



0063359

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

05-OES-0034

JAN 10 2005

Mr. Michael A. Wilson, Program Manager  
Nuclear Waste Program  
State of Washington  
Department of Ecology  
3100 Port of Benton Boulevard  
Richland, Washington 99354

RECEIVED  
JAN 18 2005

EDMC

Dear Mr. Wilson:

TRANSFER OF THE 300 AREA WASTE ACID TREATMENT SYSTEM (WATS)  
HANFORD FACILITY DANGEROUS WASTE PART A PERMIT APPLICATION FORM 3

Enclosed for your review is Revision 6 of the 300 Area WATS Dangerous Waste Part A, Form 3 Permit Application. The form designates the U.S. Department of Energy, Richland Operations Office (RL) as the "Owner/Operator" and its prime contractor as "Co-operators." The enclosed Part A Form 3s identify a switch in responsibilities among existing Hanford Site Co-operators.

Co-operator responsibility for these units is being transferred from Fluor Hanford, Inc. to Bechtel Hanford, Inc. A Class 1 Hanford Facility Resource Conservation and Recovery Act Permit modification documenting the Co-operator change will be submitted with the quarterly Class 1 modification notification due to Ecology on January 10, 2005.

If you have any questions, please contact me, or your staff may contact Joel Hebdon, Director, Office of Environmental Services, on (509) 376-6657.

Sincerely,

Keith A. Klein  
Manager

OES:ACM

Enclosure

cc w/encl:

F. W. Bond, Ecology  
G. P. Davis, Ecology  
R. J. Landon, BHI  
J. J. McGuire, BHI  
J. F. Ollero, BHI  
Environmental Portal, LMSI  
Administrative Record

<b>FORM 3</b>	<b>DANGEROUS WASTE PERMIT APPLICATION</b>	<b>I. EPA/State I.D. No.</b>											
		W	A	7	8	9	0	0	0	8	9	6	7

<b>FOR OFFICIAL USE ONLY</b>													
Application Approved	Date Received (month/ day / year)	Comments											
		<b>Partial Closure Plan Completed, 12/03/01.</b>											

**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.)

<b>MO</b>	<b>DAY</b>	<b>YEAR</b>		<b>MO</b>	<b>DAY</b>	<b>YEAR</b>
03	22	1943	*For existing facilities, provide the date (mo/day/yr) operation began or the date construction commenced. (use the boxes to the left)			

For new facilities, provide the date (mo/day/yr) operation began or is expected to begin

\*The date construction of the Hanford Facility commenced

**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 DESIGN 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.

- Amount – Enter the amount.
- 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	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
<b>STORAGE:</b>		
Container (barrel, drum, etc.)	S01	Gallons or liters
Tank	S02	Gallons or liters
Waste pile	S03	Cubic yards or cubic meters
Surface impoundment	S04	Gallons or liters
	S06	Cubic yards or cubic meters*
<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
<b>TREATMENT:</b>		
Tank	T01	Gallons per day or liters per day
Surface impoundment	T02	Gallons per day or liters per day
Incinerator	T03	Tons per hour or metric tons per hour; gallons per hour or liters per hour
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

<u>Unit of Measure</u>	<u>Unit of Measure Code</u>	<u>Unit of Measure</u>	<u>Unit of Measure Code</u>	<u>Unit of Measure</u>	<u>Unit of Measure Code</u>
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		

**III. PROCESS – CODES AND DESIGN CAPACITIES (continued)**

**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 No.	A. Process Code (from list above)			B. process Design Capacity			For Official Use Only			
				1. Amount (Specify)		2. Unit of Measure (enter code)				
X-1	S	0	2	600		G				
X-2	T	0	3	20		E				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

**C. Space for additional process codes or for describing other process (code "T04"). For each process entered here include design capacity.**

The 300 Area Waste Acid Treatment System (300 Area WATS) permanently ceased operations in 1995. Information provided on this form pertaining to unit processes, design capacities, or dangerous waste managed at the unit is for historical purposes only.

The 300 Area WATS was a tank system that operated from 1973 until 1995 treating and storing mixed and dangerous waste. 'Partial' closure activities for this unit began in 1996 and were completed September 1999. Closure activities occurred in three phases and in accordance with the approved closure plan and the requirements of Part V, Chapter 20 of the Hanford Facility RCRA Permit (Permit Number WA7890008967). Clean closure was achieved for all 300 Area WATS locations and components with the exception of two locations of potential soil contamination. The areas of potential soil contamination are defined by Part V, Chapter 20, of the Hanford Facility Resource Conservation and Recovery Act of 1976 (RCRA) Permit (Permit Number WA7890008967) and are shown as Area 1 and 2 in the Figure. Area 1 is located beneath the concrete WATS and U-Bearing Piping trench that itself is not a portion of the TSD unit. Area 2 is located beneath the scabbled concrete floor of the 313 Building.

In December 2001, Ecology (Letter, G. P. Davis, Ecology, to J. B. Hebdon, U.S. Department of Energy) accepted certification for the clean closed 300 Area WATS locations and released these clean closed locations from the requirements of RCRA and Chapter 173-303 of the Washington Administrative Code (WAC). The soil at Areas 1 and 2 will remain unclosed and regulated by RCRA, Chapter 173-303 WAC until soil disposition in conjunction with the future 300-FF-2 Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) Operable Unit remedial action. Concrete surfaces over unclosed soil will remain until the time of soil disposition. Closure of these areas will complete 300 Area WATS closure.

T01, S02, T04

The 300 Area Waste Acid Treatment System (300 WATS) and Tank 40 began waste management operations in April 1973; auxiliary equipment and centrifuge operations began in November 1995. The 300 WATS was used for the treatment and storage of mixed waste generated during fuel fabrication operations in the 300 Area. The 300 WATS also was used for disposing of used and/or unneeded chemicals for other Hanford Facility operations. A portion of the waste initially was treated in two tanks (tanks 7 and 11) in the 333 Building to reduce the chromium (VI) to chromium (III). From May 1983 to January 1987, tanks 7 and 11 were used twice a year to treat up to 757 liters (200 gallons) per day of waste (T01). This waste, along with all other waste acid generated in the 333 Building, was drained to the 334-A Building and stored in two storage tanks (tanks Band C) (S02), with a combined volume of 15,142 liters (4,000 gallons). Previously, waste entered the 334-A Building passing through a settling tank [tank A, volume 1,363 liters (360 gallons)] before entering tanks B and C. Tank A ceased receiving waste in August 1984 when piping was disconnected to the tank and waste was routed directly to tanks B and C. Tank A was cleaned out and the polyvinyl chloride liner removed in 1988.

From startup in April 1973 until August 1973, the waste acid from the 333 Building was collected in a plastic-lined steel underground 14,385 liter (3,800 gallon) tank and a plastic-lined steel aboveground 22,712 liter (6,000 gallon) tank (tank 4) in the 334 Tank Farm. At that time, the underground tank developed a leak and was removed from service. The 334-A Building storage tanks replaced this underground tank in December 1974. Tank 4 was retained for emergency storage when the 313 Building neutralization activities were down for maintenance or modifications. Tank 4 usually was empty and when the tank was filled in January 1986, a leak developed near the top of the tank. Tank 4 was emptied and abandoned at that time. Tank 4 was removed, cleaned, and disposed of onsite in 1988.

The waste acid was pumped from the 334-A Building to the 313 Building where the waste acid underwent pH adjustment in a waste acid neutralization tank (tank 2) (T01). Tank 2 was capable of treating a maximum of 13,249 liters (3,500 gallons) per day of waste acid. The waste acid was pumped from tank 2 to tank 11 and then to a centrifuge where the waste acid underwent further treatment to separate the liquid and solid phases (T04). A maximum of 11,356 liters (3,000 gallons) of waste acid per day could be treated in the centrifuge. The solid waste from the centrifuge was collected in containers and transferred to the 303-K Storage Unit. The liquid effluent was pumped from the centrifuge to tank 5 and to a filter press for additional treatment to remove fine solids (T04), which remained following treatment in the centrifuge. The filter press treated a maximum of 4,542 liters (1,200 gallons) per day. Solids collected in the filter press were sent to the uranium recovery system or to the 303-K Storage Unit. The filtered liquid effluent was drained into effluent collection tanks (tanks 9 and 10), where the liquid effluent was stored temporarily before being pumped to the 311 Tank Farm.

T01, S02 - The 311 Tank Farm was used for storage of treated liquid effluents from both the 300 WATS and the uranium recovery process. Storage occurred in two tanks (tanks 40 and 50) with capacities of 15,142 and 18,927 liters (4,000 and 5,000 gallons), respectively. Tanks 40 and 50 are constructed of stainless steel. Tank 50, the 18,927 liter (5,000 gallon) tank, occasionally was used for decanting waste when the centrifuge in the 313 Building was down for maintenance. Tank 50 was capable of treating up to 18,927 liters (5,000 gallons) per day, but only was used occasionally for decanting waste (a total of five times between January 1986 and December 1987).

Auxiliary equipment (two pumps, two cartridge filters, and two sample ports) are housed in the adjacent 303-F Building. Auxiliary equipment was used to filter solutions and to recirculate the solutions between various tanks and the 313 Building for reprocessing.

**IV. DESCRIPTION OF DANGEROUS WASTES**

**A. Dangerous Waste Number** – Enter the 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.

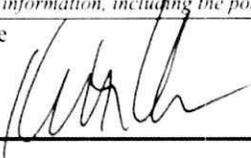
Line No.	A. Dangerous Waste No. <i>(enter code)</i>				B. Estimated Annual Quantity of Waste	C. Unit of Measure <i>(enter code)</i>			D. Processes					
									1. Process Codes <i>(enter)</i>			2. Process Description <i>(if a code is not entered in D(1))</i>		
X-1	K	0	5	4	900		P		T03	D80				
X-2	D	0	0	2	400		P		T03	D80				
X-3	D	0	0	1	100		P		T03	D80				
X-4	D	0	0	2					T03	D80				Included with above

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

I.D. Number (enter 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))							
<b>300 Area Waste Acid Treatment System</b>											
1	D	0	0	1	2,086,525	K	T01	S02	T04	Tank-Treatment/Tank-Storage/ Treatment-Other (Phase Separation)	
2	D	0	0	2		K	T01	S02	T04	Tank-Treatment/Tank-Storage/ Treatment-Other (Phase Separation)	
3	D	0	0	4		K	T01	S02	T04	Tank-Treatment/Tank-Storage/ Treatment-Other (Phase Separation)	
4	D	0	0	5		K	T01	S02	T04	Tank-Treatment/Tank-Storage/ Treatment-Other (Phase Separation)	
5	D	0	0	6		K	T01	S02	T04	Tank-Treatment/Tank-Storage/ Treatment-Other (Phase Separation)	
6	D	0	0	7		K	T01	S02	T04	Tank-Treatment/Tank-Storage/ Treatment-Other (Phase Separation)	
7	D	0	0	8		K	T01	S02	T04	Tank-Treatment/Tank-Storage/ Treatment-Other (Phase Separation)	
8	W	T	0	2		K	T01	S02	T04	Tank-Treatment/Tank-Storage/ Treatment-Other (Phase Separation)	
9	D	0	0	9		K	T01	S02	T04	Tank-Treatment/Tank-Storage/ Treatment-Other (Phase Separation)	
10	D	0	0	7	907	K	T01			Treatment-Tank (chemical treatment)	
<b>311 Tanks</b>											
11	W	T	0	2	2,086,525	K	T01	S02		Treatment-Tank/Storage-Tank	
12	D	0	0	2		K	T01	S02		Treatment-Tank/Storage-Tank	
13	D	0	0	4		K	T01	S02		Treatment-Tank/Storage-Tank	
14	D	0	0	5		K	T01	S02		Treatment-Tank/Storage-Tank	
15	D	0	0	6		K	T01	S02		Treatment-Tank/Storage-Tank	
16	D	0	0	7		K	T01	S02		Treatment-Tank/Storage-Tank	
17	D	0	0	8		K	T01	S02		Treatment-Tank/Storage-Tank	
18	D	0	0	9		K	T01	S02		Treatment-Tank/Storage-Tank	
19											
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<b>IV. DESCRIPTION OF DANGEROUS WASTE (continued)</b>					
<p><b>E. Use this space to list additional process codes from Section D(1) on page 3.</b></p> <p>The 300 WATS was used to treat both mixed and dangerous waste from fuels fabrication operations in the 333 Building and from nonroutine waste additions. Treatment was performed to make the waste more amenable for further treatment and for storage. The 333 Building waste primarily consisted of hydrofluoric acid, nitric acid, sulfuric acid, and copper nitrate. These routine waste types exhibited the dangerous waste characteristics of ignitability (D001) and corrosivity (D002) as the nitric acid is considered an oxidizer in accordance with Washington Administrative Code 173-303. Routine waste also was considered a state-only, toxic, dangerous waste (WT02). Additionally, some of the routine waste was designated characteristic waste due to chromium (D007). Nonroutine waste added to the system included characteristic waste due to arsenic (D004), barium (D005), cadmium (D006), lead (D008), and mercury (D009). Approximately 2,086,525 kilograms (4,600,000 pounds) of waste were treated and stored yearly in this system. Approximately 907 kilograms (2,000 pounds) of waste (D007, chromium VI to chromium III) were treated per year.</p> <p>The 311 tank system was used for the treatment and storage of waste. This waste was effluent from the waste acid treatment and uranium recovery process. This waste, depending on the variations in the treatment process, was considered mixed waste due to toxicity (WT02). Routine and nonroutine waste added to the waste acid treatment system included characteristic waste due to arsenic (D004), barium (D005), cadmium (D006), chromium (D007), lead (D008), and mercury (D009). The waste frequently had a pH greater than 12.5, which exhibits the dangerous waste characteristic of corrosivity (D002). Approximately 2,086,525 kilograms (4,600,000 pounds) of waste were treated and stored per year in the 311 tanks.</p>					
<b>V. FACILITY DRAWING</b> 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).					
<b>VI. PHOTOGRAPHS</b> 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).					
<b>VII. FACILITY GEOGRAPHIC LOCATION</b>			This information is provided on the attached drawing.		
LATITUDE (degrees, minutes, & seconds)			LONGITUDE (degrees, minutes, & seconds)		
<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 XI 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 Number (area code & no.)	
3. Street or P.O. Box		4. City or Town		5. St.	6. Zip Code
<b>IX. OWNER CERTIFICATION</b>					
<i>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.</i>					
Name (print or type)		Signature		Date Signed	
Keith A. Klein, Manager U.S. Department of Energy, Richland Operations Office				1/10/05	
<b>X. OPERATOR CERTIFICATION</b>					
<i>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.</i>					
Name (Print Or Type)		Signature		Date Signed	
See attachment					

**X. OPERATOR CERTIFICATION**

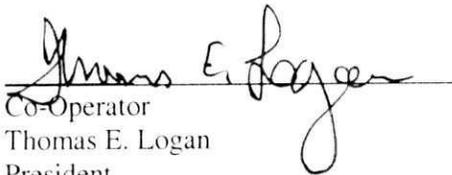
*I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true,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



\_\_\_\_\_  
Owner/Operator  
Keith A. Klein, Manager  
U.S. Department of Energy  
Richland Operations Office

1/10/05

\_\_\_\_\_  
Date Revision 6 Signed



\_\_\_\_\_  
Co-Operator  
Thomas E. Logan  
President  
Bechtel Hanford, Inc.

12/21/04

\_\_\_\_\_  
Date Revision 6 Signed