

DOE/RL-88-08, Rev. 0

Closure Plan 300 Area Solvent Evaporator

November 1985

Prepared by:
U.S. Department of Energy
Richland Operations Office
Hanford Site
Richland, Washington

T-3-1

Closure Plan
300 Area Solvent Evaporator

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FOREWORD

The U. S. Department of Energy, Richland Operations Office (DOE-RL) Part B Permit Application for the Hanford Site consists of separate permit applications for the following hazardous waste treatment, storage, and disposal units:

1. The Nonradioactive Dangerous Waste Landfill and Storage Facilities
2. Alkali Metal Treatment and Storage Facilities
3. Low-Level Burial Grounds and Retrievable Storage

In addition, the following hazardous waste treatment, storage, and disposal units will be closed under interim status and have been described in a closure and/or post-closure plan:

1. The 300 Area Process Trenches (Closure/Post-Closure Plan)
2. Solar Evaporation Basins (Closure/Post-Closure Plan)
3. Solvent Evaporator (Closure Plan only)

Each separate permit application provides a complete description of hazardous waste management activities as is required in the Washington Administrative Code (WAC) 173-303-806 and Title 40 Code of Federal Regulations (CFR) Part 270 Subpart B. It is anticipated that each separate Part B will be reviewed individually and will undergo subsequent revisions prior to acceptance by the State of Washington Department of Ecology (WDOE) and the United States Environmental Protection Agency, Region X (EPA).

The following submittal contains the DOE-RL Closure Plan for the 300 Area Solvent Evaporator.

SECTION 1.0

1.0 PART A APPLICATION

1.1 INTRODUCTION

This Closure Plan for the Hanford Site was prepared for the U.S. Department of Energy, Richland Operations Office (DOE-RL) for submittal to the State of Washington Department of Ecology (WDOE) and the U.S. Environmental Protection Agency, Region X (EPA) on November 8, 1985. It contains the proposed Closure Plan for the DOE-RL Solvent Evaporator.

1.2 PART A APPLICATION

The completed Part A application for the Solvent Evaporator is included in the following pages.

WASHINGTON STATE DANGEROUS WASTE PERMIT GENERAL INFORMATION

Permit Application Process

There are two parts to a Dangerous Waste Permit Application—Part A and Part B. Part A consists of Form 1 and Form 3. Part B requires detailed site-specific information such as geologic, hydrologic, and engineering data. WAC 173-303-800 specifies the information that will be required from dangerous waste management facilities in Part B.

Operation During Interim Status

Part A of the permit application defines the processes to be used for treatment, storage, and disposal of dangerous wastes; the design capacity of such processes; and the specific dangerous wastes to be handled at a facility during the interim status period. Once Part A is submitted to the Department of Ecology, changes in the dangerous wastes handled, changes in design capacities, changes in processes, and changes in ownership or operational control at a facility during the interim status period may only be made in accordance with the procedures in WAC 173-303-820. Changes in quantity of waste handled at a facility during interim status can be made without submitting a revised Part A provided the quantity does not exceed the design capacities of the processes specified in Part A of the permit application. Failure to furnish all information required to process a permit application is grounds for termination of an interim status permit.

Confidential Information

All information submitted in this form will be subject to public disclosure, to the extent provided by RCRA and the Freedom of Information Act, 5 U.S.C. Section 552, and EPA's Business Confidentiality Regulations, 40 CFR Part 2 (see especially 40 CFR 2.305), and will be subject to the State of Washington Public Records Act chapter 42.17 RCW and chapter 43.21A-160 RCW. Persons filing this form may make claims of confidentiality. Such claims must be clearly indicated by marking "confidential" on the specific information on the form for which confidential treatment is requested or on any attachments, and must be accompanied, at the time of filing, by a written substantiation of the claim, by answering the following questions:

Confidential Information (continued)

- A. Which portions of the information do you claim are entitled to confidential treatment?
- B. For how long is confidential treatment desired for this information?
- C. What measures have you taken to guard against undesired disclosure of the information to others?
- D. To what extent has the information been disclosed to others, and what precautions have been taken in connection with that disclosure?
- E. Has the Department of Ecology, EPA or any other Federal or State agency made a pertinent confidentiality determination? If so, what would those harmful effects be and why should they be viewed as substantial? Explain the causal relationship between disclosure and the harmful effects.

If no claim of confidentiality or no substantiation accompanies the information when it is submitted, EPA or the department may make the information available to the public without further notice to the submitter.

Definitions

Terms used in these instructions and in this form are defined in the Definitions section of the Dangerous Waste Regulation, chapter 173-303 WAC.

FORM 1—INSTRUCTIONS

This form must be completed by all applicants.

Completing This Form

Please type or print. If you print, place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response.

Section I

Space is provided at the upper right hand corner of Form 1 for insertion of your EPA/State identification number. If you have an existing facility, enter your identification number. If you don't have an EPA/State identification number, please contact the Department of Ecology (206) 459-6303 and one will be provided for you. If your facility is new (not yet constructed), leave this item blank.

Section II

Enter the facility's official or legal name. Do not use a colloquial name.

Section III

Give the name, title, and work telephone number of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and who can be contacted if necessary.

Section IV

Give the complete mailing address of the office where correspondence should be sent. This often is not the address used to designate the location of the facility or activity.

Section V

Give the address or location of the facility identified in Section III of this form. If the facility lacks a street name or route number, give the most accurate alternative geographic information (e.g., section number or quarter section number from county records or at intersection of Rts. 425 and 22).

Section VI

List, in descending order of significance, the four 4-digit standard industrial classification (SIC) codes which best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words. These classifications may differ from the SIC codes describing the operation generating the dangerous wastes.

SIC code numbers are descriptions which may be found in the "Standard Industrial Classification Manual" prepared by the Executive Office of the President, Office of Management and Budget, which is available from the Government Printing Office, Washington, D.C. Use the current edition of the manual. If you have any questions concerning the appropriate SIC code for your facility, contact your Department of Ecology Regional office (see Table 1).

Table 1. Department of Ecology Regional Offices

Northwest Regional Office 4350 - 150th NE Redmond, Washington 98052 Tel: 206-885-1900	Southwest Regional Office 7272 Cleanwater Lane Olympia, Washington 98504 Tel: 206-753-2353
Eastern Regional Office East 103 Indiana Spokane, Washington 99207 Tel: 509-456-2926	Central Regional Office 3801 West Washington Yakima, Washington 98903 Tel: 509-575-2490

Section VII-A

Give the name, as it is legally referred to, of the person, firm, public organization, or any other entity which operates the facility described in this application. This may or may not be the same name as the facility. The operator of the facility is the legal entity which controls the facility's operation rather than the plant or site manager. Do not use a colloquial name.

Section VII-B

Indicate whether the entity which operates the facility also owns it by marking the appropriate box

ECY 030-31 INSTR.

ECL2 - 27J -

Section VII-C

Enter the appropriate letter to indicate the legal status of the operator of the facility. Indicate "public" for a facility solely owned by local government(s) such as a city, town, county, parish, etc.

Sections VII-D-H

Enter the telephone number and address of the operator identified in Item VII-A.

Section VIII

Indicate whether the facility is located on Indian lands.

Section IX

Provide a topographic map or maps of the area extending at least to one mile beyond the property boundaries of the facility which clearly show the following:

The legal boundaries of the facility;

The location and serial number of each of your existing and proposed intake and discharge structures;

All hazardous waste management facilities;

Each well where you inject fluids underground; and

All springs and surface water bodies in the area, plus all drinking water wells within ¼ mile of the facility which are identified in the public record or otherwise known to you.

If an intake or discharge structure, hazardous waste disposal site, or injection well associated with the facility is located more than one mile from the plant, include it on the map, if possible. If not, attach additional sheets describing the location of the structure, disposal site, or well, and identify the U.S. Geological Survey (or other) map corresponding to the location.

On each map, include the map scale, a meridian arrow showing north, and latitude and longitude at the nearest whole second. On all maps of rivers, show the direction of the current, and in tidal waters, show the directions of the ebb and flow tides. Use a 7-½ minute series map published by the U.S. Geological Survey, which may be obtained through the U.S. Geological Survey Offices listed below. If a 7-½ minute series map has not been published for your facility site, then you may use a 15 minute series map from the U.S. Geological Survey. If neither a 7-½ nor 15 minute series map has been published for your facility site, use a plat map or other appropriate map, including all the requested information; in this case, briefly describe land uses in the map area (e.g., residential, commercial).

You may trace your map from a geological survey chart, or other map meeting the above specifications. If you do, your map should bear a note showing the number or title of the map or chart it was traced from. Include the names of nearby towns, water bodies, and prominent points.

U.S.G.S. OFFICES

Western Mapping Center
National Cartographic Information
Center
U.S.G.S.
345 Middlefield Road
Menlo Park, Ca. 94025
Phone No. (415) 323-8111

AREA SERVED

Ariz., Calif., Hawaii, Idaho,
Nev., Oreg., Wash., American
Samoa, Guam, and trust
Territories

Section X

Briefly describe the nature of your business (e.g., products produced or services provided).

Section XI

For a corporation, by a principal executive officer of at least the level of vice president.

For partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

For a municipality, State, Federal, or other public facility, by either a principal executive officer or ranking elected official.

FORM

1

State of
Washington
Department
of Ecology

WASHINGTON STATE

DANGEROUS WASTE PERMIT GENERAL INFORMATION

(Read "Form 1 Instructions" before starting)

I. EPA/STATE I.D. NUMBER

WA 1789010108967

II. NAME OF FACILITY

US DEPT OF ENERGY RICHLAND OPERATIONS OFFICE

III. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)

B. PHONE (area code & no)

FITZSIMMONS, T.R. ASSISTANT MGR SAFETY* 509 376 7387

IV. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

P.O. BOX 550

B. CITY OR TOWN

RICHLAND

C. STATE

WA

D. ZIP CODE

99352

V. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

HANFORD SITE

B. COUNTY NAME

BENTON

C. CITY OR TOWN

RICHLAND

D. STATE

WA

E. ZIP CODE

99352

F. COUNTY CODE
(if known)

005

VI. SIC CODES (4-digit, in order of priority)

A. FIRST

9711

NATIONAL SECURITY

B. SECOND

8922

NUCLEAR NONCOMMERCIAL RESEARCH
DEVELOPMENT AND EDUCATION

C. THIRD

9611

ADMINISTRATION AND GENERAL
ECONOMICS PROGRAM

D. FOURTH

4911

STEAM - ELECTRIC GENERATOR

VII. OPERATOR INFORMATION

A. NAME

US DEPT OF ENERGY RICHLAND OPERATIONS

B. Is the name listed in
Item VI-A also the
owner? YES NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)

F - FEDERAL
S - STATE
P - PRIVATEM - PUBLIC (other than federal or state)
O - OTHER (specify)

F

D. PHONE (area code & no)

509 376 7387

E. STREET OR P.O. BOX

P.O. BOX 550

F. CITY OR TOWN

RICHLAND

G. STATE

WA

H. ZIP CODE

99352

VIII. INDIAN LAND

Is the facility located on Indian lands?

 YES NO

COMPLETE BACK PAGE

*Office of Assistant Manager for Safety, Safeguards and Quality Assurance

ECY 030-51

ECL 4 - 876

IX. MAP

Attach to this application a topographic map of the area extending to at least one 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 hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

X. NATURE OF BUSINESS (provide a brief description)

- NATIONAL DEFENSE NUCLEAR MATERIAL PRODUCTION
- ENERGY RESEARCH AND TECHNOLOGY DEVELOPMENT
- DEFENSE NUCLEAR WASTE MANAGEMENT
- BYPRODUCT STEAM, SOLD FOR ELECTRIC POWER GENERATION
- AND SIC 15: BUILDING CONSTRUCTION - GENERAL CONTRACTORS AND OPERATIVE BUILDERS

XI. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the 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.

A. NAME & OFFICIAL TITLE (type or print)

T.R. FITZSIMMONS, ASST. MANAGER

B. SIGNATURE

C. DATE SIGNED

FORM 3—INSTRUCTIONS

Completing This Form

Please type or print. If you print place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response.

Section I

Existing dangerous waste management facilities should enter their EPA/STATE Identification Number (if known). New facilities should leave this item blank.

Section II

A. FIRST APPLICATION. If this is the first application that is being filed for the facility place an "X" in either the Existing Facility box or the New Facility box.

1. EXISTING FACILITY. Existing facilities are:

a. Those facilities which received hazardous waste for treatment, storage, and/or disposal on or before November 19, 1980; or

b. Those facilities for which construction had commenced on or before November 15, 1980. Construction had "commenced" only if:

(1) The owner or operator had obtained all necessary Federal, State, and local preconstruction approvals or permits; and

(2-a) A continuous physical, on-site construction program had begun (facility design or other preliminary non-physical and non-site specific preparatory activities do not constitute an on-site construction program), or

(2-b) The owner or operator had entered into contractual obligations (options to purchase or contracts for feasibility, engineering, and design studies do not constitute contractual obligations) which could not be cancelled or modified without substantial loss. Generally, a loss is deemed substantial if the amount an owner or operator must pay to cancel construction agreements or stop construction exceeds 10% of the total project cost.

EXISTING FACILITY DATE. If the Existing Facility box is marked, enter the date dangerous waste operations began (i.e., the date the facility began treating, storing, or disposing of hazardous waste) or the date construction commenced.

2. NEW FACILITY. New facilities are all facilities for which construction commenced, or will commence, after November 19, 1980.

NEW FACILITY DATE. If the New Facility box is marked, enter the date that operation began or is expected to begin.

B. REVISED APPLICATION. If this is a subsequent application that is being filed to amend data filed in a previous application, place an "X" in the appropriate box to indicate whether the facility has interim status or a permit.

1. FACILITY HAS AN INTERIM STATUS PERMIT. Place an "X" in this box if this is a revised application to make changes at a facility during the interim status period.

2. FACILITY HAS A FINAL PERMIT. Place an "X" in this box if this is a revised application to make changes at a facility for which a permit has been issued.

(NOTE: When submitting a revised application, applicants must resubmit in their entirety each item on the application for which changes are requested. In addition, Items I and IX [and Item X if applicable] must be completed. It is not necessary to resubmit information for other items that will not change).

ECY 030-31 INSTR. Form 3

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Section III

The information in Section III describes all the processes that will be used to treat, store, or dispose of dangerous waste at the facility. The design capacity of each process must be provided as part of the description. The design capacity of injection wells and landfills at existing facilities should be measured as the remaining, unused capacity. See the form for the detailed instructions to Section III.

Section IV

The information in Section IV describes all the dangerous wastes that will be treated, stored, or disposed at the facility. In addition, the processes that will be used to treat, store, or dispose of each waste and the estimated annual quantity of each waste must be provided. See the form for the detailed instructions to Section IV.

Section V

All existing facilities must include a drawing showing the general layout of the facility. This drawing should be approximately to scale and fit in the space provided on the form. This drawing should show the following:

The property boundaries of the facility;

The areas occupied by all storage, treatment, or disposal operations that will be used during interim status;

The name of each operation. (Example—multiple hearth incinerator, drum storage area, etc.);

Areas of past storage, treatment, or disposal operations;

Areas of future storage, treatment, or disposal operations; and

The approximate dimensions of the property boundaries and all storage, treatment, and disposal areas.

Section VI

All existing facilities must include photographs that clearly delineate all existing structures; all existing areas for storing, treating, or disposing of hazardous waste; and all known sites of future storage, treatment, or disposal operations. Photographs may be color or black and white, ground-level or aerial. Indicate the date the photograph was taken on the back of each photograph.

Section VII

Enter the latitude and longitude of the facility in degrees, minutes, and seconds. For larger facilities, enter the latitude and longitude at the approximate mid-point of the facility. You may use the map you provided for Section IX of Form 1 to determine latitude and longitude. Latitude and longitude information is also available from Regional Offices of the U.S. Department of Interior, Geological Survey and from State agencies such as the Department of Natural Resources.

Section VIII

See the form for the instructions to Section VIII.

Section IX and Section X

All facility owners must sign Section IX. If the facility will be operated by someone other than the owner, then the operator must sign Section X. Federal regulations require the certification to be signed as follows:

A. For a corporation, by a principal executive officer at least the level of vice president;

B. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

C. For a municipality, State, Federal, or other public facility, by either a principal executive officer or ranking elected official.

FORM 3	DANGEROUS WASTE PERMIT APPLICATION	I. EPA/STATE I.D. NUMBER WA 7890008967
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FOR OFFICIAL USE ONLY		
APPLICATION APPROVED	DATE RECEIVED <i>(mo., day & yr.)</i>	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.)

2. NEW FACILITY (Complete item below)

<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;">MO</td> <td style="width:10%;">DAY</td> <td style="width:10%;">YR</td> <td style="width:10%;">5</td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> </tr> </table> <p>FOR EXISTING FACILITIES: PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)</p>	MO	DAY	YR	5					<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;">MO</td> <td style="width:10%;">DAY</td> <td style="width:10%;">YR</td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> </tr> </table> <p>FOR NEW FACILITIES: PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR IS EXPECTED TO BEGIN</p>	MO	DAY	YR					
MO	DAY	YR	5														
MO	DAY	YR															

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 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	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	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			
UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
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		

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.

N U M B E R	A. PRO-CESS CODE	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY	N U M B E R	A. PRO-CESS CODE	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY
		1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)				1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	T 0 1	220	U		7				
2					8				
3					9				
4					10				

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

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:

<u>ENGLISH UNIT OF MEASURE</u>	<u>CODE</u>	<u>METRIC UNIT OF MEASURE</u>	<u>CODE</u>
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.

L I N E N O	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEA- SURE (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

10 NUMBER (enter from page 1)
WA 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 C(1))
1	D 0 0 1	7500	P		
2	F 0 0 1	Included with above			
3	F 0 0 3	Included with above			
4					
5		This unit will be			
6		closed under interim			
7		status.			
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

V. FACILITY DRAWING See Section V attached

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 See Section VI attached

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

LATITUDE (degrees, minutes, & seconds)

LONGITUDE (degrees, minutes, & seconds)

4 6 3 5 0 2 5

1 1 9 1 5 0 6 0

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)

SIGNATURE

DATE SIGNED

T.R. FITZSIMMONS, ASST. MANAGER

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)

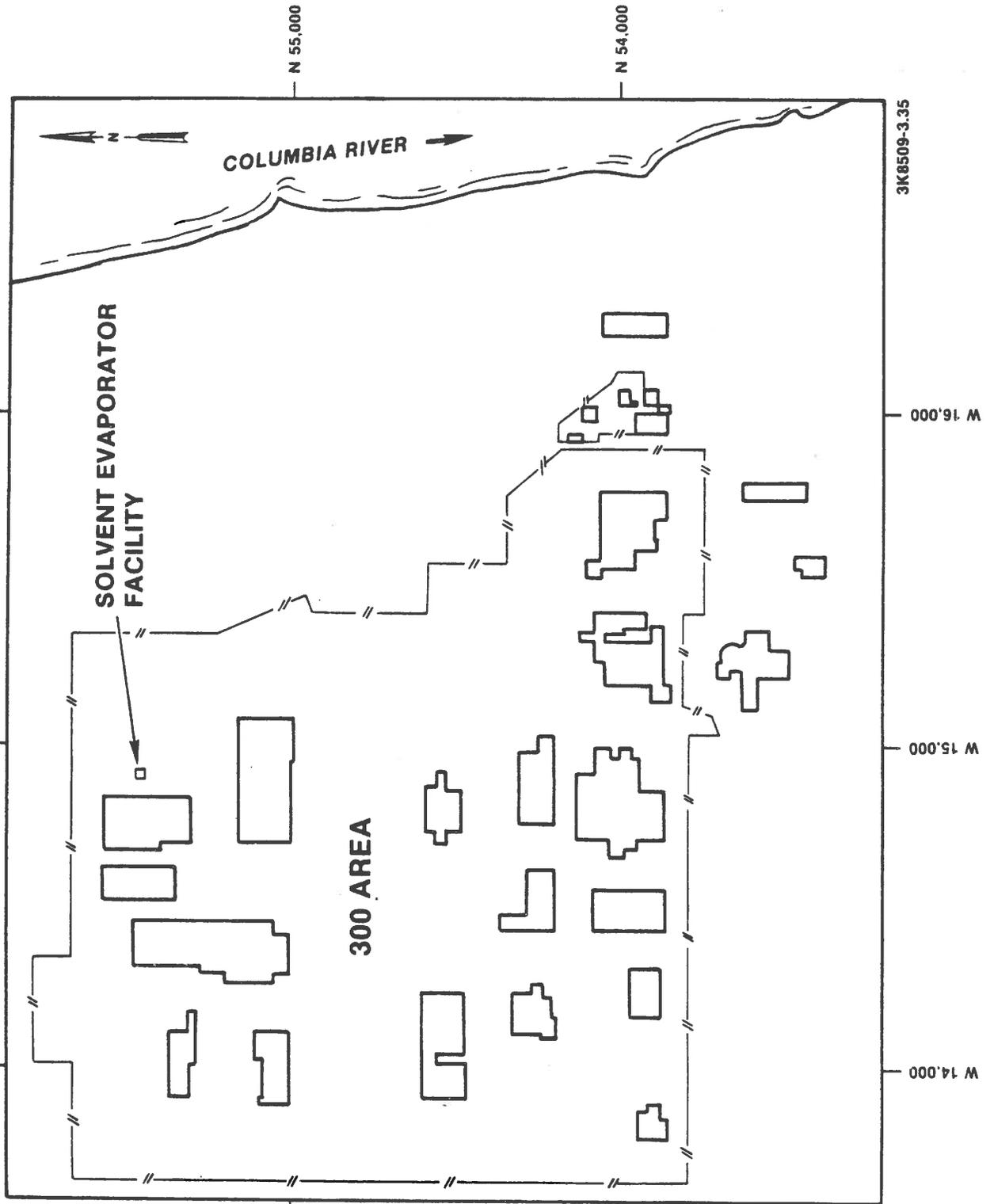
SIGNATURE

DATE SIGNED

T.R. FITZSIMMONS, ASST. MANAGER

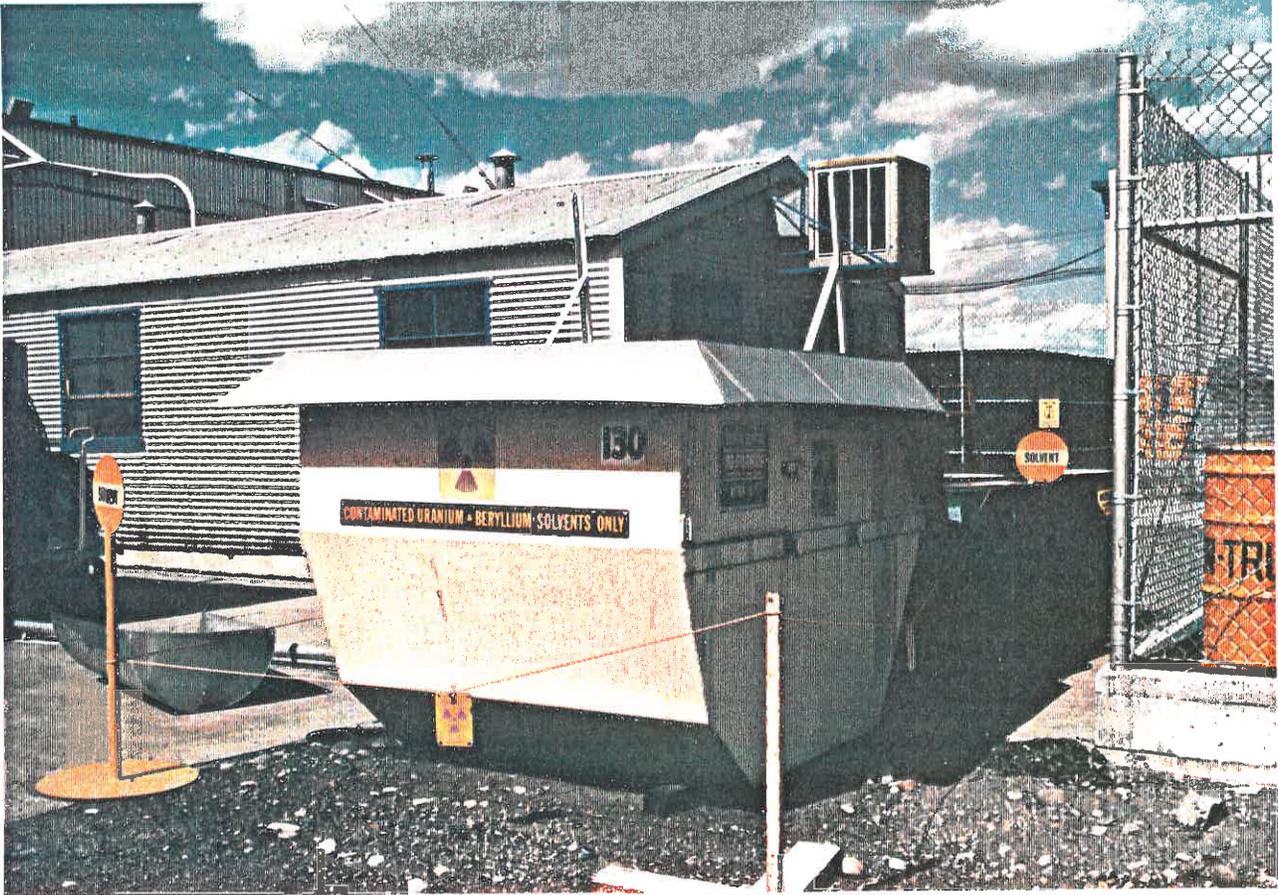
SECTION V - FACILITY DRAWINGS

300 AREA 300 AREA SOLVENT EVAPORATOR FACILITY



SECTION VI - PHOTOGRAPHS

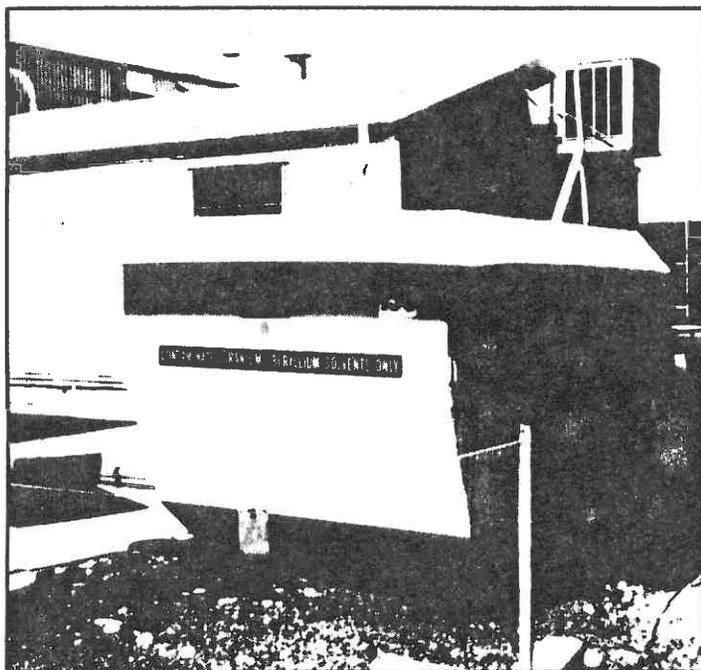
**300 AREA SOLVENT
EVAPORATION UNIT
300 AREA**



46° 35' 24.76"
119° 15' 59.75"

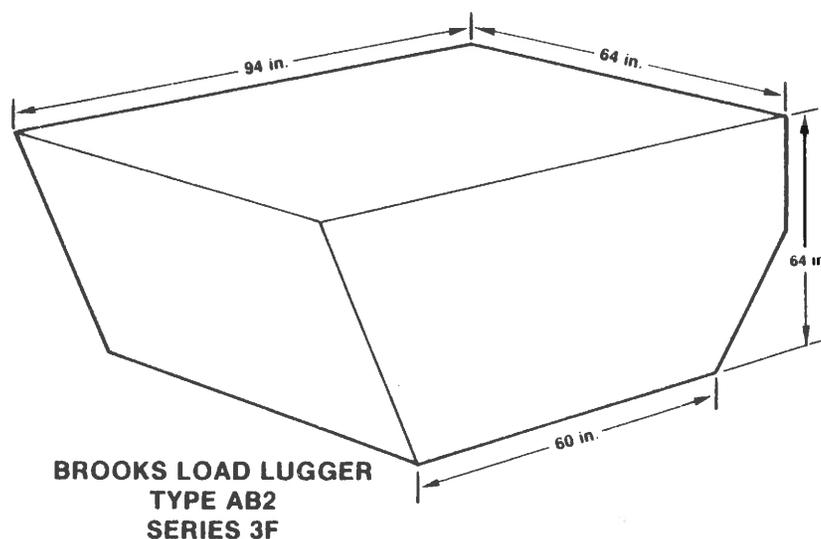
PHOTO TAKEN 1985

300 AREA 300 AREA SOLVENT EVAPORATION UNIT



46° 35' 24.75"
119° 15' 59.75"

PHOTO TAKEN 1985



2K8509-3.36

SECTION 2.0

2.0 FACILITY DESCRIPTION

This section provides a general description of the hazardous waste management facility, and is intended to acquaint the reviewer of the Closure Plan with an overview of the facility.

The Hanford Site is a 570-square-mile tract of semiarid land which is owned and operated by the U.S. Department of Energy. The site is located primarily west and south of the section of the Columbia River immediately north of Richland, Washington. In early 1943, the United States Corps of Engineers selected the Hanford Site as the location for reactor and chemical separation facilities for the production and purification of plutonium for possible use in nuclear weapons (Manhattan Project). A total of eight graphite-moderated reactors using Columbia River water for once-through cooling, and a new type of dual purpose reactor (N Reactor) using a recirculating water coolant and producing plutonium and steam for electricity, were eventually built along the Columbia River. Today, only the N Reactor remains in operation.

Activities are centralized in numerically designated areas on the Hanford Site. The reactor facilities (active and decommissioned) are located along the Columbia River in what are known as the 100 Areas. The reactor fuel process and waste management facilities are in the 200 Areas which are on a plateau about seven miles from the river. The 300 Area, north of Richland, contains the reactor fuel manufacturing facilities and the research and development laboratories. The Solvent Evaporator is located in the 300 Area. The 400 Area, five miles northwest of the 300 Area, contains the Fast Flux Test Facility. The 1100 Area, immediately north of Richland, contains facilities associated with maintenance and transportation functions for the Hanford Site. Administrative buildings and other research and development laboratories are found in the 3000 Area north of Richland. The 600 Area contains the Nonradioactive Dangerous Waste Landfills, two miles southeast of the 200 East Area.

This submittal consists of the Closure Plan for the Solvent Evaporator located in the 300 Area. The Solvent Evaporator is a tank treatment unit that evaporates radioactively contaminated spent solvents. Figure 2-1 illustrates

the location of the facility in the 300 Area. Figure 2-2 is a facility tank diagram and photograph.

The drawing in Appendix A is a general view of the Hanford Site and the surrounding area (drawing No. H-6-951). The plan view drawings for the 300 Area (drawing No. H-3-53734) are shown in Appendix B. The 300 area drawing has a scale of 1'=200' and shows the layout of the specific area and the relative position of the buildings, structures, roads, and hazardous waste units within the area.

300 AREA 300 AREA SOLVENT EVAPORATION UNIT

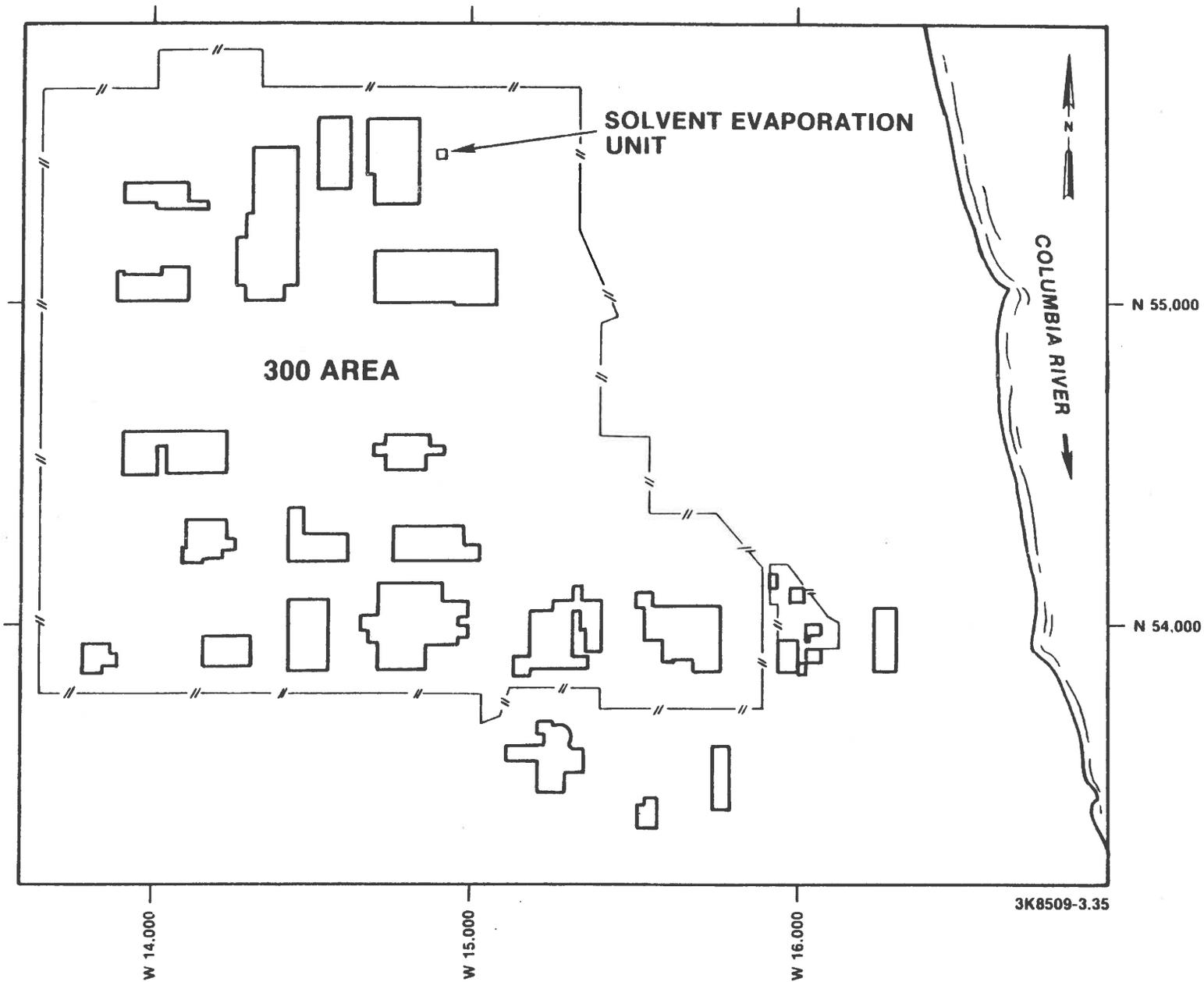
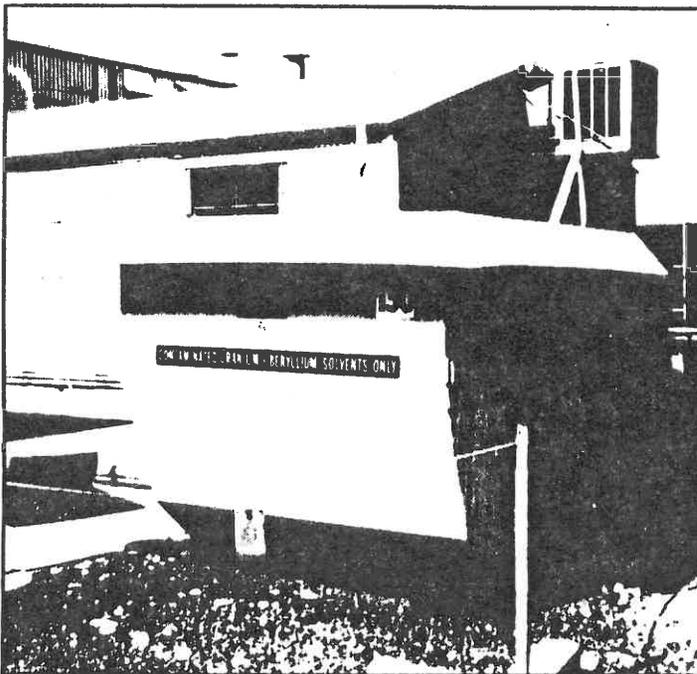


FIGURE 2-1. 300 AREA SOLVENT EVAPORATOR FACILITY LOCATION

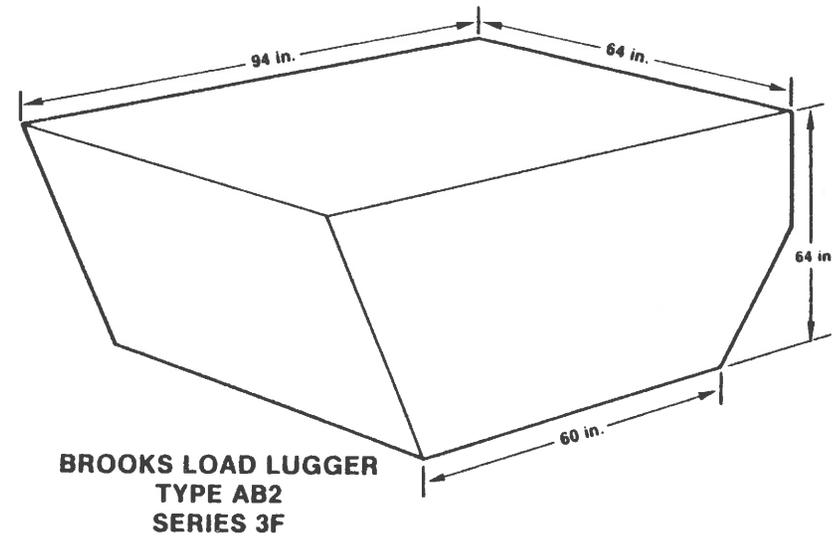
WA7890008967

**300 AREA
300 AREA SOLVENT EVAPORATION UNIT**



46° 35' 24.75"
119° 15' 59.75"

PHOTO TAKEN 1985



2K8509-3.36

FIGURE 2-2. SOLVENT EVAPORATOR FACILITY TANK DIAGRAM AND PHOTOGRAPH

SECTION 3.0

3.0 WASTE CHARACTERISTICS

Radioactive waste is defined as any material or combination of materials that (1) spontaneously emit ionizing radiation; (2) is radioactively contaminated; or (3) is suspected of being radioactively contaminated. Radioactive mixed waste (RMW) is radioactive waste which also has hazardous constituents and which is not defined as source, special nuclear, or byproduct material.

A small amount of liquid radioactively contaminated spent solvent (approximately 6000 gallons since 1975) generated at the Hanford Site has been transferred to the Solvent Evaporator for treatment. Perchloroethylene and 1,1,1-trichloroethane make up over 90 percent of the regulated waste which has been treated in the Solvent Evaporator. Other chemicals which have been treated include ethyl acetate and various paint shop solvents. This unit will be closed under interim status.

SECTION 4.0

4.0 PROCESS INFORMATION

The Solvent Evaporator is a Brooks Load Lugger (Type AB2; Series 3F) which is 96 inches long, 65 inches wide (top), 50 inches wide (bottom), and 35 inches deep. The tank has a sheet metal lid.

The Solvent Evaporator normally treats approximately 600 gallons of regulated waste each year. The waste has been deposited in the Solvent Evaporator periodically throughout the year, depending on the depth of regulated waste in the tank and the amount of regulated waste generated. Steam coils in the bottom of the tank drive the treatment process.

SECTION 5.0

5.0 CLOSURE AND POST-CLOSURE REQUIREMENTS

The purpose of this section is to demonstrate that the U.S. Department of Energy-Richland Operations Office (DOE-RL) has considered all that is necessary to adequately close the 300 Area Solvent Evaporator Unit (SE) located in the 300 Area at the East end of Building 334. This closure plan will be implemented during the closure period. The closure period will begin at the time of the approval by the regulatory authorities of this closure plan and will end when closure, in accordance with this approved closure plan, is certified by a professional engineer. Since no regulated waste will remain at this facility after closure, there is no post-closure plan in Section 5-2.

The SE is a tank treatment unit that evaporates radioactive mixed waste (RMW). The location of the unit is indicated on Figure 2-1.

The SE is a Brooks Load Lugger (Type AB2; Series 3F) with the following dimensions: 96 inches long, 65 inches wide (top), 50 inches wide (bottom), and 64 inches in height with a maximum fill level of 35 inches. The tank has a sheet metal lid.

The normal operation of the SE is to treat approximately 600 gallons of regulated waste per year. This waste is deposited in the SE periodically throughout the year, depending upon the depth of regulated waste in the tank and generation of the regulated waste. Steam coils in the bottom of the SE drive the treatment process.

At the time of the implementation of final closure, it is possible that WDOE and/or the Environmental Protection Agency (EPA) may be the regulating authority. Submittals required in this Section will be sent to the appropriate authority at the time of closure. The addresses of these possible regulating authorities are as follows:

Regional Administrator
Region X
U.S. Environmental Protection Agency
1200 Sixth Avenue
Seattle, Washington 98101

Director
Washington Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504

5-1 CLOSURE PERFORMANCE STANDARD

5-1a Closure Performance Standard

The closure performance standard for the SE will be implemented in the following manner: maintenance and threats to human health and to the environment will be minimized by removing the regulated waste from the SE and by disposing the regulated waste along with the SE to the Low-Level Burial Grounds.

5-1b Partial and Final Closure Activities

The locations of copies of the SE closure plan are given in Appendix C. The responsible person for storage and updating of copies of the closure plan is given in Appendix D.

The DOE-RL will not perform partial closure of this facility. Therefore, all closure activity will be for final closure.

The DOE-RL will initiate and monitor the closure activities. Personnel involved in the closure activities will be under the supervision of a person trained in the safe handling of hazardous waste. Personnel will wear protective outer clothing, gloves, boot covers, and other appropriate protection as needed. The DOE-RL will determine the degree of personnel protection required.

On or before November 8, 1985, treatment of waste in the SE will cease.

Within 90 days after regulatory approval of this closure plan, all regulated waste will be pumped from the tank into 30 gallon containers. The solidifying agent, Envirostone (U.S. Gypsum), will be added to each container. Each container will receive approximately the following mixture: 13 gallons of regulated waste, 1.5 gallons of Envirostone emulsion, 6.5 gallons of water, and 160 pounds of Envirostone cement. All the containers will be stored on pallets, loaded by hand truck or forklift truck onto a semi-trailer truck (or similar vehicle) and transported to the Low-Level Burial Grounds located on

the Hanford Site. Any waste scrap or residue remaining, including broken pallets, will be decontaminated as described in Section 5-1d.

Within 180 days after regulatory approval of this closure plan, the SE will be transported to the Low-Level Burial Grounds on the Hanford site for disposal. The tank will be loaded onto a flatbed truck (or other appropriate vehicle) with a crane (or other appropriate lifting device).

Within 180 days after regulatory approval of this closure plan, regulated waste contaminated soil (if any) will be removed from around the tank. Any such soil will be treated as a regulated waste [see Section 5-1d(2)].

Within 180 days after regulatory approval of this closure plan, the equipment will be decontaminated of regulated waste as outlined in Section 5-1d.

Within 180 days of receiving the last waste shipment, DOE-RL will submit the required certification of closure to the regulating authority as described in Appendix E.

5-1c Maximum Waste Inventory

The maximum inventory of regulated waste that can be treated at the SE at any one time is 750 gallons. It has been estimated that approximately 6,000 gallons of the following chemicals have been treated at the SE since the beginning of operation in 1975: Perchloroethylene, 1,1,1-trichloroethane, ethyl acetate, and various paint shop solvents. Over 90 percent of this regulated waste is a combination of perchloroethylene and 1,1,1-trichloroethane.

5-1d Inventory Removal, Disposal or Decontamination of Equipment

The inventory removal and disposal information required by this section is contained in Section 5-1b. Information required on the decontamination (referring to chemical, not radioactive decontamination) of equipment is addressed below.

The following machinery will be utilized in the final closure activity: flatbed truck (or similar vehicle), forklift, crane (or other similar lifting device), and hand cart. All this machinery and other tools that come into contact with the regulated waste will be steam cleaned or placed into a waste

drum for disposal. The cleaning residue will be collected, placed in a drum, and considered a regulated waste. If regulated waste drums are generated by this activity, they will be transported to the Low-Level Burial Grounds located on the Hanford site.

5-1d(1) Closure of Containers

This section is not applicable because the SE is a tank treatment facility.

5-1d(2) Closure of Tanks

Concrete Pads

The concrete pads located around the tank will be washed with a soap solution and, if needed, with a hydrochloric acid solution. Disposable rags will be used for this washing. The residual water generated from this cleaning will be collected in a trench excavated along one edge of the concrete pad and lined with plastic. The residual water in the trench will be collected in containers, stored, and tested for the following parameters: pH, TOC and TOX. If any of these parameters test positive (for pH this will be defined as less than 2.0 or greater than 12.5), the residual water and the associated disposal rags will be treated as regulated waste and shipped to an appropriate TSD facility.

Surrounding Soil

Representative soil samples will be taken in the vicinity of the SE and evaluated by laboratory analysis. The procedures for sampling and evaluating these samples are given below.

Soil samples will be taken within three feet of the base of the tank from zero to three feet in depth, and at three different locations. The locations will be chosen at points where spills and run-off would be most likely (i.e., down gradient). These soil samples will be mixed to obtain a homogeneous mixture. A representative background sample will also be taken from an upgradient location. The soil samples (one test and one background) will be screened for pH, TOC, and TOX.

If the analytical values of the test soil sample exceed the background soil sample, a comprehensive soil sample program will be designed. If it is

determined that soil is contaminated to the point of being considered regulated waste, the contaminated soil will be removed. After the soil is removed, representative samples will be analyzed to demonstrate that all regulated waste is removed. If contamination still exists, more soil will be removed followed by more testing until all soil considered to be regulated waste is removed.

5-1d(3) Closure of Waste Piles

This section is not applicable because the SE is a tank treatment facility.

5-1d(4) Closure of Surface Impoundment

This section is not applicable because the SE is a tank treatment facility.

5-1d(5) Closure of Incinerators

This section is not applicable because the SE is a tank treatment facility.

5-1d(6) Closure of Land Treatment Facilities

This section is not applicable because the SE is a tank treatment facility.

5-1e Closure of Disposal Units

This section is not applicable because the SE is a tank treatment facility.

5-1f Continuance of Operations

This section is not applicable because the SE is a tank treatment facility.

5-1g Schedule for Closure

DOE-RL plans to initiate closure of the SE on the date this closure plan is approved by the regulating authority. The following events will be completed on or before the time indicated below:

<u>Time (day)</u>	<u>Activity</u>
0	Regulatory approval of Closure Plan
+30	Closure initiated
+30	Soil samples taken
+90	Removal of all stored regulated waste drums
+120	Decontamination of concrete pad
+180	Removal of contaminated soil
+180	Removal of tank
+180	Certification completed

5-1h Extensions for Closure Time

If the soil surrounding the SE is contaminated and if extensive sampling and analysis is required, the removal of soil may take longer than 180 days. If this situation occurs, a demonstration will be made to the appropriate regulatory authority to explain the need to extend the 180 day closure time.

5-2 POST-CLOSURE PLAN

This section is not applicable because the SE is a tank treatment facility.

5-3 NOTICE IN DEED

This section is not applicable because the SE is a tank treatment facility.

5-4 CLOSURE COST ESTIMATE

This section is not applicable because federal facilities are exempt from this section per 40 CFR 264.140(c) and WAC 173-303-620(1)(c).

5-5 FINANCIAL ASSURANCE MECHANISM FOR CLOSURE

This section is not applicable because federal facilities are exempt from this section per 40 CFR 264.140(c) and WAC 173-303-620(1)(c).

5-6 POST-CLOSURE COST ESTIMATE

This section is not applicable because federal facilities are exempt from this section per 40 CFR 264.140(c) and WAC 173-303-620(1)(c).

5-7 FINANCIAL ASSURANCE MECHANISM FOR POST-CLOSURE CARE

This section is not applicable because federal facilities are exempt from this section per 40 CFR 264.140(c) and WAC 173-303-620(1)(c).

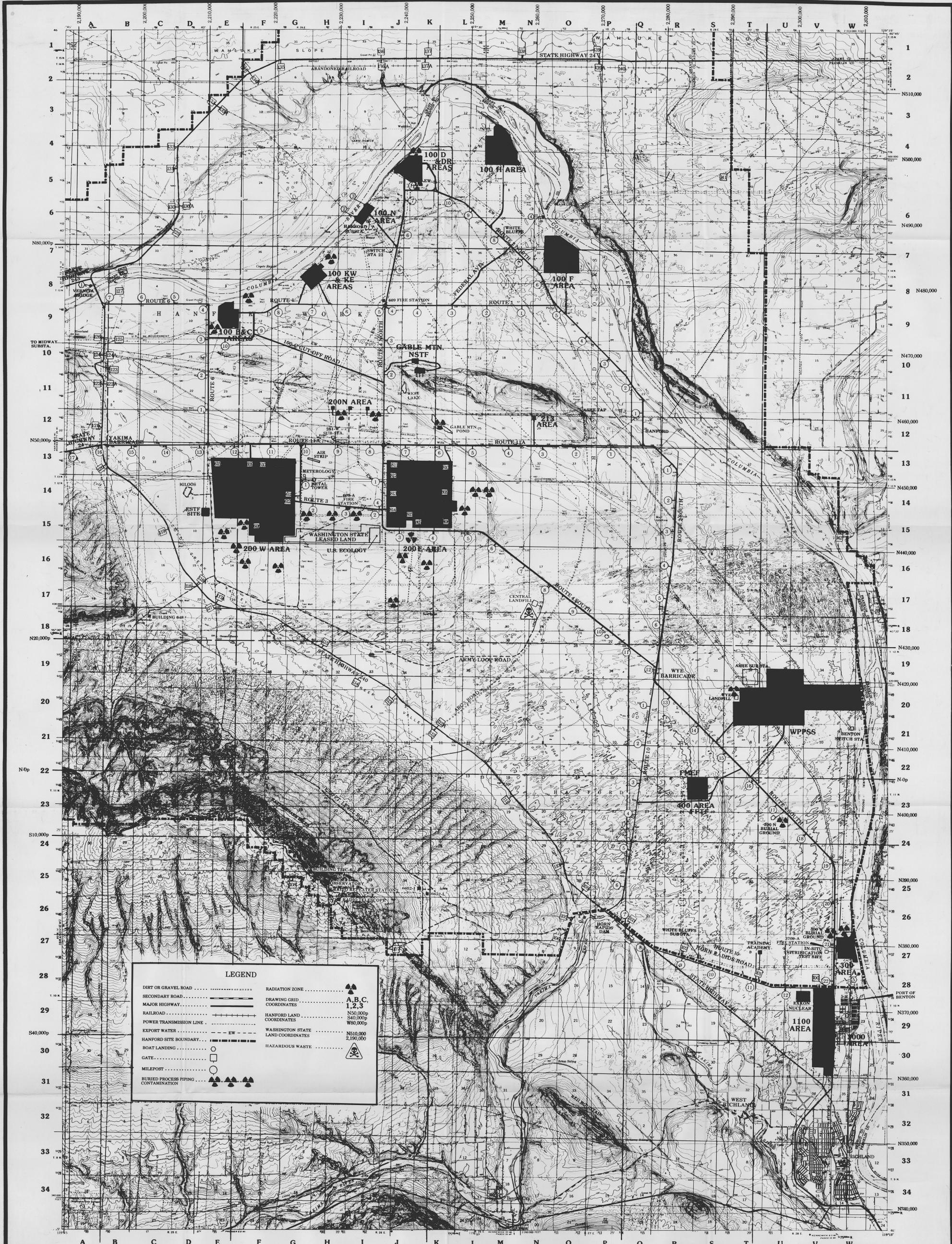
5-8 LIABILITY REQUIREMENTS

This section is not applicable because federal facilities are exempt from this section per 40 CFR 264.10(c) and WAC 173-303-620(1)(c).

APPENDIX A

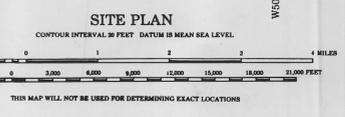
APPENDIX A
TOPOGRAPHIC MAP

APPENDIX B



LEGEND

DIRT OR GRAVEL ROAD	RADIATION ZONE	ABC, 1, 2, 3
SECONDARY ROAD	DRAWING GRID COORDINATES	N50,000p
MAJOR HIGHWAY	HANFORD LAND COORDINATES	S40,000p
RAILROAD	WASHINGTON STATE LAND COORDINATES	W80,000p
POWER TRANSMISSION LINE	HAZARDOUS WASTE	
EXPORT WATER		
HANFORD SITE BOUNDARY		
BOAT LANDING		
GATE		
MILEPOST		
BURIED PROCESS PIPING CONTAMINATION		



NO IMPACT LEVEL REQUIREMENTS

DRAWING APPROVALS		DATE	U. S. Department of Energy Richland Operations Office	
APPROVED FOR QUALITY ASSURANCE			Rockwell Hanford Operations Richland, Washington 99352	
APPROVED			<p>HANFORD SITE MAP</p> <p>SCALE AS SHOWN 600 GEN INDEX NO. 0100</p> <p>H-6-951</p>	
RESPONSIBLE ENGINEER				
CHECKED				
CLASSIFICATION				
REVISIONS	DESCRIPTION	LAST REV.	BY	DATE

NEXT USED ON: END ITEM

DRAWING STATUS

APPENDIX B
300 AREA MAP

APPENDIX C

APPENDIX C
LOCATIONS AND NUMBER OF COPIES OF CLOSURE PLAN

Two copies of the SE closure plan are official copies of the plan. These official copies are located at the following offices:

Chief

Environmental Protection Branch
Safety and Environmental Protection Division
U.S. Department of Energy-Richland Operations Office
Federal Building - Room 619
825 Jadwin Avenue
Post Office Box 550
Richland, Washington 99352
(509) 376-7387

Manager

Environmental Protection and Emergency Preparedness Section
UNC Nuclear Industries
Building 1114N - Room 2
Post Office Box 490
Richland, Washington 99352
(509) 373-4932

APPENDIX D

APPENDIX D

PERSON RESPONSIBLE FOR STORAGE AND UPDATING OF COPIES OF CLOSURE PLAN

If a permit modification is requested during the active life of the facility which changes the operating plans or facility design, the SE closure plan will be modified at the same time. In all other cases, a request for modification of the SE closure plan will be completed within 60 days after a change in operating plans, facility design or events which affect the SE closure plan. The following office will be responsible for updating the official copies of the SE closure plan.

Chief
Radiological and Environmental Safety Branch
Environmental Safety and Environmental Protection Division
U.S. Department of Energy-Richland Operation Office
Federal Building - Room 619
825 Jadwin Avenue
Post Office Box 550
Richland, Washington 99352
(509) 376-7387

APPENDIX E

APPENDIX E
CERTIFICATION OF CLOSURE

When closure is completed DOE-RL will submit to the regulating authority both a self-certification and a certification by an independent registered professional engineer that the SE has been closed in accordance with the specifications of the approved closure plan.

Owner/Operator Closure Certification:

The DOE-RL will self-certify with the following document or a document similar to it:

I, (name), an authorized representative of the U.S. Department of Energy-Richland Operation Office located at the Federal Building, 825 Jadwin Avenue, Richland, Washington, hereby state and certify that the 300 Area Solvent Evaporator, to the best of my knowledge and belief, has been closed in accordance with the attached approved closure plan, and that the closure was completed on (date).

(signature and date)

Professional Engineer Closure Certification:

The DOE-RL will engage an independent registered professional engineer to certify that the 300 Area Solvent Evaporator has been closed in accordance with this approved closure plan. The DOE-RL will require the engineer to sign the following document or a document similar to it:

I, (name), a certified professional engineer, hereby certify, to the best of my knowledge and belief, that I have made visual inspection(s) of the 300 Area Solvent Evaporator and that closure of the aforementioned facility has been performed in accordance with the attached approved closure plan. (signature, date, state professional engineer license number, business address, and phone number)