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

JUN 22 1993

93-RPS-214

Mr. George C. Hofer
Hanford Project Manager
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, Washington 98101

Mr. Roger F. Stanley, Director
Tri-Party Agreement Implementation
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Dear Messrs. Hofer and Stanley:

325/3100 HAZARDOUS WASTE TREATMENT UNIT DANGEROUS WASTE PERMIT APPLICATION: PROCESS DESCRIPTION AND WASTE TREATMENT CODE CHANGES

This letter transmits the U.S. Department of Energy, Richland Operations Office (RL)/Pacific Northwest Laboratory (PNL) revision of the 325/3100 Hazardous Waste Treatment Unit Dangerous Waste Permit Application, Form 3 (Part A).

The changes made in this permit application include the following:

- Define more accurately the activities proposed to occur within the 325 portion (325 HWTU) of the 325/3100 Hazardous Waste Treatment Unit. Earlier revisions to the application limited the processes to be conducted in the 325 HWTU to stabilization and alkali metal treatments. The revised permit application specifies the treatments to be conducted in the 325 HWTU: pH adjustment, ion exchange, carbon absorption, oxidation, reduction, waste concentration by evaporation, precipitation, filtration, liquid/solids separation, catalytic destruction, grouting, encapsulation, and stabilization.

- Add waste codes inadvertently left out of the most recent revision.

- Correct the total storage capacity of the 325/3100 Hazardous Waste Treatment Unit to 5500 gallons to accurately reflect the combined storage capacity of both treatment portions. The storage capacity specified for the 325 HWTU has been reduced from 1000 to 500 gallons.

No changes have been made to the proposed activities or to the proposed storage capacity for the 3100 portion of the 325/3100 Hazardous Waste Treatment Unit at this time.

Messrs. Hofer and Stanley
93-RPS-214

JUL 2 2 1993

The enclosed revised Part A is being submitted in compliance with WAC-173-303-805. This regulation required submittal of a revised Part A prior to process additions, process changes and design capacity increases and whenever previously unidentified wastes will be treated, stored, or disposed of at an interim status unit.

If you have any questions regarding the enclosed Part A, please contact Mr. C. E. Clark of RL on (509) 376-9333, or Mr. H. T. Tilden of PNL on (509) 376-0499.

Sincerely,

James E. Rasmussen

James E. Rasmussen, Acting Program Manager
Office of Environmental Assurance,
Permits, and Policy
DOE Richland Operations Office

W. W. Laity

W. W. Laity, Manager
Materials and Chemical Sciences
Pacific Northwest Laboratory

EAP:CEC

Enclosure

cc w/encl:
W. W. Laity, PNL
D. L. Duncan, EPA (2)
T. M. Michelena, Ecology
D. C. Nylander, Ecology
A. W. Conklin, DOH
J. J. Wallace, Ecology
Administrative Record (T-3-4)

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.)*

MO. | DAY | YR. — FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

☐ 2. NEW FACILITY *(Complete item below)*

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	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
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
Disposal:		
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

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
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

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

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 1. AMOUNT *(specify)*	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S02	600	G		5				
X-2	T03	20	E		6				
1	T04	(annual average) 30	U		7				
2	S01	5500	G		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.

The 325 Hazardous Waste Treatment Unit (325 HWTU) is located in rooms 520, 527A and 528 of the 325 Building. Approximately 55 gallons of radioactive mixed waste can be treated per day in the 325 HWTU. Treatments will include pH adjustment, ion exchange, carbon absorption, oxidation, reduction, waste concentration by evaporation, precipitation, filtration, liquid/solids separation, catalytic destruction, grouting, encapsulation, and stabilization.

The 3100 Hazardous Waste Treatment Unit (3100 HWTU) will be a single story building with an area of approximately 10,500 square feet. Approximately 10,000 gallons of dangerous waste will be treated annually in this unit. Treatment will include carbon absorption, oxidation, reduction, deactivation, vitrification, liquid-liquid extraction, encapsulation, neutralization, precipitation, recovery of acids and bases, recovery of organics, recovery of metals or inorganics, stabilization, controlled reaction with water, photo catalytic destruction, and ceramic melting.

Storage capacity in the 325 HWTU is 500 gallons and in the 3100 HWTU will be 5,000 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)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K054	900	P	T03 D80	
X-2	D002	400	P	T03 D80	
X-3	D001	100	P	T03 D80	
X-4	D002			T03 D80	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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D001	10,000	K	S01 T04	Treatment
2	D002	5,000	K	S01 T04	Treatment
3	D003	500	K	S01 T04	Treatment
4	D004	200	K	S01 T04	Treatment
5	D005	200	K	S01 T04	Treatment
6	D006	200	K	S01 T04	Treatment
7	D007	10,000	K	S01 T04	Treatment
8	D008	50,000	K	S01 T04	Treatment
9	D009	400	K	S01 T04	Treatment
10	D010	50	K	S01 T04	Treatment
11	D011	200	K	S01 T04	Treatment
12	D012	200	K	S01 T04	Treatment
13	D013	200	K	S01 T04	Treatment
14	D014	200	K	S01 T04	Treatment
15	D015	200	K	S01 T04	Treatment
16	D016	200	K	S01 T04	Treatment
17	D017	200	K	S01 T04	Treatment
18	D018	200	K	S01 T04	Treatment
19	D019	200	K	S01 T04	Treatment
20	D020	200	K	S01 T04	Treatment
21	D021	200	K	S01 T04	Treatment
22	D022	200	K	S01 T04	Treatment
23	D023	200	K	S01 T04	Treatment
24	D024	200	K	S01 T04	Treatment
25	D025	200	K	S01 T04	Treatment
26	D026	2,000	K	S01 T04	Treatment

Continued from page 2.
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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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D027	200	K	S01 T04	Treatment
2	D028	200	K	S01 T04	Treatment
3	D029	200	K	S01 T04	Treatment
4	D030	200	K	S01 T04	Treatment
5	D031	200	K	S01 T04	Treatment
6	D032	200	K	S01 T04	Treatment
7	D033	200	K	S01 T04	Treatment
8	D034	200	K	S01 T04	Treatment
9	D035	200	K	S01 T04	Treatment
10	D036	200	K	S01 T04	Treatment
11	D037	200	K	S01 T04	Treatment
12	D038	200	K	S01 T04	Treatment
13	D039	200	K	S01 T04	Treatment
14	D040	200	K	S01 T04	Treatment
15	D041	200	K	S01 T04	Treatment
16	D042	200	K	S01 T04	Treatment
17	D043	200	K	S01 T04	Treatment
18	F001	2,000	K	S01 T04	Treatment
19	F002	2,000	K	S01 T04	Treatment
20	F003	3,000	K	S01 T04	Treatment
21	F004	1,000	K	S01 T04	Treatment
22	F005	2,000	K	S01 T04	Treatment
23	F027	200	K	S01 T04	Treatment
24	K011	200	K	S01 T04	Treatment
25	K013	200	K	S01 T04	Treatment
26	K048	200	K	S01 T04	Treatment

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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	K049	200	K	S01T04	Treatment
2	K050	200	K	S01T04	Treatment
3	K051	200	K	S01T04	Treatment
4	K052	200	K	S01T04	Treatment
5	P001	200	K	S01T04	Treatment
6	P002	200	K	S01T04	Treatment
7	P003	200	K	S01T04	Treatment
8	P004	200	K	S01T04	Treatment
9	P005	200	K	S01T04	Treatment
10	P006	200	K	S01T04	Treatment
11	P007	200	K	S01T04	Treatment
12	P008	200	K	S01T04	Treatment
13	P009	200	K	S01T04	Treatment
14	P010	200	K	S01T04	Treatment
15	P011	200	K	S01T04	Treatment
16	P012	200	K	S01T04	Treatment
17	P013	200	K	S01T04	Treatment
18	P014	200	K	S01T04	Treatment
19	P015	200	K	S01T04	Treatment
20	P016	200	K	S01T04	Treatment
21	P017	200	K	S01T04	Treatment
22	P018	200	K	S01T04	Treatment
23	P019	200	K	S01T04	Treatment
24	P020	200	K	S01T04	Treatment
25	P021	200	K	S01T04	Treatment
26	P022	200	K	S01T04	Treatment

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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	P023	200	K	S01 T04	Treatment
2	P024	200	K	S01 T04	Treatment
3	P026	200	K	S01 T04	Treatment
4	P027	200	K	S01 T04	Treatment
5	P028	200	K	S01 T04	Treatment
6	P029	200	K	S01 T04	Treatment
7	P030	200	K	S01 T04	Treatment
8	P031	200	K	S01 T04	Treatment
9	P033	200	K	S01 T04	Treatment
10	P034	200	K	S01 T04	Treatment
11	P035	200	K	S01 T04	Treatment
12	P036	200	K	S01 T04	Treatment
13	P037	200	K	S01 T04	Treatment
14	P038	200	K	S01 T04	Treatment
15	P039	200	K	S01 T04	Treatment
16	P040	200	K	S01 T04	Treatment
17	P041	200	K	S01 T04	Treatment
18	P042	200	K	S01 T04	Treatment
19	P043	200	K	S01 T04	Treatment
20	P044	200	K	S01 T04	Treatment
21	P045	200	K	S01 T04	Treatment
22	P046	200	K	S01 T04	Treatment
23	P047	200	K	S01 T04	Treatment
24	P048	200	K	S01 T04	Treatment
25	P049	200	K	S01 T04	Treatment
26	P050	200	K	S01 T04	Treatment

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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	P051	200	K	S01 T04	Treatment
2	P053	200	K	S01 T04	Treatment
3	P054	200	K	S01 T04	Treatment
4	P056	200	K	S01 T04	Treatment
5	P057	200	K	S01 T04	Treatment
6	P058	200	K	S01 T04	Treatment
7	P059	200	K	S01 T04	Treatment
8	P060	200	K	S01 T04	Treatment
9	P062	200	K	S01 T04	Treatment
10	P063	200	K	S01 T04	Treatment
11	P064	200	K	S01 T04	Treatment
12	P065	200	K	S01 T04	Treatment
13	P066	200	K	S01 T04	Treatment
14	P067	200	K	S01 T04	Treatment
15	P068	200	K	S01 T04	Treatment
16	P069	200	K	S01 T04	Treatment
17	P070	200	K	S01 T04	Treatment
18	P071	200	K	S01 T04	Treatment
19	P072	200	K	S01 T04	Treatment
20	P073	200	K	S01 T04	Treatment
21	P074	200	K	S01 T04	Treatment
22	P075	200	K	S01 T04	Treatment
23	P076	200	K	S01 T04	Treatment
24	P077	200	K	S01 T04	Treatment
25	P078	200	K	S01 T04	Treatment
26	P079	200	K	S01 T04	Treatment

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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	P081	200	K	S01 T04	Treatment
2	P082	200	K	S01 T04	Treatment
3	P084	200	K	S01 T04	Treatment
4	P085	200	K	S01 T04	Treatment
5	P087	200	K	S01 T04	Treatment
6	P088	200	K	S01 T04	Treatment
7	P089	200	K	S01 T04	Treatment
8	P092	200	K	S01 T04	Treatment
9	P093	200	K	S01 T04	Treatment
10	P094	200	K	S01 T04	Treatment
11	P095	200	K	S01 T04	Treatment
12	P096	200	K	S01 T04	Treatment
13	P097	200	K	S01 T04	Treatment
14	P098	200	K	S01 T04	Treatment
15	P099	200	K	S01 T04	Treatment
16	P101	200	K	S01 T04	Treatment
17	P102	200	K	S01 T04	Treatment
18	P103	200	K	S01 T04	Treatment
19	P104	200	K	S01 T04	Treatment
20	P105	200	K	S01 T04	Treatment
21	P106	200	K	S01 T04	Treatment
22	P107	200	K	S01 T04	Treatment
23	P108	200	K	S01 T04	Treatment
24	P109	200	K	S01 T04	Treatment
25	P110	200	K	S01 T04	Treatment
26	P111	200	K	S01 T04	Treatment

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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	P112	200	K	S01 T04	Treatment
2	P113	200	K	S01 T04	Treatment
3	P114	200	K	S01 T04	Treatment
4	P115	200	K	S01 T04	Treatment
5	P116	200	K	S01 T04	Treatment
6	P118	200	K	S01 T04	Treatment
7	P119	200	K	S01 T04	Treatment
8	P120	200	K	S01 T04	Treatment
9	P121	200	K	S01 T04	Treatment
10	P122	200	K	S01 T04	Treatment
11	P123	200	K	S01 T04	Treatment
12	U001	200	K	S01 T04	Treatment
13	U002	200	K	S01 T04	Treatment
14	U003	200	K	S01 T04	Treatment
15	U004	200	K	S01 T04	Treatment
16	U005	200	K	S01 T04	Treatment
17	U006	200	K	S01 T04	Treatment
18	U007	200	K	S01 T04	Treatment
19	U008	200	K	S01 T04	Treatment
20	U009	200	K	S01 T04	Treatment
21	U010	200	K	S01 T04	Treatment
22	U011	200	K	S01 T04	Treatment
23	U012	200	K	S01 T04	Treatment
24	U014	200	K	S01 T04	Treatment
25	U015	200	K	S01 T04	Treatment
26	U016	200	K	S01 T04	Treatment

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	1	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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U017	200	K	S01 T04	Treatment
2	U018	200	K	S01 T04	Treatment
3	U019	200	K	S01 T04	Treatment
4	U020	200	K	S01 T04	Treatment
5	U021	200	K	S01 T04	Treatment
6	U022	200	K	S01 T04	Treatment
7	U023	200	K	S01 T04	Treatment
8	U024	200	K	S01 T04	Treatment
9	U025	200	K	S01 T04	Treatment
10	U026	200	K	S01 T04	Treatment
11	U027	200	K	S01 T04	Treatment
12	U028	200	K	S01 T04	Treatment
13	U029	200	K	S01 T04	Treatment
14	U030	200	K	S01 T04	Treatment
15	U031	200	K	S01 T04	Treatment
16	U032	200	K	S01 T04	Treatment
17	U033	200	K	S01 T04	Treatment
18	U034	200	K	S01 T04	Treatment
19	U035	200	K	S01 T04	Treatment
20	U036	200	K	S01 T04	Treatment
21	U037	200	K	S01 T04	Treatment
22	U038	200	K	S01 T04	Treatment
23	U039	200	K	S01 T04	Treatment
24	U041	200	K	S01 T04	Treatment
25	U042	200	K	S01 T04	Treatment
26	U043	200	K	S01 T04	Treatment

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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U044	200	K	S01 T04	Treatment
2	U045	200	K	S01 T04	Treatment
3	U046	200	K	S01 T04	Treatment
4	U047	200	K	S01 T04	Treatment
5	U048	200	K	S01 T04	Treatment
6	U049	200	K	S01 T04	Treatment
7	U050	200	K	S01 T04	Treatment
8	U051	200	K	S01 T04	Treatment
9	U052	200	K	S01 T04	Treatment
10	U053	200	K	S01 T04	Treatment
11	U055	200	K	S01 T04	Treatment
12	U056	200	K	S01 T04	Treatment
13	U057	200	K	S01 T04	Treatment
14	U058	200	K	S01 T04	Treatment
15	U059	200	K	S01 T04	Treatment
16	U060	200	K	S01 T04	Treatment
17	U061	200	K	S01 T04	Treatment
18	U062	200	K	S01 T04	Treatment
19	U063	200	K	S01 T04	Treatment
20	U064	200	K	S01 T04	Treatment
21	U066	200	K	S01 T04	Treatment
22	U067	200	K	S01 T04	Treatment
23	U068	200	K	S01 T04	Treatment
24	U069	200	K	S01 T04	Treatment
25	U070	200	K	S01 T04	Treatment
26	U071	200	K	S01 T04	Treatment

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)*: WA7890008967

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)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	U072	200	K	S01T04	Treatment
2	U073	200	K	S01T04	Treatment
3	U074	200	K	S01T04	Treatment
4	U075	200	K	S01T04	Treatment
5	U076	200	K	S01T04	Treatment
6	U077	200	K	S01T04	Treatment
7	U078	200	K	S01T04	Treatment
8	U079	200	K	S01T04	Treatment
9	U080	200	K	S01T04	Treatment
10	U081	200	K	S01T04	Treatment
11	U082	200	K	S01T04	Treatment
12	U083	200	K	S01T04	Treatment
13	U084	200	K	S01T04	Treatment
14	U085	200	K	S01T04	Treatment
15	U086	200	K	S01T04	Treatment
16	U087	200	K	S01T04	Treatment
17	U088	200	K	S01T04	Treatment
18	U089	200	K	S01T04	Treatment
19	U090	200	K	S01T04	Treatment
20	U091	200	K	S01T04	Treatment
21	U092	200	K	S01T04	Treatment
22	U093	200	K	S01T04	Treatment
23	U094	200	K	S01T04	Treatment
24	U095	200	K	S01T04	Treatment
25	U096	200	K	S01T04	Treatment
26	U097	200	K	S01T04	Treatment

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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U098	200	K	S01 T04	Treatment
2	U099	200	K	S01 T04	Treatment
3	U101	200	K	S01 T04	Treatment
4	U102	200	K	S01 T04	Treatment
5	U103	200	K	S01 T04	Treatment
6	U105	200	K	S01 T04	Treatment
7	U106	200	K	S01 T04	Treatment
8	U107	200	K	S01 T04	Treatment
9	U108	200	K	S01 T04	Treatment
10	U109	200	K	S01 T04	Treatment
11	U110	200	K	S01 T04	Treatment
12	U111	200	K	S01 T04	Treatment
13	U112	200	K	S01 T04	Treatment
14	U113	200	K	S01 T04	Treatment
15	U114	200	K	S01 T04	Treatment
16	U115	200	K	S01 T04	Treatment
17	U116	200	K	S01 T04	Treatment
18	U117	200	K	S01 T04	Treatment
19	U118	200	K	S01 T04	Treatment
20	U119	200	K	S01 T04	Treatment
21	U120	200	K	S01 T04	Treatment
22	U121	200	K	S01 T04	Treatment
23	U122	200	K	S01 T04	Treatment
24	U123	200	K	S01 T04	Treatment
25	U124	200	K	S01 T04	Treatment
26	U125	200	K	S01 T04	Treatment

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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U126	200	K	S01T04	Treatment
2	U127	200	K	S01T04	Treatment
3	U128	200	K	S01T04	Treatment
4	U129	200	K	S01T04	Treatment
5	U130	200	K	S01T04	Treatment
6	U131	200	K	S01T04	Treatment
7	U132	200	K	S01T04	Treatment
8	U133	200	K	S01T04	Treatment
9	U134	200	K	S01T04	Treatment
10	U135	200	K	S01T04	Treatment
11	U136	200	K	S01T04	Treatment
12	U137	200	K	S01T04	Treatment
13	U138	200	K	S01T04	Treatment
14	U139	200	K	S01T04	Treatment
15	U140	200	K	S01T04	Treatment
16	U141	200	K	S01T04	Treatment
17	U142	200	K	S01T04	Treatment
18	U143	200	K	S01T04	Treatment
19	U144	200	K	S01T04	Treatment
20	U145	200	K	S01T04	Treatment
21	U146	200	K	S01T04	Treatment
22	U147	200	K	S01T04	Treatment
23	U148	200	K	S01T04	Treatment
24	U149	200	K	S01T04	Treatment
25	U150	200	K	S01T04	Treatment
26	U151	200	K	S01T04	Treatment

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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U152	200	K	S01T04	Treatment
2	U153	200	K	S01T04	Treatment
3	U154	200	K	S01T04	Treatment
4	U155	200	K	S01T04	Treatment
5	U156	200	K	S01T04	Treatment
6	U157	200	K	S01T04	Treatment
7	U158	200	K	S01T04	Treatment
8	U159	200	K	S01T04	Treatment
9	U160	200	K	S01T04	Treatment
10	U161	200	K	S01T04	Treatment
11	U162	200	K	S01T04	Treatment
12	U163	200	K	S01T04	Treatment
13	U164	200	K	S01T04	Treatment
14	U165	200	K	S01T04	Treatment
15	U166	200	K	S01T04	Treatment
16	U167	200	K	S01T04	Treatment
17	U168	200	K	S01T04	Treatment
18	U169	200	K	S01T04	Treatment
19	U170	200	K	S01T04	Treatment
20	U171	200	K	S01T04	Treatment
21	U172	200	K	S01T04	Treatment
22	U173	200	K	S01T04	Treatment
23	U174	200	K	S01T04	Treatment
24	U176	200	K	S01T04	Treatment
25	U177	200	K	S01T04	Treatment
26	U178	200	K	S01T04	Treatment

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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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U179	200	K	S01 T04	Treatment
2	U180	200	K	S01 T04	Treatment
3	U181	200	K	S01 T04	Treatment
4	U182	200	K	S01 T04	Treatment
5	U183	200	K	S01 T04	Treatment
6	U184	200	K	S01 T04	Treatment
7	U185	200	K	S01 T04	Treatment
8	U186	200	K	S01 T04	Treatment
9	U187	200	K	S01 T04	Treatment
10	U188	200	K	S01 T04	Treatment
11	U189	200	K	S01 T04	Treatment
12	U190	200	K	S01 T04	Treatment
13	U191	200	K	S01 T04	Treatment
14	U192	200	K	S01 T04	Treatment
15	U193	200	K	S01 T04	Treatment
16	U194	200	K	S01 T04	Treatment
17	U196	200	K	S01 T04	Treatment
18	U197	200	K	S01 T04	Treatment
19	U200	200	K	S01 T04	Treatment
20	U201	200	K	S01 T04	Treatment
21	U202	200	K	S01 T04	Treatment
22	U203	200	K	S01 T04	Treatment
23	U204	200	K	S01 T04	Treatment
24	U205	200	K	S01 T04	Treatment
25	U206	200	K	S01 T04	Treatment
26	U207	200	K	S01 T04	Treatment

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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U208	200	K	S01T04	Treatment
2	U209	200	K	S01T04	Treatment
3	U210	200	K	S01T04	Treatment
4	U211	200	K	S01T04	Treatment
5	U212	200	K	S01T04	Treatment
6	U213	200	K	S01T04	Treatment
7	U214	200	K	S01T04	Treatment
8	U215	200	K	S01T04	Treatment
9	U216	200	K	S01T04	Treatment
10	U217	200	K	S01T04	Treatment
11	U218	200	K	S01T04	Treatment
12	U219	200	K	S01T04	Treatment
13	U220	200	K	S01T04	Treatment
14	U221	200	K	S01T04	Treatment
15	U222	200	K	S01T04	Treatment
16	U223	200	K	S01T04	Treatment
17	U225	200	K	S01T04	Treatment
18	U226	200	K	S01T04	Treatment
19	U227	200	K	S01T04	Treatment
20	U228	200	K	S01T04	Treatment
21	U234	200	K	S01T04	Treatment
22	U235	200	K	S01T04	Treatment
23	U236	200	K	S01T04	Treatment
24	U237	200	K	S01T04	Treatment
25	U238	200	K	S01T04	Treatment
26	U239	200	K	S01T04	Treatment

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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)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U240	200	K	S01T04	Treatment
2	U243	200	K	S01T04	Treatment
3	U244	200	K	S01T04	Treatment
4	U246	200	K	S01T04	Treatment
5	U247	200	K	S01T04	Treatment
6	U248	200	K	S01T04	Treatment
7	U249	200	K	S01T04	Treatment
8	U328	200	K	S01T04	Treatment
9	U353	200	K	S01T04	Treatment
10	U359	200	K	S01T04	Treatment
11	WT01	20,000	K	S01T04	Treatment
12	WT02	10,000	K	S01T04	Treatment
13	WP01	5,000	K	S01T04	Treatment
14	WP02	1,000	K	S01T04	Treatment
15	WP03	1,000	K	S01T04	Treatment
16	WC01	1,000	K	S01T04	Treatment
17	WC02	1,000	K	S01T04	Treatment
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.

Routine treatments which will be conducted in the 325 HWTU will include pH adjustment, ion exchange, carbon absorption, oxidation, reduction, waste concentration by evaporation, precipitation, filtration, liquid/solids separation, catalytic destruction, grouting, encapsulation, and stabilization. These treatments will be conducted on small quantities of diverse dangerous and radioactive mixed waste generated from ongoing research and development activities. Waste to be handled in the 325 HWTU will include listed waste, waste from nonspecific sources, characteristic waste and state-only waste which are also regulated under the Atomic Energy Act of 1954 (as amended).

Routine treatment which will be conducted in the 3100 HWTU will include carbon absorption, oxidation, reduction, deactivation, vitrification, liquid-liquid extraction, encapsulation, neutralization, precipitation, recovery of acids and bases, recovery of metals or inorganics, recovery of organics, stabilization, controlled reaction with water, photocatalytic destruction and ceramic melting. The 3100 HWTU will not handle RMW.

Processes that are utilized as appropriate in the 3100 HWTU include electropolishing, electrodissolvers, other electrochemically-enhanced processes for decontaminating metals and oxidizing non-metals; ion-exchange for selective removal of contaminats from waste solutions; waste concentrators, waste dissolution, precipitation/filtration and solvent extraction systems for separation of contaminants from slurries and sludge; solids washing for separation of contaminants from sludges, waste retrieval from storage tanks, catalytic destruction methods, induced oxidation and decomposition, microwave treatment, sludge-to-oil conversion

continued on page 5 of 5

V. FACILITY 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

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

[x] 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)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Field Office		7/13/93

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

7/14/93
Date

Co-Operator
William R. Wiley, Director
Pacific Northwest Laboratory

4 April, 1993
Date

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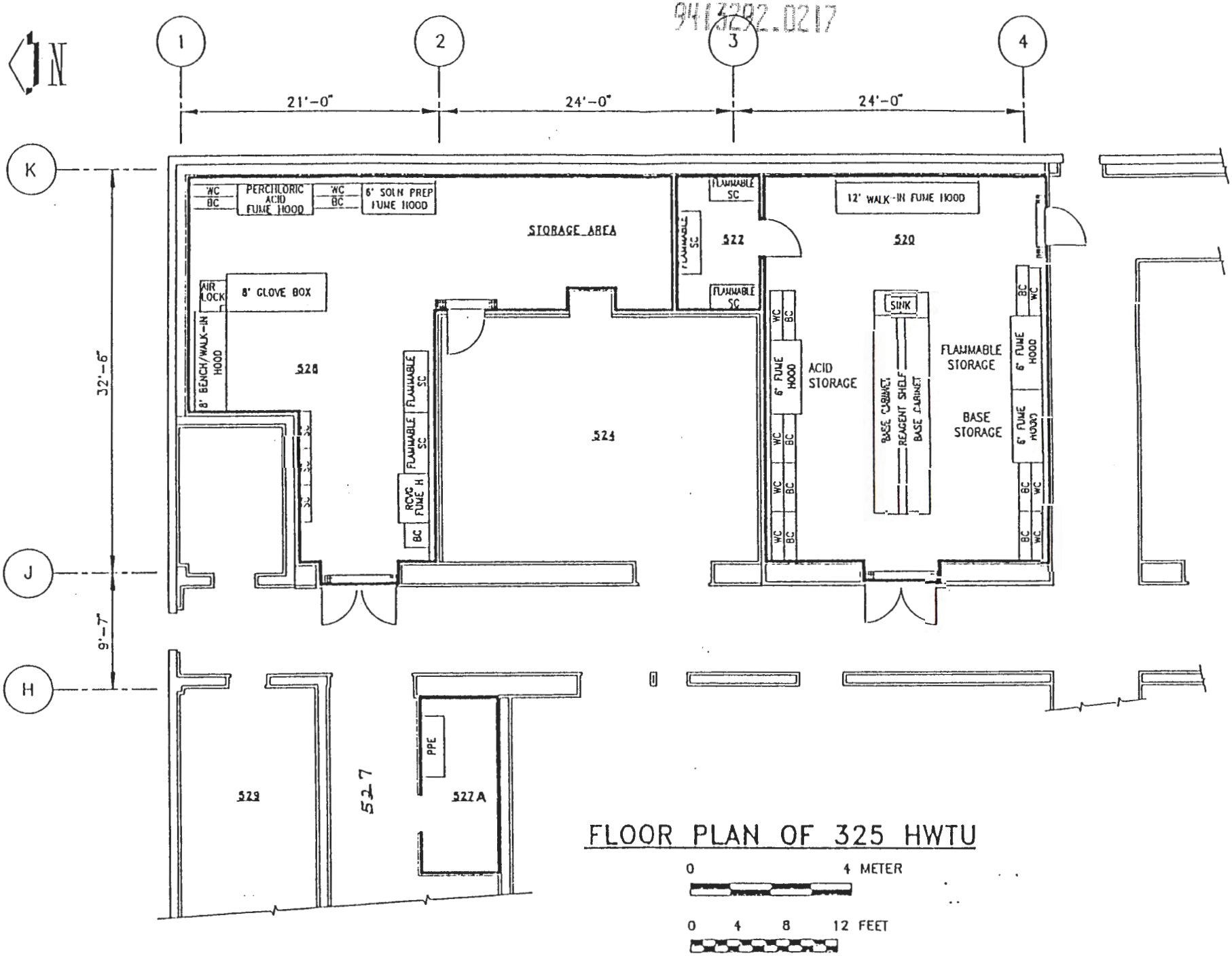
technology, biological treatment processes, grouting, distillation, alkali metal treatment, plasma arc pyrolysis, in situ heating of soils and sludges for removal of organics, metal melting for volume reduction and immobilization of contaminated metals, induced oxidation of organic chemicals, thermal treatment, in can melting of soil waste, and waste vitrification.

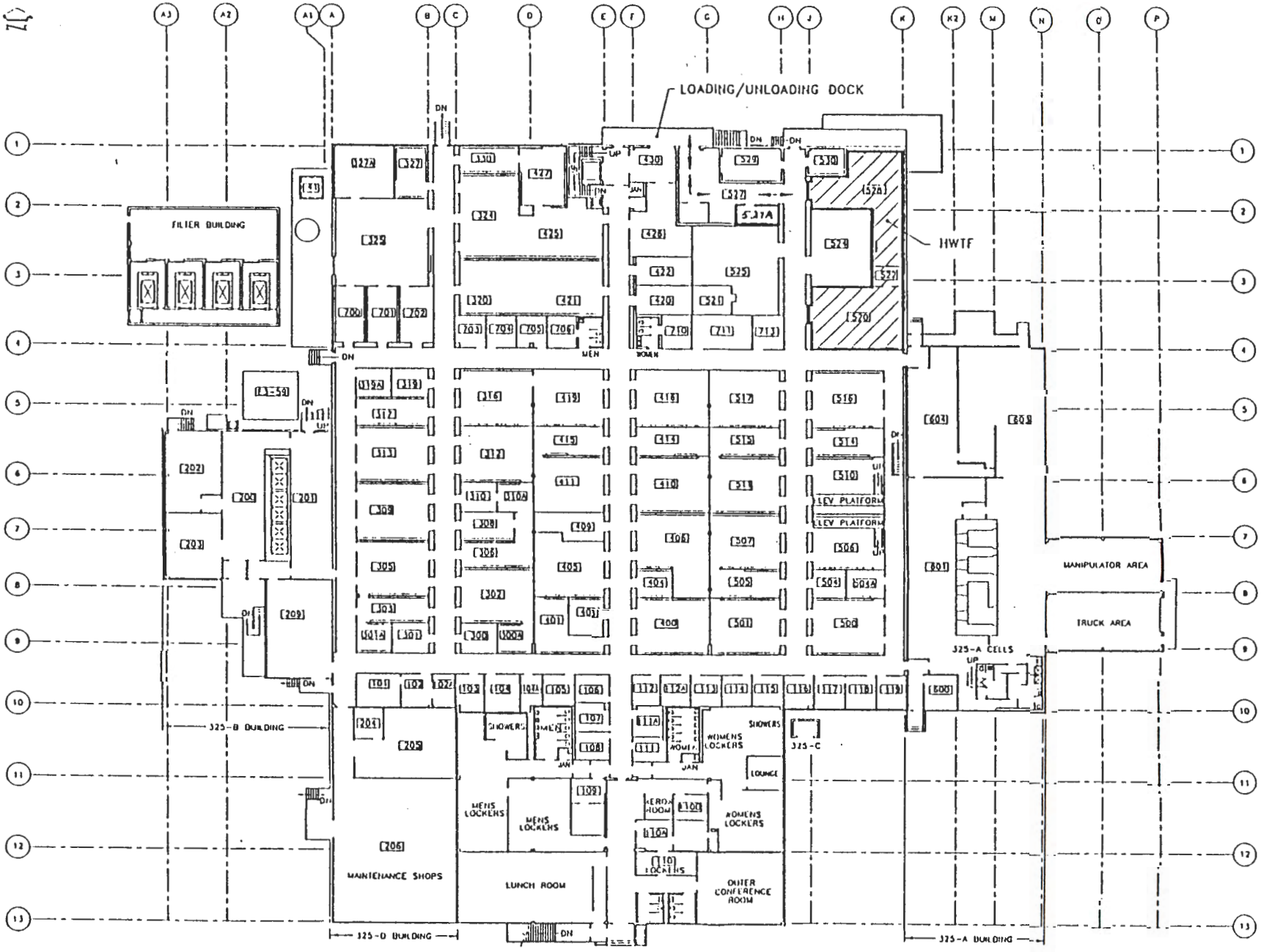
Drawings of the facility are attached.



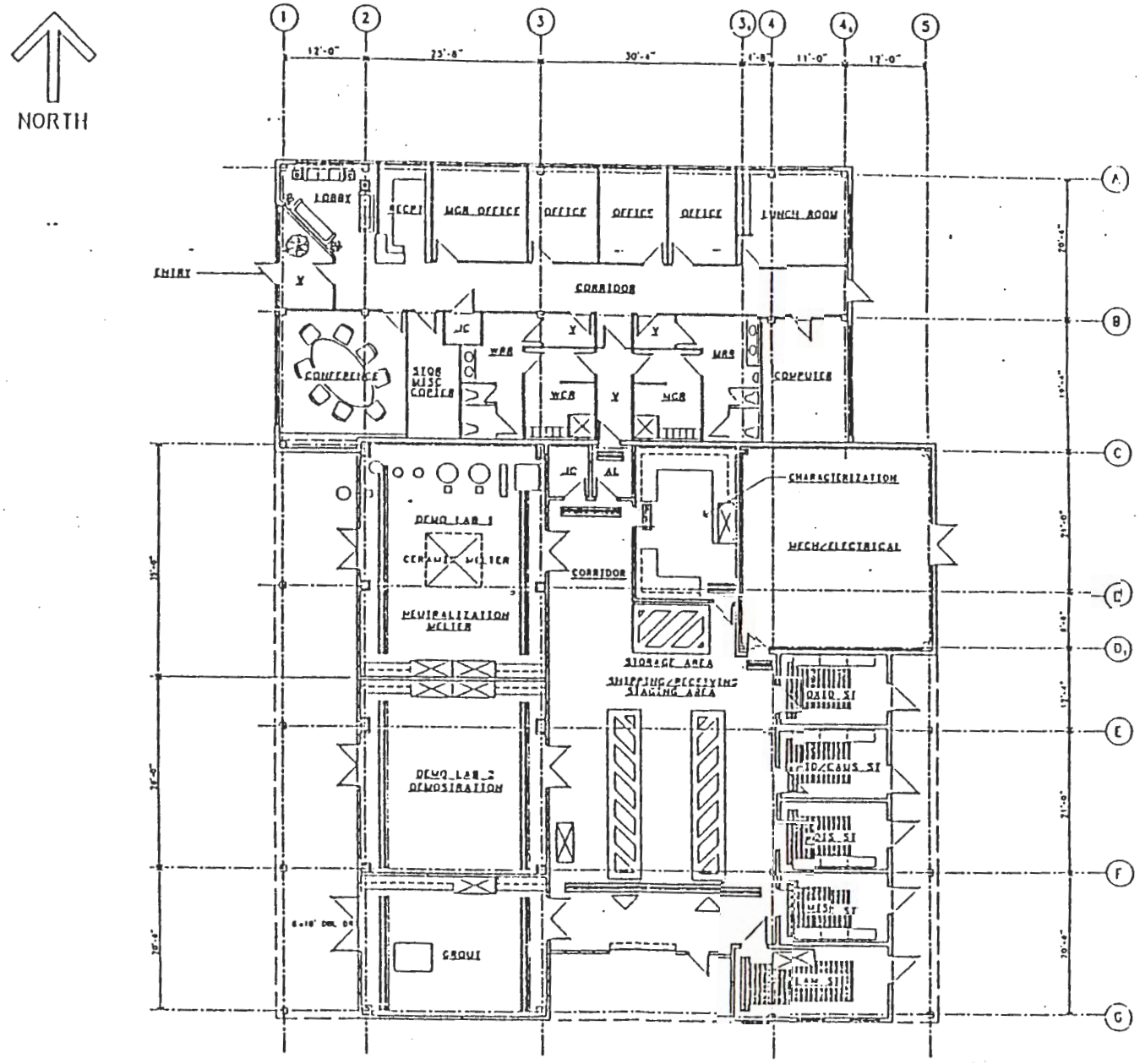
FLOOR PLAN OF 325 HWTU

0 4 METER

0 4 8 12 FEET



325 Building First Floor Plan



Floor Plan of 3100 HWTU