



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

Incoming Ltr# 9601347

MAY 17 1996

96-EAP-104

Mr. Moses N. Jaraysi
200 Area Unit Supervisor
Nuclear Waste Program
State of Washington
Department of Ecology
1315 West Fourth Avenue
Kennewick, Washington 99336-6018

Mr. Joseph J. Witczak
Unit Supervisor
Regulatory and Technical Support
Nuclear Waste Program
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, FOR THE PLUTONIUM URANIUM EXTRACTION STORAGE TUNNELS, REVISION 4 (WA7890008967) (TSD: S-2-1)

Enclosed is the Hanford Facility Dangerous Waste Part A Permit Application (Part A), Form 3, for the Plutonium Uranium Extraction (PUREX) Storage Tunnels, Revision 4. The PUREX Storage Tunnels are located in the 200 East Area of the Hanford Facility and are used for the storage of mixed waste.

The primary revision to the PUREX Storage Tunnels Part A, Form 3, has been the replacement of the federal citation for a Miscellaneous Unit (40 CFR 264, Subpart X) with the state citation for a Miscellaneous Unit (Washington Administrative Code [WAC] 173-303-680). The Part A, Form 3, also has been revised to update the number of railcars and volume of mixed waste currently stored in Tunnel Number 2. In addition, State-only dangerous waste number WC02 (carcinogenic, dangerous waste) has been removed per the revised WAC 173-303 and the Estimated Annual Quantity of Waste for dangerous waste number D008 has been increased to 8,000 kilograms.

MAY 17 1996

Messrs. Jaraysi and Witczak
96-EAP-104

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These changes to the Part A, Form 3, were made in compliance with WAC 173-303. This regulation requires the submittal of a revised Part A, Form 3, that addresses the identification of a new regulatory citation, changes in the annual quantity of waste to be managed, and the removal of dangerous waste numbers at a treatment, storage, and/or disposal (TSD) unit under interim status.

Should you have any questions regarding the PUREX Storage Tunnels Part A, Form 3, please contact Ellen Mattlin, U.S. Department of Energy, Richland Operations Office, on (509) 376-2385 or Greg J. LeBaron, Westinghouse Hanford Company, on (509) 373-1792.

Sincerely,



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

EAP:EMM



Douglas G. Hamrick, Director
PUREX Transition Project
Westinghouse Hanford Company

Enclosure:
PUREX Storage Tunnels
Dangerous Waste
Part A Permit Application,
Form 3, Revision 4

cc w/encl:
EDMC, H6-08
R. Jim, YIN
R. Julian, Ecology
G. LeBaron, WHC
D. Powaukee, NPT
S. Price, WHC
J. Wilkinson, CTUIR

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

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
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D. G. Hamrick, WHC	J. J. Witczak, Ecology	XREF: 9651839D
(C. P. Strand, WHC)		

Subject: HANFORD FACILITY DANGEROUS WASTE PART A PERMIT APPLICATION, FORM 3,
 FOR THE PLUTONIUM-URANIUM EXTRACTION STORAGE TUNNELS, REVISION 4
 (WA7890008967) (TSD: S-2-1)

INTERNAL DISTRIBUTION

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		R. C. Bowman	H6-24	
		W. T. Dixon	H6-21	
		C. R. Haas	S6-19	X
		D. G. Hamrick, Assignee	S6-15	
		D. G. Harlow	S6-19	
		G. J. LeBaron	S6-19	X
		S. M. Price	H6-23	
		M. J. Stephenson	H6-20	
		C. P. Strand	H6-24	X
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		C. D. Wollam	S6-22	
		RCRA File	H6-23	X
		CPS File/LB	H6-24	X

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	COMMENTS											
APPLICATION APPROVED _____ DATE RECEIVED (mo., day, & yr.)												
<table border="1" style="width:100%; height: 20px;"> <tr> <td style="width: 10%;"> </td><td style="width: 10%;"> </td> </tr> </table>												

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.)	<input type="checkbox"/> 2. NEW FACILITY (Complete item below)												
<table border="1" style="width:100%;"> <tr> <th style="width:10%;">MO.</th><th style="width:10%;">DAY</th><th style="width:10%;">YR.</th> </tr> <tr> <td style="text-align: center;">06</td><td style="text-align: center;">15</td><td style="text-align: center;">56</td> </tr> </table> FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)	MO.	DAY	YR.	06	15	56	<table border="1" style="width:100%;"> <tr> <th style="width:10%;">MO.</th><th style="width:10%;">DAY</th><th style="width:10%;">YR.</th> </tr> <tr> <td> </td><td> </td><td> </td> </tr> </table> FOR NEW FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR IS EXPECTED TO BEGIN	MO.	DAY	YR.			
MO.	DAY	YR.											
06	15	56											
MO.	DAY	YR.											

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

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 CODE	PRO-CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:			Treatment:		
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
Disposal:					
INJECTION WELL	DB0	GALLONS OR LITERS			
LANDFILL	DB1	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER			
LAND APPLICATION	DB2	ACRES OR HECTARES			
OCEAN DISPOSAL	DB3	GALLONS PER DAY OR LITERS PER DAY			
SURFACE IMPOUNDMENT	DB4	GALLONS OR LITERS			
	UNIT OF MEASURE CODE	UNIT OF MEASURE		UNIT OF MEASURE CODE	UNIT OF MEASURE
GALLONS	G	LITERS PER DAY	ACRE-FEET	A	
LITERS	L	TONS PER HOUR	HECTARE-METER	F	
CUBIC YARDS	Y	METRIC TONS PER HOUR	ACRES	B	
CUBIC METERS	C	GALLONS PER HOUR	HECTARES	Q	
GALLONS PER DAY	U	LITERS PER HOUR			

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. PROCESS CODE (from list above)		B. PROCESS DESIGN CAPACITY				FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)		B. PROCESS DESIGN CAPACITY				FOR OFFICIAL USE ONLY
	1.	2.	1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	1.	2.			1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	1.	2.	1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	
X-1	S	0 2	200	G					6						
X-2	T	0 3	20	F					6						
1	S	0 5	24,007	C					7						

* Process Code S05 is being used to designate the PUREX Storage Tunnels as a "Miscellaneous Unit" per WAC 173-303-680.

4																			
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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.

S05

The PUREX Storage Tunnels are a miscellaneous unit (S05) used for storage of mixed waste subject to the requirements of WAC 173-303-680. The two tunnels store waste from the PUREX Plant and other onsite sources. Since being placed into service, mixed waste has been stored in the tunnels on railcars. Not all material stored in the tunnels contains mixed waste.

The construction of Tunnel 1 was completed in 1956. The tunnel is approximately 5.8 meters (19 feet) wide by 6.7 meters (22 feet) high by 109 meters (358 feet) long and provides storage space for eight railcars. Between June 1960 and January 1965, all eight railcar positions were filled and the tunnel was subsequently sealed. The combined volume of the equipment stored in Tunnel 1 is approximately 596 cubic meters (780 cubic yards). The maximum process design capacity for storage in Tunnel 1 is approximately 4,129 cubic meters (5,400 cubic yards).

The construction of Tunnel 2 was completed in 1964. Tunnel 2 is approximately 5.8 meters (19 feet) wide by 6.7 meters (22 feet) high by 514 meters (1,686 feet) long and provides storage space for 40 railcars. The first railcar was placed in Tunnel 2 in December 1967 and as of April 1996, 24 railcars have been placed in the tunnel. The combined volume of equipment stored on the 24 railcars presently in Tunnel 2 is approximately 1,923 cubic meters (2,515 cubic yards). The maximum process design capacity for storage in Tunnel 2 is approximately 19,878 cubic meters (26,000 cubic yards).

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	D 0 0 5	454*	K	S05	Storage - Miscellaneous
2	D 0 0 6	454*			
3	W T 0 2				
4	D 0 0 7	454*			
5	D 0 0 8	8,000*			
6	D 0 0 9	45*			
7	D 0 1 0	454*			
8	D 0 1 1	680*			
9	D 0 0 1				
10	W T 0 2	454*	Y	Y	Included With Above

* The estimated annual quantity of waste listed above represent the maximum quantity of waste placed in either tunnel in a given year.

13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
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.

The waste stored in the tunnels includes barium (D005), chromium (D007), cadmium (D006), lead (D008), mercury (D009), selenium (D010), silver (D011), and light mineral oil contained in oil absorption material (WT02). The silver is predominately in the form of salts and is considered ignitable (D001) because of the presence of silver nitrate (AgNO₃). Cadmium may also be considered toxic, dangerous waste (WT02).

V. FACILITY DRAWING 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).

VI. PHOTOGRAPHS 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).

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawings and photos.

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
John D. Wagoner

DATE SIGNED
5/17/96

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.

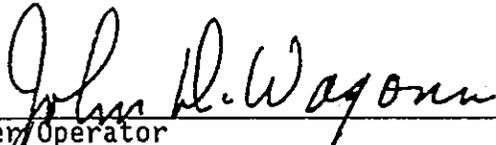
NAME (print or type)
SEE ATTACHMENT

SIGNATURE

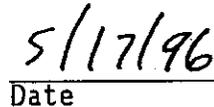
DATE SIGNED

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.



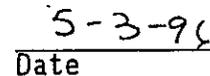
Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office



Date

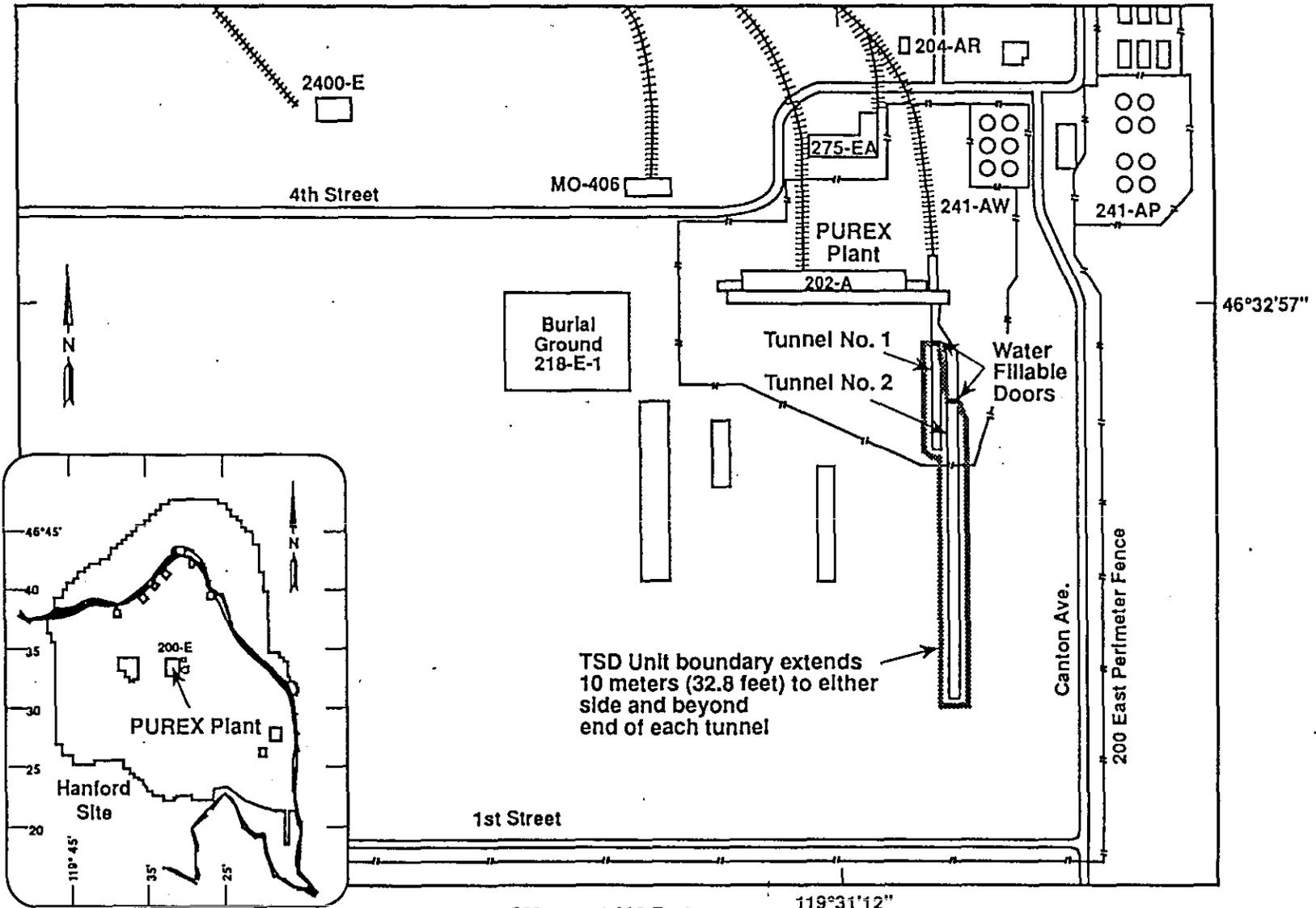


Co-operator
R. J. Bliss, Vice President and Manager
Transition Projects
Westinghouse Hanford Company



Date

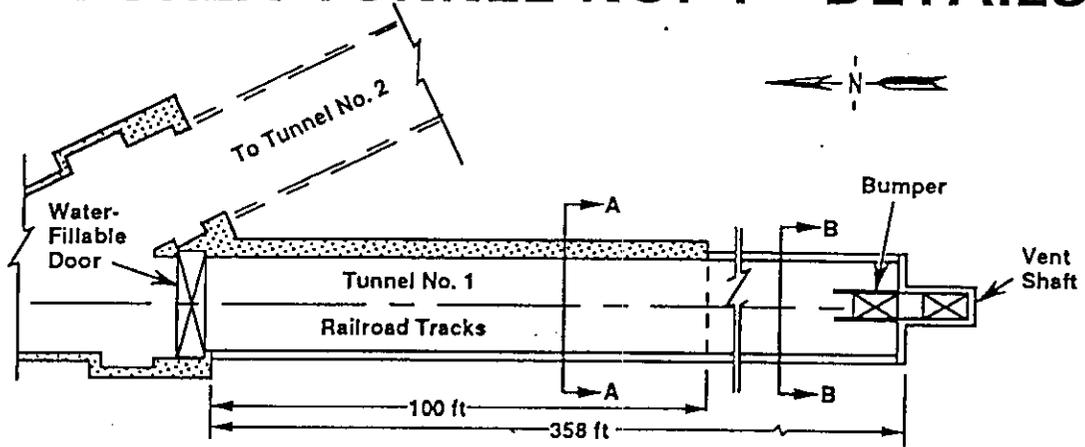
PUREX Storage Tunnels Site Plan



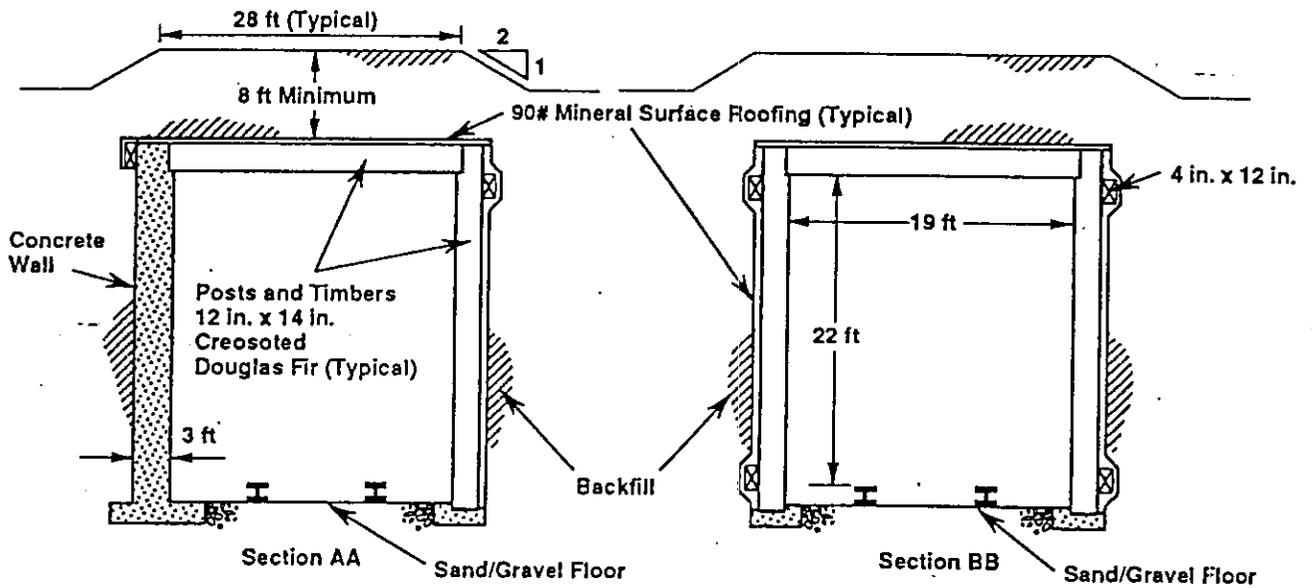
TSD Unit boundary extends 10 meters (32.8 feet) to either side and beyond end of each tunnel

H9411012.1

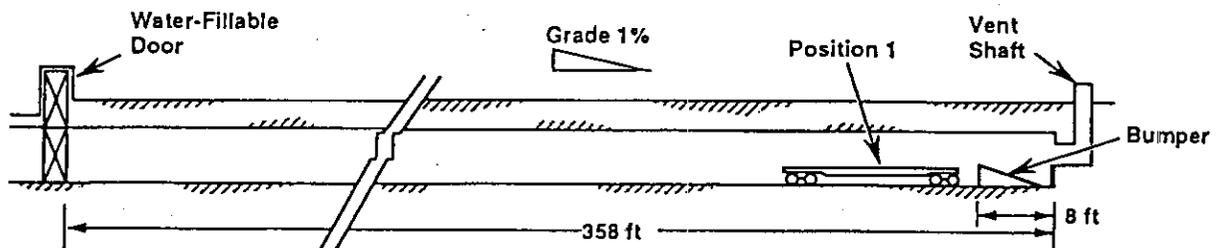
PUREX TUNNEL NO. 1 - DETAILS



Tunnel No. 1 - Plan View



PUREX Tunnel No. 1 - Section Views

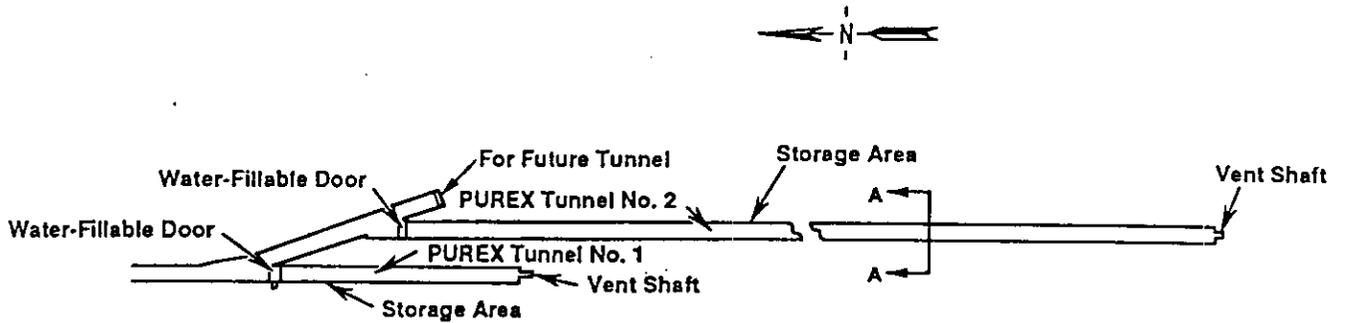


PUREX Tunnel No. 1 - Elevation View

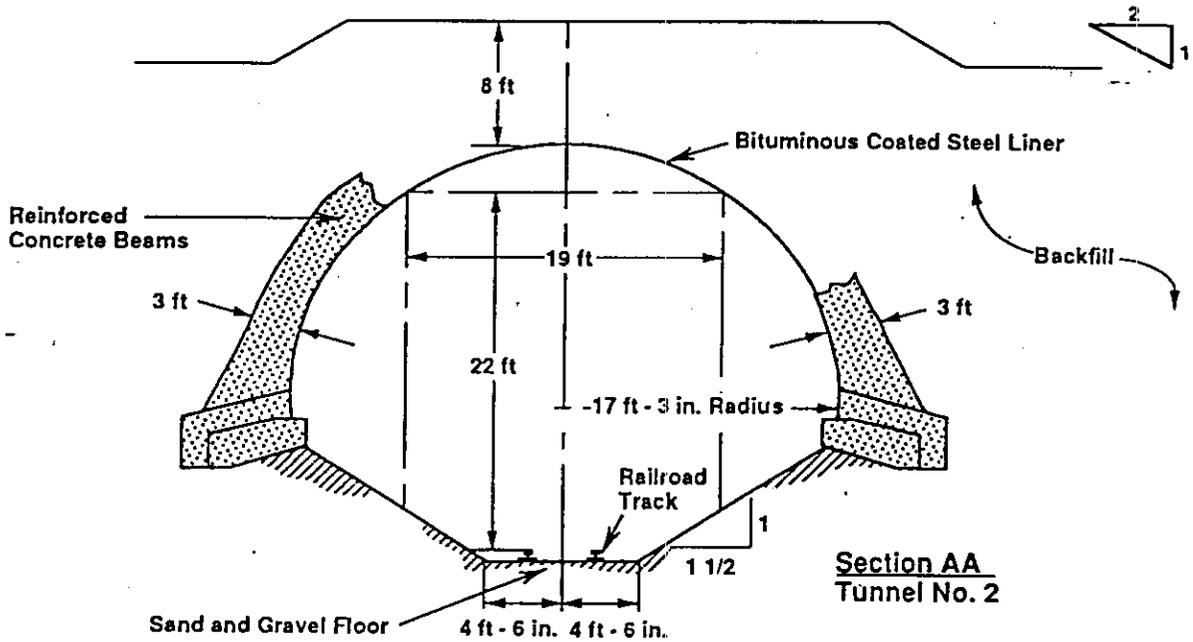
For conversion to meters, multiply feet by 0.3048.
 For conversion to centimeters, multiply inches by 2.54.

H96030186.2

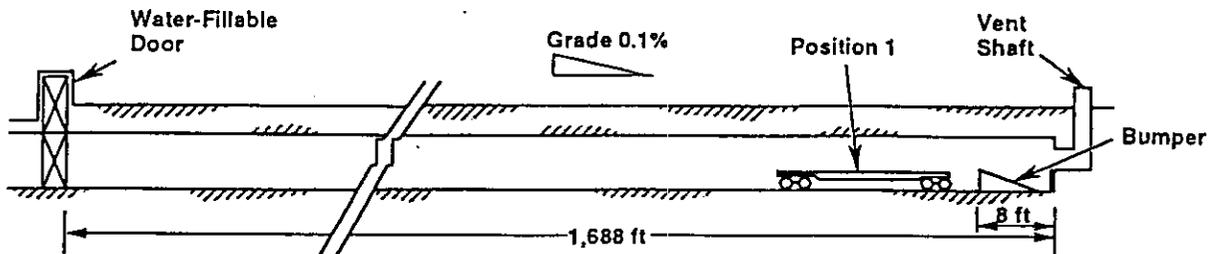
PUREX TUNNEL NO. 2 - DETAILS



PUREX Tunnels - Plan View



Section AA
 Tunnel No. 2

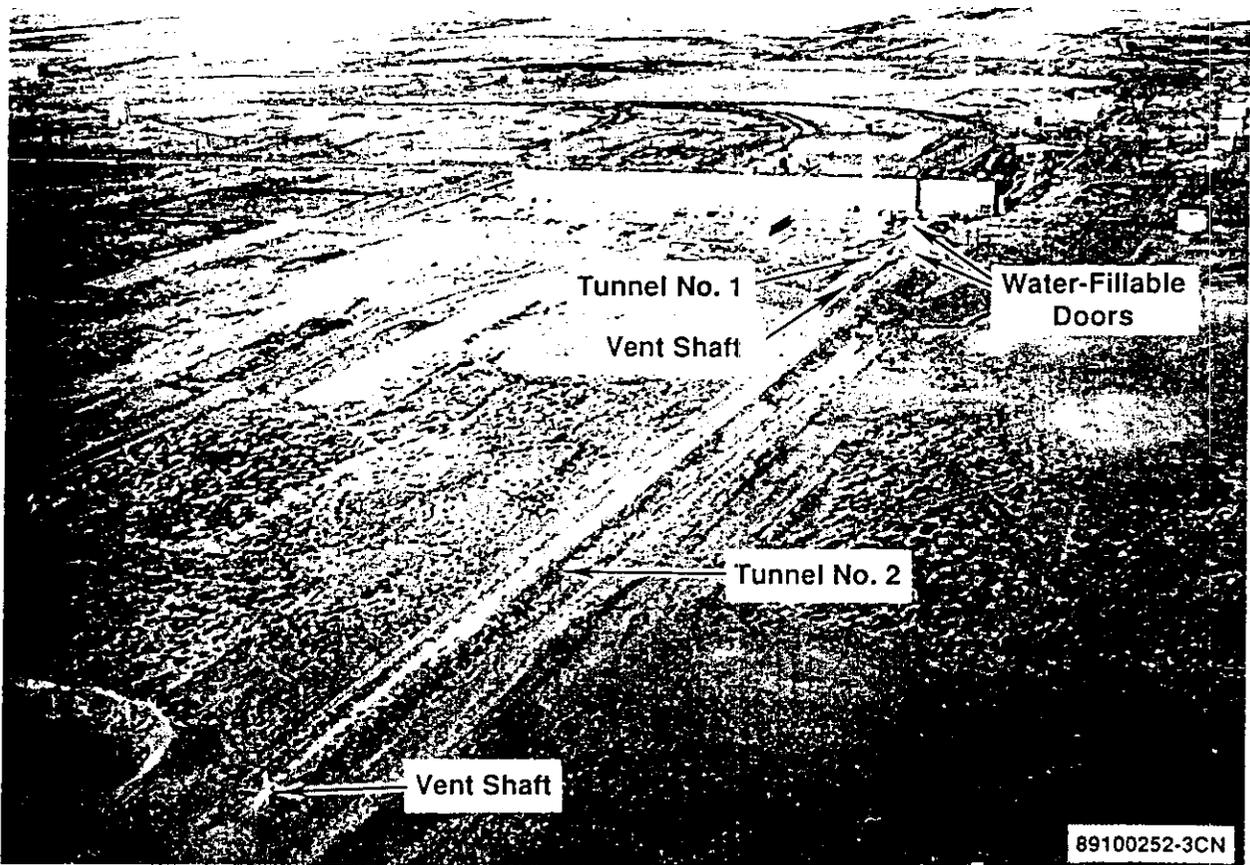


PUREX Tunnel No. 2 - Elevation View

For conversion to meters, multiply feet by 0.3048.
 For conversion to centimeters, multiply inches by 2.54.

H96030186.1

PUREX STORAGE TUNNELS



46°32'47"
119°31'07"

89100252-3CN
(PHOTO TAKEN 1989)