

		WASHINGTON STATE DEPARTMENT OF ECOLOG Y		Dangerous Waste Permit Application Part A Form	
Date Received		Reviewed by: <i>[Signature]</i>		Date: 0 9 2 9 2 0 0 8	
Month	Day	Year	Approved by: <i>[Signature]</i>	Date: 0 9 2 9 2 0 0 8	
0	9	2 5			
I. This form is submitted to: (place an "X" in the appropriate box)					
<input checked="" type="checkbox"/>	Request modification to a final status permit (commonly called a "Part B" permit)				
<input type="checkbox"/>	Request a change under interim status				
<input type="checkbox"/>	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).				
<input type="checkbox"/>	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		D. Facility Existence Date		
	Latitude (degrees, mins, secs)		Longitude (degrees, mins, secs)		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 450					
City or Town				State	ZIP Code
Richland				WA	99352

VI. Facility contact (Person to be contacted regarding waste activities at facility)														
Name (last)						(first)								
Smith						Kevin								
Job Title						Phone Number (area code and number)								
Manager						(509) 372-2315								
Contact Address														
Street or P.O. Box														
P.O. Box 450														
City or Town						State		ZIP Code						
Richland						WA		99352						
VII. Facility Operator Information														
A. Name										Phone Number				
Department of Energy Owner/Operator Washington River Protection Solutions, LLC Co-Operator for 242-A Evaporator*										(509) 372-2315 (509) 372-9138*				
Street or P.O. Box														
P.O. Box 450 P.O. Box 850*														
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?						<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								
If yes, provide the scheduled date for the change:						Month		Day			Year			
D. Is the name listed in VII.A. also the owner? If yes, skip to Section VIII.C.										<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
VIII. Facility Owner Information														
A. Name										Phone Number (area code and number)				
Kevin W. Smith, Operator/Facility-Property Owner										(509) 372-2315				
Street or P.O. Box														
P.O. Box 450														
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?						<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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								

X. Other Environmental Permits (see instructions)															
A. Permit Type		B. Permit Number										C. Description			
	E		A	O	P	0	0	-	0	5	-	0	0	5	Title V Air Operating Permit
	E		A	I	R	1	2	-	3	0	6				FF-01 Approval Approval Date for AIR 12-306: 2/23/2012
	E		A	4	0	4	1								Petroleum Underground Storage Tank License

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

The 242-A Evaporator is used to treat and store mixed waste from the DST System. Two waste streams leave the 242-A Evaporator following the treatment process: a concentrated slurry waste stream that is routed to the DST System; and a process condensate waste stream that is routed to the Liquid Effluent Retention Facility.

The waste fed to the 242-A Evaporator is regulated as a mixed waste with the same waste constituents as the waste in the DST System. The concentrated slurry is a characteristic waste (D001, D002, and D003), toxic waste (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 characteristic waste (WT01, WT02, WP01, WP02. Multi-source leachate (F039) is included as a waste derived from nonspecific source waste F001 through F005.

The process condensate is regulated as a mixed waste due to the toxicity of ammonia (WT02) and because it is derived from the waste with a nonspecific source wastes F001 through F005. Multi-source leachate (F039) is included as a waste derived from nonspecific source waste F001 through F005.

The list of dangerous waste constituents under Section XIV.A includes constituents that have not been detected in the waste; however, knowledge of the processes providing the waste to the 242-A Evaporator indicates the strong possibility that these constituents are present in the waste or there is a potential for treating these constituents in the future. The annual waste quantity listed under Section XIV.B was calculated using an operating schedule of 365 days per year, a maximum pumping rate of 655 liters/minute (173 gpm), and a specific gravity of 2.0 for the waste. This calculation was done to provide a maximum estimate of annual waste quantity.

T04

The 242-A Evaporator began waste management operations in March of 1977. The 242-A Evaporator is located in the 200 East Area and is used to treat mixed waste from the Double-Shell Tank (DST) System by removing water and most volatile organics. Two waste streams leave the 242-A Evaporator following the treatment process. The first stream, the concentrated slurry (approximately 40 to 60 percent of the water is removed during evaporation along with a portion of volatile organics), is pumped back into the DST System. The second waste stream, process condensate (containing a portion of the volatile organics removed from the mixed waste during the evaporation process), is routed through condensate filters before release to a retention basin (Liquid Effluent Retention Facility). Off gasses from the process are routed through a de-entrainment unit, a prefilter, and high-efficiency particulate air filters before being discharged to the environment. The 242-A Evaporator is used to treat up to 943,000 liters (~249,000 gallons) of mixed waste per day, based on the 655 liters/minute (173) gpm capacity of the spare feed pump for AW-102.

S02

Tank TK-C-100, a 4.3-meter (14-foot) diameter by 5.9-meter (19-foot) high tank with a maximum design capacity of 67,380 liters (17,800 gallons) is located in the condensate room. Process condensate from the primary, inter-, and after-condensers drain by gravity to tank TK-C -100, which is constructed of stainless steel. In addition, tank TK-C-100 receives potentially contaminated drainage from the vessel vent system via a 102 -liter (27 gallon) seal pot.

Tank C-A-1 is located in the evaporator room and consists of two sections: the lower (liquid) section, a 4.3-meter (14-foot) diameter stainless steel shell, and an upper (vapor) section, a 3.5-meter (11.6-foot) diameter stainless steel shell, containing two wire-mesh de-entrainment pads for the removal of liquids and solids that could be carried into the vapor header. Process slurry from the reboiler discharges to the evaporator vessel (tank C-A-1). Concentrated process slurry exits the lower section of tank C-A-1 via the 28-inch recirculating line. Vapor flows out of tank C-A-1 through a 42-inch vapor line at the top. The maximum design capacity of tank C-A-1 is 103,217 liters (27,267 gallons).

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	2	3	4	1. Amount	2. Unit of Measure (enter code)			1	2	3	4	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	T	0	4	943,000	V	001		1							
	2	S	0	2	170,597	L	002		2							
	3								3							
	4								4							
	5								5							
	6								6							
	7								7							
	8								8							
	9								9							
1	0							1	0							
1	1							1	1							
1	2							1	2							
1	3							1	3							
1	4							1	4							
1	5							1	5							
1	6							1	6							
1	7							1	7							
1	8							1	8							
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							

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. (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	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	1	687,702,298	K	T	0	4											
2	D	0	0	2		K	T	0	4											
3	D	0	0	3		K	T	0	4											
4	D	0	0	4		K	T	0	4											
5	D	0	0	5		K	T	0	4											
6	D	0	0	6		K	T	0	4											
7	D	0	0	7		K	T	0	4											
8	D	0	0	8		K	T	0	4											
9	D	0	0	9		K	T	0	4											
10	D	0	1	0		K	T	0	4											
11	D	0	1	1		K	T	0	4											
12	D	0	1	8		K	T	0	4											
13	D	0	1	9		K	T	0	4											
14	D	0	2	2		K	T	0	4											
15	D	0	2	8		K	T	0	4											
16	D	0	2	9		K	T	0	4											
17	D	0	3	0		K	T	0	4											
18	D	0	3	3		K	T	0	4											
19	D	0	3	4		K	T	0	4											
20	D	0	3	5		K	T	0	4											
21	D	0	3	6		K	T	0	4											
22	D	0	3	8		K	T	0	4											
23	D	0	3	9		K	T	0	4											
24	D	0	4	0		K	T	0	4											
25	D	0	4	1		K	T	0	4											

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7
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Line Number	A. Dangerous Waste No. (enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (enter code)	D. Process												
							(1) Process Codes (enter)				(2) Process Description [If a code is not entered in D (1)]								
26	D	0	4	3		K	T	0	4										
27	W	T	0	1		K	T	0	4										
28	W	T	0	2		K	T	0	4										
29	W	P	0	1		K	T	0	4										
30	W	P	0	2		K	T	0	4										
31	F	0	0	1		K	T	0	4										
32	F	0	0	2		K	T	0	4										
33	F	0	0	3		K	T	0	4										
34	F	0	0	4		K	T	0	4										
35	F	0	0	5		K	T	0	4										
36	F	0	3	9		K	T	0	4										
37	D	0	0	1	348,241	K	S	0	2										
38	D	0	0	2		K	S	0	2										
39	D	0	0	3		K	S	0	2										
40	D	0	0	4		K	S	0	2										
41	D	0	0	5		K	S	0	2										
42	D	0	0	6		K	S	0	2										
43	D	0	0	7		K	S	0	2										
44	D	0	0	8		K	S	0	2										
45	D	0	0	9		K	S	0	2										
46	D	0	1	0		K	S	0	2										
47	D	0	1	1		K	S	0	2										
48	D	0	1	8		K	S	0	2										
49	D	0	1	9		K	S	0	2										
50	D	0	2	2		K	S	0	2										
51	D	0	2	8		K	S	0	2										
52	D	0	2	9		K	S	0	2										
53	D	0	3	0		K	S	0	2										
54	D	0	3	3		K	S	0	2										
55	D	0	3	4		K	S	0	2										
56	D	0	3	5		K	S	0	2										
57	D	0	3	6		K	S	0	2										
58	D	0	3	8		K	S	0	2										
59	D	0	3	9		K	S	0	2										
60	D	0	4	0		K	S	0	2										
61	D	0	4	1		K	S	0	2										
62	D	0	4	3		K	S	0	2										
63	W	T	0	1		K	S	0	2										
64	W	T	0	2		K	S	0	2										
65	W	P	0	1		K	S	0	2										

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7
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Line Number	A. Dangerous Waste No. (enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (enter code)	D. Process												
							(1) Process Codes (enter)						(2) Process Description [If a code is not entered in D (1)]						
66	W	P	0	2		K	S	0	2										
67	F	0	0	1		K	S	0	2										
68	F	0	0	2		K	S	0	2										
69	F	0	0	3		K	S	0	2										
70	F	0	0	4		K	S	0	2										
71	F	0	0	5		K	S	0	2										
72	F	0	3	9		K	S	0	2										
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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.

<p>Operator Name and Official Title (type or print) Shirley J. Olinger, Manager U.S. Department of Energy Office of River Protection</p>	<p>Signature </p>	<p>Date Signed 9/15/08</p>
<p>Co-Operator* Name and Official Title (type or print) William J. Johnson President and Project Manager Washington River Protection Solutions, LLC</p>	<p>Signature </p>	<p>Date Signed 9/09/08</p>
<p>Co-Operator – Address and Telephone Number* P.O. Box 850 Richland, WA 99352 (509) 372-9138</p>		
<p>Facility-Property Owner Name and Official Title (type or print) Shirley J. Olinger, Manager U.S. Department of Energy Office of River Protection</p>	<p>Signature </p>	<p>Date Signed 9/15/08</p>

Comments

Changes from Revision 10 to 10A (modified 03/31/2014):

Section VI, "Facility Contact"

- Updated name and phone number of facility contact

Section VII, "Facility Operator Information"

- Updated phone number of facility contact
- Removed schedule for date as this revision is not a co-operator change

Section VIII, "Facility Owner Information"

- Updated name and phone number of facility owner

Section X, "Other Environmental Permits"

- Specifically named the Hanford Site Air Operating Permit (00-05-006) and FF-01 Approval
- Removed 40 CFR 761, TSCA RBDA Approval letter (EPA 10 Region Administrator) to J.B. Hebdon and J. E. Rasmussen, dated 6/8/04 as this is not a permit.

Section XI, "Nature of Business"

- Under S02, changed the name of "Tank-C-100" to "TK-C-100"

Figures

- Changed "Tank-C-100" to "TK-C-100" and "Process Condenser Pump P-G-100" to "Process Condensate Pump P-C-100" and added metric conversions alongside English units.

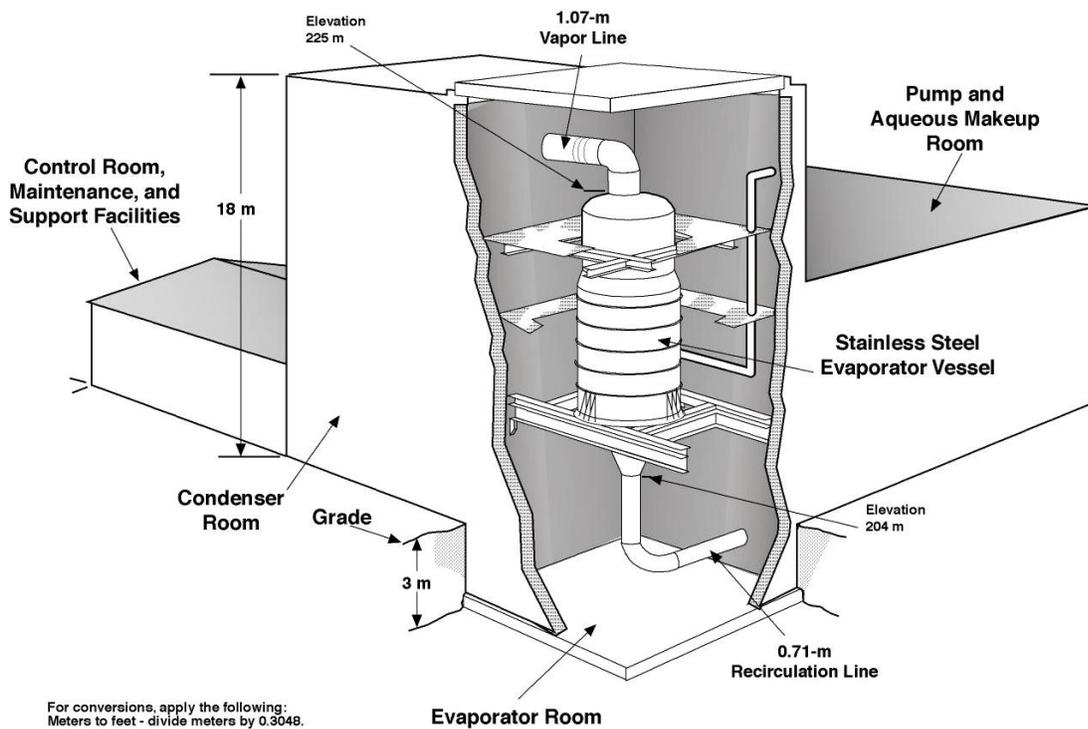
Comments

- Removed the following comment that coincided with a possible date change in section VII: "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."

242-A Evaporator



96080579-19CN
Photo Taken 1996



39211048.1a

242-A Evaporator

TK-C-100

