0025482

NOTICE OF INTENT FOR EXPANSION UNDER INTERIM STATUS

242-A EVAPORATOR/PUREX PLANT CONDENSATE TREATMENT FACILITY HANFORD FACILITY, RICHLAND, WASHINGTON

DRAFT

JAN 1993
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U.S. DEPARTMENT OF ENERGY,
RICHLAND FIELD OFFICE

JANUARY 1993

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1.0 INTRODUCTION

The Washington State Department of Ecology (Ecology) *Dangerous Waste Regulations*, Washington Administrative Code (WAC) 173-303-281, require that dangerous waste facility owners and/or operators submit a Notice of Intent (NOI) before submittal of a permit application for new or expanded dangerous waste treatment, storage, and/or disposal (TSD) units on the Hanford Facility. The following information for this NOI is being filed with Ecology by the U.S. Department of Energy, Richland Field Office (DOE-RL), the owner and operator. This NOI is to serve notice of the intent to include dangerous waste storage as part of the 242-A Evaporator/PUREX Plant Condensate Treatment Facility (ETF, formerly referred to as the 200 East Area Liquid Effluent and Treatment Facility) located on the Hanford Facility, Richland, Washington.

An NOI was submitted in March 1990 for the *200 East Area Liquid Effluent Retention and Treatment Facility*. The March 1990 NOI dealt primarily with the treatment aspect of the unit. The dangerous waste Part A permit application for the ETF was dated June 6, 1991 and identified treatment of dangerous waste in tanks as the only process involved at the ETF.

This document is to notify all concerned of a proposed change to include tank and container storage of dangerous waste as additional processes at the ETF. The ETF design, treatment capacity, location, etc., are unchanged from the original NOI. The ability to store dangerous waste is being added to ensure compliance with 90-day accumulation requirements of WAC 173-303 and the *Resource Conservation and Recovery Act* (RCRA) *of 1976*.

The following identifies the owner and operator of the Hanford Facility and the primary contact:

Owner and Operator: U.S. Department of Energy, Richland Field Office

Manager, Richland Field Office: Mr. John D. Wagoner

Richland Field Office Contact: Mr. J. D. Bauer

Address: U.S. Department of Energy
Richland Field Office
Post Office Box 550
Richland, Washington 99352

Telephone: (509) 376-5441

2.0 FACILITY DESCRIPTION AND GENERAL PROVISIONS

The Hanford Facility is a single RCRA facility, identified by the U.S. Environmental Protection Agency (EPA)/State Identification Number WA7890008967, that consists of over 60 TSD units included in the *Hanford Site*

Dangerous Waste Part A Permit Application (DOE-RL 1988b). The Hanford Facility consists of the contiguous portion of the Hanford Site that contains these TSD units and, for the purposes of RCRA, is owned and operated by the U.S. Department of Energy (excluding lands north and east of the Columbia River, river islands, lands owned by the Bonneville Power Administration, lands leased to the Washington Public Power Supply System, and lands owned by or leased to the state of Washington). The Hanford Facility is a single facility for purposes of provisions regulating offsite and onsite waste handling.

The ETF will be located in the 200 East Area on the Hanford Facility. The treatment process is designed to treat effluent from the 242-A Evaporator and the Plutonium-Uranium Extraction (PUREX) Plant. The 242-A Evaporator process condensate is generated by the evaporative concentration of mixed waste contained in the Double-Shell Tank (DST) System. Because the PUREX Plant is in a nonoperational, waste from the PUREX Plant is not expected to be treated at the ETF. However, because the ETF is being designed with a flexible treatment system, other dilute aqueous waste steams generated on the Hanford Facility will be considered for treatment at the ETF. Before startup of the ETF, the 242-A Evaporator process condensate will be stored temporarily in the Liquid Effluent Retention Facility (LERF).

2.1 LOCATION OF PROPOSED EXPANSION

The ETF will be located in the 200 East Area of the Hanford Facility, Benton County, Washington. The Hanford Facility and the proposed location of the ETF are provided in Figures 1 and 2. A large-scale map and a topographic map, which meet the 1-inch-(2.54-centimeter-) equals-not-more-than-200-feet (61-meters) requirement, are provided in Appendix A and include the following:

- Overall Hanford Facility (H-6-958)

- Topographic map of the ETF (H-13-000081), including the surrounding 1,000 feet (305 meters). There are no existing or planned injection or water supply wells in the vicinity of the ETF. There are four resource protection wells associated with the LERF basins, three downgradient and one upgradient. Well E-35-2, shown on this topographic map, is the northern-most downgradient resource protection well for the LERF. There are no barriers planned for drainage or flood control at the ETF.

2.2 DESCRIPTION OF UNIT TO BE EXPANDED

The ETF will be designed to handle a maximum feed rate of 150 gallons (568 liters) per minute and minimum of 40 gallons (151 liters) per minute, and will be designed to provide treatment of a wide range of constituents.

The ETF treatment train will consist of the following equipment:

- Surge tank with pH adjustment
- Rough filter
- Ultraviolet/oxidation system
- pH adjustment tank
- Hydrogen peroxide decomposer
- Fine filter
- Degasification system
- Reverse osmosis system
- Ion exchange polisher
- Effluent pH adjustment tank
- Verification tanks.

The influent waste streams will be delivered to the surge tank, flow through the system, and end in one of three 670,000-gallon (2,536,000-liter) verification tanks.

A single building will house the treatment processes and container storage area. An underground piping system will link the treatment processes to the onground verification tanks. The effluent will be held in the verification tanks pending laboratory analysis to determine if the effluent meets applicable permit conditions for disposal.

The verification tanks, container storage area, and process areas all will be engineered in accordance with dangerous waste regulations, including secondary containment. The impervious, specially-coated floor will provide secondary containment for the process area. The container storage area will be located inside the building to provide security and to protect the containers from the elements. The container storage area will have a coated floor and will have an impervious berm to contain any spills or leaks. The verification tanks will include a high-density polyethylene liner external to the tanks with a secondary containment dike, and will be designed to allow removal of liquids from precipitation, leaks, or spills.

Effluent from the ETF process will be discharged to the soil column, subject to receipt of the appropriate permit(s). Effluent not meeting discharge standards either will be retreated through the ETF until the effluent can be properly discharged, or stored in the tanks while other treatment or disposal options are determined. The ability to store dangerous waste in tanks is necessary to preclude accumulation violations should the effluent need to be stored longer than 90 days.

The ETF treatment will generate a secondary mixed waste. This waste will be dried to a powder, accumulated in containers, and shipped to an appropriate disposal unit. Storage is being added for these containers to ensure compliance with the 90-day accumulation requirement of the dangerous waste regulations. Several factors will affect the ability of the ETF to dispose of mixed waste containers in a timely manner, i.e., in less than 90 days. The time required for laboratory analyses of waste, owner/operator requirements for waste disposal, and operating efficiencies will all contribute to the possibility of greater-than-90-day container storage at the ETF.

Waste storage at the ETF, both in tanks and containers, is intended solely for waste generated at the ETF that cannot be disposed of within 90 days. There is no intent or plan to store waste at the ETF from other Hanford Facility units or offsite facilities.

2.3 COMPLIANCE WITH STATE ENVIRONMENTAL POLICY ACT

The *State Environmental Policy Act of 1971* Environmental Checklist is provided as Appendix B.

2.4 COMPLIANCE WITH SITING STANDARDS

The demonstration of compliance with the siting criteria as required under WAC 173-303-282(6) and (7) are addressed in the following sections.

2.4.1 Criteria for Elements of the Natural Environment

The following section addresses measures that will be in place at the ETF to provide protection of the natural environment. Each element of the criteria identified in WAC 173-303-282(6) is addressed.

2.4.1.1 Earth. This section addresses the potential for the release of dangerous waste into the environment because of structural damage resulting from conditions of the earth at the ETF.

2.4.1.1.1 Seismic Risk. The ETF is located in Benton County, Washington, which has been identified as being in Zone 2B in accordance with the *Uniform Building Code* (ICBO 1991). The ETF design will meet the seismic considerations in the *Hanford Plant Standards*, Standard Design Criteria - 4.1 (DOE-RL 1988a). This plant standard provides seismic load criteria specific for the Hanford Site.

2.4.1.1.2 Subsidence. The ETF will be located in the 200 East Area of the Hanford Facility. This area of the Hanford Facility is not considered an area subject to subsidence (PNL 1991a).

2.4.1.1.3 Slope or Soil Instability. The ETF will not be located in an area of slope or soil instability, or will it be located in an area affected by unstable slope of soil conditions (PNL 1991a).

2.4.1.2 Air. The ETF will not be an incineration unit. Discussion of measures taken to reduce air emissions resulting from incineration is not applicable.

2.4.1.3 Water. This section addresses the potential for contaminating water of the state in the event of a release of dangerous waste.

2.4.1.3.1 Surface Water. The following addresses considerations for the protection of surface water.

2.4.1.3.1.1 Flood, Seiche, and Tsunami Protection. Three sources of potential flooding of the area were considered: (1) the Columbia River, (2) the Yakima River, and (3) storm-induced run-off in ephemeral streams draining the Hanford Facility. No perennial streams occur in the central part of the Hanford Facility.

The Federal Emergency Management Agency has not prepared floodplain maps for the Columbia River through the Hanford Facility. The flow of the Columbia River is largely controlled by several upstream dams that are designed to reduce major flood flows. Based on a U.S. Army Corps of Engineers study of the flooding potential of the Columbia River that considered historical data and water storage capacity of the dams on the Columbia River (COE 1969), the U.S. Department of Energy (ERDA 1976) has estimated the probable maximum flood (Figure 3). The estimated probable maximum flood would have a larger floodplain than either the 100- or 500-year floods. The location of the ETF will be well above the elevation of the Columbia River probable maximum flood and, therefore, is not within the 100- or 500-year floodplain.

The 100-year floodplain for the Yakima River, as determined by the Federal Emergency Management Agency (FEMA 1980), is shown in Figure 4. The ETF will not be within the floodplain.

The only other potential source of flooding of the ETF is run-off from a large precipitation event in the Cold Creek watershed. This event could result in flooding of the ephemeral Cold Creek. Skaggs and Walters (1981) have given an estimate of the probable maximum flood using conservative values of precipitation, infiltration, surface roughness, and topographic features. The resulting flood area (Figure 5) would not affect the ETF. The 100-year flood would be less than the probable maximum flood.

2.4.1.3.1.2 Perennial Surface Water Bodies. There are no perennial surface water bodies within one-quarter mile (0.4 kilometer) of the ETF.

2.4.1.3.1.3 Surface Water Supply. The ETF will not be located within an area designated as a watershed or is it located within one-quarter mile (0.4 kilometer) of a surface water intake for domestic water.

2.4.1.3.2 Groundwater. The following addresses consideration for the protection of groundwater. The ETF will be an "existing facility" as defined by WAC 173-303-282(3); therefore, compliance with the contingent groundwater protection program is not required.

2.4.1.3.2.1 Depth to Groundwater. The ETF will be located in the 200 East Area of the Hanford Facility. The depth to groundwater in the 200 East Area is over 260 feet (79 meters).

2.4.1.3.2.2 Sole Source Aquifer. The ETF will not be located over an area designated as a 'sole source aquifer' under section 1424(e) of the *Safe Drinking Water Act of 1974*.

2.4.1.3.2.3 Groundwater Management Areas and Special Protection Areas. The proposed expansion involves the addition of storage capacity in the

proposed ETF. The future system will meet secondary containment requirements per WAC 173-303-640 and 173-303-630. The storage of waste in tanks and containers is not expected to result in an increased potential for release of dangerous waste to groundwater.

2.4.1.3.2.4 Groundwater Intakes. The ETF will not be located within one-quarter mile (0.4 kilometer) of a groundwater intake for domestic water.

2.4.1.4 Plants and Animals. The proposed expansion will not result in an increased potential for dangerous waste to contaminate plant and animal habitat in the event of a release of dangerous waste.

2.4.1.5 Precipitation. The ETF will not be located in an area having a mean annual precipitation level of greater than 100 inches (254 centimeters) (DOE 1987).

2.4.2 Criteria for Elements of the Built Environment

The following sections address the locational factors affecting protection of the built environment. Each element of the criteria for land-based facilities or units identified in WAC 173-303-282(7) is addressed.

2.4.2.1 Adjacent Land Use. This section addresses the setback criteria for adjacent land use.

Land-Based Facilities. The ETF will be located approximately 9 miles (14 kilometers) from the closest Hanford Facility property line.

2.4.2.2 Special Land Uses. This section addresses setback criteria for special land uses.

2.4.2.2.1 Wild and Scenic Rivers. The ETF will be located approximately 6 miles (10 kilometers) from the Hanford Reach of the Columbia River, which has been proposed as a Wild and Scenic River. The ETF is clearly not within the viewshed of users of the Columbia River.

2.4.2.2.2 Parks, Recreation Areas, National Monuments. The ETF will be situated approximately 9 miles (14 kilometers) from the closest Hanford Facility boundary line and therefore will be a minimum of 9 miles (14 kilometers) from the nearest state or federally designated park, recreation area, or national monument.

2.4.2.2.3 Wilderness Areas. The ETF will be located approximately 9 miles (14 kilometers) from the boundary of the Hanford Facility, and is therefore clear of any Wilderness Areas as defined by the *Wilderness Act of 1964*.

2.4.2.2.4 Farmland. The ETF will be a minimum of 9 miles (14 kilometers) from any commercial or private prime farmland.

2.4.2.3 Residences and Public Gathering Places

This section discusses factors affecting residences and public gathering places.

2.4.2.3.1 Incineration. Incineration will not be a process used at the ETF. Therefore, this criterion is not applicable.

2.4.2.3.2 Land Use Compatibility. The Hanford Facility conforms with local land use zoning designation requirements.

2.4.2.3.3 Archeological Sites and Historic Sites. The ETF has been investigated for cultural resource concerns by the Battelle Pacific Northwest Laboratories' Hanford Cultural Resources Laboratory (HCRL) (PNL 1991b). The HCRL has declared the building and tank site to be clear of cultural properties, but identified two areas of concern with the proposed pipe route to the 200 West Area point of discharge. One concern is the historic White Bluffs Road and the other concern is an anomalous rock cairn designated HT-89-030. The HCRL has cleared this project for construction providing specific measures are followed during construction to mitigate or avoid damage to either of these areas.

The nearest historic site designated by the federal government is B Reactor, which is located approximately 8 miles (13 kilometers) northwest of the ETF. The B Reactor is considered a National Register Property.

3.0 TEN-YEAR NONCOMPLIANCE HISTORY

Appendix C contains copies of the Notice of Noncompliance (Compliance Inspection) related to dangerous waste management since the previous NOI was filed in December 1992 (NOI for T Plant). These compliance inspection letters identify WAC 173-303 violations at the 200 East Area Tank Farms, tank 241-101-T, the 200 East Area Slab Yard, and the 305-B Storage Facility. Efforts are underway to provide responses to the inspection letters regarding the 200 East Area Tank Farms and tank 241-101-T.

4.0 JUSTIFICATION OF NEED

In May 1989, the U.S. Department of Energy along with Ecology and the U.S. Environmental Protection Agency (EPA) formally entered into an agreement known as the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1990) for the purpose of the Hanford Facility gaining compliance with federal, state, and local laws concerning the management of waste. The operation of the ETF will support Tri-Party

Agreement milestone M-20-50 by providing a means to treat Phase I* streams from the 242-A Evaporator and other sources. Treatment of Phase I waste streams supports commitment of the U.S. Department of Energy to cease untreated discharges to the environment by 1995.

The ability to store mixed waste in tanks and containers longer than 90 days is necessary because of likely delays in transferring ETF dangerous waste to a TSD unit. To ensure compliance with state and federal requirements for accumulation of dangerous waste, the ETF must be permitted to store mixed waste longer than 90 days.

5.0 IMPACT ON OVERALL CAPACITY AT THE HANFORD FACILITY AND THE STATE OF WASHINGTON

The current capacity for the treating, storing, and/or disposing of liquid mixed waste is limited within Washington State and the Hanford Facility. The ETF will have the means to treat and store the waste and to comply with WAC 173-303 regulations on mixed waste.

6.0 REFERENCES

6.1 DOCUMENTS

COE, 1969, *Columbia River Basin: Lower Columbia River Standard Project Flood and Probable Maximum Flood*, September 1969, Memorandum Report, U.S. Army Corps of Engineers, U.S. Army Engineer Division, North Pacific, Portland, Oregon.

DOE, 1987, *Final Environmental Impact Statement: Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes*, Vol. 1-5, DOE/EIS-0113, U.S. Department of Energy, Washington, D.C.

DOE-RL, 1988a, "Design Load for Structures," HPS-SDC-4.1, Revision 11, *Hanford Plant Standards*, U.S. Department of Energy-Richland Operations Office, Richland Washington.

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*Several studies of liquid effluents on the Hanford Facility resulted in a series of reports (the Hanford Site stream-specific reports, the liquid effluent study final project report and the liquid effluent study) that identify and categorize liquid effluent waste streams as Phase I, Phase II, and Miscellaneous streams. The timeline for cessation of these untreated discharges is contained in the Tri-Party Agreement.

DOE-RL, 1988b, *Hanford Facility Dangerous Waste Part A Permit Application*, Vols. 1 through 3, DOE/RL 88-21, U.S. Department of Energy-Richland Operations Office, Richland, Washington.

Ecology, EPA, and DOE, 1990, *Hanford Federal Facility Agreement and Consent Order*, Vols. 1 and 2, as amended, Washington State Department of Ecology, U.S. Environmental Protection Agency, U.S. Department of Energy, Olympia, Washington.

ERDA, 1976, *Evaluation of Impact of Potential Flooding Criteria on the Hanford Project*, RLO-76-4, U.S. Energy Research and Development Administration-Richland Operations Office, Richland, Washington.

FEMA, 1980, *Flood Insurance Study: Benton County Washington*, Federal Emergency Management Agency, Federal Insurance Administration, Washington, D.C.

ICBO, 1991, *Uniform Building Code*, International Conference of Building Officials, Whittier, California.

PNL, 1991a, *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 4, Pacific Northwest Laboratory, Richland, Washington.

PNL, 1991b, *Cultural Resources Review of the 242-A Evaporator/PUREX Plant Condensate Treatment Facility*, HCRC #91-600-014 dated July 15, 1990, Pacific Northwest Laboratory, Richland Washington.

Skaggs, R.L. and W.H. Walters, 1981, *Flood Risk Analysis of Cold Creek Near the Hanford Site*, PNL-4219, Pacific Northwest Laboratory, Richland, Washington.

6.2 FEDERAL AND STATE ACTS

Resource Conservation Act of 1976, as amended, 42 USC 6901 et seq.

Safe Drinking Water Act of 1974, as amended, 42 USC 300f et seq.

Shoreline Management Act of 1971, Revised Code of Washington, Chapter 90.58.010 et seq., Olympia, Washington.

State Environmental Policy Act of 1971, RCW 43.21c.

Wilderness Act of 1964, as amended, 16 USC 1131-1136 et seq.

6.3 REVISED CODE OF WASHINGTON AND WASHINGTON ADMINISTRATIVE CODE

WAC 173-303, *Dangerous Waste Regulations*, Washington State Department of Ecology, Olympia, Washington.

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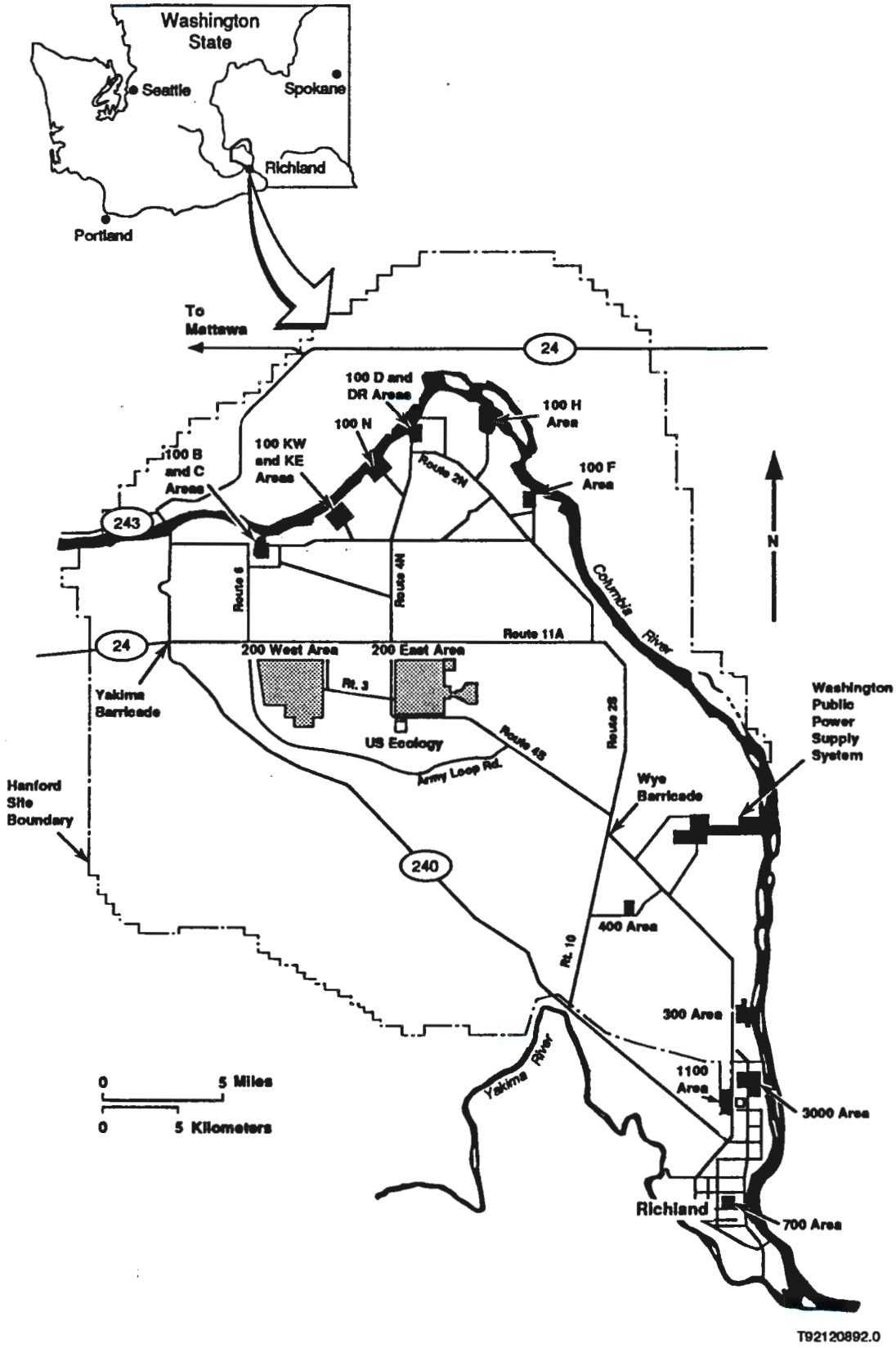

Figure 1. Hanford Site.

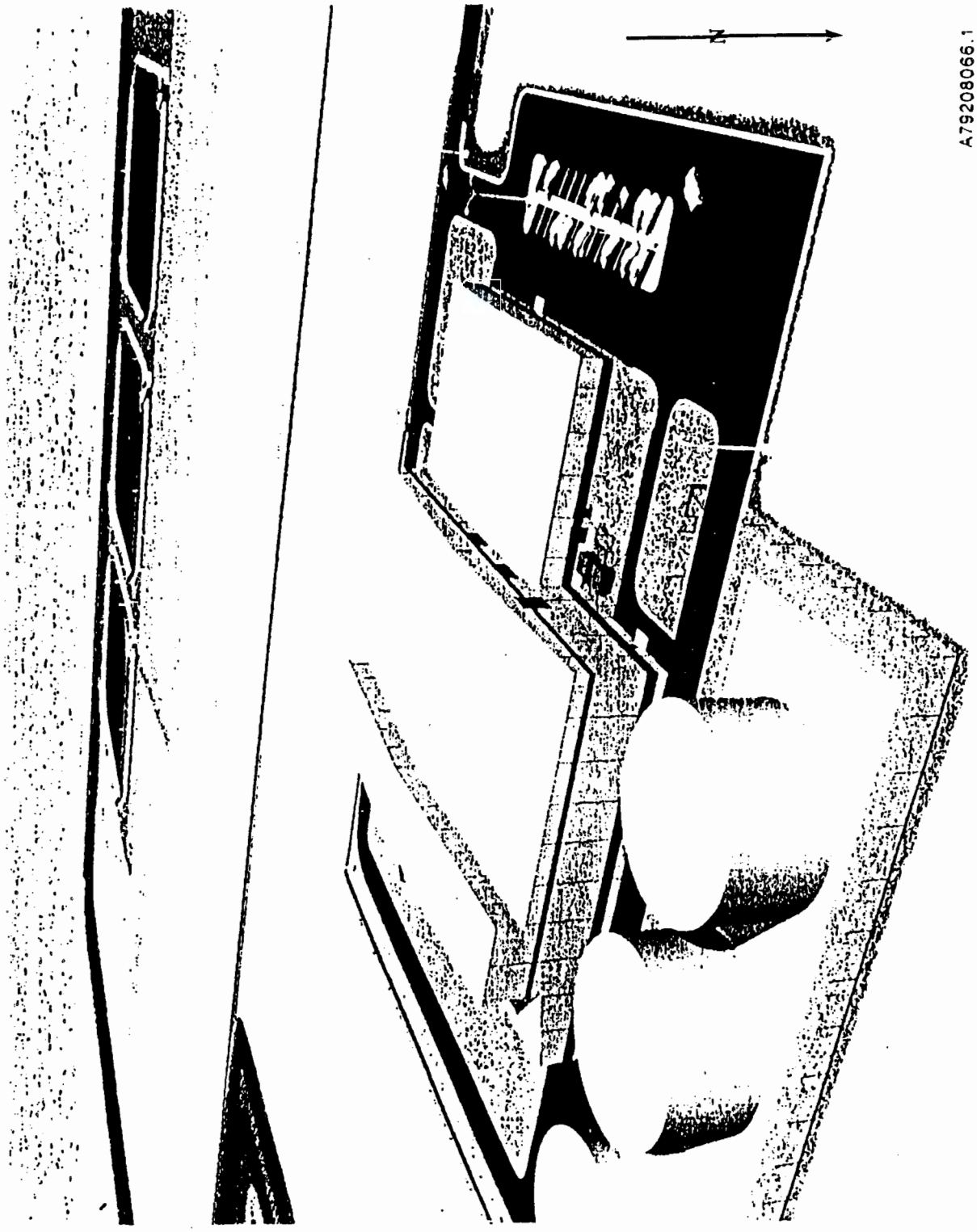

Figure 2. 242-A Evaporator/PUREX Plant Condensate Treatment Facility.

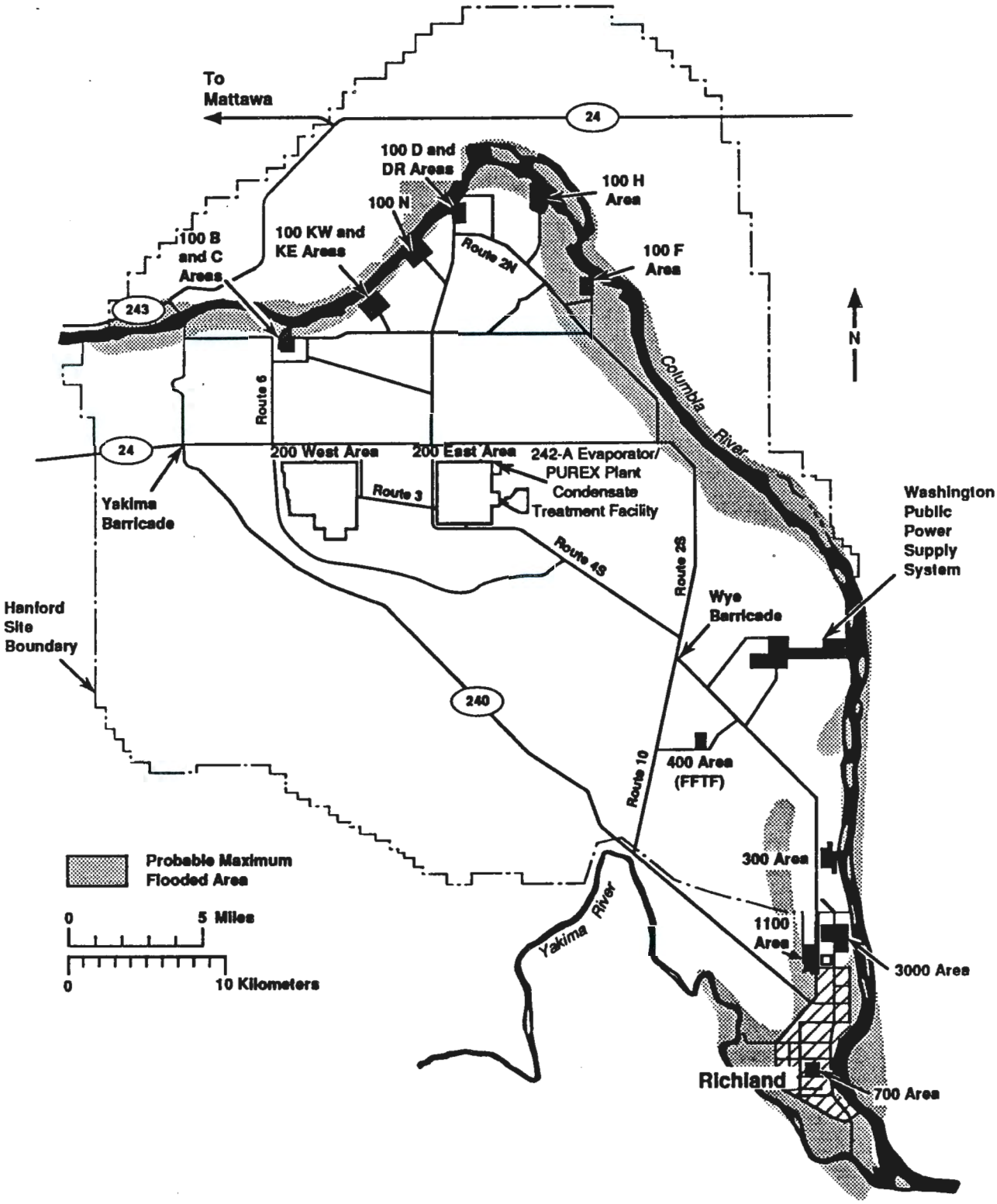

Figure 3. Columbia River Floodplain.

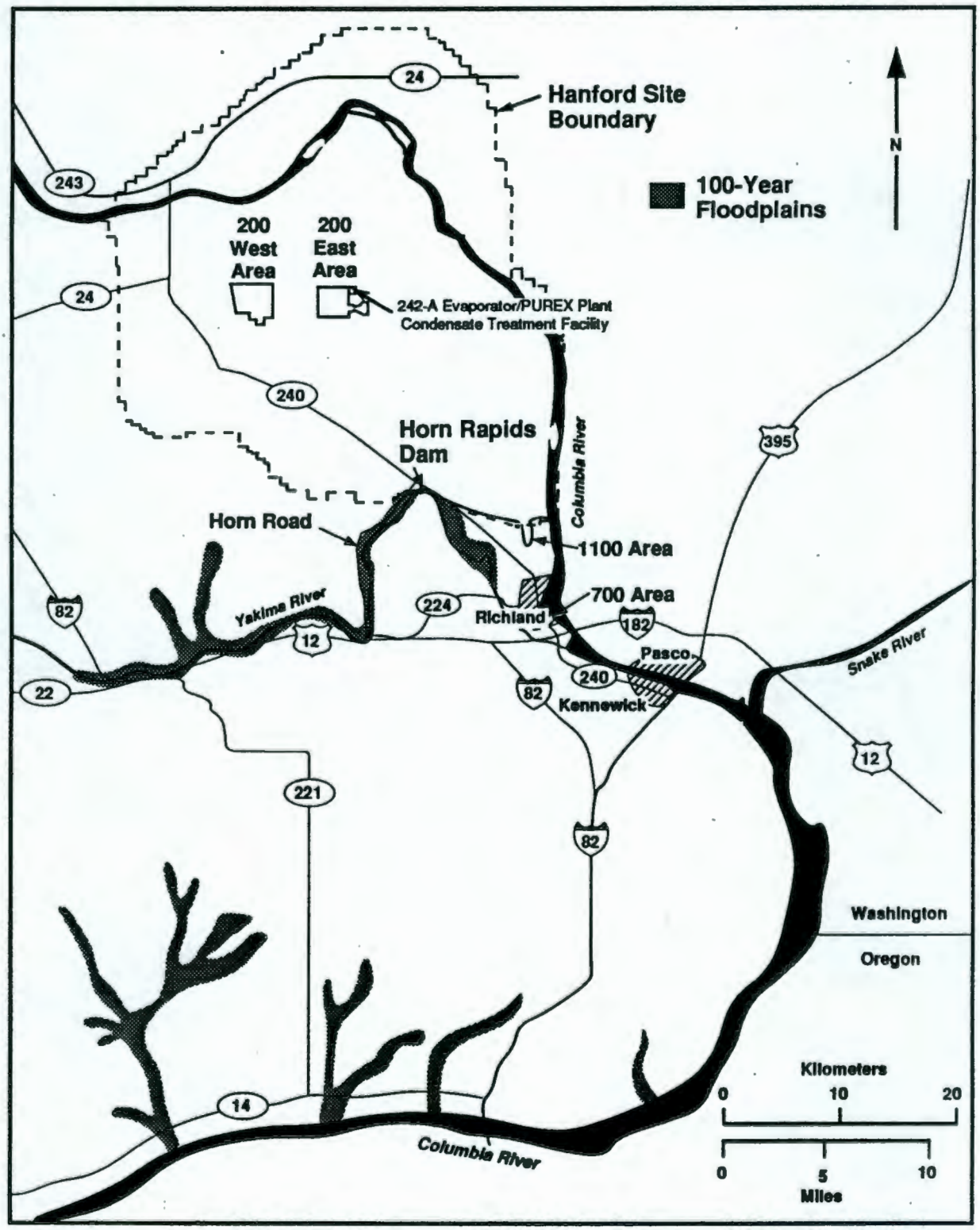

Figure 4. Yakima River Floodplain.

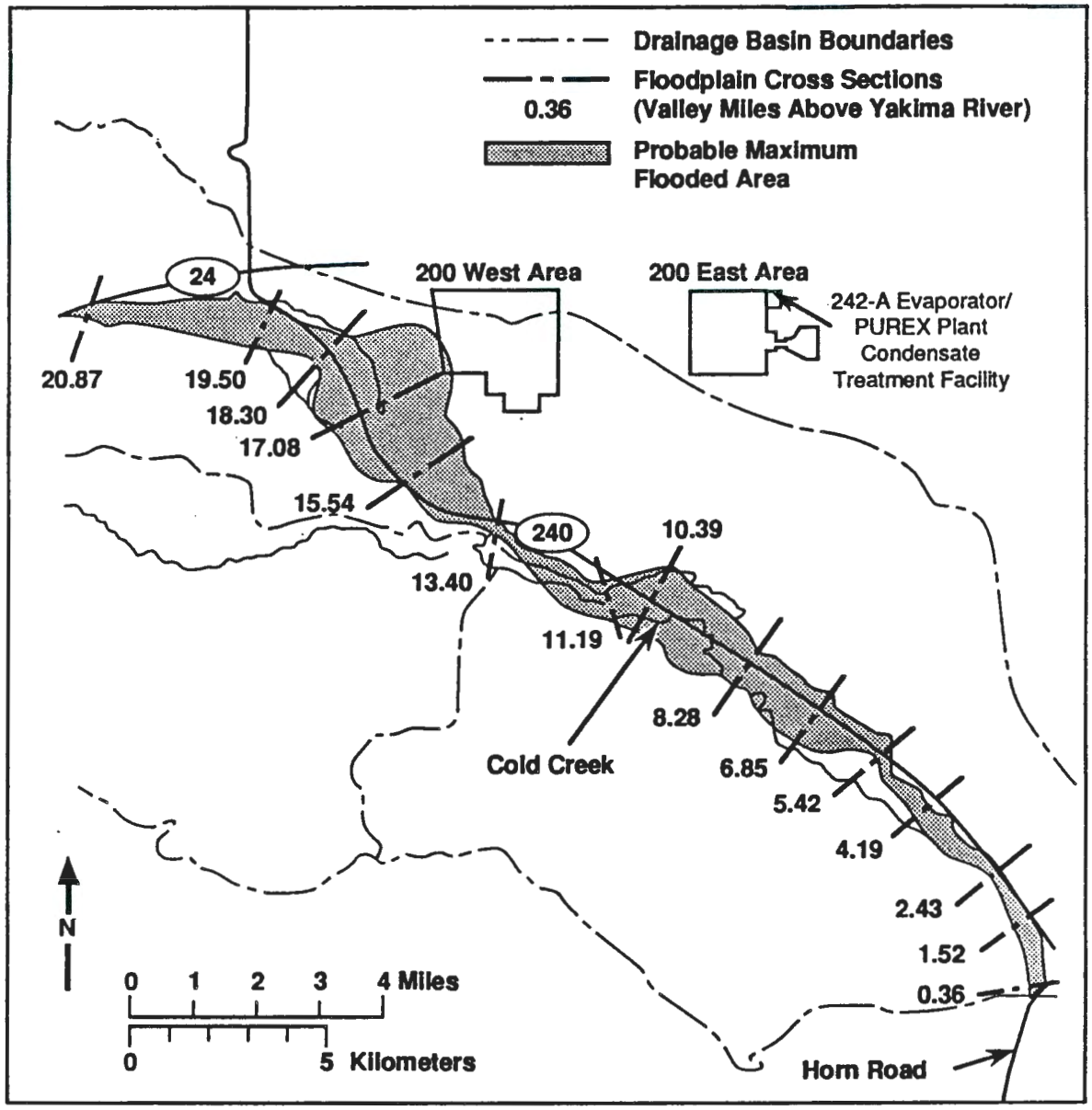

Figure 5. Cold Creek Watershed Floodplain.

APPENDIX A

HANFORD SITE MAPS

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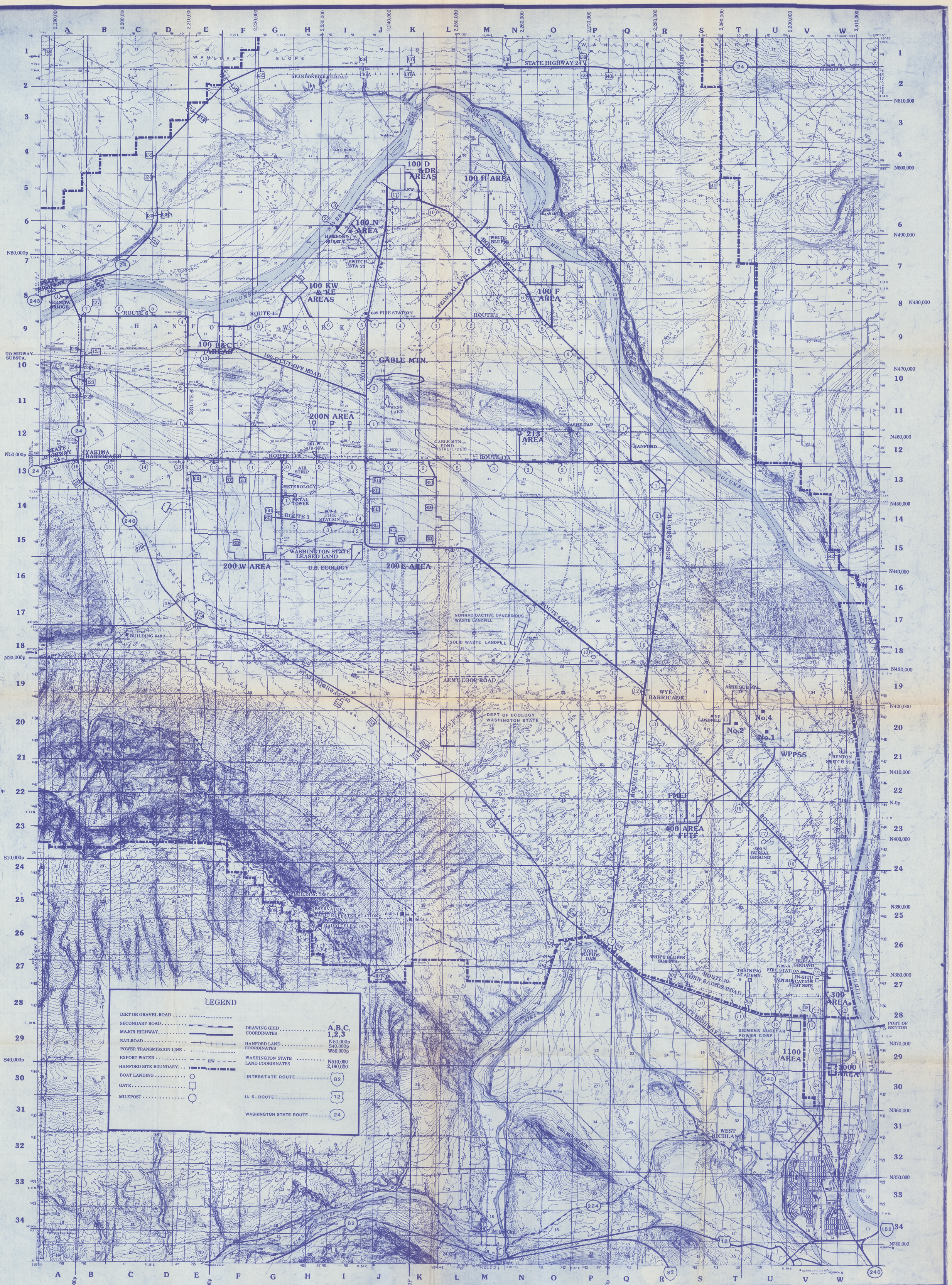


LEGEND

- DIRT OR GRAVEL ROAD
- SECONDARY ROAD
- MAJOR HIGHWAY
- RAILROAD
- POWER TRANSMISSION LINE
- EXPORT WATER — EW
- HANFORD SITE BOUNDARY
- BOAT LANDING
- GATE
- MILEPOST

- DRAWING GRID COORDINATES: A,B,C, 1,2,3
- HANFORD LAND COORDINATES: N50,000p S40,000p W80,000p
- WASHINGTON STATE LAND COORDINATES: N510,000 2,190,000
- INTERSTATE ROUTE: 82
- U. S. ROUTE: 12
- WASHINGTON STATE ROUTE: 24

SITE PLAN

CONTOUR INTERVAL 20 FEET DATUM IS MEAN SEA LEVEL

1 1/2 0 1 2 3 4 MILES

3,000 0 3,000 6,000 9,000 12,000 15,000 18,000 21,000 FEET

THIS MAP WILL NOT BE USED FOR DETERMINING EXACT LOCATIONS

NOTE

APPROVAL TO CHANGE THIS MAP MUST BE OBTAINED FROM THE ENVIRONMENTAL DIVISION, RCRA PERMITS SECTION BECAUSE THIS MAP WAS SUBMITTED WITH PERMIT APPLICATIONS TO THE WASHINGTON DEPARTMENT OF ECOLOGY.

OFFICIAL RELEASE BY WHC EDT-101111 DATE MAR 17 1989

REVISION APPROVALS							REVISIONS	
		ENGINEER	DRAFTING	CHKD BY DATE	REV BY DATE		DESCRIPTION	
RS		11-21-91	11-20-91	11-20-91	11/18/91	11-18-91	REV. PER ECN-170550	3

MICRO FILMED

LAST REV 3

DRAWING STATUS

NEXT USED ON: END ITEM

DRAWING APPROVALS	DATE
APPD FOR QUALITY ASSURANCE	
APPD	7/89
APPD	
APPD	
RESPONSIBLE ENGINEER R.L. MARTELL	3/89
DRAFTING APPD	
CHECKED	3/89
DRAWN K.D. JUNT	3/89
CLASSIFICATION NONE	BY NOT REQ'D

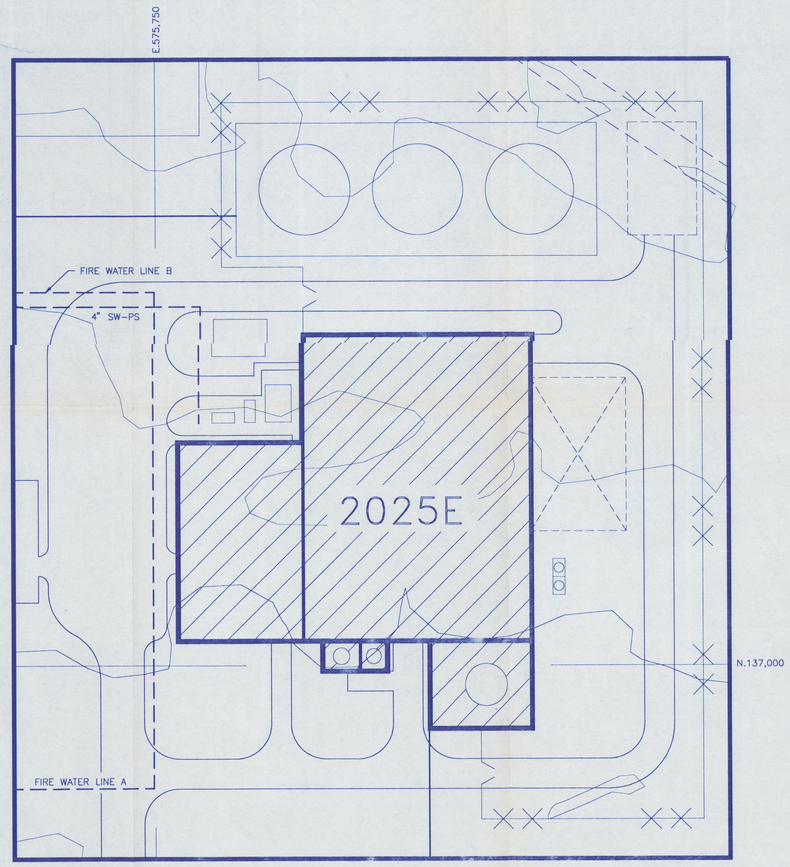
U. S. Department of Energy
Richland Operations Office

Westinghouse Hanford Company

OVERALL HANFORD FACILITIES

SCALE	BLDG.	INDEX NO.
AS SHOWN	600 GEN	0100

DRAWING NO. H-6-958 SHEET NO. 1 SHEETS 1



PARTIAL PLAN

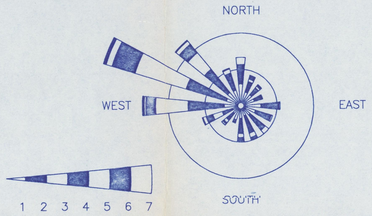
SCALE: 1:500

5 10 15 METERS

1 cm = 5 meters
PHOTO DATE: 6-24-89
CONTOUR INTERVAL: 0.5 meter

WIND ROSE FOR: 200E AREA
% CALM WINDS = .9

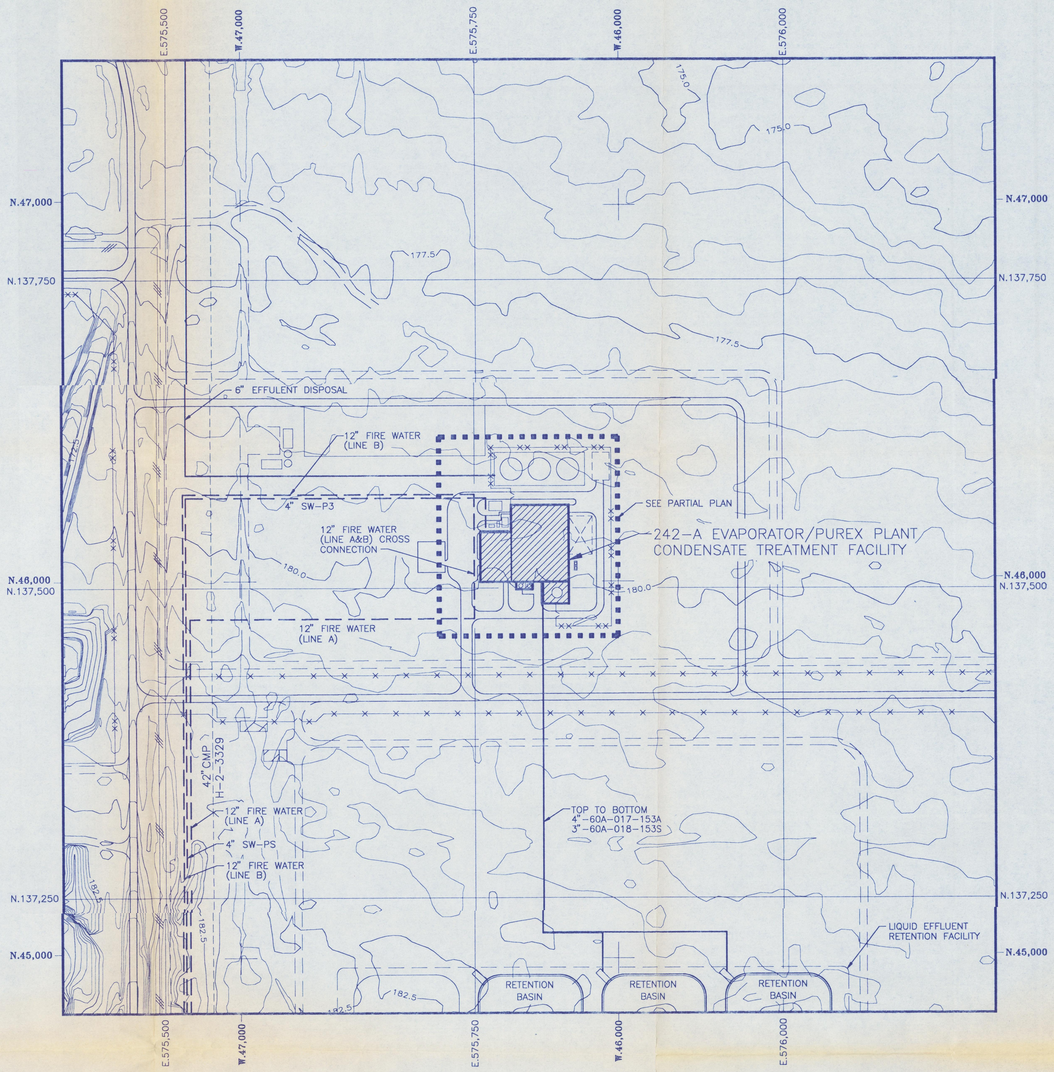
PERIOD COVERED
12/01/85 - 12/31/87
STATION NO. 6



PADDLES INDICATE DIRECTION WIND IS COMING FROM.
RADIAL GRIDS REPRESENT 5.0% AND 10.0% OCCURRENCE.

WIND CLASS	MILES/HOUR
1--------	>1.0 - 3.0
2--------	4.0 - 7.0
3--------	8.0 - 12.0
4--------	13.0 - 18.0
5--------	19.0 - 24.0
6--------	25.0 - 31.0
7--------	32.0 +

WIND ROSE

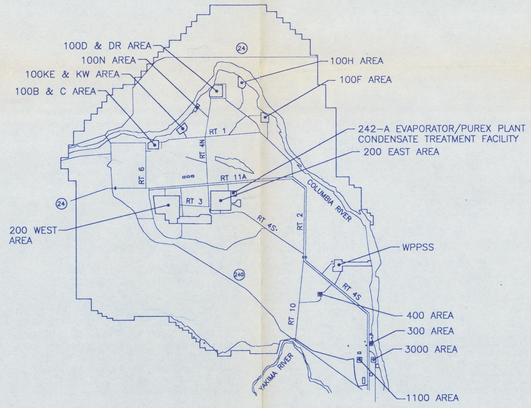


SITE PLAN

SCALE: 1:2000

0 20 40 80 120 160 METERS

1 cm = 20 meters
PHOTO DATE: 6-24-89
CONTOUR INTERVAL: 0.5 meter



HANFORD AREA MAP

SCALE: NONE

LEGEND

W.47,000 N.43,000	HANFORD PLANT COORDINATES (FEET)	216-A-42	CRIB
E.576,250 N.136,000	WASHINGTON STATE COORDINATES (METERS)	218-E-10	BURIAL GROUND
	INTERMEDIATE CONTOUR	242-A	BUILDING
215.0	INDEX CONTOUR (METERS)	2-E25-25	WELL 299-E25-25
	FENCE	S	SIGNS
	POST & CHAIN FENCE	MH	MANHOLE
	PERIMETER FENCE	CB	CATCH BASIN
	DIRT ROAD		TREES
	PAVED ROAD		RAILROAD
	BUILDINGS	24	STATE HIGHWAY
			TANKS

GENERAL NOTES

1. THIS MAP IS BASED ON AERIAL PHOTOGRAPHY FLOWN ON 6-24-89. THE TOPOGRAPHIC MAP WAS PREPARED BY MERRICK & COMPANY AND CERTIFIED TO MEET NATIONAL MAP ACCURACY STANDARDS. OFFICIAL COPIES OF THE MERRICK MAPS THAT SHOW THE CERTIFICATE ARE LOCATED IN THE WESTINGHOUSE ENGINEERING FILES AS DRAWING NUMBERS H-2-79476 SHEET 1 AND H-2-79477 SHEET 1 THRU 37. THE NAMES OF PHYSICAL FEATURES AND THE TITLE BLOCK OF THE H-13-000201 THROUGH H-13-000237 MAPS WERE ADDED BY WESTINGHOUSE HANFORD COMPANY.

2. *WASHINGTON COORDINATE SYSTEM: THE OFFICIAL STATE PLANE COORDINATE SYSTEM AS DEFINED BY THE* REVISED CODE OF WASHINGTON (RCW). THE HANFORD SITE LIES WITHIN THE WASHINGTON COORDINATE SYSTEM, SOUTH ZONE. THIS GRID COVERS THE ENTIRE SITE AND USES X (EASTINGS) AND Y (NORTHINGS) COORDINATES.

   HORIZONTAL DATUM: NAD-83 LAMBERT PROJECTIONS

   VERTICAL DATUM: NATIONAL GEODETIC SURVEY DATUM AS PROVIDED BY KAISER ENGINEERS HANFORD.

3. HANFORD PLANT GRID: A LOCAL GRID SYSTEM WITH ITS INITIAL POINT NORTHEAST OF THE 400 AREA. IT COVERS 200 EAST AND 200 WEST AREA AS WELL AS GENERAL SITE WORK SUCH AS WELLS AND BURIAL GROUNDS. COORDINATES ARE SHOWN AS FEET.

DWG NO	TITLE
H-2-3329	PLAN AND PROFILE PUREX COOLING WATER DISPOSAL
H-13-000207	200E AREA TOPOGRAPHIC MAP
H-13-000200	200E AREA TOPOGRAPHIC MAP

DRAWING TRACEABILITY LIST

REF NUMBER	TITLE
NEXT USED ON	H-13-000200

REFERENCES

MFD REV NO	REV BY DATE	DESCRIPTION	REV BY DATE	CHK BY DATE	DFTG APVD DATE	COG ENGR	OTHER	OTHER

REVISIONS

CADFILE N000081A CADCODE 1B:IBM:ACD2:10.0:SS

		DATE
DRAWN	JW VOSAHLO	12-28-92
CHECKED		
DFTG APVD		
COG ENGR		
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OTHER		
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APVD FOR IMPLEMENTATION		
BY		
FOR		DATE

APPROVALS BY/DATE

EDT XXXXX

U.S. DEPARTMENT OF ENERGY
Richland Operations Office
Westinghouse Hanford Company

TOPO MAP 242-A EVAP/PUREX PLANT CONDENATE TREATMENT FACILITY

SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	2025E	0110	H-13-000081	0

SCALE AS NOTED SHEET 1 OF 1

CHK PRINT DATE COMMENT PRINT DATE

REV 0 SH 1 OF 1 DWG NO H-13-000081

DRAFT

54-6000-027(5/89)

APPENDIX B

STATE ENVIRONMENTAL POLICY ACT ENVIRONMENTAL CHECKLIST

APPENDIX B

This environmental checklist covers the entire ETF. This environmental checklist is being submitted concurrently with the *Notice of Intent for Expansion Under Interim Status for the 242-A Evaporator/PUREX Condensate Treatment Facility*, in accordance with Washington Administrative Code 173-303-281(3)(a)(v).

STATE ENVIRONMENTAL POLICY ACT
ENVIRONMENTAL CHECKLIST

FOR

PROJECT C-018H, 242-A Evaporator/PUREX Plant Process Treatment Facility

REVISION 0

September 1992

WASHINGTON ADMINISTRATIVE CODE
ENVIRONMENTAL CHECKLIST FORMS
[WAC 197-11-960]

A. BACKGROUND

1.Name of proposed project if applicable:

Permitting of the 242-A Evaporator/PUREX Plant Process Treatment Facility (C-018H) This *State Environmental Policy Act* (SEPA) *of 1971* Checklist is being submitted concurrently with the Clean Air Act Permit Applications for the construction and operation of the treatment facility.

2.Name of applicants:

U.S. Department of Energy, Field Office, Richland (RL)

3.Address and phone number of applicant and contact person:

U.S. Department of Energy
Richland Field Office
P.O. Box 550
Richland, Washington 99352

Westinghouse Hanford Company
PO Box 1970
Richland, Washington

Contact Persons:

James D. Bauer, Acting Program Manager
Office of Environmental Assurance,
Permits, and Policy
(509) 376-5441

G. W. Jackson, Manager
Regulatory Support
(509) 376-9315

4.Date checklist prepared:

September 1992

5.Agency requesting the checklist:

Washington State
Department of Ecology
Mail Stop PV-11
Olympia, WA 98504-8711

6.Proposed timing or schedule (including phasing, if applicable):

Construction of the Project C-018H facility is proposed to commence in 1993 with completion in 1994. Operation of the treatment facility is addressed in the *Hanford Federal Facility Agreement and Consent Order*.

7.Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No, but the design of the facility would allow for future expansion.

8.List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

The approved environmental assessment, *Hanford Environmental Compliance Project, Hanford Site, Richland Washington*, DOE/EA-0383, analyzes the environmental effects of Project C-018H.

A SEPA Checklist has been previously submitted concurrently with the *LERF RCRA Permit Application* in 1989.

Project C-018H is identified in the *Hanford Federal Facility Agreement and Consent Order*, 2 vols., Washington State Department of Ecology, U.S. Environmental Protection Agency, U.S. Department of Energy.

Environmental information on the Hanford Site, in general, can be found in the following references: (1) *Final Environmental Impact Statement - Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes*, DOE/EIS-0113 (U.S. Department of Energy, 1987, Richland, Washington), (2) *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL6415 Rev. 4 (Revision 4, Pacific Northwest Laboratory, 1991, Richland, Washington).

9.Do you know whether applications are pending for government approvals of other proposals directly affecting property covered by your proposal? If yes, explain.

Yes. Hanford Site currently has submitted a Hanford Facility Dangerous Waste Permit Application.

10.List any government approvals or permits that will be needed for your proposal, if known.

This Checklist accompanies a notice of construction for the 242-A Evaporator/PUREX Plant Process Treatment Facility (Project C-018H). Other permits that may be required for Project C-018H include a Washington State Dangerous Waste Permit, a NESHAP permit, and a State Waste Discharge Permit (SWDP) administered by the State of Washington Department of Ecology (Washington Administrative Code [WAC] 173-216), Radioactive Air Emissions Program pursuant to WAC 246-247, and a delisting petition has been filed with the Environmental Protection Agency in Washington D.C.

11.Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site.

The proposed action is to construct and operate a facility to treat and dispose of the 242-A Evaporator/Crystallizer process condensate (PC) and the combined PUREX Plant process condensates (PDD) and ammonia scrubber distillate (ASD) liquid effluent streams. If approved by the State of Washington, DOE proposes to construct a new land disposal system near the 200 West area and discharge the treated effluent to the new system. The DOE is considering, as a variation of the proposed action, to construct an effluent pipeline and outfall structure, and to discharge treated effluent directly to the Columbia River. The existing untreated PC, PDD and ASD effluents had been previously discharged directly to the soil column.

The PC, PDD and ASD would be routed from 200 East Area interim retention basins to the C-018H treatment facility until the inventory of the basins has been depleted, then the PC, PDD, ASD will be routed directly to the treatment facility. The facility would provide an effluent stream of a purity that may be discharged to either a Washington State-approved land disposal system at the 200 West Area of the Hanford Site or the Columbia River. The treatment system would be capable of meeting release limits based upon the State of Washington Industrial Waste Water Discharge Program (Washington Administrative Code [WAC] 173-216) or National Pollutant Discharge Elimination System (NPDES). The treatment system would be permitted under WAC-173-303,"Dangerous Waste Regulations", since the 242-A evaporator/crystallizer condensate has been determined to be a hazardous waste. The Columbia River outfall would be permitted under NPDES (40 CFR 122). The DOE has determined that soil column disposal is BAT for tritiated streams; however, regulatory uncertainties (i.e., EPA "delisting" requirements due to other constituents) may become a primary factor. The proposed discharge to the Columbia River would not require "delisting" in the NPDES process, but discharges directly to a public waterway are less desirable to DOE and may be less desirable to the public.

While other radionuclides and contaminants may be readily removed by several means (e.g., neutralization, filtration, reverse osmosis, organic destruction, and ion exchange), such treatments generally do not affect the tritium flow path or release rates. Therefore, although the other key constituents would be reduced in the effluent, the total amount of tritium released to the environment would be the same, regardless of discharge to the soil column or Columbia River. Several disposal alternatives for tritium-contaminated wastewater streams have been evaluated. This alternative study concluded that there is no economically available technology that can be applied to tritium management at the Hanford Site to provide significant environmental benefit over past practice. Therefore, the proposed action includes discharge to an uncontaminated site, resulting in a mitigated discharge to the Columbia River via ground water migration. The dual effects of extended travel time (allowing for radiation decay) and reduction of a driving force from existing contaminated sites provide an overall reduction of tritium-induced environmental impacts compared to current Hanford Site operations.

Construction of the facility is proposed to commence in 1993 with completion in 1994. The treatment system would consist of multiple components, including staging tanks, the removal of

suspended solids, the removal of organics, chemical addition for ammonium sulfate formation, dissolved solids removal, dissolved solids polishing, pH adjustment, verification tanks, and secondary waste concentration.

A building would be constructed to house the process equipment. The building is needed primarily to provide personnel and environmental protection through containment of the effluent streams. Areas within the building will be shielded for ALARA purposes for personnel protection from waste streams prior to treatment, and from the process equipment (e.g., potentially concentrated ion exchange resin). Consideration was also given to protection of the equipment from the elements (e.g., wind and dust). The building would be constructed near the Liquid Effluent Retention Facility (LERF to minimize the cost of providing utility piping and wiring). The facility air exhaust system would be equipped with an exhaust fan, HEPA filter, and record sample monitor with isokinetic sample line(s). Road improvements would be provided, as necessary, to allow access to the building. Water, sewer, electrical, and communication services will be extended from the existing 200 east area services.

All piping would be designed to drain back to the treatment process with minimal holdup. All influent piping external to the building containing radioactive material would be encased and include leak detection equipment. Instrumentation would be provided to control and monitor the effluent treatment process. Existing plant water and electrical supplies would be used.

The land disposal system near the 200 area would consist of an underground drain field, liquid-level gauge wells, vent risers with filters, dry wells, and groundwater monitoring wells. The precise location of the system will be determined by the ongoing site selection process. The design percolation rate would be established by site testing and/or evaluation of disposal site soil characteristics. The design of the disposal system would include, at a minimum, a stabilized finished grade to prevent water ponding, security fences according to plant standards, necessary piping and pumping stations, redundant composite samplers, stabilization of all disturbed areas, and environmental monitoring systems/stations as required by permit.

A Columbia River discharge would occur either through an existing outfall in the 100N Area or by construction of a new outfall south of the 100F Area. A pipeline would be installed from the 200 East Area to the outfall.

The treatment system would be capable of meeting release limits based upon State of Washington Industrial Waste Water Discharge Program (WAC 173-216) or an NPDES permit. Washington State regulations require the application of all known, available, and reasonable technology (AKART) to prevent and control the discharge of wastes into the waterways throughout the state. During the permitting process, the appropriate treatment system design would be determined by the AKART process. Since the 242-A Evaporator/Crystallizer effluent is a listed hazardous waste, the treated stream would have to go through a delisting procedure before it can be discharged to the soil column. Approximate total processing rate anticipated for the treatment system is 150 gallons maximum per minute.

12.Give the location of the proposal. Give sufficient information for a person to understand the precise location of the proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available.

The Hanford Site is an approximately 560 square mile (1450 square kilometers) area in southeastern Washington State. A map of the Hanford Facility is attached.

B. ENVIRONMENTAL ELEMENTS

1.Earth

a.General description of the site (indicate one): Flat, rolling, hilly, steep, mountainous, other.

The terrain of the central and eastern portions of the Hanford Site is relatively flat. Project C-018H will be located in and around the 200 Areas which is a flat portion of the facility. Detailed descriptions of individual site can be found in the Permit Application. A more detailed description of the Hanford Site can be found in *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415 (Revision 2, Pacific Northwest Laboratory, 1990, Richland, Washington).

b.What is the steepest slope on the site (approximate percent slope)?

The approximate slope of the land used by Project C-018H is less than two percent.

c.What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The soil at the Project C-018H site consists primarily of silty, sandy gravel. No farming is permitted on or near the project site.

d.Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

e.Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate the source of the fill.

Excavation and trenching will be required for the construction of Project C-018H including that required to construct the pipeline and the land disposal unit.

f.Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Erosion due to wind and/or precipitation occurs in areas on and directly surrounding Project C-018H during construction.

g.Approximately what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Less than 10% of the Project C-018H treatment facility site will be affected by impervious surfaces. Less than 1% of the land disposal site will be affected by impervious surfaces.

h.Proposed measures to reduce or control erosion, or other impacts to the earth, if any?

To control the amount of dust generated by construction activities, water trucks will periodically spray disturbed areas. Paved access roadways and graveled parking areas will be provided to minimize erosion due to vehicular traffic.

2.Air

a.What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Small amounts of air emissions exhaust will be generated by construction equipment and vehicles used by building personnel to gain access to the site. Some dust will be generated during construction activities.

Air emissions which result from the operational activities associated with Project C-018H include radionuclides and other air pollutants. Estimates of specific pollutants and amounts may be found in the Toxic Air Pollutants application.

b.Are there any off-site sources of emissions or odors that may affect your proposal? If so, generally describe.

No.

c.Proposed measures to reduce or control emissions or other impacts to the air, if any?

To control the amount of dust generated by construction activities, water trucks will be available to periodically spray affected areas. The treatment facility will use appropriate air monitoring and sampling equipment, and HEPA filters to ensure that air emissions remain within applicable regulatory limits and guidelines at all times.

3.Water

a.Surface:

1)Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No.

2)Will the project require any work over, in, or adjacent to [within 200 feet (61 meters) of] the described waters? If yes, please describe and attach available plans.

No.

3)Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Material removed during pipeline installation will be used to backfill the pipeline resulting in no net change in elevation.

4)Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

Yes. A small amount of sanitary water used on the facility is withdrawn from the Columbia River.

5)Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No.

6)Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

Project C-018H may discharge liquid effluent to the Columbia River. The specific details of those units will be documented in the discharge permit applications that would be submitted.

b.Ground:

1)Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities, if known.

Treated effluent would be discharged to the ground water, as described in the answer to question 3.b.2.

2)Describe waste materials that will be discharged into the ground from septic waste tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

The treatment system would be capable of meeting release limits based upon State of Washington Industrial Waste Water Discharge Program (WAC 173-216). During the permitting process, the appropriate treatment system design would be determined by the AKART process. Approximate total processing rate anticipated for the treatment system is 150 gallons maximum per minute.

A septic tank and drain field will be installed to receive sanitary waste from the restrooms, changerooms, showers, and the lunchroom for Project C-018H.

c.Water run-off (including storm water):

1)Describe the source of run-off (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Precipitation run-off might occur. However, due to the small amount of precipitation that normally falls in the area, the amount of precipitation run-off is expected to be small.

2)Could waste materials enter ground or surface waters? If so, generally describe.

No. The only waste material generated will be the liquid effluents, discussed previously.

d.Proposed measures to reduce or control surface, ground, and run-off water impacts, if any:

The design of the disposal system would include, at a minimum, a stabilized finished grade to prevent water ponding.

4.Plants

a.Check the types of vegetation found on the site:

__ deciduous tree: alder, maple, aspen, other
__ evergreen tree: fir, cedar, pine, other
_X_ shrubs
_X_ grass
__ pasture
__ crop or grain
___wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
__ water plants: water lily, eelgrass, milfoil, other
__ other types of vegetation

The vegetation on the site consist of sagebrush, forbs, and other common central Washington desert plant species. A more detailed description of the Hanford Site can be found in *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415 (Revision 4, Pacific Northwest Laboratory, 1991, Richland, Washington).

b.What kind and amount of vegetation will be removed or altered?

Grasses, shrubs, and forbs will be removed during construction.

c.List threatened or endangered species known to be on or near the site.

No threatened or endangered plant species are known to depend on habitat unique to the Project C-018H site. Additional information can be found in *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415 (Revision 4, Pacific Northwest Laboratory, 1991, Richland, Washington).

d.Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Disturbed areas will be stabilized where ever possible.

5.Animals

a.Indicate (by underlining) any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: <u>hawk</u>, heron, <u>eagle</u>, <u>songbirds</u>, <u>other</u>
mammals: <u>deer</u>, bear, elk, beaver, <u>other</u>
fish: bass, salmon, trout, herring, shellfish, other

A variety of insects, birds, and mammals common to the Hanford Site, including pigeons, passerine birds, rodents, and lagomorphs have been observed at the proposed TSD units. Larger mammals commonly seen in the vicinity include deer and coyote. Additional information on birds and animals on the Hanford Site can be found in *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415 (Revision 4, Pacific Northwest Laboratory, 1991, Richland, Washington).

b.List any threatened or endangered species known to be on or near the site.

No threatened or endangered animal species are known to depend on habitat unique to the Project C-018H site.

c.Is the site part of a migration route? If so, explain.

Yes. The Columbia River is part of the broad Pacific Flyway for waterfowl migration and other birds also migrate along the river.

d.Proposed measures to preserve or enhance wildlife, if any:

None.

6.Energy and Natural Resources

a.What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Diesel fuel, gasoline, oil, and electrical power will be used to operate construction and operation equipment, to power building ventilation and lighting systems, and to provide process heating.

b.Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c.What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Energy conservation guidelines outlined in the U.S. Department of Energy Order 6430.1A, "General Design Criteria," will be incorporated in the design.

7.Environmental Health

a.Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Yes. Review part 2 of this question for further details.

1)Describe special emergency services that might be required.

Hanford Site security, fire response, ambulance services, and an emergency communications and response system are on call 24 hours a day, 7 days a week, in the event of an onsite emergency.

2)Proposed measures to reduce or control environmental health hazards, if any:

A building would be constructed to house the process equipment. Containment will provide personnel and environmental protection from the effluent streams. Areas within the building will be shielded for radiation protection purposes for personnel protection from waste streams prior to treatment, and from the process equipment (e.g., potentially concentrated ion exchange resin). Consideration was also given to protection of the equipment from the elements (e.g., wind and dust). The facility would be equipped with an exhaust fan, HEPA filter, and record sample monitor with isokinetic sample line(s). All piping would be designed to drain back to the treatment process with minimal holdup. Influent piping external to the building containing radioactive material would be encased and include leak detection equipment.

b.Noise

1)What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

2)What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Excavation, construction, and operation of Project C-018H will increase noise levels in the immediate vicinity of the site. The primary sources of noise will be heavy equipment during the construction phase and exhaust systems during the operational phase. However, the remote location of the project will prevent any detectable increase in noise levels off the Hanford Site.

3)Proposed measures to reduce or control noise impacts, if any:

Excavation, construction, and operational equipment will meet manufacturer's requirements for noise suppression.

8.Land and Shoreline Use

a.What is the current use of the site and adjacent properties?

Project C-018H is a part of the U.S. Government-owned Hanford Site, which is used for the management of waste associated with the cleanup from past and/or present production of special nuclear materials and for energy research. Commercial activities on the Hanford Site include a nuclear power plant and a State of Washington administered low-level burial area operated by U.S. Ecology.

b.Has the site been used for agriculture? If so, describe.

The site of Project C-018H and the area adjacent to it has not been used for agricultural purposes since 1943.

c.Describe any structures on the site.

No structures currently exist on the site of Project C-018H.

d.Will any structures be demolished? If so, what?

No.

e.What is the current zoning classification of the site?

The Hanford Site is zoned by Benton County as an Unclassified Use (U) district.

f.What is the current comprehensive plan designation of the site?

The 1985 Benton County Comprehensive Land Use Plan designates the Hanford Site as the "Hanford Reservation". Under this designation, land on the Hanford Site may be used for "activities nuclear in nature." Nonnuclear activities are authorized "if and when DOE approval for such activities is obtained."

g.If applicable, what is the current shoreline master program designation of the site?

Does not apply.

h.Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

The shoreline of the Columbia River, an environmentally sensitive area could be afected by construction of an outfall.

i.Approximately how many people would reside or work in the completed project?

Approximately 200 people will work on Project C-018H.

j.Approximately how many people would the completed project displace?

None.

k.Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

l.Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Does not apply. (Refer to Checklist Question B.8.f.)

9.Housing

a.Approximately how many units would be provided, if any? Indicate whether high-, middle-, or low-income housing.

None.

b.Approximately how many units, if any, would be eliminated? Indicate whether high-, middle-, or low-income housing.

None.

c.Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10.Aesthetics

a.What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The building that houses Project C-018H would be a 40,000 square foot pre-engineered metal building with a maximum height of 45 feet and an average height of 35 feet.

b.What views in the immediate vicinity would be altered or obstructed?

None.

c.Proposed measures to reduce or control aesthetic impacts, if any:

None.

11.Light and Glare

a.What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

b.Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c.What existing off-site sources of light or glare may affect your proposal?

None.

d.Proposed measures to reduce or control light and glare impacts, if any:

Does not apply.

12.Recreation

a.What designated and informal recreational opportunities are in the immediate vicinity?

None.

b.Would the proposed project displace any existing recreational uses? If so, describe.

Does not apply.

c.Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any?

Does not apply.

13.Historic and Cultural Preservation

a.Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

The pipeline from the treatment facility to the land disposal site would cross the historic White Bluffs Road, any disturbance to the road would be minimized by restoring the grade of the road and revegetating the disturbed area. The State Historic Preservation Officer will be notified.

b.Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

The pipeline from the treatment facility to the land disposal site will pass near a prehistoric cairn. The grade near the marker will be restored and the disturbed soil stabilized. There would be no anticipated impact directly to the cairn.

c.Proposed measures to reduce or control impacts, if any:

Where appropriate, a cultural resource review will provide the vehicle for necessary approvals required under the *National Historic Preservation Act of 1966*.

14.Transportation
a.Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

See the attached map.

b.Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

Project C-018H is not served by public transit.

c.How many parking spaces would the completed project have? How many would the project eliminate?

A small parking area would be provided for Project C-018H.

d.Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

Access roads to the land disposal site and the facility will be installed. The roads will not be publicly accessible.

e.Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f.How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Peak traffic volumes will occur at the beginning and end of regular 8-hour working shifts. Many employees, however, will use the Hanford Site shuttle bus system that will transport employees from northern Richland to the TSD units.

g.Proposed measures to reduce or control transportation impacts, if any:

None.

15.Public Services

a.Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

b.Proposed measures to reduce or control direct impacts on public services, if any:

Does not apply.

16.Utilities

a.List utilities currently available at the site (electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other):

Currently electricity, telephone, and water utilities are available near the Project C-018H site.

b.Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Existing utilities will be extended to Project C-018H. A septic system will be installed as part of the project.

SIGNATURES

These answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

_____ _____

James D. Bauer, Acting Program Manager — Date
Office of Environmental Assurance,
Permits, and Policy
U.S. Department of Energy
Richland Field Office

_____ _____

G. W. Jackson, Manager — Date
Regulatory Support
Westinghouse Hanford Company

APPENDIX C

COPIES OF NOTICE OF NONCOMPLIANCE AND THE U.S. DEPARTMENT OF ENERGY, RICHLAND FIELD OFFICE RESPONSES

APPENDIX C

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APPENDIX C-1

NOTICE OF NONCOMPLIANCE 200 EAST AREA TANK FARMS

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KRISTINE M. GEBBIE
Secretary

AIR 92-703.200E

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
Airdustrial Center, Bldg. 5, LE-13 • P.O. Box 47827 • Olympia, Washington 98504-7827

August 5, 1992

Mr. Ron Gerton, Manager
Tank Farms Project Office
Department of Energy
P. O. Box 550
Richland, Washington 99352

Dear Mr. Gerton:

Enclosed please find our regulatory audit results for the 200-East Area Tank Farms. As you know, the field inspections were performed in March and April 1992. A close out meeting was held to give preliminary findings and audit results.

Please provide a Program Plan to address resolution and corrective actions for audit results. Include a listing of responsible persons and organizations and a reasonable schedule for completion for each audit result and its specified expected response(s). This information is required by November 15, 1992.

Please contact me at (206) 586-0254, or write to the above address if any clarification is needed.

Sincerely,

Allen W. Conklin, Head
Air Emissions and Defense Waste
Division of Radiation Protection

AWC/JB/jr

cc: T. R. Strong
Rick Poeton
Robert King
Robert Mooney

A REGULATORY AUDIT

OF

RADIOACTIVE AIR EMISSIONS

FROM THE

200-EAST TANK FARMS

AT

HANFORD

By The
Air Emissions And Defense Waste Section
Division Of Radiation Protection
Department Of Health
State Of Washington

August 4, 1992

EXECUTIVE SUMMARY

Under the authority of Washington State's Radioactive Air Emissions Program, a technical audit of airborne radioactive emissions from Hanford's 200-East Area Tank Farms was conducted by the Department of Health, Division of Radiation Protection, along with assistance from the Environmental Protection Agency (EPA) Region 10, and the Department of Ecology. Field evaluations were performed in March and April of 1992.

The purpose of this audit was to verify compliance with the federal and state Clean Air Acts' provisions for airborne radioactivity, and with conditions established in a facility permit originally issued in 1989 and renewed in August 1991 (Permit FF-01).

No findings were identified that adversely affect public health and safety, or that would call into question the facility's compliance with the offsite dose standard of 10 mrem/yr effective dose equivalent. However, the facility-related compliance issues identified by this audit will require verification and correction to assure the public is protected from potential releases of radioactive emissions.

The principle findings centered around shortcomings in compliance to the Reasonably Available Control Technology (RACT) engineering standard, mandated under WAC 173-480-050. In addition:

- Quality assurance oversight as it relates to radioactive air emissions was found to be limited;
- The lack of calibration of instruments used to measure and monitor for radioactive airborne emissions was observed;
- Irregularities in reporting for sampling data and in the calculation of emissions were found. Fugitive emissions (uncontrolled release of radionuclides) were found at several sites within the 200-East tank farms.
- Access was denied to information on past QA findings and corrective actions, and to radioactive source term data, contrary to permit conditions and prior agreements; and, an unresolved safety question (USQ) was also reported to the Department (tank criticality).

Several issues were found and included in this audit as Observations and as Best Management Practices. Noteworthy issues were: inadequate drawings, a user unfriendly PISCES database, difficulties with HEPA filter testing, a cumbersome document clearance process, an underutilized job control system (JCS) and QUEST database.

Several "other" issues were identified for further review by the Department or other regulatory authority at a future date. Also, positive observations were expressed.

INTRODUCTION

Background

In August 1989, the Department of Health (Department) initially issued a permit to the Hanford facility, operated by the United States Department of Energy (USDOE), for a two year period, which was renewed in 1991. This permit (FF-01) was issued in accordance with Washington State's Radioactive Air Emissions Program under Washington Administrative Code (WAC) 402-80, which is now WAC 246-247 (ref. 1).

As part of that permit, USDOE registered 129 emission units (stacks and vents), including fifteen (15) associated with the 200-East Tank Farms. The following tank farms were included in the audit scope: A, AN, AP, AW, AY, AZ, B, BX, BY, and C Farms. Related facilities were not reviewed by this audit, although the CR Vault was reviewed as part of the C Tank Farm.

The Department has the responsibility to ensure compliance with all applicable regulations related to radioactive airborne emissions. As part of the verification process and prior to renewal of the sitewide permit in August 1991, the Department recognized the need to begin an in-depth review process of permitted facilities. The audit process began with a Technical Review of the Plutonium Finishing Plar (PFP). (ref. 2) As a continuation of the audit process, the 200-East Tank Farms was then selected. The reasons for the selection of these facilities include the following:

- The expected radioactive material source term is concentrated in the waste tanks. The 200-East Tank Farms contain the largest volume of high level radioactive waste material at Hanford, implying a large "potential to emit;"

- Several Unusual Occurrences were reported for the 200-East Tank Farms facilities by the USDOE under their occurrence reporting procedures that may impact air emissions;

- Power outages in the 200-East area have adversely affected operations in the area, causing ventilation systems to fail;

- It is a sufficiently complex facility to provide ample training for the Department's staff in reviewing facilities to the RACT engineering standard, and to further develop a professional working relationship with Westinghouse Hanford Company (WHC) and USDOE; and,

- Most importantly, to verify compliance to regulations.

Authority

The authority for the Department to regulate airborne radioactive emissions from federal facilities, and to conduct inspections and audits begins with Section 118 of the federal Clean Air Act, which states "... the Federal Government... shall be subject to, and comply with, all... state... requirements, administrative authority, and processes and sanctions respecting the control and abatement of air pollution..." (ref. 3).

Under the authority of the state Clean Air Act (ref. 4) Washington State promulgated it's own regulations, giving the Department of Ecology the authority to set standards for airborne radionuclides. These standards were established in 1986 in WAC 173-480 (ref. 5). The authority to enforce those standards was given to the Department of Health, as the radiation control agency (ref. 6). The Department of Health's WAC 246-247 was adopted on August 10, 1988.

One of the standards in WAC 173-480-050 (3) states that, "whenever another federal or state regulation or limitation in effect controls the emission of radionuclides to the ambient air, the more stringent control of emissions shall govern." The Department, therefore, also has authority to enforce (but not supersede the Environmental Protection Agency's authority for) the conditions established in 40 CFR 61, "National Emission Standards for Hazardous Air pollutants; Radionuclides.." (ref. 7). The Department is currently seeking delegation of authority from EPA for the direct enforcement of 40 CFR 61. Another standard in WAC 173-480-050-050 (1) states that, "All radionuclide emission units are required to meet the emission standards in this chapter. At a minimum, all existing emission units shall meet WAC 402-10-010 [now 246-220-007] requiring every reasonable effort to maintain radioactive materials in effluents to unrestricted areas, as low as reasonably achievable (ALARA). For the purposes of this chapter, control equipment of facilities operating under ALARA shall be defined as reasonably available control technology (RACT)." The definition of ALARA is interpreted in WAC 246-220-007, which states in part, "...The term "as low as reasonably achievable" means as low as is readily achievable taking into account the state of technology, and the economics of improvements in relation to benefits to the public health and safety and in relation to the utilization of nuclear energy, ionizing radiation, and radioactive materials in the public interest."

The Department, therefore, conducted this review under the following authorities:

- The conditions and limitations of permit FF-01, including the required supplemental information;
- The federal and state Clean Air Acts;
- The regulations in WAC 173-480 and WAC 246-247; and,
- The conditions of 40 CFR 61, with EPA, and as required in WAC 173-480.

Scope

The scope for this audit was limited to selectively chosen emission sources in the 200-East Tank Farms, which are considered to represent the entire facility. An emphasis was placed on the reasonably available control technology (RACT) engineering standard, permit registration, construction or modification approval and selected aspects of quality assurance. Radiation surveys and quality surveillances were included.

Audit staff included the following individuals:

NAME	AREA OF REVIEW
Al Conklin	Manager
John Blacklaw	Lead Auditor, Abatement Technology
Don Peterson	Indication, CAMs (NESHAPs)
Kathy Fox-Williams	Fugitive Emissions, Health Physics
Cindy Grant	Quality Assurance, Permits
Randy Acselrod	Controls (Auto./Admin.), U.O.s
Mike Robertson	Observer
Ed Bricker	Support
Al Danielson	Support
Rick Poeton	EPA Observer
Bob King	WDOE Observer

Specifically, the following areas were evaluated:

* Stack and air monitor flow procedures
* Air sampler procedures,
* HEPA Filter change and test procedures,
* Effluent system schematics,
* Source term data,
* Control technology and efficiencies,
* Sample Data,
* Organizational structure and lines of communication, and
* The overall quality assurance program.

Interviews were conducted with personnel responsible for the above areas; and, whenever possible, documents were evaluated.

Background on the 200-East Tank Farms

The 200-East Area Tank Farms is located in 200-East Area of the Hanford complex. These facilities are centrally located within the reservation, and maximally isolated from the general public. At the tank farms, waste from the chemical reprocessing of reactor fuels is stored. Because these wastes will retain radioactivity for many years, they must be safely managed, contained, and disposed with regard to protection of the environment, employees, and the public. The radioactive liquid and solid wastes are stored in underground carbon steel tanks ranging from 55,000 to over 1 million gallons. (Reference 8)

One hundred and forty-nine (149) single-shell tanks (SSTs) were constructed between 1944 and 1964 at Hanford. All SSTs have been removed from active service. Twenty-Eight (28) double-shell tanks (DSTs), all having been build since 1968, are in active service. The DSTs are concrete-reinforced vessels with two concentric carbon steel liners, a tank within a tank. The annular space between the steel liners is monitored to detect any leakage from the inner tank and to trap any leakage so that it can be removed from the tank annulus space. Sixty-six of the single-shell tanks and 25 of the double-shell tanks are located in the 200-East Area. The remaining tanks are located in a similar configuration in the 200-West Area (about five miles from the 200-East Area). (Reference 3)

Safety evaluations have identified four (4) highest priority safety issues involving five double-shell tanks and 48 single-shell tanks:

* Flammable gas generation in Tank 101-SY and other tanks,
* Potential explosive mixtures of ferrocyanide in tanks,
* Potential organic-nitrate reactions in tanks, and
* Continued cooling required for high-heat generation in Tank 106-C.

An Unresolved Safety Question (USQ) was identified in May 1992:

* Tank Criticality being incredible (although very unlikely) is not proven by existing data and analysis.

The need for resolution of five (5) additional lower priority safety issues has been identified: (Reference 9)

* Tank Safe Operating Life,
* Excessive hydroxide consumption in Tank 107-AN,
* Intertank ventilation connections,
* insufficient tank contents characterization, and
* inadequate safety documentation.

RESULTS OF THE AUDIT

The audit was conducted during March and April, 1992, with significant efforts being expended in the weeks prior to accommodate access training requirements and to review documentation. During the Department's pre-audit efforts, liaison with USDOE counterparts in the Tank Farm organization was unsuccessfully attempted. The Department's compliance with training requirements was time consuming and limited the technical preparation for the audit. During the audit, access was denied for information regarding the Quality Assurance findings and corrective actions for radioactive air emissions at the 200-East Area Tank Farms, and the radioactive source term data for the AY and AZ tank farms, contrary to prior agreements and permit conditions. In spite of these difficulties, Westinghouse staff were very cooperative and helpful and understood that our audit was intended to assist them in bringing the facility into full compliance.

Compliance was evaluated, with findings and observations prepared as follows:

- Finding (Level I): This level of finding would have actual public health implications; i.e., levels of releases that could cause excessive risk to the general public.

- Finding (Level II): This level of finding would indicate that compliance problems wit' the 10 mrem/yr standard could exist.

- Finding (Level III): This level of finding indicates that, although the facility is in compliance with the dose standard, they are out of compliance with other technical requirements. These areas could affect the final dose calculations.

- Observation: This is an area of noncompliance that would not be expected to alter the dose calculations, but requires correction.

- Best Management Practice: This does not represent a significant area of noncompliance with specific regulations, but is, in the opinion of the reviewers, an area that needs improvement.

- "Other Issues": Several "Other issues" were identified outside of the scope of this audit that have merit for further review during future audits under this and/or other regulatory authority.

- Positive Issues: Several issues are of a positive nature and represent contributions to improvements in facility and management performance.

Audit Results Format

The format for audit results is consistently expressed. A short description of the result is given directly after the numbered Finding, Observation, or Best Management Practice. Next, the regulatory authority for the audit result is quoted; e.g., WAC 246-247-050. Then, a general discussion of the basis for the result is given in some detail to augment the short description. Specific details are given or referenced. At the conclusion, indented statements of expected responses are given after the stars (*). Corrective actions that result from this audit must conform to the expected responses given for each audit result. "Other Issues" and Positive Issues give only a short description of the audit result.

AUDIT RESULTS

I. Finding (Level I): None were identified.

II. Finding (Level II): None were identified.

III. Finding (Level III):

1. **FINDING:** Potential temporary emission units (greenhouses) were found adjacent to the tank farms without prior approval of the Department. The potential emissions sources were inadequately controlled and not monitored.

Requirement: WAC 246-247-060, 070, and 080.

Discussion: In a Pre-audit inspection, seven "greenhouses" were observed that were posted as "airborne radioactivity," indicating that the site was a potential emissions unit. They provided inadequate containment, contained only breathing filters that were not Best Available Radionuclide Control Technology (BARCT), contained no monitoring equipment, and were not approved by the Department. We were told that the posting was precautionary only, and did not represent sources. USDOE and Westinghouse were verbally notified that they were not in compliance with the regulations. They were given the opportunity to provide documentation that Health's observation was incorrect. To date, however, no documentation has been provided.

* All current and future greenhouses and similar portable containment structures must be approved by the Department; or be documented that they are not potential sources.

2. **FINDING:** Indications of potential fugitive emissions were found at several locations in the tank farms.

Requirement: WAC 173-480-050 (1) (RACT/ALARA)

Discussion: Smearable contamination was found at several locations that appear to be the result of airborne emissions. They were: CR Vault cover blocks; 241-AX Valve Pit; 241-A Valve Pit; 241-A-101 lead plate; the riser in CR vault area; observation ports over 241-B-112; 241-C-103; and tank farm fence lines. Low-level contamination in 200 East Area may, in part, originate from these fugitive emission sources.

* Evaluate the offsite impact of fugitive emissions from 200-East tank farm sources.
* Decontaminate and eliminate fugitive sources, wherever practical.
* Estimates of offsite doses from fugitive emissions must be included in the annual report to the Department.

3. **FINDING:** Of nine tank farm ventilation systems inspected, only three were operating. The others were "out of service."

Requirement: WAC 173-480-050 (1) (RACT/ALARA)

Discussion: The implications of the ventilation systems not operating is unknown, since the monitoring systems are ineffective for non-functioning stacks. Some of the stacks in question have large source terms in the form of waste tank contents. The 105-A and 106-C stacks are for high heat tanks, (high radioactivity and heat rates). The potential for fugitive emissions from these non-operating stacks appears to be high.

* Justify the elimination of ventilation systems that are unnecessary, and stabilize the "out-of service" condition, as soon as practical.
* For any ventilation systems that must operate, perform any and all maintenance necessary to reliably bring "out-of service" exhausters on-line as soon as practical, with a priority and a schedule agreed upon between the USDOE and the Department.

4. **FINDING:** A lack of emissions control is evident at the 105-A exhauster.

Requirement: WAC 173-480-050 (RACT/ALARA).

Discussion: A lack of control was evident at the 105-A exhauster. Evidence included contaminated water dripping from the vent into buckets under the ducts. This may result in the degradation of the downstream HEPA filters.

* This situation must be evaluated and corrected.

5. **FINDING:** Of the exhausters inspected, all have instruments with calibration stickers that were "out-of-date."

Requirement: 40 CFR 61, Method 114, App. B., 4.3

Discussion: All stack monitoring systems had at least one instrument (and in some cases, all) "out of calibration." The most updated calibration was noted on the CAMs. All pressure gages were "uncalibrated." In interviews with responsible staff, we were told that the PISCES database represented the "primary" data on calibration, while the calibration equipment tag was "secondary." We were not able to verify this by written policy or procedure, although it is universally accepted at the facility. Even so, the tags must be representative of the primary data, if it is located elsewhere, such as in the PISCES database. Our attempt to correlate a specific field calibration to the PISCES database was unsuccessful, even with help from trained staff. Either the equipment is "out of calibration" and we could not verify it in PISCES, or the calibration tags do not reflect the actual calibration represented by PISCES.

* Improve the calibration program. Base the program on realistic equipment requirements based on documented operating specifications.
* Install instruments that are calibrated to tolerances that can be assured within the calibration frequency chosen.
* Make the calibration tag and database system compatible and available for periodic inspections.
* Implement audit and corrective action programs to assure continued improvements in the calibration program.

6. **FINDING:** The implementation of the Quality Assurance Program Plan (QAPP), as required by the NESHAPs, is inadequate.

Requirement: 40 CFR 61, Method 114, App. B., 4.

Discussion: The QAPP document reviewed during the audit represents a positive contribution toward addressing the concerns of the Department. However, it lacks an effective implementation. The definition of organizational responsibilities within the QAPP is deficient as is the interface to the existing QA organization and it's charters, policies, procedures, and organization structure. Some of the QA groups interviewed had not seen the QAPP or knew their specified duties as identified in the QAPP. No specific organization or group could be identified that was chartered with the responsibility of performing audits or corrective action for the NESHAPs. This is evidence of a lack of implementation by all parties who have been delegated authority to perform the QAPP responsibility.

* The USDOE and its contractors must implement a QAPP that meets the requirements of the NESHAPs. They must be implemented into an overall QA program that meets a national standard, such as NQA-1.

* The QAPP must be planned and implemented in an organized manner with established interfaces, charters and responsibilities. Responsible staff must remain adequately trained.
* Provide a plan on implementation of the QAPP for Department review to include at least: requirements, organizational structure, interfaces, and oversight.
* Implement an audit and corrective action program to do oversight of the QAPP to assure compliance to the requirements.
* Include a listing of oversight responsibilities by organization as an addendum to any QAPP.
* The Department highly recommends that an independent QA consultant be hired to develop QAPPs that meet the requirements.

7. **FINDING:** The sampling probes for the AY and AZ tank farms are not isokinetic.

Requirement: WAC 173-480-050 (3) and 40 CFR 61, and 40 CFR 60, Method 5.

Discussion: The matching of probe and stack velocities is necessary to obtain an isokinetic condition. Representative sampling is jeopardized for stacks with larger particulate emissions, when the sample probe and stack do not have coincident velocities. Particle size distribution for the AY and AZ stacks is unknown.

The NESHAPs guidance under 40 CFR 60, Method 5, specifies a +/- 10% allowance, howev Hanford operates at +/- 20%.

The document (WHC-SD-WM-ER-054, Rev 0, 1989) stated that the AY and AZ sample probes were not operated isokinetically. A memo from Bramson, 1991, contradicted that document, stating that the A-20 stack requires modification, while the A-18 and A-19 stacks are "OK." Weekly stack flow data for A-40 and A-17 stacks show that the stack flow rates vary considerably with time, while the sampler flow rates also vary to a lesser degree, but not in coincidence with the stack flow rate. Also, the sample filter has a pressure drop which increases over the sampling period, as the filter loads up. This will affect the pressure at the sampler flow device, and therefore produce flow rates that need pressure compensation. Calculation of this error has been estimated to be as large as 20%.

* Evaluate the standard isokinetic condition, including any pressure and temperature compensations, for the AY and AZ sample probes.
* Evaluate the compliance requirements of the NESHAPs and determine the allowance (10% versus 20%) for isokinetic flow.
* Prepare a program plan to address the issue of meeting isokinetic flow requirements, to include any necessity to perform temperature and pressure compensations, or to adjust the sample flow coincident with stack flow variation.

8. **FINDING:** Several flow meters, or rotameters had inadequate paper tapes attached denoting CFM (cubic feet per minute).

Requirement: 40 CFR 61, Method 114, App. B., 4.3.

Discussion: Paper tapes are inaccurate and lack permanency. Calibration of the paper tapes is not evident, calling into question the reliability and precision of data. Sampler flow data is reported on the envelope that holds the weekly record sample, for the start and end of the sample period. The integrity of the data, including chain-of-custody, is essential for emissions calculations.

* Remove all uncalibrated paper tapes, or replace the paper tapes with a permanent scale that is calibrated. Replace equipment, as necessary.
* Assure that all flow rate devices are calibrated.
* Prepare a plan to address the collection of flow data for stack samplers and CAMs to be consistent with the indication scales on the flow devices installed in the field. Revise any data sheets and data reduction procedures to include the appropriate units of measure.
* Evaluate the chain-of-custody for sampler flow rate data used to estimate the radioactive airborne emission rate included in the annual report to the Department.
* Train personnel in the correct method of collecting data and adjusting sampler and CAM flow rates.
* Implement an audit and corrective action program to assure that sampler and CAM flow rates are monitored and used correctly in the field, and that there is a chain of custody from data collection to inclusion in the annual report.

9. **FINDING:** The Department was denied access to the QUEST database on repeated occasions during audit preparation and during field inspections. The input data in the form of audits and corrective action documents were also requested, but not provided after repeated requests.

Requirement: 42 USA 7414 (a)(2) and 40 CFR 61, Method 114, App. B., 4.
Permit FF-01

Discussion: Access to the QUEST database information relative to the regulation of radioactive airborne emissions was requested and denied. Even during the field inspections, the request was repeated with the allowance that the audit and corrective action reports that are the basis of the QUEST database would be sufficient. Upon repeated requests to review audits, none were provided. This is contrary to permit conditions and agreements made by USDOE that all information would be available, at least for onsite review.

Since verification of the existence of audit results requires access of the QUEST database, access is, therefore, mandatory.

* Provide the Department access to the QUEST database to verify the existence of regulatory information pertaining to radioactive airborne emissions.
* Provide audit and corrective action reports that may be identified by the Department.
* Provide justification for denial of access to the QUEST database.
* Provide justification for not providing requested audit and corrective action reports.

10. **FINDING:** There are several sample periods missing for 1991 for the stacks evaluated.

Requirement: 40 CFR 61, and WAC 246-247-080(5)

Discussion: The Department reviewed EDP Code E059 weekly stack sample data for 296-A-17 and 296-A-40 stacks. If the exhausters and air sampler vacuum pumps were not operating during these periods, then the data would be accurate.

* Provide a log indicating the operating and non-operating time periods for the exhausters and air sampler vacuum pumps for the referenced stacks.
* Justify the occurrence of any time periods that have a no flow condition for t exhausters and air sample vacuum pumps.
* Justify any occurrence of the on/off periods out of coincidence for the stack fan versus the air sample vacuum pumps, for both referenced stacks.

11. **FINDING:** The total annual air volume calculation methodology for stacks is inadequate.

Requirement: 40 CFR 61 and WAC 246-247-080(5)

Discussion: The elapsed hours for calculating the total volume of air released from the stack appear to be based on the time that the sampler was operating. This would not be an accurate method of establishing the elapsed hours for the total stack volume, unless the air sample vacuum was hard wired to operate only when the stack is operating. Our field inspections have shown that air sampler vacuum pumps may be plugged into either direct power or "switched" power. Both conditions were observed.

* Provide the methodology used to determine the total annual stack air volume released from a stack during a calendar year.
* Evaluate the adequacy of the stack flow determination method and make corrections, as necessary.
* Provide the revised method to the Department for review.

12. **FINDING:** The total CFM-hours for air samples at stacks 296-A-17 and 296-A-40 were often very low for 1991. These small samples reduce the detectability and increase the uncertainty in the dose calculation.

Requirement: 40 CFR 61, (ANSI N13.1), and WAC 246-247-080(5)

Discussion: The review of weekly stack data identified a high incidence of low volume samples, particularly for the last 3 months of 1991. The Westinghouse document WHC-EP-0479 (Facility Effluent Monitoring Plan for the Tank Farms Facilities) specifies that "the record sample flow rates shall be sized to provide optimum samples for laboratory analysis." The product of the sample flow rate and the sample collection time shall be at least 370 cfm-hours." This was not the case for any sample period during 1991 for these exhausters.

* Justify the sample analytical results based on the low cfm-hour samples.
* Justify the minimum sample size selection of 370 cfm-hours.
* Take corrective actions that assures adequate sample sizes are collected.

13. **FINDING:** Weekly stack data did not include all radionuclide results for all periods.

Requirement: 40 CFR 61 and WAC 246-247-080(5)

Discussion: Only 9 of 47 sample periods reported measurements for ruthenium, tin, antimony and iodine for stack 296-A-17. The 296-A-40 exhauster had results for all but 10 of the weeks sampled.

* Explain why these measurements are not reported weekly.

14. **FINDING:** The calibration methodology for the flow totalizer is inadequate,violates EPA, Method 2A requirements, and introduced unnecessary statistical bias into air sampler flow data.

Requirement: 40 CFR 60, App. A., Method 2A

Discussion: The rotameter, less precise than the gas meter (totalizer), is used to calibrate the gas meter. The 2% precision required for the gas meter by Method 2A is compromised by the calibration procedure used for flow totalizers.

* Prepare an organized approach to revise the calibration protocol.
* Revise the calibration procedure for flow totalizers to be consistent with the EPA Method 2A.
* Implement a QA audit and corrective action oversight program to assure compliance to the requirements.

15. **FINDING:** An **UNRESOLVED SAFETY QUESTION (USQ)** was declared regarding "criticality safety of tank farms," which may affect the air pathway.

Requirement: WAC 246-247-090

Discussion: An Unusual Occurrence was declared May 1, 1992, as follows. "On 4/30/92, at 1030 hours, following a plant operations review committee meeting (PRC), an unreviewed safety question concerning criticality safety issues in the tank farms was declared an 'event.' The basis for this determination is that the Facility Safety Analysis Reports (FSARs) regard a potential criticality as being incredible, where as, our ability to prove this is not possible within the available information and analysis. A preliminary justification .... is being considered for those activities that will be continued, those that will be put on hold, and the justifications for continuing with operations in the immediate future." A criticality event in a waste tank could potentially be very destructive and could result in radioactive airborne emissions that would have actual public health implications; i.e., levels of releases that could cause excessive risk to the general public. Since this issue represents a differing interpretation of existing data, rather than "new data", the issue is not a Category I finding. Nevertheless, resolution is required.

* Evaluate the likelihood and effect (consequence) of postulated criticality events.
* Concurrently, with the above effort, evaluate several potential mitigation technologies that have a high probability of either reducing the likelihood or effect of criticality events.
* Communicate to the Department the results of the above efforts at their conclusion, and weekly by written progress reports or in attended status meetings.
* Reduce the risk, as soon as practical, by implementing mitigation strategies.

16. **FINDING:** The USDOE showed a lack of responsiveness to this audit resulting in lost time and efficiency.

Requirement: 40 CFR 61, and WAC 246-247

Discussion: The 200-East tank farm audit was announced verbally at a monthly status meeting between the USDOE (and contractors) and the Department in December, 1991. Written notice was provided in a letter sent to USDOE from the Department, dated January 22, 1992. The scope of the audit, the audit team, and the audit schedule for field work were specified. A request for information was made for liaison: "We need to obtain a listing of names, titles, responsibilities, addresses and phone numbers for the DOE and WHC staff, with instructions on areas of responsibility for this audit. This information is needed before February 10, 1992." Westinghouse provided liaison from the Facility Compliance group (Cindy Stout). She provided several points of contact from Westinghouse informally. Her efforts have been commendable. She also communicated the Department's concern to WHC management and the USDOE that there was no response from the USDOE for liaison, as requested.

There has been no communication regarding liaison for this audit from the USDOE. There were no USDOE staff involved in the audit directly. [Please refer to an article in the Hanford Reach, May 11, 1992 that describes a well planned audit with established liaison and protocol.]

Our staff was unable to make sufficient contact with audit counterparts in advance of field inspections. This resulted in the necessity to return for follow-up reviews. Several issues were also identified that will be carried over to future audits due to a lack of audit efficiency.

* In the future, provide audit liaison to the Department that conforms to that described in the Hanford Reach article, "Hanford 'Progress Assessment' starts today", May 11. 1992, by Howard Rew (Quality Assurance). Include USDOE representation.

17. **FINDING:** The HEPA (High Efficiency Particulate) filter in-place efficiency test is inadequate.

Requirement: 173-480-050(1) (RACT/ALARA)

Discussion: Upon review of Procedure 7-GN-055, Rev. 3, Chg. A, "In-place Testing of HEPA Filter Systems (Single Stage and Overall Filter Test)," deficiencies were identified. This test procedure is used to determine leaks in the air filter systems containing HEPA filters. The aerosol material (DOP, or equivalent) is not specified directly in the procedure. The efficiency used for the pass condition is 99.95% (0.05% penetration, 2000 DF). This is derated from HEPA and procurement specifications requiring 99.97% (0.03% penetration, 3333 DF). The pass condition is for single stage filters, as well as for multiple stage (series) filter systems. For multiple stage configurations, no credit is allowed for the added efficiency of the additional filtration stage. This limits the potential of multiple stage filter systems for a higher efficiency evaluation. We recognized that some systems at Hanford are not testable to a representative test for each stage, and that multiple stage tests are the only representative test available. However, the limit of 99.95% for multiple stage systems is inadequate.

* Modify the procedure(s) to include a direct reference to the aerosol used.
* Evaluate the performance (efficiency) expected for multiple HEPA filter systems and determine an appropriate efficiency value to use as a test limit.

18. **FINDING:** A RACT engineering evaluation was incomplete due to a lack of access to radioactive source term data.

Requirement: USC 7414 (a)(2), 40 CFR 61, WAC 246-247, WAC 173-480-050 (1), and the facility operating permit FF-01

Discussion: All engineering and health physics evaluations require the source term. The appropriateness of the control devices and configuration for the mitigation of radioactive airborne emissions must be evaluated against the available source material. The monitoring system is

likewise a result of evaluations of source material and its mitigation by the control system. The source term for the AY and AZ tank farms was requested and has not been made available for review. This is contrary to permit conditions and previous commitments made by USDOE for accessibility to all necessary data.

* Provide source term data for the AY and AZ tank.
* Evaluate the control and monitoring system for the AY and AZ tanks against the RACT engineering standard, as specified in the proposed revision of WAC 246-247, Appendix C.

19. **FINDING:** The ventilation systems inspected did not lend themselves to efficiency testing. The aerosol injection ports, sample ports and general configuration are not sufficient to perform representative single stage in-place HEPA filter efficiency testing. Efficient performance can not be assured.

Requirement: WAC 173-480-050 (1) (RACT/ALARA)

Discussion: A physical inspection was performed on 8 ventilation systems in the 200-East tank farms. The AP annulus ventilation system (296-A-41) is a relatively new installation and appears to be appropriately designed. The AP main ventilation system (296-A-040) may be acceptable. The injection and sample ports are not obvious from a physical inspection. A other systems inspected (AY annulus, AZ annulus, 702-A main, 105-A, 106-C, and CR Vault, lacked an obvious capability for representative efficiency testing. Details of the sample and injection ports were unavailable for review. We reviewed WHC-SD-WM-WP-147, "Test Procedure Upgrade Program for Ventilation Systems in Tank Farms", which addresses this issue by means of assuring an improvement in the test capability for the existing systems. It does not address the adequacy of the equipment itself and it's testability. Ventilation systems must meet an Air-Aerosol Mixing Uniformity Test, as specified in ANSI N510, 9. to be testable.

* Evaluate the existing ventilation systems for compliance with the ANSI N510, 9. Air-Aerosol Mixing Uniformity Test.
* Review results of testing with the Department.
* Evaluate any required modifications to existing ventilation systems to allow for representative efficiency testing of HEPA filters.
* Modify equipment, as required.

20. **FINDING:** Older ventilation equipment is antiquated and requires modification or replacement.

Requirement: WAC 173-480-050 (1)

Discussion: A detailed physical inspection was made of the ventilation system for tank 105-A. Cursory physical inspections of several other older ventilation systems were also made. Al' older ventilation systems are fabricated with the HEPA filters mounted permanently inside the

ductwork. Therefore, the entire ventilation duct must be replaced if the HEPA filter is damaged, or can not pass the filter efficiency test. During replacement, the source term is not protected by adequate containment because of the lack of negative pressure zone control. The potential for fugitive emissions is high during replacement. Modern ventilation systems have bulkheads that are easily removed for prompt replacement of HEPA filters through bag-in/bag-out procedures. By proper design for redundancy, filters can be changed without removing the exhauster from service.

* Evaluate the necessity for older ventilation systems.
* Evaluate the combination of annulus flow through the main exhauster stack.
* Evaluate any other requirement for modification of ventilation systems.
* Prepare recommendations for modification or replacement of older ventilation systems for Department review and concurrence.

21. **FINDING:** Operators have observed water coming from the 106-C stack.

Requirement: 173-480-050 (1) (RACT/ALARA)

Discussion: Operators have reported that the 106-C stack has experienced outbursts of liquid water. 106-C is a high heat tank that has periodic input of water for cooling and to compensate for the possible evaporation of liquid. The heat rate in this tank exceeds the design limits of the single shell tanks and must be compensated for by additions of water and with ventilation of the vapor space. Water must be exiting the tank at a relatively high rate, probably in the form of evaporation (atmospheric pressure steam, or water vapor). This high humidity air passes out the stack by way of the ventilation ducts and HEPA filters. HEPA filters are not compatible with excessively high humidity air streams, and especially for liquid entrained in the air. If, in fact, there is liquid water exiting the stack, it implies that there is a by-pass in the HEPA filters or their gasketed mounting. This is not a favorable condition, and requires correction.

* Verify, or rule out, the occurrence of liquid water in 106-C stack, after the next start-up of the exhauster.
* Inspect the HEPA filters and evaluate the potential for high humidity airstream conditions.
* Test for HEPA efficiency and for psychrometry at the inlet of the tank and at the stack.
* Make any equipment configuration changes, as necessary, before continuing to operate.

IV. Observations

1. **OBSERVATION:** Many drawings do not reflect equipment conditions in the field, or are unavailable.

Requirement: WAC 173-480-050 (1) (RACT/ALARA)

Discussion: Several drawings were reviewed for accuracy and completeness with respect to facilities in the East-Area tank farms. Drawings for the AP tank farm were representative. Several drawings of A-Farm monitoring equipment had some deficiencies, which were corrected immediately by the Cognizant Engineer. Drawings were requested for the ventilation system for the 105-A portable exhauster, but were unavailable. Details of the HEPA filter testing ports and HEPA mounting geometry could not be evaluated from design drawings because they were also unavailable. General comments in interviews and in reports indicated that the drawings can not be trusted, and any potential modification must be "walked down" to determine the "as-built" condition. Older facilities and equipment suffers the most from this condition.

* Adopt a configuration control procedure that keeps the drawings compatible with the facility condition.
* Drawings for older facilities must be updated to the as-built condition as the opportunity presents itself and according to a priority basis.

2. **OBSERVATION:** The data entry and the source data provided by instrument technicians to PISCES have not been evaluated by QA procedures or practices.

Requirement: 40 CFR 61, Method 114, App. B., 4.

Discussion: The PISCES database is used for status and data collection on the calibration and testing of essential equipment. Data entry is performed subject to several quality control procedures devised by the PISCES staff. Input data that is provided to the data entry function has had no known formal quality assurance or quality control procedures. The preparation of there data has not been evaluated by QA audits The instrument technicians perform the data assurance without oversight.

* Develop a set of data quality objectives as requirements for an oversight QA program.
* Implement an oversight QA program of audits and corrective actions, as necessary, to assure the data quality that is input to the PISCES database.

3. **OBSERVATION:** The lower limit of detection (LLD) calculation cannot be verified.

Requirement: 40 CFR 61 and WAC 246-247-080(5)

Discussion: The Department is concerned that the LLD is not based on the ACV or other scientific values.

* Describe all the parameters used to calculate the LLD for I-129, Cs-137, total alpha, and total beta.
* Describe the methodology for determination of the LLD. Describe how the collection efficiency, detector efficiency and self-absorption are included.

4. **OBSERVATION:** The 1991 release quantities of SR-90 and Cs-137 could not be verified from the weekly stack data provided.

Requirement: 40 CFR 61 and WAC 246-247-080(5)

Discussion: Quarterly results for Sr-90 and Cs-137 are reported on EDP Code X059. The reported elapsed hours were 9,732.6 for A-17 and 10,412.3 for A-40. These values exceed the elapsed hours reported on E059 (and the total hours in a quarter) by more than 2000 hours.

* Provide the methodology and a sample calculation used to estimate the release quantity for SR-90 and CS-137 for stacks 296-A-17 and 296-A-40, as reported in the ODIS, and in the annual reports to the Department.

5. **OBSERVATION:** There is a potential discrepancy between the 1990 and 1991 release quantities reported for stacks 296-A-17 and 296-A-40.

Requirement: 40 CFR 61 and 246-247-080(5)

Discussion: The emissions of Ru-103, Ru-106, Sn-113, Sb-125 and I-131 decreased to zero during 1991 for both stacks. The 1990 ODIS report listed positive release quantities for those radionuclides. Stack 296-A-40 reported zero emissions for Cs-137 and total alpha in 1991. Emissions for SR-90 for the 296-A-17 stack reduced by a factor of 360 from 1990 to 1991.

* Review the concern and explain the potential discrepancies noted.

6. **OBSERVATION:** The reported emissions for Sr-90 exceeded the total beta value for stack 296-A-40 for 1991.

Requirement: 40 CFR 61 and 246-247-080(5)

Discussion: The results for Sr-90 (a high energy beta emitter) exceeded the total beta result in stacks 296-A-17 and 296-A-40.

* Explain why total beta is not at least as great as the total of all beta emitters.

7. **OBSERVATION:** According to procedures (5.2.2.6 of the HP manual), a checklist and a Radiological Survey Report (RPR) is prepared weekly. Records showed discrepancies in completeness and correct dates.

Requirement: 173-480-050(1) (RACT/ALARA)

Discussion: The Department reviewed of procedures and required reporting for radiological issues. The HPT "Gaseous Effluent Sampling/Monitoring System Evaluation Checklist" is prepared weekly, along with the scheduled Radiological Survey Report (RSR). Together they are used to inform management of radiological equipment problems. The shift supervisor either writes up a request for work through the JCS system, or sends the information to SCES directly. Recent records indicate that the checklist is not always filled out completely, nor correctly. One recent record did not include an out of calibration rotameter and flow totalizer (ED code E903, AN farm K-2 exhauster). A date of 2/26 on the RSR did not match the date of 2/24 on the checklist. A date of 3/3 had nothing entered and was not signed.

* The procedures should be either revised to match the practice, or diligently followed.
* Implement a QA oversight of this function to include audit and corrective action, as needed.

8. **OBSERVATION:** The document clearance process is cumbersome and results in excessive lost response time in performing official investigations and inquiries.

Requirement: WAC 246-247, 40 CFR 61, Permit FF-01

Discussion: The clearance process is in place at the USDOE facility for the purpose of review for classified (security classification) and proprietary information. Completeness, accuracy and public relations are also reviewed. The USDOE and contractors each have a review cycle for document clearance for release to the public. The Department is considered the public with regard to the clearance process. Department official inquiries require the release or availability of information to perform the duties as provided by regulation. As documents are requested, they are sent through a document review process. If no facilitator is present, the requested document may be placed "on-hold", or "refused", without explanation. Even with facilitation, the managers who review have not provided delegated authority to expedite the approval process. Clearance can be held up by the successive non-availability of review managers. If changes, deletions or additions are required, the review must be recycled. Document clearance on average takes over a month. The Department requires an improved response time to document clearance requests. An alternative is that radioactive air emissions related documents and/or data be kept available onsite for inspections.

* Requested documents must be provided or made available either at the time requested or after a time found reasonable by the Department.

* A procedure and protocol must by prepared that specifically addresses this issue and improves the response time.

9. **OBSERVATION:** HEPA filter testing backlog has increased and many filters are past due (as of 5/1/92).

Requirement: WAC 173-480-050 (1) (RACT/ALARA)

Discussion: HEPA filter testing and other vent and balance procedures have lost priority and are not being performed on time. Many classes of filters have been down-graded from OSR to OSD. An official authorization for this change could not be produced. Breather filters for passive ventilation of single shell tanks have a 90 to 120 day filter test cycle because of past history of problems with liquid accumulation in the filter. All breather filters are past due, as of May 1, 1992. Filters are not being tested on time because of the down-graded priority and because safety personnel (HPTs and sniffers) are not trained and available to assist vents and balance workers. The vents and balance psychometric (flow and relative humidity) testing per procedure 7-GN-063, 12/89, has not occurred since October or November, 1991 due to the work back-log.

* Increase the priority by appropriate administrative means so that the vents and balance procedures are performed "on-time."
* Review the inspection times and make any appropriate changes necessary to assure proper and efficient function of the ventilation systems.
* Implement an audit and corrective action program to assure the performance of ventilation systems.

10. **OBSERVATION:** Monitoring systems are unreliable.

Requirement: WAC 173-480-050 (1)

Discussion: The monitoring systems experience excessive down-time and maintenance. The GAST air pump is reported as being 90% of the problems causing alarms. An alarm circuit is connected to a pressure switch that indicates a flow or no flow condition. Failed air pumps cause the electrical breaker to actuate.

* Evaluate the root cause of monitoring system failures.
* Improve the monitoring system reliability (percent up-time).

V. Best Management Practices

1. **BMP:** The Job Control System (JCS) backlog has increased from hundreds to thousands of work orders, resulting in reduced equipment and operations effectiveness.

Requirement: WAC 173-480-050 (1) (RACT/ALARA)

Discussion: The cause of this increase in work load is known to include: (1) equipment showing age and deferred maintenance, (2) Increased emphasis on the JCS system, including additional requirements and protocols, (3) recent JCS system changes and lack of trained staff, and (4) a lack of flexibility to respond according to a priority. Because of the increase in backlog and increased response time, many safety and priority systems are left "out-of-service," including OSR (Operational Safety Requirements) equipment, such as exhausters and monitoring equipment.

- Add a priority component to the JCS system, train staff and implement the system site-wide.
- Add any required inputs from regulatory, quality (QUEST), ALARA, calibration and testing (PISCES), or other corrective action programs.
- Make the system user friendly and available for immediate use in the field, whe it is needed.
- Perform Quality Assurance audits of the progress in meeting these goals.

2. **BMP:** Alarms are allowed to continue without timely responses.

Requirement: WAC 173-480-080 (1) (RACT/ALARA)

Discussion: Several alarms were noted during field inspections. Field investigation, at the time, was effective in determining the cause, correcting the condition, and resetting of the alarm, for some of the observed alarms. Operations could respond in a timely fashion to correct these conditions. Also, several local conditions are wired to the same general alarm circuit. These general circuits are monitored in the 242-A control room and by CASS. One alarm condition that is allowed to continue, even though not of a major significance, masks other alarms. Some alarms were observed in the alarm condition over several days. There needs to be a response criteria that requires a response time for clearance of alarms.

- Prepare an alarm response procedure to include: (1) a response criteria giving a maximum response time for clearing an alarm, and (2) an inspection protocol for masked alarms.
- Implement an audit and corrective action program to assure compliance with this procedure.

3. **BMP:** There is contradictory information on stack CAMs as OSR items.

Requirement: 40 CFR 61, and WAC 173-480-050 (1) (RACT/ALARA)

Discussion: PISCES indicates that stack CAMs are not OSR related items; however, the responsible instrument technicians claim that they are. The OSR classification is used for establishing priority for maintenance and upgrade of equipment and facilities, and impacts the JCS system, as well as general management concern. It is important that instruments of "regulatory concern" are managed to be functional and calibrated with a high degree of reliability. Record samplers, CAMs and associated instruments are considered regulated by either the NESHAPs, or the RACT engineering standard. It is vital that both PISCES and the instrument technician groups accept the same requirements. WHC suggested that there may be a justification for establishing a new classification category to address instruments and equipment that is required by regulation.

* Evaluate the benefit of establishing an Environmental, or Regulatory classification category.
* Determine the proper, or appropriate classification for stack monitoring CAMs and communicate the requirement to all organizations that must respond to the requirements.
* Manage the instruments associated with effluent control and monitoring of radioactive air emissions in a reliable manner for functionality and calibration.
* Implement an audit and corrective action program that assures proper calibration and maintenance of regulated equipment and instruments.

4. **BMP:** QUEST (Quality Environmental Safety Tracking) is a tracking system, but does not perform quality trending. The system is under utilized and is not available to responsible staff and regulatory personnel with a need to know.

Requirement: 40 CFR 61, Method 114, App. B., 4.

Discussion: The QUEST database contains environmental and quality assurance audit findings and assigned outcomes for management of corrective action. It contains, or should contain, issues pertaining to radioactive air emissions regulations enforceable by the Department. It was found through interviews that the distribution and access within the affected organizations is strictly limited and that only 200, staff site-wide, have been trained in root cause analysis and corrective actions for effective use of QUEST. At the present, QUEST is used only for tracking issue resolution. The potential of using this database system for trending (and root cause analysis) is not being utilized. The system is reported as user unfriendly.

* Provide training and availability to the QUEST database for responsible staff, and quality assurance and regulatory oversight personnel.

* Develop procedures for input from audit findings and for completion of corrective actions. Fully authorize and manage the QUEST system for the benefit of all stake holders.
* Implement a trending function into QUEST to assure correction of issues of general applicability, and for root cause determination.
* Implement findings developed by audits and inspections performed by the Department into the QUEST database.
* Provide the Department with access to the QUEST database for regulatory review and oversight.

5. **BMP:** The tritium sampler for the 702-A stack has been non-functional for over 2 years.

Requirement: 40 CFR 61, 61.93, (b)(4)(i)

Discussion: The tritium monitor was first installed in the 702-A building stack (296-A-17) as a prototype. It was not meant for permanent installation, but for sensor development. For an unknown reason, it was abandoned over 2 years ago. The QUEST system has now identified it for implementation to bring it on line for this stack. The basis for the QUEST finding is unknown because the Department was denied access to the database. In reviewing the source term documents made available during the audit, it appeared that the tritium source term [illegible] be below the 10% requirement of the NESHAPs for radionuclides that must be monitored.

* Provide the QUEST finding related to the 702-A tritium monitor for the Department's review.
* Evaluate the application at the 702-A stack for the necessity for tritium monitoring.
* As a result of the evaluation, either stabilize the tritium monitor as "out of service," or upgrade it and begin tritium monitoring, as soon as practical.

6. **BMP:** The shift change for the Health Physics Technicians is not smooth and lacks an adequate hand-off.

Requirement: No requirement.

Discussion: Discussions with HPTs and operators in the field identified an issue associated with shift change hand-off. The operators hold a briefing at the shift change to update the next shift on the job being performed. The operators depend on the HPTs to perform radiation surveys and to identify radiation health and safety risks. Safe operations would not be assured without this service. At shift change, the HPTs do not hold their own briefings nor participate in the operator's briefings. Therefore, the conditions at the facility from the previous shift are not communicated in any consistent or formal manner.

* Include both HPTs and operators in joint briefings at the shift change to as safe operations.

7. **BMP:** PISCES database information is independent from the QUEST database, and is, therefore, not able to meet it's potential as a tool for corrective action.

Requirements: 40 CFR 61, Method 114, App. B., 4.

Discussion: The PISCES database includes status for on time and over time for essential operations such as calibration and testing. Any over time status is, generally speaking, a violation of procedures, or requirements (DOE Orders, or state and federal regulations). As such, the status of these conditions must be known by management. And since the QUEST database is the essential management tool for corrective action, this information needs to be included.

* Evaluate the PISCES database for the types of information that is applicable to the QUEST database system, and prepare a justification for merging the databases (at least corrective action issues).
* As appropriate, make PISCES data automatically available to the QUEST database.

8. **BMP:** The overall QA program is not well implemented by USDOE. In particular, QA oversight was found lacking.

Requirement: 40 CFR 61, Method 114, App. B., 4.

Discussion: The overall QA program was reviewed as it relates to the QAPP and to the regulation of radioactive airborne emissions subject to regulation by the Department. Although the overall QA program is not specifically mentioned in the NESHAPs, an overview QA structure must be implemented and effective to support the requirements of the NESHAPs QA Methods. Specifically, QA oversight to assure the proper implementation and operation of activities instituted by the QAPP is necessary. An effective oversite QA program would address and correct the issues associated with the finding related to the QAPP. This corrective action is not evident. The oversight group within DOE chartered with QA and Environmental oversight has begun performing this oversight function. The responsiveness to accept this responsibility is commendable.

* Continue the communication between the QA/Environmental oversight group at USDOE and the Department to develop expectations for oversight assurance of meeting regulatory requirements.
* Build a working relationship between the QA/Environmental oversight group at USDOE and the Department, to assure timely response to Department audits and corrective actions.

9. **BMP:** There is a discrepancy between the design of stack monitoring equipment and EPA requirements.

Requirement: 40 CFR 60, App. A.

Discussion: A review was performed of the generic stack pack design (based on blueprints and field observations) versus the EPA Method 5 requirement. The EPA Method 5 has the flow totalizer (or rotameter) installed downstream of the air pump. This position is insensitive to pressure variations caused by filter loading. The effort and complication involved in pressure compensation of flow data is greatly diminished with this configuration. The design of the stack pack has the flow totalizer and/or rotameter installed between the sample filter and the air pump. Pressures due to filter loading of 10 inches of mercury vacuum have been recorded at the pressure gage. A compensation for this pressure would be on the order of 20% when compared with standard conditions. The pressure gage was uncalibrated for all stack packs inspected. These instruments must be calibrated if used for pressure compensation.

The stack sampling system at Hanford accounts for pressure, but not for temperature. The stack pack or exhauster stacks do not in general provide temperature indication. 40 CFR 60, Appendix A, Method 17 states that "temperature generally has a greater effect on effluent particulate sampling than pressure." Some DOE stacks operate significantly above standard temperature. The specifics of flow totalizer and rotameter calibration are not known, but are expected to be performed at standard temperature and pressure. The 40 CFR 60, Appendix A, Method 2 requires the calculation of temperature and pressure compensations, or shown to be insignificant. Similarly, relative humidity (moisture content) also affects the flow determinatic While the Vents and Balance group is capable of performing measurements of moisture content, it is not routinely evaluated and not compensated for in the flow determinations affecting calculation of emission rates. The 40 CFR 60, Appendix A, Methods 4 and 5 contain requirements for compensation of flow for moisture content. This issue is a BMP, rather than a finding, since EPA retains the lead on it's resolution.

* Evaluate the improvement expected by revision of stack packs to be consistent with the EPA Methods. Evaluate the logistics and program requirements necessary to implement the evaluated changes.
* Present the evaluation to the Department and the EPA for review and concurrence.

VI. "Other Issues": The following issues not related to the Department's regulatory program, were identified. Follow up is recommended.

+ Recent power outages experienced in the 200-East tank farms have produced plant conditions below emergency response contingency plans. Emergency back-up systems failed to operate.

+ The exhausters at AP, AW, and AN tank farms are shut-down automatically as a result of indications due to the high radiation (gamma probes) alarms. Some of the old facilities do not have this control feature.

+ Tank level indicators were reviewed and found to be adequate, although all back-up systems have been lost due to deferred maintenance. Some measurements have not been made because of lack of access and ALARA considerations.

+ Some thermocouple systems are out-of-service for monitoring tank waste temperatures.

+ Operators at the CASS (Computer Automated Surveillance System) are not fully trained in the TMACS (Tank Monitoring and Control System).

+ Condensers (heat exchangers) used to remove liquids form ventilation air streams use exorbitant volumes of water that must be discharged to the environment. Potential low concentrations of radionuclides may be released due to leaks or equipment failure. Water discharged near past release points drives soil contamination to the ground water and hastens the dispersion of contaminated ground water.

VII. Positive Issues:

- Staff witnessed of a lock-and-tag removal. It was considered appropriate and authorized.

- The ALARA program at Westinghouse is in an upgrade mode to include other than radiation hazards. It appears understaffed for its purpose, however.

- The AY/AZ tank ventilation system upgrade project (Project W.O. 030) was reviewed by the Department and by the Department of Ecology and found in the cursory overview to be a significant improvement over the existing ventilation system.

- Westinghouse staff had a very positive attitude about making improvements to their programs and equipment. They were very cooperative.

REFERENCES

1. **Washington Administrative Code (WAC) 246-247**, "Monitoring and enforcement of Air Quality and Emission Standards for Radionuclides," (1986), Department of Health, Olympia, WA.

2. **A Technical Review of Radioactive Air Emissions from the Plutonium Finishing Plant at Hanford**, October 4, 1991, Department of Health, Division of Radiation Protection, Air Emissions and Defense Waste Section, Olympia, WA.

3. **42 United States Code**, as Amended, Section 7418, (1990), Washington, DC

4. **Revised Code of Washington (RCW) 70.94**, "Washington Clean Air Act," (1967), Olympia, WA.

5. **Washington Administrative Code (WAC) 173-480**, "Ambient Air Quality Standards and Emission Limits for Radionuclides," (1986), Department of Ecology, Olympia, WA

6. **Revised Code of Washington (RCW) 70.98**, "Nuclear Energy and Radiation," (1961), Olympia, WA.

7. **Code of Federal Regulations (CFR) 40 CFR 61**, "National Emission Standards for Hazardous Air Pollutants; Radionuclides," (1989), U.S. Environmental Protection Agency, Washington, DC.

8. **Technical Safety Appraisal of the Hanford Tank Farm Facility**, (1989), U.S. Department of Energy, Assistant Secretary for Environmental, Safety, and Health, Office of Safety Appraisals, Washington, DC.

9. **Waste Tank Safety Program Overview Plan**, WHC-EP-0426, Rev. 1, (1991), Prepared for the U.S. Department of Energy, Office of Environmental Restoration and Waste Management, by Westinghouse Hanford Company, Richland, WA.

APPENDIX C-1A

RESPONSE TO NOTICE OF NONCOMPLIANCE 200 EAST AREA TANK FARMS

The U.S. Department of Energy, Richland Field Office formally has not responded to this Notice of Noncompliance as of the submitted date of this Notice of Intent.

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APPENDIX C-2

NOTICE OF NONCOMPLIANCE TANK 241-101-T

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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

November 12, 1992

Mr. John D. Wagoner
Manager
U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, WA 99352

Dear Mr. Wagoner:

This letter is sent to notify you that the Department of Ecology (Ecology) has become aware of a number of significant violations of the State's Dangerous Waste Regulations, Chapter 173-303 Washington Administrative Code (WAC), which have occurred and continue to occur at Single-Shell Tank 241-101-T (T-101), located in 200 West Area, T Tank Farm, on the Hanford Reservation in South Central Washington State. Enclosed is a proposed amendment to the Hanford Tri-Party Agreement (TPA), which addresses these violations. The violations occurring at Tank T-101 present extremely serious threats to human health and the environment. Therefore, we will allow a maximum of thirty (30) days to reach agreement on this proposed amendment. If no agreement can be reached, Ecology will issue appropriate enforcement action(s) (under Chapter 70.105 RCW) to U.S. Department of Energy (USDOE) and its contractor, Westinghouse Hanford Co.

Tank T-101 is a subsurface single-shell tank, with associated equipment, including leak detection devices. Tank T-101 has a capacity of 530,000 gallons and currently contains approximately 133,000 gallons of mixed radioactive, dangerous, and extremely hazardous waste as designated under Chapter 173-303 WAC. Tank T-101 is not equipped with a secondary containment system.

Ecology inspections have documented a number of serious deficiencies at Tank T-101. Most alarming is evidence that between April of 1992 and September of 1992 Tank T-101 leaked approximately 7,425 gallons of extremely hazardous and radioactive waste (and may well be continuing to leak as of this date). This liquid is not contained and has been released to the environment.

Ecology inspections have also documented that Tank T-101's leak detection systems and devices are thoroughly inadequate. These systems and devices are often out of service. When these systems and devices are operating, they are far from adequate.

Ecology was not notified of leakage from Tank T-101 until October 7, 1992, nearly six months after monitoring data indicated the tank had begun leaking. Delays of this nature serve to underscore the lack of Hanford site systems capable of detecting, confirming, and adequately responding to tank leaks. In addition, delayed reporting violates state regulations (e.g., WAC 173-303 -145).

Ecology's inspections, file reviews, and discussions with tank farm operations and management personnel have documented the following violations of Washington's Dangerous Waste Regulations, Chapter 173-303 WAC, at Tank T-101:

1. Failure to provide secondary containment: WAC 173-303-400 (3)(a) and 40 C.F.R. Part 265(j).

2. Failure to provide an adequate leak detection system: WAC 173-303 -400(3)(a) and 40 C.F.R. Part 265(j).

3. Failure to adequately inspect: WAC 173-303-320(3) and -400(3)(a) and 40 C.F.R. Part 265(j).

4. Failure to adequately respond to leaks or spills and dispositions of leaking or unfit-for-use tank systems: WAC 173-303-145(3) and -400(3)(a) and 40 C.F.R. Part 265(j).

5. Failure to adequately notify and report: WAC 173-303-145(2) and -400(3)(a) and 40 C.F.R. Part 265(j).

6. Failure to maintain and implement an adequate personnel training plan: WAC 173-303-330.

7. Failure to maintain and implement an adequate contingency plan: WAC 173-303-350.

The preceding constitute the most pressing and obvious violations occurring at Tank T-101. The enclosed TPA Change Control Form sets forth a number of tasks and associated deadlines for completion of these tasks. Ecology has determined that these tasks are necessary to bring Tank T-101 into compliance with applicable standards and to address the violations described above. We believe these tasks and the time frames for completion of these tasks are reasonable. As stated previously, we will allow thirty days for USDOE to sign this Change Control Form and implement the required tasks.

If the enclosed TPA Change Control Form is not signed within thirty days, Ecology will issue appropriate enforcement action(s) against USDOE and Westinghouse Hanford Co. requiring implementation and completion of these tasks.

It is our hope that this situation can be addressed promptly and cooperatively by the parties to the TPA via the enclosed Change Control Form. Clearly, this would be the praferable way to address a very real and present threat to human health and the environment. We are ready and willing to discuss this situation with you and/or your staff at your convenience. Please contact myself at (206) 438-7020 or David Nylander of Ecology's Kennewick field office at (509) 546-2992, if you or your staff have any questions regarding this matter.

Sincerely,

Roger Stanley

Roger Stanley
Program Manager
Nuclear and Mixed Waste Management

RS:lm
Enclosures

cc: Tom Anderson, WHC
John Anttonen, USDOE
Becky Austin, WHC
James Bauer, USDOE
Paul Day, USEPA
Dana Rasmussen, USEPA
Steve Wisness, USDOE
Fred Olson, Ecology
Narda Pierce, Ecology
David Jansen, Ecology
David Nylander, Ecology

Change Number	FEDERAL FACILITY AGREEMENT AND CONSENT ORDER CHANGE CONTROL FORM	Date
M-23-92-XX	Do not use blue ink. Type, or print using black ink.	

Originator: David B. Jansen

Phone: 206-438-7021

Class of Change

☐ I – Signatories (Section 13.0) ☒ II – Project Manager ☐ III – Unit Manager

Change Title: Establish additional Interim milestones for single-shell tank 241-101-T to achieve compliance with interim status requirements.

Description/Justification of Change

These interim milestones will establish actions necessary for single-shell tank 241-101-T and associated equipment to achieve compliance with interim status requirements.

Interim Milestone Descriptions:

M-23-21 USDOE shall, no later than December 18, 1992, submit a report to Ecology detailing options, the feasibility of each option, the amount of time necessary to implement each option assuming an accelerated schedule, and comparative overall implementation costs associated with securing secondary containment or its equivalent at single-shell tank T-101.

(See attachments for additional descriptions)

Impact of Change

This change will add nine (9) new interim milestones. Transfer line testing and tank pumping at Tank 241-101-T may expedite certain aspects of Milestone M-07-01, M-07-02, and M-07-03. This change may also potentially affect waste characterization schedules under Milestone M-10.

Affected Documents

Hanford Federal Facility Agreement and Consent Order Action Plan, Appendix D (Table D-1 and figure D-1 work schedules).

Approvals ____ Approved ____ Disapproved

DOE _____ Date _____

EPA _____ Date _____

Ecology _____ Date _____

Change Control Form
M-23-92-XX
November 12, 1992

M-23-22 USDOE shall, no later than December 18, 1992, provide an adequate in-tank liquid level leak detection system at tank T-101 and ensure that the system is monitored/inspected daily.

M-23-23 USDOE shall, no later than December 18, 1992, inspect all other tank T-101 monitoring systems (e.g., dry well and temperature), and shall submit a written report to Ecology detailing the status and capability of these and other T-101 leak detection systems to immediately detect a release to the environment.

Should the aforementioned inspections and report document system inadequacy (or inadequacies), system upgrades shall be completed no later than February 12, 1993 or other timeframe as approved by Ecology.

M-23-24 USDOE shall, no later than December 18, 1992, take preparatory actions necessary for the removal of liquid wastes from tank T-101. Actions taken by USDOE within this period shall include, but are not limited to, the following:

M-23-24a USDOE shall complete evaluation of tank T-101 wastes sufficient to assess compatibility and criticality concerns in order to determine the most feasible receiver tank. Tank waste evaluation data shall be submitted to Ecology and EPA immediately on completion of analysis.

M-23-24b USDOE shall plan for and initiate physical testing of underground transfer lines needed to begin pumping T-101 tank liquids to a compatible tank.

M-23-24c Concurrent with M-23-24b above, USDOE shall initiate engineering and procurement processes needed for acquisition of double contained piping systems meeting the requirements of Chapter 173-303 WAC (to be implemented in the event that the existing tank transfer lines do not pass required testing).

M-23-25 Pursuant to actions under M-23-24b and/or M-23-24c, USDOE shall complete necessary transfer line system acquisition and installation, and shall initiate full scale removal of T101 liquids no later than February 15, 1993.

M-23-26 USDOE shall, no later than December 18, 1992, provide Ecology with copies of all data/correspondence pertaining to tank T-101 including all data/correspondence related to past and present releases or spills from tank T-101, and shall submit <u>weekly progress reports</u> throughout the duration of work under this change request which document all work performed, detail USDOE's

compliance with these interim milestones, explains any anticipated noncompliance and all actions being taken by USDOE to ensure schedule recovery. Such data, memoranda, reports and other correspondence shall include, but not be limited to the following subject matters:

- Environmental Degradation
- Leak Detection Systems
- Waste Characterization
- Tank Compatibility
- Transfer Lines
- Engineering Studies
- Maintenance of Monitoring Equipment

M-23-27 USDOE shall, no later than January 15, 1993, devise and implement an operator and tank farm management training program to ensure adequate and appropriate training in areas including monitoring, reporting, and response actions in the event of monitoring and potential incidents at tank T-101.

M-23-28 USDOE shall, no later than December 18, 1992, provide to Ecology and EPA for comment documentation of actions taken in revising its operator and tank farm management training program. Such program shall include, but not be limited to, the following:

M-23-28a Training which ensures the timely identification and confirmation of "tank leaks". "Tank leak" shall be defined as any release to the environment such that human health or the environment is threatened, regardless of quantity. (Chapter 173-303-145(1) WAC).

M-23-28b Training which ensures adequate and timely USDOE and USDOE contractor tank farm management response, and notification of Ecology staff as required by Chapter 173-303-145(2)(c)(i) WAC.

M-23-28c The identification of operational requirements for personnel responsible for reading and maintaining tank monitoring and leak detection systems.

M-23-29 USDOE shall, no later than December 18, 1992, provide management control and/or tracking procedures which ensure that issues identified on Discrepancy Reports are tracked and acted on as necessary in order to verify proper closure of identified discrepancies. Copies of the amended procedures and other relevant documentation shall be provided to Ecology and EPA no later than January 15, 1993.

APPENDIX C-2A

RESPONSE TO NOTICE OF NONCOMPLIANCE TANK 241-101-T

The U.S. Department of Energy, Richland Field Office formally has not responded to this Notice of Noncompliance as of the submitted date of this Notice of Intent.

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APPENDIX C-3

NOTICE OF NONCOMPLIANCE 200 EAST AREA SLAB YARD

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STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

1601 W. Clearwater, Suite 107 • Kennewick, Washington 99336 • (509) 546-2990

October 27, 1992

CERTIFIED MAIL

Mr. John Wagoner, Manager
U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

Mr. Richard French, President
Kaiser Engineers Hanford
P.O. Box 888
Richland, Washington 99352

Dear Messrs. Wagoner and French:

Re: Dangerous Waste Compliance Inspection at 200 East Area Slab Yard

Thank you for the assistance of Kaiser Engineers Hanford (KEH) personnel during the inspection of the 200 East Area slab yard in July and September 1992. Areas of non-compliance with the Washington State Dangerous Waste Regulations (Chapter 173-303 WAC) at the slab yard have been identified and need to be resolved. Responsibility for completion of corrective action items of this letter is directed to KEH. Responsibility for verification of completion on the enclosed Certificate of Completion is directed to the United States Department of Energy-Richland Operations Office (USDOE-RL), the facility owner.

The violations documented in the KEH slab yard inspection report identify a failure by KEH to properly identify, designate, and manage dangerous waste. These violations are basic to every dangerous waste generator in Washington. It is incumbent upon USDOE-RL and KEH to take any actions necessary to ensure these types of deficiencies do not exist at other facilities on the Hanford site. Violations documented in the inspection report also identify a failure by KEH to provide personnel training records as requested.

A unique situation exists at the KEH slab yard; KEH representatives identify Westinghouse Hanford Company (WHC) as the responsible party for

many improperly managed containers being stored in the slab yard. It is Ecology's position that KEH is responsible for proper management of all containers being stored in their facilities.

The Washington State Department of Ecology (Ecology) has chosen, in this case, to issue a Compliance Letter. However, future failure by other Hanford site facilities to comply with these basic generator requirements may result in formal enforcement action. In the future, similar violations found at other facilities will be viewed as repeat violations and may be subject to formal enforcement action (administrative order and/or penalty).

This compliance action is being taken under the authorities granted to Ecology by Chapter 70.105 RCW (Hazardous Waste Management) and using the policy guidance of the Department. In accordance with paragraph 28 of the Hanford Federal Facility Agreement and Consent Order, USDOE-RL has twenty-one (21) days to respond in writing to this Compliance Letter.

Details on the following violations are identified in the enclosed fact sheet:

CLASS I VIOLATIONS

WAC 173-303-016 - Identifying solid waste.

- o failure to identify material as solid waste

WAC 173-303-070 - Designation of dangerous waste.

- o failure to designate solid waste as dangerous waste or extremely hazardous waste
- o failure to properly designate dangerous waste

WAC 173-303-200 - Accumulating dangerous waste on-site.

- o failure to adhere to on-site accumulation requirements
- o failure to transfer/transport waste to a proper storage facility

WAC 173-303-280 - General requirements for dangerous waste management facilities.

- o failure to adhere to treatment, storage, and disposal facility requirements

WAC 173-303-330 - Personnel training.

- o failure to provide records identifying the name of each person related to dangerous waste management at the facility as required in the training plan

- o failure to provide records documenting that facility personnel have received and completed the required training

WAC 173-303-380 - Facility recordkeeping.

- o failure to provide employee training records as requested

WAC 173-303-630 - Use and management of containers.

- o failure to identify major risk(s) associated with the contents in the containers

- o failure to perform weekly inspections

CLASS II VIOLATIONS

WAC 173-303-180 - Manifest.

- o failure to properly class, describe, mark, and label waste

- o failure to properly complete the uniform waste manifest

In order to correct the identified violations of WAC 173-303, please complete the following three (3) corrective action items within the time frames specified. Please be advised that failure to correct these non-compliance items may result in the issuance of an administrative order and/or penalty under Chapter 70.105.096 RCW (Hazardous Waste Management).

1. Within forty (40) calendar days of receipt of this letter, KEH shall identify, by physical inspection and document review, the "cradle-to-grave" status of all potentially or known dangerous waste containers and all unidentified/unknown waste containers being stored at the KEH slab yard. This identification shall include points of generation, process operators, individual container numbers, original and current storage locations, accumulation dates, MSDSs, waste designations, waste codes, sample dates for undesignated or "unknown" waste, waste quantities, past and present labels and/or markings, and container conditions.

Provide a report of all findings from this investigation to Ecology within 40 calendar days of receipt of this letter.

2. Within forty (40) calendar days of receipt of this letter, KEH shall provide a specific program for correcting all deficiencies identified in item 1. This program shall identify accomplishment dates and proposed disposal locations. For all deficiencies identified, a "root cause" shall be determined to aid in assessing appropriate long-term corrective actions once short-term problems are corrected. All corrective actions resulting from Ecology inspections', and the investigation required in item 1, must be completed by January 15, 1993. Provide this all-inclusive corrective action program to Ecology within 40 calendar days of receipt of this letter.

3. Within forty (40) calendar days of receipt of this letter, KEH shall modify their training plan to meet WAC 173-303-330(2)(a) requirements. Specifically, KEH shall add the names of the employees filling each position related to dangerous waste management at the facility.

Please do not hesitate to call me at (509) 546-2990 or Laura Russell at (509) 546-2977 should you have questions or require clarification on any of the items in this Compliance Letter or the enclosed Certificate of Completion. Please complete and submit the Certificate of Completion to Laura Russell by December 11, 1992.

Sincerely,

Dave Nylander

David Nylander
Office Manager
Nuclear and Mixed Waste Management Program

DN:lr
Enclosures:
1. Certificate of Completion
2. Fact sheet

cc: Scott Potter, USDOE-RL
Brian Dixon, KEH
Roger Stanley, Ecology
Dave Jansen, Ecology
G. Thomas Tebb, Ecology

Please complete and return this form to Laura Russell, Washington Department of Ecology, by December 11, 1992.

CERTIFICATE OF COMPLETION

As a representative of the U.S. Department of Energy, I certify, to the best of my knowledge, the completion of items identified below. The items represent compliance actions required for the Kaiser Engineers Hanford slab yard located on the Hanford Reservation, 200 East Area, Facility ID Number WA7890008967, as described in the October 27, 1992 Compliance Letter.

COMPLETION STATUS

(The facility representative shall list completion date and initial each item.)

Corrective Action Items	Due Date	Date Completed	Initials	Comments
Item 1	_____	_____	_____	_____
Item 2	_____	_____	_____	_____
Item 3	_____	_____	_____	_____

_____

Signature of USDOE-RL Representative Date

Kaiser Engineers Hanford Compliance Inspection Fact Sheet

Owner U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, WA 99352

Operator Kaiser Engineers Hanford Company (KEH)
P.O. Box 888
Richland, WA 99352

Facility/Location KEH Slab Yard, 200 East Area - Hanford Federal Reservation

Contact Brian Dixon, Manager, KEH Environmental Compliance
(509) 376-7053

Activity Compliance inspection conducted following inadequate response to informal Ecology notification.

Background

The KEH slab yard is a storage and staging area located in the 200 East Area of the Hanford Federal Reservation (Hanford). The slab yard is used to store drilling related products and materials, to wash down drilling equipment after use in the field, and to manage miscellaneous waste generated as a result of drilling, vehicle maintenance, and spills. Wastes generated are a result of activities in support of Hanford Federal Facility Agreement and Consent Order milestones. Waste streams include drill cuttings, decontamination water, waste oils, rags/filters, epoxy resins, and compactible materials (plastics, personnel protective equipment, gloves, etc.)

The KEH slab yard is not under interim status nor is it a permitted treatment, storage, and disposal (TSD) facility.

Findings

Facility inspection and review of documentation by Ecology revealed the following findings:

Finding #1 - FAILURE TO IDENTIFY MATERIAL AS SOLID WASTE

WAC 173-303-016 Identifying solid waste. (1)(a) The purpose of this section is to identify those materials that are and are not solid wastes. (3)(a) A solid waste is any discarded material that is not excluded by WAC 173-303-017(2) or . . . WAC 173-303-017(5).

During all three inspections, Ecology inspectors observed drums of material that had not been identified as solid wastes, i.e., bore no labels and/or markings. For many drums, KEH representatives had no knowledge of where they came from, what was in them, or who generated them.

Finding #2 - FAILURE TO DESIGNATE WASTE

WAC 173-303-070 Designation of dangerous waste. (1)(a) This section describes the procedures for determining whether or not a solid waste is DW or EHW. (b) . . . Any person who must determine whether or not his solid waste is designated must follow the procedures set forth in subsection (3) of this section.

During all three inspections, Ecology inspectors observed drums of material that had not been identified as solid wastes, i.e., bore no labels and/or markings, and consequently had not been designated. Additionally, many drums identified as waste had not been designated (e.g., WHC Project drums, #3U-2U17-90-011 drum, rags/filters drums, etc.). KEH failed to provide documentation as to whether the materials were dangerous wastes or extremely hazardous wastes.

The two waste containers identified on manifest #00078 were not properly designated:

- Drum HW91-29 containing 1,1,1-trichloroethane and dioxane designates as Hazardous Waste Liquid, n.o.s., with Waste Codes WT02, WP01, WC01, and F002. On manifest #00078, the drum HW91-29 was erroneously designated as Waste Flammable Liquid, n.o.s., and assigned Waste Codes D001 and WT02. However, the waste was not ignitable (D001).

- Drum HW91-28 containing miscellaneous inert material contaminated with epoxy designates as Non-RCRA Waste Solid, with Waste Codes WT02 and WP01. On manifest #00078, the drum HW91-28 was erroneously designated as Hazardous Waste Solid, n.o.s., and assigned Waste Codes D001 and WT02. Again, the waste was not ignitable.

Finding #3 - FAILURE TO PROPERLY PREPARE A MANIFEST

WAC 173-303-180 Manifest. Before transporting dangerous waste or offering dangerous waste for transport off the site of generation, the generator shall prepare a manifest and shall follow all applicable procedures described in this section. (1) . . . The manifest must be prepared . . . as described in the uniform manifest Appendix of 40 CFR Part 262, and in addition must contain the following information in the specified shaded items of the uniform manifest: (c) Item H - The designated receiving facility's telephone number must be provided in this space . . .

40 CFR Part 262, Appendix. Item 11. Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number (UN/NA) for each waste as identified in 49 CFR 171 through 177.

49 CFR 171.2 General requirements. (a) No person may offer or accept a hazardous material for transportation in commerce unless the material is properly classed, described, packaged, marked, labeled, and in condition for shipment as required or authorized by this subchapter . . .

On manifest #00078, the material offered for transport was not properly designated and therefore not properly classed, described, marked, or labeled.

On manifest #00078, the receiving facility's telephone number was not provided.

Finding #4 - FAILURE TO MEET ON-SITE ACCUMULATION STANDARDS

WAC 173-303-200 Accumulating dangerous waste on-site. (1) A generator . . . may accumulate dangerous waste on-site without a permit for ninety days or less after the date of generation, provided that: (a) All such waste is shipped off-site to a designated facility or placed in an on-site facility which is permitted by the department . . . in ninety days or less. . . . A generator who accumulates dangerous waste for more than ninety days is an operator of a storage facility and subject to the facility requirements of this chapter and the permit requirements of this chapter as a storage facility . . . (b) The waste is placed in containers and the generator complies with WAC 173-303-630 (2), (3), (4), (5), (6), (8), and (9) . . . (c) The date upon which each period of accumulation begins is marked and clearly visible for inspection on each container . . . (e) The generator complies with the requirements for facility operators contained in WAC 173-303-320 . . . (general inspection). (2) . . . the ninety-day accumulation period begins on the date that: (c) The quantity of dangerous waste being accumulated in containers in a satellite area exceeds fifty-five gallons of dangerous waste or one quart of acutely hazardous waste . . . For the purposes of this section, a satellite area shall be a location at or near any point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste.

WAC 173-303-280 General requirements for dangerous waste management facilities. (1) Applicability. The requirements of WAC 173-303-280 through 173-303-395 apply to all owners and operators of facilities which store, treat, or dispose of dangerous wastes . . .

Waste containers HW91-28 and HW91-29, after being shipped from the point of generation on May 29, 1991, were not managed under WAC 173-303-200, on-site accumulation requirements, nor were they managed under WAC 173-303-280 through WAC 173-303-395, TSD facility requirements, or WAC 173-303-400, Interim status facility requirements.

Finding #5 - FAILURE TO TRANSFER/TRANSPORT WASTE TO A PROPER STORAGE FACILITY

WAC 173-303-200 Accumulating dangerous waste on-site. (1) A generator . . . may accumulate dangerous waste on-site without a permit for ninety days or less after the date of generation, provided that: (a) All such waste is shipped off-site to a designated facility or placed in an on-site facility which is permitted by the department . . . in ninety days or less. . . . A generator who accumulates dangerous waste for more than ninety days is an operator of a storage facility and subject to the facility requirements of this chapter and the permit requirements of this chapter as a storage facility . . .

Waste containers #HW91-28 and #HW91-29 were not shipped to a permitted storage facility.

Finding #6 - FAILURE TO MEET PERSONNEL TRAINING REQUIREMENTS

WAC 173-303-330 Personnel Training. (2) Written training plan. The owner or operator shall develop a written training plan which must be kept at the facility and which must include the following documents and records: (a) For each person related to dangerous waste management at the facility, the job title, the job description, and the name of the employee filling each job. The job description must include the requisite skills, education, other qualifications, and duties for each position. . . . (c) Records documenting that facility personnel have received and completed the training required by this section.

KEH failed to provide records identifying the name of each person related to dangerous waste management at the facility as required in the training plan. KEH also failed to provide records documenting that facility personnel have received and completed the training required by this section. As a result, Ecology considers the personnel deficient in training requirements.

Finding #7 - FAILURE TO PROVIDE TRAINING RECORDS

WAC 173-303-380 Facility recordkeeping. (3) Availability, retention and disposition of records. (a) All facility records, including plans, required by this chapter must be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of the department who is designated by the director.

Ecology inspectors requested to be provided personnel training records. KEH failed to provide the records.

Finding #8 - FAILURE TO PROPERLY MANAGE AND STORE WASTE CONTAINERS

WAC 173-303-630 Use and management of containers. (3) Identification of containers. The owner or operator must label containers in a manner which adequately identifies the major risks(s) associated with the contents of the containers . . . (6) Inspections. At least weekly, the owner or operator must inspect areas where containers are stored . . .

Because the wastes on manifest #00078 were erroneously designated, the containers did not adequately nor accurately identify the major risk(s) associated with the contents of the containers.

Weekly inspections were not performed on containers HW91-28 and HW91-29.

APPENDIX C-3A

RESPONSE TO NOTICE OF NONCOMPLIANCE 200 EAST AREA SLAB YARD

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BJD Redistribution
CE Anderson
EC Staff

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

NOV 1 2 1992

93-RPA-051

Mr. David C. Nylander
Nuclear and Mixed Waste Program
State of Washington
Department of Ecology
7601 West Clearwater Suite 102
Kennewick, Washington 99336

Dear Mr. Nylander:

DANGEROUS WASTE COMPLIANCE INSPECTION AT 200 EAST SLAB YARD

This letter and enclosure provide the U.S. Department of Energy, Richland Field Office (RL) response to your October 27, 1992, letter entitled "Dangerous Waste Compliance Inspection at 200 East Slab Yard". This response has been prepared pursuant to Part II, Article VII, Paragraph 28, of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) that requires the U. S. Department of Energy (DOE) to respond with a plan and schedule of actions to any notice of violation within 21 days of receipt of notice.

We have identified several serious errors in the fact finding and regulatory basis for the alleged violations cited in the inspection report. These are addressed individually in the enclosed response. More importantly, we feel that your letter is inconsistent with Ecology's often repeated statement and position that when DOE or a contractor proactively identifies regulatory concerns and undertakes immediate corrective action, that such matters would be considered favorably by Ecology. The Ecology position, we believe, was based upon the sound proposition that there is a beneficial incentive to DOE and its contractors to taking appropriate and diligent action. In this case, Ecology has taken enforcement action involving a single occurrence that Kaiser Engineers Hanford Company (KEH) itself identified and brought to Ecology's attention on August 21, 1992. That situation was immediately rectified and was of no regulatory concern as of the date of Ecology's final inspection. Ecology's October 27, 1992, enforcement action inaccurately and inappropriately depicts the circumstances associated with this occurrence. We are concerned that this type of action will act as a serious disincentive to the efficient communication of environmental compliance matters at RL.

We also feel that fairness would require that inspection reports distinguish between the portrayal of activities necessary to demonstrate compliance with regulations with those that are prudent or advantageous from a best management practice standpoint.

The enclosure sets forth our position on each issue presented by your October 27, 1992 letter and provides an item-by-item response to the action items requested. The requested items are being actively addressed by RL and

Mr. Nylander
93-RPA-051

KEH consistent with our commitment to operate our facilities in compliance with applicable requirements. The supplemental information requested in Items 1, 2 and 3 will be provided in a separate transmittal to your office by December 31, 1992.

If you have any questions, please contact Mr. P. J. Krupin on (509) 372-1112 or Mr. Brian Dixon, KEH on (509) 376-7053.

Sincerely,

James D. Bauer, Acting Program Manager
Office of Environmental Assurance,
Permits, and Policy

EAP:PJK

Enclosures

cc w/encl:
P. T. Day, EPA
R. T. French, KEH
S. J. Bensussen, KEH
B. J. Dixon, KEH
J. T. Lilly, KEH

ENCLOSURE
U.S DEPARTMENT OF ENERGY RICHLAND FIELD OFFICE
PLAN AND SCHEDULE OF ACTION
&
RESPONSE TO ECOLOGY OCTOBER 27, 1992 INSPECTION REPORT
OF THE 200 EAST AREA SLAB YARD

RESPONSE TO SPECIFIC ISSUES:

1. As a matter of clarification, it should be noted that the compliance inspection sheet attached to the October 27, 1992 letter identifies the Slab Yard as a "Facility" and Kaisar Engineers Hanford Company (KEH) as the "Operator". The Slab Yard is not a "facility" as defined in WAC 173-303, nor does KEH meet the definition of an "operator" as defined in the regulations.

2. We object to Findings 1 and 2 because there is no obligation or duty under WAC 173-303 to label and mark drums of solid waste that do not contain hazardous or dangerous waste.

3. We object to Finding 3 because as applied to the cited manifest (#00078), WAC 173-303 does not require utilization of the Uniform Waste Manifest. WAC 173-303 applies to wastes transported or offered for transport off the site of generation (emphasis added). Manifest #00078 was used to document an "on-site movement" of waste consistent with the definition of "on-site" in WAC 173-303-040. WAC 173-303-040 stipulates that travel can occur perpendicular to a public right of way, or that right-of-way can be controlled and made inaccessible to the public, and still be considered on-site. There are no shipping paper requirements for on-site movements. On-site waste tracking is applied at the Hanford Facility as a matter of good management practice. Tracking mechanisms have been in place for the on-site movement of waste at Hanford for many years. The manifest documentation is used to ensure that waste destined for further on-site management units is properly managed. As a best management practice, on-site transfers of dangerous waste meet all substantive requirements of 49 CFR Parts 100-177 even though these regulations are applicable only to off-site transport.

4. We object to the statement in Finding 3 that "On manifest #00078, the material was not properly designated and therefore not properly classed, described, marked or labelled." and the statement in Finding 8 that "the wastes on manifest #00078 were erroneously designated,..." The waste was appropriately classified for transport as flammable because the process knowledge available (MSDS Sheet and hazard rating by KEH Industrial Hygiene) indicated the presence of liquids containing dioxane (flash point 54 degrees Fahrenheit). This was a proper, conservative, prudent and reasonable determination made using the appropriate information at the appropriate time. Even if overly conservative in terms of protecting human health and the environment, no violation can be properly alleged.

5. Findings 4 & 5 pertain to the same transaction and occurrence and are duplicative and repetitious in that they both cite WAC 173-303-200. They should have been addressed together as one Finding.

6. Finding 7 does not provide any recognition of the fact that Ecology is in possession of information documenting the efforts DOE is making to resolve the conflict of laws which exists regarding statutory provisions allowing regulatory agencies access to employee training records and the prohibitions against disclosure imposed on DOE by the Privacy Act of 1974. The resolution of this issue has been discussed with representatives of Ecology and the Office of the Attorney General on numerous occasions. Ecology has received information describing the proposed revision to the general training system of records by publication of a proposed routine use in the Federal Register.

7. We have been unable to identify a basis or citation for requiring a Certificate of Completion, as is included in the October 27, 1992 letter. We will continue to document the compliance status of our facility in the documentation developed in our environmental programs. Such documentation will be kept at RL facilities and in our recordkeeping files as appropriate.

RESPONSE TO SPECIFIC ITEMS:

1. Item 1

Within forty (40) calendar days of receipt of this letter, KEH shall identify, by physical inspection and document review, the "cradle-to-grave" status of all potentially or known dangerous waste containers and all unidentified/unknown waste containers being stored at the KEH slab yard. This identification shall include points of generation, process operators, individual container numbers, original and current storage locations, accumulation dates, MSDSs, waste designations, waste codes, sample dates for undesignated or "unknown" waste, waste quantities, past and present labels and/or markings, and container conditions.

Provide a report of all findings from this investigation to Ecology within 40 calendar days of receipt of this letter.

Response:

A report of all findings from the investigation requested in this item will be transmitted to Ecology by December 31, 1992. Dangerous wastes identified in the inspection and document review will be handled and dispositioned appropriately.

Waste contained in waste containers stored in the Slab Yard will be properly designated pursuant to WAC 173-303 requirements. Significant progress has already been made in this regard. For example the drums marked with the initials K.K.K. have been sampled for regulated constituents. The sample results were received on August 14, 1992, and confirmed the contents to be solid waste that is not subject to WAC 173-303. The sample results for the 85 drums containing drilling equipment rinseate were also received recently and will be dispositioned pursuant to direction from Westinghouse Hanford Company (WHC).

We do not agree that drums containing solely solid wastes must be marked or labeled or provided with documentation concerning designation unless the contents are regulated under WAC 173-303. The adequacy of procedures will be evaluated to assure adequate process knowledge is developed and documented to support the proper designation of waste for safe handling, transportation, treatment, storage or disposal as appropriate.

2. Item 2

Within forty (40) calendar days of receipt of this letter, KEH shall provide a specific program for correcting all deficiencies identified in Item 1. This program shall identify accomplishment dates and proposed disposal locations. For all deficiencies identified a "root cause" shall be determined to aid in assessing appropriate long-term corrective actions once short-term problems are corrected. All corrective actions resulting from Ecology inspections, and the investigation required in Item 1, must be completed by January 15, 1993. Provide this all-inclusive corrective action program to Ecology within 40 calendar days of receipt of this letter.

Response:

A specific program to correct any deficiencies identified in the investigation conducted to address Item 1 will be developed. Root causes will be evaluated in the identification and development of appropriate corrective actions. The December 31, 1992 submittal will describe the plan and schedule for implementing the corrective action program.

3. Item 3

Within forty (40) calendar days of receipt of this letter, KEH shall modify their training plan to meet WAC 173-303-330(2)(a) requirements. Specifically, KEH shall add the names of the employees filling each position related to dangerous waste management at the facility.

Response:

The training plan will be evaluated and modified where necessary to meet WAC 173-303-330(2)(a) requirements. A copy of the section of the training plan pertaining to each position related to dangerous waste management at the facility will be provided in the December 31, 1992, submittal. This response is consistent with what has been agreed to in the Hanford Facility Part B Permit Application.

APPENDIX C-4

NOTICE OF NONCOMPLIANCE 305-B STORAGE FACILITY

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STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

7601 W. Clearwater, Suite 102 • Kennewick, Washington 99336 • (509) 546-2990

October 30, 1992

NOV 1992
RCS. WASTE

CERTIFIED MAIL

Mr. John D. Wagoner, Manager
U. S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, WA 99352

ID Number: WA7890008967

Date and Time of Inspection:
July 16, 1992, 9:50 - 12:00 a.m.
July 23, 1992, 10:51 - 11:20 a.m.

Mr. William R. Wiley, Director
Pacific Northwest Laboratories
P.O. Box 999
Richland, WA 99352

Dear Messrs. Wagoner and Wiley:

Re: Dangerous Waste Compliance Inspection for 305-B Storage Facility

Thank you for the assistance of Pacific Northwest Laboratories (PNL) personnel during the inspection of the 305-B storage facility on July 16, and July 23, 1992. During these inspections, my staff documented several areas of non-compliance by PNL with the Washington State Dangerous Waste Regulations (Chapter 173-303 WAC) at the 300 Area, 305-B facility. Responsibility for corrective actions for these items of non-compliance is being directed to the operator (PNL) and verification of completion of actions is directed to the owner, the U. S. Department of Energy (USDOE-RL).

The violations documented in the 305-B storage facility inspection report identify a failure by PNL to properly manage dangerous waste. The 305-B storage facility RCRA Part B permit application has been received by Ecology and is in the review process. It is necessary for USDOE-RL and PNL to take any actions necessary to ensure these deficiencies are corrected in a timely manner to receive permit and/or meet WAC's. Violations noted include the following:

Class II Violations

- o WAC 173-303-300 - General waste analysis.

  Failure to sample, test and redesignate waste per subsection (4)(a).

- o WAC 173-303-350 - Contingency plan and emergency procedures.

  Failure to list responsible emergency and contingency plan coordinators per subsection (3)(d) required under WAC 173-303-360 (1).

- o WAC 173-303-380 - Facility recordkeeping.

  Failure to record and maintain in the operating record the location of each dangerous waste within the facility and the quantity at each location per subsection (1)(b).

- o WAC 173-303-630 - Use and management of containers.

  Failure to manage condition of containers per subsection (2).

  Failure to properly label containers per subsection (3).

  Failure to comply with WAC storage limits equivalent with Uniform Fire Code per subsection (8)(b).

Staff is available to assist USDOE-RL and/or PNL in completing these compliance items within the time specified. Failure to correct these items may result in the issuance of an administrative order and/or penalty as authorized under RCW 70.105.095 (Hazardous Waste Management).

1. Within thirty (30) calendar days of receipt of this letter, PNL shall submit to Ecology a schedule to sample and designate container #13040.

2. Within thirty (30) calendar days of receipt of this letter, PNL shall provide Ecology with a list of the responsible emergency and contingency plan coordinators.

3. Within thirty (30) calendar days of receipt of this letter, PNL shall provide Ecology with an accurate inventory of waste stored within the 305-B facility using the required units of measure.

4. Within thirty (30) calendar days of receipt of this letter, PNL shall properly affix labels to drums and containers throughout the 305-B facility.

5. Within thirty (30) calendar days of receipt of this letter, PNL shall verify compliance with WAC storage requirements under the Uniform Fire Code.

If you have any questions or technical inquiries concerning this matter, please contact me at (509) 546-2990, or G. Thomas Tebb of my staff at (509) 546-4302. Please complete the enclosed certificate of completion and submit to this Department by December 14, 1992.

Sincerely,

Dave Nylander

Dave Nylander
Office Manager
Nuclear and Mixed Waste Management Program/Kennewick

DN:gd
Enclosures (2)

cc: Roger Stanley, Ecology
Dave Jansen, Ecology
Scott McKinney, Ecology
Jim Bauer, DOE
Kyle Webster, PNL
W. J. Bjorklund, PNL
Administrative Record

FACT SHEET

Owner U. S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, WA 99352

Operator Pacific Northwest Laboratories
P.O. Box 999
Richland, WA 99352

Facility/Location 305-B Storage Facility, 300 Area

Contact Glenn T. Thornton (new manager is Kyle Webster)
(509) 376-7688

Activity Compliance inspection conducted in support of 305-B hazardous waste storage Part B permit issuance.

Background

The 305-B hazardous waste storage facility is a one-story frame and masonry building with a basement, constructed in the early 1950's. An attached two-story-high metal and concrete building was constructed in January 1978. The facility has been specially modified to provide storage of many types of dangerous wastes.

The 305-B facility has been used for dangerous waste storage since March 1989, operating under interim status. Wastes, primarily from Pacific Northwest Laboratories (PNL)-operated research facilities, are brought to the facility for consolidation either through lab packing, bulking, or simple accumulation of "truckload quantities" in preparation for recycling, treatment, or disposal. No treatment or disposal of waste is performed at the facility.

Finding #1 FAILURE TO SAMPLE, TEST AND REDESIGNATE WASTE

WAC 173-303-300 General waste analysis. (4) Analysis shall be repeated as necessary to ensure that it is accurate and current. At a minimum, analysis must be repeated: (a) When the owner or operator has been notified, or has reason to believe, that the process or operation generating the dangerous wastes has significantly changed.

A note on the MSDS for container #13040, originally containing AEROSOL OT 75% Surfactant, read "ethanol evaporated off prior to becoming waste." The waste remaining in the container is not accurately represented by the MSDS. A waste analysis has not been repeated.

Finding #2 FAILURE TO MAINTAIN CURRENT CONTINGENCY PLAN

WAC 173-303-350 Contingency plan and emergency procedures. (3)(d) A current list of names, addresses, and phone numbers (office and home) of all persons qualified to act as the emergency coordinator required under WAC 173-303-360(1).

Mr. Thornton stated 305-B is using the Emergency plan in the Part B permit application. The Part B Permit application, Section 7.2, page 703 states that, due to security requirements, names or phone numbers of personnel acting as emergency contacts are not released. When Steve asked Mr. Thornton how facility personnel knew who the emergency contacts were, he retrieved an old list from a bulletin board. The list was from the previous emergency plan, and Mr. Thornton said it was not maintained with current information.

Finding #3 FAILURE TO USE SPECIFIED UNITS OF MEASUREMENT

WAC 173-303-380 Facility recordkeeping. (1) Operating record. The owner or operator of a facility shall keep a written operating record at his facility. The following information shall be recorded . . . (b) The location of each dangerous waste within the facility and the quantity at each location. . .

The operating record failed to report accurate quantities of dangerous waste being stored in specific locations. The inspection team was informed by Mr. Thornton that such information was tracked using a computerized data base. However, the data base was inaccurate and did not provide the required information as to the location of each dangerous waste within the facility and the quantity at each location.

Finding #4 FAILURE TO PROPERLY LABEL OR MANAGE CONTAINERS

WAC 173-303-630 Use and management of containers. (2) Condition of containers. If a container holding dangerous waste is not in good condition (e.g., severe rusting, apparent structural defects) . . . the owner or operator must transfer the dangerous waste from the container to a container that is in good condition . . . (3) Identification of containers. The owner or operator must label containers in a manner which adequately identifies the major risk(s) associated with the contents of the containers for employees, emergency response personnel and the public . . . The owner or operator must affix labels upon transfer of dangerous wastes from one container to another. The owner or operator must destroy or otherwise remove labels from the emptied container . . . (8) Special requirements for ignitable or reactive waste. . . . (b) Special requirements for ignitable or reactive waste. . . . (b) The owner or operator shall design, operate, and maintain ignitable waste and reactive waste . . . container storage in a manner equivalent with the Uniform Fire Code.

A dented container (#13040) was observed in the non/ORM/state-only storage area of the nonradioactive high bay. Mr. Thornton reported that the container was dented when it arrived at 305-B in 1990. The WAC requires containers not in good condition to be transferred from the damaged container into one of good condition.

On the date of our inspection, drums in the mixed waste storage area (17 contained waste and approximately 8 were empty) and 1 container in the radioactive flammable liquid storage area were not properly marked/labeled. Waste management personnel did not affix labels or apply markings upon transfer of dangerous wastes from one container to another, nor did they destroy or otherwise remove labels from the emptied containers. Instead, all information dictating the contents of the container, unique container number, and point of origin were on individual log sheets (CDRR) laying on top of the containers, and were not secured.

During our inspection of the radioactive mixed waste storage area (cell #7) located in the basement, Laura Russell commented on an 8 gallon container in the secondary containment area used for PCB's. Mr. Selby stated that it was labeled wrong and he removed the hazardous waste sticker as we stood there. Pictures were taken before and after the removal of the dangerous waste label.

When Mr. Selby opened the flammable radioactive mixed waste storage containment area (cell #9), Steve Moore noticed that a drum in the doorway was marked only with a flammable sticker and stenciled with 325/300 on the side. Mr. Selby immediately took a black felt tip marker and began to write on its lid. Pictures were also taken while he was writing.

During routine inspections by PNL personnel, Drum Action Sheets are filled out and placed on top of drums needing action (e.g., labels missing, etc.). However, the Drum Action Sheets are not dated, and there is no way of knowing how long the action has been required.

The Uniform Fire Code (UFC) storage requirements were exceeded from January through April, 1992. Waste acceptance at 305-B, in lieu of exceeding the UFC requirements, was a known and deliberate act. In Glenn Thornton's memo dated July 30, 1992, he stated, "we chose to [sic] above UFC limits due to contracting difficulties which precluded off-site movement of flammable liquid wastes. This forced us to make a choice between non-compliance with 90 day storage limits in some Battelle laboratories or temporary non-compliance with UFC limits at 305-B." Ecology was not informed at the time of PNL's decision to violate WAC storage requirements.

Please complete this form and return to Greta P. Davis at 7601 W. Clearwater Ave., Suite 102, Kennewick, WA 99336 by December 14, 1992.

CERTIFICATE OF COMPLETION

As an authorized representative of U.S. Department of Energy, I certify, to the best of my knowledge, the completion status of our facility located on the Hanford Reservation, 300 Area, 305-B Storage Facility ID Number WA7890008967 as shown below.

COMPLETION STATUS
(representative should list completion date & initial each item)

Items of Non-compliance (WAC 173-303)	Required Completion Date	Date of Completion	Initials	Comments
Item 1 - 300 (4)(a)	_____	_____	_____	_____
Item 2 - 350 (3)(d)	_____	_____	_____	_____
Item 3 - 380 (1)(b)	_____	_____	_____	_____
Item 4 - 630 (2), (3), and (8)(b)	_____	_____	_____	_____

_____ _____
Signature of Authorized Representative Date

APPENDIX C-4A

RESPONSE TO NOTICE OF NONCOMPLIANCE 305-B STORAGE FACILITY

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

DEC 02 1992

93-RPA-061

Mr. David C. Nylander
Nuclear and Mixed
Waste Management Program
State of Washington
Department of Ecology
7601 W. Clearwater, Suite 102
Kennewick, Washington 99336

Dear Mr. Nylander:

DANGEROUS WASTE COMPLIANCE INSPECTION FOR 305-B STORAGE FACILITY

This letter and enclosure provide the U.S. Department of Energy Richland Field Office (RL) and Pacific Northwest Laboratory (PNL) response to your October 30, 1992, letter entitled "Dangerous Waste Compliance Inspection for 305-B Storage Facility" (305-B). This is a consolidated and unified response which provides RL and PNL responses to all pertinent issues and the specific requested information in Items 1 to 5 of your letter.

This response has been prepared pursuant to Part II, Article VII, Paragraph 28, of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), that requires RL to respond with a plan and schedule of actions to any notice of violation within 21 days of receipt of notice. We confirmed by phone with Mr. Tom Tebb, of your office, that your October 30, 1992, letter extended the 21-day period for response in this case to 30 calendar days from the date of receipt.

As a general comment, we are concerned that Ecology has alleged violations with less than adequate factual verification or regulatory basis. We have identified several inaccuracies in the October 30, 1992, letter and fact sheet affecting each of the Findings. These are addressed individually in the enclosed response.

In consideration of the actual circumstances surrounding this inspection, we must take specific exception to the statement in the October 30, 1992, letter that there is "a failure by PNL to properly manage dangerous waste." This statement is totally unjustified and is unsubstantiated by any of the conditions noted in the letter. It is also inconsistent and fairly well

DEC 02 1992

contradicted by the statements of the lead inspector, Mr. Steve Moore, at the inspection closeout on July 16, 1992. At that time, Mr. Moore expressly indicated that there were "no significant issues, no show stoppers and that the Ecology letter and report would reflect only minor concerns." The statement is also incompatible with the fact that the inspector had expressed specific agreement with the actions taken by 305-B unit staff to address Ecology's concerns on the spot during the July inspection. RL and PNL left the inspection closeout with the specific impression that Ecology's concerns had been addressed in a satisfactory manner.

RL and PNL strive at all times to be in full compliance with the applicable requirements. We rely on and respond in good faith, to the statements, observations and professional opinions that are expressed to us by Ecology inspectors during meetings, site visits and inspections. RL and Ecology have agreed that the goal of our working relationship should be responsible, planned, and controlled mutual action that will achieve the necessary level of compliance. To achieve this goal we believe we should have a good working relationship which is based on professional credibility, mutual respect and trust.

In keeping with our policy to operate in compliance with applicable requirements, we wish to emphasize that the issues raised in your letter have been seriously evaluated. Specific responses to Items 1 through 5 are provided in the enclosure.

If you have any questions, please contact me or P. J. Krupin, of my staff, on (509) 372-1112 or E. M. Bowers, PNL Onsite Office on (509) 376-9922.

Sincerely,

James D. Bauer

James D. Bauer, Acting Program Manager
Office of Environmental Assurance,
Permits, and Policy

EAP:PJK

Enclosure

cc w/encl:
P. T. Day, EPA
T. D. Chikalla, PNL
H. T. Tilden, PNL
D. S. Broussard, PNL
W. J. Bjorklund, PNL

ENCLOSURE
U.S. DEPARTMENT OF ENERGY, RICHLAND FIELD OFFICE
PLAN AND SCHEDULE OF ACTION
&
RESPONSE TO ECOLOGY OCTOBER 30, 1992 INSPECTION REPORT
FOR THE 305-B STORAGE UNIT

RESPONSE TO SPECIFIC ISSUES:

1. The compliance letter should, but does not, reference or cite the applicability of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement or TPA) to the letter. 305-B is a treatment, storage, and disposal (TSD) facility operating under interim status. The Ecology compliance letter should clearly cite the applicable TPA provisions for alleging findings of non-compliance found in Paragraph 28. Any alleged violations or findings should be brought to the attention of RL pursuant to the provisions of Paragraph 28. We have treated your letter as such and are responding pursuant to the procedures specified in Paragraph 28.

2. We have been unable to identify a basis or citation for requiring a Certificate of Completion, as is included in the October 30, 1992 letter. We will continue to document the compliance status of 305-B in the documentation developed in our environmental programs. Such documentation will be kept at RL facilities and in our recordkeeping files as appropriate.

RESPONSE TO SPECIFIC ITEMS

Item 1

Within thirty (30) calendar days of receipt of this letter, PNL shall submit to Ecology a schedule to sample and designate container #13040.

Response:

We object to the Finding that a violation of WAC 173-303-300 occurred. There is no requirement to sample and analyze wastes when process knowledge is sufficient to designate the waste. WAC 173-303-300(2) states, in pertinent part, "... analysis may ... consist of existing published or documented data on the dangerous waste ..."

The material in question, Aerosol OT (container #13040), became waste when it dried out and became unusable to the owner. The material was properly designated based on existing published and documented process knowledge, i.e. the information on the MSDS plus documented knowledge that the solvent had evaporated. The Aerosol OT was 75% sodium dioctylsulfosuccinate, 18% water, and 7% ethanol. The proper waste designation of either a 75% solution or a 100% solid cake is WT01/EHW/Non-RCRA waste. It was properly designated per WAC 173-303-070. The fact that the water and ethanol had evaporated had no effect on the final designation of the material. This material was manifested and shipped to a permitted offsite TSD facility on August 20, 1992.

Item 2

> Within thirty (30) calendar days of receipt of this letter, PNL shall provide Ecology with a list of the responsible emergency and contingency plan coordinators.

Response:

We object to the Finding that a violation of WAC 173-303-350 occurred. The contingency plan shown in the 305-B Part B permit application is indeed current and correct. The list of current emergency contacts, as required by WAC 173-350(3)(d), is maintained at the facility as required by WAC 173-303-350(4)(a).

The language in the 305-B contingency plan is consistent with that found in other Hanford TSD contingency plans. The 305-B permit has been through three Notice of Deficiency cycles and has been accepted by Ecology permit writers, who also report to the same supervisor as do the regulators who performed the 305-B inspection. Ecology has previously agreed that names of responsible personnel would not be provided in unit contingency plans submitted as part of the units' permit applications; see, e.g., T.L. Nord to S.H. Wisness letter, March 23, 1990, "Notice of Deficiency for 616 Nonradioactive Dangerous Waste Storage Facility".

Item 3

> Within thirty (30) calendar days of receipt of this letter, PNL shall provide Ecology with an accurate inventory of waste stored within the 305-B facility using the required units of measure.

Response:

The inventory requested in this Item is provided in the Attachment to this enclosure.

What the October 30, 1992 letter fails to recognize is that the error noted by Ecology at the time of the inspection was diagnosed as a software problem and was corrected immediately during the inspection.

The Ecology inspector made a correct observation that the database record must be current if it to be used as part of the written record. WAC 173-303-380(1) requires the owner or operator to keep a written operating record at his facility. The "written record" maintained at 305-B includes two types of documents, 1) the Chemical Disposal/Recycle Request (CDRR) form for those wastes coming into the facility and 2) the shipping manifests for waste leaving the facility. These written records, however, do not adequately define the quantity and location of waste as it is managed within 305-B. We have chosen to maintain, in addition to the aforementioned written records, a computerized database of hazardous and radioactive mixed waste (RMW) stored at 305-B. This is done because it is impractical to instantaneously access the vast amount of data on the written CDRR form. At the time of the inspection, we recognized that the database has not always been maintained daily. We have reconciled the physical location and inventory records with the database records.

Item 4

Within thirty (30) calendar days of receipt of this letter, PNL shall properly affix labels to drums and containers throughout the 305-B facility.

Response:

We object to the alleged violation of WAC 173-303-630(2) and (3). All waste containers are labeled in compliance with WAC 173-303-200(1)(d), as required, prior to acceptance at 305-B. The Ecology comments are in error, are based on misunderstanding of the operations at 305-B, and inappropriate interpretations of the applicability of the cited regulations to the facility.

While in 305-B, staff routinely labpack or consolidate through bulking the thousands of lab chemical bottles received annually. These labpack or bulk containers are then properly labeled.

We object to the compliance letter and Fact Sheet statement that a dented container in storage at 305-B was "not in good condition". We object to these statements because the container was not leaking and was in a reasonable condition for storage. The dented container was a fiber drum with a plastic inner liner. The dent in the exterior of the fiber drum in no way impaired the ability of the container to contain the solid mass inside. The dent did not present a risk which would require action under the applicable regulations.

It should also be noted that, since 305-B is currently operating under interim status, that the reference to WAC 173-303-630(2) is incorrect. Interim status facilities are required to comply with interim status standards of 40 CFR and certain WAC sections listed in WAC 173-303-400(3) in lieu of the final facility standards listed in WAC 173-303-600.

Item 5

Within thirty (30) calendar days of receipt of this letter, PNL shall verify compliance with WAC storage requirements under the Uniform Fire Code.

Response:

We object to the alleged violation of WAC 173-303-630(8)(b). This provision is inapplicable to interim status facilities. We provided Ecology Inspector Laura Russell information addressing this issue via FAX on July 30, 1992. The faxed information documented that 305-B utilizes a grossly conservative estimation of inventory by assuming dilute solvent mixtures are pure components. This over-conservatism is more fully protective of human health and the environment and is a prudent best management practice. It is not an action that is required by WAC 173-303.

Since 305-B is currently operating under interim status, the reference to WAC 173-303-630(8) is incorrect. Interim status facilities are required to comply with interim status standards of 40 CFR and certain WAC sections listed in WAC 173-303-400(3) in lieu of the final facility standards listed in WAC 173-303-600.

ATTACHMENT

305-B Storage Unit Hazardous Waste Inventory by Location
(effective 11/20/92)

Location	Hazardous Waste Description	Weight, kgs
Cell 1	Acids and Oxidizers	1474.7
Cell 2	Poisons, ORM and PCBs	549.4
Cell 3	Caustics, State-Only Waste and *Non-regulated Waste	858.4
Cell 4	Organics	504.4
Cell 5 (Bulking Module)	Organics	170.4
Storage Area 6	Asbestos	0.5
Cell 7	Radioactive Mixed Waste (excluding flammable liquids)	475.2
Storage Area 8	Ignitables	618.1
Storage Area 9	Radioactive Mixed Waste (flammable materials only)	498.0
Storage Area 11	State-Only, ORM, *Non-regulated Waste, labpacks and bulked waste containers prior to offsite shipment (drums only)	8412.4
Storage Area 12	Oxidizers, labpacks and bulked waste containers prior to offsite shipment (drums only)	3583.4
Storage Area 13	Caustics (drums only)	733.5
Storage area 14	Acids (drums only)	155.2

Note: Total Class I flammable liquids in storage is approximately 190 gallons (must be less that 480 gallons).

* not included in totals

DON'T SAY IT -- Write It!

Date: November 27, 1992

To: Paul Krupin, DOE-RL

From: Kyle Webster, Battelle, Pacific NW Laboratory

Subject: 305-B Storage Unit Hazardous Waste Inventory

The attached subject inventory is submitted in response to your telephone request on 11/25.

Call me on 376-7688 if you have any questions concerning this information.

cc: WJB, HTT w/o att.

Kyle Webster

INVENTORY BY CELL

(SUBJECT TO CHANGE)

DATE: 11/25/92

Cell: 1

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
13189	1	HYDROFLUORIC ACID FROM LAB	368L	0.1500 kgs
13164	1	BATTERIES - LEAD ACID	13164	16.0000 kgs
14909	1	HYDROCHLORIC ACID 28%, NITRIC ACID 9% AND HYDROFLUORIC ACID .01 SOLUTION FROM LAB	368L	3.0000 kgs
15132	1	HYDROCLORIC ACID 28%, NITRIC ACID 9%, HYDROFLUORIC ACID .01 AND WATER 62.99% SOLUTION FROM LAB	368L	2.5000 kgs
16050	1	NITRIC ACID 20%, SILVER .5%, CHROME/SELENIUM ALL TRACE, WATER 80% FROM LAB	16050	250.0000 kgs
16552	1	HYDROFLUORIC ACID 90%, SILCON DIOXIDE 10% FROM LAB	368L	4.5000 kgs
15973	1	HYDROFLUORIC ACID 48%, WATER 52% SOLUTION FROM LAB	368L	0.5000 kgs
16412	1	SULFURIC ACID 12.6%, HYDROFLUORIC ACID 2.5%, BORIC ACID 1.2%, FERRIC AMMONIUM SULFATE .2%, AMMONIUM	368L	3.0000 kgs
16413	1	SULFURIC ACID 12.6%, HYDROFLUORIC ACID 2.5%, BORIC ACID 1.2%, FERRIC AMMONIUM SULFATE .2%, AMMONIUM	368L	3.0000 kgs
16414	1	SULFURIC ACID 12.6%, HYDROFLUORIC ACID 2.5%, BORIC ACID 1.2%, FERRIC AMMONIUM SULFATE .2%, AMMONIUM	368L	3.0000 kgs
16418	1	ETHANOL 2.6%, SULFURIC ACID .8%, BORON .5%, HYDROFLUORIC ACID .4%, CITRATE .2%, WATER 95.5% SOLUTIO	368L	20.0000 kgs
16780	1	TUNGSTEN SPECTROMETRIC SOLUTION NITRIC ACID 7%, HYDROFLOURIC AICD 4%, WATER 88.99% SOLUTION FROM LA	368L	0.1000 kgs
16786	1	MULTIELEMENT MIX D - NITRIC ACID 5%, HYDROFLUORIC ACID 1%, ALUMINIUM .01%, BERYLLIUM .01%, BORIC AC	368L	0.0454 kgs
17266	1	NITRIC ACID 12.5%, HYDROFLUORIC ACID 1.1%, WATER 86.4% SOLUTION FROM LAB		19.0000 kgs
17489	1	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB		19.0000 kgs
17490	1	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB		19.0000 kgs

INVENTORY BY CELL

Cell: 1

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17491	1	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB		19.0000 kgs
18341	1	SODIUM CHLORIDE 16%, POTASSIUM CHLORIDE 8%, CITRIC ACID 2.4%, IRON .8%, WATER 72.8% SOLUTION FROM L		20.0000 kgs
18433	1	SULFURIC ACID 15%, PHOSPHORIC ACID 6%, HYDROFLUORIC ACID 2%, VANADIUM .05%, WATER 77% SOLUTION FROM		20.0000 kgs
18437	1	HYDROCHLORIC ACID 5%, NITRIC ACID 2%, SELENIUM (21 ppm) .0021%, WATER 93% SOLUTION FROM LAB		20.0000 kgs
18438	1	HYDROCHLORIC ACID 5%, NITRIC ACID 2%, SELENIUM (1.2 ppm) .00012%, WATER 93% SOLUTION FROM LAB		20.0000 kgs
18439	1	NITRIC ACID 1%, SELENIUM (500 ppm) .05%, WATER 98.5% SOLUTION FROM LAB		20.0000 kgs
18527	1	COPPER SULFATE 18%, SULFURIC ACID 7.5% SOLUTION FROM LAB		64.5000 kgs
18528	1	COPPER SULFATE 18%, SULFURIC ACID 7.5% SOLUTION FROM LAB		64.5000 kgs
18529	1	COPPER SULFATE 18%, SULFURIC ACID 7.5% SOLUTION FROM LAB		64.5000 kgs
18530	1	COPPER SULFATE 18%, SULFURIC ACID 7.5% SOLUTION FROM LAB		64.5000 kgs
18531	1	COPPER SULFATE 18%, SULFURIC ACID 7.5% SOLUTION FROM LAB		64.5000 kgs
18532	1	COPPER SULFATE 18%, SULFURIC ACID 7.5% SOLUTION FROM LAB		64.5000 kgs
18533	1	COPPER SULFATE 18%, SULFURIC ACID 7.5% SOLUTION FROM LAB		30.5000 kgs
18534	1	COPPER SULFATE 18%, SULFURIC ACID 7.5% SOLUTION FROM LAB		30.5000 kgs
			Total	**929.7954 kgs**

INVENTORY BY CELL

Cell: 1A

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
12467	1A	2-ETHYLHEXYL NITRATE 100% FROM LAB		0.1160 kgs
11469	1A	MERCURIC NITRATE		0.0750 kgs
12405	1A	NITROGEN DIOXIDE	12405	1.0000 kgs
15100	1A	MERCURIC NITRATE FROM LAB		0.0100 kgs
16430	1A	ACETIC ACID 97%, PERCHLORIC ACID .03%, IRON .007%, NICKEL .003%, CHROMIUM .001%, SILICON >.01% FROM		0.5000 kgs
16423	1A	ACETIC ACID 97%, PERCHLORIC ACID 3%, CHROMIUM/IRON/NICKEL ALL TRACE FROM LAB		0.5000 kgs
17182	1A	PERACETAIC ACID 35%, WATER 65% SOLUTION FROM LAB		0.5000 kgs
17473	1A	ALUMINUM NITRATE 24.1%, ZIRCONYL NITRATE 5.6%, SODIUM FLUORIDE 3.1%, SODIUM CHLORIDE .9%, BORIC ACI		9.5500 kgs
17481	1A	ALUMINUM NITRATE 18.2%, SODIUM FLUORIDE 3.4%, ZIRCONYL NITRATE 5.4%, SODIUM SILICATE .5%, BORIC ACI		7.1400 kgs
17522	1A	SODIUM NITRATE 8.47%, SOIDUM NITRITE 10.06%, SOIDUM ALUMINATE 8.1% AND OTHER SODIUM COMPOUNDS FROM		17.0100 kgs
17523	1A	SODIUM NITRATE 18.5%, SOIDUM NITRITE 12.8%, SOIDUM ALUMINATE 10.1% AND OTHER SODIUM COMPOUNDS FROM		25.0000 kgs
17643	1A	NITRIC ACID 65%, WATER 35% SOLUTION FROM LAB		0.0100 kgs
17714	1A	POTASSIUM PERSULFATE 4.2%, IRON NITRATE 1.6%, PALLIDIUM NITRATE 2.7%, NICKEL NITRATE 4.2%, METHANOL		10.0000 kgs
17796	1A	MERCURIC NITRATE 50%, WATER 50% SOLUTION FROM LAB		0.0500 kgs
18249	1A	NITRIC ACID 65%, WATER 35% SOLUTION FROM LAB		2.5000 kgs
18321	1A	OXALIC ACID .7%, AMMONIUM HYDROXIDE 1%, NITRIC ACID 58%, IRON NITRATE .04%, SODIUM CARBONATE .5%, W		2.5000 kgs
18140	1A	NITRIC ACID CONCENTRATED 60%, WATER 39%, ACETONE 1% SOLUTION FROM LAB		7.0000 kgs

INVENTORY BY CELL

Cell: 1A

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18190	1A	SILVER NITRATE 34%, WATER 66% SOLUTION FROM LAB		0.0500 kgs
18305	1A	RUTHENIUM NITROSYL NITRATE 18.5%, WATER 81.5% SOLUTION FROM LAB		1.0000 kgs
18306	1A	PALLADIUM NITRATE 8%, WATER 92% SOLUTION FROM LAB		0.1000 kgs
18307	1A	RHODIUM NITRATE 10%, WATER 90% SOLUTION FROM LAB		0.1000 kgs
18665	1A	HYDROGEN PEROXIDE 30%, WATER 70% SOLUTION FROM LAB		1.0000 kgs
18666	1A	HYDROGEN PEROXIDE 30%, WATER 70% SOLUTION FROM LAB		1.0000 kgs
			Total	**86.7110 kgs**

INVENTORY BY CELL

Cell: 1B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
11822	1B	STANNIC CHLORIDE		0.5000 kgs
11217	1B	STANNIC CHLORIDE		2.0000 kgs
11499	1B	SODIUM BISULFATE		0.2000 kgs
11509	1B	SODIUM BISULFATE		0.2500 kgs
12671	1B	PHOSPHOROUS PENTOXIDE		0.9000 kgs
12978	1B	INEL-4 SERIES A SLUDGE		1.0000 kgs
13513	1B	BIS(2-ETHYL HEXYL) PHOSPHATE SPILL CLEANUP FROM LAB	13513	7.0000 kgs
13792	1B	BATTERIES - GELL CELL FROM PLANT MAINTENANCE	13792	18.9000 kgs
13314	1B	CADMIUM NITRATE FROM LAB		0.1130 kgs
14062	1B	STRONTIUM NITRATE FROM LAB		0.3000 kgs
15078	1B	3-CHLOROPERBENZOIC ACID 65% SOLUTION FROM LAB		0.0250 kgs
15062	1B	6-VOLT PB/ACID BATTERY (DAMAGED) FROM LAB		59.0000 kgs
15097	1B	CADMIUM NITRATE FROM LAB		0.0100 kgs
12881	1B	STRONTIUM NITRATE		0.2000 kgs
12882	1B	STRONTIUM NITRATE		0.2000 kgs
17404	1B	NIOBIUM NITRIDE FROM LAB		0.5000 kgs
17515	1B	SODIUM NITRATE 23.82%, SOIDUM NITRITE 19.33%, SOIDUM ALUMINATE 15.56% AND OTHER SODIUM COMPOUNDS FR		1.0210 kgs
17516	1B	SODIUM NITRATE 23.89%, SOIDUM NITRITE 19.39%, SOIDUM ALUMINATE 7.82% AND OTHER SODIUM COMPOUNDS FRO		1.0000 kgs
17517	1B	SODIUM NITRATE 23.89%, SOIDUM NITRITE 19.39%, SOIDUM ALUMINATE 7.82% AND OTHER SODIUM COMPOUNDS FRO		1.0000 kgs
17518	1B	SODIUM NITRATE 23.89%, SOIDUM NITRITE 19.39%, SOIDUM ALUMINATE 7.82% AND OTHER SODIUM COMPOUNDS FRO		1.0000 kgs
17519	1B	SODIUM NITRATE 20.66%, SOIDUM NITRITE 16.78%, SOIDUM ALUMINATE 20.6% AND OTHER SODIUM COMPOUNDS FRO		1.0000 kgs

INVENTORY BY CELL

Cell: 1B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17520	1B	SODIUM NITRATE 20.66%, SOIDUM NITRITE 16.78%, SOIDUM ALUMINATE 20.66% AND OTHER SODIUM COMPOUNDS FR		1.0000 kgs
17521	1B	SODIUM NITRATE 20.66%, SOIDUM NITRITE 16.78%, SOIDUM ALUMINATE 20.66% AND OTHER SODIUM COMPOUNDS FR		1.0000 kgs
17843	1B	SODIUM PEROXIDE FROM LAB		0.5000 kgs
17844	1B	SODIUM PEROXIDE FROM LAB		0.2000 kgs
17759	1B	SODIUM NITRATE FROM LAB		0.5000 kgs
17760	1B	POTASSIUM PERMANGANATE FROM LAB		0.4540 kgs
17767	1B	MAGNESIUM PERCHLORATE FROM LAB		0.5000 kgs
17768	1B	MAGNESIUM PERCHLORATE FROM LAB		0.5000 kgs
17769	1B	MAGNESIUM PERCHLORATE FROM LAB		0.5000 kgs
17770	1B	MAGNESIUM PERCHLORATE FROM LAB		0.5000 kgs
17771	1B	MAGNESIUM PERCHLORATE FROM LAB		0.5000 kgs
17772	1B	MAGNESIUM PERCHLORATE FROM LAB		0.5000 kgs
17773	1B	MAGNESIUM PERCHLORATE FROM LAB		0.5000 kgs
17777	1B	STANNIC CHLORIDE FROM LAB		0.5000 kgs
17779	1B	CALCIUM HYPOCHLORITE FROM LAB		0.5000 kgs
17973	1B	SILVER NITRATE FROM LAB		0.1000 kgs
18034	1B	GRAPHITE 90.2%, BORIC ACID 5.7%, CADMIUM OXIDE 1.1%, COBALT(III) OXIDE 1.4%, MANGANESE DIOXIDE 1.6%		0.0010 kgs
18135	1B	MERCUROUS NITRATE FROM LAB		0.4540 kgs
18225	1B	AMMONIUM CENIUM(IV) NITRATE FROM LAB		0.1000 kgs

INVENTORY BY CELL

Cell: 1B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18254	1B	POTASSIUM PERMANGANATE FROM LAB		0.1000 kgs
18270	1B	CALCIUM NITRATE FROM LAB		0.4535 kgs
18186	1B	POTASSIUM NITRATE FROM LAB		0.4530 kgs
18199	1B	RUBIDIUM NITRATE FROM LAB		0.0010 kgs
18403	1B	SODIUM PEROXIDE FROM LAB		0.1000 kgs
18404	1B	SODIUM PEROXIDE FROM LAB		0.5000 kgs
18417	1B	SODIUM PEROXIDE FROM LAB		0.4500 kgs
18537	1B	ZINC CHLORIDE FROM LAB		0.5000 kgs
18589	1B	SODIUM NITRITE FROM LAB		0.4540 kgs
18590	1B	PHOSPHORS PENTOXIDE FROM LAB		0.1000 kgs
18618	1B	ALUMINUM NITRATE FROM LAB		0.5000 kgs
18619	1B	ALUMINUM NITRATE FROM LAB		0.5000 kgs
18620	1B	ALUMINUM NITRATE FROM LAB		0.5000 kgs
18621	1B	ALUMINUM NITRATE FROM LAB		0.5000 kgs
18622	1B	BARIUM NITRATE FROM LAB		0.4530 kgs
18623	1B	BARIUM NITRATE FROM LAB		0.4530 kgs
18627	1B	AMMONIUM BIFLUORIDE FROM LAB		2.2676 kgs
18641	1B	POTASSIUM NITRATE FROM LAB		0.4500 kgs
18724	1B	AMMONIUM NITRATE FROM LAB		0.5000 kgs
18869	1B	ZINC CHLORIDE 100%		0.0500 kgs
			Total	114.2131 kgs

INVENTORY BY CELL

Cell: 1C

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
10921	1C	HYDROCHLORIC ACID		2.2676 kgs
10922	1C	SULFURIC ACID		2.0408 kgs
11320	1C	HYDROFLUORIC ACID		0.1000 kgs
11656	1C	HYDROFLUORIC ACID		0.0500 kgs
11995	1C	NITRIC ACID		0.2500 kgs
12773	1C	MERCURY STANDARD		0.2500 kgs
12774	1C	MERCURY STANDARD		0.1000 kgs
12775	1C	MERCURY STANDARD		0.2500 kgs
13537	1C	NITRIC ACID	SEQ-010	0.1000 kgs
13291	1C	AQUEOUS SOLUTION WITH .3% MERCURY FROM LAB		4.0000 kgs
14362	1C	MERCURIC CHLORIDE .69%, WATER 99.31% SOLUTION FROM LAB		20.0000 kgs
15243	1C	NITRIC ACID 10%, MERCURY STANDARD 1% AND WATER 89% SOLUTION FROM LAB		0.2500 kgs
17475	1C	SODIUM FLUORIDE 7.2%, NITRIC ACID 10.7%, NICKEL FLUORIDE .3%, WATER 81.8% SOLUTION FROM LAB		8.9200 kgs
17484	1C	ALUMINUM NITRATE .2%, SODIUM FLUORIDE .9%, ZIRCONYL NITRATE 2.6%, BORIC ACID .1%, HYDROCHLORIC ACID		12.1800 kgs
17513	1C	SULFURIC ACID 25%, CYANIDE .01%, WATER 74.99% SOLUTION FROM LAB		0.5000 kgs
17492	1C	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB		19.0000 kgs
17628	1C	CHROMIUM 9.8 ppm, SELENIUM 2.2 ppm, CADMIUM 3.1 ppm, MERCURY 1.6 ppm, LEAD 15.6 ppm, NITRIC ACID 1%		1.0000 kgs
17797	1C	MERCURIC CHLORIDE .41%, MERCURIC NITRATE .48%, NITRIC ACID .25%, POTASSIUM PERSULFATE 1%, WATER 97.		2.0000 kgs
17871	1C	NITRIC ACID 5%, WATER 95% SOLUTION FROM AB		6.0000 kgs
18247	1C	SULFURIC ACID 96.5%, WATER 35% FROM LAB		2.5000 kgs

INVENTORY BY CELL

Cell: 1C

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18320	1C	NITRIC ACID 9.3%, URINE 30%, ALUMINUM NITRATE .2%, WATER 60.8%, SOLUTION FROM LAB		2.5000 kgs
18148	1C	SILVER NITRATE .05%, MERCURIC CHLORIDE 8.2%, MERCURIC NITRATE 9.6%, POTASSIUM PERSULFATE 20%, NITRI		10.0000 kgs
18200	1C	ANTIMONY TRICHLORIDE FROM LAB		0.1080 kgs
18308	1C	ACETIC ACID GLACIAL 99.55, WATER .5% SOLUTION FROM LAB		2.0000 kgs
18309	1C	HYDROFLUORIC ACID 48%, WATER 52% SOLUTION FROM LAB		3.8000 kgs
18310	1C	HYDROFLUORIC ACID 48%, WATER 52% SOLUTION FROM LAB		3.8000 kgs
18311	1C	HYDROFLUORIC ACID 48%, WATER 52% SOLUTION FROM LAB		3.8000 kgs
18312	1C	PHOSPHORIC ACID (CONCENTRATED), WATER 15% SOLUTION FROM LAB		1.0000 kgs
18317	1C	SULFURIC ACID (CONCENTRATED) 96%, WATER 4% SOLUTION FROM LAB		4.0000 kgs
18405	1C	CHROMIUM TRIOXIDE 63%, WATER 37% SOLUTION FROM LAB		0.0250 kgs
18406	1C	CHROMIUM TRIOXIDE 63%, WATER 37% SOLUTION FROM LAB		0.0250 kgs
18409	1C	HYDROFLUORIC ACID 50%, WATER 50% SOLUTION FROM LAB		0.0500 kgs
18410	1C	HYDROFLUORIC ACID 50%, WATER 50% SOLUTION FROM LAB		1.5000 kgs
18411	1C	HYDROFLUORIC ACID 50%, WATER 50% SOLUTION FROM LAB		2.0000 kgs
18412	1C	HYDROFLUORIC ACID 50%, ZIRCONIUM FLUORIDE .02%, WATER 49.98% SOLUTION FROM LAB		0.1000 kgs
18434	1C	SULFURIC ACID 15%, PHOSPHORIC ACID 4.4%, HYDROFLUORIC ACID 1.4%, VANADIUM .06%, WATER 79% SOLUTION		20.0000 kgs

INVENTORY BY CELL

Cell: 1C

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18435	1C	SULFURIC ACID 6.7%, HYDROFLUORIC ACID 1.8%, METHANOL 2.6%, BORIC ACID 7.2%, ETHANOL 1.2%, PHOSPHORI		20.0000 kgs
18446	1C	HYDROXYLAMINE HYDROCHLORIDE 1.7%, HYDROCHLORIC ACID 8.45, WATER 90% SOLUTION FROM LAB		0.5000 kgs
18496	1C	HYDROCHLORIC ACID 40.3%, HYDROFLUORIC ACID .1%, WATER 59.7% SOLUTION FROM LAB		2.5000 kgs
18497	1C	HYDROCHLORIC ACID 21%, AMMONIUM CHLORIDE .04%, SODIUM CHLORIDE .05%, HYDROFLUORIC ACID <.01%, WATE		2.5000 kgs
18498	1C	NITRIC ACID 22.7%, WATER 77.2% SOLUTION FROM LAB		2.5000 kgs
18499	1C	OXALIC ACID 1.1%, AMMONIUM HYDROXIDE .78%, IRON NITRATE .01%, NITRIC ACID 16.4%, SODIUM HYDROXIDE 9		2.7000 kgs
18500	1C	CONCENTRATED NITRIC ACID 19.7%, CONCENTRATED HYDROCHLORIC ACID 9.3%, SULFURIC ACID .007%, WATER 68		4.0400 kgs
18508	1C	HYDROCHLORIC ACID 8%, WATER 92% SOLUTION FROM LAB		4.0000 kgs
18509	1C	PERCHLORIC ACID 2%, HYDROCHLORIC ACID 3%, WATER 95% SOLUTION FROM LAB		1.0000 kgs
18510	1C	HYDROCHLORIC ACID 17%, NITRIC ACID 21%, WATER 23% SOLUTION FROM LAB		4.0000 kgs
18511	1C	HYDROCHLORIC ACID 6%, MAGNESIUM CHLORIDE 2%, SAFRAMIN O INDICATOR 1%, WATER 91% SOLUTION FROM LAB		0.1500 kgs
18513	1C	HYDROCHLORIC ACID 1. M 3.5%, GOLD .05%, WATER 96.45 % SOLUTION FROM LAB		0.2500 kgs
18524	1C	NITRIC ACID 3%, WATER 97% SOLUTION FROM LAB		10.0000 kgs
18549	1C	CONCENTRATED POTASSIUM HYDROXIDE 1.6%, CONCENTRATED HYDROCHLORIC ACID 6.1%, CONCENTRATED NITRIC ACI		4.3000 kgs
18642	1C	ZINC CHLORIDE 67%, WATER 33% SOLUTION FROM LAB		0.4500 kgs
18652	1C	FUMING NITRIC ACID FROM LAB		0.2500 kgs

INVENTORY BY CELL

Cell: 1C

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18653	1C	NITRIC ACID .9%, WATER 99.1% SOLUTION FROM LAB		0.9500 kgs
18655	1C	MERCURY .001%, NITRIC ACID 6.3%, WATER 93.7% SOLUTION FROM LAB		0.9500 kgs
18669	1C	HYDROCHLORIC ACID .37%, WATER 99.63% SOLUTION FROM LAB		0.2000 kgs
18689	1C	SULFURIC ACID 10%, WATER 90% SOLUTION FROM LAB		0.1200 kgs
18730	1C	SULFURIC ACID FROM LAB		0.5000 kgs
18753	1C	SULFURIC ACID >15%, WATER <85% SOLUTION FROM LAB		0.5300 kgs
16558	1C	MERCURY, SULFURIC ACID, SODIUM HYDROXIDE FROM LAB • LABPACK MRC-012	MRC-012	21.3152 kgs
17085	1C	PHOSPHORIC ACID, MERCURIC NITRATE, CADMIUM, ACETONE, CHROMIUM FROM LAB • LABPACK MRC-022	MRC-022	60.0000 kgs
			Total	**280.1716 kgs**

INVENTORY BY CELL

Cell: 1D

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
9094	1D	DICHLOROACETIC ACID		0.2000 kgs
9964	1D	TRICHLOROACETIC ACID		1.0000 kgs
9965	1D	FORMIC ACID		0.5000 kgs
11121	1D	TRICHLOROACETIC ACID		0.3000 kgs
17271	1D	POTASSIUM CHLORIDE 24%, CITRIC ACID 2.5%, IRON .8%, WATER 72.7% SOLUTION FROM LAB		12.4800 kgs
17275	1D	FILTER MATERIAL 80%, POTASSIUM CHLORIDE 17.6%, CITRIC ACID 1.8%, IRON .4%, CHROMIUM .1%, NICKEL .1%		5.1300 kgs
17276	1D	FILTER MATERIAL 80%, POTASSIUM CHLORIDE 17.6%, CITRIC ACID 1.8%, IRON .4%, CHROMIUM .1%, NICKEL .1%		5.1300 kgs
17277	1D	FILTER MATERIAL 80%, POTASSIUM CHLORIDE 17.6%, CITRIC ACID 1.8%, IRON .4%, CHROMIUM .1%, NICKEL .1%		5.1300 kgs
17278	1D	FILTER MATERIAL 80%, POTASSIUM CHLORIDE 17.6%, CITRIC ACID 1.8%, IRON .4%, CHROMIUM .1%, NICKEL .1%		5.1300 kgs
17279	1D	FILTER MATERIAL 80%, POTASSIUM CHLORIDE 17.6%, CITRIC ACID 1.8%, IRON .4%, CHROMIUM .1%, NICKEL .1%		5.1300 kgs
17280	1D	FILTER MATERIAL 80%, POTASSIUM CHLORIDE 17.6%, CITRIC ACID 1.8%, IRON .4%, CHROMIUM .1%, NICKEL .1%		5.1300 kgs
17281	1D	FILTER MATERIAL 80%, POTASSIUM CHLORIDE 17.6%, CITRIC ACID 1.8%, IRON .4%, CHROMIUM .1%, NICKEL .1%		5.1300 kgs
17282	1D	FILTER MATERIAL 80%, POTASSIUM CHLORIDE 17.6%, CITRIC ACID 1.8%, IRON .4%, CHROMIUM .1%, NICKEL .1%		5.1300 kgs
17758	1D	OXALIC ACID FROM LAB		0.5000 kgs
17934	1D	TRICHLOROACETIC ACID FROM LAB		3.0000 kgs
18131	1D	CITRIC ACID FROM LAB		0.4540 kgs
18244	1D	CITRIC ACID FROM LAB		0.4535 kgs
18246	1D	ACETIC ACID FROM LAB		2.5000 kgs
18276	1D	OXALIC ACID FROM LAB		0.4535 kgs
18201	1D	TRICHLOROACETIC ACID FROM LAB		0.2400 kgs
18202	1D	TRICHLOROACETIC ACID FROM LAB		0.2400 kgs
18713	1D	ACETIC ANHYDRIDE FROM LAB		0.0250 kgs

INVENTORY BY CELL

Cell: 1D

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
			Total	63.3860 kgs

INVENTORY BY CELL

Cell: 1E

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
11468	1E	POTASSIUM PERSULFATE		0.4000 kgs
			Total	0.4000 kgs

INVENTORY BY CELL

Cell: 2

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DATE: 11/25/92

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17885	2	MERCURIC IODIDE, CARBOLIC ACID FROM LAB • MRC-189 LABPACK	MRC-189	1.1000 kgs
			Total	**1.1000 kgs**

INVENTORY BY CELL

Cell: 2A

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
9055	2A	SODIUM CYANIDE		0.2000 kgs
9056	2A	SODIUM META BISULFITE		0.4000 kgs
9779	2A	POTASSIUM CYANIDE		0.4535 kgs
10369	2A	ANILINE		1.0000 kgs
10832	2A	SODIUM CYANIDE		0.0500 kgs
10847	2A	AMMONIUM THIOCYANIDE		2.0000 kgs
11102	2A	SEMICARBAZIDE HYDROCHLORIDE		0.2000 kgs
11133	2A	SAFROLE		0.1250 kgs
11161	2A	1-AMINONAPHTHALENE		0.0100 kgs
11208	2A	ARSENIC REFERENCE SOLUTION		0.4730 kgs
11210	2A	VANADIUM PENTOXIDE		4.0000 kgs
11214	2A	1-AMINONAPHTHALENE		0.0250 kgs
11225	2A	METHYLMERCURIC CHLORIDE		0.0500 kgs
11235	2A	P-TOLUIDINE		0.1000 kgs
11273	2A	ANILINE		0.0140 kgs
11276	2A	PHENOL		0.6000 kgs
11363	2A	SODIUM AZIDE		0.0050 kgs
11435	2A	COPPER (II) CYANIDE		0.2500 kgs
11464	2A	ARSENIC PENTOXIDE		0.2000 kgs
11467	2A	POTASSIUM COBALTICYANIDE		0.6000 kgs
11490	2A	POTASSIUM FERROCYANIDE		0.1000 kgs
11522	2A	SODIUM META-BISULFITE		0.0750 kgs
11527	2A	POTASSIUM COBALTICYANIDE		0.3500 kgs
11553	2A	ARSENIOUS ACID		0.1000 kgs
11565	2A	ARSENIC TRIOXIDE		0.0500 kgs
11581	2A	SILVER ACTIVATED ZINC SULFIDE ZnS(Ag) FROM LAB		0.0400 kgs
11586	2A	CUPRIC SULFIDE		1.5000 kgs
11604	2A	SODIUM AZIDE		0.5000 kgs

INVENTORY BY CELL

Cell: 2A

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
12571	2A	MERCURY IODIDE	386L	0.1000 kgs
12572	2A	CHEMICAL MIXTURE	386L	2.0000 kgs
12574	2A	CHEMICAL MIXTURE	386L	0.5000 kgs
12573	2A	CHEMICAL MIXTURE	386L	1.5000 kgs
12576	2A	MERCURIC CHLORIDE .25%, MERCURIC SODIUM CHLORIDE .25%, WATER 99.5% SOLUTION FROM LAB	386L	0.6000 kgs
12577	2A	TCM SOLUTION	386L	0.9000 kgs
12939	2A	MERCURY CHLORIDE	386L	0.8000 kgs
14060	2A	SODIUM AZIDE #S-227 FROM LAB		0.2300 kgs
16504	2A	SPENT MIXTURE OF METHANOL, PHENOL, CHLOROFORM, SODIUM HYDROXIDE FROM LAB • LABPACK BNW-841	BNW-841	6.5000 kgs
17081	2A	2,4,5, TRICHLOROPHENOL FROM LAB • LABPACK SIG-114	SIG-114	0.0050 kgs
15101	2A	MERCURIC CHLORIDE .1% SOLUTION FROM LAB	386L	0.5000 kgs
17542	2A	PHENOL 50%, WATER 50% SOLUTION FROM LAB		1.0000 kgs
17761	2A	MERCURIC IODIDE FROM LAB		0.5000 kgs
17940	2A	PHENOL REAGENT FROM LAB		1.0000 kgs
17951	2A	PHENOL REAGENT FROM LAB		0.5000 kgs
17965	2A	MERCUROUS SULFATE FROM LAB		0.1000 kgs
17975	2A	PHENOL 90%, WATER 10% SOLUTION FROM LAB		4.0000 kgs
17976	2A	PHENOL 90%, WATER 10% SOLUTION FROM LAB		4.0000 kgs

INVENTORY BY CELL

Cell: 2A

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17977	2A	PHENOL 90%, WATER 10% SOLUTION FROM LAB		4.0000 kgs
17978	2A	PHENOL 90%, WATER 10% SOLUTION FROM LAB		4.0000 kgs
17979	2A	PHENOL FROM LAB		2.0000 kgs
17981	2A	PHENOL FROM LAB		5.0000 kgs
17913	2A	PHENOL 30%, CHLOROFORM pH 8 30%, WATER 35%, ISOOMPYL ALCOHOL FROM LAB		2.5000 kgs
18207	2A	PURIFIED HYDROCARBON NON RADIO ACTIVE 100% - CONTAINING PCB 7.5 ppm, TOTAL ORGAIN HALIDE 4 ppm, ARS		9.0000 kgs
18664	2A	NITRO BENZENE FROM LAB		0.2000 kgs
17686	2A	BARIUM NITRATE, SODIUM CHROMATE, SODIUM SELENITE, CHLOROFORM FROM LAB • MRC-119 LABPACK	MRC-119L	18.0000 kgs
			Total	**82.9055 kgs**

INVENTORY BY CELL

Cell: 2B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17755	2B	BALLASTS - PCB >500 ppm (SMALL) FROM PLANT MAINTENANCE	17755	109.0000 kgs
18401	2B	BALLASTS - LEAKING PCB >500 ppm (SMALL) FROM LAB	18401	100.0000 kgs
			Total	**209.0000 kgs**

INVENTORY BY CELL

Cell: 2C

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
8958	2C	POTASSIUM BISULFATE		1.5000 kgs
9624	2C	SODIUM BISULFATE		0.5000 kgs
9649	2C	SODIUM META-BISULFATE		0.5000 kgs
9672	2C	SODIUM FLUORIDE		0.0050 kgs
9987	2C	FLUORANTHENE		0.1000 kgs
10989	2C	NAPHTHALENE		0.0050 kgs
12349	2C	MERCUROUS CHLORIDE		0.1250 kgs
11191	2C	SODIUM FLUORIDE		12.0000 kgs
11244	2C	MOLYBDENUM DISULFIDE		0.1000 kgs
11274	2C	MERCUROUS CHLORIDE		0.1000 kgs
11429	2C	ACRYLAMIDE		0.1000 kgs
11433	2C	STANNOUS CHLORIDE		2.4000 kgs
12740	2C	ISV CONDENSATE		12.0000 kgs
13259	2C	FORMALDEHYDE		0.5000 kgs
14223	2C	SODIUM BISULFATE FROM LAB		1.3605 kgs
13976	2C	ALUMINUM NITRIDE -200 MESH FROM LAB		0.5000 kgs
13977	2C	ALUMINUM NITRIDE -200 MESH FROM LAB		0.6000 kgs
14296	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14297	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14298	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14299	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14300	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14301	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14302	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14303	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14304	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14305	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14306	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs

INVENTORY BY CELL

Cell: 2C

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
14307	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14309	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14308	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14310	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14311	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14312	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14313	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14314	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
14315	2C	SODIUM FLUORIDE 100% FROM LAB		0.4535 kgs
17693	2C	POTASSIUM NITRATE, AMMONIUM PERSULFATE, SODIUM PERCHLORATE FROM LAB • MRC-153	MRC-153	3.7000 kgs
			Total	45.1655 kgs

INVENTORY BY CELL

Cell: 2D

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
9137	2D	FERRIC CHLORIDE		1.5000 kgs
8967	2D	SODIUM DICHROMATE		0.4540 kgs
9613	2D	SODIUM DICHROMATE		0.6500 kgs
11129	2D	FERRIC CHLORIDE		0.5000 kgs
11308	2D	FERRIC CHLORIDE		0.3500 kgs
15979	2D	FORMALIN 1% & WATER 99% SOLUTION FROM LAB		15.0000 kgs
17467	2D	FERROCYANIDE WASTE CONTAINING SODIUM NICKEL FERROCYANIDE 3.9%, (SULFATE, NITRATE, NITRITE, PHOSPHAT		3.5000 kgs
17446	2D	SODIUM METAL - BISULFITE FROM LAB		0.7200 kgs
17524	2D	MERCURY 100% FROM LAB		0.8760 kgs
17525	2D	THERMOMETER - BROKEN MERCURY		0.2500 kgs
17526	2D	THERMOMETER - BROKEN MERCURY		0.2500 kgs
17527	2D	THERMOMETER - MERCURY(NOT BROKEN)		0.1000 kgs
17528	2D	THERMOMETER - BROKEN MERCURY		0.1000 kgs
17529	2D	THERMOMETER - BROKEN MERCURY		0.1000 kgs
17530	2D	THERMOMETER - BROKEN MERCURY		0.1000 kgs
17531	2D	THERMOMETER - BROKEN MERCURY		0.1000 kgs
17532	2D	THERMOMETER - BROKEN MERCURY		0.1000 kgs
17533	2D	THERMOMETER - BROKEN MERCURY		0.1000 kgs
17534	2D	THERMOMETER - BROKEN MERCURY		0.1000 kgs

INVENTORY BY CELL

Cell: 2D

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17535	2D	THERMOMETER - BROKEN MERCURY		0.1000 kgs
17499	2D	THERMOMETER - MERCURY (NOT BROKEN)		0.1000 kgs
17500	2D	THERMOMETER - MERCURY (NOT BROKEN)		0.1000 kgs
17501	2D	THERMOMETER - MERCURY (NOT BROKEN)		0.1000 kgs
17502	2D	THERMOMETER - MERCURY (NOT BROKEN)		0.1000 kgs
17503	2D	THERMOMETER - MERCURY (NOT BROKEN)		0.1000 kgs
17504	2D	THERMOMETER - MERCURY (NOT BROKEN)		0.1000 kgs
17505	2D	THERMOMETER - MERCURY (NOT BROKEN)		0.1000 kgs
17506	2D	THERMOMETER - MERCURY (NOT BROKEN)		0.1000 kgs
17507	2D	THERMOMETER - MERCURY (NOT BROKEN)		0.1000 kgs
17508	2D	THERMOMETER - MERCURY (NOT BROKEN)		0.1000 kgs
17509	2D	FORMALDEHYDE 10%, SODIUM PHOSPHATE 1%, WATER 89% SOLUTION FROM LAB		19.0000 kgs
17581	2D	FORMALDEHYDE >1%, WATER 99.9% SOLUTION FROM LAB		8.0000 kgs
17681	2D	MOBILE D7E 24 HYD CONTAMINATED W/10.9 ppm PCB AND 4.7 ppm CADMIUM FROM LAB		0.0030 kgs
17667	2D	PAPER TOWELS USED TO CLEAN UP SPILL CONTAMINATED WITH >5% ACETONITRILE, METHANOL, DICHLOROMETHANE,		3.8000 kgs
17641	2D	FORMALDEHYDE 4%, WATER 96% SOLUTION FROM LAB		1.0000 kgs

INVENTORY BY CELL

Cell: 2D

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17709	2D	SULFURIC ACID .63%, SODIUM HYDROXIDE .00093%, METHANOL .833%, DIONIZED WATER 98.5% SOLUTION FROM LA		30.0000 kgs
17789	2D	STANNOUS CHLORIDE FROM LAB		0.4540 kgs
17790	2D	STANNOUS CHLORIDE FROM LAB		0.4540 kgs
17791	2D	POTASSIUM DICHROMATE FROM LAB		0.1000 kgs
17792	2D	POTASSIUM DICHROMATE FROM LAB		0.1000 kgs
17793	2D	POTASSIUM DICHROMATE FROM LAB		0.1000 kgs
17825	2D	MERCURY THERMOMETER (NOT BROKEN) FROM LAB		0.0050 kgs
17826	2D	MERCURY THERMOMETER (BROKEN) FROM LAB		0.0050 kgs
17827	2D	MERCURY THERMOMETER (NOT BROKEN) FROM LAB		0.0100 kgs
17828	2D	MERCURY THERMOMETER (NOT BROKEN) FROM LAB		0.0050 kgs
17829	2D	MERCURY THERMOMETER (NOT BROKEN) FROM LAB		0.0050 kgs
17830	2D	MERCURY METALLIC		0.0280 kgs
17824	2D	MERCURY THERMOMETER (BROKEN) FROM LAB		0.0050 kgs
17928	2D	FERRIC CHLORIDE FROM LAB		1.0000 kgs
18229	2D	CALCIUM OXIDE LOW FLUORIDE FROM LAB		0.1000 kgs
18267	2D	SODIUM DICHROMATE FROM LAB		0.4535 kgs
18268	2D	STANNOUS CHLORIDE DIHYDRATE FROM LAB		0.4535 kgs
18159	2D	THERMOMETERS - 10 BROKEN WITH MERCURY FROM LAB		1.0000 kgs

INVENTORY BY CELL

Cell: 2D

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18160	2D	THERMOMETERS - 47 WITH MERCURY FROM LAB		1.0000 kgs
18161	2D	THERMOREGULATORS - WITH MERCURY FROM LAB		1.0000 kgs
18162	2D	THERMOREGULATORS - WITH MERCURY FROM LAB		1.0000 kgs
18163	2D	MERCURY SPILL CLEANUP MATERIAL - MERCURY, BROKEN THERMOMETER, RAGS FROM LAB		1.0000 kgs
18315	2D	SELENIUM DIOXIDE FROM LAB		0.0100 kgs
18316	2D	SELENIUM METAL FROM LAB		0.0100 kgs
18551	2D	STANNOUS CHLORIDE FROM LAB		0.5000 kgs
18596	2D	METALLIC MERCURY WASTE FROM PLANT MAINTENANCE		2.0000 kgs
18654	2D	MERCURY .1%, WATER 99.9% SOLUTION FROM LAB		0.9500 kgs
18693	2D	POTASSIUM DICHROMATE FROM LAB		0.0300 kgs
18694	2D	POTASSIUM DICHROMATE FROM LAB		0.0300 kgs
18695	2D	POTASSIUM DICHROMATE FROM LAB		0.0300 kgs
18696	2D	POTASSIUM DICHROMATE FROM LAB		0.0300 kgs
18697	2D	POTASSIUM DICHROMATE FROM LAB		0.0300 kgs
18698	2D	POTASSIUM DICHROMATE FROM LAB		0.0300 kgs
18699	2D	POTASSIUM DICHROMATE FROM LAB		0.0300 kgs
18700	2D	POTASSIUM DICHROMATE FROM LAB		0.0300 kgs

INVENTORY BY CELL

Cell: 2D

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18701	2D	POTASSIUM DICHROMATE FROM LAB		0.0300 kgs
18702	2D	POTASSIUM DICHROMATE FROM LAB		0.0300 kgs
18723	2D	SODIUM BISULFITE FROM LAB		0.5000 kgs
18740	2D	THERMOMETER - 2 BROKEN WITH MERCURY FROM LAB		4.0000 kgs
18741	2D	SPILL KIT CONTAMINATED WITH MERCURY FROM LAB		0.0000 kgs
			Total	**104.3010 kgs**

INVENTORY BY CELL

Cell: 2E

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
13790	2E	MIXED WASTE SHAVINGS FROM PLANT MAINTENANCE		4.5351 kgs
13946	2E	AQUEOUS SOLUTION WITH 0.5% SILVER NITRATE FROM LAB		2.3000 kgs
16755	2E	BERYLLIUM METAL 100% FROM LAB		0.5000 kgs
17385	2E	LEAD TELLURIDE FROM LAB		2.1800 kgs
17386	2E	LEAD TELLURIDE FROM LAB		2.1800 kgs
17387	2E	LEAD TELLURIDE FROM LAB		2.1800 kgs
17552	2E	SILVER CHLORIDE FROM LAB		0.0400 kgs
17553	2E	CADMIUM METAL FROM LAB		0.0170 kgs
17556	2E	SELENIUM METAL FROM LAB		0.0010 kgs
17559	2E	SILVER CHLORIDE FROM LAB		0.0100 kgs
17562	2E	CADMIUM METAL FROM LAB		0.1000 kgs
17574	2E	LEAD ROD FROM LAB		0.0200 kgs
17722	2E	CONTAINING MINERAL SPIRITS, ZINC CHROMATE, CHROMIC ACID AND CHROME FROM LAB		2.3000 kgs
17708	2E	CLEANING CLOTHES CONTAMINATED WITH <.1% ACETONE FROM LAB		0.7000 kgs
17992	2E	VINYL CHLORIDE .042%, 1,1,1-TRICHLOROETHANE .061%, 1,2-DICHLOROPROPANE .1%, ACETONE .012%, WATER 99		0.0250 kgs
17993	2E	VINYL CHLORIDE .042%, 1,1,1-TRICHLOROETHANE .061%, 1,2-DICHLOROPROPANE .1%, ACETONE .012%, WATER 99		0.0250 kgs
17994	2E	VINYL CHLORIDE .042%, 1,1,1-TRICHLOROETHANE .061%, 1,2-DICHLOROPROPANE .1%, ACETONE .012%, WATER 99		0.0250 kgs
17995	2E	VINYL CHLORIDE .042%, 1,1,1-TRICHLOROETHANE .061%, 1,2-DICHLOROPROPANE .1%, ACETONE .012%, WATER 99		0.0250 kgs
17996	2E	VINYL CHLORIDE .042%, 1,1,1-TRICHLOROETHANE .061%, 1,2-DICHLOROPROPANE .1%, ACETONE .012%, WATER 99		0.0250 kgs
18049	2E	LEAD OXIDE 99.99%, BERYLLIUM .1% FROM LAB		0.0001 kgs

INVENTORY BY CELL

Cell: 2E

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18273	2E	MOLYODIC ACID 85%, AMMONIUM MOLYBDATE 15% FROM LAB		0.4535 kgs
18211	2E	LEAD OXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0001 kgs
17894	2E	LEAD SCRAPS FROM PLANT MAINTENANCE		3.5000 kgs
18157	2E	MECHANICAL PUMP OIL - CONTAMINATED WITH CADMIUM <1 ppm FROM LAB		3.8000 kgs
18209	2E	SPILL CLEAN UP - CONTAINING ABSORBENT 95%, CHROMIUM TRIOXIDE .02% FROM LAB		10.0000 kgs
18146	2E	PYRIDINE .1%, BARBITURIC ACID .1%, SODIUM PHOSPHATE .1%, CYANIDE 100 PARTS/BILLION, WATER 98% SOLUT		1.0000 kgs
18203	2E	LEAD MONOXIDE FROM LAB		1.0750 kgs
18407	2E	SILVER NITRATE 3%, WATER 97% SOLUTION FROM LAB		0.0250 kgs
18423	2E	PAPER, RUBBER, GLASS, PLASTIC 80%, SAND 13.6%, DRIRITE .2%, KADLIN 2.7%, NAPHTHALENE 1.8%, FURFURAL		1.1000 kgs
18555	2E	SILVER METAL FROM LAB		0.1200 kgs
18556	2E	SILVER CHLORIDE FROM LAB		0.0500 kgs
18600	2E	LEAD TURNINGS/FINES WASTE FROM PLANT MAINTENANCE		4.0000 kgs
18505	2E	CADMIUM METAL FROM LAB		0.0600 kgs
18651	2E	SILVER 400 ppm IN WATER		0.0900 kgs
18672	2E	SILVER (POWDER) 99.9%, GERMANIUM .0001% SOLUTION FROM LAB		0.0540 kgs
18747	2E	WATER >95%, POTASSIUM DICHROMATE <5% SOLUTION FROM LAB		0.4800 kgs
18752	2E	WATER >98%, SILVER NITRATE <2% SOLUTION FROM LAB		0.4800 kgs
17614	2E	BARIUM NITRATE, METHYLENE CHLORIDE, ACETONE, TOLUENE, CHLOROFORM, SILVER, CADMIUM, PYRIDINIUM CHROM	MRC-144	38.7000 kgs

INVENTORY BY CELL

Cell: 2E

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18867	2E	METHANOL 5%, WATER 94%, TWEEN <.1%, TRI-FLURALIN <.01%		20.0000 kgs
18868	2E	MERCURY .0106%, CHROMIUM .0106%, TOLUENE .1288%, ETHYL ACETATE .0002%, WATER 99.8508%		4.7000 kgs
			Total	**106.8758 kgs**

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(SUBJECT TO CHANGE)
DATE: 11/25/92

INVENTORY BY CELL

Cell: 3

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
11994	3	OAKITE LSD		36.3000 kgs
12707	3	TURCO 4502	12707	1.0000 kgs
13773	3	BATTERIES - ALKALINE FROM PLANT MAINTENANCE		19.8000 kgs
13801	3	BATTERIES - CARBON ZINC FROM PLANT MAINTENANCE	13801	13.7000 kgs
17123	3	VACUUM PUMP OIL FROM LAB • LABPACK SEQ-117	SEQ-117	12.7000 kgs
17514	3	SODIUM NITRATE 21.5%, SODIUM NITRITE 17.5%, SODIUM HYDROXIDE 9.5%, SODIUM ALUMINATE 14%, AND OTHER		24.5000 kgs
18205	3	CAPACITORS - WITH PYRANOL OIL (ASKAREL) IN SEALED UNITS FROM LAB		27.5000 kgs
18206	3	CAPACITORS - WITH PYRANOL OIL (ASKAREL) IN SEALED UNITS FROM LAB		27.9000 kgs
18418	3	JP-4 JET FUEL .5%, POTASSIUM NITRATE .01%, POTASSIUM PHOSPHATE DIBASIC .001%, TINKER SOIL WITH SILI	18418	58.0000 kgs
18603	3	PROPYLENE GLYCOL WASTE FROM PLANT MAINTENANCE		44.5000 kgs
			Total	**265.9000 kgs**

INVENTORY BY CELL

Cell: 3A

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
10083	3A	BATTERIES - MERCURY		5.0000 kgs
10620	3A	BATTERIES - NICKEL CADMIUM		1.0000 kgs
10624	3A	BATTERIES - MERCURY		4.0000 kgs
10707	3A	HYDRAZINE		7.5000 kgs
11858	3A	BATTERIES - ALKALINE		0.3000 kgs
11626	3A	KODAK TETRAPROPYLAMMONIUM HYDROXIDE		0.5000 kgs
12031	3A	BATTERIES - ALKALINE		0.4000 kgs
12662	3A	BATTERIES - MERCURY		4.5000 kgs
12663	3A	BATTERIES - NICKEL CADMIUM		4.3000 kgs
12924	3A	TADOO FLOOR STRIPPER		20.0000 kgs
14670	3A	SODIUM FLUORIDE 2.65%, SODIUM HYDROXIDE .48% AND AMMONIUM HYDROXIDE .34% SOLUTION FROM LAB		4.0000 kgs
14689	3A	SODIUM HYDROXIDE 2.0% AND HYDROCHLORIC ACID 1.6% SOLUTION FROM LAB		4.0000 kgs
14835	3A	BATTERIES - ALKALINE CONTAINING POTASSIUM HYDROXIDE FROM LAB		0.7200 kgs
16803	3A	BATTERY - 6 VOLT EVERREADY LANTERN ALKALINE 100% FROM LAB		0.5000 kgs
16804	3A	BATTERY - 6 VOLT EVERREADY LANTERN ALKALINE 100% FROM LAB		0.5000 kgs
16352	3A	ASCARITE 100% - SODIUM HYDROXIDE COATED SILICA FROM LAB		0.4540 kgs
17625	3A	SODIUM HYDROXIDE .2%, SODIUM NITRATE 1%, SODIUM NITRATE 2%, WATER 97% pH 12.74 SOLUTION FROM LAB		10.0000 kgs
17626	3A	SODIUM HYDROXIDE .2%, SODIUM NITRATE 1%, SODIUM NITRATE 2%, WATER 97% pH 12.74 SOLUTION FROM LAB		10.0000 kgs
17645	3A	BATTERIES - ALKALINE CONTAINING ZINC 16%, POTASSIUM HYDROXIDE 7%, COPPER 1%, MERCURY .5%, FROM LAB		0.2000 kgs
17831	3A	SODIUM HYDROXIDE 2.95%, HYDROCHLORIC ACID .0005%, OXIDIZED DYES TRACE SOLUTION FROM LAB		2.8000 kgs

INVENTORY BY CELL

Cell: 3A

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17873	3A	SODIUM HYDROXIDE 24%, WATER 76% SOLUTION FROM LAB		4.2000 kgs
17939	3A	POTASSIUM HYDROXIDE FROM LAB		2.2000 kgs
17941	3A	TETRAPROPYL AMONONIUM HYDROXIDE FROM LAB		5.0000 kgs
17942	3A	TETRAPROPYL AMONONIUM HYDROXIDE FROM LAB		5.0000 kgs
17943	3A	TETRAPROPYL AMONONIUM HYDROXIDE FROM LAB		5.0000 kgs
17944	3A	TETRAPROPYL AMONONIUM HYDROXIDE FROM LAB		5.0000 kgs
17945	3A	TETRAPROPYL AMONONIUM HYDROXIDE FROM LAB		5.0000 kgs
17946	3A	TETRAPROPYL AMONONIUM HYDROXIDE FROM LAB		5.0000 kgs
17947	3A	TETRAPROPYL AMONONIUM HYDROXIDE FROM LAB		5.0000 kgs
17948	3A	TETRAPROPYL AMONONIUM HYDROXIDE FROM LAB		5.0000 kgs
17949	3A	TETRAPROPYL AMONONIUM HYDROXIDE FROM LAB		5.0000 kgs
17950	3A	TETRAPROPYL AMONONIUM HYDROXIDE FROM LAB		5.0000 kgs
17952	3A	ETHANOLAMINE 95%, WATER 5% SOLUTION FROM LAB		3.0000 kgs
17966	3A	POTASSIUM HYDROXIDE FROM LAB		2.2000 kgs
18242	3A	SODIUM HYDROXIDE FROM LAB		0.5000 kgs
18243	3A	SODIUM HYDROXIDE FROM LAB		2.5000 kgs
18266	3A	SODIUM HYDROXIDE FROM LAB		0.4535 kgs
18147	3A	SODIUM HYDROXIDE 8%, MANNITOL 5%, HYDRAZINE SULFITE .06%, WATER 86%, HEAVY METALS <1% SOLUTION FROM		0.2500 kgs

INVENTORY BY CELL

Cell: 3A

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18424	3A	BATTERIES - MERCURY CONTAINING MERCURIC OXIDE 32%, POTASSIUM HYDROXIDE 11%, MERCURY 5% FROM LAB		0.0400 kgs
18436	3A	FORMALDEHYDE .5%, METHANOL .25%, SODIUM HYDROXIDE 1.3%, WATER 97.9% SOLUTION FROM LAB		2.0000 kgs
18441	3A	AMMONIUM HYDROXIDE FROM LAB		12.0000 kgs
18442	3A	AMMONIUM HYDROXIDE FROM LAB		12.0000 kgs
18443	3A	AMMONIUM HYDROXIDE FROM LAB		12.0000 kgs
18467	3A	HEWLETT PACKARD 41C RECHARGEABLE BATTERY PACK CONTAINING NICKEL 50%, CADMIUM 50% FROM LAB		0.2500 kgs
18469	3A	LITHIUM HYDROXIDE ON RESIN FROM LAB		0.0200 kgs
18470	3A	LITHIUM HYDROXIDE ON RESIN FROM LAB		0.0200 kgs
18494	3A	SODIUM HYDROXIDE 8.8%, SODIUM BISULFITE .3%, AMMONIUM NITRATE .6%, WATER 90.3% SOLUTION FROM LAB		2.5000 kgs
18495	3A	SODIUM HYDROXIDE 9.6%, AMMONIUM HYDROXIDE 1.4%, AMMONIUM PHOSPHATE .9%, SODIUM CARBONATE .3%, AMMON		2.7000 kgs
18507	3A	AMMONIUM HYDROXIDE 39%, WATER 61% SOLUTION FROM LAB		2.0000 kgs
18561	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18562	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18563	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18564	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18565	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs

INVENTORY BY CELL

Cell: 3A

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18566	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18567	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18568	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18569	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18570	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18571	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18572	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18573	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB	18573	0.4540 kgs
18574	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB	18574	0.4540 kgs
18575	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB	18575	0.4540 kgs
18576	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18577	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18578	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18580	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18581	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18582	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs

INVENTORY BY CELL

Cell: 3A

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18583	3A	SILICA GEL 8%, SODIUM HYDROXIDE 92% MIX FROM LAB		0.4540 kgs
18667	3A	POTASSIUM CYANIDE .0125%, POTASSIUM HYDROXIDE .1%, WATER 99.89% SOLUTION FROM LAB		0.9000 kgs
18670	3A	SODIUM HYDROXIDE .4%, WATER 99.6% SOLUTION FROM LAB		0.2000 kgs
18671	3A	SODIUM HYDROXIDE 2.1%, WATER 97.9% SOLUTION FROM LAB		1.0000 kgs
17189	3A	ACTIVATED CHARCOAL 50%, ASBESTOS 25%, SODIUM HYDROXIDE 25% MIXTURE FROM LAB		2.0000 kgs
18861	3A	AMMONIUM HYDROXIDE 25%, WATER 75%		3.8000 kgs
			Total	**209.3955 kgs**

INVENTORY BY CELL

Cell: 3B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
9074	3B	SODIUM CHLORIDE	024B	1.0000 kgs
9205	3B	SODIUM CHLORIDE	024B	0.0500 kgs
9655	3B	SODIUM CHLORIDE	024B	2.0000 kgs
9662	3B	SODIUM CHLORIDE	024B	1.0000 kgs
9674	3B	SODIUM CHLORIDE	024B	0.0010 kgs
9804	3B	SODIUM CHLORIDE	024B	0.3500 kgs
9966	3B	PHENANTHRENE		1.0000 kgs
10004	3B	PHENOSAFRANIN		0.0010 kgs
10977	3B	PHENYL ACETIC ACID		0.0010 kgs
10985	3B	SODIUM CHLORIDE	024B	0.0250 kgs
10986	3B	SODIUM DODECYL SULFATE		0.0200 kgs
10987	3B	DIAZALD		0.1000 kgs
10915	3B	SODIUM CHLORIDE	024B	0.0010 kgs
10916	3B	SODIUM CHLORIDE	024B	0.0100 kgs
11130	3B	SODIUM CHLORIDE	024B	0.2500 kgs
11369	3B	SALT	024B	4.0000 kgs
11440	3B	SODIUM CHLORIDE	024B	0.1000 kgs
11460	3B	SALT	024B	0.3000 kgs
12669	3B	SODIUM SILICATE		1.0000 kgs

INVENTORY BY CELL

Cell: 3B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
12674	3B	SODIUM ACETATE		1.0000 kgs
12681	3B	ZINC		0.4500 kgs
12686	3B	VANADIUM PENTOXIDE		0.5000 kgs
15858	3B	SODIUM BARBITAL FROM LAB		0.0500 kgs
11222	3B	SODIUM CHLORIDE 100% FROM LAB	024B	0.2500 kgs
8804	3B	SODIUM CHLORIDE 100% FROM LAB	024B	0.5000 kgs
5207	3B	SODIUM CHLORIDE 100% FROM LAB	024B	0.9070 kgs
2620	3B	SODIUM CHLORIDE 100% FROM LAB	024B	4.5000 kgs
2808	3B	SODIUM CHLORIDE 100% FROM LAB	024B	1.3605 kgs
8201	3B	SODIUM CHLORIDE 100% FROM LAB	024B	2.5000 kgs
6634	3B	SODIUM CHLORIDE 100% FROM LAB	024B	0.2270 kgs
7359	3B	SODIUM CHLORIDE 100% FROM LAB	024B	4.3000 kgs
6186	3B	SODIUM CHLORIDE 100% FROM LAB	024B	2.1400 kgs
5840	3B	SODIUM CHLORIDE 100% FROM LAB	024B	0.5000 kgs
5841	3B	SODIUM CHLORIDE 100% FROM LAB	024B	1.0000 kgs
16686	3B	PURE NICKEL STRANDS (WIRE) 100% FROM LAB		0.6000 kgs
17353	3B	n-METHYL-n-NITRONITROSOQUANIDINE .1%, WATER 99.9% SOLUTION FROM LAB • PULLED FROM BNW-821L	BNW-821	0.1000 kgs
17377	3B	METCO 43C POWDER - CONTAINING NICKEL 80%, CHROMIUM 20% FROM LAB		0.5000 kgs

INVENTORY BY CELL

Cell: 3B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17399	3B	SILICON, SOLID LUMP FROM LAB		0.1800 kgs
17408	3B	SILICON 99.6% FROM LAB		2.0000 kgs
17409	3B	NICKEL FROM LAB		9.0000 kgs
17430	3B	SILICON METAL POWER FROM LAB		4.5000 kgs
17440	3B	SILICON METAL FROM LAB		1.5000 kgs
17448	3B	SILICON METAL FROM LAB		0.6200 kgs
17456	3B	NICKEL POWDER FROM LAB		0.3200 kgs
17457	3B	NICKEL POWDER FROM LAB		0.3200 kgs
17493	3B	GUANIDINE HYDROCHLORIDE FROM LAB		0.0050 kgs
17494	3B	GUANIDINE HYDROCHLORIDE FROM LAB		0.0050 kgs
17495	3B	GUANIDINE HYDROCHLORIDE FROM LAB		0.0010 kgs
17620	3B	LIQUID SCINTILLATION COCKTAIL FROM LAB		1.0000 kgs
17621	3B	LIQUID SCINTILLATION COCKTAIL FROM LAB		1.0000 kgs
17642	3B	MAGNESIUM CHLORIDE 100% SOLUTION FROM LAB		0.7000 kgs
15250	3B	SODIUM CHLORIDE 99.7%, RAGS .1%, FIBERBOARD .1%, METAL DISC .1% FROM LAB	15250	273.0000 kgs
17698	3B	OIL FROM LAB (H.H. = 5979 ppm)		0.9000 kgs
17720	3B	CONTAINING TITANIUM DIOXIDE, 2,2,4, TRIMETHYL, 1,3 PENTANEDIOL ISOBUTYRATE, FORMERS, RESINS AND ADD		2.3000 kgs
17721	3B	CONTAINING TITANIUM DIOXIDE, ETHYL BENZENE, XYLENE, ALUMINUM SILICATE, CALCIUM CARBONATE FROM LAB		0.9100 kgs
17732	3B	CHLORAL HYDRATE FROM LAB (#6278 pulled from MRC-030)		0.5000 kgs
17857	3B	SODIUM IODIDE FROM LAB		0.2500 kgs
17778	3B	BENZOIC ACID FROM LAB		0.5000 kgs

INVENTORY BY CELL

Cell: 3B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17782	3B	ZINC ACETATE FROM LAB		0.5000 kgs
17784	3B	SODIUM BROMIDE FROM LAB		0.5000 kgs
17785	3B	BROMOTHYMOL BLUE FROM LAB		0.0100 kgs
17788	3B	HYDROQUINONE FROM LAB		0.5000 kgs
17879	3B	WATER 99.14%, CETYLTRIMETHYLAMMONIUM BROMIDE .02%, ACETIC ACID .49%, POTASSIUM BROMIDE .3%, MAGNESI		1.0000 kgs
17880	3B	WATER 99.2%, CETYLTRIMETHYLAMMONIUM BROMIDE .35%, ACETIC ACID .4%, POTASSIUM BROMIDE .01%, ACETIC A		4.0000 kgs
17881	3B	WATER 99.2%, CETYLTRIMETHYLAMMONIUM BROMIDE .03%, ACETIC ACID .5%, POTASSIUM BROMIDE .008%, ACETIC		4.0000 kgs
17925	3B	PROCAINE 99%, WATER 1% FROM LAB		0.5000 kgs
17926	3B	PROCAINE 99%, WATER 1% FROM LAB		0.5000 kgs
17929	3B	MAGNESIUM CHLORIDE FROM LAB		2.2000 kgs
17954	3B	BROMPHENOL BLUE FROM LAB		0.0100 kgs
17959	3B	COPPER SULFATE FROM LAB		0.1000 kgs
17960	3B	8 QUINOLINE FROM LAB		0.1000 kgs
17961	3B	5 BROMO URACIL FROM LAB		0.0250 kgs
17968	3B	PLATINUM DICHLORIDE 99.9%, WATER .1% FROM LAB		0.0010 kgs
17970	3B	PHENYLPROPANOLAMINE HYDROCHLORIDE FROM LAB		0.0500 kgs
17971	3B	PLATINUM CHLORIDE 10%, WATER 90% SOLUTION FROM LAB		0.0290 kgs
17972	3B	CESIUM SULFATE FROM LAB		0.0100 kgs
18036	3B	ALUMINUM OXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0020 kgs
18037	3B	ALUMINUM OXIDE 99.95%, BERYLLIUM .05% FROM LAB		0.0020 kgs
18038	3B	ALUMINUM OXIDE 99.9%, BERYLLIUM .1% FROM LAB		0.0020 kgs

INVENTORY BY CELL

Cell: 3B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18039	3B	ALUMINUM OXIDE 99%, BERYLLIUM 1% FROM LAB		0.0020 kgs
18040	3B	ALUMINUM OXIDE 99.5%, BERYLLIUM .5% FROM LAB		0.0020 kgs
18046	3B	DUST (HANFORD SOIL) 99.8%, BERYLLIUM .2% FROM LAB		0.0010 kgs
18047	3B	DUST (HANFORD SOIL) 99.5%, BERYLLIUM .5% FROM LAB		0.0010 kgs
18048	3B	DUST (HANFORD SOIL) 99%, BERYLLIUM 1% FROM LAB		0.0010 kgs
18050	3B	COPPER(II) OXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0001 kgs
18051	3B	COPPER(II) OXIDE 99.99%, BERYLLIUM .1% FROM LAB		0.0001 kgs
18052	3B	ZIRCONIUM OXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0001 kgs
18053	3B	ZIRCONIUM OXIDE 99.9%, BERYLLIUM .1% FROM LAB		0.0001 kgs
18055	3B	ALUMINUM OXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0001 kgs
18056	3B	ALUMINUM OXIDE 99.9%, BERYLLIUM .1% FROM LAB		0.0001 kgs
18057	3B	TITANIUM SESQUIOXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0001 kgs
18058	3B	TITANIUM SESQUIOXIDE 99.9%, BERYLLIUM .1% FROM LAB		0.0001 kgs
18059	3B	MAGNESIUM OXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0001 kgs
18060	3B	MAGNESIUM OXIDE 99.9%, BERYLLIUM .1% FROM LAB		0.0001 kgs
18061	3B	ZINC OXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0001 kgs

INVENTORY BY CELL

Cell: 3B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18062	3B	ZINC OXIDE 99.9%, BERYLLIUM .1% FROM LAB		0.0001 kgs
18063	3B	FERRIC OXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0001 kgs
18064	3B	FERRIC OXIDE 99.9%, BERYLLIUM .1% FROM LAB		0.0001 kgs
18065	3B	TIN DIOXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0001 kgs
18066	3B	TIN DIOXIDE 99,9%, BERYLLIUM .1% FROM LAB		0.0001 kgs
18067	3B	MAGNESIUM OXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0001 kgs
18068	3B	MAGNESIUM OXIDE 99.9%, BERYLLIUM .1% FROM LAB		0.0001 kgs
18073	3B	POTASSIUM SULFATE 49.999%, SODIUM SULFATE 49.999%, BERYLLIUM .02% FROM LAB		0.0010 kgs
18074	3B	POTASSIUM SULFATE 49.9975%, SODIUM SULFATE 49.9975%, BERYLLIUM .05% FROM LAB		0.0010 kgs
18075	3B	POTASSIUM SULFATE 49.995%, SODIUM SULFATE 49.995%, BERYLLIUM .01% FROM LAB		0.0010 kgs
18076	3B	CALCIUM OXIDE 99.99%, BERYLLIUM .01%		0.0001 kgs
18077	3B	SILICON DIOXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0001 kgs
18078	3B	HTQ SALT 99.99%, BERYLLIUM .01% FROM LAB		0.0001 kgs
18081	3B	GRAPHITE 99.99%, BERYLLIUM OXIDE .01% FROM LAB		0.0010 kgs
18082	3B	GRAPHITE 99.99%, BERYLLIUM OXIDE .01% FROM LAB		0.0010 kgs
18083	3B	GRAPHITE 99.98%, BERYLLIUM OXIDE .02% FROM LAB		0.0010 kgs

INVENTORY BY CELL

Cell: 3B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18084	3B	GRAPHITE 99.96%, BERYLLIUM OXIDE .04% FROM LAB		0.0010 kgs
18085	3B	GRAPHITE 99.96%, BERYLLIUM OXIDE .04% FROM LAB		0.0010 kgs
18086	3B	GRAPHITE 99.8%, BERYLLIUM OXIDE .2% FROM LAB		0.0010 kgs
18087	3B	GRAPHITE 99.5%, BERYLLIUM OXIDE .5% FROM LAB		0.0010 kgs
18088	3B	GRAPHITE 99.9%, BERYLLIUM OXIDE .1% FROM LAB		0.0010 kgs
18089	3B	GRAPHITE 99.8%, BERYLLIUM OXIDE .2% FROM LAB		0.0010 kgs
18090	3B	GRAPHITE 99.8%, BERYLLIUM OXIDE .2% FROM LAB		0.0010 kgs
18091	3B	GRAPHITE 99.99%, BERYLLIUM OXIDE .01% FROM LAB		0.0250 kgs
18092	3B	GRAPHITE 99.9%, BERYLLIUM OXIDE .1% FROM LAB		0.0250 kgs
18093	3B	GRAPHITE 99.9%, BERYLLIUM OXIDE .1% FROM LAB		0.0010 kgs
18096	3B	POTASSIUM SULFATE 49.995%, SODIUM SULFATE 49.995%, BERYLLIUM .01% FROM LAB		0.0200 kgs
18098	3B	POTASSIUM SULFATE 49.95%, SODIUM SULFATE 49.95%, BERYLLIUM .1% FROM LAB		0.0200 kgs
18099	3B	POTASSIUM SULFATE 49.9%, SODIUM SULFATE 49.9%, BERYLLIUM .2% FROM LAB		0.0200 kgs
18100	3B	POTASSIUM SULFATE 49.75%, SODIUM SULFATE 49.75%, BERYLLIUM .5% FROM LAB		0.0200 kgs
18102	3B	ZINC OXIDE 99.99%, CADMIUM .01% FROM LAB		0.0200 kgs
18103	3B	ZINC OXIDE 99.9%, CADMIUM .1% FROM LAB		0.0200 kgs

INVENTORY BY CELL

Cell: 3B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18104	3B	TIN OXIDE 99.99%, BERYLLIUM .01% FROM LAB		0.0010 kgs
18105	3B	HTQ SALT 99.99%, BERYLLIUM .01% FROM LAB		0.0010 kgs
18119	3B	MAGNESIUM OXIDE 66.6%, SODIUM CARBONATE 33.4% FROM LAB		0.1000 kgs
18136	3B	SODIUM ACETATE FROM LAB		0.4540 kgs
18137	3B	SODIUM ACETATE FROM LAB		0.4540 kgs
18138	3B	SODIUM ACETATE FROM LAB		0.4540 kgs
18139	3B	SODIUM ACETATE FROM LAB		0.4540 kgs
18226	3B	AMMONIUM MOLYBDATE FROM LAB		0.4535 kgs
18228	3B	AMMONIUM THIOCYANATE FROM LAB		0.4535 kgs
18264	3B	SODIUM BIOCARBONATE FROM LAB		0.4535 kgs
18265	3B	SODIUM CARBONATE FROM LAB		0.4535 kgs
18275	3B	OTHOBORIC ACID FROM LAB		0.2500 kgs
18158	3B	MECHANICAL PUMP OIL - CONTAMINATED WITH CADMIUM <1 ppm FROM LAB		2.0000 kgs
18183	3B	AMMONIUM MOLYBDATE FROM LAB		0.4530 kgs
18189	3B	AMMONIUM MOLYBDATE FROM LAB		0.4530 kgs
18328	3B	NICKEL .139%, SILICON DIOXIDE .27%, GLYCERIN 9.591%, WATER 90% SOLUTION FROM LAB		3.6000 kgs
18376	3B	WATER 80%, ISOPROPPYL ALCOHOL 15%, AMMONIA WATER 5% SOLUTION FROM LAB		0.0283 kgs
18383	3B	SCOTCH CAST ELETRICAL RESIN - CONTAINING NONYL PHENOL 5-15%, AROMATIC HYDROCARBON RESIN 45-55%, ARO		0.1000 kgs
18514	3B	CALCIUM CHLORIDE FROM LAB		0.1000 kgs
18515	3B	BORIC ACID CRYSTAL FROM LAB		0.5000 kgs

INVENTORY BY CELL

Cell: 3B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18516	3B	BENZOIC ACID CRYSTAL FROM LAB		0.5000 kgs
18552	3B	SODIUM CARBONATE FROM LAB		0.5000 kgs
18553	3B	SODIUM CARBONATE FROM LAB		0.5000 kgs
18557	3B	SODIUM BICARBONATE FROM LAB		0.4540 kgs
18584	3B	POTASSIUM CHLORIDE FROM LAB		0.4540 kgs
18586	3B	RUTHENIUM DIOXIDE FROM LAB		0.0010 kgs
18504	3B	NICKEL METAL POWDER FROM LAB		0.0300 kgs
18506	3B	NICKEL METAL FROM LAB		0.1200 kgs
18628	3B	BORIC ACID FROM LAB		0.4535 kgs
18629	3B	BORIC ACID FROM LAB		0.4535 kgs
18630	3B	BORIC ACID FROM LAB		0.4535 kgs
18632	3B	CALCIUM CHLORIDE FROM LAB		2.3000 kgs
18638	3B	BORIC ACID FROM LAB		0.2000 kgs
18643	3B	n-HYDROXYETHYL ETHYLENEDAMINE TRIACETIC ACID FROM LAB		0.2000 kgs
18646	3B	THENOYL TRIFLUORO ACETONE 11.12%, XYLENE 88.9% SOLUTION FROM LAB		0.6500 kgs
18668	3B	BROM CRESOL GREEN FROM LAB		0.0010 kgs
18683	3B	LITHIUM CARBONATE FROM LAB		0.1000 kgs
18726	3B	PENTYLENETETRAZOLE FROM LAB		0.0600 kgs
18727	3B	PENTYLENETETRAZOLE FROM LAB		0.0600 kgs
18728	3B	ETHYLENE GLYCOL FROM LAB		1.0000 kgs
18678	3B	DIPHENYL OXIDE 73%, DIPHENYL 27% SOLUTION FROM LAB		0.4540 kgs
18679	3B	DIPHENYL OXIDE 73%, DIPHENYL 27% SOLUTION FROM LAB		0.4540 kgs
18748	3B	SODIUM CARBONATE 99%, PARAFORMALDEHYDE 1% SOLUTION FROM LAB		0.1200 kgs
18749	3B	SODIUM CARBONATE 99%, PARAFORMALDEHYDE 1% SOLUTION FROM LAB		0.1200 kgs

INVENTORY BY CELL

Cell: 3B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18750	3B	SODIUM CARBONATE 99%, PARAFORMALDEHYDE 1% SOLUTION FROM LAB		0.1200 kgs
18751	3B	SODIUM CARBONATE 99%, PARAFORMALDEHYDE 1% SOLUTION FROM LAB		0.1200 kgs
12195	3B	NICKELOUS SULFATE	169L	0.4540 kgs
			Total	**367.8874 kgs**

INVENTORY BY CELL

Cell: 3C

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
9144	3C	ZINC CHLORIDE		1.5000 kgs
9963	3C	TITANIUM TRICHLORIDE		2.7200 kgs
10913	3C	AMMONIUM SULFITE		0.0010 kgs
10918	3C	1-ALLYL-2-THIOUREA		0.0010 kgs
12034	3C	ALUMINUM		0.4540 kgs
12546	3C	COPPER		2.5000 kgs
14399	3C	LITHIUM FROM LAB		1.0000 kgs
15474	3C	GUANAZULENE FROM LAB		0.0250 kgs
17335	3C	BATTERIES - LITHIUM		2.5000 kgs
			Total	**10.7010 kgs**

INVENTORY BY CELL

Cell: 3D

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
10255	3D	SEPHAROSE 4B		1.0000 kgs
10317	3D	HARDENER		1.0000 kgs
10318	3D	EPOCAST 202		1.0000 kgs
15197	3D	2,4,6 TRIMETHYLPYRIDINE 2.5% AND NINHYDRAN .2% FROM LAB		0.5000 kgs
18480	3D	DOG BLOOD 20%, FORMALIN 40%, WATER 40% SOLUTION FROM LAB • CONTAINER PULLED FROM MRC-049		0.5000 kgs
18481	3D	DOG BLOOD 20%, FORMALIN 40%, WATER 40% SOLUTION FROM LAB • CONTAINER PULLED FROM MRC-049		0.5000 kgs
			Total	**4.5000 kgs**

INVENTORY BY CELL

Cell: 4

WORKING COPY
(SUBJECT TO CHANGE)
DATE: 11/25/92

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
16556	4	OIL - USED VACUUM 100% FROM LAB	416B	3.8000 kgs
17153	4	OIL - VACUUM PUMP 100% FROM LAB	416B	0.7000 kgs
17154	4	OIL - VACUUM PUMP 100% FROM LAB	416B	0.7000 kgs
17155	4	OIL - VACUUM PUMP 100% FROM LAB	416B	0.7000 kgs
17156	4	OIL - VACUUM PUMP 100% FROM LAB	416B	0.7000 kgs
17157	4	OIL - VACUUM PUMP 100% FROM LAB	416B	0.7000 kgs
17158	4	OIL - VACUUM PUMP 100% FROM LAB	416B	0.7000 kgs
17159	4	OIL - HYDRAULIC 100% FROM LAB	416B	0.2000 kgs
17468	4	2-METHOXYETHYL ETHER FROM LAB	485L	0.2000 kgs
17587	4	ETHYL SILICATE FROM LAB	485L	3.0000 kgs
17589	4	FURFURAL FROM LAB	485L	0.5500 kgs
17590	4	FURFURAL FROM LAB	485L	0.5500 kgs
17615	4	VACUUM PUMP OIL 100% FROM LAB	416B	3.4000 kgs
17624	4	VACUUM PUMP OIL 100% FROM LAB	416B	1.0000 kgs
17697	4	OIL FROM LAB (flashpoint 432 degrees F)	416B	2.0000 kgs
17699	4	OIL FROM LAB	416B	7.5000 kgs

INVENTORY BY CELL

Cell: 4

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17700	4	OIL FROM LAB	416B	4.5000 kgs
17715	4	SHELL DIALA OIL AX WITH <.2% BUTYLATED HYDROXY AND TOLUENE FROM LAB	416B	26.6000 kgs
17716	4	SHELL DIALA OIL AX WITH <.2% BUTYLATED HYDROXY AND TOLUENE FROM LAB	416B	24.9000 kgs
17717	4	SHELL DIALA OIL AX WITH <.2% BUTYLATED HYDROXY AND TOLUENE FROM LAB	416B	24.9000 kgs
17718	4	SHELL DIALA OIL AX WITH <.2% BUTYLATED HYDROXY AND TOLUENE FROM LAB	416B	24.9000 kgs
17719	4	SHELL DIALA OIL AX WITH <.2% BUTYLATED HYDROXY AND TOLUENE FROM LAB	416B	11.4000 kgs
17801	4	VACUUM PUMP OIL FROM LAB	416B	28.0000 kgs
17933	4	1-OCTANOL 99%, WATER 1% SOLUTION FROM LAB	485L	0.5000 kgs
17980	4	2 METHYOXY ETHANOL FROM LAB	485L	4.0000 kgs
18330	4	MINERAL OIL FROM LAB	416B	18.0000 kgs
18397	4	PETROLEUM DISTILLATES FROM LAB • MRC-224	MRC-224	2.9700 kgs
18398	4	HEAVY NAPTHA FROM LAB • MRC-225	MRC-225	0.3300 kgs
18419	4	SIMULATED GROUND WATER 80%, CARBON TETRACHLORIDE .17%, HEXANE 19.83% SOLUTION FROM LAB	485L	3.4000 kgs
18429	4	TURBINE OIL FROM LAB	416B	8.1000 kgs
18472	4	PSEUDOCUMENE 59%, NON-IONIC EMULSIFIERS/FLUORS 41% SOLUTION FROM LAB	485L	3.5000 kgs
18864	4	USED VACUUM PUMP OIL 100%		1.0000 kgs
			Total	213.4000 kgs

INVENTORY BY CELL

Cell: 4A

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
9791	4A	SODIUM PENTACHLOROPHENNATE		20.0000 kgs
9792	4A	2,4,5-TRICHLOROPHENOL		0.0050 kgs
9793	4A	SODIUM PENTACHLOROPHENNATE		4.0000 kgs
10717	4A	LUBRICANT		0.1000 kgs
12082	4A	CHLORAL HYDRATE FROM LAB - CROSSED OUT ON REQUEST		0.4540 kgs
16455	4A	METHYLENE CHLORIDE 98%, PENTACHLOROPHENOL 2% FROM LAB		0.1000 kgs
17870	4A	1,12-TRICHLOROTRIFLUORO ETHANE FROM LAB		1.6000 kgs
17874	4A	1,1,2,TRICHLOROTRIFLUORO ETHANE FROM LAB		0.7870 kgs
17875	4A	1,1,2,TRICHLOROTRIFLUORO ETHANE FROM LAB		0.7870 kgs
18271	4A	DRICOTE CONTAINING METHYLENE CHLORIDE 97.85 FROM LAB		0.0567 kgs
18377	4A	1-1-1 TRICHLOROETHANE 98%, PHENYLETHYLETHANOLAMINE 2% SOLUTION FROM LAB		0.0283 kgs
18378	4A	1-1-1 TRICHLOROETHANE 98%, PHENYLETHYLETHANOLAMINE 2% SOLUTION FROM LAB		0.0283 kgs
17468	4A	WASTE METHOXYETHYL ETHER		0.2000 kgs
16554	4A	1,1,2-TRICHLOROTRIFLUOROETHANE 95%, SILICONES 5% FROM LAB		2.1000 kgs
16500	4A	MERCURY, NITRIC ACID, CHROMIC ACID FROM LAB • LABPACK BNW-837	BNW-837	47.4500 kgs
			Total	**77.6963 kgs**

INVENTORY BY CELL

Cell: 4B

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17619	4B	OIL PCB 3 ppm from lab		1.7000 kgs
18379	4B	METHYL-2-CYANOACRYLATE 90% SOLUTION FROM LAB		0.0300 kgs
18380	4B	METHYL-2-CYANOACRYLATE 90% SOLUTION FROM LAB		0.0300 kgs
18656	4B	NORMAL PARAFFIN HYDRO CARBON FROM LAB		2.1000 kgs
18661	4B	TRIBUTYL PHOSPHATE 30% KEROSENE 70% FROM LAB		0.7000 kgs
18662	4B	ISOPENTYL ALCOHOL FROM LAB		0.4800 kgs
18759	4B	ISOPENTYL ALCOHOL FROM LAB		0.4800 kgs
18760	4B	ISOPENTYL ALCOHOL FROM LAB		0.4800 kgs
18761	4B	ISOPENTYL ALCOHOL FROM LAB		0.4800 kgs
18762	4B	ISOPENTYL ALCOHOL FROM LAB		0.4800 kgs
18763	4B	ISOPENTYL ALCOHOL FROM LAB		0.4800 kgs
18764	4B	ISOPENTYL ALCOHOL FROM LAB		0.4800 kgs
18765	4B	ISOPENTYL ALCOHOL FROM LAB		0.4800 kgs
18766	4B	ISOPENTYL ALCOHOL FROM LAB		0.4800 kgs
18767	4B	ISOPENTYL ALCOHOL FROM LAB		0.4800 kgs
18768	4B	ISOPENTYL ALCOHOL FROM LAB		0.0300 kgs
18691	4B	n-DODECANE FROM LAB		0.0020 kgs
18769	4B	n-DODECANE FROM LAB		0.0020 kgs
18725	4B	ETHANOL 31%, GLACIAL ACETIC ACID 5%, POLYVINYL ACETATE 5%, MECURIC CHLORIDE 4.5%, GLYCEROL 2%, WATE		0.5000 kgs
18744	4B	METHYL CELLOSOLVE ACETATE FROM LAB		3.8000 kgs
12792	4B	READY GEL - BECKMAN'S		7.5000 kgs
			Total	21.1940 kgs

INVENTORY BY CELL

Cell: 4C

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
9740	4C	TEFLON PAINT		5.9920 kgs
18344	4C	DURALCO 254 - ROOM TEMP BINDER CONTAINING TOLUENE FROM LAB		0.3500 kgs
18345	4C	DURALCO 254 - ROOM TEMP BINDER CONTAINING TOLUENE FROM LAB		0.3500 kgs
18346	4C	ALUMINA FIBER BASE - COLTRONICS 901 FROM LAB		0.1500 kgs
18525	4C	ACETONE FROM LAB		5.0000 kgs
18637	4C	AMMONIUM SULFIDE 20%, WATER 80% SOLUTION FROM LAB		0.2000 kgs
18644	4C	SODIUM SULFIDE 20%, WATER 80% SOLUTION FROM LAB		0.3000 kgs
18650	4C	CYCLOHEXANONE FROM LAB		0.0400 kgs
18657	4C	1,2 DICHLOROETHANE #511280 FROM LAB		3.5000 kgs
18658	4C	CYCLOHEXANONE FROM LAB		3.5000 kgs
18660	4C	CYCLOHEXANE FROM LAB		3.0000 kgs
18663	4C	CYCLOHEXANE FROM LAB		0.5000 kgs
18687	4C	TRIARYLEMETHANE 20%, METHYL ALCHOHOL 80% SOLUTION FROM LAB		0.1600 kgs
17747	4C	METHANOL, TOLUENE, BENZENE, MERCURY, CHROME, METHYLENE CHLORIDE FROM LAB • MRC-155	MRC-155	49.0000 kgs
18300	4C	ACETONE, METHYLENE CHLORIDE, (PYRIDINE), BENZENE, CHLOROFORM FROM LAB • MRC-186	MRC-186	21.5000 kgs
18862	4C	METHANOL 60%, FLURIDONE <.01%, WATER 40%		0.2500 kgs
18863	4C	METHANOL 60%, FLURIDONE <.01%, WATER 40%		0.2500 kgs
			Total	**94.0420 kgs**

INVENTORY BY CELL

Cell: 4E

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
8898	4E	MAGNAFLUX DEVELOPER ZP-4A DRY TYPE		0.3000 kgs
9760	4E	WHITMIRE PRESCRIPTION SYSTEM AEROSOL	369L	0.2000 kgs
10144	4E	GLASS CLEANER	369L	0.6000 kgs
10304	4E	CLEANER	369L	4.0000 kgs
10473	4E	FELT FLOCK UNDERCOAT		0.3000 kgs
12605	4E	PAINT - CLEAR	369L	0.3690 kgs
12049	4E	ANTIFOAM-A SPRAY	369L	0.1700 kgs
12093	4E	CONTACTENE	369L	0.1500 kgs
15266	4E	ACETONE 50% AND PROPANE 30% ORGANIC MIXTURE FROM LAB	369L	1.0000 kgs
15267	4E	ACETONE 50% AND PROPANE 30% ORGANIC MIXTURE FROM LAB	369L	1.0000 kgs
15269	4E	1,1,1-TRICHLOROETHANE >95% FROM LAB	369L	0.0670 kgs
15245	4E	MONOETHANOLAMINE 5% AND ISOPROPYL ALCOHOL 20% SOLUTION FROM LAB	369L	0.6380 kgs
15291	4E	RP SUPER FILTER COAT AIR FILTER ADHESIVE FROM LAB	369L	2.2200 kgs
13688	4E	SPRAY PAINT FROM LAB	369L	0.4000 kgs
18501	4E	HYDROGEN 45%, CARBON MONOXIDE 40%, NITROGEN 5%, HELLIUM 10% FROM LAB		0.4500 kgs
18502	4E	HYDROGEN 15%, CARBON MONOXIDE 10%, NITROGEN 5%, HELLIUM 70% FROM LAB		0.4500 kgs

INVENTORY BY CELL

Cell: 4E

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18503	4E	HYDROGEN 15%, CARBON MONOXIDE 50%, NITROGEN 10%, HELLIUM 25% FROM LAB		0.4500 kgs
			Total	12.7640 kgs

INVENTORY BY CELL

Cell: 4F

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
13303	4F	N-METHYL-N-NITRO-N-NITROSOGUANIDINE FROM LAB		0.0010 kgs
15201	4F	1,3,5-TRINITROBENZENE 5%, WATER 47.5% & ETHANOL 47.5% SOLUTION FROM LAB		0.0500 kgs
18035	4F	GRAPHITE 90%, ZICONIUM 10% FROM LAB		0.0010 kgs
18106	4F	ALUMINIUM 49.998%, LITHIUM 49.998%, BISMUTH .01%, CADMIUM .01%, COBALT .01%, MANGANESE .01% FROM LA		0.0200 kgs
18107	4F	ALUMINIUM 49.9998%, LITHIUM 49.9998%, BISMUTH .0001%, CADMIUM .0001%, COBALT .0001%, MANGANESE .000		0.0200 kgs
18108	4F	ALUMINIUM 49.998%, LITHIUM 49.998%, BISMUTH .001%, CADMIUM .001%, COBALT .001% MANGANESE .001% FROM		0.0200 kgs
18109	4F	GRAPHITE 99.9988%, ALUMINIUM .0002%, CADMIUM .0002%, CHROMIUM .0002%, IRON .0002%, LEAD .0002%, ZIN		0.0200 kgs
18110	4F	GRAPHITE 99.9969%, ALUMINIUM .0005%, CADMIUM .0005%, CHROMIUM .0005%, IRON .0005%, LEAD .0005%, ZIN		0.0200 kgs
18111	4F	GRAPHITE 99.9939%, ALUMINIUM .001%, CADMIUM .001%, CHROMIUM .001%, IRON .001%, LEAD .001%, ZINC .00		0.0200 kgs
18112	4F	GRAPHITE 99.98785, ALUMINIUM .002%, CADMIUM .002%, CHROMIUM .002%, IRON .002%, LEAD .002%, ZINC .00		0.0200 kgs
18113	4F	GRAPHITE 99.9695%, ALUMINIUM .005%, CADMIUM .005%, CHROMIUM .005%, IRON .005%, LEAD .005%, ZINC .00		0.0200 kgs
18114	4F	GRAPHITE 99.939%, ALUMINIUM .01%, CADMIUM .01%, CHROMIUM .01%, IRON .01%, LEAD .01%, ZINC .01%, COP		0.0200 kgs
18115	4F	GRAPHITE 99.878%, ALUMINIUM .02%, CADMIUM .02%, CHROMIUM .02%, IRON .02%, LEAD .02%, ZINC .02%, COP		0.0200 kgs
18116	4F	GRAPHITE 99.695%, ALUMINIUM .05%, CADMIUM .05%, CHROMIUM .05%, IRON .05%, LEAD .05%, ZINC .05%, COP		0.0200 kgs
18117	4F	GRAPHITE 99.39%, ALUMINIUM .1%, CADMIUM .1%, CHROMIUM .1%, IRON .1%, LEAD .1%, ZINC .1%, COPPER .01		0.0200 kgs
18118	4F	GRAPHITE 63.4%, ALUMINIUM 6%, CADMIUM 6%, CHROMIUM 6%, IRON 6%, LEAD 6%, ZINC 6%, COPPER .6% FROM L		0.0200 kgs

INVENTORY BY CELL

Cell: 4F

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18121	4F	ALUMINIUM 99.995%, LITHIUM .005% FROM LAB		0.0010 kgs
18122	4F	ALUMINIUM 99.99%, LITHIUM .01% FROM LAB		0.0010 kgs
18123	4F	ALUMINIUM 99.98%, LITHIUM .02% FROM LAB		0.0010 kgs
18124	4F	ALUMINIUM 99.95%, LITHIUM .05% FROM LAB		0.0010 kgs
18125	4F	ALUMINIUM 99.9%, LITHIUM .1% FROM LAB		0.0010 kgs
18128	4F	ALUMINIUM 99%, LITHIUM NITRATE 1% FROM LAB		0.0010 kgs
18129	4F	ALUMINIUM 99%, LITHIUM NITRITE 1% FROM LAB		0.0010 kgs
18130	4F	ALUMINIUM 99.99%, LITHIUM NITRITE .01% FROM LAB		0.0010 kgs
18191	4F	SODIUM SULFIDE 9-HYDRATE FROM LAB		0.5000 kgs
18640	4F	MAGNESIUM TURNINGS FROM LAB		0.0100 kgs
			Total	**0.8300 kgs**

INVENTORY BY CELL

Cell: 4G

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
9103	4G	POTASSIUM FERRICYANIDE		0.5000 kgs
9266	4G	CHLOROFORM		4.0000 kgs
9770	4G	D-CAMPHOR		0.2500 kgs
9951	4G	1-BUTANOL		0.7700 kgs
9962	4G	METHYL SULFOXIDE		1.3600 kgs
9999	4G	DINITROFLUOROBENZENE		0.0250 kgs
10364	4G	FREON		1.0000 kgs
10371	4G	3-THIENYL-TRIFLUOROBUTANEDIONE		0.2000 kgs
10808	4G	CHROMIST		0.1250 kgs
10833	4G	FREON		0.3000 kgs
10557	4G	IODOHEXADECANE		0.1000 kgs
10559	4G	1-IODOHEPTANE		0.0200 kgs
10560	4G	1-IODO OCTANE		0.0400 kgs
10561	4G	ISOPROPYLIODIDE		0.0600 kgs
10971	4G	LUMMUS TLP BLEND COAL		0.0600 kgs
10993	4G	2-THENOYL TRIFLUOROACETONE		0.0400 kgs
10659	4G	DIBUTYL BUTYLPHOSPHONATE		16.0000 kgs
10660	4G	ETHYL ACETATE		4.0000 kgs
11707	4G	IODOPROPANE		0.1000 kgs
11735	4G	FREON		1.0000 kgs
11082	4G	3,5 DIIODO-4 PYRIDONE, N ACETIC ACID		0.0500 kgs
11174	4G	MERCAPTOETHANOL		0.8000 kgs
11185	4G	CLEANER AND POLISHER		0.3000 kgs
11228	4G	FREON		0.0750 kgs
11249	4G	POTASSIUM FERRICYANIDE		0.4000 kgs
11266	4G	OIL		0.4000 kgs
11305	4G	SODIUM SULFIDE		0.0500 kgs
11349	4G	PENTAFLUORABENZOIC ACID		0.0020 kgs

INVENTORY BY CELL

Cell: 4G

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
11358	4G	TETRABUTYLAMMONIUM BROMIDE		0.1000 kgs
11500	4G	POTASSIUM FERRICYANIDE		0.4000 kgs
11627	4G	METHYL TRICAPRYLYL AMMONIUM CHLORIDE		0.7000 kgs
11868	4G	HYDRAZINE		0.5000 kgs
11872	4G	BEHOLD POLISH		0.4640 kgs
12719	4G	ORGANIC SOLUTION		1.0000 kgs
12721	4G	URETHANE		0.3000 kgs
12865	4G	PAINT - KRYLON		0.3000 kgs
13044	4G	ZIP-STRIP PAINT REMOVER		0.4000 kgs
13050	4G	AMYL ACETATE		2.5000 kgs
13051	4G	BENZENE		0.5000 kgs
13052	4G	TRICHLOROETHYLENE		4.0000 kgs
13053	4G	1,1,2 TRICHLOROTRIFLUOROETHANE		1.0000 kgs
13599	4G	SCINTILLATION COCKTAIL 90% SOLUTION FROM LAB		3.5000 kgs
14225	4G	METHANOL 20% SOLUTION FROM LAB		3.0000 kgs
14371	4G	METHYLENE CHLORIDE 80%, ETHANOL 10% AND MINERAL SPIRITS 5% SOLUTION FROM LAB		4.0000 kgs
14373	4G	PNEUMATIC OIL 10W FROM LAB		1.0000 kgs
14394	4G	PETROLEUM GREASE FROM LAB		4.0000 kgs
14382	4G	TRICHLOROETHYLENE FROM LAB		4.0000 kgs
8764	4G	TITANIUM		2.0000 kgs
10351	4G	ALUMINUM POWDER		0.3590 kgs
11593	4G	SODIUM SULFIDE		2.0000 kgs
12354	4G	RUBBER CEMENT - NAPHTHA 89% SOLUTION FROM LAB		0.0100 kgs
12864	4G	CLEANER - BATTTERY		0.3000 kgs

INVENTORY BY CELL

Cell: 4G

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
10588	4G	CHROMIC NITRATE		0.8000 kgs
			Total	69.1600 kgs

(SUBJECT TO CHANGE)
DATE: 11/25/92

INVENTORY BY CELL

Cell: 5

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17756	5	METHANOL FROM LAB		20.0000 kgs
17833	5	METHANOL 8%, ACETONE 3.3%, METHYLENE CHLORIDE 3.3%, POTASSIUM PHOSPHATE 6.7%, AMMONIUM ACETATE 60.3		15.0000 kgs
17834	5	t-BUTANOL .03%, TOLUENE .16% .2 M AMMONIUM ACETATE 79.81%, 20% ACETONITRILE 20% SOLUTION FROM LAB		14.9000 kgs
17899	5	AEROSOL CANS		85.5000 kgs
18327	5	ACETONITRILE 28%, AMMONIUM ACETATE 52%, METHYLENE CHLORIDE 2.2% SOLUTION FROM LAB		20.0000 kgs
18536	5	ACETONITRILE 20%, METHYLENE CHLORIDE 1.3%, METHANOL .7%, SODIUM HYDROXIDE .007%, AMONIUM ACETATE 26		15.0000 kgs
			Total	**170.4000 kgs**

REVIEW COPY
(SUBJECT TO CHANGE)
DATE: 11/25/92

INVENTORY BY CELL

Cell: 6

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18468	6	ASBESTOS SHEETING FROM LAB		0.5000 kgs
			Total	0.5000 kgs

INVENTORY BY CELL

Cell: 8

REVIEW COPY
(SUBJECT TO CHANGE)
DATE: 11/25/92

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
12788	8	LITHIUM CARBIDE	486L	0.2270 kgs
12789	8	LITHIUM CARBIDE	486L	0.2270 kgs
12790	8	LITHIUM FROM LAB	486L	0.2270 kgs
13083	8	PAINT - SPRAY	13083	40.0000 kgs
13085	8	PAINT CONTAINING STODDARD SOLVENT FROM PLANT MAINTENANCE	342B	40.0000 kgs
13007	8	POLYAMIDE RESIN 45.5%, ABSORBANT 30%, XYLENE 21%, ETHYL BENZENE 3.5% FROM LAB	13007	4.0000 kgs
13809	8	MIXED PAINT WASTE FROM PLANT MAINTENANCE	342B	39.9000 kgs
14253	8	PAINT - WASTE FROM PLANT MAINTENANCE (overpacked)	342B	38.5000 kgs
15202	8	2,4,6-TRINITRORESORCINOL 5%, WATER 47.5% & ETHANOL 47.5% SOLUTION FROM LAB	364L	0.0500 kgs
15795	8	CHOLOROFORM 5.5%, WATER 50%, HEXANE 27.7% & METHYLENE CHLORIDE 16.6% SOLUTION FROM LAB	481L	1.0000 kgs
16506	8	PICRYL CHLORIDE FROM LAB • LABPACK BNW-844	BNW-844	0.0990 kgs
16607	8	BULBS - SODIUM FROM PLANT MAINTENANCE	16607	10.0000 kgs
16657	8	LITHIUM 100% FROM LAB	486L	1.4300 kgs
16658	8	LITHIUM 100% FROM LAB	486L	0.9070 kgs
16659	8	LITHIUM POWDER 100% FROM LAB	486L	1.4300 kgs
16672	8	CALCIUM POWDER 100% FROM LAB	486L	2.9300 kgs

INVENTORY BY CELL

Cell: 8

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
16677	8	COMMERICAL CALCIUM 100% FROM LAB	486L	0.4200 kgs
16678	8	CALCIUM POWDER 100% FROM LAB	486L	0.2000 kgs
16679	8	CALCIUM POWDER 100% FROM LAB	486L	0.2000 kgs
17022	8	ACETYLENE FROM LAB	341L	1.0000 kgs
17023	8	ACETYLENE FROM LAB	341L	1.0000 kgs
17135	8	PAINT - KRYLON SPRAY AEROSOL 100% FROM LAB	345	1.0000 kgs
17136	8	PAINT - KRYLON SPRAY AEROSOL 100% FROM LAB	345	1.0000 kgs
17137	8	PAINT - KRYLON SPRAY AEROSOL 100% FROM LAB	345	1.0000 kgs
17138	8	PAINT - KRYLON SPRAY AEROSOL 100% FROM LAB	345	1.0000 kgs
17139	8	PAINT - KRYLON SPRAY AEROSOL 100% FROM LAB	345	1.0000 kgs
17145	8	PAINT - PACTRA ENAMEL SPRAY WHITE AEROSOL 100% FROM LAB	345	0.1000 kgs
17146	8	PAINT - PACTRA ENAMEL SPRAY WHITE AEROSOL 100% FROM LAB	345	0.1000 kgs
10635	8	TITANIUM	487L	6.0000 kgs
17245	8	ACETONITRILE 50%, 0.1M TRIETHYLAMINE 1%, WATER 49% SOLUTION FROM LAB	482L	4.0000 kgs
17246	8	ACETONITRILE 50%, 0.1M TRIETHYLAMINE 1%, WATER 49% SOLUTION FROM LAB	482L	4.0000 kgs
17248	8	ACETONITRILE 40%, TRIETHYLAMINE .1%, TRICHLOROACETIC ACID .1%, WATER 60% SOLUTION FROM LAB	482L	4.0000 kgs

INVENTORY BY CELL

Cell: 8

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17249	8	ACETONITRILE 50%, TRIFLUOROACETIC ACID .1% SOLUTION FROM LAB	482L	4.0000 kgs
17250	8	ACETONITRILE 50%, TRIFLUOROACETIC ACID .1% SOLUTION FROM LAB	482L	4.0000 kgs
17252	8	METHANOL 40%, ACETIC ACID 10%, CHARCOAL 10%, WATER 40% SOLUTION FROM LAB	484L	4.0000 kgs
17254	8	ACETONITRILE 50%, TRIETHYLAMINE ACETATE 5%, WATER 45% SOLUTION FROM LAB	482L	4.0000 kgs
17255	8	ACETONITRILE 30%, METHANOL 20%, TRIFLUOROACETIC ACID 1%, PHOSPHATE 5% SOLUTION FROM LAB	482L	4.0000 kgs
17257	8	ACETONITRILE 40%, WATER 60% SOLUTION FROM LAB	482L	4.0000 kgs
17258	8	ACETONITRILE 40%, WATER 60% SOLUTION FROM LAB	484L	4.0000 kgs
17269	8	ACETONITRILE 33%, TRIFLUOROACETIC ACID .01%, AMINONAPHTHALENE IN SOIL <.01%, TRICHLOROBENZENE <.01%	482L	3.6900 kgs
17384	8	ALUMINUM 35%, VANADIUM 65% FROM LAB	487L	2.5000 kgs
17388	8	ALUMINUM 50%, VANADIUM 50% FROM LAB	487L	2.0000 kgs
17389	8	ZIRCONIUM HYDRIDE FROM LAB	486L	2.0000 kgs
17392	8	TITANIUM CARBIDE FROM LAB	487L	2.5000 kgs
17393	8	CHROME 22-24%, ALUMINUM 12-14%, YITTRIUM 1%, COBALT 61-65% FROM LAB	487L	1.7000 kgs
17394	8	CHROME 22-24%, ALUMINUM 12-14%, YITTRIUM 1%, COBALT 61-65% FROM LAB	487L	1.7000 kgs
17395	8	CHROME 22-24%, ALUMINUM 12-14%, YITTRIUM 1%, COBALT 61-65% FROM LAB	487L	1.7000 kgs
17396	8	CHROME 22-24%, ALUMINUM 12-14%, YITTRIUM 1%, COBALT 61-65% FROM LAB	487L	1.7000 kgs

INVENTORY BY CELL

Cell: 8

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17413	8	METHYL ETHYL KETONE 15-20%, TOLUENE 25-30%, LEAD PHOSPHITE 1-5%, ANTIMONY TRIOXIDE 5-10% FROM LAB	484L	3.9000 kgs
17414	8	METHYL ETHYL KETONE 15-20%, TOLUENE 25-30%, LEAD PHOSPHITE 1-5%, ANTIMONY TRIOXIDE 5-10% FROM LAB	484L	3.9000 kgs
17415	8	METHYL ETHYL KETONE 15-20%, TOLUENE 25-30%, LEAD PHOSPHITE 1-5%, ANTIMONY TRIOXIDE 5-10% FROM LAB	484L	3.9000 kgs
17416	8	METHYL ETHYL KETONE 15-20%, TOLUENE 25-30%, LEAD PHOSPHITE 1-5%, ANTIMONY TRIOXIDE 5-10% FROM LAB	484L	3.9000 kgs
17420	8	DI-CAMPHOR FROM LAB	487L	2.0000 kgs
17421	8	DI-CAMPHOR FROM LAB	487L	2.0000 kgs
17431	8	TITANIUM POWDER FROM LAB	487L	1.2000 kgs
17432	8	TITANIUM METAL POWDER FROM LAB	487L	9.0000 kgs
17445	8	ATOMIZED ZK60 MAGNESIUM 93%, ZINC 6%, ZIRCONIUM 1% FROM LAB	486L	4.1100 kgs
17454	8	TITANIUM SPONGE POWDER FROM LAB	487L	0.8900 kgs
17512	8	SCINTILLATION COCKTAIL - PSUEDOCUMENE 29%, P-XYLELNE 30%, NON-IONIC EMULSIFIRE AND FLUORS 41% SOLU	484L	0.5000 kgs
17538	8	NITRIC ACID 33%, METHANOL 67% SOLUTION FROM LAB	481L	1.0000 kgs
17544	8	MAGNESIUM FROM LAB	486L	0.0850 kgs
17586	8	LITHIUM POWDER FROM LAB	486L	0.5500 kgs
17664	8	ACETONITRILE 72%, METHANOL 11%, DICHLOROMETHANE 9%, TETRAHYDROFURAN 5%, PHOSPHORAMIDITES 1%, ACETIC	480L	4.0000 kgs
17665	8	ACETONITRILE 72%, METHANOL 11%, DICHLOROMETHANE 9%, TETRAHYDROFURAN 5%, PHOSPHORAMIDITES 1%, ACETIC	480L	4.0000 kgs

INVENTORY BY CELL

Cell: 8

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17666	8	ACETONITRILE 72%, METHANOL 11%, DICHLOROMETHANE 9%, TETRAHYDROFURAN 5%, PHOSPHORAMIDITES 1%, ACETIC	480L	4.0000 kgs
17636	8	ISOPROPYL ALCOHOL 70%, WATER 30% SOLUTION FROM LAB	481L	3.8000 kgs
17637	8	ISOPROPYL ALCOHOL 70%, WATER 30% SOLUTION FROM LAB	480L	3.8000 kgs
17638	8	ISOPROPYL ALCOHOL 70%, WATER 30% SOLUTION FROM LAB	480L	3.8000 kgs
17639	8	ISOPROPYL ALCOHOL 70%, WATER 30% SOLUTION FROM LAB	481L	3.8000 kgs
17640	8	ACETONE 99%, WATER 1% SOLUTION FROM LAB	481L	2.0000 kgs
17710	8	ACETONE 29.4%, METHYLENE CHLORIDE 19.2%, METHANOL 67.5%, 1,1,1-TRICHLOROETHANE 4.2%, TETRAHYDROFURA	481L	3.0000 kgs
17711	8	ZIRCONIUM METAL FROM LAB	487L	0.1000 kgs
17712	8	ZIRCONIUM METAL FROM LAB	487L	0.1000 kgs
17713	8	SODIUM HYDRIDE 80%, MINERAL OIL 20% FROM LAB	486L	0.0400 kgs
17795	8	METHANOL 24.9%, DICHLOROMETHANE 12.1%, ACETONITRILE 5.2%, TETRA HYDROFURAN 4%, CHROMIUM OXIDE .02%,	481L	3.2000 kgs
17835	8	FORMALDEHYDE 38%, METHANOL 15%, WATER 54% SOLUTION FROM LAB	481L	0.5400 kgs
17836	8	FORMALDEHYDE 38%, METHANOL 15%, WATER 54% SOLUTION FROM LAB	481L	0.5400 kgs
17837	8	FORMALDEHYDE 38%, METHANOL 15%, WATER 54% SOLUTION FROM LAB	481L	0.5400 kgs
17838	8	FORMALDEHYDE 38%, METHANOL 15%, WATER 54% SOLUTION FROM LAB	481L	0.5000 kgs
17839	8	FORMALDEHYDE 38%, METHANOL 15%, WATER 54% SOLUTION FROM LAB	482L	0.7600 kgs

INVENTORY BY CELL

Cell: 8

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17840	8	FORMALDEHYDE 38%, METHANOL 15%, WATER 54% SOLUTION FROM LAB	482L	0.7600 kgs
17841	8	FORMALDEHYDE 38%, METHANOL 15%, WATER 54% SOLUTION FROM LAB	482L	0.6100 kgs
17842	8	FORMALDEHYDE 38%, METHANOL 15%, WATER 54% SOLUTION FROM LAB	482L	0.6100 kgs
17864	8	RUBBER CEMENT - CONTAINING HEPTANE & ETHYL ALCOHOL SOLUTION FROM LAB	482L	0.8400 kgs
17865	8	RUBBER CEMENT - CONTAINING HEPTANE & ETHYL ALCOHOL SOLUTION FROM LAB	482L	0.8400 kgs
17866	8	RUBBER CEMENT - CONTAINING HEPTANE & ETHYL ALCOHOL SOLUTION FROM LAB	482L	0.8400 kgs
17867	8	RUBBER CEMENT - CONTAINING HEPTANE & ETHYL ALCOHOL SOLUTION FROM LAB	482L	0.8400 kgs
17868	8	RUBBER CEMENT - CONTAINING HEPTANE & ETHYL ALCOHOL SOLUTION FROM LAB	482L	0.8400 kgs
17869	8	RUBBER CEMENT - CONTAINING HEPTANE & ETHYL ALCOHOL SOLUTION FROM LAB	482L	0.8400 kgs
17860	8	SODIUM BOROHYDRIDE FROM LAB	486L	0.0250 kgs
17861	8	SODIUM BOROHYDRIDE FROM LAB	486L	0.0250 kgs
17862	8	SODIUM BOROHYDRIDE FROM LAB	486L	0.1000 kgs
17863	8	SODIUM BOROHYDRIDE FROM LAB	486L	0.1000 kgs
17956	8	FISHER ACTIVATED CHARCOAL CHEMICAL INVENTORY #26151 FROM LAB	487L	2.2000 kgs
17909	8	METHANOL 45%, WATER 45%, ACETIC ACID 10% SOLUTION FROM LAB	481L	4.0000 kgs
17910	8	METHANOL 45%, WATER 45%, ACETIC ACID 10% SOLUTION FROM LAB	481L	4.0000 kgs

INVENTORY BY CELL

Cell: 8

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17911	8	METHANOL 45%, WATER 45%, ACETIC ACID 10% SOLUTION FROM LAB	481L	4.0000 kgs
17912	8	METHANOL 45%, WATER 45%, ACETIC ACID 10% SOLUTION FROM LAB	481L	4.0000 kgs
17914	8	ACETONITRILE 50%, TRIETHYLAMINE .1%, WATER 49% SOLUTION FROM LAB	480L	4.0000 kgs
17915	8	ACETONITRILE 50%, TRIETHYLAMINE .1%, WATER 49% SOLUTION FROM LAB	480L	4.0000 kgs
17916	8	ACETONITRILE 50%, TRIETHYLAMINE .1%, WATER 49% SOLUTION FROM LAB	480L	2.5000 kgs
17917	8	ACETONITRILE 50%, TRIETHYLAMINE .1%, WATER 49% SOLUTION FROM LAB	480L	2.5000 kgs
17918	8	ACETONITRILE 50%, TRIETHYLAMINE .1%, WATER 49% SOLUTION FROM LAB	480L	2.5000 kgs
17919	8	ACETONITRILE 50%, TRIETHYLAMINE .1%, WATER 49% SOLUTION FROM LAB	480L	2.5000 kgs
17920	8	ACETONITRILE 50%, TRIETHYLAMINE .1%, WATER 49% SOLUTION FROM LAB	481L	2.5000 kgs
17921	8	ACETONITRILE 50%, TRIETHYLAMINE .1%, WATER 49% SOLUTION FROM LAB	480L	2.5000 kgs
17922	8	ACETONITRILE 50%, TRIETHYLAMINE .1%, WATER 49% SOLUTION FROM LAB	480L	2.5000 kgs
17923	8	ACETONITRILE 50%, TRIETHYLAMINE .1%, WATER 49% SOLUTION FROM LAB	480L	2.5000 kgs
17924	8	Na PHOSPHATE 20 mM, METHANOL 30%, WATER 65% SOLUTION FROM LAB	480L	2.5000 kgs
17905	8	ACETONITRILE 72%, METHANOL 11%, DICHLOROMETHANE 9%, TETRAHYDROFURAN 5%, PHOSPHORAMIDITES 1%, ACETIC	481L	4.0000 kgs
18132	8	CARBON FROM LAB	487L	0.4540 kgs
18133	8	CARBON FROM LAB	487L	0.4540 kgs

INVENTORY BY CELL

Cell: 8

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18134	8	CARBON FROM LAB	487L	0.4540 kgs
18298	8	ACETONE, METHYLENE CHLORIDE, (PYRIDINE), BENZENE, CHLOROFORM FROM LAB • MRC-182	MRC-182	19.0000 kgs
18304	8	ACETONITRILE 1.05%, METHANOL 67.78%, HEXANE 1.05%, TOLUENE 1.26%, METHYLENE CHLORIDE 28.45%, BALANC	481L	15.0000 kgs
18204	8	MAGNESIUM METAL POWDER FROM LAB	486L	0.1080 kgs
18331	8	TETRAHYDROFURAN FROM LAB	483L	3.8000 kgs
18354	8	TETRAHYDROFURAN 64.4%, EPOXY NOVALAC 30.3%, METHYL ETHYL KETONE 5.3% SOLUTION FROM LAB	483L	0.0283 kgs
18355	8	TETRAHYDROFURAN 64.4%, EPOXY NOVALAC 30.3%, METHYL ETHYL KETONE 5.3% SOLUTION FROM LAB	483L	0.0283 kgs
18356	8	TETRAHYDROFURAN 64.4%, EPOXY NOVALAC 30.3%, METHYL ETHYL KETONE 5.3% SOLUTION FROM LAB	483L	0.0283 kgs
18357	8	TETRAHYDROFURAN 64.4%, EPOXY NOVALAC 30.3%, METHYL ETHYL KETONE 5.3% SOLUTION FROM LAB	483L	0.0283 kgs
18358	8	TETRAHYDROFURAN 90%, 1,2,4,5-BENZENE TETRACARBOXYLIC ANHYDRIDE 10% SOLUTION FROM LAB	483L	0.0283 kgs
18359	8	TETRAHYDROFURAN 90%, 1,2,4,5-BENZENE TETRACARBOXYLIC ANHYDRIDE 10% SOLUTION FROM LAB	483L	0.0283 kgs
18360	8	TETRAHYDROFURAN 90%, 1,2,4,5-BENZENE TETRACARBOXYLIC ANHYDRIDE 10% SOLUTION FROM LAB	483L	0.0283 kgs
18361	8	TETRAHYDROFURAN 90%, 1,2,4,5-BENZENE TETRACARBOXYLIC ANHYDRIDE 10% SOLUTION FROM LAB	483L	0.0283 kgs
18362	8	XYLENE 38-44%, ETHYL BENZENE 7-12%, OIL MODIFIED POLYARETHANE 45-55% SOLUTION FROM LAB	482L	0.0283 kgs
18363	8	XYLENE 38-44%, ETHYL BENZENE 7-12%, OIL MODIFIED POLYARETHANE 45-55% SOLUTION FROM LAB	482L	0.0283 kgs
18364	8	XYLENE 38-44%, ETHYL BENZENE 7-12%, OIL MODIFIED POLYARETHANE 45-55% SOLUTION FROM LAB	482L	0.0283 kgs

INVENTORY BY CELL

Cell: 8

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18365	8	METHYL ETHYL KETONE 85%, CABON TETRACHLORIDE <1%, PHENOL <1% SOLUTION FROM LAB	482L	0.0283 kgs
18366	8	METHYL ETHYL KETONE 85%, CABON TETRACHLORIDE <1%, PHENOL <1% SOLUTION FROM LAB	482L	0.0283 kgs
18367	8	METHYL ETHYL KETONE 85%, CABON TETRACHLORIDE <1%, PHENOL <1% SOLUTION FROM LAB	482L	0.0283 kgs
18368	8	METHYL ETHYL KETONE 85%, CABON TETRACHLORIDE <1%, PHENOL <1% SOLUTION FROM LAB	482L	0.0283 kgs
18369	8	VM&P NAPHTHA 10%, XYLENE 25%, 3140 RTV (INFO ATTACHED TO MSDS) (PROPRIETARY) 65% FROM LAB	482L	0.0283 kgs
18370	8	VM&P NAPHTHA 10%, XYLENE 25%, 3140 RTV (INFO ATTACHED TO MSDS) (PROPRIETARY) 65% FROM LAB	482L	0.0283 kgs
18371	8	VM&P NAPHTHA 10%, XYLENE 25%, 3140 RTV (INFO ATTACHED TO MSDS) (PROPRIETARY) 65% FROM LAB	482L	0.0283 kgs
18372	8	TOLUENE 50%, TITANIUM DIOXIDE 17%, METHYL ETHYL KETONE 15%, ACRYLIC ESTER RESIN 8% FROM LAB	482L	0.0283 kgs
18373	8	TOLUENE 50%, TITANIUM DIOXIDE 17%, METHYL ETHYL KETONE 15%, ACRYLIC ESTER RESIN 8% FROM LAB	482L	0.0283 kgs
18374	8	TOLUENE 50%, TITANIUM DIOXIDE 17%, METHYL ETHYL KETONE 15%, ACRYLIC ESTER RESIN 8% FROM LAB	482L	0.0283 kgs
18391	8	PETROLEUM DITILLATES FROM LAB • MRC-230	MRC-230	0.3300 kgs
18392	8	ETHYL ACETATE FROM LAB • MRC-231	MRC-231	1.9800 kgs
18396	8	ETHANOL, ETHYL ACETATE FROM LAB • MRC-223	MRC-223	2.9700 kgs
18413	8	ETHYL ETHER FROM LAB	483L	0.4000 kgs
18414	8	ETHYL ETHER FROM LAB	483L	0.5000 kgs
18422	8	METHANOL 85%, DICHLOROMETHANE 6.3%, 1-BUTANOL 1.1%, 2-PROPANONE 1.1%, BENZENE 1.1%, CARBON DISULFID	483L	1.0000 kgs

INVENTORY BY CELL

Cell: 8

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18425	8	METHANOL 24%, HEXANE 10%, 1,1,1-TRICHLOROETHANE 53%, TETRAHYDROFURAN 13% SOLUTION FROM LAB	483L	1.0100 kgs
18426	8	WATER 36.7%, ACETONITRILE 30.8%, TETRAHYDROFURAN 32.5% SOLUTION FROM LAB	483L	0.6800 kgs
18758	8	ACETONITRILE 60%, WATER 40%, POLYAROMATIC HYDROCARBON STANDARD TRACE SOLUTION FROM LAB	482L	3.5000 kgs
18431	8	METHANOL FROM LAB	18431	17.3200 kgs
18432	8	METHANOL FROM LAB	18432	17.3200 kgs
18440	8	TOLUENE FROM LAB	482L	4.0000 kgs
18444	8	ETHANOL 60%, SODIUM ACETATE .032%, SODIUM CHLORIDE .005%, WATER 40% SOLUTION FROM LAB	481L	6.0000 kgs
18445	8	ETHANOL 60%, SODIUM ACETATE .032%, SODIUM CHLORIDE .005%, WATER 40% SOLUTION FROM LAB	481L	6.0000 kgs
18447	8	AMYL ACETATE 96.6%, SODIUM TETRAPHENYL BORON 3.4% SOLUTION FROM LAB	482L	1.0000 kgs
18512	8	ACETONITRILE 72%, METHANOL 11%, DICHLOROMETHANE 95, TETRAHYDROFURAN 5%, PHOSPHORAMIDITES 1%, ACETIC	481L	4.0000 kgs
18517	8	ISOPROPYL ALCOHOL 70%, WATER 30% SOLUTION FROM LAB	482L	3.4000 kgs
18518	8	ISOPROPYL ALCOHOL 70%, WATER 30% SOLUTION FROM LAB	482L	3.4000 kgs
18519	8	ISOPROPYL ALCOHOL 70%, WATER 30% SOLUTION FROM LAB	482L	3.4000 kgs
18520	8	ISOPROPYL ALCOHOL 70%, WATER 30% SOLUTION FROM LAB	482L	3.4000 kgs
18521	8	ISOPROPYL ALCOHOL 70%, WATER 30% SOLUTION FROM LAB	481L	0.9000 kgs
18522	8	ACETONE FROM LAB	481L	1.0000 kgs

INVENTORY BY CELL

Cell: 8

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18523	8	ACETONE FROM LAB	481L	0.2000 kgs
18526	8	ACETONE FROM LAB	481L	1.0000 kgs
18538	8	ACETONITRILE 72%, METHANOL 11%, DICHLOROMETHANE 9%, TETRAHYDROFURAN 5%, PHOSPHORAMIDITES 1%, ACETIC	481L	4.0000 kgs
18542	8	HEXANE 48%, CARBON TETRACHLORIDE 21%, ISOOCTANE 15%, METHANOL 6%, DECANE 4%, ACETONITRILE 3%, METHY	480L	1.6000 kgs
18543	8	METHYLENE CHLORIDE 43%, HEXANE 41%, ACETONE 12%, METHANOL 2%, CARBON TETRACHLORIDE 2% SOLUTION FROM	480L	1.9000 kgs
18548	8	ALUMINUM 3.4%, VANADIUM 8.2%, CHROMIUM 5.8%, MOLYBDENUM 4.1%, ZIRCONIUM 40%, TITANIUM 74.5% SOLUTIO	18548	41.0000 kgs
18594	8	MAGNESIUM WASTE TURNINGS/FINES FROM PLANT MAINTENANCE	18594	22.0000 kgs
18595	8	TITANIUM WASTE TURNINGS/FINES FROM PLANT MAINTENANCE	18595	29.0000 kgs
18607	8	KLEAN STRIP AEROSOL PAINT REMOVER FROM PLANT MAINTENANCE	18607	11.5000 kgs
17372	8	TETRAHYDROFURAN 100%, FROM LAB MRC-93 LABPACK	483L	8.0000 kgs
			Total	**633.4363 kgs**

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(SUBJECT TO CHANGE)
DATE: 11/25/92

INVENTORY BY CELL

Cell: 11

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
8676	11	ETHYLENE OXIDE	8676	0.2268 kgs
9773	11	FREON	470L	0.4540 kgs
9865	11	P-CHLOROMERCURIBENZOATE	432L	0.0010 kgs
10700	11	TUNGSTEN HEXAFLUORIDE	10700	1.5000 kgs
10701	11	MOLYBDENUM HEXAFLUORIDE	10701	1.0000 kgs
11882	11	CARBON MONOXIDE	11882	1.0000 kgs
12174	11	MERCURIC SULFATE	432L	0.4540 kgs
13810	11	PAINT WASTE FROM PLANT MAINTENANCE		105.2000 kgs
13811	11	PAINT WASTE FROM PLANT MAINTENANCE		65.3000 kgs
13812	11	PAINT WASTE FROM PLANT MAINTENANCE		67.1000 kgs
13817	11	PAINT BOOTH FLOOR PAPER FROM PLANT MAINTENANCE		38.1000 kgs
14250	11	PAINT WASTE FROM PLANT MAINTENANCE		81.5000 kgs
14252	11	PAINT WASTE FROM PLANT MAINTENANCE		39.0000 kgs
13844	11	CONTAMINATED CURED GROUT FROM LAB		97.0000 kgs
14158	11	MERCUROUS CHLORIDE FROM LAB	432L	0.5000 kgs
13159	11	PAINT WASTE FROM LAB		64.0000 kgs

INVENTORY BY CELL

Cell: 11

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
13307	11	MERCUROUS CHLORIDE FROM LAB	432L	0.4500 kgs
14556	11	ALUMINUM POWDER FROM LAB		30.0000 kgs
14655	11	ALUMINUM POWDER FROM LAB		2.0000 kgs
14557	11	ALUMINA FROM LAB		45.3515 kgs
14723	11	ALUMINA FROM LAB		45.3515 kgs
14724	11	ALUMINA FROM LAB		45.3515 kgs
14656	11	ALUMINA FROM LAB		20.0000 kgs
14657	11	ALUMINA FROM LAB		20.0000 kgs
14658	11	ALUMINA FROM LAB		20.0000 kgs
14659	11	ALUMINA FROM LAB		20.0000 kgs
14660	11	ALUMINA FROM LAB		20.0000 kgs
14661	11	ALUMINA FROM LAB		20.0000 kgs
14662	11	ALUMINA FROM LAB		20.0000 kgs
14719	11	ZIRCONIUM OXIDE FROM LAB		50.0000 kgs
14925	11	MERCURIC CHLORIDE	BNW-648	3.7500 kgs
14996	11	SODIUM CARBONATE 99.9% INORGANIC MIX FROM LAB	432L	0.0150 kgs
15633	11	NON-RCRA WASTE SOLID FROM LAB	BNW-720	14.2320 kgs
15634	11	NON-RCRA LIQUID FROM LAB	BNW-722	0.1000 kgs
15775	11	NON-RCRA WASTE LIQUID SOLUTION FROM LAB	BNW-738	75.0000 kgs
15718	11	LAB PACK CONTAINING SILVER NITRATE, FORMALDEHYDE, CHROME, ACETONE, LEAD NITRATE, SELENIUM OXIDE, ME	BNW-735	16.8000 kgs
16559	11	BALLASTS - PCB >500ppm (small) FROM PLANT MAINTENANCE • BULK MRC-013	MRC-013	126.0000 kgs
16436	11	FIXER - KODAK - SODIUM THIOSULFATE 14%, AMMONIUM ALUM 2%, SODIUM METABISULFATE 1%, SODIUM ACETATE 1	477L	20.0000 kgs

INVENTORY BY CELL

Cell: 11

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
16222	11	MERCUROUS CHLORIDE 100% FROM LAB	432L	0.1330 kgs
16932	11	METHANOL 5%, WATER 95% FROM LAB • BULK BNW-327	BNW-327	160.0000 kgs
16031	11	TRICHLOROTRIFLUORO ETHANE 95%, METHANOL 5% FROM LAB • BULK BNW-818B	491L	64.0000 kgs
17021	11	METHYLMERCAPTAN FROM LAB	17021	0.2000 kgs
17025	11	NITROGEN FROM LAB	471L	0.4540 kgs
17026	11	PERFLUORODIMETHYL CYCLOHEXANE 1 ppb, AIR 100% FROM LAB	17026	0.1000 kgs
17078	11	PENTACHLOROPHENOL FROM LAB • LABPACK SIG-111	SIG-111	0.0010 kgs
17055	11	FIXER - KODAK - CONTAINING SODIUM THIOSULFATE 14%, AMMONIUM ALUM 2%, SODIUM METABISULFATE 1%, SODIU	476L	20.0000 kgs
17132	11	METHANOL 5%, WATER 95% SOLUTION FROM LAB • MRC-020	MRC-020	113.3787 kgs
17229	11	ARSENIC <20 ppm, LEAD <10 ppm, HALOGENATED HYDROCARBON 220,000 ppm SOLUTION FROM LAB • MRC-009	MRC-009	39.0000 kgs
17230	11	ARSENIC <20 ppm, LEAD <10 ppm, HALOGENATED HYDROCARBON 220.000 ppm SOLUTION FROM LAB • MRC-010	MRC-010	121.0000 kgs
17316	11	MERCURY (III) OXIDE FROM LAB • BNW-756 LABPACK	BNW-756	20.0000 kgs
17331	11	NICOTINE FROM LAB • MRC-102	MRC-102	1.0000 kgs
17326	11	UNANADIUM PENTOXIDE FROM LAB • MRC-101	MRC-101	0.5000 kgs
17327	11	CHROMIUM FROM LAB • MRC-60	MRC-60	4.5000 kgs
17261	11	AMMONIUM HYROXIDE .5%, WATER 99.5% SOLUTION FROM LAB	494L	2.0000 kgs

INVENTORY BY CELL

Cell: 11

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17270	11	DICHLOROBENZENE <.001%, TETRACHLOROBENZENE <.001%, RHODAMINE B DYE <.002%, CALCIUM PHOSPHATE BUFFER	478L	3.8600 kgs
17365	11	1-NITROPYRENE 1% FROM LAB • MRC-116 LABPACK	MRC-116	50.0000 kgs
17358	11	SODIUM FERRO-NICKEL CYANIDE SOLUTION FROM LAB • MRC-087 LABPACK	MRC-087	7.0000 kgs
17462	11	AQUA QUENCH 251 - CONTAINING SODIUM NITRATE 1 - 10%, WATER 90 - 99% SOLUTION FROM LAB	17462	183.7100 kgs
17463	11	UCON QUENCHENT A - CONTAINING TRADE SECRET POLYALKYLENE GLYCOL <55%, TRADE SECRET INORGANIC NITRILE	17463	280.7900 kgs
17464	11	UCON QUENCHENT A - CONTAINING TRADE SECRET POLY ALKYLENE GLYCOL <55%, TRADE SECRET INORGANIC NITRIL	17464	280.7900 kgs
17488	11	SODIUM PHOSPHATE 2.07%, PYRIDINE 1.5%, SODIUM HYDROXIDE .5%, BARBITURIC ACID .3%, HYDROCHLORIC ACID	479L	20.0000 kgs
17536	11	FIXER - KODAK - SOIDUM THIOSULFATE 14%, AMMONIUM ALUM 2%, SOIDUM METABISULFATE 1%, SODIUM ACETATE 1	479L	24.0000 kgs
17537	11	DEVELOPER - KODAK D-19 - SODIUM SULFITE 9%, SODIUM CARBONATE 5%, HYDROQUINONE 1%, METHYLAMMONIUMPHE	478L	24.0000 kgs
17539	11	FIXER - KODAK - SOIDUM THIOSULFATE 14%, AMMONIUM ALUM 2%, SOIDUM METABISULFATE 1%, SODIUM ACETATE 1	477L	20.0000 kgs
17540	11	DEVELOPER - KODAK D-19 - SODIUM SULFITE 9%, SODIUM CARBONATE 5%, HYDROQUINONE 1%, METHYLAMMONIUMPHE	476L	20.0000 kgs
17616	11	PUMP OIL 100% WITH BARIUM 1800 pp, PCB 5 ppm, LEAD 20 ppm FROM LAB	474L	6.8000 kgs
17617	11	OIL WITH SELENIUM 1 ppm, LEAD 32 ppm, HALOGENATED HYDROCARBONS 1,434 ppm FROM LAB	478L	0.5000 kgs
17618	11	OIL WITH LEAD 38 ppm, HALAGENATED HYDROCARBONS 6,878 ppm FROM LAB	474L	13.6000 kgs
17630	11	TRIMSOL (NON HAZARDOUS PROPRIETARY MIXTURE OF PETROLEUM OIL, NON-IONIC SURFACTANTS, CHLORINATE PARA	17630	44.0000 kgs
17633	11	LEAD FROM PLANT MAINTENANCE	17633	23.5000 kgs

INVENTORY BY CELL

Cell: 11

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17635	11	BALLASTS - PCB >500 ppm (SMALL) FROM PLANT MAINTENANCE	17635	354.0000 kgs
17668	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
17669	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
17670	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
17671	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	469L	3.8000 kgs
17672	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	469L	3.8000 kgs
17673	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	469L	3.8000 kgs
17674	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	469L	3.8000 kgs
17675	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	469L	3.8000 kgs
17676	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	469L	3.8000 kgs
17677	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
17678	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
17679	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
16597	11	OIL, USED 100% FROM PLANT MAINTENANCE	16597	182.5000 kgs
16595	11	OIL, USED 100% FROM PLANT MAINTENANCE	16595	200.5000 kgs
16596	11	OIL, USED 100% FROM PLANT MAINTENANCE	16596	193.5000 kgs

INVENTORY BY CELL

Cell: 11

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
16594	11	OIL, USED 100% FROM PLANT MAINTENANCE	16594	234.0000 kgs
17701	11	SOIL 96% CONTAMINATED WITH PETROLEUM 4% FROM LAB	466L	32.0000 kgs
17702	11	SOIL 96% CONTAMINATED WITH PETROLEUM 4% FROM LAB	466L	32.0000 kgs
17703	11	SOIL 96% CONTAMINATED WITH PETROLEUM 4% FROM LAB	466L	32.0000 kgs
17735	11	OILS (LEAD, CADMIUM, SELENIUM) FROM LAB • MRC-174 BULK	MRC-174	30.8390 kgs
17752	11	1-NITROPYRENE FROM LAB • MRC-132	MRC-132	0.0000 kgs
17754	11	BALLASTS - PCB >500 ppm (SMALL) FROM PLANT MAINTENANCE	17754	54.5000 kgs
17798	11	ALUMINUM .02%, SODIUM 1.15%, CHLORINE .077%, PHOSPHOROUS .025%, NITRATE 1.75%, CHROMIUM .0006%, (CA	478L	18.0000 kgs
17757	11	METHANOL 5%, SODUM HYDROXIDE .001%, WATER 95% SOLUTION FROM LAB	475L	20.0000 kgs
17887	11	MERCURY METALLIC FROM LAB	456L	0.4000 kgs
17888	11	MERCURY SPILL CLEANUP FROM LAB	457L	0.0500 kgs
17988	11	1,4-DICHLOROBENZENE .000065%, 2,4-DINITROTOLUENE .0000036%, ENDRIN .000046%, WATER <99.9% SOLUTION	478L	2.0000 kgs
17989	11	1,4-DICHLOROBENZENE .000065%, 2,4-DINITROTOLUENE .0000036%, ENDRIN .000046%, WATER <99.9% SOLUTION	478L	2.0000 kgs
17990	11	1,4-DICHLOROBENZENE .000065%, 2,4-DINITROTOLUENE .0000036%, ENDRIN .000046%, WATER <99.9% SOLUTION	478L	2.0000 kgs
17991	11	1,4-DICHLOROBENZENE .000065%, 2,4-DINITROTOLUENE .0000036%, ENDRIN .000046%, WATER <99.9% SOLUTION	478L	2.0000 kgs
18216	11	METHANOL FROM LAB • MRC-143 BULK	488L	64.0000 kgs

INVENTORY BY CELL

Cell: 11

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17903	11	BALLASTS - PCB >500 ppm (SMALL) FROM PLANT MAINTENANCE	17903	361.0000 kgs
17895	11	PAINT BOOTH FILTERS FROM PLANT MAINTENANCE	17895	30.0000 kgs
17896	11	BALLAST - NON PCB FROM PLANT MAINTENANCE	17896	380.5000 kgs
18152	11	MECHANICAL PUMP OIL - CONTAM. W/ CADMIUM 3.4 ppm, METHYLENE CHLORIDE 11.5 ppm, TOLUENE 12.9 ppm	473L	1.0000 kgs
18153	11	MECHANICAL PUMP OIL - CONTAM. W/ CADMIUM 5.5 ppm, METHYLENE CHLORIDE 6.6 ppm, TOLUENE 5.1 ppm	473L	2.0000 kgs
18154	11	MECHANICAL PUMP OIL - CONTAMINATED WITH CADMIUM <1 ppm, TOLUENE 11.1 ppm FROM LAB	473L	19.0000 kgs
18155	11	MECHANICAL PUMP OIL - CONTAM. W/ CADMIUM 5 ppm, METHYLENE CHLORIDE 5.4 ppm, TOLUENE 26 ppm	473L	19.0000 kgs
18156	11	MECHANICAL PUMP OIL - CONTAM. W/ CADMIUM <1 ppm, METHYLENE CHLORIDE 7.2 ppm, TOLUENE 33 ppm	473L	19.0000 kgs
18149	11	CAST IRON 90%, LEAD 10% FROM LAB	18149	178.8000 kgs
18150	11	CAST IRON 90%, LEAD 10% FROM LAB	18150	178.8000 kgs
18151	11	CAST IRON 90%, LEAD 10% FROM LAB	18151	178.8000 kgs
18288	11	CAST IRON 90%, LEAD 10% FROM LAB	18288	178.8000 kgs
18289	11	CAST IRON 90%, LEAD 10% FROM LAB	18289	178.8000 kgs
18291	11	CHROME 6, SILVER, PRYRIDINIUM CHLOROCHROMATE FROM LAB • MRC-208 LABPACK	MRC-208	50.8500 kgs
18297	11	CHROME, LEAD, SILVER FROM LAB • MRC-204	MRC-204	79.0000 kgs
18318	11	METHANOL 5%, SODIUM HYDROXIDE .001%, WATER 95% SOLUUTION FROM LAB	475L	20.0000 kgs

INVENTORY BY CELL

Cell: 11

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18325	11	FORMALDEHYDE FROM LAB • MRC-218 BULK	MRC-218	113.0000 kgs
18326	11	BALLASTS - PCB >500 PPM (SMALL) FROM PLANT MAINTENANCE • MRC-217 BULK	MRC-217	200.0000 kgs
18390	11	TOLUENE, m-XYLENE FROM LAB • MRC-048	MRC-048	3.8000 kgs
18400	11	BALLASTS - PCB >500 ppm (SMALL) FROM LAB	18400	177.0000 kgs
18408	11	SILVER NITRATE .005%, WATER 99% SOLUTION FROM LAB	478L	0.2000 kgs
18427	11	PETROLEUM LUBIRICATING OIL 100%, BARIUM 2,000 - 3,000 ppm FROM LAB	474L	17.5000 kgs
18428	11	PETROLEUM LUBIRICATING OIL 100%, BARIUM 2,000 - 3,000 ppm FROM LAB	474L	17.5000 kgs
18448	11	POTASSIUM NITRATE .8%, WATER 99.2% SOLUTION FROM LAB	494L	1.0000 kgs
18449	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
18450	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	469L	3.8000 kgs
18451	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
18452	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	469L	3.8000 kgs
18453	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
18454	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	469L	3.8000 kgs
18455	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	469L	3.8000 kgs
18456	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs

INVENTORY BY CELL

Cell: 11

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18457	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
18458	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
18459	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
18460	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
18461	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
18462	11	AMMONIA 26%, WATER 74% SOLUTION FROM LAB	468L	3.8000 kgs
18466	11	NON REGULATED AQUEOUS WASTE WITH WATER 20.9% SOLUTION FROM LAB (pH=4.0) INCLUDING EUROPIUM NITRATE	494L	8.0000 kgs
18477	11	1 PHENYL-1-XYLYETHANE <75%, NONYPHENOXYPOLYETHOXYETHANOL <25%, 2,25-DIPHENYLOXAZOLE <1% SOLUTION FR	494L	3.8000 kgs
18478	11	1 PHENYL-1-XYLYETHANE <75%, NONYPHENOXYPOLYETHOXYETHANOL <25%, 2,25-DIPHENYLOXAZOLE <1% SOLUTION FR	494L	3.8000 kgs
18479	11	1 PHENYL-1-XYLYETHANE <75%, NONYPHENOXYPOLYETHOXYETHANOL <25%, 2,25-DIPHENYLOXAZOLE <1% SOLUTION FR	494L	3.8000 kgs
18487	11	METHANOL 5%, WATER 95%, TWEEN <.1%, TRIFLURIN <.01% SOLUTION FROM LAB • DEBULK FROM MRC-20	18487	60.8000 kgs
18488	11	METHANOL 5%, WATER 95%, TWEEN <.1%, TRIFLURIN <.01% SOLUTION FROM LAB • DEBULK FROM MRC-20	18488	60.8000 kgs
18489	11	METHANOL 5%, WATER 95%, TWEEN <.1%, TRIFLURIN <.01% SOLUTION FROM LAB • DEBULK FROM MRC-20	18489	15.2000 kgs
18490	11	METHANOL 5%, WATER 95%, TWEEN <.1%, TRIFLURIN <.01% SOLUTION FROM LAB • DEBULK FROM BNW-827	18490	61.0000 kgs
18491	11	METHANOL 5%, WATER 95%, TWEEN <.1%, TRIFLURIN <.01% SOLUTION FROM LAB • DEBULK FROM BNW-827	18491	61.0000 kgs
18492	11	METHANOL 5%, WATER 95%, TWEEN <.1%, TRIFLURIN <.01% SOLUTION FROM LAB • DEBULK FROM BNW-827	18492	61.0000 kgs

INVENTORY BY CELL

Cell: 11

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18493	11	METHANOL 5%, WATER 95%, TWEEN <.1%, TRIFLURIN <.01% SOLUTION FROM LAB • DEBULK FROM BNW-827	18493	8.0000 kgs
18482	11	BIO RAD RESIN AG 11A.8 • TAKEN FROM MRC-106		0.5000 kgs
18483	11	MANGANESE DICHLORIDE .002%, WATER 99.99% SOLUTION FROM LAB • TAKEN FROM MRC-047		1.0000 kgs
18484	11	LINDANE FROM LAB • TAKEN OUT OF SIG-105		0.0010 kgs
18486	11	FREON 14 IN 14" LECTURE BOTTLE FROM LAB	472L	0.0005 kgs
18471	11	WATER 97%, AMMONIUM ACETATE 2%, POTASSIUM PHOSPHATE 1%, COPPER TRACE, EDTA TRACE SOLUTION FROM LAB	494L	4.0000 kgs
18545	11	SODIUM SULFITE 9%, SODIUM CARBONATE 5%, HYDROQUINONE 1%, METHYL LAMINOPHENOL SULFATE 1%, WATER 84%	477L	24.0000 kgs
18546	11	SODIUM THIOSULFATE 14%, AMMONIUM ALUM 2%, SODIUM METABISULFATE 1%, SODIUM ACETATE 1%, BORIC ANHYDRI	476L	24.0000 kgs
18547	11	PROPYLENE GLYCOL 30%, TERTIARY-OCTYLPHENOXY POLYETHYL ALCOHOL 5%, WATER 65% SOLUTION FROM LAB	494L	20.0000 kgs
18593	11	PAINT BOOTH FLOOR PAPER WASTE FROM PLANT MAINTENANCE	18593	31.5000 kgs
18597	11	FLUORESCENT LIGHT TUBES - CRUSHED W/.3 PPM MERCURY FROM PLANT MAINTENANCE	18597	162.0000 kgs
18598	11	SPILL CLEAN-UP MATERIALS WITH ALIPHODIC PETROLEUM DISTILLANTS 20%, VERMICULITE 80% FROM PLANT MAINT	18598	37.5000 kgs
18599	11	ETHYLENE GLYCOL SPILL CLEAN-UP MATERIAL WASTE FROM PLANT MAINTENANCE	18599	8.5000 kgs
18601	11	ASBESTOS WASTE FROM PLANT MAINTENANCE	18601	54.0000 kgs
18602	11	FLUORESCENT LIGHT TUBES - CRUSHED W/.3 ppm MERCURY FROM PLANT MAINTENANCE	18602	165.5000 kgs
18605	11	BALLAST - PCB >500 ppm (SMALL) FROM PLANT MAINTENANCE	18605	342.0000 kgs

INVENTORY BY CELL

Cell: 11

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18647	11	POTASSIUM PERMANGANATE 1.73%, WATER 98.27% SOLUTION FROM LAB	494L	1.0000 kgs
18648	11	IODINE SOLUTION 2.5%, WATER 97.5% SOLUTION FROM LAB	494L	1.7000 kgs
18649	11	POTASSIUM THIOCYNATE 1%, WATER 99% SOLUTION FROM LAB	494L	1.0000 kgs
18710	11	DIMETHYL SULFOXIDE FROM LAB	494L	0.9460 kgs
18745	11	MINERAL OIL FROM LAB	494L	3.8000 kgs
18675	11	GLYCERIN FROM LAB	494L	0.4500 kgs
18609	11	WATER 95.30%, ACETONE 2.47%, METHYL MERCAPTIN .01%, TRICHLOROETHANE .02%, PHENOL .98%, CRESOL 1.13%	MRC-280	20.0000 kgs
			Total	**7936.5905 kgs**

INVENTORY BY CELL

Cell: 12

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(SUBJECT TO CHANGE)
DATE: 11/25/92

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
10617	12	BATTERIES - ALKALINE	10617	15.0000 kgs
12609	12	DEHA 2 - NITRIC<15%, WATER>80%, FERRIC NITRATE<5%, INFORMATION FROM MSDS	465L	0.2000 kgs
12381	12	BATTERIES - ALKALINE	12381	160.0000 kgs
12399	12	BATTERIES - ALKALINE	12399	75.0000 kgs
12658	12	BATTERIES - ALKALINE	12658	148.0000 kgs
13087	12	BATTERIES - ALKALINE	13087	30.0000 kgs
13089	12	BATTERIES - ALKALINE	13089	130.0000 kgs
13095	12	BATTERIES - ALKALINE	13095	125.0000 kgs
13099	12	BATTERIES - ALKALINE	13099	22.0000 kgs
13793	12	BATTERIES - ALKALINE FROM PLANT MAINTENANCE	13793	118.8000 kgs
14251	12	BATTERIES - ALKALINE FROM PLANT MAINTENANCE	14251	136.5000 kgs
14652	12	MERCURY NITRATE FROM LAB	SEQ-038	3.1746 kgs
14591	12	BATTERIES - ALKALINE FROM PLANT MAINTENANCE	14591	130.0000 kgs
14967	12	BATTERIES - ALKALINE FROM PLANT MAINTENANCE	14967	132.5000 kgs
15215	12	BATTERIES - ALKALINE FROM PLANT MAINTENANCE	15215	119.0000 kgs
15754	12	BATTERIES - ALKALINE FROM PLANT MAINTENANCE	15754	114.0000 kgs

INVENTORY BY CELL

Cell: 12

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
15750	12	BATTERIES ALKALINE 100% FROM PLANT	15750	145.5000 kgs
15803	12	HAZARDOUS WASTE SOLID FROM LAB	BNW-743	21.0000 kgs
13795	12	BATTERIES - ALKALINE FROM PLANT MAINTENANCE	13795	132.4000 kgs
15990	12	MERCURIC NITRATE FROM LAB • LABPACK BNW-770	BNW-770	0.2000 kgs
15992	12	LABPACK CONTAINING BATTERIES ALKALINE, WET FROM LAB	BNW-810L	70.0000 kgs
16525	12	BATTERIES - ALKALINE CONTAINING POTASSIUM HYDROXIDE FROM LAB	16525	6.8027 kgs
16014	12	BATTERIES - ALKALINE CONTAINING POTASSIUM HYDROXIDE 5%, MERCURY <0.1% FROM PLANT MAINTENANCE	16014	141.5000 kgs
16601	12	BATTERIES, ALKALINE FROM PLANT MAINTENANCE	16601	148.0000 kgs
16612	12	BATTERIES - CONTAINING ALKALINE FROM PLANT MAINTENANCE	16612	128.0000 kgs
17049	12	NICAD BATTERIES, POTASSIUM HYDROXIDE, CADMIUM, SELENIUM FROM LAB • BULK BNW-832	BNW-832	11.8000 kgs
16942	12	BATTERIES - ALKALINE CONTAINING ZINC 16%, POTASSIUM HYDROXIDE 7%, COPPER 1% MERCURY .5% FROM PLANT	BNW-830	14.7000 kgs
16943	12	BATTERIES - MERCURY CONTAINING MERCURIC OXIDE 32%, POTASSIUM HYDROXIDE 11%, MERCURY 5%, FROM PLANT	BNW-833	9.7000 kgs
17094	12	BATTERIES - MERCURY CONTAINING MERCURIC OXIDE 32%, POTASSIUM HYDROXIDE 11%, MERCURY 5%, PLANT MAINT	MRC-079	0.2000 kgs
17103	12	NITRIC ACID, HYDROCHLORIC ACID FROM LAB • BULK SEQ-94	SEQ-94	145.5000 kgs
17108	12	CADMIUM, NITRIC ACID FROM LAB • BULK SEQ-93	SEQ-93	131.4000 kgs
17110	12	WATER CONTAMINATED WITH OIL & GASOLINE FROM LAB • BULK SEQ-101	SEQ-101	99.5000 kgs

INVENTORY BY CELL

Cell: 12

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17131	12	NITRIC ACID <40%, WATER <60% SOLUTION FROM LAB • BULK SEQ-92	SEQ-92	140.9100 kgs
17133	12	CHROME LE OXIDE 10%, MOLYBDENUM 10%, ALUMINA 80% SOLUTION FROM LAB • MRC-089	MRC-089	0.0500 kgs
17221	12	BATTERIES - ALKALINE CONTAINING ZINC 16%, POTASSIUM HYDROXIDE 7%, COPPER 1%, MERCURY .5% FROM PLANT	17221	126.0000 kgs
17304	12	NITRIC ACID .86%, ZIRCONIUM NITRATE .3%, ALUMINIUM NITRATE .2%, NICKEL NITRATE .1%, HYDROFLUORIC AC	465L	3.5000 kgs
17260	12	HYDROCHLORIC ACID 22%, AMMONIUM HYDROXIDE <0.1%, WATER 78.1% SOLUTION FROM LAB	465L	2.5000 kgs
17262	12	NITRIC ACID 15.4%, HYDROCHLORIC ACID 6.1%, AMMONIUM IODIDE <0.1%, AMMONIUM NITRATE <0.1%, WATER 78.	465L	2.5000 kgs
17263	12	HYDROCHLORIC ACID 1.4%, LEAD, 1%, WATER 97.6% SOLUTION FROM LAB	465L	0.0000 kgs
17264	12	HYDROCHLORIC ACID 27%, NITRIC ACID 10%, SULFURIC ACID .7%, AMMONIUM IODIDE .2%, WATER 61.7% SOLUTIO	465L	2.5000 kgs
17265	12	HYDROCHLORIC ACID 10%, OXALIC ACID .2%, AMMONIUM HYDROXIDE 3.3%, CESIUM CHLORIDE <0.1%, STRONTIUM N	465L	3.8000 kgs
17367	12	ALKALINE BATTERIES FROM PLANT MAINTENANCE • MRC-118 LABPACK	MRC-118	20.0000 kgs
17368	12	NI-CAD BATTERIES FROM PLANT MAINTENANCE • MRC-121 LABPACK	MRC-121	20.0000 kgs
17369	12	PURIFIL 4% POTASSIUM PERMANGENATE FROM LAB • MRC-39 LABPACK	MRC-039	181.0000 kgs
17486	12	AMMONIUM NITRATE 17%, NITRIC ACID 11%, AMMONIUM HYDROXIDE 10%, TETRAPHENYLARSONIUM CHLORIDE .05%, W	465L	2.5000 kgs
17487	12	AMMONIUM NITRATE 15%, NITRIC ACID 9.6%, AMMONIUM HYDROXIDE 7.7%, TETRAPHENYLARSONIUM CHLORIDE .11%,	465L	2.5000 kgs
17632	12	BATTERIES - ALKALINE CONTAINING ZINC 16%, POTASSIUM HYDROXIDE 7%, COPPER 1%, MERCURY .5% FROM PLANT	17632	125.5000 kgs
17680	12	COPPER .07%, CHROMIUM .23%, IRON .072%, POTASSIUM .8%, NICKEL .12%, SILICON .015%, MOLYBDENIM .06%,	465L	6.9000 kgs

INVENTORY BY CELL

Cell: 12

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
17647	12	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB	464L	3.0000 kgs
17662	12	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB	464L	3.0000 kgs
17644	12	SULFURIC ACID 98%, WATER 2% SOLUTION FROM LAB	464L	0.0600 kgs
17627	12	CHROMIUM 41.5 ppm, CADMIUM 1 ppm, NITRIC ACID 1%, WATER 99% SOLUTION FROM LAB	465L	5.0000 kgs
17725	12	SILVER NITRATE FROM LAB • MRC-164 LABPACK	MRC-164	1.1000 kgs
17820	12	LEAD (126 ppm) .0126%, CHROMIUM (216 ppm) .0216%, SELENIUM (2.7 ppm) .0003%, NITRIC ACID 1%, WATER	464L	5.0000 kgs
17821	12	SELENIUM (3.8 ppm) .0004%, NITRIC ACID 1%, WATER 99% SOLUTION FROM LAB	464L	5.0000 kgs
17822	12	CADMIUM (1.3 ppm) .0001%, LEAD (28.2 ppm) .0028%, NITRIC ACID 1%, WATER 99% SOLUTION FROM LAB	464L	5.0000 kgs
17823	12	CHROMIUM (6 ppm) .0006%, lead (7 ppm) .007%, NITRIC ACID 1%, WATER 99% SOLUTION FROM LAB	464L	5.0000 kgs
18248	12	HYDROCHLORIC ACID 37.3%, WATER 62.7% SOLUTION FROM LAB	465L	2.5000 kgs
18223	12	PURIFIL (4-6% POTASSIUM PERMANGANATE) FROM LAB • MRC-133 BULK	MRC-133	72.0000 kgs
18142	12	PHOSPHORIC ACID 75%, SULFURIC ACID 25% SOLUTION FROM LAB	465L	1.0000 kgs
18143	12	PHOSPHORIC ACID 75%, SULFURIC ACID 25% SOLUTION FROM LAB	465L	1.0000 kgs
18144	12	PHOSPHORIC ACID 75%, SULFURIC ACID 25% SOLUTION FROM LAB	465L	1.0000 kgs
18145	12	HYDROCHLORIC ACID CONCENTRATED 14%, FORMALDEHYDE <1%, WATER 85% SOLUTION FROM LAB	465L	0.2500 kgs
18164	12	SILVER 1%, NITRIC ACID 7%, WATER 92% SOLUTION FROM LAB	465L	0.1000 kgs

INVENTORY BY CELL

Cell: 12

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18165	12	SILVER .1%, NITRIC ACID 7%, WATER 92.9% SOLUTION FROM LAB	464L	0.1000 kgs
18166	12	CHROMIUM 1%, HYDROCHLORIC ACID 3.7%, WATER 95.3% SOLUTION FROM LAB	465L	0.0500 kgs
18167	12	CHROMIUM .1%, HYDROCHLORIC ACID 3.7%, WATER 96.2% SOLUUTION FROM LAB	464L	0.1000 kgs
18168	12	CHROMIUM .01%, HYDROCHLORIC ACID .74%, WATER 99.16% SOLUTION FROM LAB	464L	0.1000 kgs
18169	12	SELENIUM 1%, NITRIC ACID 7%, WATER 92% SOLUTION FROM LAB	465L	0.0500 kgs
18170	12	SELENIUM .01%, NITRIC ACID 1.4%, WATER 98.59% SOLUTION FROM LAB	464L	0.1000 kgs
18171	12	ARSENIC 1%, HYDROCHLORIC ACID 5.55%, WATER 93.45% SOLUTION FROM LAB	465L	0.0500 kgs
18174	12	CADMIUM 1%, NITRIC ACID 7%, WATER 92% SOLUTION FROM LAB	465L	0.0500 kgs
18175	12	CADMIUM .1%, NITRIC ACID 7%, WATER 92.9% SOLUTION FROM LAB	464L	0.1000 kgs
18176	12	CADMIUM .01%, NITRIC ACID 1.4%, WATER 98.59% SOLUTION FROM LAB	464L	0.1000 kgs
18177	12	BARIUM 1%, HYDROCHLORIC ACID 3.7%, WATER 95.3% SOLUTION FROM LAB	465L	0.0500 kgs
18178	12	BARIUM .1%, HYDROCHLORIC ACID 3.7%, WATER 96.2% SOLUTION FROM LAB	464L	0.1000 kgs
18179	12	LEAD 1%, NITRIC ACID 7%, WATER 92% SOLUTION FROM LAB	465L	0.0500 kgs
18180	12	LEAD .1%, NITRIC ACID 7%, WATER 92.9% SOLUTION FROM LAB	464L	0.1000 kgs
18181	12	LEAD .01%, NITRIC ACID 1.4%, WATER 98.59% SOLUTION FROM LAB	464L	0.1000 kgs
18182	12	SILVER NITRATE 113 ppm, HYDROCHLORIC ACID 19%, WATER 81% SOLUTION FROM LAB	465L	1.0000 kgs

INVENTORY BY CELL

Cell: 12

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
18332	12	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB	464L	3.0000 kgs
18333	12	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB	464L	3.0000 kgs
18334	12	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB	464L	3.0000 kgs
18335	12	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB	464L	3.0000 kgs
18336	12	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB	464L	3.0000 kgs
18337	12	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB	464L	3.0000 kgs
18338	12	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB	464L	3.0000 kgs
18339	12	NITRIC ACID 35%, WATER 65% SOLUTION FROM LAB	464L	3.0000 kgs
18340	12	SULFURIC ACID 48.3%, WATER 51.7% SOLUTION FROM LAB	464L	3.0000 kgs
18375	12	PHOSPHORIC ACID 10%, WATER 90% SOLUTION FROM LAB	464L	0.0283 kgs
18385	12	SELENIOUS ACID, PHOSPHORIC ACID FROM LAB	465L	0.4800 kgs
18399	12	ME 3,3,3,-TRIFLUOROPROPYL, POLYSILOXANE, FORMALIN FROM LAB • MRC-226	MRC-226	2.0000 kgs
18606	12	BATTERIES - ALKALINE CONTAINING ZINC 16%, POTASSIUM HYDROXIDE 7%, COPPER 1%, MERCURY .5% MAGNESIUM	18606	136.0000 kgs
18608	12	MAGNESIUM SULFATE 87.69%, SELICA GEL 1.54%, CHROMIUM OXIDE 3.08%, SODIUM HYDROXIDE 2.31%, PAPER .07	MRC-279	0.1300 kgs
			Total	3583.3856 kgs

INVENTORY BY CELL

Cell: 13

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ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
12392	13	BATTERIES - ALKALINE	12392	79.0000 kgs
13163	13	ALKALINE BATTERIES FROM LAB	13163	125.0000 kgs
14966	13	BATTERIES - ALKALINE FROM PLANT MAINTENANCE	14966	125.0000 kgs
16524	13	BATTERIES - NI-CAD CONTAINING POTASSIUM HYDROXIDE FROM LAB	16524	1.0000 kgs
16009	13	BATTERIES - ALKALINE	16009	133.5000 kgs
16010	13	BATTERIES - CARBON ZINC	16010	19.5000 kgs
18218	13	HYDROFLUORIC ACID FROM LAB • MRC-195 LABPACK	MRC-195	4.0000 kgs
17901	13	BATTERIES - ALKALINE CONTAINING ZINC 16%, POTASSIUM HYDROXIDE 7%, COPPER 1%, MERCURY .5% FROM PLANT	17901	143.5000 kgs
17889	13	BATTERIES - CARBON ZINC CONTAINING ZINC 24%, AMMONIUM CHLORIDE 13.5%, ZNINC CHLORIDE 3%, FROM PLANT	17889	16.5000 kgs
17890	13	BATTERIES - MERCURY CONTAINING MERCURIC OXIDE 32%, POTASSIUM HYDROXIED 11%, MERCURY 5%, FROM PLANT	17890	5.5000 kgs
17892	13	BATTERIES - ALKALINE CONTAINING ZINC 16%, POTASSIUM HYDROXIDE 7%, COPPER 1%, MERCURY .5% FROM PLANT	17892	81.0000 kgs
			Total	**733.5000 kgs**

INVENTORY BY CELL

Cell: 14

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(SUBJECT TO CHANGE)
DATE: 11/25/92

ITEM #	CELL	WASTE DESCRIPTION	DRUM #	VOLUME, KGS
12828	14	BROMINE	237L	4.5000 kgs
12829	14	BROMINE	237L	1.5000 kgs
13172	14	HYDROCHLORIC ACID	237L	1.5000 kgs
13133	14	IRRIDITE 80	237L	3.6000 kgs
13134	14	IRRIDITE 80	237L	3.8000 kgs
13135	14	POTASSIUM CHLORIDE	237L	2.8000 kgs
13192	14	NITRIC ACID	237L	9.0000 kgs
13559	14	NITRIC ACID 39% SOLUTION FROM LAB	237L	2.5000 kgs
14960	14	BATTERIES - GELL CELL FROM PLANT MAINTENANCE		68.0000 kgs
17328	14	BLEACH 18%, AMMONIUM SULFIDE 1% SOLUTION FROM LAB • MRC-103	MRC-103	1.0000 kgs
17366	14	GELL CELL BATTERY FROM PLANT MAINTENANCE • MRC-117 LABPACK	MRC-117	20.0000 kgs
17753	14	WATER 80%, NITRIC ACID 19%, SILVER NITRATE 01% SOLUTION FROM LAB	17753	32.0000 kgs
17891	14	BATTERIES LEAD ACID FROM PLANT MAINTENANCE	17891	5.0000 kgs
			Total	155.2000 kgs

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UNF

INVENTORY RMW STORED AT 305B

11/25/92

CELL #9: Flammable Liquids

ITEM #:	REQUEST #:	WASTE DESCRIPTION:	KGS OR L:
259B		55-gal drum, contains 56 items (see attachment #1)	195.0 Kg
325-92-048	92R01	Flammable scintillation liquids containing hexone, methanol, xylene, acetone, toluene, selenium, methylene chloride, arsenic, sodium dichromate, thenoyl trifluoroacetone	32.6 Kg
7589	B1-B4 89R-255	Polishing solutions containing 38% isopropyl alcohol, 7% methanol, 4% sodium nitrate, 51% water. pH=7, flashpoint <100 (isopropyl-53 F).	16.0 L
7592	11R 89R255	Polishing solution containing 98% methanol, 2% of traces of acetic acid and perchloric acid.	2.0 kg
7593	14R & 15R 89R-255	Polishing solution containing 98% methanol, 2% of traces a acetic acid and perchloric acid.	2.0 Kg
7594	17R 89R-255	Polishing solution containing 98% methanol, 2% of traces of acetic acid and butyl alcohol.	1.0 Kg
7590	B5 89R-255	Polishing solution containing 38% isopropyl alcohol, 7% methanol, 4% sodium nitrate, and 51% water.	1.0 Kg
7591	8R 89R255	Polishing solution containing 98% water, 2% methanol, traces of acetic and perchloric acid.	1.0 Kg
90003	89R23A	Scintillation liquids containing hexane, xylene, toluene, thenoyl tri-fluoroacetone.	86.2 Kg
9698,9699 Dm-104	90R-19	Machine oil with halogenated hydrocarbons (trichlorotrifluoroethane). photographic plates.	150.0 Kg
10063	89R-18 90-054	Beryllium fines with cutting oil in Kitty litter. 10% Be, 40% kitty litter, 25%	3.0 Kg

		cutting oil, 25% water.	
6280	89-172 309-1	Organic mixture of 25% hexane, 25% acetone, 50% water. Scintillation cocktail	2.0 Kg
7584	89R-254 529-3	Beckman Ready Solv CP scintillation liquid containing 60% pseudocumene, 40% fluors.	0.2 Kg
7587	89R-254 529-7	Scintillation liquid containing 5% xylene, 10% hexone, 1% thenoyl trifluoroacetone, 5% methyllactic acid, 79% water.	2.0 Kg
7588	89R-254 529-6	Beckman Ready Solv CP scintillation liquid containing 60% pseudocumene, 40% fluors.	2.0 Kg
7586	89R-254 529-5	Amersham PCS scintillation cocktail containing 90% Xylene, 10% 2-ethoxyethanol.	2.0 Kg
		Subtotal:	498.0 Kg

CELL 7: RMW IN BASEMENT

8771	89-307	drum #3, transformer less oil	22.7 Kg
325-91-0000031	91R-23	Mercury spill cleanup containing floor tile, cloth, rags, plastic, paper, amalgamated mercury, soil, glass.	81.8 Kg
8772	89-307	drum #4, transformer, less oil	11.4 Kg
KBS-4A		55-gal drum, galvanized (see attachment #2)	34.236 Kg
KBS-2		55-gal drum, galvanized (attach 3)	1.137 Kg
KBS-5		20 gal, liquid oxidizers (attach 4)	9.473 Kg
322L		55-gal drum, oxidizer (attach 5)	21.782 Kg
13116	90-381	Poly bottle, 2 quart	1.89 Kg
14372	91-122	Ethylhexyl phosphate	6.0 L
13938	91-073	Inorganic mixture, HCL, HNO3	3.7 L

13574	91-041	Titanium Tetrachloride	0.47 L
11655		Zirconium Standard	0.01 L
11337		Ferric Chloride	0.001 L
11342		Concentrated Phosphoric	0.005 L
3012	89-053	DPD Indicator Solution	0.473 L
11007	90-174	Titanium Trichloride	0.118 L
10873	90-146	Gold chloride	0.005 L
11659	90-184	Zirconium Standard	0.003 L
13594	91-041	Titanium Tetrachloride	0.473 L
11010	90-174	Bromine	0.2 L
8994	89-322	Chlorosulfonic Acid	0.2 L
8994	89-322	Chlorosulfonic Acid	0.7L
13776	91-036	Inorganic mix	0.4 L
13557	91-034	Inorganic mix	0.47 L
13563	91-036	Hydrochloric Acid	2.7 Kg
14685	91-155	Inorganic mix	3.78 L
11418	90-184	Aluminum Chloride	1.0 Kg
11461	90-184	Aluminum Chloride	0.454 Kg
13939	91-074	Inorganic mix	3.2 kg
613-2		Nitric / metals (attachment #6)	17.0 L
14525	91-126	Hydrochloric acid	17.0 L
14389	91-126	Hydrochloric acid	18.9 L
	91-118	Battery Acid	18.9 L
	91-118	Battery Acid	18.9 L
13927	_ _ -069	Inorganic mix	2.5 L
13238	90-416	Nitric Acid	2.5 L

13236	90-414	Nitric Acid	2.4 L
13118	90-381	Nitric & water	2.0 L
13930	91-071	Inorganic mix	2.5 L
13904	91-065	Hydorchloric acid	1.0 L
13905		Nitric	1.0 L
11316		Ammonium Iodide	0.4 L
13941	91-074	Inorganic mix	2.5 L
13940	91-074	Inorganic mix	2.5 L
14214	91-083	Inorganic mix	2.5 L
13935	91-073	Inorganic mix	2.5 L
13237	90-415	Nitric Acid	2.4 L
13285	91-013	PCB contaminated oil	15.9 Kg
Pump	90R40	PCB contaminated well pump.	45.0 Kg
7568	89-254 529-9	Slop jar waste containing 2% fluran, 0.01% nitric acid, 98% water.	2.0 Kg
7583	89-254 529-1	Transformer oil containing 500 ppm PCB.	4.0 L
7579	89-254 529-20	Slop jar waste containing 8% hydroxylamine hydrochloride, 4% of a solution of: nitric acid, hydrobromic acid, methanol, potassium permanganate, sulfamic acid, sodium sulfite, sodium nitrate solution, 88% water.	2.0 Kg
7578	89-254 529-19	Slop jar waste containing 8% hydroxylamine hydrochloride, 4% of a solution of: nitric acid, hydrobromic acid, methanol, potassium permanganate, sulfamic acid, sodium sulfite, sodium nitrate solution, 88% water.	2.0 L
5214	89-093	Uranyl Acetate	0.025 Kg
5214	89-093	Uranyl Acetate	0.025 Kg
7582	89-254	PCBs, Transformer oil	

	529-2		
7585	89-254 529-4	Solution of tar, 5 ppm PCBs, 9.8% sulfuric acid.	1.0 L
7569	89-254 529-10	Slop jar waste containing 8% hydroxylamine hydrochloride, 4% of a solution of: nitric acid, hydrobromic acid, methanol, potassium permanganate, sulfamic acid, sodium sulfite, sodium nitrate solution, 88% water.	2.0 L
7580	89-254 529-21	Slop jar waste containing 8% hydroxylamine hydrochloride, 4% of a solution of: nitric acid, hydrobromic acid, methanol, potassium permanganate, sulfamic acid, sodium sulfite, sodium nitrate solution, 88% water.	2.0 L
7573	89-254 529-14	Slop jar waste containing 8% hydroxylamine hydrochloride, 4% of a solution of: nitric acid, hydrobromic acid, methanol, potassium permanganate, sulfamic acid, sodium sulfite, sodium nitrate solution, 88% water.	2.0 L
7572	89-254 529-13	Slop jar waste containing 8% hydroxylamine hydrochloride, 4% of a solution of: nitric acid, hydrobromic acid, methanol, potassium permanganate, sulfamic acid, sodium sulfite, sodium nitrate solution, 88% water.	2.0 L
11162	90-184	Cardisorber	0.15 L
11170	90-184	Aminoethanol	0.1 L
11330	90-184	Sodium Hydroxide	0.001 Kg
11326	90-184	Sodium Hydroxide	0.001 Kg
11325	90-184	Boric acid + sodium hydroxide	0.0005 Kg
11335	90-184	Antimony	0.01 Kg
11422	90-184	Potassium hydroxide	0.15 Kg
11287	90-184	Barium hydroxide	0.06 L
10581	90-115	Germanium Carrier	0.06 L

11327	90-184	Sodium hydroxide + Aluminum		0.0005 Kg
11336	90-184	(CH3) 4NOH (liquid)		0.5 Kg
11567	90-184	Lithium hydroxide		0.5 Kg
			Subtotal:	407.66 Kg
			TOTAL:	905.66 Kg