initial final status permit for a site or for a permit renewal (i.e., a new permit to replace an expiring permit).**
☐	**Establish interim status because of the wastes newly regulated on:** (Date)
	List waste codes:

II. EPA/State ID Number

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

III. Name of Facility

US Department of Energy – Hanford Facility

IV. Facility Location (Physical address not P.O. Box or Route Number)

A. Street

825 Jadwin

City or Town	State	ZIP Code
Richland	WA	99352

County Code (if known)	County Name
0 0 5	Benton

B. Land Type	C. Geographic Location Latitude (degrees, mins, secs)	Longitude (degrees, mins, secs)	D. Facility Existence Date Month	Day	Year
F	Refer to TOPO Map (Section XV.)		0 3	0 2	1 9 4 3

V. Facility Mailing Address

Street or P.O. Box

P.O. Box 550

City or Town	State	ZIP Code
Richland	WA	99352

VI. Facility contact (Person to be contacted regarding waste activities at facility)	
Name (last)	**(first)**
Brockman	David
Job Title	**Phone Number (area code and number)**
Manager	(509) 376-7395
Contact Address	
Street or P.O. Box	
P.O. Box 550	
City or Town	**State** / **ZIP Code**
Richland	WA / 99352

VII. Facility Operator Information	
A. Name	**Phone Number**
Department of Energy Owner/Operator CH2M HILL Plateau Remediation Company Co-Operator for Waste Encapsulation and Storage Facility*	(509) 376-7395 (509) 376-0556*
Street or P.O. Box	
P.O. Box 550 P.O. Box 1600 *	
City or Town	**State** / **ZIP Code**
Richland	WA / 99352
B. Operator Type	F
C. Does the name in VII.A reflect a proposed change in operator?	☐ Yes ☒ No Co-Operator* change
If yes, provide the scheduled date for the change:	**Month** 1 0 **Day** 0 1 **Year** 2 0 0 8
D. Is the name listed in VII.A. also the owner? If yes, skip to Section VIII.C.	☐ Yes ☒ No

VIII. Facility Owner Information	
A. Name	**Phone Number (area code and number)**
David A. Brockman, Operator/Facility-Property Owner	(509) 376-7395
Street or P.O. Box	
P.O. Box 550	
City or Town	**State** / **ZIP Code**
Richland	WA / 99352
B. Owner Type	F
C. Does the name in VIII.A reflect a proposed change in owner?	☐ Yes ☒ No
If yes, provide the scheduled date for the change:	**Month** **Day** **Year**

IX. NAICS Codes (5/6 digit codes)													
A. First							**B. Second**						
5	6	2	2	1		Waste Treatment & Disposal	9	2	4	1	1	0	Administration of Air & Water Resource & Solid Waste Management Programs
C. Third							**D. Fourth**						
5	4	1	7	1		Research & Development in the Physical, Engineering, & Life Sciences							

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X. Other Environmental Permits (see instructions)

A. Permit Type	B. Permit Number	C. Description
E	AIR-02-1218	WAC 246-247, Radiation Protection -- Air Emissions
E	EPA-1999-8-12	40 CFR 61, Subpart H, NESHAPS

XI. Nature of Business (provide a brief description that includes both dangerous waste and non-dangerous waste areas and activities)

WESF was constructed on the west end of B Plant in 1974 to encapsulate and store cesium chloride and strontium fluoride salts that had been separated from Hanford's high-level radioactive tank waste. WESF had stored the encapsulated salts since operations began in 1974 and initiated mixed waste management activities on July 14, 1997. The waste is stored in stainless steel capsules whose maximum outer height is approximately 53 centimeters (~21 inches) and maximum diameter is approximately 8 centimeters (~3 inches). WESF is a two-story, 20,000 square-foot building 157 feet long and 40 feet high. It is constructed of steel reinforced concrete. It is partitioned into seven hot cells, the hot cell service area, operating areas, building service areas, and the pool cell area.

The seven hot cells are labeled A through G and activities within the hot cells are performed remotely using manipulators. Waste and drum load out is performed in hot cell A. Hot cells B through E were used to convert strontium nitrate and cesium carbonate into strontium fluoride and cesium chloride salts. Only hot cells F and G will remain active for cesium/strontium capsule storage. The hot cell service area is located on the south side of the hot cells and is used for access into hot cells A and G. The operating areas and other building service areas associated with the hot cells provide areas for instrumentation monitoring, utility support, or manipulator repair as required.

The pool cell area consists of 12 pools lined with stainless steel. Pools 9, 10, and 11 are outside the TSD unit boundary. Pool cells 1 through 8 and 12 can be used for capsule storage and are filled with water to a depth of approximately 13 feet. Each pool is equipped with a monitoring system to detect any leakage from capsules. The water cools the cesium/strontium capsules and provides radiation shielding. Pool cell 12 is used to move capsules from hot cell G and from pool cell to pool cell.

The maximum process design capacity for miscellaneous storage in pool cells 1 through 8 and 12 is approximately 4,484 liters (~1,185 gallons) and for Process cells A through G is approximately 56 liters (~15 gallons). The total maximum process design capacity for miscellaneous storage in the pool cells and process cells is approximately 4,540 liters (~1,200 gallons).

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EXAMPLE FOR COMPLETING ITEMS XII and XIII (shown in lines numbered X-1, X-2, and X-3 below): A facility has two storage tanks that hold 1200 gallons and 400 gallons respectively. There is also treatment in tanks at 20 gallons/hr. Finally, a one-quarter acre area that is two meters deep will undergo *in situ vitrification.*

Section XII. Process Codes and Design Capacities								Section XIII. Other Process Codes								
Line Number		A. Process Codes (enter code)			B. Process Design Capacity		C. Process Total Number of Units	Line Number		A. Process Codes (enter code)			B. Process Design Capacity		C. Process Total Number of Units	D. Process Description
					1. Amount	2. Unit of Measure (enter code)							1. Amount	2. Unit of Measure (enter code)		
X	1	S	0	2	1,600	G	002	X	1	T	0	4	700	C	001	In situ vitrification
X	2	T	0	3	20	E	001									
X	3	T	0	4	700	C	001									
	1	S	9	9	4,540	L	001		1							
	2								2							
	3								3							
	4								4							
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1	0							1	0							
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1	9							1	9							
2	0							2	0							
2	1							2	1							
2	2							2	2							
2	3							2	3							
2	4							2	4							
2	5							2	5							

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XIV. Description of Dangerous Wastes

Example for completing this section: A facility will receive three non-listed wastes, then store and treat them on-site. Two wastes are corrosive only, with the facility receiving and storing the wastes in containers. There will be about 200 pounds per year of each of these two wastes, which will be neutralized in a tank. The other waste is corrosive and ignitable and will be neutralized then blended into hazardous waste fuel. There will be about 100 pounds per year of that waste, which will be received in bulk and put into tanks.

Line Number	A. Dangerous Waste No.				B. Estimated Annual Quantity of Waste	C. Unit of Measure	D. Processes									
							(1) Process Codes									(2) Process Description [If a code is not entered in D (1)]
X 1	**D**	**0**	**0**	**2**	**400**	**P**	**S**	**0**	**1**	**T**	**0**	**1**				
X 2	**D**	**0**	**0**	**1**	**100**	**P**	**S**	**0**	**2**	**T**	**0**	**1**				
X 3	**D**	**0**	**0**	**2**												**Included with above**
1	D	0	0	5	5,000	K	S	9	9							Includes Debris
2	D	0	0	6		K	S	9	9							Includes Debris
3	D	0	0	7		K	S	9	9							Includes Debris
4	D	0	0	8		K	S	9	9							Includes Debris
5	D	0	1	1		K	S	9	9							Includes Debris
6																
7																
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XV. Map

Attach to this application a topographic map of the area extending to at least one (1) 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 dangerous waste treatment, storage, recycling, or disposal units; and each well where fluids are injected underground. Include all springs, rivers, and other surface water bodies in this map area, plus drinking water wells listed in public records or otherwise known to the applicant within ¼ mile of the facility property boundary. The instructions provide additional information on meeting these requirements.

Topographic map is located in the Ecology Library

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (refer to Instructions for more detail).

XVII. Photographs

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

XVIII. Certifications

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Operator Name and Official Title (type or print) David A. Brockman, Manager U.S. Department of Energy Richland Operations Office	**Signature**	**Date Signed** 9/19/08
Co-Operator* Name and Official Title (type or print) John G. Lehew, III President and Chief Executive Officer CH2M HILL Plateau Remediation Company	**Signature**	**Date Signed** 9/2/08
Co-Operator – Address and Telephone Number* P.O. Box 1600 Richland, WA 99352 (509) 376-0556		
Facility-Property Owner Name and Official Title (type or print) David A. Brockman, Manager U.S. Department of Energy Richland Operations Office	**Signature**	**Date Signed** 9/19/08

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Comments
In Section VII. Facility Operator Information, there is no change to DOE as the Facility Owner/Operator; only a change in Co-Operator*. The change in Co-Operator* will be effective October 1, 2008.

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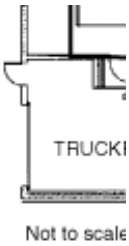
Waste Encapsulation and Storage Facility

225-B Building

97110265-14CN
Photo Taken 1997



Waste Encapsulation and Storage Facility Pool and Process Cells

H97110237.2

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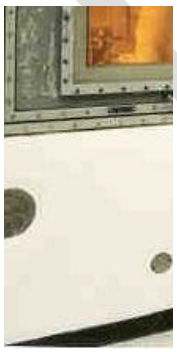
Waste Encapsulation and Storage Facility

Pool Cells

97110265-8CN
Photo Taken 1997



Process Cells

97110265-2CN
Photo Taken 1997

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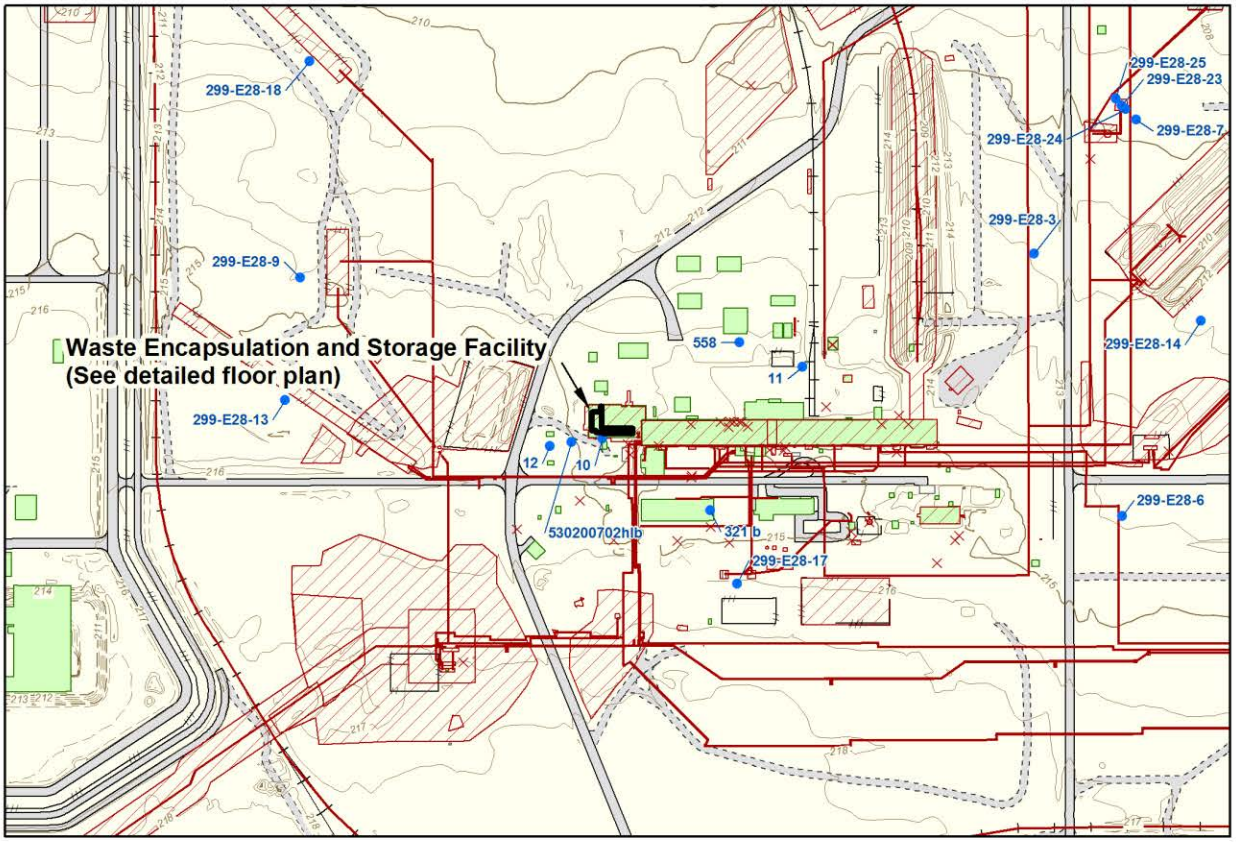

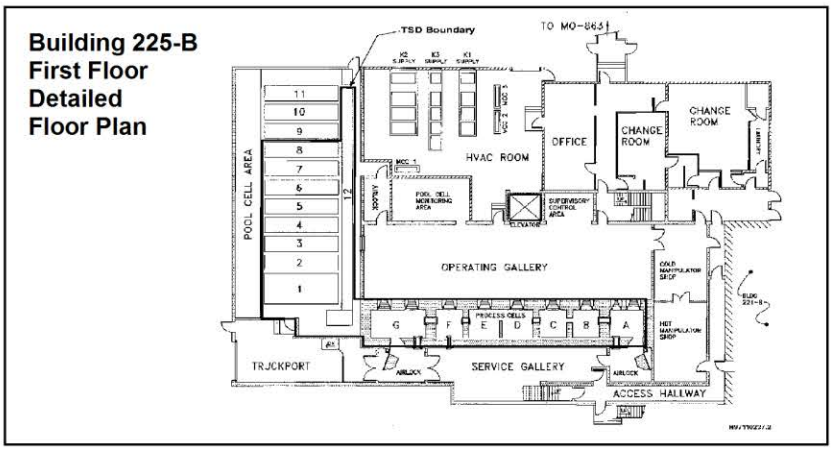

Waste Encapsulation and Storage Facility

Prepared for:
US DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE
Created and Published by:
Central Mapping Services
Fluor Hanford, Richland, WA
(509) 373-9076
Intended Use: REFERENCE ONLY
Topographic Data:
1996, Bechtel Hanford, Inc.

Hanford Site

Unit Location

- TSD Unit Boundary
- DOE Operating Areas
- Hanford Facility
- Injection and Withdrawal Wells
- Contours at 1 Meter Intervals
- Depression Contours
- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings
- Structures
- Concrete
- Major Roads
- Service Roads
- Railroads
- Fences

Meters: 0 50 100 150 200
Feet: 0 200 400 600

O:\Projects\2005\RCRA_TSD\050614_2ndPriorityFacilityTopos2005_Thompson\Maps\050921_WasteEncapAndStorageFacility_LineDwg_85x11_Rev4.mxd - 7/17/2008 @ 3:42:35 PM