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NOTICE OF INTENT

FOR EXPANSION UNDER INTERIM STATUS

T PLANT COMPLEX
HANFORD FACILITY,
RICHLAND, WASHINGTON

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

DECEMBER 1992

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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 expand the treatment and storage capacity of the T Plant Complex on the Hanford Facility, Richland, Washington.

The T Plant Complex, which is located in the northeastern corner of the 200 West Area, provides decontamination services for the Hanford Facility. The T Plant Complex consists of two structures, the 221-T Building and the 2706-T Building. The 221-T Building is made of reinforced concrete and is 850 feet (260 meters) long by 68 feet (21 meters) wide by 74 feet (23 meters) high, covering an area of 57,800 square feet (5,400 square meters). The 221-T Building consists of a canyon (which is divided into 20 sections, each section contains two cells), three galleries (operating, pipe, and electrical), and one craneway. The 221-T Building is used for the treatment and storage of liquid mixed waste in stainless steel tanks (one tank is used for treatment and storage and four tanks are used for storage only), for the storage of contaminated process equipment, and for the decontamination of process equipment. The decontaminated process equipment is returned either to service or sent to the Hanford Central Waste Complex for storage or the Low-Level Burial Grounds for disposal, depending on the nature of the waste. After treatment, the liquid mixed waste is sent by way of railroad tank cars to the 204-AR Waste Unloading Station or, as a back-up, the waste can be transferred by way of underground pipelines to the Double-Shell Tank System.

The 2706-T Building is a 50-foot (15-meter) wide, 66-foot (20-meter) long, 25-foot (8-meter) high ground-level building constructed of prefabricated steel with 20-foot (6-meter) high side walls used to decontaminate railroad equipment, buses, trucks, automobiles, road building equipment, and process equipment. The building contains two pits over which the decontamination activities are performed. Equipment decontaminated by the 2706-T Building either is returned to service or sent to the Hanford Central Waste Complex for storage or the Low-Level Burial Grounds for disposal, depending on the nature of the waste. Liquid mixed waste generated in these two pits is pumped to the 211-T sump and to the liquid dangerous waste handling system in 221-T Building. In the future, liquid mixed waste generated by the 2706-T Building decontamination process will be sent to two greater-than-90-day storage tanks that will be located north of the 2706-T Building. The liquid mixed waste will be transferred from the two storage tanks to the Double-Shell Tank System.

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 defined as a single *Resource Conservation and Recovery Act* (RCRA) *of 1976* facility, identified by the U.S. Environmental Protection Agency (EPA)/State Identification Number WA7890008967, that consists of over 60 TSD units conducting dangerous waste management activities. These TSD units are included in the *Hanford Facility 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 lands, 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 or onsite waste handling.

The proposed expansion is as follows: (1) to permit existing tanks 5-6, 5-7, 5-9, 11-R, and 15-1 for storing liquid mixed waste for greater than 90 days before transferring the waste to the Double-Shell Tank System; (2) to permit the existing cells from section 4 through section 19 of the 221-T Building for greater-than-90-day storage of dry mixed waste; (3) to permit the existing cell blocks and canyon deck from section 4 through section 10 of the 221-T Building for greater-than-90-day storage of dry mixed waste; (4) to permit three open, round, or square decontamination tanks (known as 'thimbles') and three open, rectangular decontamination tanks (known as 'troughs') in 221-T Building for miscellaneous treatment; (5) to permit the 2706-T Building for miscellaneous treatment; and (6) to permit two tanks, to be located north of the 2706-T Building, for storing liquid mixed waste for greater-than-90 days before transferring the waste to the Double-Shell Tank System. The following sections provide a description of the expanded treatment and storage capacity of the T Plant Complex, along with other general provisions specified in WAC 173-303-281.

2.1 LOCATION OF PROPOSED EXPANSION

The T Plant Complex is located in the 200 West Area of the Hanford Facility, Benton County, Washington. Small-scale maps depicting the Hanford Facility and the location of the T Plant Complex 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 T Plant Complex (H-13-000080), including surrounding 1,000 feet (305 meters). There are no existing or planned injection or withdrawal wells in the vicinity of the T Plant Complex. There are no barriers planned for drainage or flood control at the T Plant Complex.

2.2 DESCRIPTION OF UNIT TO BE EXPANDED

The T Plant Complex consists of two structures, the 221-T Building and the 2706-T Building (Figure 3). Decontamination activities occur in the canyons of the 221-T Building on the cell blocks of three cells, cell 8-R, cell 11-R, and cell 15-R. Thimble 1 is a 2,000 gallon (7,600 liter) tank with a tube section that is recessed through the cover blocks on cell 11-R. Thimble 2 is a 300-gallon (1,200-liter) square tank with a tube section recessed through the cover blocks of cell 15-R. Thimble 3 is a 332-gallon (1,300-liter) round tank with a tube section recessed through the cover block on cell 15-R. The three troughs are located over cells 8-R and 15-R. Trough Number 1 is 18 feet (6 meters) long by 2 feet (0.6 meters) wide by 3 feet (0.9 meter) high. Trough Number 2 is 8 feet (2.4 meters) long by 4 feet (1.2 meters) wide by 4 feet (1.2 meters) high. Trough Number 3 is 12 feet (3.7 meters) long by 8 feet (2.4 meters) wide by 4 feet (1.2 meters) high. Decontamination of process equipment such as jumpers and motors is performed by placing the equipment in thimbles or troughs and using air, steam, water, decontamination chemicals, and/or other methods to remove the contamination from the equipment. Liquid mixed waste generated by this process, which is not collected directly in one of the mixed waste storage tanks, is collected by a drainage system that flows to tank 5-7.

The 2706-T Building is used to decontaminate railroad equipment, buses, trucks, automobiles, road building equipment, and plant process equipment. The building contains two pits over which the decontamination activities are performed (Figure 4). The railroad pit is 55 feet (17 meters) long, 17 feet (5 meters) wide, and 6 feet (2 meters) deep. The automotive pit is 30 feet (9.1 meters) long, 4 feet (1.2 meters) wide, and 6 feet (1.8 meters) deep. Liquid mixed waste generated in the automotive pit drains into the railroad pit. Mixed waste generated in or drained to the railroad pit is collected in two sumps located in the bottom of the pit where the waste is pumped to the 211-T sump located approximately 40 feet (12 meters) southwest of the 2706-T Building. The liquid mixed waste transferred to the 211-T sump is transferred into the 221-T Building liquid mixed waste handling system,

described in the following paragraph. In the future, liquid mixed waste will be transferred directly from the 2706-T Building to two stainless steel, double-walled tanks [each of which will have a 15,000 gallon (57,000 liter) capacity] that will be installed north of the 2706-T Building. The waste will be transferred from these two tanks to the Double-Shell Tank System. The waste transfer line from the 2706-T Building to the 221-T Building will be used as a backup in the event that the waste cannot be transferred to the 2706-T Building waste storage tanks.

Tank 5-7 [10,000 gallon (38,000 liter) capacity], tank 5-6 [4,600 gallon (17,000 liter) capacity], tank 5-9 [4,800 gallon (18,000 liter) capacity], and tank 11-R [14,000 gallon (53,000 liter) capacity] are used for primary and backup storage of liquid mixed waste generated by decontamination activities. Mixed waste is pumped to tank 15-1 [14,000 gallon (53,000 liter) capacity], where the waste is treated as required before being pumped to a railroad tank car and subsequently transported to the Double-Shell Tank System. If the liquid mixed waste is to be transferred to the Double-Shell Tank System using the underground transfer line from tank 15-1, the waste is treated by the addition of sodium hydroxide until the pH is greater than 12.0 but less than 12.5, to maintain proper caustic concentration and by the addition of sodium nitrite until the concentration is above 600 parts per million to provide corrosion protection for the double-shell tanks.

Storage of dry mixed waste in the 221-T Building (Figure 5) occurs in two places: (1) in the cells from section 4 through section 19 of the 221-T Building and (2) on the canyon deck and the cell blocks from section 4 through section 10. A typical cell is 34 feet (10 meters) long by 18 feet (5.5 meters) wide by 13 feet (3.9 meters) deep. Thirty cells are used for storage of dry mixed waste, giving a total of 240,000 cubic feet (6,800 cubic meters) of storage space. Each section of the canyon deck and cell blocks is 40 feet (12 meters) long by 35 feet (11 meters) wide; seven sections of the canyon deck are used for storage, giving a total of another 10,000 square feet (930 square meters) of storage area. The mixed waste stored is primarily process equipment such as jumpers, pumps, and motors. Some of the smaller solid mixed waste is stored in 55-gallon (208-liter) drums.

2.3 DESCRIPTION OF EXPANSION OF THE T PLANT COMPLEX

The T Plant Complex tank storage capacity is being increased because of the delays in transferring liquid mixed waste to the Double-Shell Tank System caused by waste minimization considerations and the necessity of minimizing the number of railcar waste transfers. These delays require that the T Plant Complex have greater-than-90-day tank storage for liquid mixed waste. The expansion of the process design capacity for the storage of liquid mixed waste in tanks 5-6, 5-7, 5-9, 11-R, and 15-1 is 43,400 gallons (164,300 liters). In addition, the two stainless steel, double-walled storage tanks that will be installed north of the 2706-T Building will have a combined capacity of 30,000 gallons (114,000 liters). The total expansion of the process design capacity for the storage of liquid mixed waste at the T Plant Complex is 73,400 gallons (277,800 liters).

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Expansion of storage is necessary to allow equipment contaminated with mixed waste to be stored at the T Plant Complex before decontamination. Total expansion of the process design capacity for storage is 240,000 cubic feet (6,800 cubic meters) in the canyon cells and 10,000 square feet (930 square meters) on the canyon deck.

Expansion of miscellaneous treatment for process equipment at the T Plant Complex is necessary to allow decontamination activities at the 2706-T Building and the 221-T Building to proceed. Miscellaneous treatment capacity at the T Plant Complex will be expanded by 300 cubic yards (230 cubic meters).

2.4 COMPLIANCE WITH STATE ENVIRONMENTAL POLICY ACT

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

2.5 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.

2.5.1 Criteria for Elements of the Natural Environment

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

2.5.1.1 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 TSD unit.

2.5.1.1.1 Seismic Risk. The T Plant Complex is located in Benton County, Washington, and has been identified as being in Zone 2B in accordance with the *Uniform Building Code* (ICBO 1991). The T Plant Complex design meets 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.

2.5.1.1.2 Subsidence. The T Plant Complex is located in the 200 West Area of the Hanford Facility. This area of the Hanford Facility is not considered an area subject to subsidence (PNL 1991).

2.5.1.1.3 Slope or Soil Instability. The T Plant Complex is not located in an area of slope or soil instability, or is it in an area affected by unstable slope or soil conditions (PNL 1991).

2.5.1.2 Air. The T Plant Complex is not an incineration unit. Discussion of measures taken to reduce air emissions resulting from incineration is not applicable.

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

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

2.5.1.3.1.1 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 Site. No perennial streams occur in the central part of the Hanford Site.

The Federal Emergency Management Agency has not prepared floodplain maps for the Columbia River through the Hanford Site. 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 6). The estimated probable maximum flood would have a larger floodplain than either the 100- or 500-year floods. The T Plant Complex is 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 7. The T Plant Complex is not within the floodplain.

The only other potential source of flooding of the T Plant Complex 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 8) would not affect the T Plant Complex. The 100-year flood would be less than the probable maximum flood.

2.5.1.3.1.2 Perennial Surface Water Bodies. There are no perennial surface water bodies within one-quarter mile (0.4 kilometer) of the T Plant Complex.

2.5.1.3.1.3 Surface Water Supply. The T Plant Complex is not 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.

2.5.1.3.2 Groundwater. The following addresses consideration for the protection of groundwater. The T Plant Complex is an "existing facility" as

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defined by WAC 173-303-282(3); therefore, compliance with the contingent groundwater protection program is not required.

2.5.1.3.2.1 Depth to Groundwater. The T Plant Complex is located in the 200 West Area of the Hanford Facility. The depth to groundwater at this location is over 260 feet (79 meters).

2.5.1.3.2.2 Sole Source Aquifer. The T Plant Complex is not located over an area designated as a 'sole source aquifer' under section 1424(e) of the *Safe Drinking Water Act of 1974*.

2.5.1.3.2.3 Groundwater Management Areas and Special Protection Areas. The proposed expansion involves the addition of storage capacity in existing tanks in the 221-T Building and two future storage tanks at the 2706-T Building. The two future tanks will meet double-containment requirements per WAC 173-303-640. The storage of waste in the existing tanks is not expected to result in an increased potential for release of dangerous waste to groundwater. The T Plant Complex is not located in a groundwater management area or a special protection area.

2.5.1.3.2.4 Groundwater Intakes. The T Plant Complex is not located within one-quarter mile (0.4 kilometer) of a groundwater intake for domestic water.

2.5.1.4 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.

2.5.1.5 Precipitation. The T Plant Complex is not located in an area having a mean annual precipitation level of greater than 100 inches (254 centimeters) (DOE 1987).

2.5.2 Criteria for Elements of the Built Environment

The only physical modifications to the existing T Plant Complex that are planned as part of the proposed action are: (1) the addition of two storage tanks to be installed north of the 2706-T Building; (2) replacement of the existing tanks in the 221-T Building; (3) replacement of auxiliary piping from tank 15-1 to the railroad tank car loading station within the 221-T Building. The addition of treatment and storage capacity of the troughs, thimbles, and existing tanks will have no impact to the built environment. Demonstration of consideration of criteria for elements of the built environment as specified by WAC 173-303-282(7) will be addressed when the tank and piping design specifications are completed and before installation of the equipment. This information will be included in the Part B dangerous waste permit application.

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 March 1992. These compliance inspection letters identify WAC 173-303 violations at tank 241-SY-101, PUREX Plant tank F18, 200 East Area Tank Farms, T Plant Complex, and tank 241-101-T. Associated responses for three of these inspection letters are provided in Appendix C. Efforts are underway to provide responses to the two remaining inspection letters.

4.0 JUSTIFICATION OF NEED

In May 1989, the U.S. Department of Energy along with Ecology and the 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 T Plant Complex supports Tri-Party Agreement milestones by providing a means to identify waste constituents, decontaminate and segregate waste from useable equipment/product, and prepare waste for treatment and transfer within the Hanford Facility.

Expansion of storage of dry mixed waste is necessary to allow equipment contaminated with mixed waste to be stored at the T Plant Complex before decontamination. The expansion of the miscellaneous treatment process at T Plant Complex is necessary to allow decontamination to proceed. Because of delays in transferring liquid mixed waste to the Double-Shell Tank System, caused by waste minimization considerations and the necessity of minimizing the number of railcar waste transfers, it is necessary to expand the liquid mixed waste storage capacity of the T Plant Complex.

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 expansion at the T Plant Complex will allow for treatment and storage of mixed waste and will comply with WAC 173-303 regulations on mixed waste. This expansion for treatment and storage capacity at the T Plant Complex supports the Hanford Site mission of remediation and restoration.

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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.

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, 1991, *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 4, 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

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.

6.3 REVISED CODE OF WASHINGTON AND WASHINGTON ADMINISTRATIVE CODE

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

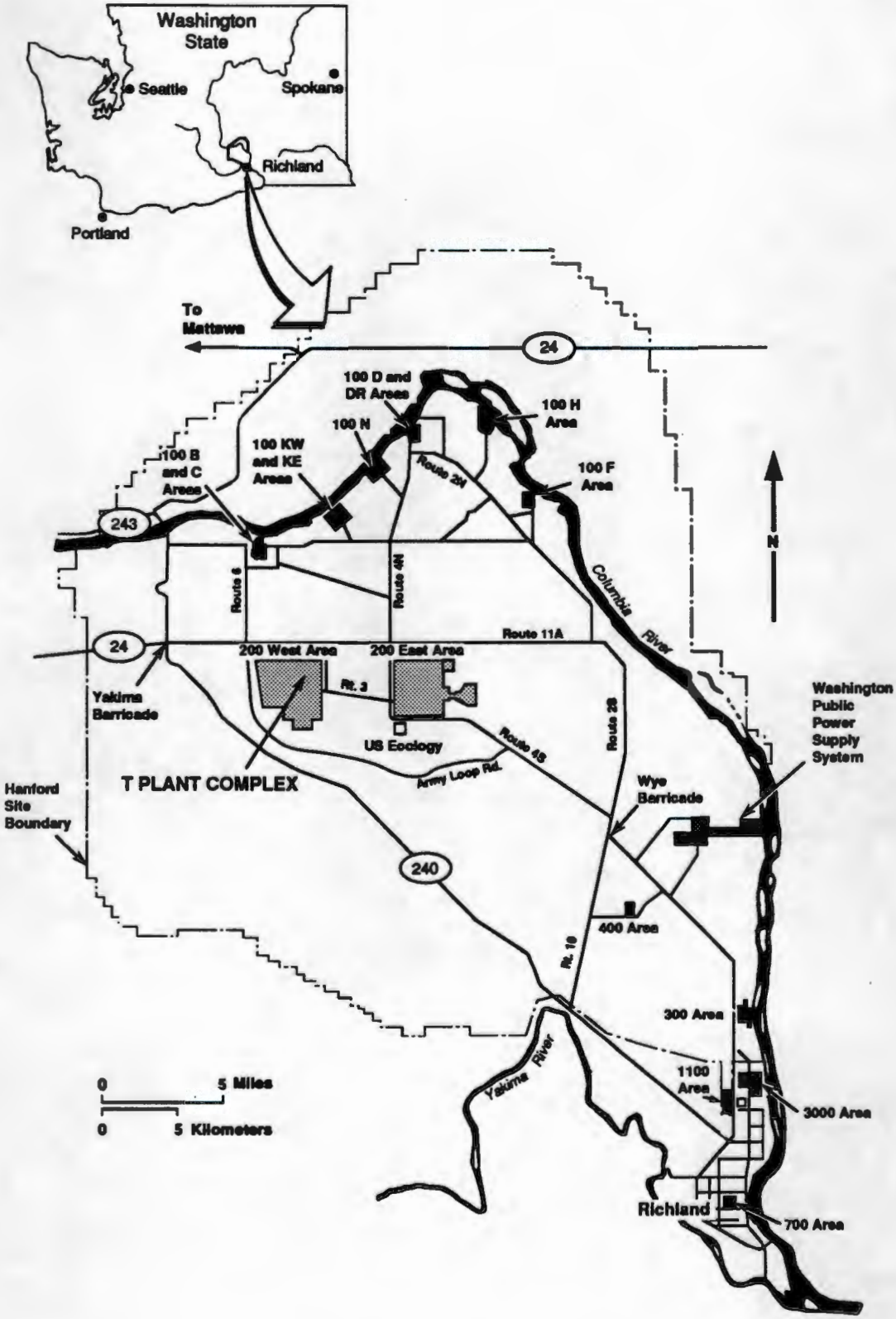

Figure 1. Hanford Site.

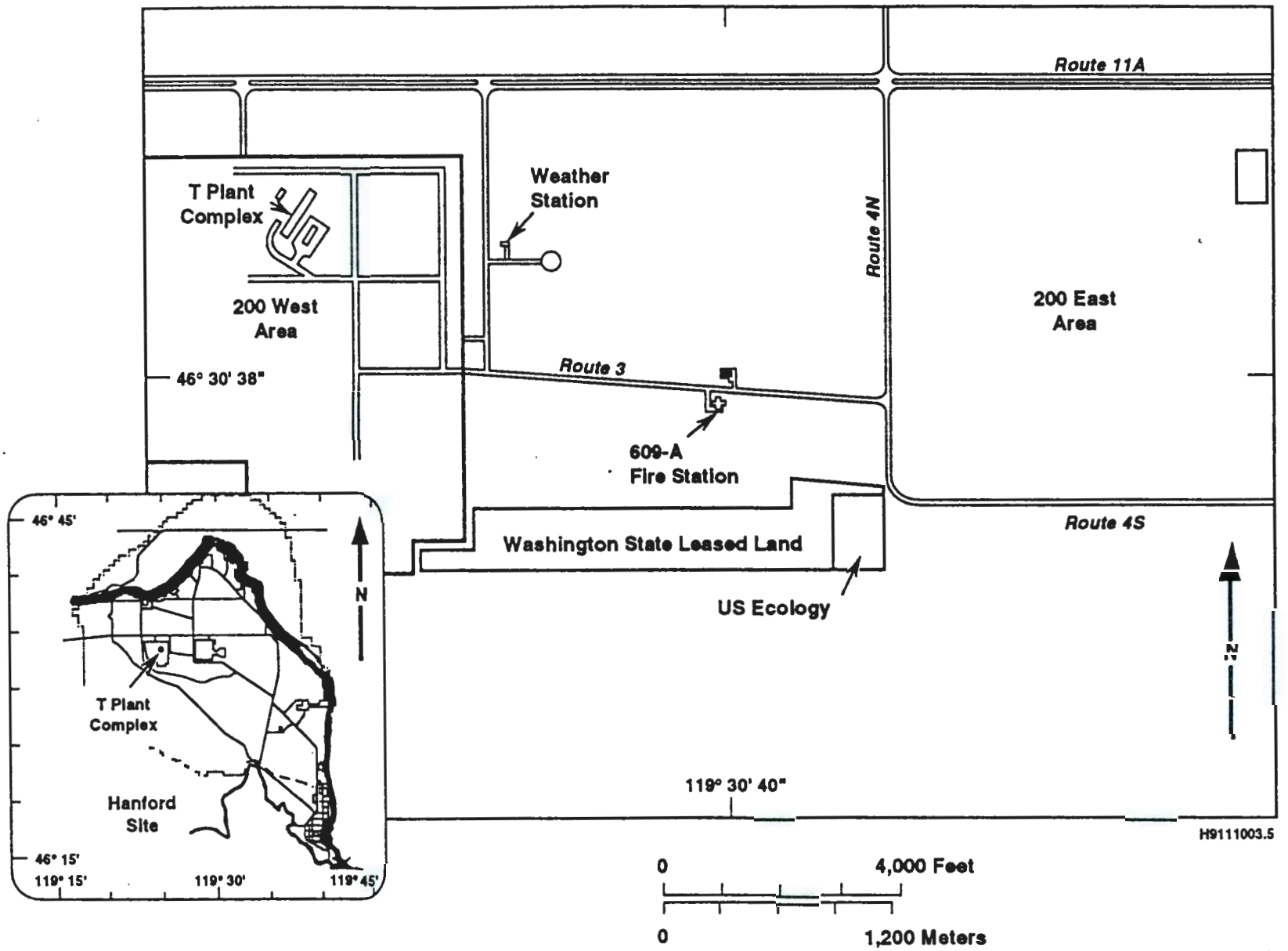

Figure 2. Location of T Plant Complex.

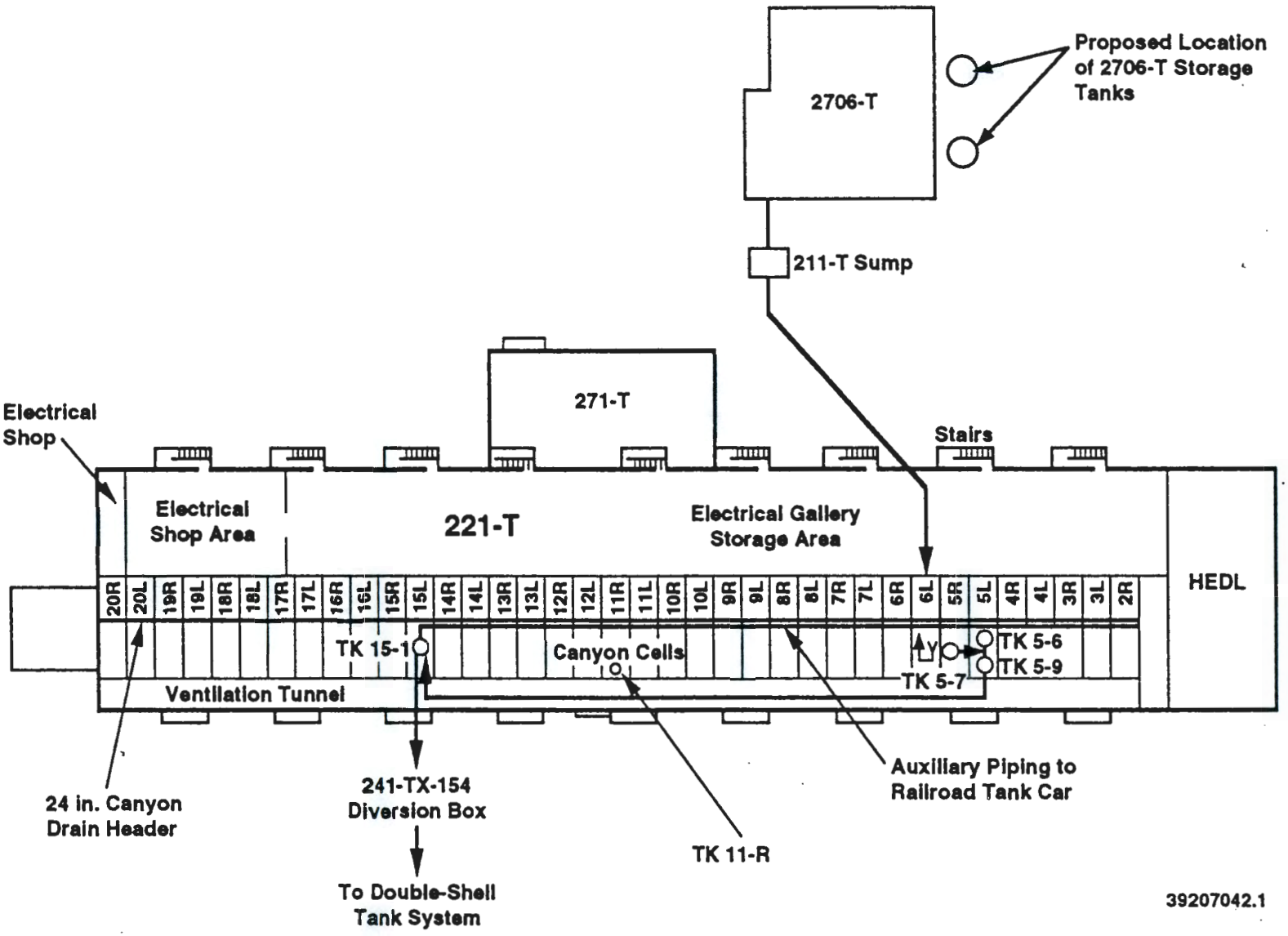

Figure 3. T Plant Complex.

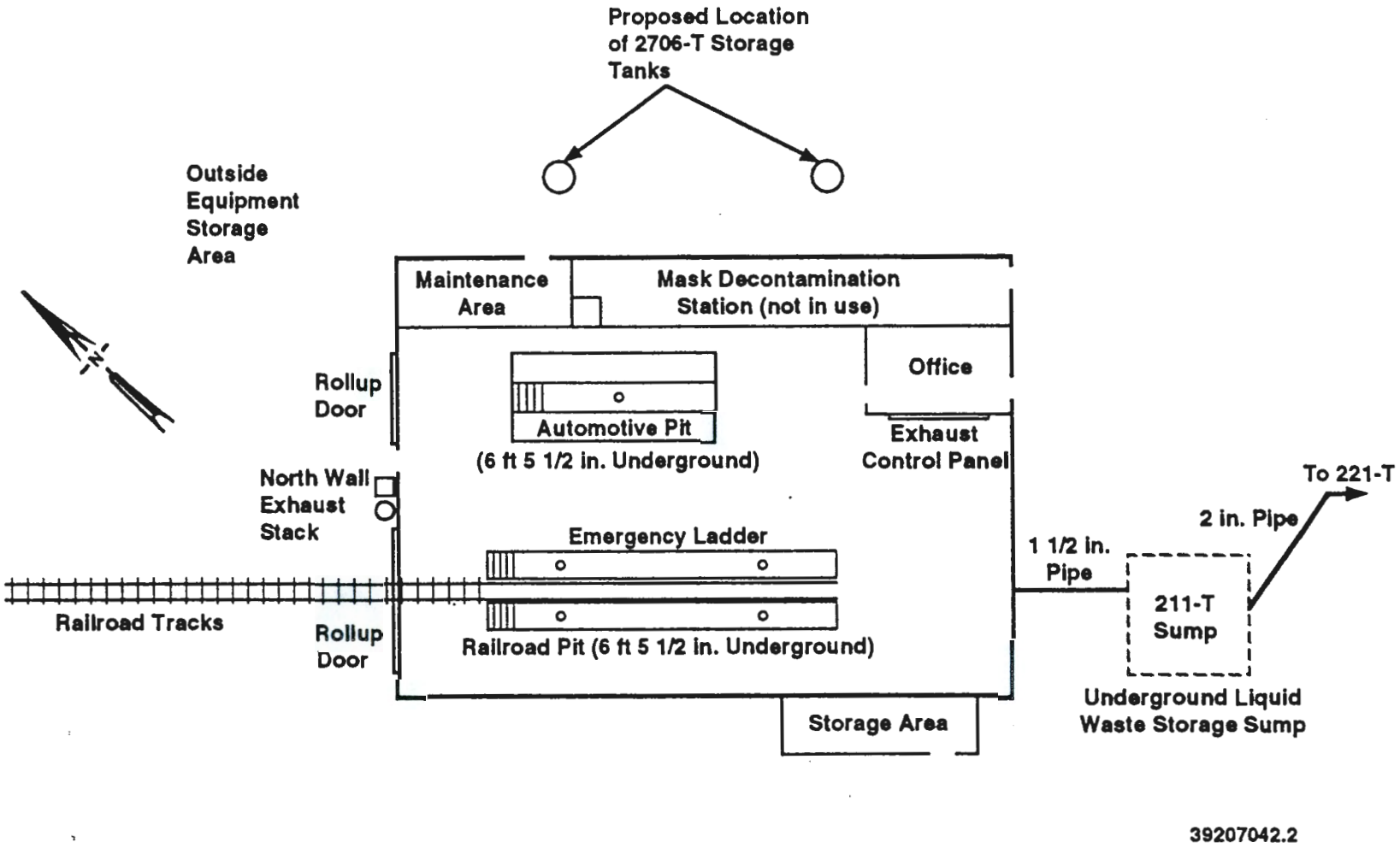

Figure 4. 2706-T Building.

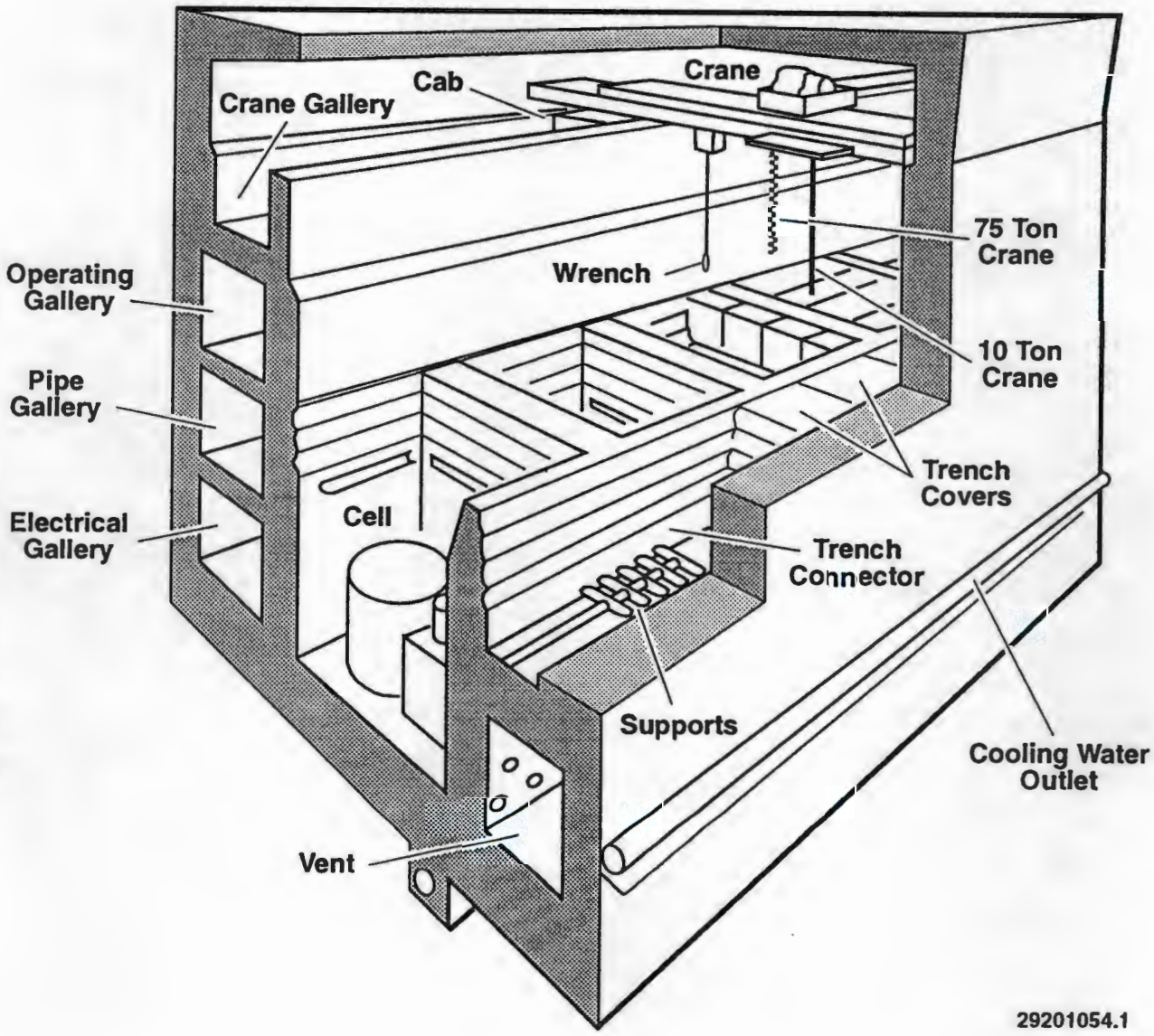

Figure 5. 221-T Building.

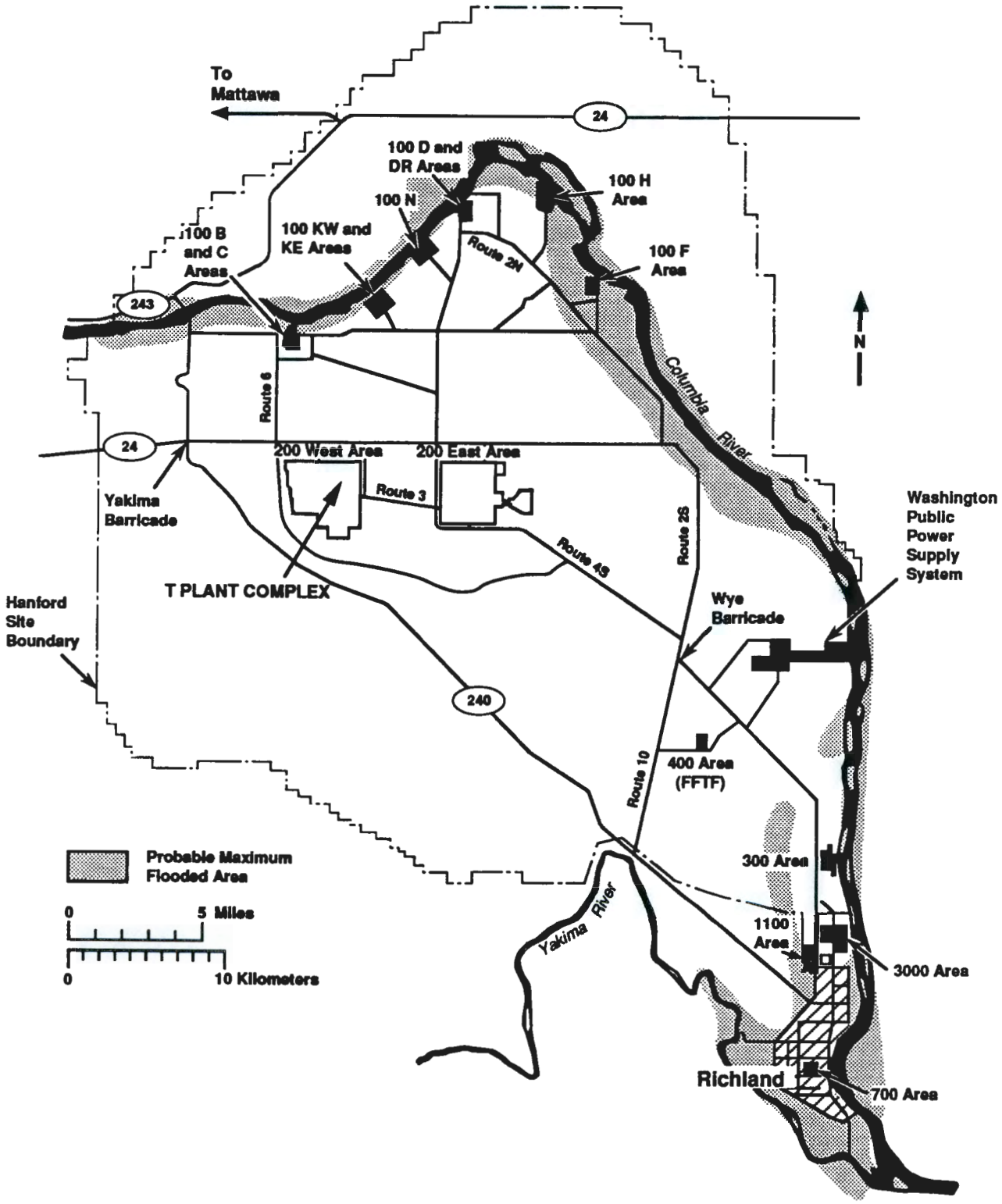

Figure 6. Columbia River Floodplain.

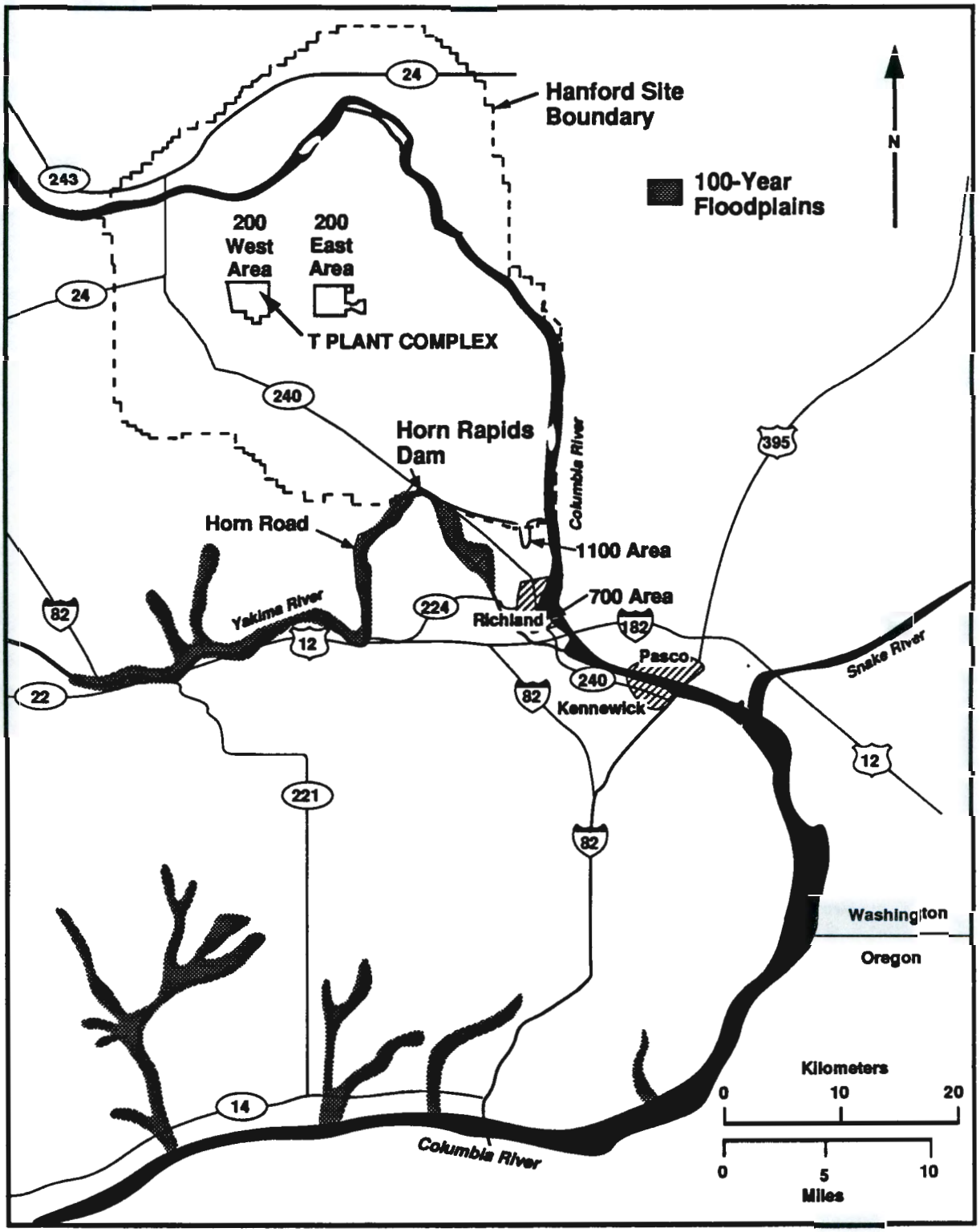

Figure 7. Yakima River Floodplain.

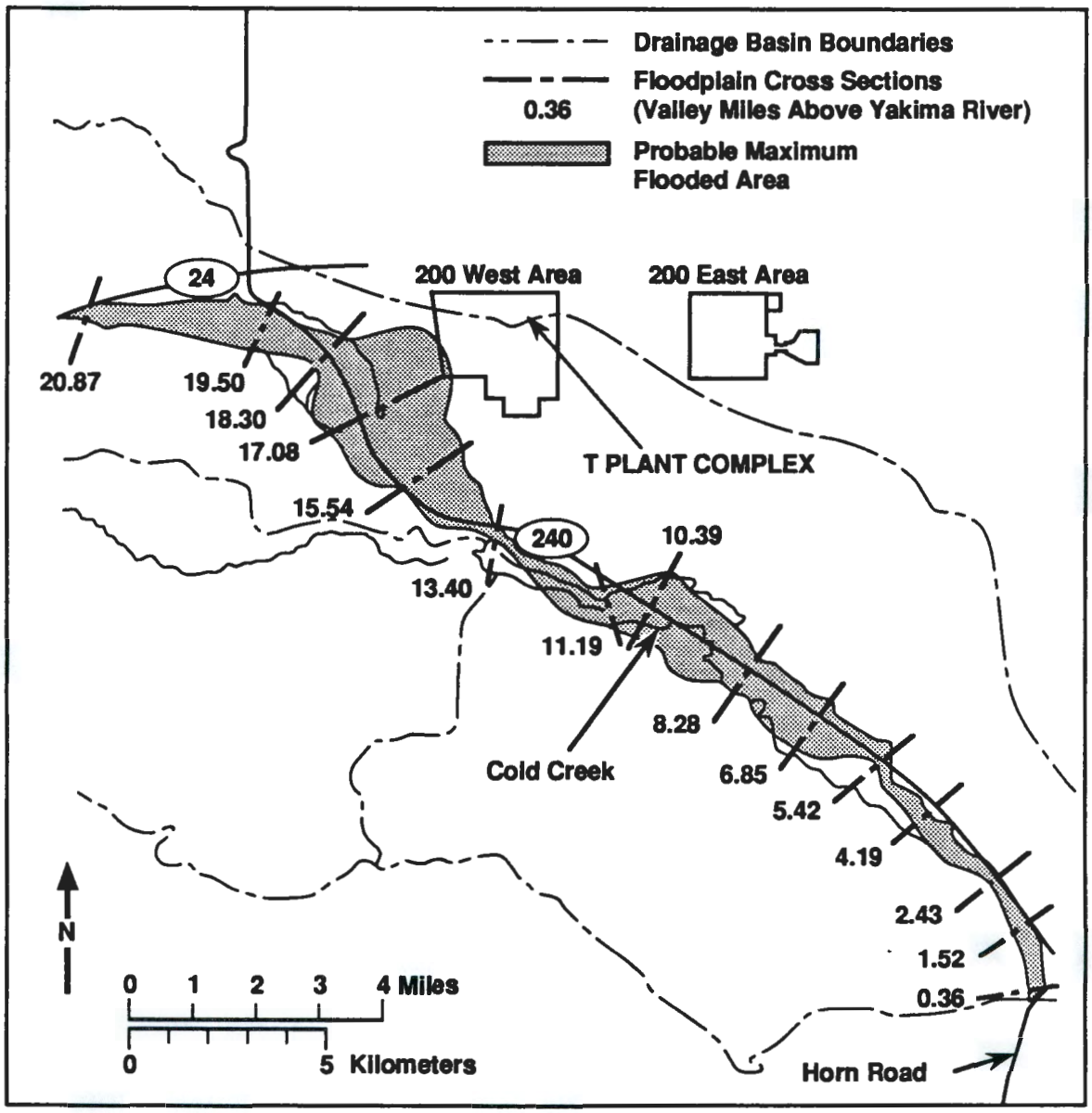

Figure 8. Cold Creek Watershed Floodplain.

APPENDICES

A HANFORD SITE MAPS

B STATE ENVIRONMENTAL POLICY ACT ENVIRONMENTAL CHECKLIST

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

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APPENDIX A

HANFORD SITE MAPS

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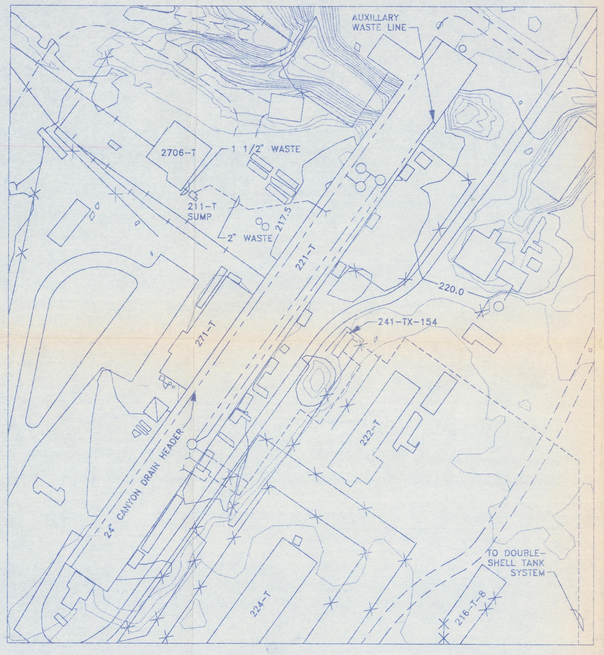


PARTIAL PLAN

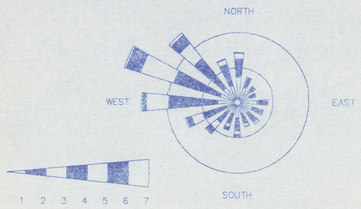
SCALE: 1:1000

0 10 20 40 60 80 METERS

1 cm = 10 meters
PHOTO DATE: 6-24-89
CONTOUR INTERVAL: 0.5 meter

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

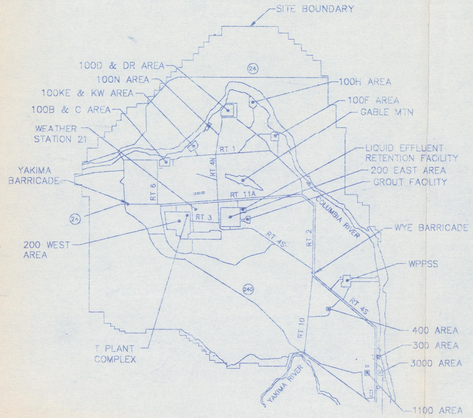
PERIOD COVERED
12/01/85 - 12/31/87
STATION NO. 21



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

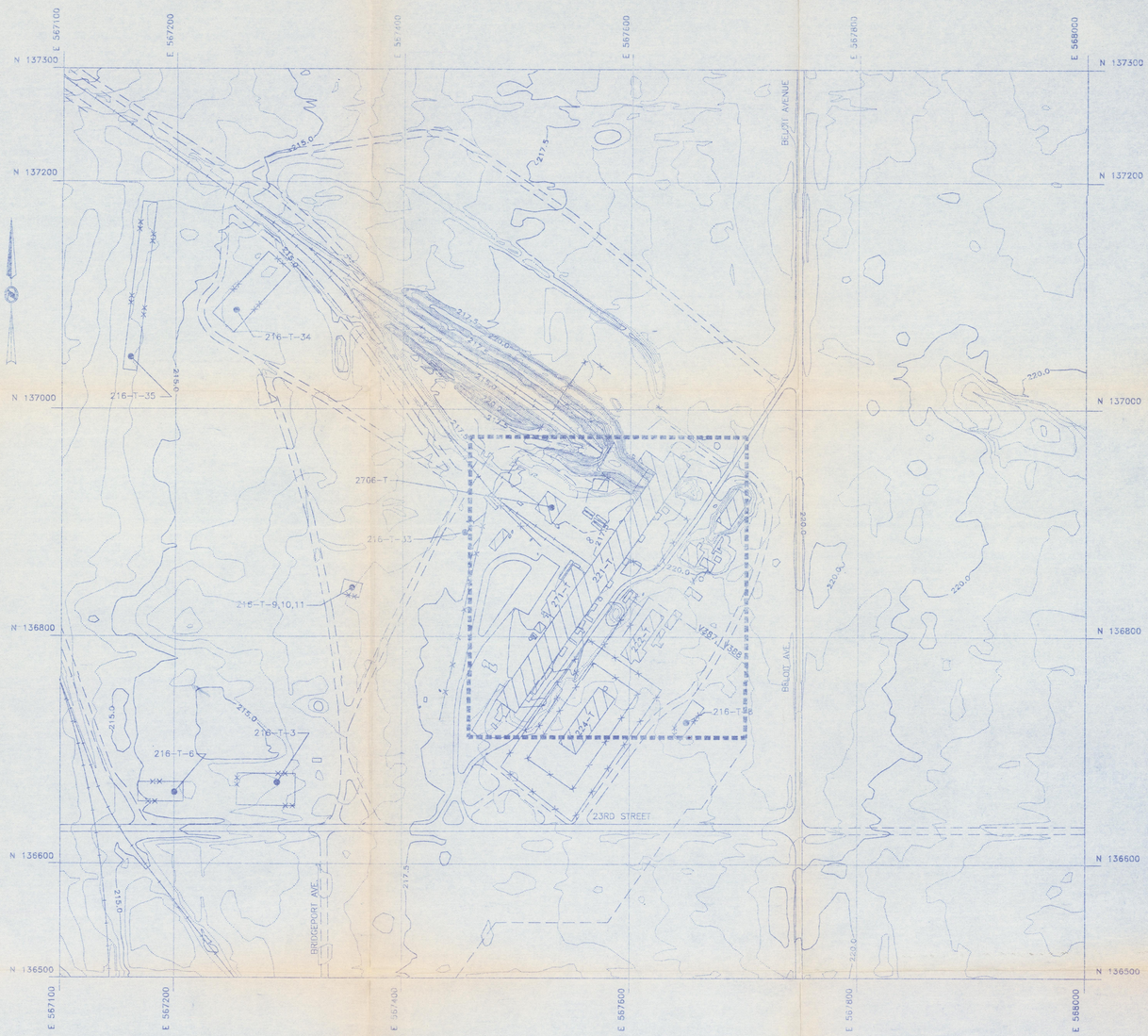
WIND CLASS	MILES/HOUR
1	>1.0 - 3.0
2	4.0 - 7.0
3	8.0 - 12.0
4	13.0 - 18.0
5	19.0 - 24.0
6	25.0 - 31.0
7	32.0 +

WIND ROSE



HANFORD AREA MAP

SCALE: NONE



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

LEGEND

E.576,250 N.136,000	WASHINGTON STATE COORDINATES (METERS)	216-A-42	CRIB
	INTERMEDIATE CONTOUR	218-E-10	BURIAL GROUND
215.0	INDEX CONTOUR (METERS)	242-A	BUILDING
	EDGE OF PAVEMENT	2-E-25-25	WELL 200-E-25-25
	FENCE		SIGNS
	POST & CHAIN FENCE	MH	MANHOLE
	PERIMETER FENCE	CB	CATCH BASIN
	DIRT ROAD OR TRAIL		MISCELLANEOUS POST
	PAVED ROAD		PIPELINE
	UNIMPROVED PAVED ROAD		STEAMLINE
	BUILDINGS	V455	WASTE TRANSFER LINE
	CONCRETE LINE/ SIDEWALK	24" FW	EXPORT WATER LINE
	RAILROAD	4" RW	RAW WATER LINE
24	STATE HIGHWAY	4" SW	SANITARY WATER LINE

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 PROJECTION

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

   COORDINATES ARE SHOWN AS METERS.
   CONTOURS ARE SHOWN AS 0.5 METERS.

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. IT IS ROTATED FROM NORTH AND IS ON A SLIGHTLY DIFFERENT SCALE THAN LAMBERT.

4. THE PARTIAL PLAN SHOWS THE UNDERGROUND PIPELINES THAT TRANSFER WASTE FROM THE 2706-T BUILDING TO THE 221-T BUILDING AND FROM THE 221-T BUILDING TO THE DOUBLE-SHELL TANK SYSTEM. THE WASTE EXITS THE 2706-T BUILDING VIA A 1 1/2" WASTE LINE AND ENTERS THE 211-T SUMP. THE WASTE ENTERS THE 221-T BUILDING VIA A 2" WASTE LINE AND ENTERS INTO THE 24" CANYON DRAIN HEADER.

DWG NO	TITLE
H-13-000211	200 AREA TOPOGRAPHIC MAP
H-13-000200	200 AREA TOPOGRAPHIC MAP
H-2-34585	PLOT PLAN SLUDGE COLLECTION

DRAWING TRACEABILITY LIST

REF NUMBER	TITLE
NEXT USED ON	END ITEM

REFERENCES

REV NO	DESCRIPTION	REV BY DATE	CHK BY DATE	DFTG APVD DATE	COG ENGR	OTHER	OTHER
					APPROVALS BY/DATE		

REVISIONS

CADFILE N0000080A
CADCODE 18:IBM:ACD2:10.0:N

OFFICIAL RELEASE BY WHC
DATE OCT 15 1992

DRAWN CJ Bryant	7-31-92	
CHECKED D. Tilley	10/12/92	
DFTG APVD	10/13/92	
COG ENGR	10/15/92	
QA		
OTHER		
OTHER		
OTHER		
APVD FOR IMPLEMENTATION		
BY		
DATE		

FOT 145780

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

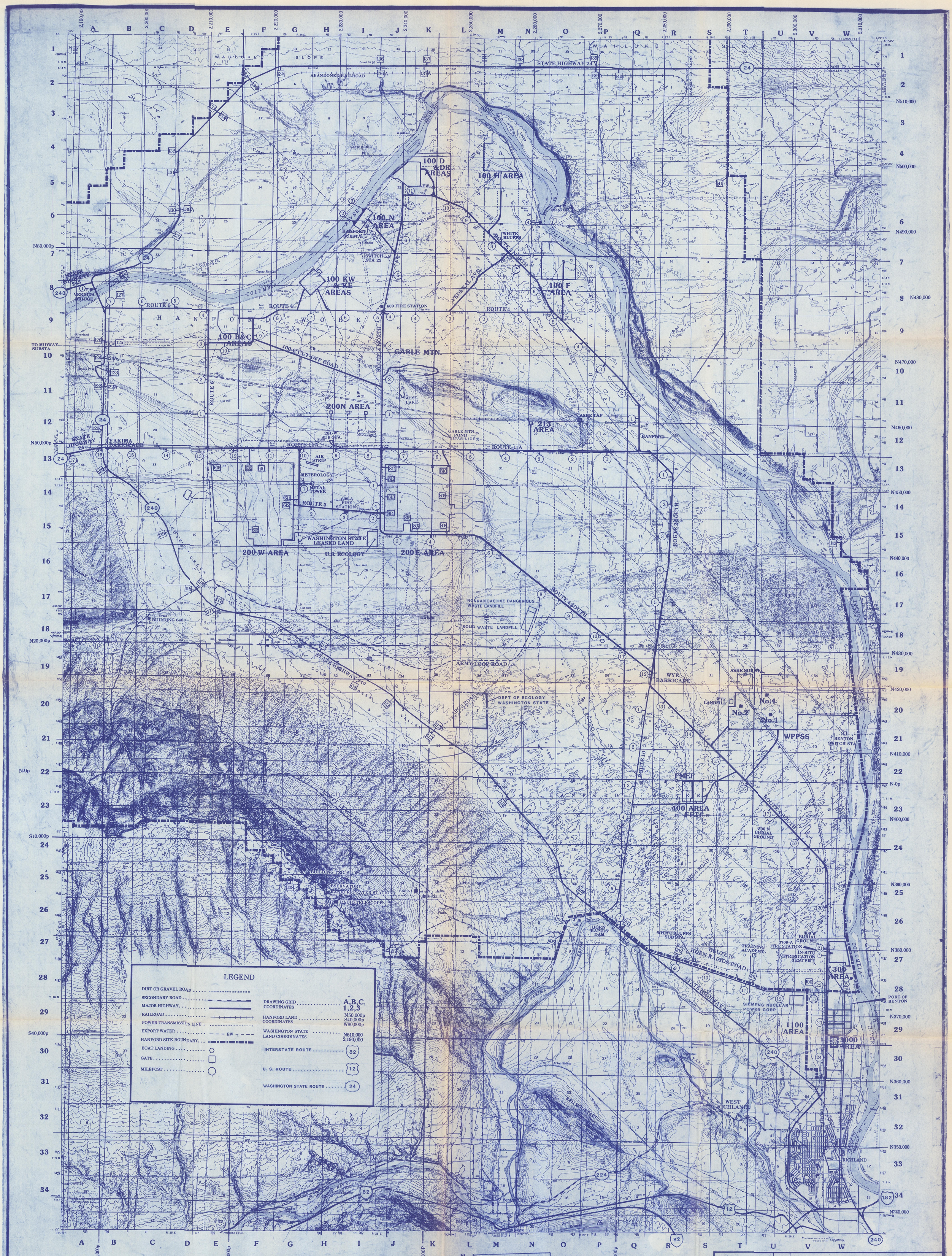
TOPOGRAPHIC MAP T PLANT COMPLEX

SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	2706-T, 221-T	0110	H-13-000080	0
SCALE 1:2000			SHEET 1 OF 1	

OK PRINT DATE
COMMENT PRINT DATE

DWG NO H-13-000080 SH 1 OF 1 REV 0

54-6000-027(5/89)



SITE PLAN

CONTOUR INTERVAL 20 FEET DATUM IS MEAN SEA LEVEL

THIS MAP WILL NOT BE USED FOR DETERMINING EXACT LOCATIONS

OFFICIAL RELEASE BY WHC EDT-10111 DATE MAR 17 1989

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.

NEXT USED ON: END ITEM

REVISION APPROVALS						REVISIONS	
		ENGINEER	DRAFTING	CHKD BY DATE	REV BY DATE	DESCRIPTION	LAST REV.
RS	JCE 11-21-91	RTA 11-20-91	JH 11-20-91	DT 11/18/91	DO 11-18-91	REV. PER ECN-170550	3

DRAWING STATUS

DRAWING APPROVALS	DATE
APPD FOR QUALITY ASSURANCE	
APPD	7/89
APPD	
APPD	
RESPONSIBLE ENGINEER R.L. MARTELL	3/89
DRAFTING APPD	
CHECKED	3/3/89
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. NO.	INDEX NO.
AS SHOWN	600 GEN	0100

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

APPENDIX B

STATE ENVIRONMENTAL POLICY ACT ENVIRONMENTAL CHECKLIST

This environmental checklist covers the entire T Plant Complex. This environmental checklist is being submitted concurrently with the *Notice of Intent for Expansion Under Interim Status for the T Plant Complex*, in accordance with Washington Administrative Code 173-303-281(3)(a)(v).

STATE ENVIRONMENTAL POLICY ACT
ENVIRONMENTAL CHECKLIST FORMS

FOR

EXPANSION OF T PLANT COMPLEX WASTE TREATMENT AND STORAGE CAPACITY

REVISION 0

November 18, 1992

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

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A. BACKGROUND

1. Name of proposed project, if applicable:

Expansion of the Hanford Facility T Plant Complex treatment and storage unit. This *State Environmental Policy Act* (SEPA) *of 1971* Environmental Checklist is being submitted concurrently with the T Plant Complex Notice of Intent (NOI) for expansion under interim status. Waste management activities at the T Plant Complex are planned to be expanded to allow additional dangerous waste treatment and storage capacity.

2. Name of applicants:

U.S. Department of Energy, Richland Field Office (DOE-RL) and Westinghouse Hanford Company (Westinghouse Hanford).

3. Address and phone number of applicants and contact persons:

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

Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352

Contact:

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

R. E. Lerch, Deputy Director
Restoration and Remediation
(509) 376-5556

4. Date checklist prepared:

November 18, 1992

5. Agency requesting the checklist:

Washington State
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

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

This SEPA Environmental Checklist is being submitted concurrently with the T Plant Complex NOI. The NOI is submitted in accordance with the Washington State Department of Ecology (Ecology) *Dangerous Waste Regulations*, Washington Administrative Code (WAC) 173-303-281, "Notice of Intent", which require that dangerous waste facility owners and/or operators submit a NOI before submittal of a permit application for new or expanded dangerous waste treatment, storage, and/or disposal units. After submittal of the NOI, there will be an opportunity for public

notification and review for 150 days. Submittal of the T Plant Complex Dangerous Waste Part A Permit Application will occur after the public comment period.

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

The T Plant Complex is the primary equipment decontamination unit for the Hanford Facility. To support this mission, minor modifications and maintenance are expected to occur periodically at the T Plant Complex. It is possible that future Hanford Facility restoration and cleanup might require modifications of the T Plant Complex.

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

This SEPA Environmental Checklist is being submitted to Ecology concurrently with the NOI for the T Plant Complex. A revision of the Part A permit application will be submitted at least 150 days after submission of the T Plant Complex NOI in accordance with WAC 173-303-281. A Part A permit application for the T Plant Treatment Tank was submitted on November 25, 1987.

General information concerning the Hanford Facility environment can be found in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 4, December 1991. This document is updated annually by Pacific Northwest Laboratory, and provides current information concerning climate and meteorology; ecology; history and archeology; socioeconomics; land use and noise levels; and geology and hydrology. This baseline data for the Hanford Site and its past activities are useful for evaluating proposed activities and their potential environmental impacts.

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

No applications to government agencies are known to be pending.

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

Ecology is the lead regulatory agency authorized to approve the Part A permit application pursuant to the requirements of WAC 173-303 and 40 Code of Federal Regulations (CFR) Part 265. The NOI provides public notice of the intention to expand the waste treatment and storage capacity of the T Plant Complex.

No other permits are known to be required at this time.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

The T Plant Complex consists of two structures: 221-T and 2706-T Buildings. The T Plant Complex provides a centralized location for decontamination of large equipment such as motors, trucks, railroad equipment, and process equipment.

The 221-T Building consists of a canyon and three support galleries. The canyon is divided into 20 sections, each section contains two cells. The cells are used for: the treatment and storage of liquid mixed waste in stainless steel tanks (one tank is used for treatment and storage and four tanks are used for storage only); storage of contaminated process equipment; and decontamination of process equipment. The liquid mixed waste generated during decontamination activities periodically is transferred to the Double-Shell Tank System.

The 2706-T Building is used to decontaminate railroad equipment, trucks, buses, automobiles, and large equipment. Decontamination activities in the 2706-T Building occur over two pits that collect the liquid mixed waste generated during the decontamination process. Liquid mixed waste collected in the pits is pumped to the liquid mixed waste handling system in the 221-T Building.

Because there are delays that occur in transferring liquid mixed waste from the T Plant Complex to the Double-Shell Tank System, liquid mixed waste storage capacity at the T Plant Complex must be expanded. Expansion will include the capacity for greater-than-90-day storage, and will expand the process design capacity for storage of liquid mixed waste in five tanks: 5-6, 5-7, 5-9, 11-R, and 15-1. Total expansion of the process design capacity in the five tanks will be 43,400 gallons (164,300 liters).

Expansion of waste storage capacity also will include the installation of two 15,000 gallon (57,000 liters) double-shell tanks directly outside of the 2706-T Building. These tanks will be used to store liquid mixed waste from decontamination activities in the 2706-T Building. The tanks will be classified as greater than 90 day storage tanks to allow the T Plant Complex the necessary operating flexibility. Total expansion of process design capacity will be 30,000 gallons (114,000 liters).

Expansion of storage of dry mixed waste for greater-than-90-day storage also is necessary to allow extended safe storage of equipment scheduled for decontamination. Total expansion of the process design capacity for storage of dry mixed waste will be 240,000 cubic feet (6,800 cubic meters).

Expansion of miscellaneous treatment at the T Plant Complex is necessary to facilitate decontamination activities. This will allow the various decontamination activities to be performed at the T Plant Complex in a

safe and efficient manner. Miscellaneous treatment capacity at the T Plant Complex will be expanded by 300 cubic yards (230 cubic meters).

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your 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. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The T Plant Complex is located in the northeastern corner of the 200 West Area of the Hanford Facility, approximately 30 miles (48 kilometers) northwest of the city of Richland, Washington. The section, township, and range are as follows: Section 1, Township 12N, Range 25E. A map and site plans are included with the T Plant Complex NOI.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other_____.

Flat.

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

The approximate slope of the land at the T Plant Complex is less than 2 percent.

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

The soil types in the 200 Areas and around the T Plant Complex consist mainly of eolian and fluvial sands and gravel. More detailed information concerning specific 200 West Area soil classifications can be found in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 4, December 1991. Farming is not permitted on the Hanford Facility.

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 source of fill.

No filling or grading is required.

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

No.

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

Not applicable. The existing area would not be expanded.

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

Erosion is not expected to occur during the proposed activities.

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.

Minor amounts of exhaust will be generated by vehicles used by building personnel to gain access to the T Plant Complex.

Volatilization of dangerous and/or radioactive materials can be expected to occur during normal operations as the result of routine decontamination activities. Stack emissions from the 2706-T Building have been monitored using a record particulate sampler since the mid-1970's. The high-efficiency particulate air (HEPA) filtration system recently was improved and the latest monitoring data from 1991 indicate that gross alpha and gross beta emissions are nondetectable. Restrictions on the amount and type of radioactive materials allowed in the building minimize the potential for airborne contamination.

The 221-T Building decontamination activities exhaust through the 291-T-1 Main Stack. Four banks of HEPA filters became operational in 1991, and sampling apparatus consists of a record sampler, a beta-gamma continuous air monitor (CAM), and an alpha CAM unit. In 1991, the 291-T-1 Main Stack released 1.3 x 10-4 curies of plutonium and 1.3 x 10-4 curies of americium.

Greater than 90-day storage and treatment are not likely to alter air emissions at the T Plant Complex.

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?

Good engineering practices would be followed, and actions would comply with onsite procedures designed to protect the environment and worker safety and health. Administrative control practices will limit air emissions as well as protect worker health.

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.

There is no surface water body on or in the immediate vicinity of the T Plant Complex. Two intermittent streams traverse through the Hanford Facility. These are Cold Creek and Dry Creek. Water drains through these creeks during the wetter winter and spring months. No perennial streams originate within the Columbia Plateau. Primary surface-water features associated with the Hanford Facility are the Columbia and Yakima Rivers, and their major tributaries, the Snake and Walla Walla Rivers. West Lake, about 10 acres (4.05 hectares) in size and less than 3 feet (0.9 meter) deep, is the only natural lake within the Hanford Facility. Waste water ponds, cribs, and ditches associated with nuclear fuel reprocessing and waste disposal activities also are present on the Hanford Facility.

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

The T Plant Complex upgrades would not require any activity in or near the described waters and drainages.

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.

There would be no dredging or filling from or to surface water or wetlands.

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

The water supply for the 200 Areas is pumped from the Columbia River. The decontamination activities performed at the T Plant Complex use relatively little of this overall withdrawal. The estimated amounts are insignificant compared to normal daily water use in the 200 Areas.

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

The T Plant Complex is not within the 100- or 500-year floodplains (*Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 4, December 1991).

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.

No.

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.

No groundwater would be withdrawn in support of this project, and water would not be discharged to the aquifer. In the vicinity of the T Plant Complex, the depth to groundwater is over 260 feet (79 meters).

2) Describe waste material that will be discharged into the ground from septic 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.

Sanitary waste from the T Plant Complex is discharged to the septic tank and drain field located southwest of the T Plant Complex. The proposed waste treatment and storage expansion will not impact the existing sanitary waste sewer system.

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.

The Hanford Facility receives only 6 to 7 inches (15.2 to 17.8 centimeters) of annual precipitation. Precipitation runs off the existing buildings and seeps into the soil on and near the buildings. This precipitation does not reach the groundwater or surface waters. Precipitation would not come in contact with any of the liquid mixed waste generated by normal decontamination activities.

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

There is a small potential that waste materials could enter the ground. There are not surface waters in the vicinity of the T Plant Complex. Upgrades for the secondary containment of the storage tank waste are planned that includes a leak detection system.

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

No surface, ground, or run-off water impacts are expected.

4. Plants

a. Check or circle the types of vegetation found on the site.

___ deciduous tree: alder, maple, aspen, other
___ evergreen tree: fir, cedar, pine, other
___ 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 most common vegetation community in the 200 West Area is the sagebrush/cheatgrass or Sandberg's bluegrass. Native vegetation in the immediate vicinity of the T Plant Complex has been eradicated. Vegetation consists primarily of cultivated ornamentals.

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

No native vegetation alteration would occur.

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

The T Plant Complex is located within a previously disturbed area that has been heavily industrialized since the mid 1940's, and biological survey personnel indicate that no sensitive species occur in the general vicinity.

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

Not applicable.

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: hawk, heron, eagle, songbirds, other:.....
mammals: deer, bear, elk, beaver, other:.....
fish: bass, salmon, trout, herring, shellfish, other:.....

Raptors (burrowing owls, ferruginous, redtail, and Swainson's hawks) are seen occasionally in the 200 West Area. Small passerines (sparrows, finches) also are present in the general vicinity of the T Plant Complex. Mule deer, rabbits, badgers, and coyotes occasionally are seen in the general area.

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

Two federal and state listed threatened or endangered species have been identified on the Hanford Site along the Columbia River; the bald eagle and peregrine falcon. In addition, the state listed white pelican, sandhill crane, and ferruginous hawk also occur on or migrate through the Hanford Site. Of these five species, only the ferruginous hawk is likely to use the upland shrub-steppe habitat of the 200 Areas. Although ferruginous hawks have been seen in the general area on occasion, ferruginous hawks do not use the habitat in the vicinity of the T Plant Complex for perching, hunting, or nesting.

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

The Hanford Site is a part of the broad Pacific Flyway.

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

This project contains no specific measures to preserve or enhance wildlife.

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.

Electricity is used at the T Plant Complex for decontamination activities.

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 consumption is not anticipated to be significant, and energy conservation features are not readily applicable to the expansion activities.

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.

Possible environmental health hazards to workers could arise from the waste decontamination activities at the T Plant Complex. The hazard could come from exposure to radioactive, dangerous, and/or mixed waste. Stringent administrative controls and engineered barriers are employed to minimize the probability of even a minor incident and/or accident. A chemical spill, release, fire, or explosion could occur only as a result of a simultaneous breakdown in multiple barriers or a catastrophic natural forces event.

1) Describe special emergency services that might be required.

Hanford Site security, fire response, and ambulance services are on call at all times in the event of an onsite emergency. Hanford Site emergency services personnel are specially trained to manage a variety of circumstances involving chemical and/or radioactive constituents and situations.

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

All personnel are trained to follow proper procedures during the storage and treatment operations to minimize potential exposure. The T Plant Complex has systems for ventilation, radiation

monitoring, fire protection, and alarm capability. The heating, ventilation, and air conditioning system maintains a negative air pressure on the complex.

Chemical and radiological safety hazards would be mitigated by preventing direct contact with the residual chemical constituents; HEPA filtration of all offgas streams; and protective clothing, appropriate training, and respiratory protection used by onsite personnel as necessary.

b. Noise

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

While there is a minor amount of traffic, operation, and equipment noise in the vicinity, it is not expected to affect personnel at the T Plant Complex.

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.

Minor amounts of noise from traffic and equipment are expected during day shift hours.

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

If Occupational Safety and Health Administration noise standards are exceeded, appropriate measures to protect workers will be employed.

8. Land and Shoreline Use

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

The Hanford Facility is defined as a single *Resource Conservation and Recovery Act* (RCRA) *of 1976* facility, identified by the EPA/State Identification Number WA7890008967, that consists of over 60 TSD units conducting dangerous waste management activities. These TSD units are included in the *Hanford Facility 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 lands, 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 or onsite waste handling.

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

No portion of the 200 Areas has been used for agricultural purposes since 1943, if ever.

c. Describe any structures on the site.

The T Plant Complex consists of several concrete and concrete block office and support structures, the 2706-T Building and the 221-T Canyon Building. The 2706-T Building is a prefabricated steel structure 50 feet (15 meters) wide, 66 feet (20 meters) long, and 25 feet (7.6 meters) high. The 221-T Canyon Building is 850 feet (260 meters) long, 68 feet (21 meters) wide, and 74 feet (23 meters) high. The current mission of the T Plant Complex is the decontamination of process equipment.

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 as an Unclassified Use (U) district by Benton County.

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 entire Hanford Site was designated a National Environmental Research Park in 1977, for use as an outdoor laboratory for ecological research. However, the 200 Areas, and the T Plant Complex in particular, are previously disturbed industrial areas with little or no environmental significance.

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

Approximately 13 people work in the decontamination areas within the T Plant Complex.

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.

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:

None.

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?

Except for the installation of two 15,000 gallon (57,000 liters) storage tanks outside of the 2706 T Building, the proposed expansion of the treatment and storage capacity would occur entirely within existing structures.

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?

Not applicable.

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:

None.

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.

No.

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

None.

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.

Several areas of the Hanford Site are listed, or are proposed for listing, on national, state, or local preservation registers. One of these, the White Bluffs freight road, crosses diagonally through the 200 West Area. The road, formerly an Indian trail, has been in continuous use since antiquity, and has played a role in Euro-American immigration, development, and agriculture. This property is

considered eligible for the National Register of Historic Places. Additional information concerning Hanford Site cultural resources can be found in *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 4, December 1991.

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

A 328-foot (100-meter) easement protects the White Bluffs freight road from disturbance, and the T Plant Complex lies well outside that boundary. Personnel from the Pacific Northwest Laboratory Hanford Cultural Resources Laboratory conducted a general cultural resources review of the 200 West Area and issued a clearance for activities within the 200 West Area fenceline.

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.

Not applicable to the proposed project.

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

The T Plant Complex is not accessible to the public and is not served by public transit.

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

Not applicable to the proposed project.

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).

No.

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

There is railroad freight transport in the vicinity of the T Plant Complex. Railroad cars are used to transport contaminated equipment and liquid effluents to and from the T Plant Complex.

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

Traffic and parking is not expected to increase significantly or adversely impact existing traffic patterns.

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

Not necessary.

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.

Not applicable to the proposed project.

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

Not applicable to the proposed project.

16. Utilities

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

Electricity, potable water, refuse service, telephone, and a septic system are available at or near the T Plant Complex.

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.

Electricity would be used during decontamination activities. Utility use is generally not a significant part of these activities.

SIGNATURES

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

Robert D. Holt/for
James D. Bauer, Acting Program Manager
Office of Environmental Assurance,
Permits, and Policy
U.S. Department of Energy
Richland Field Office

Date 12/14/92

R. E. Lerch, Deputy Director
Restoration and Remediation
Westinghouse Hanford Company

Date 10/23/92

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APPENDIX C

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

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APPENDIX C

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APPENDIX C-1

NOTICE OF NONCOMPLIANCE TANK 241-SY-101

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

May 14, 1992

CERTIFIED MAIL

Mr. R. D. Izatt
U. S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, WA 99352

ID Number: (WA7890008967)

Dates and Times of Inspection:
(January 22, 1992, 10:00-16:25 HRS)
(January 23, 1992, 8:30-15:30 HRS)
(February 11, 1992, 12:30-3:15 HRS)

Mr. Harry D. Harmon
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Dear Messrs. Izatt and Harmon:

RE: Dangerous Waste Compliance Inspection for Tank 241-SY-101

As was discussed in a meeting between our respective staff on May 6, 1992, there are several areas of (waste tank) noncompliance with Washington State's Dangerous Waste Regulations, WACs 173-303-320, 330, 400, and 960 which need immediate attention and resolution. The details of our findings were provided, at the meeting referenced above, for your preliminary review. Specific violations are as follows:

Class I Violations

WAC 173-303-320: General Inspection

- Failure to adequately inspect the tank monitoring systems;

WAC 173-303-400: Interim Status Facility Standards

- Failure to provide and operate adequate leak detection for secondary containment per section 40 CFR 265.193(c)(3);

WAC 173-303-960: Denial of Access

- Failure to allow Ecology inspectors access to training records; and

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Class II Violations

WAC 173-303-330: Personnel Training

- Failure to properly identify personnel in the training plan.

In order to correct these items of noncompliance, please complete the following measures within the timeframes specified. Please be advised that failure to correct these noncompliance items may result in the issuance of an administrative order and/or penalty under RCWs 70.105.080 and/or 70.105.095 (Hazardous Waste Management).

1. Within thirty (30) days of receipt of this letter, identify all the leak detection and alarm systems related to the monitoring of tank SY-101. Identify any discrepancies found with any of the above equipment including, but not limited to, alarm lights, sensing instruments, liquid level measuring devices, and the Computer Automated Surveillance System (CASS).

2. Within forty-five (45) days of receipt of this letter, provide Ecology with the results of the investigation required by item 1 and a schedule for correcting any deficiencies found.

3. Within forty-five (45) days of receipt of this letter, provide Ecology with a schedule for an investigation, similar to that conducted for item 1, for all tank systems within Tank Farms Operations.

4. Within sixty (60) days of receipt of this letter, provide Ecology with a schedule for the correction of any discrepancies found during the investigation for item 3.

5. Within thirty (30) days of receipt of this letter, provide Ecology with a schedule for updating the Safety Analysis Report (SAR), Operational Safety Requirements (OSR) section to reflect current facility inspection, and operation activities as required by WAC 173-303-320.

6. Within thirty (30) days of receipt of this letter, comply with the requirement to remedy problems revealed by inspections as set forth in WAC 173-303-320(3). Provide Ecology, within the 30 days, a list of the actions taken to correct any deficiencies found with the management systems used to identify and correct problems identified during inspections.

7. Within thirty (30) days of receipt of this letter, investigate to determine any discrepancies in the inspection (calibration system) for tank SY-101. Provide Ecology, within the 30 days, the results of the investigation and a schedule for correcting any problems found.

8. Within thirty (30) days of receipt of this letter, provide Ecology with a schedule for investigating the calibration system for other tank systems within Tank Farms Operations.

9. Within thirty (30) days of receipt of this letter, revise the facility training plan to include the names of personnel filling each job as set forth in WAC 173-303-330. Provide Ecology, within the 30 days, a copy of the corrected training plan.

10. Within twenty-one (21) days of receipt of this letter, provide Ecology with access to inspect and copies of the previously requested training records for Nuclear Operators and Shift Supervisors as set forth in WAC 173-303-960.

11. Within twenty-one (21) days of receipt of this letter, take the necessary action to assure training records as set forth in WAC 173-303-330 are immediately accessible to Ecology inspectors. Provide Ecology, within the 21 days, a copy of the documented action taken to resolve this violation.

Technical inquiries related to this matter should be directed to G. Thomas Tebb at (509) 546-4302. The enclosed certificate of compliance should be completed and submitted to Mr. Tebb by July 15, 1992.

Sincerely,

Roger Stanley

Roger Stanley
Program Manager
Nuclear and Mixed Waste Management

Enclosure

cc: Ron Gerton, USDOE-RL
John Tseng, USDOE-HQ

Enclosure

Please complete and return this form to G. Thomas Tebb at 7601 W. Clearwater Ave., Suite 102, Kennewick, WA 99336 by July 15, 1992.

CERTIFICATE OF COMPLIANCE

As an authorized representative of U.S. Department of Energy, I certify that to the best of my knowledge, the compliance of our hazardous waste facility located at the Hanford Reservation, Facility ID Number WA7890008967. Facility representative should list compliance date and initial each item below.

		COMPLIANCE STATUS		
Items of Noncompliance	Compliance Date	Complied	Not Complied	Comments
Item 1	_____	_____	_____	_____
Item 2	_____	_____	_____	_____
Item 3	_____	_____	_____	_____
Item 4	_____	_____	_____	_____
Item 5	_____	_____	_____	_____
Item 6	_____	_____	_____	_____
Item 7	_____	_____	_____	_____
Item 8	_____	_____	_____	_____
Item 9	_____	_____	_____	_____
Item 10	_____	_____	_____	_____
Item 11	_____	_____	_____	_____

_____ _____

Signature of Facility Representative Date

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APPENDIX C-1A

RESPONSE TO NOTICE OF NONCOMPLIANCE TANK 241-SY-101

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

JUN 0 5 1992

92-RPA-197

Mr. Roger F. Stanley
State of Washington
Department of Ecology
Post Office Box 47600
Olympia, Washington 98504-7600

Dear Mr. Stanley:

DANGEROUS WASTE COMPLIANCE INSPECTION FOR TANK 241-SY-101

This letter and enclosure have 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 of the Washington Administrative Code (WAC) within 21 days of receipt of notice. It responds to your May 14, 1992, letter titled "Dangerous Waste Compliance for Tank 241-SY-101," describing alleged violations of WAC 173-303, State of Washington Dangerous Waste Regulations. The Enclosure contains an itemized description of the actions DOE will take and the schedule for each action.

As discussed at a May 18, 1992, meeting with your staff, not all schedule dates described in our response (See Enclosure) are consistent with those directed by State of Washington Department of Ecology in the May 14, 1992, letter. We believe, however, they are appropriate given the complexity of the stated issues.

Please note our responses to Items 10 and 11 of your letter. The responses address the issue of personnel training records. This issue has been addressed at length by DOE, Westinghouse Hanford Company legal counsel and the State Attorney General Office. Attachment 4 to the Enclosure documents the agreement reached by these parties.

We have been unable to identify a basis or citation for requiring a certificate of compliance, as is provided in the enclosure to your May 14, 1992, letter. We will continue, as we have done in the past, to document the compliance status of our facility in the documentation developed in our environmental management program. Such documentation will be kept at facilities and in our record keeping files as appropriate.

In closing, the alleged violations noted in your letter are being seriously evaluated. A special task team has been formed and each issue is being investigated. A response will be provided to your office on the dates provided in the responses to the specific Items in the Enclosure.

If you have any questions, please contact me or Mr. R. G. Holt of my staff on (509) 376-9989.

Sincerely,

ORIGINAL SIGNED BY

R. D. Izatt, Program Manager
Office of Environmental Assurance,
Permits, and Policy

EAP:PJK

Enclosure

cc w/encl:
P. T. Day, EPA
H. D. Harmon, WHC

RECORD NOTE: Responds to may 14, 1992 letter of violation from Ecology identifying violations of four WAC 173-303 regulations. Enclosure contains responses to eleven specific corrective measures directed by Ecology to remedy the violations. Enclosure contains descriptions of specific action items and schedules for submittal of investigations and plans to correct identified deficiencies. Completes CCC Action #10286 - Letter #I92-rpa-144

bcc w/o encl:
EAP OFF FILE
EAP RDG FILE
RPA RDG FILE
CCC RDG FILE
P. J. Krupin - EAP w/encl
W. J. Rutherford, TFP

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DOE - RL/CCC

ENCLOSURE 1

U.S. DEPARTMENT OF ENERGY
RICHLAND FIELD OFFICE
RESPONSE TO MAY 14, 1992 ECOLOGY LETTER
REGARDING DANGEROUS WASTE COMPLIANCE INSPECTION
FOR TANK 241-SY-101

ITEM 1

Within thirty (30) days of receipt of this letter, identify all the leak detection and alarm systems related to the monitoring of Tank SY-101. Identify any discrepancies found with any of the above equipment including, but not limited to, alarm lights, sensing instruments, liquid level measuring devices, and the Computer Automated Surveillance System (CASS).

RESPONSE

RL will review and identify all the leak detection and alarm systems related to monitoring on Tank SY-101. Attachment A provides a brief description and current status of the SY-101 leak detection systems. A more detailed submittal identifying all leak detection and alarm systems related to monitoring the SY-101 tank will be prepared and submitted to Ecology by July 10, 1992. The more detailed submittal will identify any discrepancies found with any of the leak detection equipment and alarm systems.

ITEM 2

Within forty-five (45) days of receipt of this letter, provide Ecology with the results of the investigation required by Item 1 and a schedule for correcting any deficiencies found.

RESPONSE

The July 10, 1992 submittal discussed in the response to Item 1 will identify any discrepancies found with any of the leak detection equipment and alarm systems. We believe this will satisfy Ecology's request that they be provided with the results of the investigation required by Item 1. RL will submit a schedule for correcting any deficiencies found in the effort described in Item 1 to Ecology by August 14, 1992.

ITEM 3

Within forty-five (45) days of receipt of this letter, provide Ecology with a schedule for an investigation, similar to that conducted for Item 1, for all tank systems within Tank Farms Operations.

RESPONSE

A schedule for conducting an investigation, similar to that conducted on 101-SY, for all double shell tank systems described in the Part B permit Application will be submitted to Ecology by August 14, 1992.

ITEM 4

Within sixty (60) days of receipt of this letter, provide Ecology with a schedule for the correction of any discrepancies found during the investigation for Item 3.

RESPONSE

At this time, the type of discrepancies that will be identified by these investigations are unknown. If discrepancies are identified, engineering studies or line item funding may be required to support corrective action. Thus, we believe that it is premature to provide a schedule for all corrective actions that may be identified as a result of tank farm investigations, within the 60 days directed by Ecology.

DOE RL proposes that, following the inspection of the tank farms, any discrepancies identified will be discussed with Ecology, including plans for corrective action. If discrepancies are identified, DOE-RL will submit to Ecology a plan and schedule for corrective action.

ITEM 5

Within thirty (30) days of receipt of this letter, provide Ecology with a schedule for updating the safety analysis report (SAR), operational safety requirements (OSRs) section to reflect current facility inspection, and operation activities as required by Washington Administrative Code (WAC) 173-303-320.

RESPONSE

DOE-RL recognizes that our interim status ispection plan presently references the SAR's and OSR's. We believe that it is inappropriate to utilize the SAR's and OSR's for WAC 173-303-320 compliance purposes. While we are not aware of any specific deficiencies in the present inspection program, we will develop a plan to remove references to SAR's and OSR's by October 30, 1992.

ITEM 6

Within thirty (30) days of receipt of this letter, comply with the requirement to remedy problems revealed by inspections as set forth in WAC 173-303-320(3). Provide Ecology, within the 30 days, a list of the actions taken to correct any deficiencies found with the management systems used to identify and correct problems identified during inspections.

RESPONSE

DOE-RL's operating contractor has assigned a senior manager and a task force to review and investigate the current deficiencies and initiate resolution. In addition, a number of initiatives are in progress to enhance system maintenance. These enhancements include dedicated maintenance teams, streamlined work controls, and more rigorous deficiency identification.

Prioritization is used to allocate available resources between waste tank safety field work, operations and maintenance, tank farm upgrades, and characterization activities. Maintenance activities are further prioritized based on the Work Control System. Priorities are established as indicated in Attachment B. This prioritization system places a lower priority on some plant conditions that are not viewed as an immediate safety issue. Corrective actions are given high priority where potential failure of redundant systems is involved. This position is currently being reviewed to assure an appropriate level of attention to leak detection and related hardware commensurate with Ecology requirements.

ITEM 7

Within thirty (30) days of receipt of this letter, investigate to determine any discrepancies in the inspection (calibration system) for Tank SY-101. Provide Ecology, within the 30 days, the results of the investigation and a schedule for correcting any problems found.

RESPONSE

RL has initiated an investigation to determine any discrepancies in the inspection procedures and calibration program for 101-SY. The investigation of SY-101 will be submitted to Ecology by July 15, 1992. A plan and schedule for correcting any deficiencies found will be submitted to ecology by August 14, 1992.

ITEM 8

Within thirty (30) days of receipt of this letter, provide Ecology with a schedule for investigating the calibration system for other tank systems within Tank Farms Operations.

RESPONSE

A schedule for investigation of other double shell tank systems described in the Part B Permit Application will be submitted to Ecology by August 14, 1992.

ITEM 9

Within thirty (30) days of receipt of this letter, revise the facility training plan to include the names of personnel filling each job as set forth in WAC 173-303-320. Provide Ecology, within the 30 days, a copy of the corrected training plan.

RESPONSE

The finding specifically states that the training plan is deficient in that it does not include the name of the employee filling each job. Ecology, in the course of the visit reviewed two training documents; "200 Areas Nuclear Operator Training Program Description", WHC-WD-56110-001, Rev 0, and the "WHC Training Administration Manual", WHC-CM-2-15. Each of these documents provide one element of the training program/plan. A key and integral component of the training program/plan referenced in each of the aforementioned documents is the training record system. The training record system provides the names of each employee and the position(s)/qualifications which are identified in the WHC training programs. This specific method of compliance was chosen to facilitate the large number of employees involved, the variety of jobs involved, combination of job qualifications which any individual employee may have, and the frequency by which an employee adds or deletes qualifications. The training record system is available to each manager via a soft reporting program accessible at the job location or hard copies of the records are located in a central record facility. Because the training record system is subject to the Privacy Act, dissemination of the records must be consistent with the Privacy Act. See item 10 for Inspector's access to the training record system. Training records are updated continually as training/retraining is completed. Attachment C is a list of the operators and current qualification levels available from the record system as part of the overall WHC training plan. More detailed reports can be generated identifying each specific job qualification or training completed.

ITEM 10

Within twenty-one (21) days of receipt of this letter, provide Ecology with access to inspect and copies of the previously requested training records for Nuclear Operators and Shift Supervisors as set forth in WAC 173-303-960.

RESPONSE

The RL and WHC can find no basis for the use the WAC 173-303-960, Special Powers and Authorities of the Department, citation. Further, the RL and WHC dispute the finding that they failed to allow Ecology inspectors access to training records. The Ecology inspector was aware of the process by which the training records could be provided to him without violating any laws. The records in question can be provided to the Ecology inspector usually within 24 hours of the Freedom of Information Act (FOIA) Request receipt by the RL Privacy Act/FOIA Officer. A FOIA Request form is provided in Attachment D for use by the Ecology inspector.

The training records requested by the Ecology inspector are subject to the Privacy Act of 1974. The RL requires that WHC maintain employee training records as Privacy Act records in its contract No. DE-AC06-87RL10930 with WHC. A conflict of law arose between the federal statute and the state Dangerous Waste Regulations when the Ecology inspector demanded to review and copy certain WHC employee training records under his state authority.

Generally, the Privacy Act restricts disclosure of information unless the disclosure is pursuant to the prior written consent of the individual to whom the record pertains or fits within one of the 12 narrowly construed exemptions contained in the Act. The purpose of the Act is to balance the federal government's needs to maintain information on individuals with the rights of the individuals to be protected from unwarranted invasions of their privacy stemming from federal agencies' collection, maintenance, use and disclosure of personal information about them. When the Act is violated by an impermissible disclosure, those individuals who released the information may become subject to criminal penalties including imprisonment and/or a fine of up to $5,000.00. Further, civil lawsuits for "adverse effects" suffered by the individual with respect to whom the record was maintained may be brought against the agency releasing the information.

Consequently, a conflict arises between the need to keep the records' confidentiality under the Privacy Act and the state inspector's need to review the training records to verify dangerous waste regulation compliance under WAC 173-303-330.

Access to the training records that avoids the conflict of law that exists between the federal statute and state environmental regulations is possible. Discussions occurred between Ecology and the RL Privacy Act/FOIA Officer in August of 1991 resulting in an informal and tentative verbal agreement whereby Ecology would obtain such records by following a Freedom of Information Act (FOIA) procedure. The RL formally suggested that Ecology gain access to those training records subject to the Privacy Act by making a FOIA Request through the RL Privacy Act/FOIA Officer in letter to Ecology dated, October 3, 1991. It was unclear whether Ecology had by its silence rejected the proposal or retained it for further consideration. To date, Ecology has not formally responded to that letter, nor has it attempted to use the FOIA method to obtain the records.

On January 23, 1992, Ecology's inspector did not attempt to or request the training records from the RL's Privacy Act/FOIA Officer even though Ecology's inspector recognized that the training record matter was a conflict of laws issue requiring the input of legal counsel representing Washington State Attorney General, RL and WHC. In fact, the Ecology inspector announced he would turn the matter over to his own Attorney General.

The WHC initiated discussions in February of 1992, involving the counsel of the Washington State Attorney General, RL and WHC. The Washington State Attorney General's Office was provided with the Privacy Act, its related regulations and other relevant documents for its consideration in resolving the matter. The Washington State Attorney General's Office had remained silent on the matter.

On May 21, 1992, WHC initiated a conference call with the Attorney General's office and the RL to negotiate an acceptable resolution to the access issue. After careful consideration, the Washington State Attorney General's Office has agreed to the FOIA method for supplying the required training records to Ecology inspectors. Ecology inspectors are to write a FOIA request for the desired records to the RL Privacy Act/FOIA Officer. The RL Privacy Act/FOIA Officer will supply Ecology with the desired training records as immediately as is possible.

The RL also agreed to pursue a change to the Federal Register Privacy Act Record Notice that would allow environmental regulators routine access to the training records subject to the Privacy Act. The Privacy Act Record Notice change will take more than 21 days to complete since such a change will have to be reviewed and approved by U.S. Department of Energy-Headquarters. Routine access would allow Ecology inspectors to immediately review the training records of particular employees at the facility, but would also require confidentiality by maintained for those records. Albeit, copies of those records could still be obtained via the FOIA method so that the records would not be subject to the confidentiality requirements of the Act. Attachment D provides copies of the formal communication on the issue and contains the confirmation letter of the agreement reached. Verbal confirmation that the confirmation letter correctly restates the agreement has been obtained from the Attorney General's Office.

ITEM 11

Within twenty-one (21) days of receipt of this letter, take the necessary action to assure training records as set forth in WAC 173-303-330 are immediately accessible to Ecology inspectors. Provide Ecology, within the 21 days, a copy of the documented action taken to resolve this violation.

RESPONSE

The RL and WHC dispute the finding that they failed to allow Ecology inspectors access to training records. See response to item 10 and its accompanying attachments for documentation that explains access to the training records described in WAC 173-303-330 has been assured.

ATTACHMENT A

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DESCRIPTION AND STATUS OF THE SY-101 LEAK DETECTION SYSTEM

There are three leak detection methods used to detect leaks from the primary tank in double-shell waste tanks. The three leak detection methods are (1) level detection via the Food Instrument Corporation (FIC) level indicating transmitter in the primary tank, (2) the annulus conductivity probe, and (3) the annulus radiation monitor in the annulus. A leak detection pit is also provided to detect leaks from the annulus if the annulus were ever to collect liquids.

LIQUID LEVEL INDICATING TRANSMITTER

A means of leak detection in SY-101 is level detection. Three devices are use to detect the level: 1) radar level gage, 2) FIC gage, and 3) a reel-mounted manual tape. The radar gage uses extremely low level microwave energy to measure the height of the waste from the gage. The radar gage measures to 0.1 inches. The FIC gage is an automatic device which periodically lowers a probe to the surface and identifies the surface by either conductivity or by a slack switch detector on the tape. The manual method consists of lowering a reel-mounted tape or calibrated insulated wire, to which electrodes are attached, to a point where the liquid surface is contacted. Readout is obtained through the use of a portable direct-current meter. The data is recorded to the nearest 1/4 inch increment. Each automatic gauge consists of an electrically driven plummet, a calibrated tape, a tape reel, a sight glass, control box, and flush equipment. A counter is provided for readout of liquid level to the nearest 0.1 inch.

THE ANNULUS CONDUCTIVITY PROBES

Another means of leak detection for the SY-101 tank takes place in the annulus or secondary containment of the tank. This method is via a detection device known as a conductivity probe. Drain channels in the insulating concrete, under the primary tank, carry any leakage to the annulus space where it is detected by these probes. The problems identified with this device during the Audit performed by Ecology personnel have been corrected. Operating procedures were revised and tested on 3/11/92. The maintenance procedure was revised on 4/14/92. PISCES job cards and Preventive Maintenance data sheets confirms the correct setting.

THE ANNULUS RADIATION MONITOR

The third means of leak detection is by means the annulus radiation monitor, commonly known as a continuous air monitor (CAM). Ventilation air is supplied individually to the double-shell tank annulus through inlet HEPA filters. The incoming air is ducted to the annulus space below the center of the primary tank. From this point it is released to the annulus and flows up and out through an outlet duct to the annulus exhaust fan. The outlet duct air for the tank is continuously sampled using the CAM. Any leaking liquid from the primary tank would contaminate the annulus air with radionuclides, which in turn would set off the tank CAM alarm. In order for the CAM to function properly, air must be flowing through the annulus. To understand this, further detail is provided here:

> The annulus leak detector CAM functions by pulling 2 cubic feet per minute (CFM) of air flow from the annulus through a probe inserted in the ducts leading from the annulus to the stack. The probe for the SY-101 annulus is designed to be isokinetic at 94 CFM. In a truly isokinetic system, the sampling probe would be designed to draw particles into the sampling probe nozzle(s) at the same velocity that they move in the duct. Studies have shown that at duct velocities higher than that of the sampling probe, larger particles deviate from the stream's path and are drawn into the sampling probe. This is due to the inertial effects of the particles. The resultant effect is oversampling.
>
> The flow through each of the SY annuli was designed for 250 cubic feet per minute (CFM) at a temperature of 200°F. A constant air flow from the annulus of each tank is maintained through air flow transmitters. These transmitters sense the duct velocities with flow elements, amplified by instrument air. The signal is transmitted to flow controllers which modulate flow damper motors. The annulus is thus maintained at a negative pressure which will vary with the pressure drop across the inlet filters. A flow recorder records the flow from each tank annulus. The flow recorder also actuates the alarm light when the flow from either tank drops to 150 CFM. <u>This alarm light was designed to be an indication of excess pressure drop in the inlet filters.</u> However, in this case the alarm light means that this system is turned off. The low flow alarm light is activated because the instrument air which amplifies the pressure signals from the annulus ducts is turned off. The valves controlled by the

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damper motors have been fixed in the fully opened position, thus assuring the damper motors are inoperable.

One of the problems identified during the Audit performed by Ecology personnel was that the low flow alarm light was on. This indicated to them that the annulus CAM was inoperable. On the contrary, though, with this understanding it can now be seen that because the sampling probe is designed to be isokinetic at 94 CFM, even if the low flow alarm light had indicated that the annulus air flow had fallen below 150 CFM, the annulus would still be sampled conservatively.

Accurate flow measurements are periodically taken on the Tank Farm stacks by Vent and Balance. Vent and balance data from March of 1990 through September of 1991 resulted in an average total flow of 705 CFM through the annulus stack. Dividing this average total flow by three (three tanks) results in an average flow of 235 CFM through each annulus. Vent & Balance is scheduled to take the next flow measurement in this stack during September 1992 (per Work Plan Test Procedure Upgrade Program For Ventilation Systems In Tank Farms WHC-SD-WM-WP-147).

An approximate flow through the stack can be obtained through a pressure gauge (instrument number PI-1-2) located near the annulus stack. For purposes of this response, a reading was taken on May 28, 1992. The gauge was reading 0.4 inches of water. The temperature in the stack was 93 °F. From these data an approximate stack flow of 903 CFM can be calculated.

Another problem identified during the Audit performed by Ecology personnel was that the annulus radiation readings were recorded as rejected or out of service. The associated system was repaired and placed back in service on 1/6/92. The discrepancy report was closed on 1/22/92.

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THE LEAK DETECTION PIT

If the annulus were ever to collect liquids for some reason, a leak detection pit is also provided to detect any leaks from the annulus. It is important to point out here that the primary tank FIC level indicating transmitter, the annulus conductivity probe, and the annulus radiation monitor in the annulus or ventilation system are the primary means of leak detection for SY-101. The leak detection pit (LDP) instrumentation (weight factor, specific gravity, and radiation detectors) normally provide process control data only. The pits are not leak detection devices for the primary tank, but provide leak detection data for the annular (secondary) tank. If the annulus should become filled with waste from a leaking primary tank, the LDP would then become the primary leak detection device for the annular tank. However, the leak detection pit would not contain all the leakage from the annulus; it is not a secondary containment.

Leak detection pits are designed to detect and recover solution leakage through the tank's steel secondary liner (the annulus). Such leakage is collected in slots in the concrete foundation. These slots drain to the center which is plumbed to a 60 foot deep leak detection well located adjacent to the tank. The well consists of a vertical section of 24 inch diameter pipe surmounting a base section 3 feet high by 4 feet in diameter. The 24 inch section is a pumpout riser that extends to a pump pit in which a 10 gallon per minute deep well pump can be installed and the solution routed to a designated receiver tank.

There are three basic instrument systems installed on each leak detection pit. One is a radiation detection well installed adjacent to and extending to the base of the 4 foot diameter section. The second consists of instrument dip tubes for measuring weight factor and specific gravity. Readout is provided at the panel-boards in the associated instrument buildings. The third is a thermocouple installed in a well that extends to within 3 inches of the bottom of the pit.

The problem identified during the Audit performed by Ecology personnel was that the leak detection pit exceeded the allowable limit of 24 inches of liquid and that the pit radiation readings were recorded as rejected. The status of these problems are as follows:

> These pits are currently being pumped. An update to this current action will be provided on July 10.
>
> Work is continuing on repair of the radiation reading instruments. Completion is planned by 6/15/92. An update will be provided on July 10.

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ATTACHMENT B

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APPENDIX A

WORK PRIORITY SYSTEM
(sheet 1 of 3)

1.0 WORK PRIORITY

All work at WHC shall be assigned a priority within this system. The Work Priority System is a four level numeric system that denotes the importance of the work activity relative to the facility, plant safety, environmental requirements, and personnel.

2.0 PRIORITY SYSTEM

2.1 PRIORITY 1

Those items that are necessary to recover from unsafe conditions, re-establish the safety envelope, avoid imminent violation of safety and environmental requirements, or restore security systems when an alternate is not available. This is work that requires immediate attention to

1. Prevent injury to personnel

2. Prevent major damage to facilities (e.g., flooding or fire)

3. Prevent a criticality event or release of hazardous or radioactive substance to the environment beyond prescribed limits

4. Repair security systems to prevent direct loss of security where an alternative system cannot be reasonably provided

5. Bring systems/facilities back into technical specification/OSR compliance or avoid imminent violation of technical specification/OSR compliance requirements

6. Repair activity that requires immediate action to ensure continued safe operation of a facility

7. Restore the credibility of an alarm or alarm system by correcting nuisance alarms that divert personnel attention from other monitored parameters or equipment by their continued or repetitive nature. A Priority 1 may be used immediately but in all cases shall be declared if the nuisance condition has not been corrected within 24 hours.

8. Restore a malfunctioning alarm system that does not transmit an alarm to appropriate personnel. If alternate monitoring can be established, a Priority 1 may not be required.

APPENDIX A

WORK PRIORITY SYSTEM
(sheet 2 of 3)

2.2 PRIORITY 2

Those regular, routine actions required to ensure that the safety of the facility is maintained and those actions necessary to continue facility operation are executed. This work is normally scheduled to

1. Repair or prevent equipment breakdowns or correct problems that impact reliability of essential equipment/facilities

2. Perform tasks that are essential to meet program goals

3. Perform OSR/Technical Specification Surveillance procedures

4. Modify equipment for urgent near-term improvement

5. Accomplish essential equipment/facility modifications

6. Perform routine repairs to security systems (including repairs where alternate systems have been provided)

7. Perform mandatory preventive maintenance procedures

8. Perform necessary safety/environmental equipment maintenance and repairs.

2.3 PRIORITY 3

Perform work that is necessary but can be scheduled at the facility's option. Lack of performance does not jeopardize meeting the safety requirements or maintaining facility operation. This is work that can be scheduled to

1. Correct problems associated with nonessential but necessary equipment

2. Perform preventive maintenance procedures not identified as Priority 2 above

3. Modify equipment/facilities to improve operability or maintainability

4. Repair spare facility parts/equipment.

APPENDIX A

WORK PRIORITY SYSTEM
(sheet 3 of 3)

2.4 PRIORITY 4

All other work that can be scheduled to

1. Perform tasks that are nonessential to meet program goals
2. Perform tasks that are generally not directly related to the operation of a facility.

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ATTACHMENT C

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NAME	JOB TITLE
BRIGHTON TERESA E	LNPO
DABLING WARREN S	LNPO
DEAN LARRY L	LNPO
DUNN JEFF P	LNPO
JOYCE S BRENT	LNPO
KLUTE TERRENCE A	LNPO
MCMULLEN JAMES W	LNPO
MORRISON DAVID B	LNPO
PAULSELL TIM B	LNPO
THORNTON BETTY J	LNPO
WILDENBORG ROBERT J	LNPO
WILLIAMSON JOHN R	LNPO
WYATT DALLAS C	LNPO
ARMSTRONG MIKE J	NO
BARGER DAVID L	NO
BOYD LINDA S	NO
CROSS DUANE D	NO
DEEGAN JOHN E	NO
EBBERSON DARIN J	NO
FISHER TIM S	NO
HARTLEY LISA G	NO
HERMAN MIKE D	NO
HUFFMAN YVONNE M	NO
KNAPP BARB J	NO
MEEKS MARK R	NO
MILLER VICKIE L	NO
MORRIS WILLIAM A	NO
NEARING TIM K	NO
SHARP RICKY L	NO
SHORD R R	NO
SUMSION DALE K	NO
ALCALA HOPE	NPO
BACHMANN WILLIAM J	NPO
BACON TROY L	NPO
BERG PHILLIP M	NPO
BERGER CANDACE M	NPO
BERGER TED E	NPO
BLOOM NADA	NPO
BONEWELL JACK O	NPO
BONEWELL KRISTINE R	NPO
BOTU PRISCILLA J	NPO
BOYD MARY R	NPO
BURT STEVE L	NPO
CAMPBELL BOBBY C	NPO
CARAWAY EDWARD R	NPO
CAREY PAUL L	NPO
CARRERA FRANK	NPO
CAYLOR SCOTT A	NPO
CHRISTIANSON ROBERT	NPO
CHUNN MALCOM R	NPO
CLANCY DONNA G	NPO
CLEVELAND EVAN D	NPO
COUGHREN GORDON R	NPO
DAVIS MARSHALL J	NPO
DAVIS STEVEN R	NPO

NAME	JOB TITLE
DEMOTTS SANDRA L	NPO
DUDLEY DEAN O	NPO
EAGEN ALICE K	NPO
EDMUNDS DANIEL L	NPO
EDMUNDS JULIE A	NPO
EKSTROM ROBERT P	NPO
ELLINGSWORTH RANDY	NPO
EMERSON HARVEY F	NPO
FISCHER CHERYL S	NPO
FISH THOMAS M	NPO
FOREMAN BOBBY D	NPO
FOREMAN JOHN L	NPO
FOREMAN LINDA L	NPO
GALBREATH JAMES H	NPO
GEER DALE E	NPO
GEORGE KEVIN L	NPO
GREENAWAY DAVID A	NPO
GUERRA JOSE	NPO
HAM-HUEBNER SALLIE	NPO
HAMMACK ALAN G	NPO
HAMMER ROGER B	NPO
HASBARGEN BOB L	NPO
HATFIELD MERLE L	NPO
HENZEL VERNON L	NPO
JONES DONALD R	NPO
KATSEL PATRICIA A	NPO
KEARNEY CHARLES L	NPO
KLUNDT MARVIN E	NPO
KNAPP JAMES R	NPO
KOOB KAREN K	NPO
KULCZYK KENNETH E	NPO
LEAF KENNETH P	NPO
LEMOS RICHARD P	NPO
LOLLIS CHARLES B	NPO
MANIS JACK E	NPO
MCCORD COREY W	NPO
MEADOR GARRETT C	NPO
MILLER THOMAS N	NPO
MYERS BRENT	NPO
MYERS CLIFFORD D	NPO
PAYNE JOSEPH A	NPO
PETTEY RICHARD F	NPO
PHILLIPS BARBARA E	NPO
PYLE TIMOTHY A	NPO
RIDGLEY DAN E	NPO
RODRIQUEZ JOSE S	NPO
ROGERS ROBERT E	NPO
SANCHEZ CATHY L	NPO
SCHNEIDER WILLIAM R	NPO
SHARP BETTY M	NPO
SMITH WILLY N	NPO
SWAIN JOHN L	NPO
THORNTON GARETH L	NPO
TRAINOR KENNETH E	NPO
TRAINOR VIOLET J	NPO

NAME	JOB TITLE
TUCKSEN JEFFERY L	NPO
TURNER THOMAS M	NPO
WEEKS STEVEN E	NPO
WEIL MICHAEL R	NPO
WIBERG DANA W	NPO
WIDMAN DAVID M	NPO
WILKERSON PINK S	NPO
WILSON DANIEL W	NPO
WINDSOR MARK L	NPO
WITHERSPOON DOROTHY	NPO
WOEHLE DAN	NPO
WYATT BRUCE C	NPO
WYER BRADLEY C	NPO
ZAHN DONALD W	NPO
HIPKE DANNY L	PO
HORNE JOHN C	PO
ROSANE JERRY A	PO
STEFFEN ANTHONY G	PO

LNPO: Lead Nuclear Process Operator
NO: Nuclear Operator
NPO: Nuclear Process Operator
PO: Power Operator

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TITLE:	Approved by
200 AREA OPERATOR TRAINING PROGRAM	D. B. Klos, Manager Technical Training

1.0 IMPLEMENTATION INFORMATION

This document redefines and replaces the requirements that were listed in WHC-WD-56110-001, "200 Areas Nuclear Operator Training Program Description." This document outlines the purpose, scope, responsibilities, and other main requirements for the 200 Area Operator Training Program within the 200 Areas. It is expected that implementation of this section may have moderate to serious impacts on the facilities as they incorporate the requirements into their respective operator training programs.

2.0 PURPOSE

The purpose of this document is to establish the requirements for the Operator Training Program in the 200 Area nuclear facilities. The program reflects the requirements of DOE 5480.18A, "Accreditation of Performance-Based Training for Category A Reactors and Nuclear Facilities," 5480.19, "Conduct of Operations Requirements for DOE Facilities," and 5480.20, "Personnel Selection, Qualification, Training, and Staffing Requirements at DOE Reactor and Non-Reactor Facilities."

3.0 SCOPE

The requirements of this document apply to all Nuclear Operators (Seniority Group 004) employed by Westinghouse Hanford Company (WHC). Based on each facility mission, flexibility is provided for additional or modified training material. Facilities shall implement these requirements in their facility-specific training program.

4.0 DEFINITIONS

Please see Section 3.0, "Definitions," of this manual for a listing of the definitions that may apply to this document.

5.0 RESPONSIBILITIES

5.1 FACILITY/PLANT MANAGERS

The Facility/Plant Managers are responsible for the following:

1. Selecting, training, and certifying the nuclear operators.

2. Approving and implementing the facility's operator training program.

5.2 TECHNICAL TRAINING MANAGER

The Technical Training Manager is responsible for the following:

1. Establishing and maintaining uniform standards and requirements.

2. Providing technical, instructional, and administrative support to the Facility/Plant Managers, as defined in Section 1.0 of this manual.

5.3 TRAINING REVIEW BOARD

The Training Review Board is responsible for providing recommendations for the requalification program for previously certified personnel returning to work following extended absences, and/or corrective action for personnel demonstrating poor performance in the training program or facility operations.

6.0 REQUIREMENTS

6.1 ENTRY REQUIREMENTS

Applicants for the position of nuclear operator trainee (OT) shall have a high school diploma or equivalent, pass the Basic Occupational Literacy Test (BOLT III), which is normally administered by the Washington State Job Service, pass a pre-employment medical examination, have a drug screening, and complete a respirator mask fit.

6.2 INITIAL TRAINING REQUIREMENTS

All OTs shall complete the applicable areas of the Hanford General Employee Core training as required by U.S. Department of Energy (DOE) Orders and WHC regulations. Operator training is divided into three phases: Phase I - Fundamentals Training, Phase II - Plant Specific Training, and Phase III - Specific Certification Training.

FUNDAMENTALS TRAINING	
Fundamentals	Classroom instruction covering the fundamentals of Mathematics, Chemistry, Instrumentation, Electrical Theory, Nuclear Physics, and other related topics are included. This portion of the training program will be conducted onsite or offsite as appropriate, and may be a prerequisite to being hired by WHC. Qualifying examinations shall be given at the completion of this phase.
Introduction	Includes course overview, 200 Area map orientation, Hanford history, and WHC policies.
Process Fundamentals	Classroom instruction covering chemical processes specific to the 200 Areas. Courses may include solvent extraction, liquid waste systems, conversion processes, special nuclear materials handling, and waste concentration.
Safety Training	Classroom instruction covering safety-related topics. Primary emphasis is on Radiation, Criticality, Industrial Safety, and First Aid/Cardiopulmonary Resuscitation.
Rigging and Crane/Forklift	Classroom instruction and "hands-on" experience on the basics of hoisting, rigging, and lifting as applicable to operations in the 200 Area Plant/Facilities. Forklift basics and on-the-job training (OJT) shall also be covered during this portion of the training.
Contamination Control	Classroom instruction devoted to inside and outside methods of contamination control. OTs will participate in constructing a greenhouse and practice decontamination methods.
Miscellaneous Training	Instruction that covers generic, site training subjects to ensure the OT's safety and quality orientation is complete. Courses include Occupational Health and Safety Administration (OSHA) requirements, Drug and Alcohol Awareness, Quality Assurance/Quality Control (QA/QC) Program, Emergency Preparedness, Criticality Prevention, Lock and Tag, Configuration Control, Fire Extinguisher Training, Security, and Hanford General Employee Training (HGET).

NOTE:
At the completion of this phase of training, a qualifying examination shall be given. The examination covers the objectives of the Phase I courses. Individuals who fail the examination will be given 2 weeks to pass a re-examination. Failure of the re-examination shall result in removal from the OT program.

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6.2.1 Plant-Specific Training

After satisfactory completion of the Phase I fundamental training, the OT will be assigned to a facility for plant-specific training. Because of differing missions and facility processing complexities, plant-specific training time and content will vary between facilities. All plant-specific training programs shall include appropriate and applicable courses covering General Design and Configuration, Auxiliary and Support Systems, Safety Fire and Emergency Systems, Facility Safety Training, Operational Safety Requirements (OSR), and Emergency Response and Casualty Control.

Phase II training shall be evaluated by a written examination. Individuals who fail the examination must satisfactorily complete a re-examination within 1 month.

6.2.2 Qualification Training

At the completion of Phase II training, the OT may be provided supplementary classroom training to prepare the trainee for OJT and qualification, leading to operator certification. This training will be preparatory to each certification.

6.2.3 On-the-job Training

On-the-job training shall be used to ensure that each operator obtains the required skills to safely and effectively perform a job function. The OJT program shall be described in the facility-specific training program.

On-the-job training is achieved by following the requirements of the Qualification Guide. Under the direct supervision of a certified operator or supervisor, the trainee receives practical "hands-on" training in the operation of the plant/facilities systems and equipment. The trainee's understanding and proficiency in each task is documented and signed-off on the appropriate Qualification Card.

6.2.4 Written Examination

Upon the successful completion of the on-the-job training for a particular certification, the trainee will be given a written examination designed to test and confirm the trainee's understanding of the knowledge requirements defined in the Qualification Guide.

6.2.5 Independent Operational Evaluation

Upon the completion of the written examination, the trainee will be given an independent operational evaluation designed to test and confirm the trainee's ability to safely and effectively perform the operations required for the qualification, and the trainee's knowledge and understanding pertaining to those operations as defined in the Qualification Guide.

6.2.6 Probationary Acceptance

The performance of the operator trainee during the probationary training period shall be recorded on a Trainee Probationary Training Record. Classroom performance and in-plant performance shall be evaluated and recorded. The decision to retain or release the trainee shall be made at the end of the probationary period by the plant/facility operations manager, and recorded on the probationary training record. The completed record shall be retained in the operations training records.

6.2.7 Certification

When all the training, qualification , examination, and administrative requirements have been successfully completed for a particular qualification, the plant/facility manager may certify the operator for independent performance of tasks covered by that certification.

6.3 CONTINUING TRAINING AND RECERTIFICATION

6.3.1 Continuing Training

Continuing training will be conducted to maintain and keep current the operator's skills and facility/plant knowledge. It will provide facility/plant certification-oriented training that will enhance the operator's knowledge, provide refresher training in selected areas, and ensure proficiency in areas where certification has been attained.

Continuing training may be presented in lectures, self-study, computer-based training (CBT), demonstrations, etc., as appropriate to the facility. All certified operators subject to this program shall participate in the continuing training program. This program shall be established at each facility and shall include as a minimum:

- Attendance at selected continuing training lectures.
- Completion of required reading.
- Completion of selected performance items.
- Biennial recertification and annual emergency and abnormal procedures written examinations.

6.3.2 Lectures

A minimum of four lectures shall be scheduled and conducted annually. Lectures shall be given a sufficient number of times to ensure that all targeted individuals will be able to attend. Lectures missed by an operator shall be made up either by attending the lecture at a different time or by self-study of the instructional material.

The level of knowledge presented in these lectures shall be consistent with that required for initial certification. The content of this training shall be detailed in the facility-specific training program, including the following topics, as appropriate to the facility:

- Theory and principles of operation.
- Industrial, Radiological and Criticality Safety.
- Operational Safety Requirements.
- Facility protection systems.
- Facility operating characteristics.
- Safety systems, design, and operation.
- Facility instrumentation and control.
- Normal, abnormal, and emergency procedures.

6.3.3 Required Reading

A required reading program shall be established for each facility and shall be described in the facility-specific training program. Technical trainers assigned to the facility shall be included with the facility personnel. The program should include material determined appropriate and necessary by facility operations management. As a minimum, it should include:

- Building emergency and evacuation plans.
- Reports of off-normal occurrences.
- Design changes in the facility, as appropriate.
- Selected infrequent and abnormal, or changed procedures.

6.3.4 Performance Requirements

Each facility shall include performance requirements in the continuing training program for those skill items that have been added to the initial operator Qualification Cards in the last 2 years. Additionally, selected skill items from the operator's qualification program that should be practiced to ensure proficiency shall also be included.

6.3.5 Examinations

Written examinations shall be administered on essential material covered in the continuing training program. An Emergency Procedures and Abnormal Plant Conditions (EP/APC) written examination shall be given every year.

6.3.6 Proficiency Requirements

Operators identified by the operating organization to be certified must actively participate in the job functions associated with their certifications. Each facility shall establish procedures which define requirements and frequency necessary to maintain their certification status. If the established proficiency requirements are not met, certification shall be suspended and the person shall not be assigned certification duties until their certification is regained.

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6.3.7 Operator Recertification

A recertification program shall be implemented to ensure operator proficiency through a biennial evaluation process, which verifies the certified operator's knowledge and skills. Recertification methods may vary depending on the type of certification held, the critical elements of the process involved, hazardous materials involved, seniority/experience level, etc. Methods used may include demonstrations, demonstration/performance, lecture, etc., appropriate to the frequency and importance of the activity.

An operator shall re-certify, on each certification held, 2 years from the date of the initial or subsequent recertification. The due date for recertification shall be a "window" which begins 2 months before the date of initial certification and ends on the last day of the month in which the certification was accomplished. Failure to re-certify within the given window shall result in the operator being removed from activities requiring the certification.

If extenuating circumstances or plant configuration inhibits the recertification process, the operator shall complete all portions of the recertification available and shall be provisionally recertified. The operator shall be restricted from performing those specific tasks which cannot be demonstrated until such time as proficiency demonstration can be done.

The Facility/Plant Manager shall recertify individual operators based upon the successful completion of the continuing training program, and the review of other documents such as evaluations, security checks, medical status, and absence records.

6.4 REMEDIAL TRAINING

A remedial training program shall be implemented to give an operator written direction of actions to be completed to achieve an increased competence in an area of demonstrated deficiency. Remedial training programs may be assigned, as necessary, but shall be assigned for the following:

- Failed classroom examination.
- Failed written certification/recertification examination.
- Failed independent operational evaluation.

Required remedial training programs must be approved by the Facility Operations Manager. The remedial training program should be of sufficient depth to ensure that the operator has the requisite knowledge in the weak area. In the case of a failed written examination, a 2 week minimum waiting period shall be observed before a make-up examination can be administered.

6.5 JOB PROFICIENCY

6.5.1 Transfers

Operators who are transferred from one 200 Area facility to another 200 Area facility shall begin training for new job certifications after completion of the plant-specific training. Until certified, the operator shall be assigned to work under the direction of a certified operator.

6.5.2 Absences

Retraining shall be required of all operators following extended absence from the plant or facility, or if the operator has not performed duties for which he/she is certified, for an extended time period, as defined below. The extent of retraining will depend on the duration of the absence or time away from the process. Operations management shall assess the depth and method of retraining needed in accordance with the following guide:

- Less than 3 months. If retraining is deemed necessary, informal training and oral testing may be sufficient

- 3 to 12 months. Selected retraining, including oral and written examinations as deemed necessary, will be provided before reassignment to certification duties. The base date of initial certification or recertification remains unchanged.

- Greater than 12 months. Written and oral examinations equivalent to initial certification requirements shall be administered to determine areas of weakness where recraining is required. Retraining and re-examinations shall be given in areas of weakness. After successful completion, certification may be re-established to a new certification date.

6.6 ADMINISTRATIVE REQUIREMENTS

6.6.1 Certification Documents

A certification "package" is a compilation of those inter-related training materials which define the qualifications to be achieved by an operator to become certified to perform a specified operational function. A separate certification package shall be developed and approved for each operator certification. A certification package is comprised of the following:

- Qualification Guide (Qual Guide).
- Training manual.
- Lesson plan (where required).
- Independent Operational Evaluation.
- Test question bank.
- Qualification Card (Qual Card).

6.6.2 Qualification Guide

The Qualification Guide identifies the minimum acceptable knowledge and skills required to safely and effectively perform the tasks identified on the Qualification Card. The Qual Guide is also used as a study reference, as evaluation and training guidance for trainers and managers, and as a source reference document for establishing the Independent Operational Evaluation.

6.6.3 Training Manual

The training manual provides information designed to assist the operator in meeting the knowledge requirements for the certification, in composite instructional form.

6.6.4 Lesson Plans

The lesson plans provide an instructional outline for classroom presentation of the information contained in the training manuals.

6.6.5 Independent Operational Evaluation

The Independent Operational Evaluation is a complement to the Qual Card. It provides a checklist of the minimum task performance and associated knowledge and skill requirements (as defined in the Qual Guide and Qual Card) which must be met during the conduct of the independent evaluation. The independent evaluator may add requirements from the Qual Card/Qual Guide, as necessary to assure that the trainee is fully qualified.

6.6.6 Test Question Bank

A bank of questions designed to test the trainee's understanding of the knowledge requirements specified in the Qual Guide. Written qualification examinations are comprised of questions randomly selected from the test question bank.

6.6.7 Qualification Card

The Qualification Card defines operator performance requirements for the certification to which it pertains. It also lists prerequisite training requirements, and provides sign-off record of completion of qualification requirements.

6.7 ADMINISTRATION OF EXAMINATION AND RECORDS

The passing grade for written examinations covering the material presented in fundamentals training shall be 70% on each section of the course. The passing grade for written examinations covering material presented in the plant-specific classroom training and for each certification examination shall be 70%. Minimum passing score on an Independent Operational Evaluation is 70%. While some evaluations are subjective and are therefore graded PASS/FAIL, the evaluator shall apply the above criteria as guidance.

6.7.1 Examination Control

Employees shall have the opportunity to review their graded examinations and Independent Operational Evaluations upon request. Such reviews are confidential. Copies of examinations shall not be provided to employees.

6.7.2 Completed Examinations

Completed examinations shall be controlled in accordance with Section 7.4 of this manual to prevent the compromise of examination material (document not yet published in this manual).

7.0 REFERENCES

DOE 5480.18A, "Accreditation of Performance-Based Training for Category A Reactors and Nuclear Facilities."

DOE 5480.19, "Conduct of Operations Requirements for DOE Facilities."

DOE 5480.20, "Personnel Selection, Qualification, Training, and Staffing Requirements at DOE Reactor and Non-Reactor Facilities."

WHC-CM-2-15, Training Administration Manual.
Section 1.0, "Technical Training Organizations."
Section 3.0, "Definitions."

ATTACHMENT D

U.S. Department of Energy
Richland Field Office

P. O. Box 550, Mail Stop A4-52
Richland, Washington 99352

TO: Tanya Barnett

FROM: Carolyn Reeploeg
(509) 376-2026 - call if questions

MESSAGE: You may want to add more to this, but for FOIA purposes the attached is all we need

Number of pages: 2
(including cover sheet)

Please verify complete receipt. Thank you.

Facsimile Number: (509) 376-4590
Confirmation Number: (509) 376-7374

Legal Department

9312898042 7

Yvonne Sherman
Freedom of Information Act Officer
P.O. Box 550, MSIN A7-75
Richland Field Office
United States Department of Energy
Richland, WA. 99352

Dear Ms. Sherman:

Pursuant to the Freedom of Information Act (5 U.S.C. § 552), I request the following Westinghouse Hanford Company employee(s) training records:

[INSERT EMPLOYEE(S) NAME(S) HERE]

_____
[signature of requestor]

_____
[date of request]

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Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

May 8, 1992 VIA FAX

Tanya Barnett, Esquire
Assistant Attorney General
Washington State Attorney General's Office
4407 Woodview Drive, S. E.
Lacey, Washington 99504-0117

Re: WESTINGHOUSE HANFORD COMPANY TRAINING RECORDS

Dear Tanya:

Following up on our conversation of today, enclosed please find a copy of the draft report issued by the Washington State Department of Ecology. Let me again emphasize that my purpose in contacting you anew is to seek a resolution to the issue of access to training records of Westinghouse Hanford Company employees by the Department of Ecology that was first raised in September, 1991, and which we previously discussed in February of this year. The sole purpose in providing you this draft report is to facilitate your understanding of the issue and by no means is this letter or our conversation to be construed an appeal of any of the findings contained in the report or as a comment on those findings.

As I indicated in our conversation, Westinghouse Hanford Company (WHC) continues to be very interested in resolving this issue. Like you, we also believed that the issue was resolved satisfactorily some time ago. In fact, it was our understanding that the U.S. Department of Energy and the Department of Ecology had exchanged correspondence or conducted discussions on this issue and that an acceptable solution had been reached. As I pointed out in our conversation and in my letter of February 19, WHC is constrained by the terms of the federal Privacy Act. Nevertheless, I believe there should be some way to resolve this access issue through the mutual cooperation of the parties.

Once you've had an opportunity to revisit this issue, please give me a call on (509) 376-6738. As I indicated to you, I will be in the office on Monday and Tuesday, May 11 and 12, and will be back in the office on the afternoon of May 15. I look forward to working with you in this matter and hopefully we can reach successful resolution.

Sincerely,

Robert A. Dutton
Senior Counsel

dh

Enclosure.

cc: P. J. Mackey
C. E. Reeploeg
B. D. Williamson

Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

May 26, 1992 VIA FAX

Tanya Barnett, Esquire
Assistant Attorney General
Washington State Attorney General's Office
4407 Woodview Drive, S. E.
Lacey, Washington 99504-0117

RE: CONFERENCE CALL - WESTINGHOUSE HANFORD COMPANY TRAINING RECORDS

Dear Tanya:

This letter will serve to summarize the conference call that occurred on May 21, 1992, with the U. S. Department of Energy Richland Field Office, Westinghouse Hanford Company, and your office. Representing the Department of Energy, Richland Field Office (DOE-RL) in the conversation were Ms. Carolyn Reeploeg, Esquire and Ms. Yvonne Sherman. Representing Westinghouse Hanford Company was the undersigned and Ms. Peg Cottrell. The basic thrust of the conversation was to seek a solution to the issue of access to training records of Westinghouse Hanford Company (WHC) employees. As you will recall, training records maintained on WHC employees are protected by the Privacy Act (5 USC 552a).

During the conference call, DOE and WHC provided three options calculated to resolve the access issue. The first option was for your client, the Department of Ecology, (Ecology) to file a Freedom of Information Act (FOIA) (5 USC 552b) request for the specific records requested. In discussing this option further, both DOE-RL and WHC pledged that if this approach were adopted, the records would be expeditiously reviewed, redacted, and provided to the Ecology requester. Further, a standard form letter for the request could be developed requiring minimal information from Ecology. My records indicate that shortly after the termination of the conference call, DOE-RL faxed to your office a draft of what the form request would look like. Finally, the principle advantage to this option is that once the information is released pursuant to FOIA, it would have no further restrictions on dissemination and use.

The second option that we discussed was for DOE to amend its systems notice in the Federal Register and provide access to Ecology employees as an identified routine use. As we discussed, the principle disadvantage to this approach would be that the information would still contain its character i.e., remain protected by the Privacy Act. This of course would in all likelihood, place further restraints on Ecology's dissemination of the information. However, the principle advantage to be

gained was that the information could be reviewed by the Ecology inspector on-site.

Finally, we discussed the possibility of a head of a federal agency making a request to DOE for these records. The head of the agency in this case would be the Administrator for the U. S. Environmental Protection Agency. My notes indicate that all parties agreed that this was not a workable solution.

It is my understanding that based upon this conference call, the position of the Attorney Generals' Office is that the FOIA option is acceptable and will be utilized by employees of Ecology to gain access to the training records of WHC employees. Further, the Richland Field Office has agreed to request DOE Headquarters to publish a notice in the Federal Register amending the systems notices relating to training records to provide immediate access by Ecology personnel. Finally, WHC agreed to process the FOIA requests for specifically identified records on a priority "as soon as possible" basis which in the main, would mean transferring the records electronically, making the redactions electronically, sending the redacted record to the Richland Field Office Privacy Act\FOIA Officer for release to the Ecology requester or in the alternative, upon receipt of approval by the Richland Field Office Privacy Act\FOIA Officer, WHC could directly provide the requested records to the Ecology personnel.

Please advise me at your earliest convenience if I have misstated or misunderstood anything which transpired in the telephone conference call of May 21 as set forth above. If you have any questions, I am available on 509-376-6738.

Sincerely,

Robert A. Dutton
Senior Counsel

dh

cc: C. E. Reeploeg

RECORD COPY

OCT 03 1991

Mr. Timothy L. Nord
Hanford Project Manager
Washington State Dept. of Ecology, PV-11
Olympia, Washington 98504-8711

Dear Mr. Nord:

EMPLOYEE TRAINING RECORDS

It is our understanding, based upon the conversations between Scott McKenney and Yvonne Sherman, of my staff, that the State of Washington Department of Ecology (Ecology) seeks access to certain Westinghouse Hanford Company (WHC) employee training records. We do not foresee any problems with providing such information, but we would ask that you send Yvonne Sherman, Freedom of Information Act Officer, a written request for these records.

Your request should include the following:

- a statement of the purpose for which the information is to be collected (the statutory/regulatory requirements you are fulfilling),
- a reference to the fact that you are requesting the information under the Freedom of Information Act,
- the indication of an ongoing need for the information, if applicable, and
- an assurance that the information obtained will not be distributed further, or be used for any purpose other than that for which it is being collected.

Because of the employees' interests under the Privacy Act, and because it is of no use to Ecology, the payroll number of the individual employee will be deleted from the training records.

Upon receipt of your letter, we will provide a written response to your request.

Sincerely,

ORIGINAL SIGNED BY
Wm. Lynn Engles

Wm. Lynn Engles, Director
Office of Communications

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

92-RPA-222

JUL 10 1992

Mr. Roger F. Stanley
State of Washington
Department of Ecology
Post Office Box 47600
Olympia, Washington 98504-7600

Dear Mr. Stanley:

SECOND RESPONSE TO DANGEROUS WASTE COMPLIANCE INSPECTION FOR TANK 241-SY-101

References: (1) Letter, R. D. Izatt, RL, to R. F. Stanley, Ecology, "Dangerous Waste Compliance Inspection for Tank 241-SY-101", dated June 5, 1992.

(2) Letter, R. F. Stanley, Ecology, to H. D. Harmon, WHC, et al. "Dangerous Waste Compliance Inspection for Tank 241-SY-101", dated May 14, 1992.

This letter transmits enclosures which meet a commitment schedule, as delineated in Reference 1, made by U.S. Department of Energy Richland Field Office (RL) and Westinghouse Hanford Company (WHC) to the State of Washington Department of Ecology (Ecology). These commitments were made in response to the Ecology letter cited in Reference 2. The commitments addressed in this letter are as follows:

By July 10, 1992, RL and WHC agreed to review, identify, prepare, and submit to Ecology, a detailed description of all leak detection and alarm systems relating to the monitoring of Tank 241-SY-101. Enclosure 1 contains this information.

By July 10, 1992, RL and WHC agreed to submit to Ecology any identified discrepancies associated with the operation and performance of the leak detection equipment and alarm systems for Tank 241-SY-101. Enclosure 2 contains these deficiencies.

By July 15, 1992, RL and WHC agreed to submit to Ecology the investigation results of any discrepancies found in the inspection (calibration system) for Tank 241-SY-101. This information has been included in Enclosure 2.

The enclosures to this letter contain very detailed explanations of several separate liquid level monitoring instruments, leak detection apparatus and air sampling devices being used to monitor Tank 241-SY-101. The purpose of these systems is to meet Department of Energy requirements to ensure that the contents of tank are not released to the environment or endanger employee or public health. It is the position of RL that each monitoring apparatus, when evaluated individually, independently fulfills the monitoring and leak detection requirements as set forth in the Washington Administrative Code (WAC) at 173-303-640, Tank Systems.

It is also RL's opinion that the section of WAC which describes the regulatory requirements for tank monitoring systems does not require the utilization of such multiple systems for monitoring and leak detection purposes. The Ecology inspection of Tank 241-SY-101 and RL's response to requests for information regarding our monitoring systems points to the need for our organizations to meet and discuss this matter in greater detail. To that end, RL proposes that representatives from our respective departments convene in the near future to examine this issue.

If you have any questions concerning this matter, please feel free to contact me or Mr. R. G. Holt of my staff on (509) 376-9989.

Sincerely,

R. D. Izatt, Program Manager
Office of Environmental Assurance,
Permits, and Policy

EAP:RGH

Enclosures

cc w/encl:
P. T. Day, EPA
H. D. Harmon, WHC

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U.S. DEPARTMENT OF ENERGY
RICHLAND FIELD OFFICE
A DETAILED DESCRIPTION OF ALL THE LEAK DETECTION
AND ALARM SYSTEMS RELATED TO MONITORING ON TANK SY-101
PER REQUEST IN ITEM #1 IN THE MAY 14, 1992 ECOLOGY LETTER
REGARDING DANGEROUS WASTE COMPLIANCE INSPECTION
FOR TANK 241-SY-101

This enclosure includes a description of the 101-SY tank and its associated liquid level and leak detection systems. As the double-shell tank systems have multiple monitoring systems, the systems discussed herein encompass more than the minimum systems required by the State of Washington Dangerous Waste Regulations.

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TANK 101-SY - Tank 101-SY is a double-shell mixed radioactive waste storage tank. This tank is fabricated as two concentric shells. The free-standing primary tank contains the radioactive waste material, and is 75 feet in diameter. The secondary tank, five feet larger in diameter than the primary tank, creates a surrounding space called the annulus. The completely enclosed annulus serves as a containment barrier if the primary tank should leak. Surrounding the second tank is a concrete shell that provides additional containment, radiation shielding, and structural support.

An important note to point out is that one inch of liquid in the primary tank represents 2,754 gallons; whereas, one inch of liquid in the annular space would represent 379 gallons. This would cause a liquid rise in the annulus level (if a leak were to occur) about 7 times faster than the corresponding drop in the primary tank liquid level. The reader may wish to reference the associated graphics presented in the *DOUBLE-SHELL TANK SYSTEM DANGEROUS WASTE PERMIT APPLICATION* for illustrations of the various systems which are described herein.

LIQUID LEVEL INDICATING TRANSMITTER - Tank 101-SY is equipped with level detection by means of conductivity probes and a radar gauge. The conductivity probes consist of both an automatic Food Instrument Corporation (FIC) gauge and a reel-mounted manual tape device. The principle of operation for both instruments is electrical conductivity. The FIC gauge is designed to be an automatic device which periodically lowers a probe to the surface and identifies the surface by either conductivity or by a slack switch detector on the tape. The automatic gauge consists of an electrically driven plummet, a calibrated tape, a tape reel, a sight glass, control box, and flush equipment. A counter is provided for readout of liquid level to the nearest 0.1 inch. The precision of accuracy for the automatic FIC is +/- 0.25 inch. The manual method consists of lowering a reel-mounted tape or calibrated insulated wire, to which electrodes are attached, to a point where the liquid surface is contacted. Readout is obtained through the use of a portable direct-current meter. The data is recorded to the nearest 1/4 inch increment. The precision of accuracy for the manual tape is +/- 0.5 inch.

Ordinarily, the automatic FIC gauge is connected to the Computer Automated Surveillance System (CASS) for daily readout, monitoring, and trending. However, because of the poor conductivity in the crust in this tank, the continuous mode of operation of the FIC is turned off and is operated twice per shift to obtain a reading.

The radar gage uses extremely low-level microwave energy to measure the height of the waste from the gauge. The radar gauge measures to +/- 0.1 inch and existing data demonstrates its reliability. The Enraf-Nonius Radar Gauge requires no calibration after installation. This is because this gauge has a 7.2 m (23½ ft) length of coaxial cable in the antenna unit which serves as a distance reference line. This line also provides compensation for changes in reference frequency and temperature.

THE ANNULUS LEAK DETECTION - The 101-SY annulus leak detection consists of a conductivity probe and an annulus radiation monitor, commonly known as a continuous air monitor (CAM). The principle of operation for these conductivity probes is the same as for the primary tank manual tape. Drain channels in the insulating concrete, under the primary tank, carry any leakage to the annulus space where it is detected by these probes which are set 1/2 inch from the secondary tank (or annulus) bottom. This device provides a real-time alarm. It activates an indicator light and annunciator in the 241-SY-271 Instrument Building, in the 242-S Evaporator Control Room, and annunciates (as well as prints out) at CASS. The established action criteria for this device is to investigate any indication of a leak detected by this device.

The 101-SY double-shell tank is equipped with an annulus ventilation system. Ventilation air enters the annulus through inlet HEPA filters. The incoming air is ducted to the annulus space below the center of the primary tank. From this point it is released to the annulus and flows up and out through an outlet duct to the annulus exhaust fan and stack. Due to the relatively high and balanced rate of air flow, the CAM which samples the outlet air stream/duct is an important leak surveillance parameter. Any leaking liquid from the primary tank would contaminate the annulus air with radionuclides, which in turn, would set-off the annulus tank CAM alarm.

The annulus leak detector CAM functions by pulling 2 cubic feet per minute (CFM) of air flow from the annulus through a probe inserted in the ducts leading from the annulus to the stack. The probe for the 101-SY annulus is designed to be isokinetic at 94 CFM.

The flow through the 101-SY annulus was designed for 250 CFM at a temperature of 200°F. The system is designed to maintain constant air flow from the annulus. Flow is sensed by flow elements in the duct. The signal is sent to a pneumatic transmitter and controller system. The flow controller sends signals to the flow-damper motor which controls a duct valve. The annulus is thus maintained at a negative pressure which will vary with the pressure drop across the inlet filters. A flow recorder records the flow from each tank annulus. The flow recorder also actuates the alarm light when the flow from either tank annulus drops to 150 CFM. This alarm light was designed to be an indication of excess pressure drop in the inlet filters. Currently, the low flow alarm light is activated because the instrument air which amplifies the pressure signals from the annulus ducts is turned off. To assure annulus

flow, the valves controlled by the damper motors, on each of the three annuli ducts, have been fixed in the fully opened position.

The annulus stack is provided with two separate pressure gauges. Approximate flow through the stack can be obtained with these gauges. Division of the calculated results by three will give an approximate flow in the 101-SY tank annulus. This assumption is approximately true since each of the three annulus duct valves is fixed in the fully opened position. This assumption is also true if the differential pressure across each of the three annulus inlet HEPA filter systems (three tank annulus vent systems) are approximately equal.

Accurate flow measurements are periodically taken on the Tank Farm stacks by the Vent and Balance organization. Ventilation data from March 1990 through September 1991 resulted in an average total flow of 705 CFM through the annulus stack. Dividing this average total flow by three (three tank annulus vent systems) results in an average flow of 235 CFM through each annulus. Vent and Balance is scheduled to take the next flow measurement in this stack during September 1992 (per *Work Plan Test Procedure Upgrade Program For Ventilation Systems In Tank Farms* WHC-SD-WM-WP-147). A similar CAM device and a record sampler samples the air flowing through the annulus stack. The record sampler is analyzed weekly and radionuclide emissions from this stack are reported annually.

If the annulus ventilation radiation reading increase greater than three times an established baseline (normal background) action is taken. When this occurs, the filter medium within the device is sent to the labs and analized to determine if a leak has occurred. Alarms associated with this device and which are of interest for purposes of this response are:

TK 101-SY ANNULUS SAMPLE PUMP FAILURE CASS alarm - This alarm annunciates in the 241-SY-271 Instrument Building and in the 242-S Evaporator Control Room. It is also a local common alarm; meaning, it annunciates at the instrument location. This alarm denotes a problem with annulus radiation sampling system flow.

TK 101-SY ANNULUS EXHAUST RADIATION HIGH CASS alarm - This alarm annunciates in 241-SY-271 Instrument Building and the 242-S Control Room. This alarm indicates a possible leak in the 101-SY annulus.

SY FARM EXHAUSTER TROUBLE CASS alarm - This alarm annunciates in 241-SY-271 Instrument Building and the 242-S Control Room. This alarm indicates a problem with the annulus exhaust stack HEPA filters.

SY FARM ANNULUS EXHAUSTER FLOW LOW CASS alarm - This alarm annunciates in 241-SY-271 Instrument Building and the 242-S Control Room. This alarm indicates a problem with the annulus inlet HEPA filters.

SY FARM ANNULUS EXHAUST RADIATION HIGH (FANS SHUTDOWN) CASS alarm - This alarms in 241-SY-271 Instrument Building and in the 242-S Building. This alarm denotes that the annulus exhaust stack is/could be discharging high radiation; meaning that one or more of the three SY tanks might be leaking into their respective annular spaces.

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In addition, a sample flow local alarm exists on the annulus stack sampling system. This alarm is a flashing beacon on the stack sampling system cabinet. This alarm would denote a problem with the sample system flow. It does not go to CASS but does alarm in the 241-SY-271 Instrument Building and in the 242-S Building.

THE LEAK DETECTION PIT - If the tank annulus were ever to collect liquids, a leak detection pit is provided to detect any leaks from the annulus. The pits are not leak detection devices for the primary tank, but provide leak detection data for the annular (secondary) tank. If the annulus should become filled with waste from a leaking primary tank, the LDP would then become the primary leak detection device for the annular tank.

Leak detection pits are designed to detect and recover solution leakage through the tank's steel secondary liner (the annulus). Such leakage is collected in slots in the concrete foundation. These slots drain to the center which is plumbed to a 60 foot deep leak detection well located adjacent to the tank. The well consists of a vertical section of 24-inch diameter pipe surmounting a base section 3 feet high by 4 feet in diameter. The 24-inch section is a pumpout riser that extends to a pump pit in which a 10 gallon per minute deep well pump can be installed and the solution routed to a designated receiver tank.

There are three basic instrument systems installed on each leak detection pit. One is a radiation detection well installed adjacent to, and extending to the base of, the 4-foot diameter section. The second consists of instrument dip tubes for measuring weight factor (which provide liquid level) and specific gravity. Readout is provided at the panel-boards in the associated instrument buildings. The third is a thermocouple installed in a well that extends to within 3 inches of the bottom of the pit. The principle of operation, alarms, and action criteria for these devices is as follows:

Radiation Detection Well - A drywell is located outside of but in close proximity to the leak detection pit. A radiation detector element is suspended on a chain and lowered to the bottom of the drywell, adjacent to the liquid maintained in the leak detection pit. Waste leaked into the pit will emit gamma radiation that will be detected through the pit and drywell walls. Radiation above background will trip the alarm. The alarm is located on CASS and in the 242-S Control Room. A radiation increase in excess of 0.2 R/h from an established baseline is an action criteria. If both a weight factor increase of 4 inches above an established baseline and a corresponding radiation reading increase in excess of 0.2 R/H from an established baseline occurred, a Discrepancy Report would be initiated.

Weight Factor (Liquid Level) - A 1/2-inch (nominal) diameter bubble pipe extends to within 1 inch of the leak detection pit floor. A small flow of instrument air continuously purges this pipe. The pressure existing within this pipe is measured relative to the pit atmosphere and directly indicates the hydrostatic head of liquid in the pit. High weight factor

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(hydrostatic head) causes the alarm to be tripped. This alarms at CASS, in the 241-SY-271 Instrument Building, and in the 242-S control room. A weight factor increase in excess of 4 inches from an established baseline is an action criteria. The established operational liquid level limit within this pit is between 4 and 24 inches.

Specific Gravity - A second 1/2-inch bubble pipe extends to within 10 inches of the weight factor bubble pipe. It is similarly purged with a small flow of instrument air, and the pressure in the pipe is measured. The difference in the pressure of the weight factor and specific gravity tubes is a direct indication of pit-liquid specific gravity. The specific gravity for raw water is 1.00 inch and a significantly higher value is expected to indicate the presence of waste. There are no alarms for this device. In addition, no action criteria are established.

Thermocouple - Temperature within the leak detection pit is provided for use in conjunction with special studies relating to other anomalies. No action criteria or alarms exist.

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U.S. DEPARTMENT OF ENERGY
RICHLAND FIELD OFFICE
IDENTIFIED LEAK DETECTION EQUIPMENT AND ALARM SYSTEM
DISCREPANCIES
RELATED TO MONITORING ON TANK SY-101
PER REQUEST IN ITEM #2 IN THE MAY 14, 1992 ECOLOGY LETTER
REGARDING DANGEROUS WASTE COMPLIANCE INSPECTION
FOR TANK 241-SY-101
AND
THE INVESTIGATION RESULTS IDENTIFYING ANY DISCREPANCIES
FOUND IN THE INSPECTION PROCEDURES AND CALIBRATION PROGRAM FOR TANK SY-101
PER REQUEST IN ITEM #7 IN THE MAY 14, 1992 ECOLOGY LETTER
REGARDING DANGEROUS WASTE COMPLIANCE INSPECTION
FOR TANK 241-SY-101

For purposes of this response, a special task team was assembled to look for deficiencies in not only the leak detection and calibration systems for 101-SY, but also in all the like systems throughout the Double-Shell Tank Systems as described in the *DOUBLE-SHELL TANK SYSTEM DANGEROUS WASTE PERMIT APPLICATION*. To date, all these systems within the SY Tank Farm complex have been examined. This effort included the following activities:

- Identification of applicable instruments - A conservative approach was taken to identify the leak detection and alarm systems components for the purpose of performing the field walkdowns.

- Review of the adequacy of calibration and preventative maintenance procedures used on these instruments. These procedures were used to test the applicable instruments. No problems were found with the procedures.

- Review of existing work packages.

- Field walkdown of the SY Tank Farm Complex to confirm existing problems and to determine if other unidentified problems exist. The inspections/walkdowns included the review of the following Plant Instrumentation Surveillance, Calibration and Evaluation System (PISCES) reports:

  - Loop Number/Instrument Number Cross Reference Report 013
  - Calibration Overdue Report 007
  - Calibration Procedure Missing Report 040
  - Inventory By Active Instrument Report 045
  - Facility Drawing Number List Report 046
  - As Left As Found Component History Report 070

A summary of the walkdown/inspection of 101-SY is presented below. General conditions of the systems are noted. A poor or failed condition statement can be taken to mean a deficiency exists.

LIQUID LEVEL DETECTION - As a result of the field walkdowns it was determined that these system are in satisfactory condition. Level detection is available for the 101-SY tank using the installed radar gauge and the FIC in its manual mode.

The radar gauge recently installed in the 101-SY tank is considered state of the art and is in excellent working condition.

The continuous mode of operation of the FIC is turned off because of the poor conductivity in the crust in this tank.

The manual tape installed in 101-SY is currently hard to read and has accumulated solids on the probe, thus affecting its accuracy. This is a deficiency and is being addressed.

The 101-SY liquid level detection instruments are identified as follows:

The Radar Level Gauge

Liquid Level Element LLE 1011 SYS

Liquid Level Indicator/Transmitter LIT 101 1

Liquid Level Indicator Manual Tape LLI FB 101

ANNULUS LEAK DETECTION VIA CONDUCTIVITY PROBES - As a result of the field walkdowns it was determined that these instruments are in satisfactory-to-good condition. The annulus leak detectors on the 101-SY and the 102-SY tanks have recently been replaced and are in good working condition. The 102-SY tank detector still has the old housing arrangement (flake box) and needs to be replaced. It is operational at this time.

The problem identified with this device in the 101-SY tank annulus during the audit performed by Ecology personnel (incorrectly set at 2.5 feet from the bottom) has been corrected. Operating procedures were revised and tested on March 11, 1992. The maintenance procedure was revised on April 14, 1992. PISCES job cards and Preventive Maintenance data sheets confirm the correct setting of 1/2 inch from the bottom.

These 101-SY annulus leak detector instruments are identified as follows:

Leak Detector Element LDE 101 2A SYS

Leak Detector Indicator LDI 101 2A

Leak Detector Alarm LDA 101 2A

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ANNULUS LEAK DETECTION RADIATION MONITORING - As a result of the field walkdowns it was determined that these instruments are in satisfactory to poor condition.

The monitoring equipment is installed in outside cabinets near each tank. The temperature controls within these cabinets are poor and cause the instruments to drift.

The underground wiring to the 103-SY monitor failed about five years ago. The interim fix has been to provide 480-volt AC power via an above-ground cord run from the 101-SY monitor. A permanent fix for this cord is being pursued.

As an upgrade for these monitors, a modification to replace them with standard Eberline beta/gamma CAMs is being prepared. These systems are installed in various locations throughout the site and have a proven reliability. The needed equipment (cabinets, CAMs, etc) has already been procured and is currently available at 272-WA.

One of the problems identified during the audit performed by Ecology personnel was that the low-flow alarm light was on. This was and is because the instrument air which amplifies the pressure signals from the annulus ducts is turned off. It is turned off because the controlling instrument air is contaminated with oil and water. An upgrade program is underway to replace the compressors in a two phased approach. The first phase provides for temporary clean/dry instrument air (phase one is complete), while the second phase installs permanent compressors with suitable air quality in place of the failed units. The valves controlled by the damper motors have been fixed in the fully opened position, thus assuring the flow through the annulus. Flow can be approximated through the annulus by use of the stack pressure instruments as described in Enclosure 1. Calculations from the reading taken on May 28, 1992 approximated the stack flow at 903 CFM.

Another problem identified during the audit performed by Ecology personnel was that the annulus radiation readings were recorded as rejected or out of service. This deficiency was corrected and the system placed back in service on January 6, 1992. The discrepancy report was closed on January 22, 1992.

The 101-SY annulus leak detector radiation monitoring instruments are identified as follows:

Radiation Element RE EXH 101

Count Rate Meter CRM EXH 101

Converter CVT 101 1

Radiation Recorder RR EXH 101 1

Annulus Sample Flow Differential Pressure Alarm Switch DPAS EXH 101 1

Annulus Sample Flow Differential Pressure Alarm DPA EXH 101 1

101 Annulus Flow Transmitter FT K2 2 1

101 Annulus Flow Element FE K2 2 1

101 Annulus Flow Controller FC K2 1 1

101 Annulus Pressure Switch PS 1 2 101

TANK ANNULUS EXHAUST SYSTEM - As a result of the field walkdowns it was determined that these instruments are in excellent condition and require no corrective actions.

The SY annulus exhaust fan instruments are identified as follows:

Exhaust Fan K2 4 1

Radiation Monitor RM EXH K2 1

Radiation Recorder RR EXH K2 1

Beta/Gamma CAM Flow Alarm Switch FAS EXH K2 1

Beta/Gamma CAM Flow Alarm FA EXH K2 1

Annulus Flow Pressure Indicator PI K2 1 2

Annulus Flow Differential Pressure Indicator DPI EXH K2 1

LEAK DETECTION PIT MONITORING INSTRUMENTATION - As a result of the field walkdowns it was determined that the radiation monitoring instruments are in poor or failed condition. Leak detections of the 101-SY tank secondary containment or annulus are available through the weight factor instruments in the leak detection pit.

All three radiation monitors in SY Farm are turned off. The radiation elements pre-amplifiers are located in small pits next to the leak detection pits. Changes in temperature cause moisture to condense in these pits, and the moisture often shorts out the pre-amplifiers. The instrumentation cannot be calibrated and many components have failed.

The problem identified during the audit performed by Ecology personnel was that the leak detection pit exceeded the allowable limit of 24 inches of liquid and that the pit radiation readings were recorded as rejected. The status of these problems is as follows:

This pit was pumped from June 3 to June 9, 1992. The current liquid level is 10 inches (limiting criteria is from 4 to 24 inches).

The radiation instruments are not corrected.

The 101-SY leak detector pit monitoring instruments are identified as follows:

Radiation Element RE 01C 1

Radiation element Pre-Amplifiers PRAM 01C 1

Power Unit Recorder PWRR 01C 1

Radiation Indicator Alarm Switch RIAS 01C 1

Radiation Alarm RA 01C 1

Specific Gravity Transmitter SGT 01C 1

Specific Gravity Indicator SGI 01C 1

Weight Factor Alarm Switch WFAS 01C 1

Weight Factor (HI) Alarm WFA 01C 1

Weight Factor (HI) Transmitter WFT 01C 1

Weight Factor Indicator WFI 01C 1

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Mr. R. F. Stanley
State of Washington
Department of Ecology
Post Office Box 47600
Olympia, Washington 98504-7600

Dear Mr. Stanley:

SECOND RESPONSE TO DANGEROUS WASTE COMPLIANCE INSPECTION FOR TANK 241-SY-101

This letter is the second response to your May 14, 1992, letter titled, "Dangerous Waste Compliance for Tank 241-SY-101," describing alleged violations of WAC 173-303, State of Washington Dangerous Waste Regulations. This response complies with commitments made to your office in the June 5, 1992, DOE-RL letter, "Dangerous Waste Compliance Inspection for Tank 241-SY-101." The June 5 letter was the first response to your May 14, 1992 letter as required 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 of the Washington Administrative Code (WAC) within 21 days of receipt of notice. The specific commitments that this letter complies with are:

By July 10, 1992, RL committed, and WHC agreed, to review, identify, prepare, and submit to Ecology a detailed description of all the leak detection and associated alarm systems related to monitoring on Tank SY-101 (refer to response to Item 1 in the June 5, 1992 DOE/RL letter). Enclosure 1 contains this description.

By July 10, 1992, RL committed, and WHC agreed, to submit, to Ecology, any identified discrepancies found with the 101-SY leak detection and associated alarm systems (refer to response to Item 2 in the June 5, 1992 DOE/RL letter). RL committed, and WHC agreed, to submit a schedule for correcting any deficiencies found in the effort described in Item 1 to Ecology by August 14, 1992. Enclosure 2 contain the deficiencies identified for 101-SY.

By July 15, 1992, RL committed, and WHC agreed, to submit to Ecology the investigation results of any discrepancies found in the inspection procedures and calibration program (refer to response to Item 7 in the June 5, 1992 DOE/RL letter). Enclosure 2, also contains this.

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

92-RPA-242

AUG 14 1992

Mr. Roger F. Stanley
State of Washington
Department of Ecology
Post Office Box 47600
Olympia, Washington 98504-7600

Dear Mr. Stanley:

THIRD RESPONSE TO DANGEROUS WASTE COMPLIANCE INSPECTION FOR TANK 241-SY-101

The letter provides the schedules for actions identified in Items 2, 3, 4, 7, and 8 of the U.S. Department of Energy Richland Field Office (RL) June 5, 1992, response to State of the Washington Department of Ecology (Ecology) May 14, 1992, letter regarding the Dangerous Waste Compliance Inspection of Tank 241-SY-101.

The specific schedules for the identified Items are as follow:

Item 2: RL will correct all deficiencies identified in the investigation effort described in Item 1 by March 2, 1993. The results of this investigation were provided in the RL July 10, 1992, response.

Item 3: Investigations similar to that conducted on 101-SY for all double shell tank systems described in the Part B permit application will be completed by January 6, 1993.

Item 4: RL will schedule a meeting with Ecology to discuss any discrepancies identified in the investigation, including plans for corrective action, after January 6, 1993. If discrepancies are identified, RL will submit to Ecology the plan and schedule for corrective action by February 28, 1993.

Item 7: The investigation described in the RL July 10, 1992, response identified no discrepancies in the inspection procedures and calibration program for 101-SY. A schedule for correcting deficiencies is therefore unnecessary.

Item 8: Investigation of the calibration systems of other double shell tank systems described in the Part B Permit Application will be completed in conjunction with Item 3 by January 6, 1993.

If you have any questions, please contact me or Mr. R. G. Holt of my staff on (509) 376-9989.

Sincerely,

R. E. Gerton, Project Manager
Tank Farm Project Office

EAP:PJK

cc: P. T. Day, EPA
H. D. Harmon, WHC
V. R. Dronen, WHC

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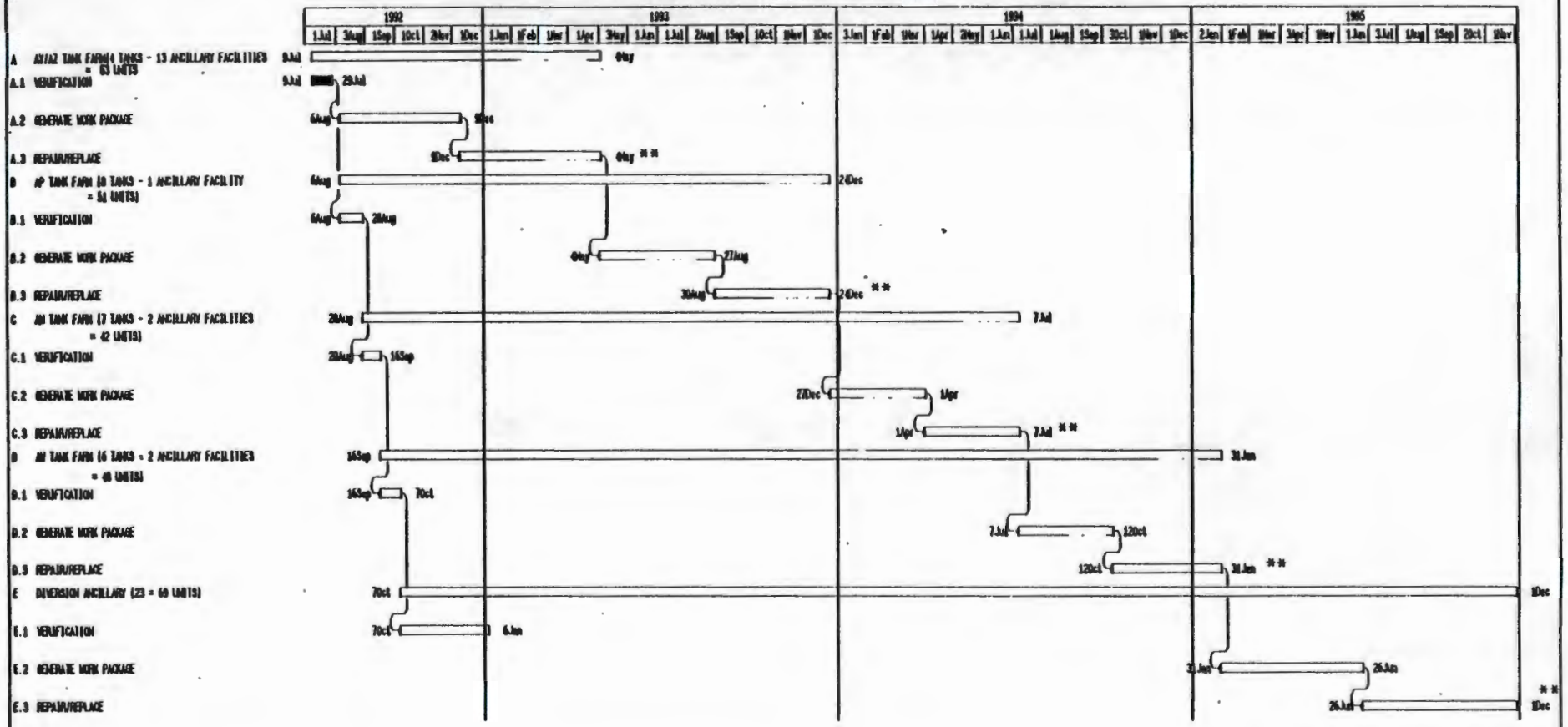
TANK FARM ENVIRONMENTAL MONITORING SYSTEM
LEAK DETECTION AND ALARM UPGRADES

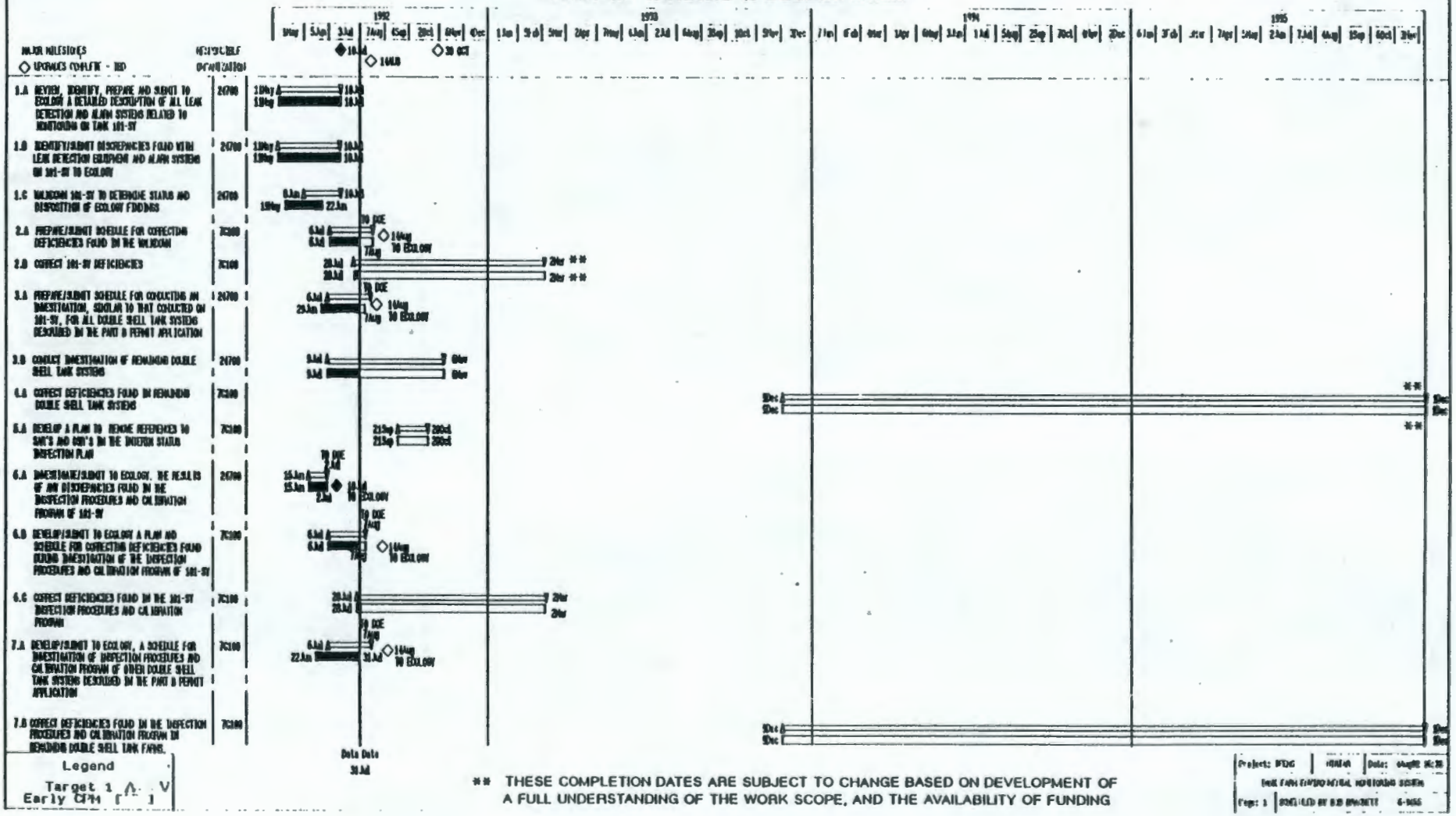


*NOTE: TANK HAVING 6 UNITS AND EACH ANCILLARY FACILITY HAVING 3 UNITS TO INSPECT AND TEST. THE SCHEDULE IS ALSO BASED ON THE FOLLOWING ASSUMPTIONS:

- THE VERIFICATION TEAM WILL INSPECT AND TEST 3 UNITS PER DAY
- EACH WORK PACKAGE WILL REQUIRE THREE DAYS TO INITIATE
- THE REPAIR TEAM WILL REPAIR/REPLACE THREE UNITS PER WEEK
- A 50% FAILURE RATE OF TESTED UNITS

** THESE COMPLETION DATES ARE SUBJECT TO CHANGE BASED ON DEVELOPMENT OF A FULL UNDERSTANDING OF THE WORK SCOPE, AND THE AVAILABILITY OF FUNDING

TANK FARM ENVIRONMENTAL MONITORING SYSTEM
NEAR TERM SCHEDULE



** THESE COMPLETION DATES ARE SUBJECT TO CHANGE BASED ON DEVELOPMENT OF A FULL UNDERSTANDING OF THE WORK SCOPE, AND THE AVAILABILITY OF FUNDING

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APPENDIX C-2

NOTICE OF NONCOMPLIANCE PUREX PLANT TANK F18

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STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

7601 W. Clearwater, Suite 102 • Kennewick, Washington 99336 • (509) 736-3090

RECEIVED JUL 23 1992 CORRESPONDENCE CONTROL

July 16, 1992

RECEIVED JUL 17 1992 R. J. BLISS

XC: REL JCM WGR

CERTIFIED MAIL

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

ID Number: (WA7890008967)

Date and Time of Inspection:
(March 5, 1992, 9:50 - 12:00)

Mr. Ronald J. Bliss
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Messrs. Hamric and Bliss:

RE: Dangerous Waste Compliance Inspection for PUREX Tank F-18

Thank you for the assistance of United States Department of Energy-Richland Office (USDOE-RL) and Westinghouse Hanford Company (WHC) personnel during the inspection of the PUREX facility on March 5, 1992. During this inspection my staff documented several areas of non-compliance by WHC with the Washington State Dangerous Waste Regulations (Chapter 173-303 WAC) at the 200 East PUREX facility. Responsibility for corrective actions for these items of none compliance is being directed to the operator (WHC) and verification of completion of actions is directed to the owner (USDOE-RL). Violations noted include the following:

Class I Violations

- WAC 173-303-320 - General Inspection

  Failure to adequately inspect monitoring equipment, maintain inspection logs, and remedy problems per subsection (2) and 40 CFR section 265.195(a)(3)

- **WAC 173-303-390 - Facility Reporting**
  Failure to prepare and submit a report for the PUREX canyon Tank F-18 spill per subsection (3)

- **WAC 173-303-400 - Interim Status Facility Standards**

  Failure to provide adequate overfill prevention controls per 40 CFR section 265.194(b)(2)

  Failure to provide adequate secondary containment per 40 CFR section 265.193(a), (b)(1), and (d)(2)(iv)

- **WAC 173-303-960 - Denial of Access**

  Failure to allow Ecology inspectors access to training records

Class II Violations

- **WAC 173-303-145 - Spills and Discharges**

  Failure to notify Ecology of a 260 gallon spill per subsection (2)(c)(ii)

  Failure to notify Ecology of additional materials spilled on January 7, 1992 per subsection (2)(c)(ii)

My staff is available to assist USDOE-RL and/or WHC 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) days of receipt of this letter WHC shall identify all leak detection systems, overflow prevention controls and alarm systems related to the monitoring of Tank F-18. WHC shall also identify any discrepancies found with any of the above equipment including but not limited to, sump controls, high level alarms, alarm lights, level sensing devices, automatic feed cutoff or bypass to a standby tank and the Computer Automated Surveillance System (CASS) if applicable.

2. Within forty-five (45) days of receipt of this letter WHC shall provide Ecology with the results of the investigation required by item 1 and a schedule for correcting any deficiencies found.

3. Within forty-five (45) days of receipt of this letter WHC shall provide Ecology with a schedule for an investigation, similar to that conducted for item 1, for all tank systems within the PUREX Canyon.

4. Within sixty (60) days of receipt of this letter WHC shall provide Ecology with a schedule for the correction of any discrepancies found during the investigation for item 3.

5. Immediately upon receipt of this letter WHC shall comply with the requirement to remedy problems revealed by WHC/USDOE-RL inspections as set forth in WAC 173-303 Section 320, paragraph (3). Provide Ecology, within 30 days, a list of the actions taken to correct any deficiencies found with the management systems used to identify and correct problems identified during inspections.

6. Within thirty (30) days of receipt of this letter WHC shall investigate to determine any discrepancies in the inspection (calibration system) for Tank F-18. Within the 30 days, WHC shall provide to Ecology the results of the investigation and a schedule for correcting any problems found.

7. Within thirty (30) days of receipt of this letter WHC shall provide Ecology with a schedule for investigating the calibration system for other tank systems within the PUREX canyon. Within 60 days of this Order, provide Ecology with the results of the investigation and a schedule of correcting any problems found.

8. Within twenty-one (21) days of receipt of this letter WHC shall provide Ecology with access to inspect, and copies of the previously requested training records for Nuclear Operators and Shift Supervisors as set forth in WAC 173-303 Section 960.

9. Within twenty-one (21) days of receipt of this letter WHC shall take the necessary action to assure WHC training records as set forth in WAC 173-303 Section 330 are immediately accessible to Ecology inspectors. Within the 21 days, WHC shall provide Ecology a copy of the documented action taken to resolve this violation.

10. Within twenty-one (21) days of receipt of this letter WHC shall take the necessary action to assure Ecology notification as set forth in WAC 173-303 Section 145 immediately transpires. Within the 21 days, WHC shall provide Ecology a copy of the documented action taken to resolve this violation.

11. Within twenty-one (21) days of receipt of this letter WHC shall take the necessary action to assure reporting to Ecology as set forth in WAC 173-303 Section 390 and as specified in WAC 173-303-360 are achieved. Within the 21 days, WHC shall provide Ecology a copy of the documented action taken to resolve this violation.

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 compliance and submit to this Department by September 14, 1992.

~~Sincerely,~~

Dave Nylander

Dave Nylander
Office Manager
Nuclear and Mixed Waste Management Program/Kennewick
Washington State Department of Ecology

DN:gd
Enclosure

cc: Roger Stanley, Ecology
Paul Day, EPA
Dave Jansen, Ecology
Toby Michelena, Ecology
G. Thomas Tebb, Ecology
Ron Izatt, DOE
Bob Holt, DOE
Steve Wisness, DOE
Administrative Record

FACT SHEET

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

Operator Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Facility/Location PUREX, Tank 18-F, 200 East Area

Contact Charles H. Merry, WHC/OPS/PRX
(509) 373-1547

Activity Overflow of Radioactive Mixed Waste from Tank F-18 into Sump SFB

Background

Tank F-18 is at the PUREX facility, located inside a concrete containment area known as the canyon. The canyon area is sectioned into different cells. The canyon contains a concentrator which separates waste. As the waste flows through the system, it is divided and sent to different holding tanks according to its properties. The canyon area is maintained totally by mechanical devices as Westinghouse Hanford Company (WHC) has determined the radiation level to be too high to meet worker exposure limits. Tank F-18 is in F-Cell along with sump SFB. Tank F-18 has a capacity of 5,000 gallons and is used to collect radioactive mixed wastes from all sections of the plant (E-Cell, F-11 Concentrator bottoms, sumps, sinks, drains, overflows, laboratory waste, etc.) and treated with sodium hydroxide (NaOH) and sodium nitrate ($NaNO_2$) before going to double-shell underground storage tanks. On January 3, 1992 Tank F-18 was being used as an intermediate transfer tank for a Uranyl Nitrate Hexahydrate (UNH) solution being transferred between Tank U-3 and the tank farm. The UNH properties are yellow crystals, and it is soluble in water, alcohol, and ether. The UNH is a dangerous waste because of its corrosive hazard. During this transfer Tank F-18 was overfilled which caused the spill to sump SFB.

Finding #1 FAILURE TO NOTIFY

> WAC 173-303-145 states in part, "Spills and discharges. (2) Notification. Any person who is responsible for a nonpermitted spill or discharge shall immediately notify the . . . authorities described for the following situations: . . . (c) Notify the . . . department of ecology in the following circumstances: . . . (ii) For spills or discharges occurring and contained in secondary containment meeting the requirements of this chapter, if the quantity of dangerous waste or hazardous substance meets or exceeds ten gallons. . . ."

On January 3, 1992 at approximately 2155 hours, Tank F-18 spilled into the SFB sump in F-Cell (secondary containment for Tank F-18). Operators noticed that the level in Tank F-18, as registered by the weight factor recorder (WFR-F18-1), had stopped increasing and the transfer was immediately terminated. Three minutes later, after the transfer was terminated, a sump alarm (WFR-F18-1) indicated that there were 4,560 gallons (87% of tank capacity) of liquid in the tank. The United States Department of Energy (USDOE-RL) and WHC did not report the spill to the Department of Ecology until February 26, 1992, 54 days after the spill occurred.

On January 6, 1992 between 1430 and 1500 hours, 100 gallons of caustic/nitrate was added to Tank F-18 to neutralize Tank F-18 solution. The additional 100 gallons of caustic/nitrate caused additional material to overflow from Tank F-18 into SFB sump. WHC did not report the additional spill to the Department of Ecology. The additional spill was confirmed after the Department of Ecology found evidence documenting that another spill had occurred.

The spill into F-Cell was considerably in excess of the ten gallon reporting limit. In addition, contrary to USDOE-RL Order 5000.3A and internal WHC procedure WHC-CM-1-3, Section MRP 5.14, Rev. 7, WHC reported the spill event as an Off-Normal Occurrence whereas it should have been reported as an Unusual Occurrence. The requirements for what constitutes an Unusual Occurrence state in part, "The types of occurrences that are to be categorized as unusual occurrences are those that: (a) Result in the release of radioactive or hazardous materials above limits established in, or violate safety, environment, or health requirements defined in, permits or regulations."

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Finding #2 FAILURE TO REPORT

WAC 173-303-390 states in part, "Facility reporting. The owner or operator of a facility is responsible for preparing and submitting the reports described in this section. . . . (3) Additional reports. The owner or operator shall also report to the department releases of dangerous wastes . . . as specified in WAC 173-303-360 (2)(k). . ." This section states in part, "Within fifteen days after the incident, he must submit a written report on the incident to the department." This section goes on to describe specific report criteria.

The Department of Ecology received no report, as required by the above criteria, within the fifteen day time requirement. In addition, when the Occurrence Report Notification was received (54 days after the spill occurred), the reporting criteria outlined in WAC 173-303-360 (2)(k) had not been met.

Finding #3 INADEQUATE OVERFILL PREVENTION CONTROLS

WAC 173-303-400 states in part, "Interim status facility standards. (3) Standards. (a) Interim status standards shall be standards set forth by the Environmental Protection Agency in 40 CFR Part 265 Subparts F through R . . ."

40 CFR 265.194 (b) states in part, "The owner or operator must use appropriate controls and practices to prevent spills and overflows from tanks of secondary containment systems. These include at a minimum: ". . . (2) Overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank). . ."

Controls for the level sensing device and high level alarm for Tank F-18 appear to be inadequate. The problem is compounded by the fact that the high weight factor recorder was not designed or adjusted to prevent an overflow. WHC management chose to ignore the tank overflow features (high level alarm) by ordering Tank F-18 filled to capacity without procedural authorization to do so (U-Cell Process Transfers/and Procedural Change Authorization (PCA). Plant Operating Procedure, PO-240-200, Rev. C-23, which does not allow the transfer of waste from U-3/U-4 to F-18, was used for the transfer procedure.

Several factors of this incident allow us to conclude that adequate overflow prevention on Tank F-18 was not maintained:

1. Facility Operation management chose to override the alarm set point for Tank F-18. The deputy plant manager stated on March 5, 1992 that this decision was made to assure compliance with the 90-day storage requirement. Overriding the alarm set point in order to keep from violating a WAC requirement does not provide justification for inadequate overflow prevention measures.

2. The high weight factor recorder for Tank F-18 was not properly calibrated to prevent an overflow of the liquid waste. The Ten-Day Occurrence Report #RL-WHC-PUREX-1992-0016 Item 15 states in part, "At the time of the overflow, the Tank F18 level instrument (WFR-F18-1) indicated that there were 4,560 gallons (87% of tank capacity) of liquid in the tank." Actual tank capacity is 5,230 gallons.

3. Item 22 of the Ten-Day Occurrence Report states that the weight factor recorder "indicated a significant volume difference as the tank neared maximum capacity."

Finding #4 DENIAL OF ACCESS TO INSPECT TRAINING RECORDS

WAC 173-303-960 (2)(a) states that the department may "Authorize an agency inspector to enter at reasonable times establishments

regulated under this chapter for the purposes of inspection, monitoring, and sampling . . ."

WHC refused to allow the inspection team to review or copy pertinent training records, stating that the records are protected under the federal Privacy Act.

On March 18, 1992, Washington Department of Ecology requested the training records for:

Dickie Coates, Operator
Stuart W. Hildreth, Shift Manager
Ron W. Bailey, Facility Manager

To date, training documentation has not been provided.

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Finding #5 INADEQUATE SECONDARY CONTAINMENT

WAC 173-303-400 states in part, "Interim status facility standards. (3) Standards. (a) Interim status standards shall be standards set forth by the Environmental Protection Agency in 40 CFR part 265 Subparts F through R . . . and, (vii) "Subpart J - tank systems" section 265.193(a) shall be modified so that the dates by which secondary containment (which meets the requirements of that section) must be provided are the same as the dates in WAC 173-303-640 (4)(a)."

WAC 173-303-640 (4)(a) states in part, "In order to prevent the release of dangerous waste or dangerous constituents to the environment, secondary containment that meets the requirements of this subsection must be provided . . . (iii) For those existing tank systems of known and documented age, within two years after January 12, 1989, or when the tank system has reached fifteen years of age, whichever comes later. . ."

40 CFR Part 265 Subpart J, Section 265.193(a) refers to (b) which states in part, "Secondary containment systems must be: (1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil . . ." Section (d) states in part, "Secondary containment for tanks must include one or more of the following devices: . . . (2) A Vault." Section (e)(2) states, "Vault systems must be: . . . (iv) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete . . ."

The F-Cell, including SFB sump, where the spill occurred, does not meet the requirements listed above and is not suitable secondary containment. In a May 31, 1991 letter to the Department of Ecology, USDOE recognized that the required impermeable lining does not exist as required.

Deadline dates to meet interim status requirements have not been

met. Upgrading the secondary containment to meet specifications by the required date of January 12, 1991 has not been accomplished.

Finding #6 INADEQUATE INSPECTION

WAC 173-303-320 states in part, "General inspection. (2) The owner or operator shall develop and follow a written schedule for inspecting all monitoring equipment . . . (a) He must keep the schedule at the facility; (b) The schedule must identify the types of problems which are to be looked for . . . (c) The schedule shall indicate the frequency of inspection . . . (d) The owner or operator shall keep an inspection log or summary . . . (3) The owner or operator shall remedy any problems. . ."

Contrary to Ecology's request, no written schedule for inspecting monitoring equipment, no inspection logs, and no remedial correction of identified problems were provided.

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APPENDIX C-2A

RESPONSE TO NOTICE OF NONCOMPLIANCE PUREX PLANT TANK F18

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

AUG 0 7 1992

Mr. David B. Jansen, P.E.
Hanford Project Manager
State of Washington
Department of Ecology
Post Office Box 47600
Olympia, Washington 98504-7600

Dear Mr. Jansen:

RESPONSE TO THE STATE OF WASHINGTON DEPARTMENT OF ECOLOGY COMPLIANCE LETTER ON THE OVERFLOWS OF PLUTONIUM-URANIUM EXTRACTION PLANT TANK F18

References:
(1) Letter, Dave Nylander, Ecology, to J. P. Hamric, DOE-RL, and R. J. Bliss, WHC, Dangerous Waste Compliance Inspections for PUREX Tank F-18, dated July 16, 1992.

(2) Letter, Gary Anderson, Ecology, to R. D. Izatt, DOE-RL, Equivalent Device as Secondary Containment for PUREX Dangerous Waste Tank, dated March 3, 1992.

Pursuant to Article VII, Paragraph 28 of the Hanford Federal Facility Agreement and Consent Order, this is the U.S. Department of Energy, Richland Field Office (RL) response to the State of Washington Department of Ecology (Ecology) compliance letter (Reference 1) on overflows of the Plutonium-Uranium Extraction (PUREX) Plant Tank F18. Enclosure 1 addresses the 11 action items.

The compliance letter identifies a Class I violation of WAC 173-303-400 and of 40 CFR Section 265.193(a),(b)(1), and (d)(2)(iv) as "Failure to provide adequate secondary containment." On examining the fact sheet attached to the letter and Title 40 Code of Federal Regulations (40 CFR), Section 265.193, it is assumed that the letter text reading "...(d)(2)(iv)." actually refers to 40 CFR, Section 265.193(e)(2)(iv). The RL concerns on this asserted Class I violation will be addressed based on this assumption.

The RL does not consider the identified Class I violation of the WAC, Chapter 173-303-400, and 40 CFR, Sections 265.193(a), (b)(1), and (e)(2)(iv), relative to secondary containment to be valid. The RL considers that the PUREX Plant secondary containment does meet the requirements of 40 CFR, Section 265.193(d)(4), as an "equivalent device." A revised petition for equivalency is currently under preparation for resubmittal to Ecology. On March 3, 1992, RL received a letter (Reference 2) indicating that the PUREX Plant requires no approval of secondary containment by Ecology. In this instance a citation has been issued on a subject that RL has been working with Ecology to resolve since 1990. Currently, negotiations are under way to include PUREX Plant secondary containment as a proposed Hanford Federal Facility Agreement and Consent Order milestone, M-XX-08.

During the review of Ecology's fact sheet, several inaccuracies were noted. Enclosure 2 identifies the inaccuracies, provides the recommended corrections, and gives the justification for these corrections.

If you have any questions or require more information, please call Mr. J. E. Mecca at (509) 376-7471.

Sincerely,

R. D. Izatt, Program Manager
Office of Environmental Assurance,
Permits, and Policy

Enclosures:
1. Response to Compliance Action Items
2. Recommended Corrections to the Fact Sheet

cc w/encls:
P. T. Day, EPA
R. E. Lerch, WHC, w/o encls.
J. C. Midgett, WHC, w/o encls.
D. T. Nylander, Ecology
G. T. Tebb, Ecology

Enclosure 1

RESPONSE TO THE COMPLIANCE LETTER ACTION ITEMS

Reference: Letter, Dave Nylander, Ecology, to J. P. Hamric, DOE-RL, and R. J. Bliss, WHC, Dangerous Waste Compliance Inspection for PUREX Tank F18, dated July 16, 1992.

The compliance letter provides, "Responsibility for 'corrective actions' for these items of none compliance (sic) is being directed to the operator (WHC) and verification of completion of actions is directed to the owner (USDOE-RL)." Likewise, the fact sheet designates WHC as the operator. As has been indicated on previous occasions when this issue has arisen, it is not accurate to refer to WHC as an "operator."

Applicable Dangerous Waste Regulations define an "operator" as the person responsible for the overall operation of a facility (Washington Administrative Code [WAC], Chapter 173-303-040). As WHC is not responsible for the overall operation of either the Hanford Facility or any individual unit within the Hanford Facility, it is not an "operator" within the meaning of the law. Rather, RL is responsible for overall management and operation of the Hanford Facility with authority over policy, programmatic funding and scheduling decisions, and general oversight. WHC, on the other hand, is responsible for certain day-to-day activities such as waste analysis, waste handling, monitoring, container labeling, personnel training, and record keeping. Consistent with their respective responsibilities, permit applications are signed by RL as the owner and operator, and WHC signs as the co-operator. The recognition of RL's role is also confirmed by the Hanford Federal Facility Agreement and Consent Order in which the RL, Ecology, and the Environmental Protection Agency have agreed that RL owns and operates the Hanford Facility.

While WHC has certain responsibilities under its contract and under the law with regard to PUREX Tank F-18, it does not have the responsibility of an "operator" as defined in WAC-173-303-040. Therefore, Ecology's placement on WHC of the "corrective actions" responsibility of an operator is not well-founded.

1. Compliance letter Action Item 1:

"Within thirty (30) days of receipt of this letter WHC shall identify all leak detection systems, overflow prevention controls and alarm systems related to the monitoring of Tank F-18. WHC shall also identify any discrepancies found with any of the above equipment including but not limited to, sump controls, high level alarms, alarm lights, level sensing devices, automatic feed cutoff or bypass to a standby tank and the Computer Automated Surveillance System (CASS) if applicable."

Response:

As requested, the Tank F18 leak detection systems, overflow prevention controls, and alarm systems have been identified and documented in Attachments A and B. Attachment A is the Tank F18 engineering instrumentation diagram illustrating the instrumentation. Note that automatic feed cutoff and/or bypass systems are not used. The Computer Automated Surveillance System is only used by Tank Farms and is not used at the PUREX Plant.

The Tank F18 leak detection systems, overflow prevention controls, and alarm systems have been evaluated for compliance with Washington Administrative Code (WAC) Chapter 173-303-400(3) and Title 40 Code of Federal Regulations (40 CFR), Section 265.194(b)(2). This evaluation is documented in Attachment B.

2. Compliance letter Action Item 2:

"Within forty-five (45) days of receipt of this letter WHC shall provide Ecology with the results of the investigation required by item 1 and a schedule for correcting any deficiencies found."

Response:

Per the requirements of compliance letter Action Item 1, the Tank F18 monitoring equipment has been identified and evaluated for compliance with 40 CFR, Section 265.194(b)(2). The RL has determined that the Tank F18 leak detection systems, overflow prevention controls, and alarm systems meet the requirements of WAC 173-303-400(3) and 40 CFR section 265.194(b)(2). The one physical problem with the air line was located and repaired. As the result of the spill, the Tank F18 weight factor transmitter was recalibrated after a 3 percent error was identified. The results of the evaluation are documented in Attachment B.

The physical problem was located after the spill. There was a leak in the instrument air line between the Tank F18 weight factor transmitter and the two Tank F18 weight factor recorders. The air line leak was not detected during calibration of the tank monitoring equipment, but was detected visually by PUREX Maintenance during a routine surveillance. As soon as the problem was noted, a work package was initiated to repair the leak. It is believed that the air line leak was present when the overflow occurred. The leak would have contributed to the error in the weight factor indicators for Tank F18. This makes the leak a contributing cause to the overflow. The detection and repair of the air line leak is documented in Attachment B.

The existing surveillance activities can locate and identify air-line leaks. However, to improve the ability to detect air-line leaks, a more formal approach will be developed. The existing surveillance procedures will be evaluated to determine placement for this additional procedure

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by August 31, 1992. The new procedure will be developed and implemented by October 1, 1992.

The RL considers the root causes of the event to be an administrative error in exceeding 90 percent of the Tank F18 volume and miscommunication in classifying the event as non-reportable. The RL does not consider that equipment deficiencies with respect to the regulations were a root cause of the event. Additional administrative actions to prevent reoccurrence of this event are discussed in the response to compliance letter Action Item 10.

3. Compliance letter Action Item 3:

"Within forty-five (45) days of receipt of this letter WHC shall provide Ecology with a schedule for an investigation, similar to that conducted for item 1, for all tank systems within the PUREX Canyon."

Response:

A schedule for evaluating the other PUREX Plant interim status dangerous waste treatment tanks (Tank E5, Tank F15/Tank F16, Tank U3/Tank U4, Tank G7, and Concentrator F11) leak detection systems, overflow prevention controls, and alarm systems for compliance with 40 CFR, Section 265.194(b)(2), was established:

Start evaluation:	Thursday, July 23, 1992
Complete evaluation:	Friday, July 31, 1992

The results of the evaluation are discussed in the response to compliance letter Action Item 4.

4. Compliance letter Action Item 4:

"Within sixty (60) days of receipt of this letter WHC shall provide Ecology with a schedule for the correction of any discrepancies found during the investigation for item 3."

Response:

The other PUREX Plant interim status dangerous waste treatment tanks (Tank E5, Tank F15/Tank F16, Tank U3/Tank U4, Tank G7, and Concentrator F11) leak detection systems, overflow prevention controls, and alarm systems have been identified and evaluated for compliance with 40 CFR, Section 265.194(b)(2). The appropriate leak detection systems, overflow prevention controls, and alarm systems are identified in Attachments B and C. Attachment B documents the evaluation and Attachment C contains the interim status dangerous waste treatment tank engineering drawings showing tank instrumentation.

Based on the evaluation, the RL has determined that all the tanks' monitoring equipment meet the requirements of WAC 173-303-400(3) and 40 CFR, Section 265.194(b)(2).

The RL considers the root causes of the event to be an administrative error in exceeding 90 percent of the Tank F18 volume and miscommunication in classifying the event as non-reportable. The RL does not consider that equipment deficiencies with respect to the regulations as a root cause of the event. Additional administrative actions to prevent reoccurrence of this event are discussed in the response to compliance letter Action Item 10.

During the PUREX Plant cold standby operation, it is anticipated that Tank U3/Tank U4 and Tank F18 of those tanks identified in the Part A permit application and in the Notice of Intent, currently in process, will be used for the storage and treatment of dangerous waste.

5. <u>Compliance letter Action Item 5:</u>

"<u>Immediately</u> upon receipt of this letter WHC shall comply with the requirement to remedy problems revealed by WHC/USDOE-RL inspections as set forth in WAC 173-303 Section 320, paragraph (3). Provide Ecology, within 30 days, a list of the action taken to correct any deficiencies found with the management systems used to identify and correct problems identified during the inspections."

<u>Response:</u>

The RL considers that the existing management systems for inspecting, calibrating, and repairing the PUREX Plant dangerous waste tanks meet the requirements of WAC 173-303-320(2). The requirement for a written schedule for inspections of tank monitoring equipment and for maintaining an inspection log or summary is met by the combination of the WHC-CM-5-9, <u>PUREX/UO_3 Administration</u>, Appendix A, "Dangerous Waste Inspection Plan" (PUREX Dangerous Waste Inspection Plan), the site-wide Process Instrument Surveillance, Calibration, and Evaluation System (PISCES), and the site-wide Job Control System (JCS). Each of these is briefly described below along with a discussion of how they meet the requirements of WAC 173-303-320(2).

The PUREX Dangerous Waste Inspection Plan (Attachment D) documents the requirements for tank systems that treat or store dangerous waste per WAC 173-303-640(6). This Plan includes the following regulatory compliance requirements:

- Daily inspections of monitoring data from leak detection systems
- Daily inspections of overfill/spill control equipment

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- General inspections of general safety and emergency equipment

- General inspections of security devices.

The Plan also covers the generic safety and emergency equipment in the PUREX Plant. This generic equipment includes, but is not limited to, safety showers, eye washes, fire extinguishers, emergency acid suit lockers, emergency self-contained breathing apparatus, emergency lanterns, etc.

All plant instrument calibration/inspection schedules are generated by the PISCES. For the Hanford Site, PISCES is defined by WHC-CM-8-2, Central Support Services, Section 202.0, "Plant Instrumentation, Surveillance, Calibration, and Evaluation System." There is no PUREX Plant-specific document for PISCES. The PISCES is a computerized system that generates computer print-out sheets for calibrations/inspections of plant instrumentation. The PISCES is used by PUREX Maintenance/Work Control to forecast, help schedule, and document the calibrations/inspections of the plant instrumentation. When a PISCES calibration indicates a problem with the equipment, the JCS is used to develop a work package to correct the problem. A copy of the PISCES procedure is included in Attachment E.

The JCS is a computerized system for managing and assigning priority to maintenance activities at the Hanford Site. The JCS is defined in WHC-CM-8-8, Job Control System. For the PUREX Plant, the JCS is implemented in WHC-CM-5-9, PUREX/UO, Administration, Section 5.11, "Job Control System." When problems are identified with the tank monitoring equipment, a work plan or work package is generated using the JCS. The JCS is used to plan and schedule the work, document approvals of the work plan or work package, describe the work to be performed, and to document completion of work plan or work package. A copy of the PUREX JCS procedure is included in Attachment F.

The RL considers that the combination of the PUREX Dangerous Waste Inspection Plan and PISCES meet the requirement for a written inspection schedule. Together, they specify when, how, and how often the tank monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment is inspected per WAC 173-303-320(2)(a), (2)(b), and (2)(c). The PISCES and JCS act as the summary and documentation for the inspections and the actions taken to resolve any findings or remedial actions. Together, PISCES and JCS meet the intent of WAC 173-303-320(2)(d).

To fully meet the requirements of WAC 173-303-320(2)(d), the PUREX Dangerous Waste Inspection Plan will be revised to incorporate an inspection log or summary. The inspection log or summary will include at least the date and time of the surveillance (i.e., inspection), the printed name and handwritten signature of the inspector, a notation of

the observations made, and the date and nature of any repairs or remedial actions taken. It will supplement the existing shift manager's log and surveillance data sheets and will also provide one single location for this information. This revision to the PUREX Dangerous Waste Inspection Plan will be completed by September 16, 1992.

6. Compliance letter Action Item 6:

"Within thirty (30) days of receipt of this letter WHC shall investigate to determine any discrepancies in the inspection (calibration system) for Tank F-18. Within the 30 days, WHC shall provide to Ecology the results of the investigation and a schedule for correcting any problems found."

Response:

The PISCES relative to Tank F18 has been evaluated for compliance with WAC 173-303-320(2). This evaluation is documented in Attachment B.

The RL has determined that PISCES, in combination with the JCS and the PUREX Dangerous Waste Inspection Plan (see also response to compliance letter Action Item 5), meets the requirements of WAC 173-303-320(2).

7. Compliance letter Action Item 7:

"Within thirty (30) days of receipt of this letter WHC shall provide Ecology with a schedule for investigating the calibration system for other tank systems within the PUREX canyon. Within 60 days of this Order, provide Ecology with the results of the investigation and a schedule of correcting any problems found."

Response:

Per direction from RL, a schedule for evaluating how the PUREX Plant interim status dangerous waste treatment tanks (Tank E5, Tank F15/Tank F16, Tank U3/Tank U4, Tank G7, and Concentrator F11) leak detection systems, overflow prevention controls, and alarm systems comply with WAC 173-303-320(2) was established:

Start evaluation:	Thursday, July 23, 1992
Complete evaluation:	Friday, July 31, 1992

The PISCES relative to the other PUREX Plant less than 90-day dangerous waste tanks (Tank E5, Tank F15/Tank F16, Tank U3/Tank U4, Tank G7, and Concentrator F11) has been evaluated for compliance with WAC 173-303-320(2). This evaluation is documented in Attachment B.

The RL has determined that PISCES, in combination with the JCS and the Dangerous Waste Inspection Plan (see also response to compliance letter Action Item 5), meets the requirements of WAC 173-303-320(2).

8. Compliance letter Action Item 8:

"Within twenty-one (21) days of receipt of this letter WHC shall provide Ecology with access to inspect, and copies of the previously requested training records for Nuclear Operators and Shift Supervisors as set forth in WAC 173-303 Section 960."

Response:

The RL disputes this finding and finds no basis for the use of WAC 173-303-960, "Special Powers and Authorities of the Department," citation. The training records of interest to Ecology are available using the agreed to Freedom of Information Act (FOIA) procedure.

The training records requested by Ecology are subject to the Privacy Act of 1974. In its contract (No. DE-AC06-87RL10930) with the Westinghouse Hanford Company (WHC), RL requires that WHC maintain employee training records as Privacy Act records. When Ecology demands to view training records, a conflict arises between the need to maintain the records' confidentiality, under the Privacy Act, and Ecology's need to review training records to verify dangerous waste regulation compliance under WAC 173-303-330.

A method to access the training records in a way that avoids the conflict of law that exists between federal statute and state environmental regulation has been established by the legal counsel of the Washington State Attorney General's Office, RL, and WHC. It was agreed to use the FOIA method for supplying the required training records to Ecology inspectors. The Ecology inspectors are to write a FOIA request for the desired records to the RL Privacy Act/FOIA Officer. This is done by the inspector filling in the names of the individuals for whom training records are desired and signing the previously provided form. The RL Privacy Act/FOIA Officer will supply Ecology with the requested training records. The formal communication on the agreement has already been provided to Ecology in the response to the 101-SY Tank inspection findings.

The RL also agreed to pursue a change to the Federal Register Privacy Act Record Notice that would allow environmental regulators routine access to the training records subject to the Privacy Act. The Privacy Act Record Notice change will have to be reviewed and approved by the U.S. Department of Energy-Headquarters (DOE-HQ). Routine access would allow Ecology inspectors to immediately review the training records of particular employees at the facility, but it would also require

confidentiality be maintained for those records. Albeit, copies of those records could still be obtained via the FOIA method so that the records would not be subject to the confidentiality requirements of the Privacy Act.

On March 18, 1992, Ecology's inspector did not request the training records under the agreed procedure. The Ecology inspector was aware of the process by which the training records could be provided to him without violating any laws. The training records in question can be provided to Ecology when a FOIA request identifying the personnel in question is received.

9. Compliance letter Action Item 9:

"Within twenty-one (21) days of receipt of this letter WHC shall take the necessary action to assure WHC training records as set forth in WAC 173-303 Section 330 are immediately accessible to Ecology inspectors. Within the 21 days, WHC shall provide Ecology a copy of the documented action taken to resolve this violation."

Response:

The RL disputes this finding. The training records of interest to Ecology are available using the agreed to FOIA procedure.

The training records that Ecology is interested in being able to review are subject to the Privacy Act of 1974. In its contract (No. DE-AC06-87RL10930) with WHC, RL requires that WHC maintain employee training records as Privacy Act records. When Ecology demands to view training records, a conflict arises between the need to maintain the records' confidentiality under the Privacy Act and Ecology's need to review training records to verify dangerous waste regulation compliance under WAC 173-303-330.

A method to access the training records in a way that avoids the conflict of law that exists between federal statute and state environmental regulation has been established by the legal counsel of the Washington State Attorney General's Office, RL, and WHC. It was agreed to use the FOIA method for supplying the required training records to Ecology inspectors. Ecology inspectors are to write a FOIA request for the desired records to the RL Privacy Act/FOIA Officer. This is done by the inspector filling in the names of the individuals on which training records are desired and signing the previously provided form. The RL Privacy Act/FOIA Officer will supply Ecology with the desired training records. The formal communication on the agreement has already been provided to Ecology in the response to the 101-SY Tank inspection findings.

The RL also agreed to pursue a change to the Federal Register Privacy Act Record Notice that would allow environmental

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regulators routine access to the training records subject to the Privacy Act. The Privacy Act Record Notice change will have to be reviewed and approved by the DOE-HQ. Routine access would allow Ecology inspectors to immediately review the training records of particular employees at the facility, but it would also require confidentiality be maintained for those records. Albeit, copies of those records could still be obtained via the FOIA method so that the records would not be subject to the confidentiality requirements of the Privacy Act.

Because of the need to maintain confidentiality under the Privacy Act and until the Privacy Act Notice change is approved by DOE-HQ, training records will not be available for immediate review by Ecology. However, using the agreed to FOIA procedure, the training records of interest can usually be provided within one or two working days.

10. Compliance letter Action Item 10:

"Within twenty-one (21) days of receipt of this letter WHC shall take the necessary action to assure Ecology notification as set forth in WAC 173-303 Section 145 immediately transpires. Within the 21 days, WHC shall provide Ecology a copy of the documented action taken to resolve this violation."

Response:

The RL considers the root causes of the event to be an error in exceeding the administrative limit of 90 percent of Tank F18's volume and miscommunication in classifying the event as non-reportable. The RL does not consider that equipment deficiencies with respect to the regulations as a root cause of the event. The PUREX Plant management has implemented administrative actions to prevent overflowing the PUREX Plant tanks:

- The PUREX Operations organization has implemented administrative controls on tank volume management which limits tank volumes to ≤ 70 percent of tank capacity. The new ≤ 70 percent administrative limit provides an additional safety margin not present with a potential ±10 percent instrument error and the old administrative limit of 90 percent. Authorization to exceed the administrative limits must be obtained from the PUREX Operations Manager. This action is documented in Attachment G.

- The PUREX has initiated a program to deactivate unnecessary instruments and alarms in the plant which do not support the standby/shutdown condition of the facility. This will enhance and help focus attention on the instruments and alarms which support the PUREX dangerous waste tank systems. Estimated completion date for the deactivation of unnecessary instruments and alarms is October 31, 1992.

Also, the PUREX Plant management has taken the following corrective actions to ensure proper communication, identification, and classification of spills:

- A formal critique of the event has been conducted. Causal factors and lessons learned were developed and all PUREX shift surveillance supervisors were briefed. A copy of the critique was provided during the original Ecology inspection.

- Retraining of all PUREX Operations personnel on the WAC 173-303 Dangerous Waste Regulations has been initiated. The estimated completion date for this training is August 31, 1992. Initiation of this action is documented in Attachment H.

- The PUREX Operations has implemented the use of the Environmental Spill Checklist (Form A-6000-428, 2/92) to evaluate potentially reportable spills. Use of this checklist, developed by WHC Environmental Protection, will be formally incorporated into the plant operating and administrative procedures by August 31, 1992. A copy of the Environmental Spill Checklist is in Attachment I.

- The PUREX Plant has implemented a day-shift process engineer position to provide independent expertise to the day-to-day activities in the plant. Responsibilities of this position include, but are not limited to, verification of compliance with dangerous waste regulations and improved communication between PUREX Operations, PUREX Process Engineering, and PUREX Regulatory Compliance. Documentation that this position has been established is included in Attachment J.

In addition, WHC Environmental Protection has taken the following corrective actions relative to the Environmental Spill Checklist.

- The Environmental Spill Checklist (form A-6000-428) has been revised. The revision of the form, A-6000-428 (2/92) has superseded the previous version, A-6000-428 (7/91). A copy of the revised form has already been included in Attachment I.

- The Environmental Spill Checklist (form A-6000-428 (2/92)) is available in an electronic format via the Hanford Local Area Network computer system. This ensures that a current revision of the form is available to Hanford Site personnel at all times.

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11. <u>Compliance letter Action Item 11:</u>

"<u>Within twenty-one (21) days</u> of receipt of this letter WHC shall take the necessary action to assure reporting to Ecology as set forth in WAC 173-303 Section 390 and as specified in WAC 173-303-360 are achieved. Within the 21 days, WHC shall provide Ecology a copy of the documented action taken to resolve this violation."

<u>Response:</u>

The RL disputes that a 15-day report was required because the facility contingency plan was not implemented. The WAC 173-303-360(2)(k) requires that the operating record include a notation of the time, date, and details of any incident that requires implementing the facility contingency plan and a filing of a written report within 15 days of the incident. Since the incident was not of the nature that required the implementation of the contingency plan, a 15-day report was not provided.

According to the WAC 173-303-350(1), the purpose of the contingency plan and emergency procedure is to lessen the potential impact on the public health and the environment in the event of an emergency circumstance, including fire, explosion, or unplanned sudden or gradual release of dangerous waste or dangerous waste constituents to air, soil, surface water, or groundwater by a facility. The requirements of WAC 173-303-360(2)(d) state that the emergency coordinator is to assess whether a known release could threaten human health or the environment, and if such a threat is found, to report the release in a certain manner.

The Tank F18 overflowed into the secondary containment with no releases to the air, soil, surface water, or groundwater. No threat to human health or the environment occurred which would have required evacuation of local areas, or immediate notification to emergency centers. The emergency coordinator did not and had *no* reason or requirement to activate the emergency plan. Therefore, the reporting requirements *are* those of WAC 173-303-360(2)(e), not by WAC 173-303-360(2)(k). The reporting requirements of WAC 173-303-360(2)(e) are covered in the off-normal report.

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Attachment A

Referenced in response to
Action Items: 1 and 2

NOTE: INSTRUMENT DIAGRAM H2-63243, sheet 1 of 2 (Rev. 21) IS INCLUDED IN ATTACHMENT C.

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Attachment B

Referenced in response to
Action Items: 1, 2, 3, 4, 6, and 7

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Westinghouse Hanford Company | **Internal Memo**

From: PUREX Process Technology Support 17521-92-060
Phone: 3-2694
Date: July 31, 1992
Subject: EVALUATION FOR COMPLIANCE ITEMS OF THE SUMP WASTE RECEIVER TANK (TK-F18) OVERFLOW

To: J. G. Adler S6-19

cc: D. G. Harlow S6-17
J. C. Midgett S6-15
L. F. Perkins S6-15
R. C. Roal S6-08
D. J. Washenfelder S6-18

REFERENCES:

(1) Letter, Dave Nylander, Ecology to J. P. Hamric, DOE and R. J. Bliss, WHC, "DANGEROUS WASTE COMPLIANCE INSPECTION FOR PUREX TANK F-18", dated July 16, 1992.

(2) Internal Memo, G. R. Tardiff, WHC to J. C. Midgett, WHC, "REVIEW OF PUREX FACILITY SURVEILLANCE REQUIREMENTS", dated May 5, 1992.

(3) WHC-SD-CP-RPT-004, Rev. 0, "PUREX Cold Standby Instrument Calibration Interval Evaluation"0, dated October 31, 1991.

This letter contains the information that you have requested in response to the compliance letter action items that are discussed in Reference 1. I have compiled the following information in regards to each compliance item for the Sump Waste Receiver TK-F18 and similar dangerous waste vessels.

Background of the PUREX Liquid Level Measurement by Use of a Weight Factor System

PUREX liquid level measurement is performed by use of a weight factor (WF). Weight factor is a measure of the hydrostatic (fluid) pressure in a dip tube below the liquid level in a tank (See attachment 1). It is used with the vessel calibration data and solution specific gravity to determine the liquid volume.

The weight factor system consists of a set of purge-type tubes: the "low", "med", and "high" dip tubes (terms based on the pressure in the tube). The tubes are connected to an air source (purge) to the tank, each terminating at different elevations in the tank. The low dip tube is near the top of the tank and acts as a reference. The high dip tube is located at a known distance near the bottom of the tank. The high tube is used with the low

dip tube to measure the tank weight factor. The medium dip tube is used with the high dip tube to determine the specific gravity of the liquid.

The difference in pressure between the dip tubes can be measured by use of a differential pressure transducer referred to as a weight factor transmitter (WFT). A signal from the WFT is recorded on a weight factor recorder (WFR). Using a calibration table and the specific gravity of the liquid, the tank liquid volume can be calculated using the recorder value (weight factor).

To regulate the tank volume from reaching an undesired level a weight factor alarm switch (WFAS) is used. When a tank liquid level approaches an undesired level, the WFAS activates, causing a weight factor alarm to go off in the control room.

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COMPLIANCE LETTER ACTION ITEM #1.

Monitoring systems related to TK-F18 are:

Overflow detection
- TK-F18 Weight Factor Alarm (WFA-F18-1)
- TK-F18 Weight Factor Recorder (WFR-F18-1)

Leak detection
- Sump SFB Weight Factor Recorder (WFR-SFB)
- Sump SFB High Level Alarm (WFA-SFB)
- Sump SFB Hi-Hi Level Alarm (WFA-SFB-2)

More detail is given for these instruments on attachment 2, including calibration information. Weight factor alarms (WFA) are tested at the same time as the WFAS. Similarly, the transmitters are calibrated at the same time as the recorders. Based on a review of the monitoring instruments, calibrations were performed on or near the scheduled dates for the last two years.

Two plant operating procedures (POP) are used with TK-F18. The first POP is PO-040-305, "Perform PUREX Routine Surveillance". This procedure provides instructions for performing routine shift-wise, daily, and weekly surveillance of a majority of the PUREX process vessels including Tank F18. The surveillance includes monitoring the TK-F18 weight factor and the weight factor of the secondary containment sump, SFB. (Monitoring consists of the operator looking at the recording instrumentation, writing the value on the provided data sheet, evaluating this value with preset conditions, detecting inconsistencies, and notifing supervision of such inconsistencies. The shift operations management reviews the completed data sheets for completeness, legibility, inconsistencies, trends, and compliances.)

The second POP is PO-320-009, "Perform Sump Handling and TK-F18 Disposal". This procedure provides instructions for handling waste solutions to TK-F18, including solution from the canyon sumps. The procedure also allows for transfers of waste from TK-F18 to the Tank Farms.

COMPLIANCE LETTER ACTION ITEM #2

Since the TK-F18 overflow, several activities have been conducted to resolve the potential for another TK-F18 overflow:

Changes were made to the surveillance procedure PO-040-305. The TK- F18 weight factor is monitored and recorded once per each shift. The specific gravity and calculated volume are monitored and recorded on the day shift only. In addition, associated tank alarm lights are tested for operability on a daily basis. Action levels were also incorporated into the procedure. The action level is set at 70 percent of the tank volume. When an action level is reached, the data entry is circled in red and reported to supervision immediately. Operation above the 70 percent volume limit is not allowed without approval from the PUREX Operations Manager.

A review was done on the PUREX facility surveillance requirements for all process vessels in conjunction with PUREX tank overflow events (Reference 2).

The POP for the surveillance of the sumps, PO-040-307, "PERFORM PUREX SURVEILLANCE FOR OSR COMPLIANCE DURING STANDBY", is in the process of being changed. The change calls for a "dry sump" policy in which the sumps will be kept as dry as possible. This will aid in detecting a potential leak. This change will be incorporated with the approval of PUREX Process Engineering, PUREX Operations, North Facility Safety Assurance, and Environmental Protection.

No changes were needed for the procedure PO-320-009.

The TK-F18 weight factor recorder was recalibrated to show an accurate reading. Two factors apparently influenced the inaccurate reading of between 10 percent and 12 percent. About three percent of the error was because the tank weight factor transmitter was out of calibration. The error was identified during a calibration check conducted shortly after the overflow. Calibration was conducted using the Plant Instrument Calibration, Surveillance, and Evaluation System (PISCES) Program. The instrument was recalibrated. The other seven to nine percent error was later determined to be from an air leak between the transmitter and the weight factor recorder. The air leak was subsequentially repaired. See attachments 3 and 4 for the documentation of the discovery of this air leak in the PUREX shift log, the work package and the PISCES for the air leak.

A review of WHC-N-561-2, shift operations log, PISCES, and PUREX Job Control System revealed no deficiencies associated with the TK-F18 monitoring instrumentation. Additionally, only the air leak between the TK-F18 weight factor transmitter and the weight factor recorders was identified and repaired. PUREX now meets the regulatory requirements of Title 40 Code of Federal Regulations (40 CFR) Section 265.194(b)(2).

COMPLIANCE LETTER ACTION ITERM #3

Similar Tank Systems

The following is a list of the PUREX plant dangerous waste tanks and associated sumps that are similar to the TK-F18 and sump SFB systems:

Coating Waste Tank E5 (TK-35) / F Cell Sump B (SFB)

Ammonia Scrubber Waste Concentrator F11-1 (E-F11-1) / F Cell Sump A (SFA)

1WW Denitration Tank F15 (TK-F15) / Sump SFB

1WW Denitration Tank F16 (TK-F16) / Sump SFB

100 Receiver Tank G7 (TK-G7) / G Cell Sump (SG)

Laboratory Waste Receiver Tank U3 (TK-U3) / U Cell Sump B (SUB)

Laboratory Waste Receiver Tank U4 (TK-U4) / Sump SUB

The associated monitoring equipment for these similar vessels is shown on Attachments 1 and 2.

COMPLIANCE LETTER ACTION ITEM #4

Activities related to TK-F18 have also been carried over to the other associated waste vessels (TK-E5, E-F11-1, TK-F15, TK-F16, TK-G7, TK-U3, and TK-U4). This includes routine surveillance of the vessels weight factors per procedure PO-040-305. Also these vessels have an action level of 70 percent of tank capacity.

Based on the above information, no deficiencies were found in the vessels monitoring equipment. The PUREX Plant meets the regulatory requirements of 40 CFR 265.194(b)(2).

COMPLIANCE LETTER ACTION ITEMS #6 AND #7

The calibration frequency of instrumentation is a topic recently review by the PUREX Process Technology Support Group. Last summer, an evaluation was conducted on the instrument calibration interval evaluation (Reference 3). Based upon the information found in this report, the calibration intervals for the weight factor recorders and alarm systems for the tanks (TK-F18, TK-E5, E-F11-1, TK-F15, TK-F16, TK-G7, TK-U3, and TK-U4) and associated sumps (SFB, SE, SFA, SG, and SUB) are adequate. All intervals are on a six month frequency with the exception of the E-F11-1 recorder and alarm switches, and the high weight factor alarm switches for the five sumps. These instruments have a twelve month frequency.

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All of the liquid level and alarm instruments should meet the tolerance requirements using the present calibration intervals. The PUREX Plant meets the intent of the regulatory requirements of the Washington Administrative Codes 173-303-320(c)(2).

To determine if PISCES had generated any work packages, a review of the PUREX Job Control System was conducted. The review looked for work packages that had addressed corrective action taken to repair tank monitoring equipment for the tanks (TK-F18, TK-E5, E-F11-1, TK-F15, TK-F16, TK-G7, TK-U3, TK-U4) and sumps (SFB, SE, SFA, SG, and SUB). The review covered the period between July 1991 and July 1992. Two work packages were found that required repairs to tank monitoring equipment were identified. One package was for the TK-F18 instrumentation after the TK-F18 overflow. The second was for the WFAS-SUB, which was recommended by PUREX Process Technology Support in March.

Summary

Based upon the information that has been collected for this letter:

Leak detection systems for the tanks (TK-F18, TK-E5, E-F11-1, TK-F15, TK-F16, TK-G7, TK-U3, and TK-U4) and sumps (SFB, SE, SFA, SG, and SUB) meet the regulatory requirements

Appropriate changes to surveillances and procedures have been made. A revision to the sump surveillance procedure is presently been prepared by PUREX Process Engineering to strengthen the dry sump policy.

Instruments are being calibrated at an acceptable interval to ensure that they are in tolerance. Calibrations have been performed at the required intervals. Repairs are made when instrument problems are identified.

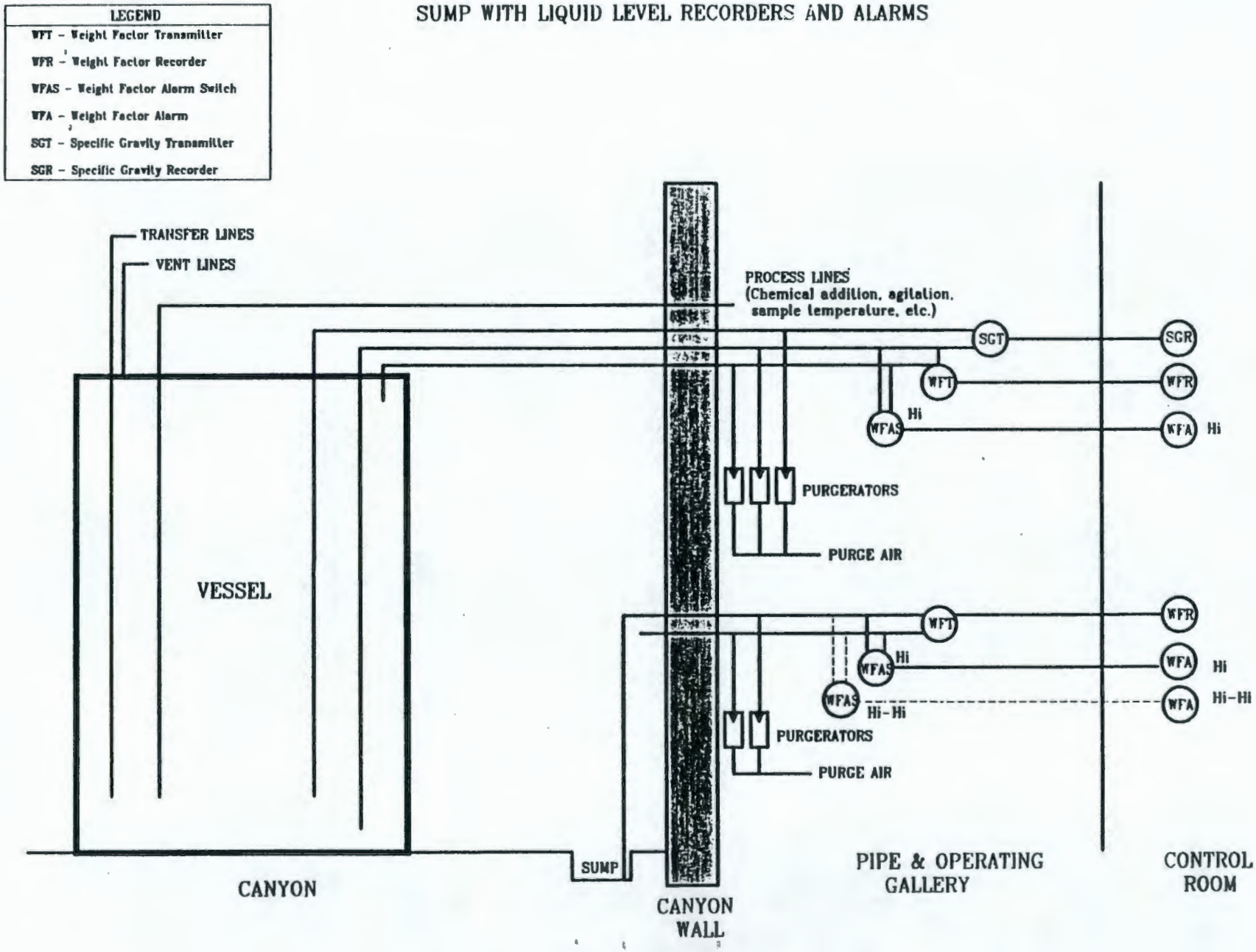
Should you have questions or need additional information related to this topic, please contact me at 3-2694.

Sean M. Eiholzer
S. M. Eiholzer
Engineer

sme

Attachments

SCHEMATIC DIAGRAM OF CANYON VESSEL AND SUMP WITH LIQUID LEVEL RECORDERS AND ALARMS



Attachment 1

7/92

PUREX PLANT DANGEROUS WASTE TANKS LEAK DETECTION MONITORING SYSTMES - TANKS

Vessel	Weight Factor Recorder	PISCES Calibrat. Frequency (PISCES Loop #2)	Weight Factor Alarm	PISCES Calibrat. Frequency (PISCES LOOP #)	WF Alarm High In.	Assoc. Sump	Surviellance
TK-F18	WFR-F18-01	6M (F0286)	WFAS-F18-1	6M (F0127)	88	SFB	PO-040-305
TK-E5	WFR-E5	6M (E0073)	WFIAS-E5-1	6M (E0075)	86	SE	PO-040-305
TK-F11	WFR-F11-2 WFR-F11-3	12M (F0370) 12M (F0371)	WFAS-F11-1	12M (F0372)	175	SFB	PO-040-305
TK-F15	WFR-F15-1	6M (F0107)	WFAS-F15-1	6M (F0107)	107.5	SF	PO-040-305
TK-F16	WFR-F16	6M (F0278)	WFAS-F16-1	6M (F0276)	96	SFB	PO-040-305
TK-G7	WFRC-G7	6M (G0051)	WFAS-G7-1	6M (G011B)	120	SG	PO-040-305
TK-U3	WFR-U3	6M (U0031)	WFAS-U3-1	6M (U0031)	138	SUB	PO-040-305
TK-U4	WFR-U4	6M (U0041)	WFAS-U4-1	6M (U0041)	138	SUB	PO-040-305

PUREX PLANT DANGEROUS WASTE TANKS LEAK DETECTION MONITORING SYSTEM - SUMPS

SUMP	WEIGHT FACTOR RECORDER	PISCES CALIBRATION FREQUENCY (PISCES LOOP #)	HI WEIGHT FACTOR ALARM	PICES CALIBRAT. FREQUENCY (PISCES LOOP #)	WF ALARM HIGH IN.	HI-HI WEIGHT FACTOR ALARM	PISCES CALIBRAT. REQUENCY (PISCES LOOP #)	WF ALARM HI-HI IN.
SFB	WFR-SFB	6M (F0122)	WFAS-SFB	12M (F0122)	15	WFAS-SFB-2	6M (F0122)	18.3
SE	WFR-SE	6M (E0154)	WFAS-SE	12M (E0154)	15	WFAS-SE-2	6M (30154)	18.25
SFA	WFR-SFA	6M (F0075)	WFAS-SFA	12M (F0075)	15	WFAS-SFA-2	6M (F0075)	18.3
SUB	WFR-SUB	6M (U0036)	WFAS-SUB	12M (U0036)	15	WFAS-SUB-2	6M (U0036)	17.5
SG	WFR-SG	6M (G0061)	WFAS-SG	12M (G0061)	12	WFAS-SG-2	6M (G0061)	14.7

Note: Sumps are surveilled using PO-040-307

ABBREVIATIONS:

TK-F18	SUMP WASTE RECEIVER TANK
TK-E5	COATING WASTE TANK
E-F11-1	AMMONIA SCRUBBER WASTE CONCENTRATOR
TK-F15	1WW DENITRATION TANK
TK-F16	1WW DENITRATION TANK
TK-G7	100 RECEIVER TANK
TK-U3	LABORATORY WASTE RECEIVER TANK
TK-U4	LABORATORY WASTE RECEIVER TANK
SFB	F CELL SUMP B
SE	E CELL SUMP
SFA	F CELL SUMP A
SG	G CELL SUMP
SUB	U CELL SUMP B
WFR	WEIGHT FACTOR RECORDER
WFAS	WEIGHT FACTOR ALARM SWITCH
M	MONTH
In	Inches of water pressure (gauge)

9 3 1 2 8 9 8 0 4 8 5

1020 Reviewed logs - J.C. Moffett
110 - Instrument tech reported that upon a high alpha alarm on CWC system we do not receive a diversion alarm. Wrote a J3 to troubleshoot
111 - Wrote a J3 to troubleshoot why both weight factor recordings (in CCR & HECR) for TK-F18 went to zero % of charts.
415-Dm: Instrument tech reported that output air signal from the F18 weight factor transmitter is leaking at a soldered tee connection. Initiated a J1 to repair. JCS # 2A-92-375
430-Dm: Pipefitter repaired RW valve 69R in the P&O Gallery. Functional tested valve by closing & opening it twice, no problems observed. OK to close package 2A-91-01749.
435-Dm: "Late Entry" - Deep Bed Filter #1 level was measured this morning as 15'6". (No significant change.)
437 Dm: "Late Entry" - Vent & Balance personnel were sent to Tank Farms after lunch, preempting lab hood adjustments. They are scheduled for tomorrow. Also, if a man-lift is available tomorrow they will complete the quarterly flow measurement for The White Room Stack.
445-Dm: Operators covered the EGE filter housing with plastic to prevent moisture reaching the HEPAs in the event of rain. The cog has been contacted regarding permanent sealing of any leaks.
52 - Performed range changes/calibrations on high weight factor alarm switches for tanks F12, 65 and R7. Tanks 65 & R7 are now off of high weight factor alarm and no longer need alternate monitoring.
[illegible] - GRT The [illegible] levels for TK-E6 have been very constant over the past five months. Therefore, no [illegible] precipitation has occurred. Therefore, approval to restart the E6 agitator is given. Please let me know if you have any questions. [illegible] 3-17-92
525 - Gave turnover to D.K. Powers. J.P. Hayfield [illegible]

3/17/92 B Shift Swing Powers

1525 - Received and accepted shift turn over from J.P. Hayfield.
1545 - Held shift turnover meeting with B Shift Personnel.
1700 - Tower operator reported that compartment E5 in the east Switchgear does not indicate any lights. When tested by pushing in the light work but neither the Red or Green indicating light is on
1700 - contacted B. Doggett about Breaker E5. He said that as long as the lights lit up when tested the there was control power and that was what was important
1800 - Surveillance operator Reported That Leak Detector 151 was not lit. Tried to contact TK Farms shift manager. Left message.

*** RECORD COPY *** *** RECORD COPY ***

==========J-1 WORK REQUEST (W110)==========

Page: 1 15:11:29 17 MAR 1992

1. Document Number 2A-92-00375/W *GENERIC WORK ITEM*
2. Work Item Title REPAIR/REPLACE LINE ON WFT-F18

==========

3. System SXE *SOLVENT EXTRACTION*

4. Components

Component Number	Type	Name
N/A	E	Not Applicable

Temporary Number	Type	Name
N/A		N/A

5. Location

Facility 2A *PUREX*
Bldg/Rm 202A/P&O Other RACK 38 Other

6. Associated Equipment

Component Number	Type	Name

		Date	Telephone No.
7. Originator Name	BROOKS,DS	03/17/92	373-5514
Organization	17200 *PROCESS OPERATIONS (ROSS)*		

8. Charge Code KPM31

9. Work Item Description

REPAIR/REPLACE LEAK IN WFT-F18 OUTPUT LINE. LEAK IS LOCATED IN LINE ABOVE RACK 38 SOUTH WALL OF THE P&O GALLERY. WHEN LEAK IS REPAIRED CALIBRATE THE LOOP. THIS IS A OSR ITEM.

		Signature	Date
10. Facility Rep. Review	X	COLLINS,WB	03/17/92
11. Priority		2	
12. Phase Designator		STNBY *PUREX STAND-BY LIST*	
13. Correct Maint. Assessment		Y	
14. Personnel Safety Related		N	

15. Cognizant Engineer TARDIFF,GR
16. Cognizant Engineer Mgr. WASHENFELDER,DJ

17. Reference Documents Type

18. Comments

==========

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==========J-8 WORK RELEASE SHEET (W180)==========

Page: 1 15:12:14 17 MAR 1992

1. Document Number 2A-92-00375/W *GENERIC WORK ITEM*
   Work Item Title REPAIR/REPLACE LINE ON WFT-F18

==========

	Signature	Date
2. Pre-Release Review	W. R. Collins	3/17/92
3. Tagout Number		
4. Released for Field Work Facility Representative See Partial Release	B Forem	3/18/92

Existing Suspensions:

	Signature	Date
7. Functional Retest Complete Facility Representative	H Hayfield	3/19/92
8. Work Complete Facility Representative	H Hayfield	3/19/92
9. Post Review Reactor Containment Integrity	[illegible]	4-7-92

==========

MES-010.005X
Craft INSTRUMENT TECH
Facility PUREX

Mid Interval Data Sheet
Overall Cal

Attachment 1
Page 3 of 6
Data Sheet Sequence #: 2A*9203170209

Instr #: WFT F18
Loop #: FC286 Bldg: 202A
Seq #: 1 Room: P&O
Sys #: Locn: R38
Freq : 06M DS Key: 015774
Function Desc: WST DISPOSAL WEIGHT FACTOR
Dwg/Sht/Coord/Rev#: H263243/01/B07/07

Appl Code: OSR
Maker: FOXBORO
Model: 3A
Serial #: 234018
Lin Code: 01

Due: 08/28/92
Last Done: 02/19/92
Proc#: PSCP-6-043 Iss.Date 11/20/
SW/CAL Tol Hist: III* OIII
Status: A

Range Input:	.0	TO 150.0	IN WG	+ / -	1.25	%
Range Output:	3.0	TO 15.0	PSIG	+ / -	5.00	%

Standards Used: (Traceable to Nationally Recognized Standards)
Input 512-28-09-012 CAL Expiration Date: 4-18-92
Output 512-25-09-010 CAL Expiration Date: 5-3-92

Calibration Data

CK PT	Input / Output Requirements: Specified Input Value	Specified Output Value	- Limit of Tolerance	+ Limit of Tolerance	Output Condition: As Found Value	As Found Tolerance (In/Out)	As Left Value
1	0.0	3.0	2.4	3.6	3.30	~~2.70~~ In	2.70
2	37.5	6.0	5.4	6.6	6.35	In	5.75
3	75.0	9.0	8.4	9.6	9.43	In	8.82
4	112.5	12.0	11.4	12.6	12.54	In	11.93
5	150.0	15.0	14.4	15.6	15.66	Out	15.04

Perform Maint. Proc. 7-GN-38

Work Released B Foreman 3/18/92 Please Circle: Accept or Reject

Remarks DPXmitter 0-30psi Output guage is bad (sticks) needs to be replaced.

Previous Remarks:

Instructions:

Revision Required (Y/N) Cal/Procedure _____ Data Sheet _____

Technician Freddie 3/18/92 Hours 3.0 Manager RK Wright 3/19/92

Work Order # _____

Craft INSTRUMENT TECH — Funct Test

Facility PUREX

Attachment 4
Data Sheet Sequence #: 2A*9203170211

Instr #: WFI F18 Appl Code: Operator Aid Due:
Loop #: F0286 Bldg: 202A Maker: FISHER & PORTER Last Done:
Seq #: 3 Room: CCR Model: RATOGRAPHIC Proc#: N/A Iss.Date
Sys #: Locn: PB16 Serial #: 5804A2658B SW/CAL Tol Hist: **** ****
Freq : 06M DS Key: PI02 Lin Code: 01 Status: N
Function Desc: WST DISPOSAL WEIGHT FACTOR
Dwg/Sht/Coord/Rev#: H263243/01/A07/07

<<<<<<<<< Data Sheet >>>>>>>>>

(Initials)

1. Record setting. - - - - - - - - - - - - 44

2. Does Instrument respond to change in Temperature Signal - - Y N

3-19-92

3/19/92

9312898049 0

Work Released 3/18/92 Please Circle: Accept or Reject

Remarks Inst tweaks on loop ck ok

Previous Remarks:

Instructions:

Revision Required (Y N) Cal/Procedure _____ Data Sheet _____

Technician 3/19/92 Hours 1.5 Manager 3/19

Work Order # _____

Craft INSTRUMENT TECH Overall Cal
Facility PUREX

Data Sheet Sequence #: 2A*9203170212

Attachment 4
Page 5 of 6

Instr #: WFR F18 Appl Code: Prim Proc Ctl Due:
Loop #: F0286 Bldg: 202A Maker: FOXBORO Last Done: 08/07/91
Seq #: 4 Room: ~~HECR~~ CCR Model: 5320-E Proc#: PSCP-4-019 Iss.Date 10/31/8
Sys #: Locn: ~~PAS~~ 816 Serial #: 1465056-C SW/CAL Tol Hist: I*** IIII
Freq : 12M DS Key: 005736 Lin Code: 01 Status: N
Function Desc: TK-F18 WEIGHT FACTOR
Dwg/Sht/Coord/Rev#: H263234/01/A02/18

Range Input:	3.0	TO	15.0	PSIG	+ / -	1.25	%
Range Output:	.0	TO	100	PERCENT	+ / -	5.0	%

Standards Used: Input 812-35-40-007 CAL Expiration Date: 5-31-92
(Traceable to Nationally Recognized Standards) Output Chart Recorder 1465056-C CAL Expiration Date: ——

Calibration Data

CK PT	Input / Output Requirements: Specified Input Value	Specified Output Value	- Limit of Tolerance	+ Limit of Tolerance	Output Condition: As Found Value	As Found Tolerance (In/Out)	As Left Value
1	3.0	0.0	-5.0	5.0	0	In	0
2	6.0	25.0	20.0	30.0	24	In	24
3	9.0	50.0	45.0	55.0	49	In	49
4	12.0	75.0	70.0	80.0	75	In	75
5	15.0	100.0	95.0	105.0	100	In	100

Perform Maint. Proc. 7-GN-38

Work Released BDorne 3/18/92 Please Circle: Accept or Reject

Remarks

Previous Remarks:

Instructions:

Revision Required (Y/N) Cal/Procedure Data Sheet

Technician [illegible] 3/19/92 Hours 3.0 Manager [illegible]
Work Order #

MES-010.005X
Craft INSTRUMENT TECH
Facility PUREX

Mid Interval Data Sheet
Overall Cal

Data Sheet Sequence #: 2A-9203170210

Instr #: WFR F18 1 Appl Code: OSR Due: 02/25/92
Loop #: F0286 Bldg: 202A Maker: FOXBORO Last Done: 01/06/92
Seq #: 2 Room: HECR Model: 5320 Proc#: PSCP-4-019 Iss.Date 10/
Sys #: Locn: PA9 Serial #: 215947 SW/CAL Tol Hist: II** IIII
Freq : 06M DS Key: 005251 Lin Code: 01 Status: A
Function Desc: WST DISPOSAL WEIGHT FACTOR
Dwg/Sht/Coord/Rev#: H263243/01/A07/07

Range Input: 3.0 TO 15.0 PSIG + / - 1.25 %
Range Output: 0 TO 100.0 PERCENT + / - 5.0 %

Standards Used: Input 512-35-40-007 CAL Expiration Date: 5-31-92
(Traceable to Nationally Recognized Standards) Output Recorder CAL Expiration Date: —

Calibration Data

CK PT	Input / Output Requirements: Specified Input Value	Specified Output Value	- Limit of Tolerance	+ Limit of Tolerance	Output Condition: As Found Value	As Found Tolerance (In/Out)	As Left Value
1	3.0	0.0	-5.0	5.0	0	IN	0
2	6.0	25.0	20.0	30.0	26		26
3	9.0	50.0	45.0	55.0	48		48
4	12.0	75.0	70.0	80.0	74		74
5	15.0	100.0	95.0	105.0	99		99

Perform Maint. Proc. 7-GN-38

Work Released B Foreman 3/8/92 Please Circle: Accept or Reject

Remarks

Previous Remarks:

Instructions:

Revision Required (Y/N) Cal/Procedure Data Sheet

Technician [illegible] 3/18/92 Hours 4.5 Manager [illegible] 5/19

Work Order #

9312890492

Attachment C

Referenced in response to
Action Items: 3 and 4

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ATTACHMENT C DRAWING LIST

Drawing	Rev.	Sheet	Title
H-2-63225	27	1	INSTRUMENTATION MISC. ELEMENTRIES ENGINEERING DIAGRAM E-CELL, TANK - E5
H-2-63225	9	2	IEFD "E" CELL TK-E5
H-2-63237	14	1	INSTRUMENTATION ENGINEERING DIAGRAM "F" CELL E-F11-1 AND E-F11-2
H-2-63238	9	1	INSTRUMENTATION ENGINEERING DIAGRAM "F" CELL E-F11-1 AND E-F11-2
H-2-63241	20	1	INSTRUMENTATION ENGINEERING DIAGRAM "F" CELL TK-F15
H-2-63241	4	2	INSTRUMENTATION ENGINEERING DIAGRAM "F" CELL TK-F15
H-2-63242	21	1	INSTRUMENTATION ENGINEERING DIAGRAM "F" CELL TK-F16
H-2-63242	2	2	INSTRUMENTATION ENGINEERING DIAGRAM "F" CELL TK-F15
H-2-63286	16	1	INSTRUMENTATION ENGINEERING DIAGRAM TK-U3
H-2-63286	15	2	INSTRUMENTATION ENGINEERING DIAGRAM TK-U4 & U7
H-2-63234	23	1	INSTRUMENTATION ENGINEERING DIAGRAM "F" CELL TK-F7 & F26
H-2-63234	4	1	INSTRUMENTATION ENGINEERING DIAGRAM "F" CELL TK-F7 & F26
H-2-63247	15	1	INSTRUMENTATION ENGINEERING DIAGRAM "G" CELL TK-G3 & G4
H-2-63247	0	1	INSTRUMENTATION ENGINEERING DIAGRAM "G" CELL TK-G3 & G4
H-2-63250	24	1	INSTRUMENTATION ENGINEERING DIAGRAM "G" CELL TK-G7

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Drawing List

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Attachment D

Referenced in response to
Action Item: 5

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TITLE

DANGEROUS WASTE INSPECTION PLAN

APPROVED BY:

PUREX Plant Manager — Date 2/20/90

A. PURPOSE

This inspection plan outlines procedures for complying with regulatory requirements and company policy for inspecting PUREX Plant dangerous waste units to prevent malfunctions and deteriorations, operator errors, and discharges which may cause a threat to human health, or lead to the release of dangerous waste constituents to the environment. The plan outlines an inspection schedule sufficient to identify problems and correct them before harming personnel or the environment.

B. SCOPE

This inspection plan outlines the requirements for inspecting:

1. All monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that help prevent, detect, or respond to hazards posed by dangerous wastes to the employees, public or environment.

2. All containers containing dangerous wastes.

3. All tank systems used to treat or accumulate dangerous waste.

4. The canyon waste pile.

5. All dangerous waste stored in the PUREX tunnels.

6. Dangerous waste transfers from PUREX Plant to Tank Farms.

C. RESPONSIBILITIES

The generator (PUREX Plant) is responsible to comply with the inspection requirements for facility operators in Washington Administrative Code (WAC) 173-303-320)(1),(2), and (3) (general inspection); WAC 173-303-630 (6) (use and management of containers); WAC 173-303-640(6) (tank systems); WAC 173-303-660 (waste piles); and other applicable regulations.

D. REQUIREMENTS

1. General Inspection

a. Regulatory Requirements

The general inspection section of WAC 173-303-320(2) states that: "The owner operator shall develop and follow a written schedule for inspecting all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that help prevent, detect, or respond to hazards to the public health or the environment. In addition:

(1) The schedule must be kept at the facility.

(2) The schedule must identify the types of problems which are to be looked for in inspections.

(3) The schedule shall indicate the frequency of inspection for specific items. The frequency should be based on the rate of possible deterioration of equipment, and the probability of an environmental or human health incident. Areas subject to spills must be inspected daily when in use.

(4) An inspection log or summary shall be kept, including at least the date and time of the inspection, the printed name and handwritten signature of the inspector, a notation of the observations made, and the date and nature of any repairs or remedial actions taken. The log or summary must be kept at the facility for at least three years from the date of the inspection."

b. Safety and Emergency Equipment

The following section provides a general description of PUREX Plant safety and emergency equipment and identifies specific procedures to satisfy the Resource Conservation Recovery Act (RCRA) inspection requirements.

PUREX Plant safety and emergency equipment includes safety showers, fixed and portable eye washes, fire extinguishers, fire protection systems, emergency acid suits, emergency SCBA equipment, emergency lanterns, emergency alarm systems, emergency equipment cabinets, respirators, Escape Paks, etc. This equipment will be regularly inspected and maintained for use in responding to emergencies such

9 3 1 2 8 7 3 1 4 9 8

as fire, explosions, natural disasters, radiological incidents, terrorist incidents, releases and/or spills of hazardous materials or dangerous wastes, and other emergencies.

The regulations for safety and emergency equipment are met as follows:

RCRA General Inspection: Safety Showers

Safety showers are inspected once per month by Operations personnel for good water flow, proper shutoff-no leaks, shower light on, access not obstructed. The shower inspection tag is initialed by the inspector and the appropriate zone monthly tickler checksheet (Part A, Appendix I) is completed by Operations and maintained by Surveillance and Testing Control.

RCRA General Inspection: Fixed Eye Washes

Fixed eye washes are inspected once per month by Operations for good water flow, proper shutoff-no leaks, and access not obstructed. The eye wash inspection tags are initialed by the inspector and the appropriate zone monthly tickler checksheet (Part A, Appendix I) completed by Operations and maintained by Surveillance and Testing Control.

RCRA General Inspection: Portable Eye Washes

The portable eye washes are inspected once per month for access not obstructed and proper pressure. The inspection tag are initialed by the inspector and the appropriate zone monthly tickler checksheet (Part A, Appendix I) completed and maintained by Surveillance and Testing Control. Once each 180 days, the portable eye washes are emptied, the internal shell inspected, and any units with discolor in water or container noted. The eye wash is then refilled and pressurized. The date of change is noted on the label and the appropriate tickler checksheet (Part A, Appendix I) completed by Operations and maintained by Surveillance and Testing Control.

RCRA General Inspection: Fire Extinguishers

Fire extinguishers are inspected once per month for unbroken seal, proper charge, access not obstructed, and correct type and identification number per appropriate tickler form. The inspection tag is initialed by the inspector and the appropriate zone monthly

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tickler checksheet (Part A, Appendix I) completed by Operations and maintained by Surveillance and Testing Control.

RCRA General Inspection: Emergency Acid Suit Lockers

Emergency acid suit lockers are inspected quarterly by Operations per PUREX Quarterly Tickler's Guideline No. G10118. The lockers will be inspected to check for a proper seal, completeness, damage or wear, replace when necessary, cleanliness and access not obstructed. The date is then checked, posted and the locker resealed. The tickler checksheet is completed by Operations and filed by Surveillance and Testing Control.

RCRA General Inspection: Emergency SCBA

The emergency self-contained breathing apparatus (SCBA) are inspected weekly by Operations per PUREX Weekly Tickler's Guidelines No. G10117 for full tanks and complete equipment. Also, the SCBA will be inspected monthly per the PUREX Monthly Tickler's Guidelines. The inspection consists of (a) checking the (1) facepiece assembly, tube, head harness and exhalation valve, (2) harness assembly, (3) cylinder pressure, (b) functional checking the regulator and alarm, (c) assuring the SCBA is clean, (d) checking that access is not obstructed, and (e) initialing the inspection tag. The record of inspection is maintained by Surveillance and Testing Control on the Zone 3 Checksheet, Tickler No. G10093. (Part A, Appendix I).

RCRA General Inspection: Emergency Lanterns

Emergency lanterns are inspected once per month by plant electricians per Preventive Maintenance (PM) Procedure 2A07001, Rev. No. 1, as required by WHC-CM-4-3, Standard FP-12. Inspection records are maintained by PUREX Plant Maintenance.

RCRA General Inspection: Fire Protection Systems

The fire protection systems include the dry sprinkler system, four wet sprinkler systems, the deluge system in the white room, and TK-R1A, the CO_2 system for the monitoring room, the fire foam system for Cells G, H-J, K, R and TK R1A, the backup foam system, the fire fog system, the canyon crane fire alarm system, the Halon systems in N-Cell, canyon cranes and 292-AB Building, and the associated smoke and heat detectors, alarms, etc. Building 202-A

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Facility Pre-Fire Plan contains further information on the fire protection systems.

The fire detection systems, will be inspected/tested on a regular schedule (per WHC-CM-4-2 FS Standards 2) as outlined in the PUREX Administrative Tickler Listing. See Appendix I Part B, for summary of the fire system ticklers. The fire system cognizant engineer is responsible for scheduling and tracking the Hanford Fire Department (HFD), Operations Support Services (OSS), or operations personnel as needed to perform the inspections/testing. Inspection records are maintained by the organization doing the inspections. The fire detection equipment in the canyon cells is discussed in the Inspection Plan section on Tank Systems.

RCRA General Inspection: Emergency Alarm Systems

The emergency alarm system includes the emergency sirens for criticality, evacuation, and take cover, the fire gong and the crash alarm phone system.

The evacuation siren, fire gong and crash phones may be applicable to dangerous waste emergency situations.

The criticality siren is tested once per month by Maintenance per PM 2A10003. The crash alarm phone system is checked once/month by Operations, per Procedure PO-020-040. See Operations Tickler G10023 (Part A, Appendix I). The fire gong is part of the fire protection system and is checked monthly by the Hanford Fire Department, per the Fire System Maintenance/Inspection Ticklers (Part B, Appendix I). The evacuation and take cover sirens are tested once per month by the dispatchers office, per Procedure PO-020-040. Inspection records are maintained by the organizations making the tests or inspections.

RCRA General Inspection: Emergency Equipment Cabinets

Emergency equipment cabinets are located by MO-409, 2714-A, and the PR dock. These cabinets provide equipment, such as acid suits, flashlights, plastic, rope, etc., which may be needed during an emergency. The cabinets are inspected once per quarter as specified by the PUREX Plant industrial safety representative.

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c. Security Devices

The PUREX Plant security system is designed to prevent access to the facility by unauthorized personnel. Further, the security system limits access inside specific plant areas to those personnel authorized by their job functions or applicable work permits. All entrances to areas containing dangerous wastes in the canyon, tunnels and U-Cell, are locked to prevent unauthorized entry and entry is controlled by the dispatcher. The security system consists of a perimeter fence with access through controlled gates and a badge house, intrusion and motion detection devices, balanced magnetic switch sensors for gates and doors, X-ray machines, metal detectors, Special Nuclear Material detectors, and personnel access card readers.

RCRA General Inspection: Security Devices

The security alarm system will be tested weekly using the sensor functional test checklist. (Procedure No. 401, "Weekly Functional Test Program"). Test results are forwarded to WHC Security Operations for review, followup with Security Maintenance, and filing. A security door and card reader functional checks are performed weekly by Operations in coordination with the patrolmen following the guidelines in PUREX Weekly Tickler G10018 (Part A, Appendix I).

d. Monitoring Equipment

Most monitoring systems (leak or contamination detection) associated with dangerous wastes are an integral part of the TSD or accumulation tanks in the PUREX canyon and U-Cell. The inspection requirements are discussed in the section on tank systems. Four PUREX Plant non-hazardous liquid effluent streams discharge to the environment. Radiation and pH monitors with diverters are provided as necessary to prevent discharge of streams that do not meet radiation or pH limits. A summary of each system follows;

1. Chemical sewer (CSL) stream - normally goes to 216-B-3 pond but automatically diverts to the 216-A-42 basin when radiation is detected or manually diverts during pH excursions.

2. Steam condensate (SCD) stream - normally goes to 216-A-30 or 216-A-37-2 cribs and automatically diverts to the 216-A-42 basin when radiation is detected.

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3. Cooling water (CWL) stream - normally goes to the 216-B-3 pond and automatically diverts to 216-A-42 basin when radiation is detected.

4. Process distillate discharge (PDD) stream - normally goes to 216-A-45 crib. A system is being installed to automatically divert the PDD stream to a catch tank during pH excursions. The PDD stream may be diverted manually when radiation is detected.

RCRA General Inspection: Monitoring Equipment

Radiation and pH data for the PUREX Plant non-hazardous liquid effluent streams are monitored in the Dispatcher's office and Central Control Room. Radiation levels and pH are recorded continuously. Alarms sound when the pH or radiation limits are reached and diversions occur. The calibration status of this instrumentation is controlled and tracked by the PISCES system with calibration required on a regular basis. The pH and radiation instruments also receive regular preventive maintenance. The above actions fulfill the inspection requirements for the monitoring equipment.

2. Container Inspections

WAC 173-303-630(6) requires that, "at least weekly, the owner or operator must inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion, deterioration, or other factors." The general inspection requirements of WAC 173-303-320(2) which spell out that "the schedule must identify the types of problems which are to be looked for..." and that "the owner or operator shall keep an inspection log or summary,..." apply to container inspections also.

Containers are used for the storage of dangerous wastes in the following PUREX areas:

- Less than 90-day hazardous waste accumulation area
- Less than 90-day mixed waste accumulation area
- Less than 90-day TRU mixed waste accumulation area
- TRU mixed waste satellite accumulation areas

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- Hazardous waste satellite accumulation areas such as for aerosol cans, paint cans and rags, paints and solvents, oil/solvent rags, compressor oil, and mercury bulb crushers.
- Mixed waste satellite accumulation areas for aerosol cans, oil/solvent rags, and mercury bulb crushers
- Laboratory satellite accumulation areas

Drawings showing locations of waste accumulation areas are in the PUREX Building Emergency Plan, WHC-IP-0263-202-A.

WAC 173-303-395(1)(d) specifies that, "At least yearly, the owner or operator shall inspect those areas of his facility where ignitable or reactive wastes are stored. This inspection shall be performed in the presence of a professional person who is familiar with the Uniform Fire Code, or in the presence of the local, state or federal fire marshal..." Most of the PUREX Plant waste accumulation areas contain, or may contain, ignitable or reactive wastes and are covered by the above regulation. The Hanford Fire Department conducts a yearly inspection per WHC-CM-4-2 FS Standards 2. The inspection is coordinated with the PUREX fire system cognizant engineer.

RCRA Weekly Inspections: Containers

The areas where containers are stored must be inspected by the Hazardous Waste Coordinator, or his/her designee, once per week. The inspections follow the guidelines given in "Inspection of Containerized Dangerous Waste Accumulation Areas," Procedure No. 4.25, WHC-CM-5-9. These guidelines cover the drum inspection requirements necessary to comply with RCRA. The inspection logs are maintained by the Hazardous Waste Coordinator.

3. Tank Systems

a. WAC 173-303-640(6) requires that for tank systems used to treat or store dangerous waste:

(1) The owner or operator must develop and follow a schedule and procedure for inspecting overfill controls.

(2) The owner and operator must inspect at least once each operating day:

9 3 1 2 8 9 8 0 5 0 4

(i) Above ground portions of the tank system, if any, to detect corrosion or leaks of waste.

(ii) Data gathered from monitoring any leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and

(3) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system to detect erosion or signs of releases of dangerous waste.

(4) The inspections must be documented in the operating record of the facility and maintained for at least three years."

b. The PUREX tank systems which must comply with the inspection requirements of WAC 173-303-640(6), (Inspections), are the interim status tanks E5, F15, F16, F18, G7, U3, U4, and concentrator E-F11, plus the dangerous waste accumulation tanks A3-4, B3-4, C3-4, E3-2 and F12.

Tanks E5, F12, F15, F16, F18, G7, and concentrator E-F11 are located in process cells in the PUREX canyon. Tanks U3 and U4 are located in U-Cell.

The PUREX canyon is 813 feet long extending in the east-west direction of the PUREX facility. The canyon is divided into two sections. The north portion of the canyon contains a single row of twelve process cells. These cells house the processing equipment including most of the TSD units utilized in the PUREX process. The process cells are 14 feet wide by 39.5 feet deep, while the cell lengths vary depending on the processing function.

The south side of the canyon houses the hot pipe trench. The hot pipe trench contains an array of pipe headers connecting the cells, permitting intercell solution transfers. The hot pipe trench also contains piping for transfers to and from cells to facilities external to PUREX.

The two sections of the canyon are enclosed by concrete walls and floors. Sumps with collection troughs are built into the floor of the process cells to collect any liquid solution or runoff which is subsequently transferred to underground tanks for long term storage. A summary of the pertinent information for the sumps associated with the dangerous waste tanks is given in Table II of Appendix II. The canyon cell sections are enclosed on top by removable, concrete cover blocks. The concrete blocks covering the cells are 3 feet thick, while those covering the hot pipe trench are 2.5 feet thick. The concrete wall separating the canyon cells from the plant galleries extends above the cell cover blocks to form a shielded cabway for two gantry-type, 40 ton capacity master cranes. The cranes are used to perform maintenance work on, or change out of, the processing equipment. The heavy walls and cover blocks are needed to shield personnel from the high levels of penetrating radiation in the cells (500 to 1,000 rad/hour). Therefore, there is no provision for personnel access to these cells.

U-Cell is a largely underground vault shielded with massive steel-reinforced concrete. Like the canyon cells, the ceiling of U-Cell consists of heavy cover blocks. Unlike the canyon cells, the U-Cell vault has a door for personnel entry from the PUREX building. Although the radiation levels in U-Cell are not life threatening, there is a possibility of contamination spread associated with any U-Cell entry, as well as a threat of personnel contamination involved in an entry.

Based upon the above information, most of the physical inspection requirements for tank systems outlined in WAC 173-303-640(6) cannot be accomplished personally but have to be done remotely with instrumentation. The intent of Subtitle C of RCRA and the State Dangerous Waste Regulations is to manage hazardous wastes in a way that is protective of human health and the environment. The intent of the regulations is met as follows:

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RCRA Daily Inspection for Tanks: Monitoring data from leak detection equipment/systems

A summary of the pertinent information for the dangerous waste tanks is given in Table I, Appendix II. Data from leak detection equipment/systems are recorded continuously in the control rooms. Monitoring data are entered on log sheets once per shift while the plant is down or four times/shift while operating.

RCRA Daily Inspection For Tanks: Overfill/spill control equipment

All process cells containing dangerous waste tanks drain to sumps in each cell. Overflow/spill control equipment consists of weight factor (WF) records, indicators, and alarms on the tanks and sumps. (Note: Weight factor is a term equivalent to liquid level.) This instrumentation is monitored in the control rooms. The WF instrumentation is calibrated on a regular basis, according to the PISCES program. Continuous WF recorders and/or indicators with WF alarms exist on all dangerous waste tanks and sumps. See Table I and II of Appendix II. The WFs of TKs-F15, F16, F18, G7, Sumps SFA, SFB, SG, and SE are recorded on log sheets and reviewed every two hours when operating. Also, all connections to the tank are top connections - no bottom flanges for possible leakage below the normal liquid level. The intent of RCRA is met by (1) the continuous WF recording and/or indication with WF alarms on all dangerous waste tanks and sumps, (2) surveillance of WF records (four times every eight hours when operating), and (3) operator response to sump and tank WF alarms, per operating procedures. See Tables I and II of Appendix II.

RCRA Daily Inspection for Tanks: Above ground portions of tank system for corrosion or releases.

Plant personnel cannot physically inspect the above-ground portions of the canyon dangerous waste tanks because the radiation dose-rates are life threatening (greater than 500 rad per hour). Any releases from canyon tanks will be detected by WF recorders and alarms (calibrated on a regular basis) in the control rooms. There has never been a dangerous waste tank leak due to tank failure in the 24 years of plant operation. Spills have occurred as a result of leaks around jumpers and tanks overflowing. If required due to indications of a leak by monitoring equipment, the crane operator can remove a cover block to identify the source of a leak using the crane optic system. The intent of RCRA is met by (1) continuous

recording of tank WFs, (2) surveillance of WF records, (3) response to WF alarms by shift personnel and (4) inspection of the tank by the crane operator using optics when required.

Plant personnel cannot routinely inspect TKs U3 and U4 without increased risk of unnecessary radioactive contamination and exposure. Any releases from TKs-U3 and U4 will be detected by WF records and alarms in the control rooms. In emergencies, or if required to trouble shoot, U-Cell can be entered for a physical inspection of the tanks. The intent of RCRA is met by (1) continuous recording of tank WFs, (2) surveillance of WF records and indicators, (3) response to WF alarms, and (4) physical inspection of the tanks in emergencies or to trouble shoot.

<u>RCRA Daily Inspection for Tanks: Construction materials and area immediately surrounding externally accessible portions of the tank system, including secondary containment.</u>

The response to this and to the intent of meeting requirements is the same as that outlined in the section on "Above ground portions of tank system for corrosion or releases."

<u>RCRA Daily Inspection for Tanks: Areas subject to spills</u>

Because of the life threatening radiation dose rates, plant personnel cannot physically inspect the areas in the canyon process cells subject to spills from the dangerous waste tanks. If a spill occurs, WF alarms sound in the control rooms. The operating personnel then respond to the alarms and take corrective actions per established operating procedures. See Tables I and II of Appendix II. The intent of RCRA is met by (1) continuous recording and/or indication of tank and sump WFs, (2) surveillance of WF records four times per shift when operating, and, (3) response to WF alarms, per operating procedures.

U-Cell cannot be inspected for spills on a routine basis because of the increased risk of personnel contamination. Entry into U-Cell for inspection may be possible if an evaluation of remote indicators shows that additional risk is justified. The WF alarms will sound if a leak occurs. The operating personnel then respond to the alarms and take corrective actions per established procedures. See Tables I and II of Appendix II.. The intent of RCRA is met by, (1) continuous recording and/or indication of tank and sump

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WFs, (2) response to WF alarms, and, (3) the possible entry into U-Cell for inspection as needed.

RCRA General Inspection for Tanks: General Safety and Emergency Equipment

The general safety and emergency equipment for the canyon dangerous waste tanks includes the in-cell fire protection equipment. The sensors and delivery nozzles that are located in the canyon cannot be physically inspected due to the radiation dose rate of at least 500 rad per hour. The sensors are tested for proper functioning by the Hanford Fire Department per Fire System Maintenance/Inspection tickler (Part B, Appendix II). The rest of the fire protection system is inspected as outlined in the section on RCRA General Inspection for Fire Protection Systems. The fire protection systems are constantly monitored through the supervisory panels near the Central Control Room. The instrumentation associated with the fire protection system is checked and calibrated as required on a schedule outlined in the PUREX Administrative Ticklers for PUREX Fire System Maintenance/Inspection (Part B, Appendix II). If a fire alarm sounds, it alarms at both the supervisory panel and the Hanford Fire Department. The intent of RCRA is met by (1) constant monitoring of the fire protection system by instrumentation, (2) inspection and calibration of this instrumentation on a set schedule, and, (3) fire alarms that annunicate at both the supervisory panel and the Hanford Fire Department.

RCRA General Inspection for Tanks: Security Devices

The cell cover blocks are considered to be security devices for the PUREX canyon tanks. Each cover block weighs several tons. Lifting these cover blocks requires a crane. Entry of the crane operator or any other personnel into the canyon is controlled by the dispatcher. General instructions for operation of the process shielded cab cranes in the PUREX canyon are given in Plant Operating Procedure (POP), PO-500-020, Operate PUREX Crane (General). The administrative controls for process-related crane activities are defined in WHC-CM-5-9, Procedure No. 5-4, Rev. 1, Canyon Change Order. These controls include a work plan with proper authorizations, log book requirements, etc. Continuous air monitors are located in the two shield cab cranes for personnel protection. The intent of RCRA is met by (1) canyon access control by the dispatcher, (2) operating and administrative procedures for the

control of canyon work including cell cover block removal, and (3) continuous air monitoring in the shielded cab cranes.

4. Canyon Waste Pile

Failed jumpers and jumper tools containing lead from the PUREX canyon are stored in the upper canyon area, on the canyon deck, prior to disposal as waste. The actual waste pile location is at cover block D5 on the hot trench side of the canyon. WAC-303-660(5)(b), requires that while a waste pile is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

(a) Deterioration, malfunction, or improper operation of run-on and run-off control systems.

(b) The presence of liquids in leak detection systems.

(c) Proper functioning of wind dispersal control systems.

(d) The presence of leachate in and proper functioning of leachate collection and removal systems.

RCRA Weekly Inspection: Waste Pile

The waste pile is located in the upper canyon area with no exposure to outside atmospheric conditions (wind, rain, etc.). The material is completely solid (failed jumpers from the canyon tanks) and is not subject to moving or shifting. If any moisture should happen to contact the waste pile, leaching of lead is unlikely. If lead did leach into the liquid, the waste material containing lead would drain to the process cell sumps via the air tunnel and be transferred to the underground storage tanks for long term storage. Due to the possibility of high radiation levels and airborne contamination, the deck level of the canyon is seldom entered by personnel. Therefore, routine weekly physical inspections of the waste pile would result in increased exposure which would violate the concept that any exposure should be "as low as reasonably achievable" (ALARA). The intent of RCRA for waste pile inspection is met since (1) the waste pile is not subject to storms or leaching, (2) if any run-off should ever occur, it is collected in the canyon cell sumps, (3) the waste pile is not subject to movement or displacement, and, (4) If a problem is suspected, inspections

can be made by the crane operator whenever additional lead-containing jumpers are added.

5. PUREX Tunnel Dangerous Waste

The railroad tunnel runs north and south at the east end of the PUREX facility. The tunnel enters the facility on the north side approximately 15 feet below grade and is closed on the north end by two roll up doors. The tunnel extends beyond the south wall of the plant where it separates into two railway storage tunnels which are closed on the south end. Access to the north end of the tunnel is through locked doors and is coordinated by the dispatcher. The railway storage tunnels are used to store canyon wastes which have high radiation levels, or size constraints, preventing storage in the burial grounds. The tunnel wastes consist of failed equipment such as jumpers, vessels or vessel components, and vessel support structures, all of which are radioactive. The hazardous materials stored in the tunnels are lead, mercury and silver. The mixed waste is stored on railroad flatcars in the two tunnels. Tunnel No. 1 is filled to capacity so all wastes of this type now go to Tunnel 2. Most of the waste going to Tunnel 2 is failed, large canyon equipment with a high level of radioactivity.

RCRA General Inspection: Tunnels

It is not possible to inspect the mixed waste in the tunnels because of the high radiation level, (>5 rad/hr). Normally, there are no liquids present in the tunnels nor is there a feasible method for moisture to enter the tunnels. The intent of RCRA for tunnel mixed waste inspections is met since (1) there is very little possibility that moisture will contact and/or leach the solid wastes, and, (2) The wastes are stable and in an inaccessible location, and (3) access to the tunnel is coordinated by the dispatcher.

6. Dangerous Waste Transfers From PUREX Plant

Dangerous wastes from Tanks E5, F15 and F16, F18, G7, U3 and U4 are transferred to Underground Storage (UGS) at Tank Farms for long term storage. Three separate routings are used. The wastes from TK-E5, F18, U3 and U4 are routed from the 202-A Building through the 241-A-151 trench to the 241-A-151 diversion box then on to Tank Farms. From the diversion box to Tank Farms, the waste lines are enclosed in a second line or encasement. Sections of the encased transfer piping are in a covered concrete trench while other portions have

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been direct-buried. An underground waste collection tank, TK-302-A collects all liquids that may leak into the 241-A-151 diversion box during routine dangerous waste transfers from PUREX to Tank Farms. The wastes transferred from TK-G7 are routed through the V4000 series piping to Tank Farms. The F15 and F16 wastes are routed through a separate line to Tank Farms.

The transfer piping used for TKs F15 and F16 transfers and TK-G7 transfers is enclosed in a carbon steel second line or encasement. The transfer piping from the 241-A-151 diversion box to Tank Farms also is encased. Hydrostatic test connections are provided on the encasements for random leak testing by Tank Farms Operations and Surveillance. Portions of the transfer piping encasements that are buried rather than enclosed in covered concrete trenches are protected against corrosion by a cathodic protection system.

The concrete trenches are sloped to diversion boxes or pits at either end of the transfer piping to contain the wastes if a leak should occur. Leak detectors are located at both ends of each waste transfer system. Leak detector alarms are monitored in the PUREX dispatcher's office and control rooms plus by Tank Farms. Electrical interlocks shut down the jet controllers or transfer pumps whenever a leak detector is activated. The leak detection and waste transfer instrumentation at PUREX Plant are calibrated on a regular basis per the PISCES system while the instrumentation at Tank Farms is calibrated on a regular basis by Tank Farms personnel. See Table III, Appendix II for a list of leak detection and waste transfer instrumentation.

The waste collection tank, TK-302-A, for the 241-A-151 diversion box, is essentially empty under normal conditions. TK-302-A is under constant surveillance by the Computer Automated Surveillance System (CASS) located in 2750-E. The CASS system is designed to alert Tank Farms and PUREX Operations in the event of a sudden liquid level increase which would indicate leakage into the vessel. During non-routine operations such as the CASS system not working, PUREX Operations conducts any manual surveillance activities that may be required. All surveillance data is turned in to the Shift Supervisor and forwarded to the Tank Farm Surveillance Analysis Section for review and filing. See Procedure PO-040-301, "Perform TK-302-A General Surveillance and Liquid Level Measurements."

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RCRA General Inspection: Dangerous Waste Transfer Systems

The purpose of RCRA is to prevent dangerous waste releases that may harm personnel or damage the environment. The intent of RCRA is met by (1) all waste transfer piping is enclosed in concrete trenches or encasements, (2) leak detectors with alarms are located at PUREX and Tank Farms on the waste transfer systems, (3) interlocks are provided to stop the dangerous waste transfers whenever leaks are detected, (4) the leak detection instrumentation is calibrated on a regular basis, (5) the encasements are tested for leaks by Tank Farms on a random basis, (6) direct-buried piping is protected by cathodic protection, and, (7) the 241-A-151 diversion box catch tank, TK-302-A, is constantly monitored per Procedure PO-040-301.

APPENDIX I

This appendix contains a summary of appropriate PUREX ticklers which provide inspection requirements, frequencies, performing organizations, etc. for safety and emergency equipment, security devices, and monitoring equipment that pertain to dangerous wastes handled at PUREX Plant.

PART A
PUREX OPERATIONS WEEKLY TICKLERS

I. SECURITY DOOR AND CARD READERS - G10018

II. N_2 BOTTLES (STORAGE GALLERY) - G10059

III. EMERGENCY SCBA INSPECTION - G10117

IV. SPILL CONTROL STATION/CENTER INSPECTIONS - G10122

PUREX OPERATIONS MONTHLY TICKLER'S

I. FIRE EXTINGUISHERS

II. SAFETY SHOWERS

III. FIXED EYE WASHES

IV. PORTABLE EYE WASHES

A. 30-day

B. 180 - day

V. SELF-CONTAINED BREATHING APPARATUS (SCBA) G10093

NOTE: All of the above monthly ticklers will be inspected as appropriate on the Zone Monthly Ticklers.

VI. CRASH ALARM PHONE SYSTEM - G10023

VII. FIRE HYDRANT CHECK - G10120

VIII. FIRE DEPARTMENT CONNECTORS - G10121

NOTE: In all cases, discrepancies should be noted on the surveillance sheets and corrective action initiated.

PUREX OPERATIONS QUARTERLY TICKLERS

I. EMERGENCY ACID SUIT LOCKERS - G10118

II. ACID SUIT LOCKERS (Non-Emergency) - G10119

ZONE MONTHLY TICKLERS (OPERATIONS)

			COMPLETED	DATE	OPERATOR
ZONE 1	AMU	G10021	_____	___	_____
ZONE 2	202-A MISCELLANEOUS/BADGEHOUSE	G10030	_____	___	_____
ZONE 3	P&O GALLERY	G10093	_____	___	_____
ZONE 4	HEADEND/EAST END	G10072	_____	___	_____
ZONE 5	STORAGE GALLERY/PIV ROOM	G10000	_____	___	_____
ZONE 6	SAMPLE GALLERY	G10007	_____	___	_____
ZONE 7	Q-CELL	G10082	_____	___	_____
ZONE 8	LAB	G10085	_____	___	_____
ZONE 9	CRANES	G10011	_____	___	_____
ZONE 10	WHITE ROOM/CANYON LOBBY	G10073	_____	___	_____
ZONE 11	HOT SHOP AREA	G10115	_____	___	_____
ZONE 12	N-CELL/R-CELL	N10014	_____	___	_____
ZONE 13	211-A	G10025	_____	___	_____
ZONE 14	203-A	G10024	_____	___	_____
ZONE 15	206-A/R.R. CUT AREA	G10008	_____	___	_____
ZONE 16	TRAILERS	G10071	_____	___	_____
ZONE 17	SHACKS 202-A AREA	G10005	_____	___	_____
ZONE 18	VEHICLES	G10104	_____	___	_____

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PART B
PUREX ADMINISTRATIVE TICKLER LISTING
Fire System Maintenance/Inspection

LOG NUMBER	DESCRIPTION	ORGANIZATION	FREQUENCY
A10032	Smoke Detector Functional Test	HFD	Annually
A10033	Smoke Detectors Inspection	HFD	6 months
A10034	Low-expansion Foam & Combined Agent Systems Operational Verification Test	HFD/OSS	6 months
A10035	Fire Door Operational Verification Test PM-2A-02002 (outside crafts)	HFD/OSS	6 months
A10036	Manual Station (Pull Box) Test	HFD/OSS	Annually
A10037	Post Indicator Valve Test	HFD	Annually
A10038	Butterfly, Gate & OS&Y Valves Test	HFD/OSS	Annually
A10039	Annunciator Test	HFD	Annually
A10040	Audible (Bell/Gong) Test	BA/HFD (Rotated 6 mo. basis)	Annually
A10041	Audible (Bell/Gong) Test	BA/HFD (Rotated 6 mo. basis)	
A10042	Zone Verification Test	HFD/OSS	Annually
A10043	Sealed Lead Acid Battery Test	HFD/OSS	Annually
A10044	Audible and Visible Trouble Signal Test	HFD/OSS	Annually
A10045	Zone Disconnect Switches (Trouble Signal) Test	HFD/OSS	Annually
A10046	Halon System Operational Verification Test	HFD/OSS	6 months
A10047	Halon Agent Quantity and Pressure Test	HFD/OSS	6 months

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PART B
PUREX ADMINISTRATIVE TICKLER LISTING
Fire System Maintenance/Inspection

LOG NUMBER	DESCRIPTION	ORGANIZATION	FREQUENCY
A10048	Fire Hydrant Condition Inspection	HFD	6 months
A10049	Fire Hydrant Operational Verification (Test/Operate)	HFD/OSS	Annually
A10050	Operational Verification of Control Valves & Fire Department Connections (FDC)	HFD/OSS	Annually
A10051	Anti-freeze Wet Sprinkler System Inspection	HFD/OSS	Annually
A10052	Fire Damper Test	HFD/OSS	Annually
A10053	Smoke Detector Sensitivity Test	HFD/OSS	2 years
A10054	Waterflow Alarm (Flow or Pressure Switch)	HFD/OSS	4 months
A10055	Wet Sprinkler System Operational Verification	HFD	4 months
A10056	Wet Sprinkler System Gauges Inspection	HFD	4 months
A10057	Dry System Priming Water Lever Inspection (214-A)	BA/OSS	4 months
A10058	Dry System Gauges Inspection (214-A)	HFD	4 months
A10059	Extinguishing System Alarm Initiating Switch (Foam, Halon, CO_2, etc.) (Vendor)	HFD	6 months

APPENDIX II

This appendix contains tables with a summary of leak detection monitoring systems for the dangerous waste tanks and the sumps associated with them, plus the transfer system to Tank Farms.

CONCURRING APPROVALS:

Manager, PUREX/UO_3 Operations	Date 2/1/90
Manager, PUREX Technical Adm.	Date 2/12/90
LFC Manager, PUREX Regulatory Compliance	Date 1 FEB 90
Environmental Compliance	Date 2/1/90

TABLE I
PUREX PLANT DANGEROUS WASTE TANKS
SUMMARY OF LEAK DETECTION MONITORING SYSTEMS

Dangerous Waste (DW) Tank	Sump Associated With Each DW Tank	Tank Leak Detection Monitoring Instrumentation: Specific Gravity Recorder (SGR)	Weight Factor Recorder (FWR)	High Weight Factor Alarm (WFA)	Weight Factor Indicator (WFI)	Log Sheet Readings
E5	SE	SGR-E5	WFR-E5	WFA-E5-1		
F15	SFB	SGR-F15	WFR-F15-1	WFA-F15-1		SGR-15,WFR-F15-1
F16	SFB	SGR-F16	WFR-F16	WFA-F16-1		SGR-F16, WFR-F16
F18	SFB	SGR-F18	WFR-F18 WFR-18-1	WFA-F18-1	WFI-18	
F12	SFA	SGR-F12	WFR-F12			
Concentrator E-F11	SFA	SGR-F11-1	WFR-F11-3 WFR-F11-2	WFA-F11-1		
G7	SG	SGR-G7	WFR-G7	WFA-G7-1		SGR-G7, WFR-G7
U3	SUB	SGR-U3	WFR-U3	WFA-U3-1		SGR-U3, WFR-U3
U4	SUA	SGR-U4	WFR-U4	WFA-U4-1		SR3-U4, WFR-U4
A3-4	SA			WFA-A3-31	WFI-A3-31	
B3-4	SB			WFA-B3-31	WFI-B3-31	
C3-4	SC			WFA-C3-31	WFI-C3-31	
E3-2	SE		WFR-E3-2	WFA-E3-3		

NOTES: 1. Tanks E5, F15, F16, F18, G7, U3, U4 and Concentrator E-F11 are included in PUREX Part A, Interim Status Permit Application. The rest of the tanks listed are accumulation tanks.
2. Log Sheet readings are recorded every 2 hours when the plant is operating; every 8 hours when plant is not operating.
3. Response to alarms is per Procedure 3.1, "Conduct of Operations," WHC-CM-5-9.

TABLE II

PUREX PLANT - SUMPS FOR DANGEROUS WASTE TANKS
SUMMARY OF LEAK DETECTION MONITORING SYSTEMS

Sump	Weight Factor Indicator (WFI)	Weight Factor Recorder (WFR)	High Weight Factor Alarm (WFA)	Extreme High Weight Factor Alarm	OSR Data Sheet Readings
SA	WFI-SA	WFR-SA	WFA-SA	WFA-SA-2	
SB	WFI-SB	WFR-SB	WFA-SB	WFA-SB-2	
SC	WFI-SC	WFR-SC	WFA-SC	WFA-SC-2	
SE	WFI-SE	WFR-SE	WFA-SE	WFA-SE-2	WFR-SE, WFA-SE-2
SFA	WFI-SFA	WFR-SFA	WFA-SFA	WFA-SFA-2	WFR-SFA, WFA-SFA-2
SFB	WFI-SFB	WFR-SFB	WFA-SFB	WFA-SFB-2	WFR-SFB, WFA-SFB-2
SG	WFI-SG	WFR-SG	WFA-SG	WFA-SG-2	WFR-SG, WFA-SG-2
SUA	WFI-SUA	WFR-SUA	WFA-SUA	WFA-SUA-2	
SUB	WFI-SUB	WFR-SUB	WFA-SUB	WFA-SUB-2	

Notes: 1. OSR Data sheet readings are recorded at the times specified on the data sheet.
2. Response to sump alarms is per Procedure PO-320-009, Sump Handling and TK-F18 Disposal.

TABLE III
DANGEROUS WASTE TRANSFERS TO TANK FARMS

Leak Detector Interlocks	Transfer Equipment Shut Down By Interlock
241-A-151 Diversion Box 151A 151B 151C TK-302-A	JC-E5-3, JC-F16-1, JC-F18-1, JC-U3, JC-U4, P-G7-2
V021 Transfer Line*	JC-E5-3
V022 Transfer Line	JC-U3, JC-U4, P-G7-2
V023 Transfer Line	JC-U3, JC-U4, P-G7-2
241-AW-A Valve Pit	JC-E5-3, JC-F18-1, JC-U3, JC-U4, P-G7-2
241-AW-B Valve Pit	JC-F18-1, JC-U3, JC-U4, P-G7-2
241-AW-02A Pump Pit	JC-E5-3, JC-F18-1, JC-U3, JC-U4, P-G7-2
241-AW-03A Pump Pit	JC-E5-3, JC-F18-1, JC-U3, JC-U4, P-G7-2
241-AW-05A Pump Pit	JC-E5-2, JC-F18-1, JC-U3, JC-U4, P-G7-2
241-AZ-101/102 Leak/Radioactivity/High WF	JC-F16-1
241-AY-101B Leak/Radioactivity/High WF	JC-F16-1

* A V021 transfer line leak detection results in only an alarm but no shutdown.

NOTE:
1. This table applies to leak detection interlocks for those tanks included in the Interim Status Permit Application - E5, F16, F18, U3, U4, and G7.
2. Nomenclature: JC - Jet Controller
   P - Pump
   WF - Weight Factor

Attachment E

Referenced in response to
Action Item: 5

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TITLE:

PLANT INSTRUMENTATION SURVEILLANCE, CALIBRATION, AND EVALUATION SYSTEM

Approved by R. G. Slocum 9/5/90
R. G. Slocum, Manager
200 Area Support Services

1.0 PURPOSE

This procedure establishes the administrative requirements for the Plant Instrumentation Surveillance, Calibration, and Evaluation System (PISCES). The program utilizes a computerized database to document and forecast plant installed instrument and equipment calibrations and verifications.

2.0 SCOPE

The PISCES applies to installed instrumentation and equipment. This equipment is used in facilities operated by the Defense Operations Division, Environmental and Waste Management, and General Area Services facilities in the 200 East, 200 West, and 600 areas.

The PISCES does not apply to chemical standards, radiological sources, hand-held radiation survey instruments, with the exception of poppies, and portable Measuring and Test Equipment (M&TE). Requirements for portable M&TE are discussed in Section 205.0, "Control of Measuring and Test Equipment," of this manual.

The administrative requirements and responsibilities for implementing the PISCES are stated in this section. The user instruction information is included in Section 207.0, "Plant Instrumentation Calibration and Control Data Elements," of this manual.

3.0 DEFINITIONS

All definitions pertaining to plant instrumentation/equipment calibration/verifications are defined in Section 207.0 of this manual.

*This is a total rewrite; therefore, no revision bars are used to indicate changes. This rewrite also incorporates Sections 204 and 206 of WHC-CM-8-2, 200 Area Support Services.

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4.0 RESPONSIBILITIES

4.1 MANAGER, 200 AREA SUPPORT SERVICES

The Manager, 200 Area Support Services, is responsible for ensuring that personnel adhere to all requirements of this procedure.

4.1.1 Manager, Maintenance Engineering Services

The Maintenance Engineering Services (MES) Manager is responsible for:

1. Providing overall management of the PISCES, including its administration and the maintenance of this section of WHC-CM-8-2.

2. Identifying funding requirements for level of effort identified by the user facilities.

4.1.2 Recall Systems Maintenance Engineering

Recall Systems Maintenance Engineering (RSME) is responsible for:

1. Administering recall programs including database inputs and the generation and distribution of the PISCES reports.

2. Implementing uniform methods of calibration/verification control and recall for required equipment/instrumentation.

3. Tracking the calibration status of instrumentation and equipment.

4. Controlling the database containing this information to ensure timely calibration recall, traceability to recognized standards, accuracy of the information in management reports, and visibility of information pertaining to items that are overdue.

5. Serving as the interface with Pacific Northwest Laboratories (PNL) for continuous air monitors (CAM) calibrated by PNL.

6. Developing and maintaining the PISCES administrative procedures.

4.1.3 Procedure Development and Control

In conjunction with groups designated in paragraph 4.1.5, Procedure Development and Control shall provide the calibration procedures, functional test procedures, and preventive maintenance procedures listed in Section 201.0, "Index of Calibration Procedures," Section 301.0, "Index of Maintenance Procedures," and Section 501.0, "Index of Preventive Maintenance Procedures," of this manual.

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4.1.4 Chemical Processing Maintenance Engineering, General Area Maintenance Engineering, and Waste Management Maintenance Engineering

Chemical Processing Maintenance Engineering, General Area Maintenance Engineering, and Waste Management Maintenance Engineering are responsible for:

1. Providing technical assistance to Westinghouse Hanford Company (WHC) maintenance units experiencing problems with calibrations and calibration procedures.

2. Providing calibration control authorities (CCA) for calibration/verification control of instrumentation and equipment used by General Area Services operations.

3. Developing the calibration procedures in conjunction with the PISCES Calibration Data Sheet (Figure 1) requirements.

4. Coordinating necessary changes to the format of the PISCES Calibration Data Sheets and the calibration procedures with the maintenance supervisors, cognizant engineers, and the respective General Area Services maintenance supervisors.

5. Providing justification to the maintenance supervisor, when required, to use test equipment which has less than a minimum ratio of 4:1 for calibrating plant instrumentation and equipment (see paragraph 5.1, item 13).
6. Providing justification to the maintenance supervisor, when required, to use test equipment that is not traceable to a nationally-recognized standard (see paragraph 6.3).

4.1.5 Plant/Area Maintenance Manager

The plant/area maintenance manager is responsible for:

1. Providing direct support to the operating programs by performing maintenance, calibration, technical assistance, and supervision of craft.

2. Ensuring that items recalled for calibration are calibrated in a satisfactory manner by craftsmen using approved calibration procedures and certified working standards.

4.2 SAFETY AND QUALITY ASSURANCE

4.2.1 Safety

Safety is responsible for:

1. Appointing radiological engineers to review and specify requirements for Health Physics instrumentation/equipment requiring calibration or verification.

2. Providing RSME, the engineering manager in each facility/area, and the facility maintenance manager with a current, typewritten list of the engineers (in Radiological Safety) who will perform review and approval of instrumentation and equipment in PISCES.

3. Reviewing calibration procedures per WHC-CM-1-3, Management Requirements and Procedures, MRP 5.43, "Impact Levels," prior to issuance and provide issuance approval of the contents for compliance with safety requirements.

4. Reviewing and approving PISCES Input Forms (BD-6400-135) (Figure 2) in accordance with paragraph 5.6, item 2, and the assigned impact level per WHC-CM-1-3, MRP 5.43.

5. *Review and approve PISCES Data Sheet Text Input form (Figure 6) text addition, modification, or deletion in accordance with the assigned impact level (see WHC-CM-1-3, MRP 5.43).*

4.2.2 Quality Assurance

Quality Assurance shall:

1. Review calibration procedures per WHC-CM-1-3, MRP 5.43, prior to issuance and provide approval of the contents for compliance with the requirements of this section.

2. Review and approve PISCES Input Forms in accordance with paragraph 5.6, item 2, and the assigned impact level per WHC-CM-1-3, MRP 5.43.

3. *Review and approve PISCES Data Sheet Text Input form (Figure 6) text addition, modification, or deletion in accordance with the assigned impact level (see WHC-CM-1-3, MRP 5.43).*

4.3 ENVIRONMENTAL ASSURANCE

Environmental Assurance shall:

1. Review, approve, and specify requirements for environmental monitoring instruments and equipment on the PISCES Input Forms for those areas specified in paragraph 5.6, item 2, and the assigned impact level per WHC-CM-1-3, MRP 5.43.

2. Review calibration procedures per WHC-CM-1-3, MRP 5.43, prior to issuance and provide approval of the contents for compliance with directives.

3. Provide RSME, the engineering manager in each facility/area, and the facility maintenance manager with a current, typewritten list of engineers (in Environmental Assurance) who will perform review and approval of instrumentation and equipment in the PISCES.

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4. *Review and approve PISCES Data Sheet Text Input form (Figure 6) text addition, modification, or deletion in accordance with the assigned impact level (see WHC-CM-1-3, MRP 5.43).*

4.4 DEFENSE OPERATIONS, ENVIRONMENTAL AND WASTE MANAGEMENT, AND MAINTENANCE INTEGRATION AND MATERIAL SUPPORT

4.4.1 Work Control/Hanford Restoration Operations/Maintenance Integration and Material Support Managers

The Work Control/Hanford Restoration Operations/Maintenance Integration and Material Support managers are responsible for:

1. Providing services in support of PISCES operations through plans, schedules, work orders, resource coordination, and material acquisition.

2. Reviewing approved PISCES Input Forms for impact to plans and schedules.

4.4.2 Cognizant Engineering Manager

The cognizant engineering manager is responsible for:

1. Assigning cognizant engineers who have a working knowledge of the controlling documents, plant instrumentation, and equipment to ensure that calibrations are performed in accordance with specified requirements.

2. Assigning an individual as the CCA for the entire facility or area. Ensuring that the CCA is trained in accordance with the administrative requirements of this section.

3. Providing RSME with a current list containing the typewritten names of CCAs and cognizant engineers, including their signatures and area of responsibility.

4.4.3 Cognizant Engineer

The cognizant engineer is responsible for:

1. Specifying which plant instruments and equipment require calibration/verification.

2. Identifying the calibration/verification specifications as designated in paragraph 5.6, item 2, for each plant instrument, equipment, or system requiring calibration/verification.

3. Providing technical support to the CCA as required.

4. Evaluating equipment out-of-tolerance conditions on Safety Class 1, 2, and 3 items.

4.4.4 Calibration Control Authority

The CCA is responsible for:

1. Ensuring that the PISCES Input Form is used for additions, deletions, and modifications to those areas specified in paragraph 5.6, item 2. When work is in progress and changes are necessary in these areas, obtain the appropriate approvals and attach the PISCES Input Form to the PISCES Calibration Data Sheet reflect authorization of these changes.

2. Ensuring that all required signatures are present in accordance with the impact level assigned and verifying that the appropriate blocks have been completed. When complete, sign and date the PISCES Input Form.

3. Coordinating technical parameters with the cognizant engineer.

4. Serving as an interface between the cognizant engineer, RSME, Operations/Work Control, Maintenance, Hanford Restoration Operations, Safety, Quality Assurance, and Environmental Assurance.

5. Initiating the appropriate Job Control System (JCS) work request/ authorization form to provide notification and authorization for Maintenance to change the calibration label, where labels are used, when the cognizant engineer authorizes a change in the status of an instrument or equipment (i.e., active to inactive).

6. Providing the cognizant engineer with data sheets containing discrepancies in those areas identified in paragraph 5.6, item 2, to obtain resolution.

7. Providing cognizant engineers with the copy of PISCES Calibration Data Sheets for out-of-tolerance instruments and equipment when received from the maintenance supervisor.

8. *Ensuring the PISCES Data Sheet Text Input form is used for addition, modification, or deletion of text changes to the body of the data sheet.*

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5.0 REQUIREMENTS

5.1 PLANT MAINTENANCE SUPERVISOR

The plant maintenance supervisor shall:

1. Review scheduled data sheets upon receipt to verify scheduled work priorities.

2. Task a craftsman to perform the job and provide the data sheet, the procedure, calibration labels, service required labels, and serial number labels.

3. Ensure that Operations release signature is obtained on the calibration data sheet prior to starting work. Ensure that the craftsman notifies Operations prior to the start of work each shift and ensure that the craftsman notifies Operations on the status of the instruments at completion of the shift.

4. Ensure calibration jobs are performed and documented in a correct and complete manner.

5. Review the returned data sheet for completeness and resolve any problems associated with the clarity of information recorded on it.

6. Ensure the record is legible, accurate, and complete.

7. Sign and return completed data sheets to the planner on a daily basis. All other PISCES Calibration Data Sheets that were not completed should be returned to the planner for rescheduling. In the event that the calibration cannot be completed in an acceptable manner, the original PISCES Calibration Data Sheet should be returned to RSME. The circumstances encountered should be stated in the remarks section of the data sheet. In these circumstances, a PISCES Mid-Interval Data Sheet (Figure 3) must be issued for the corrective maintenance of the item.

8. Coordinate the review and approval of changes to those areas specified in paragraph 5.6, item 2, with the CCA to obtain the required approvals. *Text changes to the body of the data sheet must be made using the PISCES Data Sheet Text Input Form.* Changes to all other areas on the data sheet must be made by the maintenance supervisor or maintenance engineering. Changes to the calibration procedures shall be coordinated with maintenance engineering (see note paragraph 5.2, item 7).

9. Provide maintenance engineering with copies of redlined procedures or data sheets depicting areas that require change for those cases where maintenance engineering is requested to provide the changes.

The review and approval for changes to the areas noted in paragraph 5.6, item 2, shall be specified on the PISCES Input Form prior to accomplishing the work.

10. Ensure the PISCES Input Form is attached to the data sheet to reflect the review and approval of these changes prior to returning the PISCES Calibration Data Sheet to RSME.

    NOTE: All other changes to the body of the PISCES Calibration Data Sheet other than those specified in paragraph 5.6, item 2, *and text changes to the body of the data sheet* are considered editorial and only require the plant maintenance supervisor or maintenance engineer's initial and date on the data sheet next to the change. The plant maintenance supervisor has the authority to change the status of a CAM shop spare without obtaining the review/approval signatures required in paragraph 5.6, item 2. In these cases, a "CAM shop spare" should be referenced in the remarks section of the data sheet requiring functional test. Unless otherwise noted, the change in status will apply to both the functional test and overall PISCES Calibration Data Sheet.

11. Maintain a logbook of unique serial numbers which must be assigned to plant instruments and equipment which do not bear a serial number. (Obtain serial number labels from RSME.) The logbook shall contain the component number, loop/sequence number specific location, the assigned unique serial number, and the date the unique serial number was issued.

12. Coordinate level loading with RSME and the planner.

13. Document and justify exceptions to the 4:1 accuracy ratio between the process instrument or equipment in the remarks section of the PISCES Calibration Data Sheet. This justification may be provided by the maintenance supervisor or maintenance engineer. When a PISCES Calibration Data Sheet contains these exceptions, the maintenance supervisor shalT provide a copy of the data sheet to the cognizant engineer for information.

14. Provide direction to the craftsman on the necessary recovery actions for Operational Safety Requirement (OSR) instruments and equipment found out of calibration. Contact the shift operations/ lab manager and cognizant engineer immediately to resolve out-of-calibration conditions and problems encountered with OSR instruments and equipment.

15. Document and justify exceptions for using test equipment that is not traceable to nationally recognized standards. Such cases shall be documented and justified concurrently with the maintenance engineer in the remarks section of the PISCES data sheet.

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16. Provide a copy of all PISCES data sheets which contain out-of-tolerance conditions to the CCA.

17. Ensure all craftsmen understand and comply with this procedure.

5.2 ENGINEER/CALIBRATION CONTROL AUTHORITY FOR GENERAL AREA SERVICES

The maintenance engineer/CCA for General Area Services shall:

1. Review the vendor's data to ensure that the calibration data is compatible with the information provided on the PISCES Input Form *and PISCES Data Sheet Text Input Form* prior to adding an instrument or equipment to the database.

2. Coordinate all nonperiodic calibrations performed on a PISCES Mid-Interval Data Sheet with the planner.

3. Include a provision in the work authorization package to calibrate repaired or replaced instruments or equipment prior to their return to service including any retest requirements.

4. Review, approve, and sign for all additions, deletions, and modifications recorded on the PISCES Input Form *and the PISCES Data Sheet Text Input Form.*

5. Assign the impact level on the *PISCES Data Sheet Text Input Form and on the* PISCES Input Form for all new instruments and equipment entered into PISCES and for all required changes and deletions to those areas specified in paragraph 5.6, item 2.

6. Specify the reason for changes to those areas noted in paragraph 5.6, item 2, in the remarks section of the PISCES Input Form *or PISCES Data Sheet Text Input Form.* The review and approval of these changes shall be documented on the PISCES Input Form prior to accomplishing the work.

7. Ensure the PISCES Input Form is attached to the PISCES Calibration Data Sheet prior to returning the data sheet to RSME for authorization of changes determined necessary during the calibration process.

NOTE: All other changes to the body of the PISCES Calibration Data Sheet, other than those specified in paragraph 5.6, item 2 are considered editorial and only require the maintenance supervisor or the maintenance engineer's initial and date on the data sheet next to the change.

8. Assign safety classifications in accordance with WHC-CM-1-3, MRP 5.46, "Safety Classification of Systems, Components, and Structures" (see paragraph 6.8 for safety class/application codes).

9. Specify instrument accuracy requirements in accordance with the manufacturer's recommendations and technical support documents for the facility.

10. Specify and/or validate the requirements in the procurement requisition for the end use of instrumentation/equipment being procured.

11. Determine and establish instrument/equipment calibration frequencies based on instrument application, manufacturer's recommendations, required accuracy, and history of like instruments.

12. Review PISCES reports to assess the accuracy and effectiveness for instruments/equipment within area of responsibility.

13. Review instrument and equipment out-of-tolerance conditions and document the results on the Out-of-Calibration Evaluation Record (form A-6000-519) (Figure 4) for Safety Class 1, 2, and 3 instruments and equipment. Return this record to RSME within 10 working days from the date of receipt.

14. Ensure that instruments installed by construction projects, engineering change orders, and material/parts substitution requests are entered into the PISCES with an input form prior to regular service use.

15. Coordinate the resolution of inaccurate information encountered on PISCES Calibration Data Sheets or changes to the data sheet format with RSME.

16. Document and justify exceptions to the 4:1 accuracy ratio between the plant instrument or equipment in the remarks section of the PISCES Calibration Data Sheet.

17. Document and justify exceptions for using test equipment that is not traceable to nationally recognized standards. Such cases shall be documented and justified in the remarks section of the PISCES Calibration Data Sheet.

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18. Initiate the appropriate JCS work authorization form to provide notification and authorization for Maintenance to change the calibration label when authorizing a change to the status of an instrument or equipment.

5.3 MAINTENANCE CRAFTSMEN

The craftsmen shall:

1. Notify Operations prior to beginning work and ensure that Operations management's release signature is obtained on the PISCES Calibration Data Sheet prior to starting work. When the work is released, remove the item to be calibrated from active service and post, or have Operations post the "Out of Service" label on a placard adjacent to the item.

2. Obtain the appropriate radiation release for the item.

3. Select reference standards (test equipment) that have a minimum ratio of 4:1 for calibrating plant instruments and equipment. Inaccuracies of the reference standard shall not contribute errors exceeding one-fourth of the allowable plant instrument/equipment tolerance. Use of reference standards that are an exception to this requirement must be documented and justified in the remarks section of the PISCES Calibration Data Sheet by the Maintenance Engineer or maintenance supervisor.

4. Record the WHC Standards Lab unique identification numbers and the expiration date on the data sheet. Ensure the equipment has not exceeded its expiration date.

5. Obtain serial number tags from the maintenance supervisor and assign a serial number to equipment or instruments that do not contain a unique serial number and affix the tag. (Other permanent means of identification should be coordinated with the plant maintenance supervisor or maintenance engineer).

   NOTE: The data field contains a maximum of 10 spaces for the serial number. When serial numbers are assigned, they must be recorded in the log book. For those instruments and equipment that cannot be assigned a number due to location, inaccessibility, or an adverse environmental condition, record 99999 in the serial number data field on the PISCES Calibration Data Sheet.

6. Record the assigned serial number or the manufacturer's serial number on the PISCES Calibration Data Sheet at the time of calibration and in the serial number log book maintained by the maintenance supervisor. If the serial number exceeds 10 character spaces, only record the last 10 digits of the serial number on the PISCES Calibration Data Sheet.

7. Perform the calibration using the procedure and specifications cited on the PISCES Calibration Data Sheet.

   NOTE: (a) If a disparity is identified between the calibration procedure and the PISCES Calibration Data Sheet, do not proceed with the work until the PISCES Calibration Data Sheet and calibration procedure are modified and corrected in accordance with existing control practices. These circumstances should be brought to the attention of the plant maintenance supervisor or maintenance engineer for correction.

   NOTE: (b) If the PISCES Calibration Data Sheet calls for preventive maintenance, or a functional test, perform them in the following sequence:

   (1) Obtain "As-Found" calibration data. If the "As-Found" is within tolerance but drifting from mid-range, the instrument or equipment may be adjusted to have indications as close as possible to the desired calibration point.

   (2) Perform preventive maintenance in accordance with procedure 7-GN-38.

   (3) Perform remainder of calibration procedure, as applicable.

   (4) Perform functional test, as applicable.

8. Record the data, as applicable. The data recorded shall include the "As-Found" and "As-Left" conditions and any differences between what was observed or done and what was described on the PISCES Calibration Data Sheet and calibration procedure.

9. Stabilize OSR instrument/equipment out-of-tolerance conditions as directed in accordance with plant specific instructions and administrative requirements.

10. Affix a "Service Required" tag to instruments or equipment requiring service in accordance with WHC-CM-1-3, MRP 5.11, "Identification and Tracking of Failed Alarms and Instrumentation." Place the calibration label in a visible place that does not require disassembly. Record out-of-tolerance "As-Left" conditions or defective information on the PISCES Calibration Data Sheet in the remarks section as "Service Required." In conjunction with the maintenance supervisor, either initiate or provide responsible personnel the information necessary to prepare the appropriate JCS work authorization form for items requiring corrective maintenance.

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11. Document the repairs and recovery action on the PISCES Calibration Data Sheet in the remarks section and in the JCS work authorization package.

12. Record the JCS work authorization number on the PISCES Calibration Data Sheet for all corrective maintenance.

13. Calibrate the instrument or equipment prior to returning it to active service.

14. Remove, or request Operations to remove, the "Out-of-Service" label when the "As-Left" condition of item is within the tolerances specified on the PISCES Calibration Data Sheet or when a "Service Required" tag has been applied.

15. Restore the item to active service. Where labels are used, write "Accept" in the remarks section of the PISCES Calibration Data Sheet, initial, and apply the calibration label bearing the next due date. Notify Operations of the instrument/equipment status upon completion of work.

16. Notify Operations on the status of instruments and equipment at completion of the shift.

    NOTE: In the event that the calibration label differs from the PISCES database, the label on the instrument shall take precedence since the updating process to the PISCES database occurs from 1 to 3 weeks after the calibration.

17. Provide any other known information relative to the instrument or equipment in the blank data fields except for those areas specified in paragraph 5.6, item 2. Ensure all deletions or changes are initialed and dated by the maintenance supervisor or maintenance engineer. Changes to PISCES Calibration Data Sheets may be circled, initialed, and dated when practical (i.e., when there are several changes to be made in one area of the data sheet, they can be circled together, then only one initial and date is necessary).

18. Record the date and total manhours expended, sign, and return all PISCES Calibration Data Sheets to the plant maintenance supervisor. (In the case of General Area Services, these data sheets should be provided to the maintenance engineer/CCA.) Notify the maintenance supervisor of all data sheets which contain "As Found" out-of-tolerance and "As Left" out-of-tolerance conditions.

5.4 RECALL SYSTEMS MAINTENANCE ENGINEERING

Recall Systems Maintenance Engineering shall:

1. Update the PISCES database as the PISCES Calibration Data Sheets are received throughout the month and when non-periodic calibrations are reported using the PISCES Mid-Interval Calibration Data Sheet.

2. Recall all plant instruments and equipment designated by the Cognizant Engineer as requiring periodic calibration/verification during the month that their current calibration due dates occur.

3. Send out the original data sheets for the next month during the first week of the month along with the Forecast and Calibration Scheduling Reports.

4. Collect PISCES Calibration Data Sheets from the facility drop boxes every Wednesday afternoon.

5. Collect all completed PISCES Calibration Data Sheets and the Calibration Scheduling Report by the third of each month or the first normal working day after a holiday or weekend.

6. Issue the Overdue, Completion, and Out-of-Tolerance Reports during the second week of the month to provide status on the previous month's calibration activities.

7. Issue a draft of the PISCES Calibration Data Sheets to the cognizant engineer three months in advance (i.e., at the end of January issue draft data sheets for April). These are issued during the fourth week of the month. Drafts are issued early to allow the cognizant engineers time to review the PISCES Calibration Data Sheet to determine if changes are viewed necessary before the actual PISCES data sheets are issued.

8. List the action organization, work authorization number, and the overdue information from the Calibration Scheduling Report on the Overdue Report.

9. Prepare a special report for Level 3 and 4 managers of all instruments and equipment overdue for more than 3 months.

10. Adjust the calibration due dates for all instruments in a loop to occur on the same date. This shall be coordinated with the planner and the plant maintenance supervisor.

11. Assign the revision number on the PISCES Input Form for all new additions, modifications, and deletions to those areas specified in paragraph 5.6, item 2.

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12. Provide the Out-of-Calibration Evaluation Record to the cognizant engineer for evaluation of "As-Found"/"As-Left" out-of-tolerance conditions identified on Safety Class 1, 2, and 3 instruments and equipment.

    a. Attach the PISCES Calibration Data Sheet that contains the out-of-tolerance condition to the Out-of-Calibration Evaluation Record.

    b. Include the two previous PISCES Calibration Data Sheets for the cognizant engineer to reference in the evaluation process. When the form is returned and all actions are complete, file and retain the form in the file with the associated PISCES data sheets.

    c. Send a copy of the completed Out-of-Calibration Evaluation Record to the cognizant safety engineer for information. (This will normally be the individual who signs for Safety review on the PISCES input form.)

    d. Track the status of open Out-of-Calibration Records and report the results until closure is obtained.

13. Review calibration records to ensure they are complete and correct. Retain them in accordance with the Records Inventory Disposal Schedule (RIDS).

14. Update the PISCES database within 3 weeks from the date the completed data sheet/input forms are received. Special tasks not considered part of the normal work load may take longer and should be coordinated with the affected facility.

15. Control access to the calibration record files.

5.5 WORK CONTROL

The planner shall:

1. Schedule the performance of the calibration, ensuring that all OSR related and any overdue jobs are given priority.

2. Ensure that all PISCES calibration OSR data sheets are highlighted (i.e., through use of an OSR stamp, colored paper, etc.) to signify the priority of importance.

3. Provide scheduled PISCES Calibration Data Sheets to and receive completed data sheets from the plant maintenance supervisor. This exchange of data sheets shall be continuous throughout the month as jobs become due and are completed.

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4. Annotate the Calibration Scheduling Report (Figure 5) using the PISCES overdue codes to indicate the status/completion of the calibration jobs as they are performed throughout the month. The action organization and the JCS work authorization number should be listed on the scheduling report along with the overdue information. Track calibrations and notify the plant maintenance supervisor of any potential problems related to job completion.

5. Initiate PISCES Mid-Interval Calibration Data Sheets into the current month's work schedule for emergent delinquent and rework/repair calibrations. If corrective maintenance is required, record the JCS work authorization number on the PISCES Calibration Data Sheet. All corrective maintenance performed with mid-interval data sheets must be accomplished with a JCS work authorization package.

6. Coordinate with the shift operations manager, cognizant engineer, and plant maintenance supervisor the action to be taken on all overdue items requiring calibration and those items that failed calibration.

7. Perform an overview of the work request and validate the work authorizations.

8. Ensure that work authorizations contain a requirement to calibrate repaired or replaced instruments or equipment prior to their return to service.

9. Ensure that the originals of PISCES Mid-interval Calibration Data Sheets used for corrective maintenance are provided to RSME. Ensure that copies of these sheets are attached to the JCS work authorization document.

10. Place a copy of the PISCES Calibration Data Sheets reflecting failed calibrations in the JCS Work Authorization package.

11. Prioritize OSR/Backup OSR calibrations and associated rework or repair. Screen work authorizations for corrective maintenance and system upgrades to determine if they involve OSR plant instrumentation or equipment. Annotate those which involve an OSR to flag Maintenance and Engineering.

12. Obtain all of the PISCES Calibration Data Sheets for the month from the plant maintenance supervisor. Place all data sheets and the Calibration Scheduling Report in the facility area dropbox by noon on the third of each month or on the first work day following a weekend or holiday. (RSME will collect data sheets from the facility drop boxes in the afternoon on Wednesday of every week.)

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13. Coordinate level loading of calibration intervals with the maintenance manager and RSME.

14. Coordinate with the CCA to ensure that the appropriate JCS work authorization form is initiated to change the calibration label when authorizing a change to the status of an instrument or equipment.

5.6 COGNIZANT ENGINEER

The cognizant engineer shall:

1. Review the vendor's data to ensure that the calibration data is compatible with the information provided on the PISCES Input Form, prior to adding an instrument to the database.

   NOTE: All instrumentation/equipment that can be calibrated must have an overall calibration performed upon installation when entered into PISCES regardless of vendor calibrations performed. Exceptions include switches and instruments/equipment classified as pre-certified that will not require calibration after installation. Instruments in this category must be initially calibrated at more than one point over the item's full range of operation to verify the accuracy of those points. This is necessary to establish initial calibration history and an overall calibration data sheet for retest purposes after corrective maintenance occurs.

2. Assign the impact level on the *PISCES Data Sheet Text Input Form and on the* PISCES Input Form for all new instruments and equipment entered into PISCES and for all required changes and deletions in the following areas:

   a. *Alarm points/interlocks*
   b. Tolerances *(alarm switch, interlock, instrument, component, input/output)*
   c. Instrument ranges *(scales, units)*
   d. Frequency
   e. Status
   f. Safety class/application code
   g. Loop/sequence number
   h. Component identification
   i. Calibration type
   j. Operating mode code
   k. Instructions
   l. System number
   m. *Master component index (MCI)*
   n. *Function description*
   o. *Function code*
   p. *Data table values (input, output, tolerance, calibration points)*
   q. *Data sheet text.*

In accordance with the designated impact level, review and approval signatures are required for all new additions and deletions to PISCES and changes to the areas noted above. Specify the reason for these changes in the remarks section of the PISCES Input Form. The review and approval of these changes shall be documented on the *PISCES Data Sheet Text Input Form or on the* PISCES Input Form prior to accomplishing the work. Ensure that the PISCES Input Form is attached to the data sheet prior to returning the data sheet to RSME.

NOTE: All other changes to the body of the data sheet, other than those specified in paragraph 5.6, item 2, are considered editorial and only require the plant maintenance supervisor or maintenance engineer's initial and date on the data sheet next to the change.

3. Ensure that all instruments added into PISCES and nonperiodic work performed on a PISCES Mid-Interval Calibration Data Sheet are coordinated with the planner to allow for scheduling with existing work loads. Ensure the balance of the loop is rescheduled if any instrument's date is changed in the loop.

4. Include a provision in the JCS work authorization package to calibrate repaired or replaced instruments or equipment prior to their return to service including any additional retest requirements.

5. Provide technical support to the CCA as required.

6. Assign safety classifications in accordance with WHC-CM-1-3, MRP 5.46.

7. Support the requirements for safety (nuclear and industrial), regulatory compliance, special nuclear material, and product quality.

8. Specify instrument accuracy requirements in accordance with the manufacturer's recommendations and technical support documents for the facility. Instrument accuracy and resolution shall ensure that the measured parameter and stated tolerance have not been exceeded.

9. Specify and/or validate the requirements in the purchase requisition for the end use of instrumentation/equipment being procured.

10. Determine and establish instrument/equipment calibration frequencies based on instrument accuracy, application, manufacturer's recommendations, required accuracy, and history of like instruments and equipment.

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11. Review PISCES reports to assess the accuracy and effectiveness of equipment within area of responsibility.

12. Review instrument and equipment out-of-tolerance conditions and document the results on the Out-of-Calibration Evaluation Record

for Safety Class 1, 2, and 3 instruments and equipment. Return this record to RSME within 10 working days from the date of receipt.

13. Ensure that instruments installed by construction projects, engineering change orders, and material/parts substitution requests are entered into the PISCES with an input form prior to regular service use. This input shall be coordinated with the CCA.

14. Review calibration dates of all other instruments in the instrument/equipment loop when establishing calibration frequencies to minimize interruptions in the level loading of scheduled work.

6.0 PROCEDURES

6.1 ACTIVATION AND INACTIVATION OF INSTRUMENTS AND EQUIPMENT

Instruments and equipment that have been placed in "inactive" status must be calibrated before being placed back into "active" status. "Inactive" tags should be removed at this time.

6.2 NONPERIODIC CALIBRATION/VERIFICATION RECALL

When a mid-interval calibration is performed on an instrument or equipment in a loop, the calibration due date shall not be changed for that instrument unless authorized by the cognizant engineer. Calibration due dates will be changed for continuous air monitors, hand and foot counters, porta monitors, and poppies calibrated by WHC Maintenance craftsmen. (Poppies are also known as Weico, hand-held Alpha survey devices.) The following circumstances warrant use of a PISCES Mid-Interval Calibration Data Sheet when used as a substitute for the original PISCES Calibration Data Sheet:

1. If corrective maintenance must be performed on an item during the same month as it's scheduled calibration.

2. If a PISCES Calibration Data Sheet is lost or misplaced.

3. In the event that the PISCES Calibration Data Sheet does not appear on the schedule.

In these circumstances, either the planner or RSME must line through the word mid-interval, initial, and date. Such cases will be recognized and handled like the original job card and the calibration due date will be changed in the database accordingly. The PISCES Mid-Interval Data Sheets

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shall only be used in conjunction with a work authorization package. The original mid-interval data sheet shall be returned to RSME and a copy placed in the JCS work authorization package.

6.3 CALIBRATION OF INSTRUMENTS AND EQUIPMENT WITH CERTIFIED STANDARDS

Plant instruments and equipment shall be calibrated against certified standards or measuring and test equipment traceable to nationally recognized standards. In certain circumstances, it may be necessary to calibrate an instrument or equipment with test equipment that is not traceable to a nationally recognized standard. Such cases shall be documented on the PISCES Calibration Data Sheet in the remarks section and justified concurrently by the maintenance engineer and maintenance supervisor.

Test equipment in this category may be calibrated by facility maintenance or by the WHC Standards Lab. In either case, it should be handled, stored, and controlled in accordance with the provisions specified in Section 205.0 of this manual.

6.4 FIRE PROTECTION EQUIPMENT

Fire protection equipment requiring calibration/verification is recalled by the PISCES administrative requirements as defined in this procedure. Requirements governing the inspection, maintenance, intervals, and testing are further defined in WHC-CM-4-3, Industrial Safety Manual, Volume 1.

6.5 RADIATION PROTECTION INSTRUMENTATION

Radiation protection instrumentation requiring calibration/verification are recalled by the PISCES administrative requirements as defined in this procedure. Further requirements defining the interface between the administration of PISCES and Health Physics responsibilities are defined in WHC-CM-4-10, Radiation Protection Manual.

6.6 EXTENSIONS OF DUE DATES

Extensions of the calibration due date may be assigned by the cognizant engineers when conditions warrant, including, but not limited to, the following:

1. Completion of a test thereby avoiding interruption.

2. Change in the operating mode of the plant.

3. Circumstances that would be adversely affected by the calibration activity.

4. Change based on past performance with the reasonable probability that the instruments involved will be in tolerance upon calibration at the end of the authorized extension.

Extensions to calibration frequencies based on the above shall be accomplished on the PISCES Input Form and the justification for the extension shall be provided in the remarks section of the form. In any case, extensions of the calibration due date shall not violate the safety analysis report requirements of the plant or any other requirements document.

6.7 USE OF OPERATING MODE CODES

1. Operating mode codes shall be used as follows when requesting an extension to PISCES based on the status change of the instrument or equipment:

STATUS	CODE	WHEN INSTRUMENT/EQUIPMENT IS USED
Active	AA	All the time
Active	AC	During campaigns
Active	AD	Between campaigns
Active	AE	When facility is in standby
Inactive	AF	In a "shut down" facility
Inactive	CC	Only when in use
Inactive	EE	Not in use - standby instrument
Inactive	FF	Out of service

2. If it becomes necessary to calibrate an instrument prior to the next due date assigned based on the mode code, a PISCES Mid-Interval Data Sheet must be generated by the cognizant engineer for the calibration of the instrument or equipment. Upon request, RSME will provide a special report which will identify where specific mode codes have been applied.

3. When the operating mode code is used to extend the due date, the due date must be extended on the PISCES Input Form for active instruments.

6.8 SAFETY CLASS/APPLICATION CODES

The safety class application codes for use in the PISCES are as follows:

1st Digit - Safety Class Code (1-4)
2nd Digit - Subcode *(Application)*

A <u>OSR</u>. Required to support an operational safety requirement.

B <u>Backup OSR</u>. Required as backup to support an operational safety requirement.

9312280547

C Regulatory. Required to support federal law/regulations not required by OSRs.

D Backup Regulatory. Required as backup to support federal law/regulations not required by OSRs.

E Operational. Required to support operational requirements specified in an Operating Specification Document (OSD) or Process Control Manual (PCM) not required by A or B above.

F Backup Operational. Required as backup to support operational requirements specified in an OSD or PCM not required by A or B above.

G Radiological. Required to support radiological monitoring or control functions not required by A through C above.

H Industrial. Required to support industrial safety in accordance with WHC-CM-4-3, Industrial Safety Manual, not required by A through C above.

J Environmental. Required to support environmental safety in accordance with WHC-CM-7-5, Environmental Compliance Manual, not required by A through C above.

K High Accuracy. Required for high accuracy requirements.

L Process Control. Required for normal control of plant processes.

M Backup Control. Required as alternates or backup for process control components.

N Operating Aid. Other components providing a support function.

P Criticality. Required to support criticality detection requirements specified in an OSD not required by A or B above.

Q Backup Criticality. Required as backup to support criticality detection requirements specified in an OSD not required by A or B above.

R Former OSR. Formerly required to support an operational safety requirement; not accounted for in other application codes.

S Former Backup OSR. Formerly required as backup to support an operational safety requirement; not accounted for in other application codes.

6.9 FIRST-TIME CALIBRATIONS

Instruments and equipment may be calibrated using a work package containing a draft calibration procedure and vendor information for the first time calibration. Alternatively, the calibration can be accomplished with the job control work authorization package if approved by the cognizant engineer, maintenance engineer, and the plant maintenance supervisor. This approval is required for both applications. This process can be used more than once if calibration of the instrument becomes necessary during the first assigned interval before the calibration procedure is developed. Vendor certifications used in the calibration process should be forwarded to RSME for retention with the PISCES Calibration Data Sheet.

6.10 OPERATIONS CHECKS

This section applies to checks or tests performed under the preventive maintenance system or as a function of plant/facility operating documents.

1. Master copies of the operational (Ops) check procedures that describe the checks to be performed on installed plant instruments and equipment shall be maintained on file within the plant to which they apply.

2. The Ops check procedure shall be referenced on the PISCES Calibration Data Sheet when an Ops check is performed. Ops checks are normally classified as nonperiodic recall using the PISCES mid-interval job card to document the Ops check activity. Ops checks are categorized as Type 6 in the database and items in this category are entered into PISCES upon plant operations request.

6.11 RECORDS

Instrument and equipment PISCES data sheets, input forms, and Out-of-Calibration Evaluation Records shall be legible, identifiable, indexed, and readily retrievable. They shall be completed using reproducible, non-erasable ink. Colored pens may be used on the data sheets as long as the ink used is reproducible.

When information is corrected, the individual who makes the correction shall line through the previous information and initial and date the correction. Information that has been changed may be circled, initialed, and dated when deemed necessary.

NOTE: The term "data sheet" is synonymous with the calibration job card.

6.12 CALIBRATION LABELS

Calibration labels shall be applied in accordance with the provisions of Section 203.0, "Plant Instrumentation Calibration Labeling," of this manual unless otherwise stated in this procedure. "Past Due" labels may be employed by the facilities who do not normally use calibration labels to physically flag items that are overdue for calibration. Plants employing this status tag will be responsible for procuring it.

9 3 1 2 8 9 8 0 5 5 0

7.0 REFERENCES

1. WHC-CM-1-3, Management Requirements and Procedures Manual.
   MRP 5.11, "Identification and Tracking of failed Alarms and Instrumentation."
   MRP 5.43, "Impact Levels."
   MRP 5.46, "Safety Classification of Systems, Components, and Structures."

2. WHC-CM-4-3, Industrial Safety Manual.

3. WHC-CM-4-10, Radiation Protection Manual.

4. WHC-CM-7-5, Environmental Compliance.

5. WHC-CM-8-2, 200 Area Support Services Manual.
   Section 201.0, "Index of Calibration Procedures."
   Section 203.0, "Plant Instrumentation Calibration Labeling."
   Section 205.0, "Control of Measuring and Test Equipment."
   Section 207.0, "Plant Instrumentation Calibration and Control Data Elements."
   Section 301.0, "Index of Maintenance Procedures."
   Section 501.0, "Index of Preventive Maintenance Procedures."

8.0 BIBLIOGRAPHY

1. ANSI/IEEE, Standard 498-1985, "IEEE Standard Requirements for the Calibration and Control of Measuring and Test Equipment Used in Nuclear Facilities."

2. Institute of Nuclear Power Operations, Good Practice MA-303, "Control and Calibration of Measuring and Test Equipment (M&TE)."

3. WHC-CM-2-1, Procurement Manual and Procedures.

4. WHC-CM-4-2, Quality Assurance Manual.

5. WHC-CM-8-8, Job Control System.

9 3 1 2 8 9 8 0 5 5 1

Figure 1. PISCES Calibration Data Sheet.

NES-010.003 PISCES Job Card
Craft Instrument Tech. Overall Calibration
Facility ...General Purpose Jobcard Sequence #: 000906009

Inst #: PI Appl Codes Operator Aid Date: 07/88
Loop #: WP292 Bldg: 234 W Maker: AMKSH Last Name:
Sec #: 1 Room: 308 Model: Procedure #: PSCP-4-091
Freq: 12M Loca: CORNER Serial #: Issue Date: 02/01/86
Seq/Sht/Coord/Rev#: / / / CZT#: Function Type: Linear

Function Description: FILTER

Range	Input:	.0	To 200	PSI	+/-	.25 %
	Output:	.0	To 200	PSI	+/-	1.0 %

Standards Used: Input _____ CAL Expiration Date: _____
(Traceable to Nationally
Recognized Standards) Output _____ CAL Expiration Date: _____

Calibration Data

CK Pt	Input / Output Requirements: Specified Input Value	Specified Output Value	- Limit of Tolerance	+ Limit of Tolerance	Output Condition: As Found Value	As Found Tolerance (In/Out)	As Left Value
1	0.000	0.000	-2.000	2.000			
2	50.000	50.000	48.000	52.000			
3	100.000	100.000	98.000	102.000			
4	150.000	150.000	148.000	152.000			
5	200.000	200.000	198.000	202.000			

Work Released _____ __/__/__ Not Released By _____ __/__/__

Remarks _____

_____

Previous Remarks:

Instructions:

Revision Required (Y/N) Cal/Procedure _____ Data Sheet _____

Technician _____ __/__/__ Hours __.__ Manager _____ __/__/__

Discrepancy # _____ Work Order # _____

Figure 2. PISCES Input Form. (sheet 1 of 2)

60 RSME Tech

Add = A
Modify = M
Delete = D

1. Action | 2. Rev | PISCES INPUT FORM | 8 Impact Level

3 Facility | 4. Loop No. – 5. Seq | 6. IEFD Instrument Code | 7 Safety Class/Application Code

9. Function Description

10 Engineering Dwg. No. | 11 Sheet | 12 Co-ord. | 13. System No. | 14 Oper Mode | Calibration: 15 Status | 16 Type

17 Instructions | 18 Calibration Interval | 19 Date Last Done | 20 Next Due Date

68. Remarks:

21. Cognizant Engineer Date / / | 24 CC Ass Date / /

22. Environmental Assurance Date / / | 25 Safety – Industrial/RAD Date / /

23. Quality Assurance Date / / | 26 Other Date / /

27 Manufacturer | 28 Model | 29 Craft Code

30. Serial No. | 31 Unit Type | 32 Longer Code

33. Bldg. No. | 34. Room No. | 35. Loc | 36. Procedure | 37 Issue Date

[redacted] | 38 Input Low | 39 Input High | 40 Input Units | 41 Tol (%)

42. Maintenance Proc. | 43. Output Low | 44 Output High | 45. Output Units | 46 Tol (%)

Second Input (Only for 2 Input Inst.) | 47. 2nd Input Low | 48 2nd Input High | 49. 2nd Input Units | 50 Tol (%)

51. Span Value S= | 52. Zero Value Z= | 53. Scaling Factor F=

54. No. Cal Pts. | 55 Ch Pt No 1 | 56. Ch Pt No 2 | 57. Ch Pt No 3 | 58. Ch Pt No 4 | 59. Ch Pt No 5 | 60 Ch Pt No 6

61. Low Alarm | 62. High Alarm | 63. Low Interlock | 64. High Interlock | 65. Est Hours

66. Alarm Units | 67. Interlock Units

SAMPLE

BD-6400-135 (05-90)

Figure 2. PISCES Input Form. (sheet 2 of 2)

INSTRUCTIONS FOR COMPLETING THE FORM - Unless designated otherwise, the cognizant engineer is responsible for providing the information necessary to complete this form.

	Action	Required Entry
1.	AOM	Action—Enter an "A", "D", or "M", respectively, to "Add", "Delete", or "Modify" data in the PISCES database. For example, if the item described on the form is new, and it has not been entered into the database, enter an "A" to "Add" the item to the database. If the data must be changed, such as rescheduling a calibration, enter an "M" to "Modify" the calibration due date. If the item was removed from an instrument loop and disposed of as excess, enter "D" to "Delete" it from the database.
2.	AOM	Rev.—RSMS enters this number when input forms are removed which contain revisions to the data sheet for those areas specified in para 5.6 of 202, WHC-CM-8-2.
3.	AOM	Facility—Enter the code used to identify the facility where the item is installed or stored.
4.	AOM	Loop No.—Enter the code of the Loop in which the item is installed.
5.	AOM	Seq.—Enter the code to show the Sequence in the loop assigned to the item.
6.	AOM	IEPD Instrument Code—Enter the number assigned to the item on the Instrument Engineering Flow Diagram (IEPD).
7.	A	Safety Class/Application Code—Enter the Safety Class and Code that describes the current application of the item. (Reference list of application codes in section 207 of WHC-CM-8-2).
8.	A	Impact Level—Assign the impact level to establish review requirements.
9.	A	Function Description—Enter the word, alphanumeric characters or phrase that describes the function.
10.	A	Engineering Dwg No.—Enter the number of the DWG.
11.	A	Sheet—Enter the Engineering Drawing sheet number on which the item is found.
12.	A	Co-ord—Enter the coordinates of the drawing listed in Field 10 on which the item is located.
13.	A	System No.—Enter the number assigned to the system the instrument or equipment is located in.
14.	A	Oper Mode—Enter the code that describes the Plant Operating Mode when the item must be used. (Reference mode codes in section 207 of WHC-CM-8-2.)
15.	A	Status—Enter the Calibration Status Code that reflects the item's current status.
16.	A	Type—Enter the primary type of calibration activity used to verify the item's calibration integrity. (Reference section 207 of WHC-CM-8-2.)
17.	A	Instructions—Enter any special instructions applicable to the calibration of the item; they may apply to its performance, the calibration procedure or its outcome. These instructions will be printed on the Calibration Job Card for the item.
18.	A	Calibration Interval—Enter the code that describes the interval of time allowed between calibrations of the item (mm) (i.e., 06M, 12M, 01M, 02M) or, for items requiring non-periodic "Operability Checks", leave this block blank.
19.	A	Date Last Done—RSMS Tech enters 4-digit date (mmyy) the item was last calibrated (i.e., 0690, 1290).
20.	AM	Next Due Date—Cognizant Engineer enters the 4-digit date (mmyy) the item will require its next calibration (i.e., 0690, 1290). (Note: Mid-interval do not cause next due date to be changed unless specified and coordinated through the Planner/Scheduler.)
21.	AOM	Cognizant Engineer—Review, sign and date all new additions to the database and any changes made to the areas specified in para 5.6, Item 2, Section 202, of WHC-CM-8-2.
22.	AOM	Environmental Assurance—Review, sign and date new additions to the database, based on the impact level, and any changes made to the areas specified in para 5.6, Item 2, Section 202, of WHC-CM-8-2.
23.	AOM	Quality Assurance—Review, sign and date new additions to the database, based on the impact level, and any changes made to the areas specified in para 5.6, Item 2, Section 202, of WHC-CM-8-2.
24.	AOM	Calibration Control Authority(CCA)—Review, sign and date when form is complete for the application.
25.	AOM	Safety-Industrial(IAD)—Review, sign and date new additions to the database, based on the impact level, and any changes made to the areas specified in para 5.6, Item 2, Section 202, of WHC-CM-8-2.
26.	AOM	Other—Can be any other signature determined necessary in the review, approval process.
27.	A	Manufacturer—Enter the name of the company that made the item.
28.	A	Model—Enter the model number assigned to the item by its manufacturer.
29.	A	Craft Code—Enter the Craft who is responsible to perform the work.
30.	A	Serial No.—Enter serial number assigned to the item by the manufacturer or by the craftsman. Enter digits from left to right up to ten characters. When the characters exceed ten digits, enter only the last ten digits beginning from left to right.
31.	A	Inst Type—Enter the code that describes the instrument's type.
32.	A	Linear Code—Enter the code of the linearizing function that the computer uses to issue the correct calibration points.
33.	A	Bldg No.—Enter the number of the building in which the item is installed or stored.
34.	A	Room No.—Enter the room or area where the item is installed or stored.
35.	A	Location—Enter the description of the location of the item within the room, e.g., "INSTR RACK."
36.	A	Procedure—Enter the procedure number that will be used to calibrate the item.
37.	A	Issue Date—The computer automatically enters the issue date for the procedure.
38.	A	Input Low—Enter the value that defines the low end of the range of inputs to be used to calibrate the item.
39.	A	Input High—Enter the value that defines the high end of the range of inputs to be used to calibrate the item.
40.	A	Input Units—Enter the description of the units used to describe the input range of the item.
41.	A	Input Tol—Enter the tolerance of the test equipment that must be used to calibrate the item.
42.	A	Maintenance Proc.—Enter the index number of the maintenance procedure that must be used to perform preventive maintenance or a functional test on the item.
43.	A	Output Low—Enter the value that defines the low end of the range of the item's output.
44.	A	Output High—Enter the value that defines the high end of the range of the item's output.
45.	A	Output Units—Enter the description of the units used to describe the output range of the item.
46.	A	Output Tol—Enter the value, expressed as a percent of the output range, instruments must meet to pass calibration.

NOTE: If two inputs are required to calibrate the item, Number 39 through 42 must contain the information applicable to the first input and Number 48 through 54 must contain the information applicable to the second input.

47.	A	2nd Input Low—Enter the value that will define the low end of the second range of inputs.
48.	A	2nd Input High—Enter the value that will define the high end of the second range of inputs.
49.	A	2nd Input Units—Enter the units used to describe the second input range of the item.
50.	A	2nd Input Tol—Enter the value that will define the low end of the 2nd range of inputs.
51.	A	Span Value—Enter the number that defines the span calibration value for the second input.
52.	A	Zero Value—Enter the number that defines the zero calibration value for the second input.
53.	A	Scaling Factor—Enter the value, based on the application of the computer, that enables the full output span from the computer to be used when the two input spans are never at a maximum value at the same time. The Scaling factor, "S", on this form is the same as the "K" value shown on the rear of the computer.
54.	A	No. Cal Pts—Enter the number of calibration points required to calibrate the item.
55.	A	Ck Pt No. 1—Enter the number that describes the percentage of the full scale of the input used to determine the first point on the input scale at which the item will be calibrated.
56-60	A	Enter information for each additional calibration check point as noted in step 55.
61.	A	Low Alarm—Enter the value that, when expressed in the proper engineering units, defines the lower alarm setpoint, if applicable.
62.	A	High Alarm—Enter the value that, when expressed in the proper engineering units, defines the higher alarm setpoint, if applicable.
63.	A	Low Interlock—Enter the value that, when expressed in the proper engineering units, defines the lower interlock setpoint, if applicable.
64.	A	High Interlock—Enter the value that, when expressed in the proper engineering units, defines the higher interlock setpoint, if applicable.
65.	A	Est. Hours—Enter the estimated manhours required to calibrate the item.
66.	A	Alarm Units—Enter the units used to describe the alarm setpoint of the item.
67.	A	Interlock Units—Enter the units used to describe the interlock setpoint of the unit.
68.	A	Remarks—Enter reasons for modifications or deletions to areas specified in para 5.6, 202, WHC-CM-8-2.
69.	A	RSMS Tech—Technician initials when the information has been verified and input into the PISCES database.

9 3 1 2 8 9 8 0 5 5 4

Figure 3. PISCES Mid-Interval Calibration Data Sheet.

MES-010.005X Mid Interval Test Job Card
Craft Instrument Tech. Functional Test
Facility ...West Tank Farms Jobcard Sequence #: 900810600

Inst #: CAM Appl Code: Safety Due: 08/90
Loop #: Y0650 Bldg: 272 WA Maker: EBERLINE Last Done: 07/90
Seq #: 2 Room: INST Model: ALPHA-5B Procedure #: PSCP-3-003
Freq: 01M Locn: LOG BOOK Serial #: 650 Issue Date: 10/27/88
Dwg/Sht/Coord/Rev#: / / / CVI#: Function Type: Linear
Function Description: CONTINUOUS AIR MONTR

<<<<<<<<< Data Sheet >>>>>>>>>

			(Initials)
1.	Chamber and Detectors clean. - - - - - -	Y / N / NA	_____
2.	Check and lube O-Rings. - - - - - - - - -	Y / N / NA	_____
3.	Fail Alarm test complete. - - - - - - - -	Y / N / NA	_____
4.	Source Test		_____
a.	Local Alarm. - - - - - - - - - - - - -	Y / N / NA	_____
b.	Remote Alarm. - - - - - - - - - - - - -	Y / N / NA	_____
c.	CASS Alarm check (if appicable). - - -	Y / N / NA	_____
5.	System returned to normal. - - - - - - -	Y / N	_____
6.	Change Chart Paper. - - - - - - - - - - -	Y / N	_____

Work Released _____ __/__/__ Not Released By _____ __/__/__

Remarks _____

Previous Remarks: ALRMS FULL SCALE WHEN SAMPLE DOOR IS OPENED NEEDS CAP G107 REPLACED.

Instructions:

Revision Required (Y/N) Cal/Procedure _____ Data Sheet _____

Technician _____ __/__/__ Hours __.__ Manager _____ __/__/__

Discrepancy # _____ Work Order # _____

9312980555

Figure 4. Out-of-Calibration Evaluation Record. (sheet 1 of 2)

OUT-OF-CALIBRATION EVALUATION RECORD | 1. No.

2. Instrument No./Equipment _____ 3. SR No. _____

4. Manufacturer _____ 5. Loop No./SEQ No. _____

6. Model _____

7. Calibration Date _____ 8. Previous Calibration Date _____

9. Status of Last Three Calibrations:

1) ☐ In ☐ Out 2) ☐ In ☐ Out 3) ☐ In ☐ Out

10.

Ranges Affected	% Error	Ranges Affected	% Error

11. Evaluation Criteria _____

12. ☐ No Action Required Because:

- ☐ Instrument was not used during pen[illegible]
- ☐ Affected range(s) was not used.
- ☐ The error did not cause any te[illegible]ation to exceed equipment allowable tolerances.
- ☐ Instrument could not have been [illegible] (could not function) and before calibration data, after repair, was within specified limits.
- ☐ Instrument would n[illegible]unction[illegible] [illegible]e time and cause were known, providing reasonable assurance that the instrument was [illegible] to failure.
- ☐ Other

13. ☐ Action Required Based on the [illegible]tion:

- ☐ The equipment requires retest/rework.
- ☐ Work Authorization No. _____ has been issued to ensure completion of the required action.
- ☐ The equipment listed has been retested/reworked, and no further action is required.
- ☐ Other _____

14. Remarks _____

15. Review made by _____ _____
Cognizant Engineer Date

A-6000-519 (05/90)

SAMPLE

9312989055 6

Figure 4. Out-of-Calibration Evaluation Record. (sheet 2 of 2)

Instructions

1. Pre-numbered
2. Cognizant Engineer completes the instrument/equipment code number.
3. Cognizant Engineer enters the serial number of the instrument or equipment.
4. Cognizant Engineer enters manufacturer, if known.
5. Cognizant Engineer enters loop/seq number.
6. Cognizant Engineer enters model, if known.
7. RSME Tech enters the calibration date of equipment/instrument which was as-found or as left out-of-tolerance. This date shall be the date the craftsman enters on the data sheet.
8. RSME Tech enters the previous calibration date, if the item has been calibrated previously.
9. RSME checks the status of the previous calibrations 1) is the oldest and 3) is the latest.
10. Cognizant Engineer completes Steps 10-15 and returns the form to RSME within 10 working days.

Figure 5. Calibration Scheduling Report.

RES-010.006
Facility ...3 - Plant

Calibration Scheduling Report
for the month of September
Craft - Instrument Tech.

Date 08/01/90
Page 1

#	Loop	Seq	Instrument Number				Bldg	Room	Loop	Status	Calibration Type	Application	Est. Hours	Status
1	[illegible]	1	[illegible]	[illegible]	9	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	Safety	[illegible]	
2	[illegible]	3	[illegible]	[illegible]	1		[illegible]	[illegible]	[illegible]	Active	Overall Cal	Safety	2.0	
3	[illegible]	1	[illegible]	[illegible]	2		[illegible]	[illegible]	[illegible]	Active	Funct Test	Safety	1.0	
4	[illegible]	2	[illegible]	[illegible]	2		[illegible]	[illegible]	[illegible]	Active	Overall Cal	Safety	2.0	
5	[illegible]	3	[illegible]	[illegible]	2		[illegible]		[illegible]	Active	Overall Cal	Safety	2.0	
6	[illegible]	3	[illegible]	[illegible]	1		[illegible]	[illegible]	[illegible]	Active	Overall Cal	Safety	2.0	
7	[illegible]	3	[illegible]	[illegible]	2		[illegible]	[illegible]	[illegible]	Active	Overall Cal	Safety	2.0	
8	[illegible]	4	[illegible]	[illegible]	2/4		[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.4	
9	[illegible]	2	[illegible]	[illegible]	3	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.1	
10	[illegible]	3	[illegible]	[illegible]	3	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.1	
11	[illegible]	4	[illegible]	[illegible]	3	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.1	
12	[illegible]	5	[illegible]	[illegible]	3	1	[illegible]	[illegible]	[illegible]	Active	Limited Cal	[illegible]	1.1	
13	[illegible]	6	[illegible]	[illegible]	3	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
14	[illegible]	7	[illegible]	[illegible]	3	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
15	[illegible]	2	[illegible]	[illegible]	4	2	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.4	
16	[illegible]	3	[illegible]	[illegible]	4	2	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.4	
17	[illegible]	4	[illegible]	[illegible]	4		[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.0	
18	[illegible]	5	[illegible]	[illegible]	4	1	[illegible]	[illegible]	[illegible]	Active	Limited Cal	[illegible]	1.4	
19	[illegible]	1	[illegible]	[illegible]	4	3	[illegible]	[illegible]	[illegible]	Active	Overall Cal	Safety	1.4	
20	[illegible]	2	[illegible]	[illegible]	4	3	[illegible]	[illegible]	[illegible]	Active	Overall Cal	Safety	0.9	
21	[illegible]	2	[illegible]	[illegible]	/2 9 / 30		[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.1	
22	[illegible]	3	[illegible]	[illegible]	3		[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
23	[illegible]	1	[illegible]	[illegible]	4	1	[illegible]	[illegible]	[illegible]	Active	Limited Cal	[illegible]	1.1	
24	[illegible]	2	[illegible]	[illegible]	4	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
25	[illegible]	1	[illegible]	[illegible]	4	2	[illegible]	[illegible]	[illegible]	Active	Limited Cal	[illegible]	1.1	
26	[illegible]	2	[illegible]	[illegible]	4	2	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
27	[illegible]	1	[illegible]	[illegible]	4	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.1	
28	[illegible]	2	[illegible]	[illegible]	4	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.1	
29	[illegible]	1	[illegible]	[illegible]	4	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.1	
30	[illegible]	2	[illegible]	[illegible]	4	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.1	
31	[illegible]	3	[illegible]	[illegible]	4	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.1	
32	[illegible]	2	[illegible]	[illegible]	4	2	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.1	
33	[illegible]	4	[illegible]	[illegible]	4	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.1	
34	[illegible]	5	[illegible]	[illegible]	4	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.1	
35	[illegible]	6	[illegible]	[illegible]	4	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.1	
36	[illegible]	1	[illegible]	[illegible]	2	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
37	[illegible]	1	[illegible]	[illegible]	3	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
38	[illegible]	1	[illegible]	[illegible]	1	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
39	[illegible]	1	[illegible]	[illegible]	2	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
40	[illegible]	1	[illegible]	[illegible]	2	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
41	[illegible]	1	[illegible]	[illegible]	3	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
42	[illegible]	1	[illegible]	[illegible]	1	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
43	[illegible]	1	[illegible]	[illegible]	1	1	[illegible]	[illegible]	[illegible]	Active	Funct Test	Safety	1.0	
44	[illegible]	1	[illegible]	[illegible]	1	2	[illegible]	[illegible]	[illegible]	Active	Funct Test	[illegible]	1.0	
45	[illegible]	1	[illegible]	[illegible]	1	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	[illegible]	1.0	
46	[illegible]	1	[illegible]	[illegible]	120	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	Safety	1.3	
47	[illegible]	1	[illegible]	[illegible]	121	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	Safety	1.3	
48	[illegible]	1	[illegible]	[illegible]	122	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	Safety	1.3	
49	[illegible]	1	[illegible]	[illegible]	123	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	Safety	1.3	
50	[illegible]	1	[illegible]	[illegible]	131	1	[illegible]	[illegible]	[illegible]	Active	Overall Cal	Safety	1.3	

Total Page Estimated Hours: 60.1
Total # of Instruments on Page: 50

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Figure 6. PISCES Data Sheet Text Input Form.

PISCES DATA SHEET TEXT INPUT FORM

Loop No.	Impact Level	Inst. No.	Facility Code	Job Card Key *(optional)*

Text _____

Reason (for changes only) _____

Originator _____ Date _____ RSME Tech. _____ Date _____

APPROVAL SIGNATURES

Cognizant Engineer _____ Date _____

Cognizant Engineer Manager _____ Date _____

Quality Assurance _____ Date _____

Health Safety Assurance _____ Date _____

Environmental Assurance _____ Date _____

CCA _____ Date _____

Maintenance Engineer _____ Date _____

SAMPLE

BC-6000-792.1 (02/92)

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Attachment F

Referenced in response to
Action Item: 5

9 1 2 8 9 8 0 5 6 0

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TITLE:

JOB CONTROL SYSTEM

Approved by

J. C. Midgett, Manager
PUREX/UO_3 Plants

1.0 PURPOSE

This procedure is the PUREX/UO_3 PLANT implementation procedure for WHC-CM-8-8, Volumes 1, 2, Job Control System (JCS), and describes the administration of maintenance, modifications, fabrications, and related services including contractor and construction interfaces for PUREX/UO_3. The work document and work performance flow is controlled from origination through post review and documentation.

2.0 SCOPE

This procedure provides the requirements for implementation of the JCS at PUREX/UO_3 and describes the breakdown of responsibilities and interfaces. The administration of this procedure is intended to ensure that all work is performed using "Total Quality" approved work instructions and to ensure personnel safety and equipment protection.

3.0 DEFINITIONS

Buildings and Utilities. Non-programmatic buildings, structures, utilities, central heating plants, roads, grounds, railroads, etc.

Bypass. A temporary modification in operating configuration, covered by an approved maintenance work package or operating procedure, including the installation and/or removal of jumpers, blanks, and leads which modifies the normal operating configuration of the process. The term "bypass" will apply to jumpers and/or blanks (WHC-CM-5-9, Section 5.16.)

Cognizant Engineer. The engineer assigned technical responsibility for the design, modification and maintenance of specific equipment, components or systems. (Responsibilities are provided in Section 4.0, number 9 of this procedure, and also in WHC-CM-6-1, EP-5.2 Cognizant Engineer Responsibilities).

Cognizant Engineer Manager. For the purpose of this procedure, on forms requiring a cognizant engineer's manager review/approval signature, the cognizant engineer is designated as cognizant manager and will sign the block (except for Impact Level 1 work packages). Refer to WHC-CM-1-3, MRP 5.43, "Impact Levels."

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Corrective Maintenance. The repair of failed or malfunctioning equipment to restore the intended function or design condition.

Electronic Signature. A signature automatically applied to a signature block by entry of an encrypted code by the person authorized to do so. The persons designated to provide Approval/Signatures have the option of signing electronically (in the ADP system) by entering an "X", and their Electronic Signature in the computer program.

Engineering Change Notice.

1. Engineering Change Notice (ECN). A form used to document, approve and control changes to engineering documents. Refer to WHC-CM-6-1, Standard Engineering Practices, EP 2.2, "Engineering Document Change Control" for ECN requirements.

2. Temporary Engineering Change Notice. A type of ECN, identified by an "L" suffix, which describes a physical modification to a facility, structure, system, subsystem, equipment or component which is temporary and will not result in a permanent configuration change (WHC-CM-6-1, EP 2.2).

Essential Systems. An identifier for those systems of prime importance to the safe and environmentally sound operation of a facility. The essential systems for PUREX/UO_3 are listed in Appendix B.

Facility. Programmatic buildings, utilities, structures, and other land improvements associated with an operation or service.

Impact Level. A designator that is used to identify the approvals needed for a document or document revision. The approvals required are based on the impact of the document activity. Four impact levels are defined and used in accordance with WHC-CM-1-3, Management Requirements and Procedures, MRP 5.43.

Job Control Center (JCC). The office or offices containing the Plant Tracking System (PTS), the files which contain the Work Packages and the personnel assigned to administer the JCS system for PUREX/UO_3 Planning.

Modification. Work that involves a design configuration change, using ECN's, to a facility, structure, system, subsystem, equipment or component.

Modification, Temporary. A temporary change to a permanent configuration of a facility structure, system or component as described in the design documents.

Mode. A designator used to identify the status of a facility (e.g., operating, shutdown, processing, recirculation, etc.) required to perform a work item. (See Appendix H).

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Person-In-Charge (PIC). The qualified individual designated as responsible for coordinating, directing and monitoring the performance of a Work Package (WHC-CM-8-8, Appendix D, for responsibilities and duties.)

Phase Designator. An identifier to indicate the scheduling period when work should be performed (WHC-CM-8-8, Vol. III).

Plant Maintenance Manager. The Plant Maintenance Manager shall provide a program to support corrective and preventive maintenance requirements applied at distinct levels of effort. This ensures a cost-effective application of quality and safety assurance commensurate with potential impacts on the environment, personnel safety, protection of equipment, and programmatic requirements.

Pre-Approved Work Procedures. Work which is performed routinely but does not meet the criteria to be done on a J-3 Work Request. These procedures have received prior approvals for specific work scope and will be accomplished via the J-2. The original procedures will be kept in Maintenance Planning and a listing will be provided and updated as required.

Maintenance.

1. Predictive. Continuous or periodic monitoring and diagnosing of equipment to forecast failure.

2. Preventive. Work performed to maintain equipment within specified operating conditions.

Material Control Center (MCC). The office or offices containing the Plant Material Tracking System, the files which contain the Material Work Packages and personnel assigned to administer the Material Control System for PUREX/UO_3.

Plant Tracking System (PTS). The system used at PUREX/UO_3 to status and track all Work Packages. After the Work Request is entered into the ADP System, its status and location are tracked in the PTS, from origination through closeout.

Project Engineer. The engineer assigned technical responsibility and management of a construction project.

Priority. A system that identifies the importance of the work item to be performed. The PUREX/UO_3 Priority System is presented in Appendix A.

Quality Record. Records that furnish documentary evidence of the quality items and/or activities affecting quality. A document is considered a quality record when the document has been completed (i.e., a work package when complete, and the record copy is ready for transmittal to records storage).

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Retest. A functional test conducted at the completion of corrective or preventive maintenance, or modification activities which confirms that the system is capable of performing its designed function and that the identified problem has been satisfactorily resolved. Verifies proper valve, switch, and breaker alignments, etc.

Safety Class. A designator that is used for the identification and safety classification of systems, components, and structures, in accordance with U.S. Department of Energy (DOE) requirements (WHC-CM-1-3, MRP 5.46, "Safety Classifications of Systems, Components, and Structures").

Shift Operations Manager (SOM). The SOM is a Facility Rep. for PUREX/UO_3. The SOM may review, validate and release all work packages.

Surveillance. Periodic inspections or functional tests of installed equipment, systems or facilities which are performed to satisfy technical specifications or operational safety requirements (OSR), and/or other administrative requirements.

Tag Out (Lock and Tag). The safety methodology that provides protection for personnel, plant components, and systems during maintenance, modification, operation and construction. Refer to WHC-CM-5-9, Section 3.3.

Work Package. A document consisting of the forms, documents, procedures, permits, and work instructions, etc., which are required to accomplish a work item.

4.0 RESPONSIBILITIES

PUREX/UO_3 Planning is responsible for preparing, maintaining and controlling this Plant Specific Procedure.

4.1 MANAGERS AND SUPERVISORS

1. Ensure appropriate personnel under their cognizance are knowledgeable of the JCS manual (WHC-CM-8-8) and this procedure.

2. Ensure review and approval of Work Packages by Quality Assurance (QA), as well as post-review surveillance on an audit basis (MRP 5.43, "Impact Levels".) Work-in-progress reviews are also made (Quality Control inspection criteria, etc.)

3. Ensure review and approval of Work Packages by Safety (Industrial and/or Nuclear), and post reviews (see paragraph 6.9, "Post Work Review and Documentation".)

4. Ensure review and approval of Work Packages by Environmental Division, and post reviews (see paragraph 6.9.)

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5. Ensure review and approval of Work Packages by Safeguards and Security for changes at PUREX/UO_3 which affect their organization (MRP 5.43 and MRP 5.46.)

4.2 PROJECT ENGINEER

The project engineer is responsible to ensure construction projects which modify facilities are adequately planned, installed, verified and documented for managing interfaces between construction projects and facilities and for documenting acceptability of completed construction projects. The project engineer is required to supply PUREX/UO_3 Planning, the plan, scope, and schedule, and assure that a Work Package for installation or modification is in place and followed.

4.3 WORK PACKAGE PREPARER

The Work Package Preparer (WPP) may be any knowledgeable person such as a Planner or Cognizant Engineer, who determines the actions required to fully resolve an identified work item. Work Package preparation can be performed by the Cognizant Engineer or will be assigned to the Planner by the Manager, Maintenance Planning.

4.4 COGNIZANT ENGINEER/COGNIZANT MANAGER

A cognizant engineer is assigned technical responsibility for the design, modification, and maintenance of specific equipment, components or systems (WHC-CM-6-1, EP-5.2, "Cognizant Engineer".)

NOTE: For purposes of this procedure, the cognizant engineer is designated Cognizant Manager with review/approval signature authority on forms requiring approval. Exception: Impact Level 1 Work Packages (MRP 5.43.)

The cognizant engineer supports modification Work Packages by either preparing and/or approving changes to the affected engineering documents, and monitors construction project modifications and accepts completed construction modifications before turnover to the facility. Review/approval of retest requirements and QA inspection points are also the responsibility of the cognizant engineer.

4.5 SHIFT OPERATIONS MANAGER

The Shift Operations Manager (SOM), as facility representative for PUREX/UO_3, reviews, validates and releases all Work Packages.

1. Reviews each new work request form (J-1/J-2, Figures 2 and 3) generated on their shift to ensure it is properly completed.

2. Verifies clarity of the problem description.

3. Assigns a tentative priority to the work packages.

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4. Assigns all Priority 1 work (Appendix A).

5. Validates work packages (backshifts, weekends and holidays).

6. Provides final release for field work of all Work Packages after assuring that plant conditions are appropriate for the work to be done (J-8, Figure 10).

7. Approves and signs all suspended Work Packages (J-8).

8. Performs retests and signs all completed Work Packages after verifying plant configuration has been returned to normal and work, including cleanup, is complete.

4.6 JOB CONTROL ADMINISTRATOR

The Job Control Administrator (JCA), from the Job Control Group, who prioritizes direction for the schedulers and acts as an interface with operations, maintenance, etc. The JCA coordinates the release of Work Packages to interfacing organizations on a daily basis, and ensures requested work is compatible with other work in progress.

The JCA is authorized to sign for the SOM as facility representative for certain specific functions identified in this procedure.

1. Ensures sufficient information is provided to clearly state the need for the work item.

2. Validates all work requests (J-1/J-2, Figures 2 and 3).

3. Ensures each work request does not duplicate a previous request.

4. Finalizes all priorities (Appendix A) except Priority 1.

5. Enters charge codes, assign mode designators, and identify cognizant engineer for work request.

6. Validates Work Packages, conduct pre-work reviews of all Work Packages, and pre-release all Work Packages.

7. Assists with the identification of tag out requirements and assist in resolving suspended Work Packages.

4.7 PERSON-IN-CHARGE

The person-in-charge (PIC) is a qualified individual designated to coordinate, direct, and monitor the performance of a Work Package. The PIC coordinates the task and assumes responsibility that performance is accurate and in compliance with the specified administrative and technical requirements (WHC-CM-8-8, Appendix D).

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4.8 PLANT TRACKING SYSTEM OFFICE

The Plant Tracking System (PTS) is used at PUREX/UO_3 to monitor the status of Work Packages from initiation through closeout. They maintain JCC files, provide status/tracking updates, and maintain retention storage areas records. The PTS office also obtains signatures for J-1 and J-4 forms.

4.9 FACILITY REPRESENTATIVE

The Facility Representative is responsible for prework review of packages, helping review the new work request for correctness, and assuring that there is no duplication. The Facility Representative will enter a lock and tag form and complete it.

5.0 REQUIREMENTS

Work done at PUREX/UO_3 must be initiated, planned, scheduled, performed, documented, and evaluated in accordance with this manual (WHC-CM-5-9). This procedure implements the requirements of WHC-CM-8-8, and specifies organizational structure to carry out the activities.

NOTE: In general, no Work Request/Package is required for administrative support, trainers, planners, or jobs that are adequately defined by the functional authorization (i.e., Cost Account Authorizations and Cost Account Plans) or tasks covered by job specific, approved written procedures (i.e., operation of facilities, receipt and disposal of waste, routine surveillances, data collection).

5.1 TELEPHONE APPROVAL SIGNATURES

Providing telephone review/approval may create an unacceptable risk. When an individual is contacted and requested to provide telephone review/approval, the request shall be refused when, in the opinion of the reviewer, the risk is unacceptable.

If telephone review/approval is granted, the person obtaining the telephone approval must record the telephone conversation onto the work document as follows:

- Name of approver
- Name of person requesting approval
- Date and time of telephone approval

6.0 PROCEDURES

Critical information to drive the Automatic Data Processing (ADP) System has been entered into Tables which are accessed by the User through the "Help" Screens (Menus), F1 & F2, which provide the options available to the User. Throughout this procedure, if options are available to the User, "F2 Opts. Avail." will be included in the Instructions column of that step.

The Job Control System has nine steps. The flow of a work item through the nine steps is depicted in Figure 1. Samples of forms are shown in Figures 2 through 12 and are described below to give a brief overview of each form's purpose.

Other requirements or procedures which interface with the nine step process are discussed throughout this procedure.

NOTE: Step 1, Work Item Identification, and Step 2, Validation can be accomplished by two methods:

1. Entered directly into the JCS ADP "New Request File."

2. Written on the J-1/J-2 Work Request forms (manually). (Written requests will be entered into the ADP system by the JCA.)

NOTE: The forms shown in the figures are those from the JCS Manual. In all cases PUREX/UO_3 will be using an ADP version of the JCS in which the forms will be computer generated [with the exception of the Document Record Folder (DRF)].

JCS Forms:

PM/PISCES. Periodic inspections, calibrations, adjustments, lubrication, and minor repair of property, systems, and equipment, are authorized by a PM/PISCES Job Card. A J-1/J-2 Work Request will be required only for additional maintenance repair actions discovered while performing PM/PISCES.

Work Request. The primary document for initiating work in a facility is the Work Request (J-1, Figure 2). The degree of detail and formality of the Work Package will be commensurate with the complexity of the task to be accomplished.

Work Request--Combined Form. The Combined form (J-2, Figure 3) is used for Impact Level 4 to perform limited troubleshooting, minor repairs or adjustments requiring no complex resolutions (e.g., paint offices, prepare signs, housekeeping items.) Work items which may use pre-approved procedures or shop fabrications to which approved work instructions can be attached (e.g., repair crane optics or cranes, repair/replace beta CAMs.)

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Pre-approved Support Request (J-3, Figure 4) is the simplest method of requesting work. It is intended to provide a means for accomplishing simple tasks without going through the formality of a J-1 or J-2. Tasks that may be performed using this form must be listed on the "PUREX/UO_3 Pre-Approved List" located in WHC-CM-5-9, Section 5.8.

NOTE: At PUREX/UO_3, J-3 Work Requests require a signature by Operations before work begins. This is accomplished by the SOM signing and dating the "Concurrence" block (Block 8) on the form.

Document Record Folder (Figure 5) is used as a holder for all the forms and other material needed to make up a Work Package (except J-3's). It also provides a record of past routing for the Work Package and keeps a record of the changes that have been entered into the package. The folder is designed to be able to serve as a filing folder.

Resolution/Retest (J-4, Figure 6) is used to describe the resolution of the identified problem. It provides information about the Work Package such as who prepared the resolution, who is the PIC, what resources are required and what essential systems, operational safety requirements and other documents are needed to describe the resolution and retest. Signature blocks for Acceptance of Work Completion are also on this form. Continuation sheets (J-4a, Figure 7) may be used when additional space is required when in the manual mode. The approval signatures for the work instructions are also contained on the J-4 Form.

Modification Impact Review (J-6, Figure 8) is used as a means of ensuring that each modification to a facility is carefully reviewed for any impact on existing procedures and for the special training requirements needed as a result of the modification. Figure 8a is a list of Facility Specific Items that may be required as a supplement to Block 6. This form will be attached to the J-6 when required.

Work Change Notice (J-7, Figure 9) is used when making a change to approved work instructions and/or retest requirements.

Work Release Sheet (J-8, Figure 10) is the document used to authorize a Work Package to be performed. Its primary purpose is to provide for a final package review, to ensure the appropriate tag outs have been identified and to ensure that the current facility configuration is compatible with that required to perform the work. The J-8 also provides a means to document the suspension of a Work Package and to re-release it after being suspended. If partial release is to be used (J-9), the JCA annotates Block 4 on the J-8, "See attached J-9 for Facility Release."

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Partial Release Sheet (J-9, Figure 11) is used when only a portion of a Work Package is to be released. It can be used to release only certain steps in the work procedure or it can be used to release all the steps in the work procedure for only certain pieces of equipment. The J-9 alone does not authorize release of the Work Package. It must be used in conjunction with the J-8. When using a J-9, use Fac. Release (Block 4) on the J-8 to highlight that a J-9 is being used for Facility Release, "See attached J-9 for Facility Release."

Daily Release Sheet (DRS), (Figure 12) is not part of a Work Package but instead is a tool used by schedulers to inform the Operations coordination group (JCA) of what Work Packages they would like to have released to work the following day. Each scheduler will submit a DRS along with all the listed Work Packages, unless they are currently released, to the JCA for coordination of the work release each working day. The Work Packages are given a final review and forwarded to the SOM to prepare the facility for performance of work and formal release. The main purpose of the DRS is for Operations to check daily and review the facilities configuration and the impact of each job being released for that days work. Release is for a 24-hour period for normal work hours (i.e., Friday days releases till Monday days).

Material Request Form (MRF), (Figure 13) is added to the Work Package as an aid to use in identifying material needed to accomplish the work as designated in the Work Package. The form is normally filled out by the WPP and a copy will be forwarded to the Material Control Center to assist in preparation of the BOM (WHC-CM-5-9, Procedure 4.21, "Material Control").

Bill Of Material (BOM), (Figure 14), is the document used to originate requests for procurement of Facility JCS Work Package equipment, materials, services and supplies, The BOM will be included in each work package that has material requirements.

Lock and Tag Sheet (Figure 15) is inserted in the Work Package when required. The Lock and Tag Sheet is provided to the FR by the Lock and Tag Custodian per WHC-CM-5-9, 3.3, "Lock and Tag Control".

Craft/Resource Usage Log (Figure 17) will be used to record the number of hours, craft and/or resources used, and the name of the craftsman performing the work. Either the craftsman or the PIC may fill out the log.

6.1 STEP 1 - WORK ITEM IDENTIFICATION

There are three methods for requesting or initiating work in the JCS and they vary depending on the complexity of the work item. The first and most formal method of initiating work uses the Work Request Form (J-1). Any work item may be identified with this form.

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The second and less formal method of initiating work uses a Work Request-Combined Form (J-2). This form may only be used for Impact Level 4 work items to perform limited troubleshooting and/or minor repairs or adjustments that require no complex resolutions. For Impact Level 4 work, the tagout, work instruction, and retest may be specified in block 16 of the Work Request - Combined Form (J-2).

It is also used for work items that use preapproved procedures, such as maintenance, preventive maintenance, and surveillance procedures, or shop fabrication to which approved work instructions can be attached. All procedures used with the J-2 shall be approved in accordance with the impact level specified on the procedure. When a tagout or retest is required and it is not part of the preapproved (Impact Level 1, 2, 3) procedure, then the Work Request (J-1) must be used. For Impact Level 4 preapproved procedures, the tagout or retest may be specified in Block 16 of the Work Request--Combined Form (J-2).

The third and least formal method of initiating work is by using a Pre-approved Support Request (J-3). This form is used for pre-approved work items which are included on a list approved by appropriate organizations (e.g., Safety, Quality Assurance, Operations, Production Control, Environmental Assurance) (WHC-C-M-5-9, Section 5.8). These work items do not require the following:

- Approvals by other than a Facility designated individual
- Formal scheduling
- Additional documentation

Construction interfaces: The Projects organization shall comply with this manual when the work being performed interfaces directly with the facility (e.g., tie-in, work area isolation, testing, etc.). When this situation occurs, the project engineer, in advance of the required interface, shall identify the needed interface work to be performed to support the construction activity on a Work Request form (J-1). The J-1 will be processed in accordance with the requirements of this manual. The project engineer will coordinate the scheduling and performance of the required facility activities.

The participation of the Projects organization in the Plan of the Work/Plan of the Day, and the requesting of the facility resources will be on a case-by-case basis as coordinated between the project engineer and the individual designated by the facility.

6.1.1 Work Request (J-1 and J-2)

Any employee identifying the need to submit a Work Request (J-1 and J-2, Figures 2 and 3) may do so. However, only those people who possess a password may enter requests into the ADP system at PUREX/UO_3. Those not having a password shall submit the request in writing to the SOM for the division where they work (using the manual form), who overviews the request to be aware of the problems identified on his/her shift. The SOM then ensures the request (J-1/J-2) is entered into the ADP database.

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Processing work packages necessary to recover from unsafe conditions, re-establish the safety envelope, avoid imminent violation of safety requirements, or restore safety systems, etc., as stated in Appendix A, will be considered Priority 1 work and will be immediately processed from the planning step to the work performance step. If it is determined by operations, the work will continue around the clock until the issue is resolved.

If a tag out was generated when the problem was identified, the originator should reference the tag out number assigned on the Work Request. If the problem was found during performance of a PM/PISCES test, the originator should include a copy of the data sheet/procedure showing problem identification.

The originator completes Blocks 2 through 7, and Block 9, on both forms. Additionally, complete Block 17 on form J-1, and Block 22 on form J-2.

The SOM/JCA reviews the work request for: valid need or concern; sufficient information to identify problem; ensure J-1 and J-2 are appropriate forms (i.e., cannot be satisfied by a form J-3).

Block 10 is signed and dated and a tentative priority is assigned (Block 11).

All J-1 and J-2 Work Requests meeting the review criteria are forwarded by the SOM to the JCA for Validation. If the SOM/JCA review determines that the Work Request is a duplication or is invalid, it is returned to the originator with an explanation as to why it will not be processed.

6.1.2 Processing the Pre-Approved Support Request (J-3)

Any person finding a need to submit a Pre-Approved Support Request may do so (Refer to WHC-CM-5-9, Section 5.8, for a listing of the activities that may be performed via the J-3.) Work items which are to be worked in a radiation area may be performed under the J-3 when a standing Radiation Work Permit (RWP) covers the entry to the area and when all other requirements for the entry are met. The areas in which the J-3 may be written are on the pre-approved list (Refer to WHC-CM-5-9, Section 5.8). The originator completes Block 1 and Blocks 3 through 7, then gives the form directly to the appropriate craft supervisor.

The craft supervisor is responsible for reviewing the activity requested per WHC-CM-5-9, Section 5.8. The supervisor also verifies that adequate information is provided on the J-3. If the J-3 lacks sufficient information to process, or is the inappropriate vehicle for requesting work, the craft supervisor returns the J-3 to the originator with a request for more information, or a request for a different form (J-1/J-2). The J-3 is printed by the Originator and delivered to Maintenance.

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If the J-3 is acceptable, the craft supervisor obtains the concurrence of the SOM who verifies the activity is approved by completing Block 8 and assigning a craft to perform the task. If the task requested by the J-3 cannot be completed due to an unknown equipment deficiency, the craft should inform the craft supervisor and he/she will submit a J-1 to the facility representative.

When the tasks are complete, Block 9 is filled in and the J-3 is returned to the craft supervisor, who notifies the SOM of task completion. The craft supervisor reviews the completed J-3, signs Block 10, and fills in the craft code and hours required to complete the task in Block 11. The completed form (original) is forwarded to the JCC for Post Work Review and Documentation. Maintenance personnel will enter all comments from the crafts personnel in Block 7 before forwarding it to the JCC.

6.1.2.1 Pre-Approved Procedure Work Packages.

Work may be identified which will be performed "routinely", but require a more detailed Work Package than the J-3 Work Request allows. These work items may be performed by using a "Pre-Approved Procedure".

1. After the procedure proposed for "Pre-Approval" has gone through the complete review/approval cycle and been approved as a "Pre-Approved Procedure", it will be entered into the "Pre-Approved Procedure Logbook", and assigned a unique number which can then be used to reference the procedure on subsequent Work Packages.

2. The Work Package Preparer (WPP) will maintain a file of all pre-approved procedures in conjunction with the Pre-Approved Procedure Logbook. Subsequent Work Packages that reference these procedures will require a copy of the pre-approved procedure to be included in the Work Package.

3. Once a Work Package is designated as a "Pre-Approved Procedure", subsequent Work Packages should utilize a J-2 Work Request and reference the pre-approved procedure number in the Resolution section. The WPP will enter the following statement in Block 16, on the J-2 form:

   "Perform maintenance in accordance with attached Pre-Approved Procedure number -----."

   The Pre-Approved Work Procedure may be any impact level and will be approved in accordance with MRP 5.43. The Work Package which references the pre-approved procedure can be Impact Level 4 and require only cognizant engineer and SOM review/approval. The JCA should pay particular attention to these Work Packages during "Pre-Work Review" to ensure the referenced documents in the pre-approved procedure are current.

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4. The pre-approved procedures shall be reviewed every two years by all organizations who conduct reviews/approvals to ascertain whether Plant conditions or requirements have changed necessitating update or cancellation of the procedure. Maintenance Planning will ensure the review is completed in a timely manner. If it is determined that a pre-approved procedure is no longer needed, the Work Package document should be removed from the JCC Logbook and Procedure file.

6.2 STEP 2 - WORK ITEM VALIDATION

New Work Requests may be entered directly into the database by an originator. When entered, the computer will generate a "New Work Request Number" which may then use used to call the item up for review. Once the Work Request has been validated by the JCA/SOM, it will be assigned a document record number (which will be the Work Package number), and be removed from the New Request Number file in the computer.

The document record number is a unique 10-digit alpha/numeric number providing the following information:

(1)	Area Designator	1 digit (numeric, "2" @ PUREX/UO_3)
(2)	Facility Designator	1 digit (Alpha) ("A" for PUREX & "U" for UO_3)
(3)	Calendar Year	2 digits (numeric, i.e., 89)
(4)	Unique Number	5 digits (numeric)
(5)	Work Request Type (Document Classifier)	1 digit [(alpha, i.e., "M" for Modif.) See Figure 16 for Document Classifiers.]

Example: 2 A - 89 - 00001 / M
(1) (2) (3) (4) (5)

and as it appears on a Work Document: 2A-89-00001/M.

Each Work Request is assessed to determine if it is corrective in nature (i.e., does it identify an equipment condition that requires repair, restoration or minor adjustment to restore the intended function or design condition). The following work is considered corrective:

1. Facility equipment that is not functioning or not configured in accordance with applicable codes, standards, specifications or calibrations.

2. Acknowledged safety and environmental concerns.

3. Housekeeping needs (i.e., lagging, painting, and labeling) when the accumulation of need shows unacceptable degradation.

This assessment provides the facility a means to easily identify work items, corrective in nature, for trend and backlog analysis.

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6.2.1 Job Control Administrator

Each Work Request is reviewed by the JCA to validate the need, and to confirm that it is not a duplicate request. If the request is not to be processed further, it will be returned to the originator with an explanation.

For written (manual) Work Requests the JCA/SOM validates the written copy of the Work Request. Actual entry of the information contained in the Work Request into the ADP database will normally be performed by the originator.

For Work Requests that are entered directly into the ADP Database the JCA/SOM performs his/her validation on the computer record of the Work Request and notifies the WPP that validation is complete. The WPP completes those actions as required by this procedure.

The responsibility/instructions which follow pertain to the JCA on the written Work Request, and the PTS clerk for ADP Database update.

NOTE: Blocks 1, 8, and 11 through 14, requirements and actions are the same on the J-2 and J-1 forms.

1. The JCA/SOM fills out Blocks 1 (Document Number:), 8 (Charge Code:), 11 (Priority:), 12 (Phase Designator:), 13 (Corrective Maintenance Assessment:), and 14 (Personnel Safety:), on the J-1/J-2; and Blocks 15 (Mode:), 17 (PIC:), and 18 (PIC Organization:), on the J-2 only.

2. The initiation of Modification Impact Review (J-6) is required if the JCA assigns a Document Classifier "M", "L", or "B" in Block 1 on the Work Request. The WPP adds a manual or ADP generated J-6 to the Work Request and fills out Blocks 1 (Document Number:) and 2 (This Modification Impacts:), and contacts the Cognizant Engineer to complete the Facility Specific Requirements Form (Figure 8a).

3. After the JCA has validated the Work Request, it is entered into the ADP Database and a Document Number Generated.

ADP System Down

NOTE: There may be times when the ADP system will be down and ADP document number generation will be unavailable. During these periods the JCA/SOM will utilize a log and assign temporary document numbers to packages after the validation process has been performed. When the system returns to a normal mode the JCA/SOM will enter the package into the ADP Database and a permanent Document Number will be generated and the temporary number will be noted on the work package for traceability.

6.3 STEP 3 - WORK PACKAGE PREPARATION

6.3.1 Work Request Entry into ADP Database

After SOM or JCA has reviewed and validated Work Requests they are electronically statused WPP-RES by the JCA/SOM and transferred to planning for work package preparation.

6.3.2 Origination of the Document Record Folder

1. Planning will originate the DRF at this time in order to track the original of the Form J-1/J-2 (if manually generated) Work Request, and any other non-ADP documents provided by the WPP. The following information is entered onto the DRF at this time: On a blank DRF enter the Document Number (Block 1), Phase Designator (Block 2), Priority (Block 3) and Routing To Information (Block 4). The planner will status the work package WPP-APP "Awaiting Processing Approval" and will send the package to the PTS clerk to obtain final signature approval. The WPP will obtain the Cog-Eng signature.

2. Operational Safety Requirements (OSR) related items will be identified by placing the "OSR" red stamp and Operational Specification Document (OSD) related items will be identified by placing the "OSD" red stamp on the DRF and may be done by the WPP at this time. Time requirements (start of clock) and limitations will be written next to the stamp.

6.3.3 Work Package Preparer

The WPP shall be assigned by the manager, PUREX/UO_3 Maintenance Planning, based on the area of responsibility (i.e., Division, System, etc.). The WPP is responsible for determining the actions required to fully resolve an identified work item. The WPP may be any knowledgeable person, such as the Cognizant Engineer or Planner.

6.3.4 Work Instruction Preparation

1. Work instructions will be developed in sufficient detail to ensure proper performance of the work. The level of effort for work instruction detail, approval, work control, verification, and documentation is commensurate with Essential Systems and Safety Equipment List (SEL) considerations, Operational Safety Requirements (OSR), and the impact level specified from MRP 5.43 "Impact Levels".

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2. As the first step of Work Package preparation, the assigned planner contacts the cognizant engineer for the impact level assignment, retest requirements, verifies Facility Specific Requirements Block 6 (ADP) or Figure 8a have been identified, special instructions to be included in the resolution, and QC inspection points (criteria). Then the WPP prepares the Work Package and contacts the Quality Control Engineer (QCE) for overview and/or addition of inspection criteria. If conflicts arise, the WPP and QCE contact the cognizant engineer for resolution. If the Impact Level is different for material than what is stated on the work package, the Cognizant Engineer must assign the correct Impact Level on the BOM and sign and date next to correct entry.

3. Work instructions may be a few simple lines of instructions or may include the following types of information in the following format:

   1.0 <u>Scope</u> - Description of work.

   2.0 <u>Referenced Documents</u> - Supporting documentation, such as Job safety Analysis, weld procedures, deviation from standard work practices, permits, operating procedure, test specifications, ALARA Management Work Sheet, etc.

   3.0 <u>Materials and Equipment Required</u> - List materials (including special requirements), special tools and equipment required. (Refer to WHC-CM-5-9, Section 4.21).

   4.0 <u>Prerequisites</u> - Special personnel qualifications, safety requirements, environmental requirements, and other prerequisites, which must be accomplished before work starts, shall be identified. This may include items such as necessary pre-fabrication, electrical and mechanical system lineup, and facility configuration, as applicable.

   5.0 <u>Specific Work Instructions</u> - Detailed, step-by-step instructions for how the work is to be performed. QC inspection points will be included in this section.

   6.0 <u>Special Recovery Actions</u> - Special recovery actions needed to return the equipment or facility to normal upon completion of work.

   7.0 <u>Test/Retest Requirements</u> - Test/Retest required to demonstrate successful completion of work and/or return of the system or component to an operational status.

4. The designated WPP is responsible for the following actions (Step 5.2.2) on the forms required during this step:

   If Form J-2, Work Request-Combined Form, is used:
   (Impact Level 4, or Pre-Approved Procedure work items)

5. The WPP will verify entries have been made in Blocks 15 (MODE) and 17 (PIC) by the JCA. Also the WPP will fill in Blocks 16, 19 (estimated hours only, actual hours are entered in Step 8), 20 (Cog. Eng.), and 21. The WPP may request assistance from any knowledgeable person to accomplish the above.

6. When the preceding actions are completed, the WPP will generate the Record Copy Work Package. The WPP will obtain the Approval/Signature of the Cognizant Engineer, Block 20. The PTS will obtain the remaining signature approvals if not a Priority 1. (This paragraph relates to ADP-generated packages only.)

   NOTE: If the J-1 Work Request method is used, then the Resolution is provided on a Form J-4 which is required whenever a J-1 is utilized.

If Form J-1, Work Request, is used, the WPP will fill in the following blocks on the J-4:

Block 1	Enter the Document number. (From Form J-1, block 1), (will be Computer Generated in the PUREX/UO_3 ADP system)(F2 Options Available)
Block 2	If the J-4 is ADP generated, the Essential System will appear for Block 2 and the correct entries can be made. If the J-4 is manually generated the essential system information will be written in Block 2 by the JCC and the WPP can make the correct entries. (See Appendix B) (F2 Options Available)
Block 3	Contact the JCA for the name of the person designated to be in charge of overseeing the work. (Optional at this time)

NOTE: This is <u>not</u> a signature block!
(F2 Options Available)

Block 4	Enter the Organization of the PIC assigned. (F2 Options Available)

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Block 5 — Enter a Resolution to the identified problem. Continuation Forms (J-4a) may be used for additional space.

NOTE: The WPP is responsible for assuring the Resolution is provided for all Work Packages. The Cog. Eng. determines whether it is acceptable when written.

Block 6 — Contact the Cog. Eng. who will determine the Impact Level for ALL Work Packages. WPP enters the Impact Level on the J-4 by checking the appropriate box. If the work item is on the SEL, is an OSR or OSD, or is part of an Essential System, the Cog. Eng. must be notified at this time.
(F2 Options Available.)

Block 7 — Enter any OSRs or OSDs or references that are effected by the Work Package. (WPP obtains this information from the Cog. Eng.)

NOTE: If the WPP feels the job requires a pre-job safety meeting he/she identifies such by noting "PRE-JOB SAFETY MEETING ADVISED" at the beginning of Block 5, "Review by PUREX Health Physics is mandatory for all work packages which describe work that will occur within Radiation Zones".

Block 8 — Enter the Document Identifier of any documents that are related to the work request or are included as part of the work request. (i.e.: ECN's, PM/Pisces or Surveillance procedures, RWP number, Weld procedures, HWP, MRF, or AMWS number.)

Block 9 — Based on the Impact Level assigned to the Work Package and the effect on Essential Systems, indicate the Review/Approvals that are required by leaving the blocks blank for which Review/Approval is required, and entering N/A in those blocks which will require no Review/Approval.
(See Appendix "F" for minimum approval requirements table.)
(Review/Approvals will be obtained through the PTS.
(F2 Options Available.)

NOTE: Review/Approvals can be obtained (whether manually or Electronically) (by the PTS Clerk or WPP) in the following order:
1. Cognizant Engineer

2. QCE
3. Safety
4. Others

NOTE: The person designated to provide an Approval/Signature has the option of signing electronically (in the ADP system) by entering an "X", and his Electronic Signature when prompted to do so in the computer program. If he does not wish to sign electronically, he must (via the PTS) sign & date the form on the Record Copy Work Package in the block adjacent to his position/responsibility in the Approvals section on the forms.

Block 11	Contact the Cog. Eng. for verification of Retest Requirements. Check the appropriate block "Yes" or "No".

NOTE: Cognizant Engineer is responsible for Retest, and will specify existing procedures (PM/PISCES, Work Plans, etc.) if applicable.

Block 12	Enter the Mode Designator to identify the Facility conditions required to perform the work.
Block 13	Enter instructions (PM/PISCES, etc.) for Retesting the Equipment/System following completion of the work.
Block 14	Enter the name of the person who provided the Resolution and the date.
Block 16	Enter Resource [(Craft) Appendix G] Code to an estimate of the hours required to perform the work. (Actual hours are entered by the PIC in step 8. F2 Options Available.)
Block 17	Entered by the Quality Control Engineer during the Review/Approval phase.

When the preceding actions are completed, the WPP generates the Record Copy Work Package. If there are documents referenced on the J-4 which are not in the computer record, they must be added to the Work Package by the WPP. [(i.e., ECN's, Drawings, Permits, Procedures, BOM, AMW, etc.) This paragraph relates to ADP-generated packages only.]

If material is required for the Work Package, the WPP sends a copy of the Material Request form to the Manager, Material Control. (See WHC-CM-5-9, Section 4.21.)

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6.3.5 Modification to Work Packages

All Modification Work Packages require a released (by Document Control) Engineering Change Notice (ECN). The ECN is prepared and approved per WHC-CM-6-1, Standard Engineering Practices, EP 2.2, "Engineering Document Change Control." Temporary Modification Work Packages have the following additional requirements:

1. Temporary modifications shall require the affected engineering documents to be revised by a temporary ECN prepared and approved per EP 2.2. When installation of the temporary modification is complete, the Work Package shall be suspended. In order to remove the temporary modification, the temporary modification Work Package must be re-released. Upon removal and completion of the temporary modification, engineering review shall be performed in accordance with WHC-CM-6.1, EP 2.2.

2. Temporary modifications may be allowed to remain in the facility until the temporary condition can be cleared or for a maximum of 90 days, whichever is less, as specified in EP-2.2. The temporary Engineering Change Notice (ECN) "Start Clock Date" starts when the TECN is signed off as "Installed".

   Extensions to the 90 day limitations can be accomplished by obtaining an extension letter approved by the cognizant engineer's manager and the facility representative.

   When a temporary modification is to become permanent, the originator shall obtain documented approval of the change using the Work Change Notice (J-7) and an approved ECN superseding the temporary ECN. The originator and the facility representative will perform a field walk-down. PIC approval is not required to ensure the physical installation compliance with facility standards (i.e., no temporary jumpers, etc.).

6.3.5.1 Craft Identification, Craft Hours, and Person-In-Charge Determination.

The work package will contain identification of crafts required, an estimate of craft hours required, and identification of the PIC if required. Craft codes are specific in WHC-CM-8-7.

When, during the subsequent steps of the JCS process, it is determined that the PIC is required to be changed, the changes will be documented in the work package and/or ADP system.

6.3.6 Review/Approval Signatures

If the Work Package requires Safety, Quality Assurance and/or Environmental Assurance review, the Work Package will be issued (via PTS) to those organizations for approval and signature in Block 9 on the J-4 per MRP 5.43. These Review/Approvals can be obtained by Electronic Signature if so desired. If the Quality Control engineer determines that QC inspection will be required, he/she will include in the Work Package the applicable QC inspection points per WHC-CM-4-2, Quality Assurance Manual. QCE also fills in Block 17 on the J-4 concerning Retest involvement.

6.3.7 Cancellation of Work Requests

Any work package can be canceled, however, cancellation requires specific authorization before the work package is removed from the tracking system. In the case of a duplicate work package or a non-modification work request or a problem that no longer exists, the document may be canceled with only the concurrence of the JCA. All other cases require the concurrence of the cognizant engineer manager, cognizant engineer, and the facility representative. Concurrence signatures are placed in the comments sections of the Work Request (J-1) or Work Request--Combined Form (J-2) along with the annotation "canceled".

6.3.8 Plant and Special Procedures

During the preparation of Work Packages, careful consideration shall be given to the various permits, forms, work plans, or special procedures required during or prior to the work. The following is a list of permits and/or special procedures which may be required in a Work Package. The list includes, but is not limited to: (Refer to WHC-CM-8-8.)

- Approved Work Procedures
- PM/PISCES
- Job Safety Analysis (JSA)
- Prework Safety Checklist
- Radiation Work Procedure (RWP)
- Alara Management Work Sheet (AMW)
- Excavation Permit
- Compressed Gas Cylinder Permit
- Core Drilling Permit
- Hazardous Work Permit (includes:)
- Confined Space Checklist (section A)
  - Cutting-Welding Checklist (section B)
  - General Hazard Checklist (section C)
- Asbestos Work Permit
- Tie-in Permit
- Wiring disconnect/reconnect form

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6.3.9 Plant Tracking System Office Activities

6.3.9.1 Review, Log-in & Status of Work Request. When the PTS Office receives notification of Work Package Preparation completion, the following actions are required:

1. Review entries for completeness.

2. Verify all documents referenced are available and are included in Record Package. (Documents are provided by the WPP).

3. Change Status of document to WPP APP (PTS awaiting approvals).

6.3.9.2 Obtaining Review/Approvals. Review/Approvals can be obtained (either electronically or manually) in the following order:

1. Cognizant Engineer
2. QCE
3. Safety
4. Others

NOTE: Should any reviewer have a concern with the Work Package contents which might affect other reviewers, contact must be made with the others so the concerns can be resolved.

There are two methods of obtaining review/approvals. The responsible reviewers decide which of these methods they wish to utilize.

1. Responsible reviewers perform the review through the computer record and approve and sign the document electronically.

2. Responsible reviewers perform the review after the Record Copy Work Package has been generated and physically sign and date the hard copy documents.

6.3.9.3 Electronic Review/Approval. (ADP ONLY) Responsible reviewers are required to periodically look at all Work Requests statused "WPP APP" in the computer record to ascertain if their review/approval is required. If this review results in their not wishing to provide an electronic approval/ signature, they should notify the WPP immediately and request the Record Copy Work Package be generated and staged/routed for review/ approvals.

6.3.9.4 Hard Copy Review/Approval. Once the Record Copy Work Package has been generated by the WPP, Electronic Signatures can no longer be obtained or entered into the computer record. The Record Work Package will be staged/routed for review/approvals by the PTS Office through the use of "Mailboxes" which will be located in the JCC Office. Mailboxes will be provided for all those designated as "Responsible Reviewers". The responsible reviewers should routinely check their Mailbox in the JCC to ascertain if there are any Work Packages requiring their review/approval. These Work

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Packages may be issued to the reviewer if he/she does not wish to do the review at the JCC, but must be returned by the end of the shift.

The PTS Office shall track the movements of ALL Work Packages once the record copy has been generated, and is responsible for ALL status changes through closeout of the Work Package.

6.3.9.5 Generation of Record Copy Work Packages. After all required review/approval signatures have been obtained electronically or if a hard copy of the Record Work Package is required for these review/approvals, the WPP will generate the Record Copy Work Package by:

1. Printing out the "Forms Required" for the Work Package.

2. Retrieving the "Document Record Folder (DRF)" from the temporary file to contain the assembled Work Package.

3. Assembling the Record Work Package per the "Work Package Contents Arrangement", Appendix C.

Once the Record Copy Work Package is assembled, it is either routed for review/approvals (if they were not obtained electronically) or to the FR for Prework Review. The WPP may obtain the required review/approval signatures on manually generated packages if desired.

6.3.9.6 Plant Forces Work Review. Work Packages for a facility shall be evaluated to ensure compliance with the Davis Bacon Act, MRP 4.6 "Davis Bacon Act Compliance Procedure." The manager, Plant Maintenance, is responsible for these reviews but may request input from other plant functions.

6.3.9.7 Spare Parts Repairs. A new work request shall be processed in accordance with the requirements of the JCS to document and track the repairs to any component which has been removed from service and is to be repaired and placed into spare parts.

6.4 STEP 4 - PRE-WORK REVIEW

After the Work Package has been resolved and the Record Package printed and assembled, it is forwarded, via the PTS, to the FR for Pre-Work Review. The FR will review the Work Package for completeness, proper documentation and adequate approvals. Each Work Package should be reviewed for (but not limited to) the following:

1. Safety, environmental and operational concerns.
2. Administrative compliance
3. Completeness of resolution (including provisions for restoration and retest)
4. Proper lockout requirements
5. Prerequisite instructions
6. Current approval of support documents
7. Adequacy of procedures used

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8. Craft identification and estimates
9. PIC identifications
10. Essential systems
11. OSR/OSD determinations
12. Impact level
13. Proper approvals

Incomplete or inadequate work packages shall be resolved by the preparer and corrected where necessary. Preventive Maintenance or Surveillance procedures will be corrected in accordance with WHC-CM-8-2, section 501.

When the JCA is satisfied that the above criteria have been met, he/she will sign and date Block 2 on the J-8. On Block 3 (tag out number) the SOM will enter the number during his/her Release for Field Work, step 6). The tagout must be in the package prior to release for work.

6.4.1 Facility Modification Training and Procedure Review

Each modification Work Package shall be reviewed to determine the impacts on training and procedures. Training and procedure upgrades can be worked in parallel with the work to ensure that the facility can operate the equipment when the modification is complete. The Work Package and the J-6 will be forwarded (for signature) to the training/procedure organizations to fill out Blocks 3, 4, and 5 and returned to the JCC. The J-6 Form is originated by the JCC in Step 2, Validation.

6.4.2 Changes to Approved Work Packages

1. Once the Work Package has reached Step 5, any changes made to the Resolution/Retest will require a Work Change Notice, Form J-7 to be generated.

2. The number of J-7s in each work package are to be minimized. The Facility Representative or JCA is to evaluate any work package for clarity. If the package is unclear or difficult to follow, the remaining work is to be incorporated into one J-7.

3. If it is determined, during the initial Pre-Work Review of a Work Package, that required work instruction changes are too involved to be changed with a WCN, the Work Package shall be returned to the Work Package Preparer (WPP) for reprocessing rather than revising with a J-7.

4. If Form J-7 will be used, the JCA returns the Work Package to the PTS office to be transmitted to the responsible person to complete the following actions:

NOTE: The originator for Form J-7 may be the WPP, Facility representative, PIC or cognizant engineer depending on who identified/required the change to be made.

5. The originator will fill in Blocks 1 (Document Number:), 2 (Originator), 3 [(Incorporated By:) if by other than the originator], 4 (Change No.:), 5 (Page:), 6 (Step or Paragraph:), 7 (Description of Change Instruction:), 8 (Reason For Change:) and will contact the Cognizant Engineer for Block 9 (Impact Level of Change:). The blocks that require approval/signature will be left blank and the blocks that require no approval/signature will be filled "N/A".

6. After the J-7 is completed and approvals obtained, the record copy of the J-7 is generated and added to the Record Work Package. If generated via the ADP The PTS Office will re-route the Work Package to the JCA for repeat of Step 4.

6.4.3 Physical Changes to Approved Work Packages

The changes made via the Form J-7 are annotated on the Record Work Package Resolution/Retest by the PIC/SOM/WPP/JCA as follows (dependent on complexity of change):

Minor Change - (Typo, misspelling, etc.)

1. Denote the area of change with a single line, using black ink (do not obliterate).
2. Reference J-7 where change is allowed. (i.e.; "See attached J-7, #----".)
3. Sign or Initial the change, Date (mm/dd/yy).

Complex Change - (Entire Paragraph, Page (or multiples thereof), Procedure call out, etc.

1. Denote the area of change by X'ing out or Blocking (do not obliterate), using black ink.
2. Reference J-7 where change is allowed. (i.e.; "See attached J-7, #----.)
3. Sign or Initial the change, Date (mm/dd/yy).

6.4.4 Changes to Priority and/or Phase Designators

1. The JCA, or authorized designee's concurrence is required to change a priority or phase designator. If, however, the priority is to be changed to Priority 1, then only the SOM or Operations Manager's concurrence is required.

2. To downgrade a Priority 1 document, the SOM or Operations Manager must authorize the change in priority by initialing the J-1. The JCA or designee will assign a new priority (per Appendix A) once that has been done.

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3. Changes to priorities are determined by the SOM or higher level operations manager only. Phase designators can only be changed by the JCA or Outage Planning.

4. When a work document priority and/or phase designator change is authorized, the computer record for that document will be updated promptly. The DRF and J-1 will also be updated, initialed and dated. If the priority or phase designator on the computer record disagrees with what is on the Work Package, the computer record shall be considered to be correct.

6.4.5 Changes to Other Work Package Fields

Changes to parts of Work Packages other than Resolution, Retest, Priority and Phase Designator may be made by drawing a single line through the incorrect entry, initialing and dating the correction, or by inserting new information and initialing and dating the new information. The ADP must also be updated to reflect the changes noted above.

6.4.6 Work Package Staging

Each Work Package, upon completion of a satisfactory pre-work review, is prepared for staging in a hold file. The appropriate administrative paperwork, such as Tagout authorizations, jumper/lifted lead authorizations, permits, etc., is issued and placed in the Work Package along with a Work Release Sheet (J-8). Upon completion of these activities, the status of the Work Package shall be identified on the Document Record Folder with the appropriate status indicator specified in Appendix D and the Work Package shall be placed in a hold file in the JCC. Packages previously worked in the field but suspended for whatever reason are reviewed per this section prior to being released again for field work.

6.5 STEP 5 - WORK PLANNING AND SCHEDULING

Once the FR and the JCA has completed his/her "Pre-Work Review", the Work Package is ready for Step 5, "Work Planning and Scheduling".

The scheduler is responsible for the coordination required to construct schedules to accomplish completion of the Work Package.

6.5.1 Work Planning and Scheduling Description

The primary tools used in the near-term planning and scheduling of work are a series of daily and weekly planning meetings and the three near term schedules: the Scheduling Period Schedule, Plan-of-the-Week, and Plan-of-the-Day schedules.

6.5.2 Scheduling Period Schedule

The Scheduling Period schedule is the highest level schedule in the hierarchy of plans and schedules that contains a day-by-day breakdown of work items to be accomplished. Each work item is loaded and the entire schedule is resource balanced to even out the resource requirements and to give an indication of the total resources needed over the scheduling period. The Scheduling Period schedule duration is determined by the facility to coincide with facility operations. It is the primary tool used in preparing the Plan-of-the-Week.

6.5.3 Plan-of-the-Week

The Plan-of-the-Week (POW) is a shift-by-shift breakdown of the work items planned for the next week and may include fill-in work to be available if needed. Each work item may be broken down into smaller steps and each job or step is broken down by resource requirements. The POW includes maintenance items, and other tasks that use resources.

A POW meeting is held once a week to discuss the next week's schedule. A preparatory meeting is held the day before to discuss input for the POW.

6.5.4 Plan-of-the-Day

The Plan-of-the-Day (POD) is updated each work day. During each normal work day, a POD meeting is held to discuss work performed during the past 24 hours and the work to be performed during the next 24 hours. The focus is on identifying hard spots and/or deviations from the planned effort and on establishing a revised course of action if necessary.

6.5.5 Resource Allocation

Resource allocations to support the near-term schedules shall be performed by scheduling staff. If it is determined that the crafts allotted to the facility are insufficient to accomplish the mandatory work on the schedule, then the scheduling staff should request additional crafts per the requirements of MRP 4.7, "Turndown Work."

6.6 STEP 6 - PREPARE FOR WORK AND RELEASE

Once a Work Package is scheduled on the POW and POD, it enters the JCS, Prepare for Work and Release step. This step coordinates the release request, prepares the facility for performance of the maintenance activity and releases the Work Package for work.

6.6.1 Daily Release Sheet

The Daily Release Sheet (DRS) is a form used to initiate and coordinate the release process. The DRS is used in this step only and is not carried forward in the Work Package.

9 3 1 2 8 9 8 0 5 8 8

1. The cognizant scheduler fills out Blocks 1 (PIC Organization:), 2 (Submitted By:), 3 (Documents Listed:), 4 (Date/Page of Page:), 5 (Work Document No.:), 6 (PRI:), 8 (Date of Prior Release:), 12 (Work Description:), and 13 (PIC:).

2. The JCA fills out Blocks 9 (Tagout RFR:) and 14 (Remarks:).

3. The SOM, upon completion of Work Package prerequisites, completes Blocks 7 (Facility Release:), 10 (Tags Hung:), 11 (Tag Number:) and 14 (Remarks:). If the SOM determines the package is not ready for release or the system is not available, the SOM states the reason the PKG was not release in the comments section of the DRS.

6.6.2 Formal Release of Work Packages

Each cognizant scheduler will submit a Daily Release Sheet along with the listed Work Packages, unless they are currently released, to the JCA each work day. The Daily Release Sheets will list the Work Packages to be released for work the following three shifts. The lists will include work items scheduled on the POD, carry over items from the previous shift and work items not scheduled but determined to be required. The Daily Release Sheet is used to re-release the Work Package if it works beyond the release period. Release periods are normally for a maximum of 24 hours, excluding weekends and holidays.

6.6.3 Job Control Administrator Release Review

The JCA shall review the requests for Work Packages not currently released, to:

1. Assure compatibility with facility configuration.

2. Assure drawings, procedures, etc. in the Work Package are current.

3. Assure Work Packages are ready to release.

4. Assure compatibility with other Work Packages requested for release or currently released for work.

Work Packages currently released which are not returned are reviewed for the following:

1. The Work Package requested for release has not been suspended, voiding the request for release.

2. Continued compatibility with facility configuration.

3. Compatibility with balance of Work Packages requested for release.

Any Work Packages not accepted for release will have the reason noted in the remarks column of the DRS and the Work Package returned to the Scheduler.

9 3 1 2 8 9 8 0 5 8 9

The JCA will then forward the DRS's along with the new Work Packages to the SOM for facility work preparation and initial release or re-release for Field Work, as applicable.

6.6.4 Shift Operations Manager Release Review

The SOM shall overview the new Work Packages for adequacy, then establish the required prerequisite conditions in accordance with approved facility procedures, fill out the Work Release Sheet (J-8), by signing and dating Block 4, Released for Field Work, and entering Tagout Number in Block 3 (if applicable), for each new Work Package. Initial the DRS for the new Work Packages to be released. The Work Release Sheet (J-8) is not filled out again until the Work Package is either completed or suspended. Work Packages requested for re-release are overviewed by the SOM to the same criteria that the JCA overviews for initial release. Once satisfied, the SOM initials the DRS for the re-released Work Packages.

A comparison with the previous days DRS's shall be made to ensure that there are not any Work Packages remaining in the work place that are not complete and are not listed on the current DRS. If there are such Work Packages, the PIC of the Work Package shall be notified and the Work Package shall be either added to the current DRS and re-released or suspended. The JCA will make this comparison and notify the PIC, if necessary.

The original DRSs and the new work packages are returned to the release coordinator/scheduler where they are held until the PIC/Maintenance supervisor is issued the work package to perform the work. A copy of the DRSs is forwarded to the tracking office to be statused and entered in the tracking log.

6.6.5 Forms Actions/Requirements for Work Release

The Partial Release Sheet is used when only a portion of a Work Package is to be released. It can be used to release only certain steps in the work procedure or it can be used to release all the steps in the work procedure for only certain pieces of equipment. The Partial Release Sheet alone does not authorize release of the Work Package. It must be used in conjunction with the Work Release Sheet, Form J-8. The following actions are required on the Forms used:

If a Partial Release is desired, the SOM fills out Block 4 [(Released For Field Work:) annotates Block 4, "See Partial Release Sheet J-9"] on the J-8 and Blocks 2 (Section or Equipment Number:) and 3a (Required For Release:) on the J-9. The SOM also fills out Block 3b (Hung Y or N:) on the J-9.

A copy of the J-8/J-9 will be retained by the FAC. REP./SOM until the work is completed or suspended.

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6.7 STEP 7 - PERFORM WORK

It is the responsibility of the PIC to ensure that the instructions given in the Work Package are adhered to in a deliberate manner. If it is determined that there is a need for a change to the Work Package Resolution or Retest, a Work Change Notice (J-7) shall be processed or returned to WPP for replanning.

6.7.1 Person-In-Charge

Persons In Charge (PIC) are designated individuals who are assigned specific responsibilities for a given task. It is the duty of the PIC to coordinate the task and assume the responsibility to ensure the task is performed accurately.

The PIC qualifications and training requirements will be reviewed on a job-by-job basis by the manager of Job Control. The assignment of PICs to individual jobs will be performed by the Job Control Center.

6.7.2 Work Package Suspension

When a Work Package can no longer be worked or is not being actively pursued in the field, it shall be suspended. Suspension of a Work Package may occur at any time for various reasons, however, every effort should be made to avoid suspending work in the field. If work must be suspended, the Work Release Sheet (J-8) is used to control the suspension and subsequent re-release when the reason for suspension has been resolved and the Work Package rescheduled. The PIC shall submit Work Packages to the SOM if suspension is necessary. The facility file copy of the J-8 and J-9 if applicable are also filled out and both copies of the J-8 and J-9 are placed in the Work Package. The Work Package is sent back through the appropriate portions of Paragraph 6.2 through 6.5.

When a Work Package is suspended, perform the following actions:

1. The Maintenance Manager and the SOM will concurrently fill in Blocks 5 (Suspension Data:) 5a through 5d, 6 (Concurrence:) on the J-8 and Blocks 5 (PIC Complete:) 6 (Tagout Cleared), 7 (Retest Complete:), and 8 (Complete:) on the J-9. Also, the line on which the current release was made shall be annotated "suspended".

2. The Work Package is then returned to the scheduler, through the PTS, to either reschedule or route (via the PTS) to the JCA to resolve the suspended Work Package.

6.8 STEP 8 - WORK COMPLETION AND RETEST

Upon successful completion of the Perform Work Step, the appropriate forms are filled out to indicate completion of work and retest.

After the PIC has completed the action blocks (listed below) the Work Package is forwarded (via PTS) to the Cognizant Engineer for review of the Work Package and the facility configuration to assure the system, equipment or component is ready to be restored to service and all procedure changes have been updated (ECN Packages), and training has been identified and final QA/QC Acceptance has been obtained.

The SOM also reviews the Work Package upon completion of the field work for the retest requirements and assures the system, equipment and/or component has been restored, and performs the retest. If the retest cannot be immediately performed the SOM sends the work package to the tracking office where the status is changed to perform the retest later (FWC-LTR) and placed in the functional test draw of the tracking center.

If the retest is performed successfully, the results are documented (per the actions listed below).

If the Work Package fails retest, the SOM shall assess whether repairs can be made under the existing package, with the addition of a J-7, or requires additional resources. If additional resources are required, the SOM shall suspend the package and return it to the JCC.

The JCA will forward the package to the COG ENG/WPP who will determine a course of action and initiate a resolution.

To document Work Completion and Retest, the following actions are required on the J Forms:

<u>If a Form J-2 was used</u>, the PIC fills out Blocks 19 (Resource Code:) & 24 (Work Complete:) and the craft signs and dates Block 23 (Field Work Complete:).

<u>If a Form J-1 was used</u>, the PIC fills out Blocks 16 [(Resources Required:) if additional required and actual hours] & 19 (Field Work Complete:), the person responsible for the Retest signs and dates Block 18 (Retest Satisfactory:) (only after a successful Retest) and QC signs Block 20 (QC verify Retest:) after successful completion of the Retest. (J-4)

NOTE: The cognizant engineer conducts a post-review of all Modification Work Packages and signs Block 9 (Post Review:) on the J-8 at that time. However, All ECN's related to the Modification Work Package will be signed off as "Work Complete" by the Cognizant Engineer after the retest is accepted as satisfactory by the SOM. Copies will be sent to Document Control by PUREX Job Control so the ECN's can be incorporated on the applicable drawings.

<u>For either J-1 or J-2 method</u>, the SOM fills out Blocks 7 (Functional Retest Complete:) & 8 (Work Complete:) on the J-8 and Blocks 6 (Tagout Cleared:), 7 (Retest Complete:), & 8 (Complete:) on the J-9 (if used). The PIC fills out Block 5 (PIC Complete:) on the J-9 (if used).

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6.8.1 Work Package Closeout

The SOM shall review each Work Package to ensure that the work was satisfactorily completed and all applicable procedure changes implemented and training has been identified. The work area should be inspected for clean up. When the SOM is satisfied, the Work Package will be signed off as complete and forwarded to the JCC for the "Post-Work Review and Documentation" step of the JCS process.

6.8.2 Cognizant Engineer Post-Review.

For Modification Work Packages the package is staged, by the PTS office, for cognizant engineer post-review. The cognizant engineer will close out or incorporate any ECNs or waivers from the Work Package. The cognizant engineer will sign and date Block 9 (Post Review:) on the Form J-8 when satisfied with the performance of the work and retest, and return the Work Package to the PTS/JCC for Work Package Closeout.

6.8.3 Work Package Closeout.

Work Package Closeout is performed by the PTS/JCC office to ensure that all applicable blocks, on all forms, have been completed, and assure appropriate approvals and required sign offs were obtained based on the assigned Impact Level.

As part of Work Package Closeout, when the Work Package is ready for vaulting, the PTS/JCC office will enter all Closeout information from the Record Copy Work Package into the computer record for in-house history use after the Record Copy Work Package has been sent to Records Retention.

The Work Package is to be maintained and dispositioned in accordance with the guidelines specified in WHC-CM-1-3, MRP 3.3, "Administrative Records Management System."

6.9 STEP 9 - POST-WORK REVIEW AND DOCUMENTATION

After completion of the work and the retest, the Work Package is ready for post-work review and documentation.

See Appendix F for Minimum Approval Requirements Table.

Safety, Environmental and QA organizations may request overview of completed Work Packages to assess appropriate impact levels, adequacy of retest, etc. (per MRP 5.43, "Impact Levels"). Impact Level 3 Work Packages, not previously approved by Safety, require "Post-Review" by Safety.

For modifications, the Work Package is forwarded to the cognizant engineer for post-review (via PTS). The cognizant engineer will close out or incorporate any ECN's or waivers from the Work Package (that were not closed out after completion of Step 8) and return the Work Package to the PTS Office for filing in the retention vault.

9 3 1 2 8 9 8 0 5 9 3

6.10 INTERFACES

6.10.1 Processing PM/Pisces Work Packages.

This section provides instructions on the processing of Preventive Maintenance/Plant Instrumentation Surveillance, Calibration and Evaluation System (PM/PISCES), Work Packages at PUREX/UO_3.

PM/PISCES Job Cards are issued through the Maintenance Engineering Administration and Analysis (MEA&A) group.

Until such time that the JCS ADP System provides a viable method of interfacing with the PM/PISCES system in place, PUREX/UO_3 will continue to utilize the PM/PISCES Job Card as a "Stand Alone" Work Document.

J-1/J-2 Work Packages will only be required when additional maintenance repair actions are discovered during performance of the preventive maintenance or when Work Packages are produced by maintenance groups outside PUREX/UO_3 boundaries (i.e., Fire Systems Maintenance, Vent and Balance, Safeguards and Security, etc.) who have already implemented the JCS and produce JCS Work Packages per their procedures. PUREX/UO_3 will honor these Packages and assist in their preparation, scheduling and performance.

6.10.2 Processing Construction (Kaiser) Work Packages.

1. Since the construction contractor produces the Work Packages their personnel work to, it is not deemed necessary to duplicate their efforts in the JCS at PUREX/UO_3.

2. A construction contractor "Plan of The Week" form will be utilized by the construction contractor liaison and distributed to the shift manager, HP supervisor, Job Control and Operations Support manager on Friday of each week noting the following weeks planned activities.

3. A Work Approval Authorization Form (WAAF) will be filled out daily by the construction contractor and reviewed by the shift manager and Health Physics (HP) supervisor prior to starting any activity.

4. When the work being performed interfaces directly with the facility (e.g., tie-in to facility utilities, work area isolation, OTPs/ATPs, etc.) the Project Engineer or PIC will make all necessary arrangements with Operations, Utilities, Facilities, Health Physics, or other support organizations. This includes, but is not limited to: Operations/HP Support, Lockouts, etc.

9 3 1 2 8 9 8 0 5 9 4

6.10.3 Processing Work Packages - 200 Area Support Services/Fabrication Services.

This section provides instructions on the processing of Work Requests which require the services of those 200 Area Support Services crafts or fabrication shops not permanently assigned to the PUREX/UO_3 Facility (i.e., Fire Systems Maintenance, Vent and Balance, Electrical Utilities, carpenters and painters, riggers, insulators, boilermakers, machinists, sheet metal workers, etc.).

6.10.4 Process for Working J-1/J-2 Work Packages from Support Services.

JCS Work Packages, written by the support services group, or Fabrication Shops, to be performed in the PUREX/UO_3 Facility will be produced per their procedure.

When requesting a repair or fabrication to be performed by Fabrication Services or fabrication to be performed by a support organization, PUREX/UO_3 shall submit an approved work request which is processed in accordance with the requirements of the procedure. PUREX/UO_3 is responsible for providing work instructions in sufficient enough detail to allow the preparation of internal work instructions. The work instructions will include the following information as a minimum:

- description of work to be performed
- shipping instructions
- identification of any restrictions or special conditions
- charge code and Work Order (if applicable)
- identification of inspection criteria
- material requirements
- applicable sketches or drawings
- special tests required
- documentation required
- Impact Level
- delivery date

The Perform Work Step and Work Completion Step for PUREX/UO_3 will be performed by Fabrication Services or the support organization. Upon receipt and acceptance of the requested work, it shall be identified on a Work Request - Combined Form (J-2) and the work processed in accordance with the requirements of this procedure.

Upon completion of the requested repair or fabrication, the repaired or fabricated component, along with the requesting facilities Work Package and requested documentation will be transmitted to PUREX/UO_3 for completion of processing in accordance with the requirements of this procedure.

9 3 1 2 0 9 8 0 5 9 5

7.0 REFERENCES

WHC-CM-1-3, Management Requirements and Procedures.
- MRP 3.3, "Administrative Records Management."
- MRP 4.6, "Davis Bacon Act Compliance Procedure."
- MRP 4.7, "Turndown Work."
- MRP 5.43, "Impact Levels."
- MRP 5.46, "Safety Classification of Systems, Components, and Structures."

WHC-CM-4-2, Quality Assurance Manual.

WHC-CM-5-9, PUREX/UO_3 Administration.
- 4.21, "Material Control."
- 5.16, "Equipment Temporary Modifications and Bypasses."

WHC-CM-6-1, Standard Engineering Practices,
- EP 2.2, "Engineering Document Change Control."
- EP 5.2, "Cognizant Engineer Responsibilities."

WHC-CM-8-7, Operations Support Services.

WHC-CM-8-8, Job Control System.

8.0 BIBLIOGRAPHY

OSD-P-154-00001, PUREX Cold Standby Operating Specifications.

WHC-CM-4-46, Non Reactor Facility Safety Analysis Manual,
- 6.0, "Safety Class Equipment."

WHC-CM-5-9, PUREX/UO_3 Administration.
- 3.3, "PUREX Implementation - Energy Control Program, Lockout/Tagout."
- 3.18, "Cold Standby Program."
- 5.8, "PUREX/UO_3 Pre-Approved Work Request."

WHC-CM-8-2, 200 Area Support Services, 202.0, "Plant Instrument Calibration and Control System."

9 3 1 2 8 9 8 0 5 9 6

9.0 CONCURRENCES

C. A. Sams, Manager
Quality Assurance

Date 10-25-91

R. V. Skinner, Manager
North Area Facilities Safety Assurance

Date 10-28-91

L. F. Perkins, Manager
PUREX Work Control

Date 10-24-91

G. L. Kunkle, Manager
PUREX/UO_3 Maintenance

Date 10/31/91

K. W. Gray, Acting Manager
PUREX/UO_3 Health and Safety

Date 11/7/91

R. W. Bailey, Manager
PUREX Operations

Date 10/30/91

Figure 1. Job Control System Process Flow Chart.

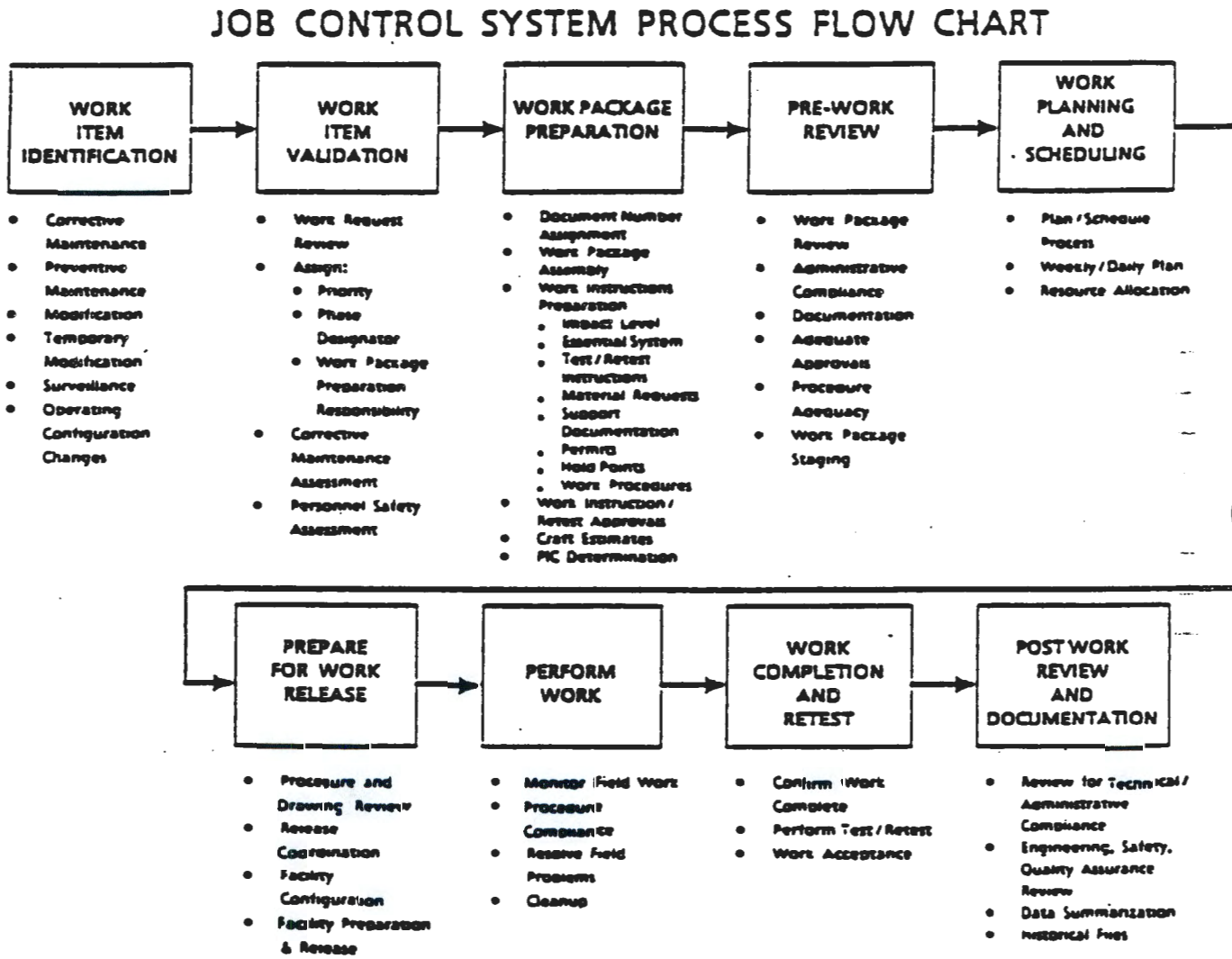

Figure 2. Form J-1 Work Request.

J-1	WORK REQUEST	1. Job Number ___ - ___ - _____ / ___

2. Work Item Info

3. System	4. Component	5. Location (Facility / Bldg / Room / Other / Other)	6. Attac. Equip.

7. Originator (Name / Date / Organization)	8. Charge Code

9. Work Item Description

10. Facility Representative Review (Signature / Date)	11. Priority	13. Corrective Maintenance Assessment Yes ☐ No ☐
	12. Phone Originator	14. Personnel Safety Related Yes ☐ No ☐

15. Cognizant Engineer	16. Cognizant Engineer's Manager

17. Reference Documents

18. Comments

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Figure 3. Form J-2 Work Request-Combined Form.

J-2 **WORK REQUEST - COMBINED FORM**

1. Document Number ___ - ___ - _____ / ___

2. Work Item Title

3. System

4. Component

5. Location ___ / ___ / ___ / ___ / ___
Facility Bldg Room Other Other

6. Assoc. Equip.

7. Originator ___ / ___ / ___
Name Date Organization

8. Charge Code

9. Work Item Description

10. Facility Representative Review
Signature / Date

11. Priority

12. Phase Designator

13. Corrective Maintenance Assessment
Yes ☐ No ☐

14. Personnel Safety Related
Yes ☐ No ☐

15. Mode

16. Resolution/Comments

17. PIC

18. PIC Organization

19.

Resource Code	Estimate	Actual

20. Component Engineer/Work Package Preparer
Signature Date

21. Manager
Signature Date

22. Reference Documents

23. Field Work Complete
Craft Signature Date

24 Work Complete
Signature Date

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Figure 4. Form J-3 Pre-Approved Support Request.

J-3 **PRE-APPROVED SUPPORT REQUEST**

1. Requested By: _____ / _____ 2. Charge Code: _____
Name Organization

3. Date of Request: _____ 4. Response Required: ☐ ASAP ☐ Routine

5. Type of Work:

☐ Chart Recorder ☐ Relamp:
☐ Equipment Move ☐ Fluorescent
☐ Gas Bottle Changeout ☐ Incandescent
☐ Oil Addition ☐ Other _____

6. Location: _____ / _____ / _____ / _____ / _____ / _____
Facility Building Room Panel/Equip./Component Other Other

7. Description _____

8. Concurrence:	9. Craft Complete:	10. Task Complete:	11. Resource Hours:
_____ / _____ Signature Date	_____ / _____ Signature Date	_____ / _____ Signature Date	___/___ ___/___

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9 3 1 2 8 9 8 0 6 0 1

Figure 5. Document Record Folder.
(sheet 1 of 2)

DOCUMENT RECORD FOLDER

DOCUMENT NUMBER 1

PHASE DIS. 2

PRIORITY 1 2 3 4 3

ROUTING

TO	VIA T.O.	REASON	TO	VIA T.O.	REASON
4					

CHANGE RECORD

WCN NO.	DATE	ENTERED BY	REMARKS
5			

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Figure 5. Document Record Folder.
(sheet 2 of 2)

INSTRUCTIONS

1) DOCUMENT NUMBER — Enter the alpha-numeric document identification number from work request. (WPP)

2) PHASE DESIGNATOR — Enter the Phase Designator, if applicable, indicating the time frame during which the job should work (same as on the Work Request). (WPP)

3) PRIORITY — Enter the priority (Appendix A). (WPP)

4) ROUTING — Enter the name of the person or organization that the package is being routed to and the reason the package is being routed (use codes in Appendix B). The package must be routed through the tracking office each time. The "VIA T.O." (via Tracking Office) block is initialed at that time. (WPP)

5) CHANGE RECORD — Enter the Work Change Notice (J-7) number, date the change is entered, name of the person entering the change and any remarks concerning the change in the appropriate block.

9 3 1 2 9 8 0 6 0 3

Figure 6. Form J-4 Resolution/Retest.

J-4 RESOLUTION / RETEST

Page ____ of ____

1. Document Number

2. Essential Systems

3. PIC:

4. PIC Organization

5. Resolution

6. Impact Level
Level 1 ☐ Level 3 ☐
Level 2 ☐ Level 4 ☐

7. Tech Spec/OSR Requirements/Reference

8. Reference Documents
RWP No
Weld Plot
MRP
AWWS No
Other

9. Approval Signatures
Cognizant Engineer / Date
Cognizant Engineer's Manager / Date
Quality Assurance / Date
Safety / Date
Facility Representative / Date
Planner / Date
Environmental Assurance / Date
/ Date
/ Date
/ Date

10. Comments

11. Retest Requirement Yes ☐ No ☐

12. Mode

13. Retest

14. Resolution By
Signature / Date

15. Plant Forces Work Remove Required
Yes ☐ Number
No ☐

16. Resources Required

Resource Code	Estimate	Actual

17. QC Involvement on Retest
Witness ☐ Hold ☐
Verify ☐ None ☐

18. Retest Satisfactory
Signature / Date

19. Field Work Complete
Signature / Date

20. QC Verify Retest (If Required)
Signature / Date

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9 3 1 2 8 9 8 0 6 0 4

Figure 7. Form J-4a Resolution/Retest (continuation).

J-4a	RESOLUTION / RETEST (Continuation)	Page ____ of ____	1. Document Number ___-___-_____/__

3. Resolution

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Figure 8. Form J-6 Modification Impact Review.

J-6 **MODIFICATION IMPACT REVIEW**

1. Document Number ___ - ___ - ____ / __

2. THIS MODIFICATION IMPACTS:

Operating Procedures	☐ Yes	☐ No
Preventive Maintenance Procedures	☐ Yes	☐ No
Surveillance Procedures	☐ Yes	☐ No
Operations Training	☐ Yes	☐ No
Maintenance Training	☐ Yes	☐ No
_____ Other	☐ Yes	☐ No

_____ / _____
Signature Date

3. INPUT REQUIRED FOR PROCEDURE CHANGES:

Operating Procedures

_____
_____
_____

Operating Procedures Input Received

_____ / _____
Signature Date

Maintenance Procedures

_____
_____
_____

Maintenance Procedures Input Received

_____ / _____
Signature Date

4. TRAINING TO BE PROVIDED BY:

☐ Shift Instructions
☐ Training Manual Update
☐ Formal Training
☐ Other _____

5. TRAINING REQUIREMENTS ACKNOWLEDGED:

_____ / _____
Training Signature Date

6. FACILITY SPECIFIC REQUIREMENTS:

7. COMMENTS:

_____
_____
_____
_____
_____
_____
_____
_____

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9 3 1 2 8 9 8 0 6 0 6

Figure 8a. Facility Specific Requirements (J-6 #6 Att.).

FACILITY SPECIFIC REQUIREMENTS
PUREX/UO_3 (A Continuation of the J-6 Block 6)

DOCUMENT NUMBER
_|_|-_|_|-_|_|_|_|_|/_|

Operating Documents Requiring Modification Prior to System Reactivation

Yes	No	Document Type*	Document Number*	Assignee
☐	☐	Facility Control Drawings (IEFDs, CAD, etc.)		
☐	☐	Process Control Manual (OSRs)		
☐	☐	Crit. Prevention Specs./Postings		
☐	☐	Facility Process Sampling Schedules		
☐	☐	Process Instrumentation Cal. Req's.		
☐	☐	Tank Calibration Manual		
☐	☐	Health Physics Procedure		
☐	☐	Safety Equipment List		
☐	☐	Safety Analysis Report		
☐	☐	Essential Equipment List		
☐	☐	Spare Parts		
☐	☐	Other		
☐	☐	Other		

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PUREX/UO_3 PLANT

JOB CONTROL SYST

J-7

2. Originator

Signature

3. Page

4.

5. Reason for Change

J-7

3. Page

Figure 10. Form J-8 Work Release Sheet.

J-8 **WORK RELEASE SHEET**

1 Document Number
___ - ___ - ___ / ___

2 Pre-Release Review
Signature ____ / Date ____

3. Tagout Number

4 Released for Field Work
Facility Representative Signature ____ / Date ____

5 Suspension Data:

5A Reason for Suspension ____

5B System/Component Status ____

5C Mode Impact ____

5D. Tagout Requirements/Status ____

6 Concurrence
PIC Signature ____ / Date ____
Facility Representative Signature ____ / Date ____

2. Pre-Release Review
Signature ____ / Date ____

3. Tagout Number

4. Released for Field Work
Facility Representative Signature ____ / Date ____

5. Suspension Data:

5A Reason for Suspension ____

5B. System/Component Status ____

5C. Mode Impact ____

5D. Tagout Requirements/Status ____

6 Concurrence
PIC Signature ____ / Date ____
Facility Representative Signature ____ / Date ____

7 Functional Retest Complete
Facility Representative Signature ____ / Date ____

8. Work Complete
Facility Representative Signature ____ / Date ____

9. Post Review Reactor Containment Integrity [Y] [N] [NA]
Signature ____ / Date ____

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Figure 11. Form J-9 Partial Release Sheet.

J-9	PARTIAL RELEASE SHEET						1. Document Number ___ - ___ - ____ / __
2. Section or Equipment Number	3. Tagouts A. Required for Release Y or N	3. Tagouts B. Hung Y or N	4. Released Sign/Date	5. PIC Complete Sign/Date	6. Tagout Cleared Sign/Date	7. Retest Complete Sign/Date	8. Complete Sign/Date

BC-6000-190 (04/88)

9 3 1 2 3 9 8 0 6 1 0

Figure 12. Daily Release Sheet.

DAILY RELEASE SHEET

1. PIC Organization _____

2. Submitted By _____
Scheduler

3. Documents listed on this release sheet are requested for work
From _____ To _____
Time and Date Time and Date

Page _____ of _____

4. Date _____

5. Work Document No.	6. PRR	7. Facility Release	8. Date of Prior Release	9. Tagout RPR	10. Tags Hung	11. Tag Number	12. Work Description	13. PIC	14. Remarks

RD-4000-193 (20/00)

9312898061

Figure 13. Material Request Form.

Westinghouse Hanford Company

MATERIAL REQUEST

Date | Originator
MSIN | Phone | MRF No. U

Action
☐ Acquisition ☐ Return to Vendor ☐ Inventory Return ☐ Excessing

Return to Spare Parts
Yes ☐ Return Date _____
No ☐

Partial Shipment Authorization
Yes ☐
No ☐

Cost Center | Account Class | Work Order/TA

Date Required _____
Desired ☐
Mandatory ☐

Deliver To: Name | Area | Bldg. | Room | Work Req. No. | Sys./Equip. No. | Authorized By

Item	Quan.	U. of I.	Description	Estimated Cost	Material Requirements (ASME, AWS, Sensitive Mat. Spec., etc.	Cert. Papers Req.

Recommended Vendor(s), Address, Phone Number, Person(s) Contacted

End Use: | Hazardous Yes ☐ No ☐

Emergency Justification

Requisition Number

Date Issued

Date Received for Material Processing _____ Action Assigned To _____ Date Completed _____

BC-7400-110 (05/88)

9 3 1 2 9 9 8 0 6 1 2

Figure 14. Bill of Material Form.

PUREX BILL OF MATERIAL	Job:	WA #	ECN #
DATE:	SMTO/Mat'l Coord:	DATE:	____ Logbook/Page ____

Part Number	Quantity/ Unit	Material Description	Material Reference or Drawing Number	Req./Store Number Store Order Number	By Qty. Cost	Impact Level	Ordered Received	Material Status

Bill of Material Approval: ________________________ *Page* ____ *of* ____

Material Received By: ____________________ *Date:* ______

lcm – 01/24/9X
form\bof

Figure 15. Lock and Tag Sheet.

PUREX TAGOUT AUTHORIZATION A-1

Sequential Serial No:_____ Issue Date:_____ Page _____ of _____

System:_____ Comp. No.:_____ Comp. Name:_____

Requested By:_____ Org.:_____ Document No.:_____

Reason for Tagging:_____

Personnel Hazards Involved (Mandatory for Danger Tags):_____

Background/Amplifying instructions (Mandatory for Caution Tags):_____

Work Necessary to Clear Tags:_____

Special Instructions/Remarks (Special Conditions Found During Tagout):

Authorized By:_____ PDM Verbal Approval:_____

Desired Restoration Lineup Including Valve Positioning and Retest Instruction if Not Provided in The Work Package:_____

All Tags Removed:_____ System Restored:_____

Retested (If Applicable):_____

TAG NO.	TYPE TAG	COLL.	EQUIPMENT NUMBER/ NAME	LOCK	REQUIRED POSITION/ CONDITION	POSTED BY / CHECKED BY	DATE	CLEARANCE APPROVAL	DATE	CLEARED BY
1										
2										
3										
4										
5										
6										
7										
8										

9 3 1 2 9 9 8 0 6 1 4

Figure 16. Work Request Document Classifier.

The Work Request Document Classifier is a single digit (alpha) identifying the type of work item to be performed. The following list of classifiers have been assigned for usage with the work document number:

A - Administrative Action

B - Failed Alarms/Instrumentation Work Item

F - Shop Repairs or Fabrications performed by Fabrication Services

I - Instrument Calibration Items

L - Temporary Modification

M - Modification

P - Preventive Maintenance Work Items

S - Surveillance

W - Work Item - Work on facilities not covered by the above.

Figure 17. Craft/Resource Usage Log.
(sheet 1 of 2)

DATE	HOURS	CRAFT/RESOURCE TYPE	NAME

DATE	HOURS	CRAFT/RESOURCE TYPE	NAME

CRAFT/RESOURCE USAGE SUMMARY

CRAFT/RESOURCE TYPE	TOTAL HOURS

9 3 1 2 8 9 8 0 6 1 6

Figure 17. Craft/Resource Usage Log.
(sheet 2 of 2)

INSTRUCTIONS

DATE	Enter each day that the work package was worked.
HOURS	Enter the number of hours that each craft or resource was used on the task.
CRAFT/RESOURCE TYPE	Enter the code or name of each craft or resource used for the task.
NAME	Enter the name of each craftsman who worked on the task.
TOTAL HOURS	Enter the total number of hours spent on the Work Package for each craft and resource used.

Table 1. List of Status Indicators.

Step	JCS Element	Status Indicator Needed	Indicator Step Indicator	Indicator Action
1	Work Item Identification	No	-	-
2	Work Item Validation	No	-	-
3	Work Package Preparation	Yes	WPP	RES
			WPP	APP
4	Pre-Work Review	Yes	PWR	FAC
			PWR	PSR
5	Planning and Scheduling	Yes	SCH	MAT
			SCH	CDN
			SCH	RES
			SCH	RTW
6	Prepare for Work and Release	No	-	-
7	Perform Work	Yes	WRK	CRQ
			WRK	REL
			WRK	SHP
			WRK	PMP
			WRK	NON
			WRK	SOP
8	Work Completion and Retest	Yes	FWC	RET
			FWC	LTR
9	Post Review and Documentation	Yes	CMP	POR
			CMP	DOC
			RET	CMP
			RET	CAN

APPENDIX A

WORK PRIORITY SYSTEM
(sheet 1 of 2)

1.0 Work Priority

All work at PUREX/UO_3 shall be assigned a priority within this system. The Work Priority System is a four level numeric system that denotes the importance of the work activity relative to the facility, plant safety, environmental requirements, and personnel.

2.0 Priority System

2.1 PRIORITY 1

Those items which are necessary to recovery from unsafe conditions. Re-establish the safety envelope, avoid imminent violation of safety requirements or to restore security systems when an alternate is not available. This is work that requires immediate attention to:

1. Prevent injury to personnel.

2. Prevent major damage to facilities (e.g., flooding or fire).

3. Prevent a criticality event or release of hazardous or radioactive substance to the environment beyond prescribed limits.

4. Repair security systems to prevent direct loss of security where alternative system cannot be reasonably provided.

5. Bring systems/facilities back into OSR/OSD compliance or avoid imminent violation of OSR/OSD compliance requirements.

6. Repair activity which requires immediate action to ensure continued safe operation of a facility.

7. Restore the credibility of an Alarm or Alarm System by correcting nuisance or spurious alarms that do not indicate an off-normal or emergency condition, but which divert personnel attention from other monitored parameters or equipment by its continued or repetitive nature. A Priority I Level situation may be used immediately, but in all cases shall be declared if the nuisance or spurious condition has not been corrected within 24 hours.

2.2 PRIORITY 2

Those regular routine actions required to assure that the safety of the plant is maintained and those actions necessary to continue plant operation are executed. This work is normally scheduled to:

APPENDIX A

WORK PRIORITY SYSTEM
(sheet 2 of 2)

1. Repair or prevent equipment breakdowns or correct problems which impact reliability of essential equipment/facilities.

2. Perform tasks that are essential to meet program goals.

3. Perform Surveillance procedures.

4. Modify equipment for urgent near term improvement.

5. Accomplish essential equipment/facility modifications.

6. Perform routine repairs to security systems (including repairs where alternate systems have been provided).

7. Perform mandatory preventive maintenance procedures.

8. Perform necessary safety/environmental equipment maintenance and repairs.

2.3 PRIORITY 3

Perform work that is necessary but can be scheduled at the plant's option. Lack of performance does not jeopardize meeting the safety requirements or maintaining plant operation. This is work that can be scheduled to:

1. Correct problems associated with non-essential but necessary equipment.

2. Perform preventive maintenance procedures not identified as Priority 2 above.

3. Modify equipment/facilities to improve operability or maintainability.

4. Repair spare facility parts/equipment.

2.4 PRIORITY 4

All other work that can be scheduled:

1. Perform tasks that are non-essential to meet program goals.

2. That is generally not directly related to the operation of a facility.

9 3 1 2 2 0 7 8 0 6 2 0

APPENDIX B

ESSENTIAL SYSTEMS/PUREX
(J-4 BLOCK 2)

1. Effluent Monitoring/Sampling
2. Personnel Protection (Radiological and Non-Radiological)
3. Fire Protection
4. Ventilation Systems 1-4
5. Steam Supply System
6. Raw/Sanitary Water System
7. Process/Instrument Air System
8. Criticality Prevention System
9. Electrical Distribution System

ESSENTIAL SYSTEM/UO_3
(J-4 BLOCK 2)

1. Environmental Monitoring/Sampling
2. Personnel Protection (Radiological and Non-Radiological)
3. Fire Protection
4. Steam Supply System
5. Raw/Sanitary Water System
6. Process/Instrument Air System
7. Breathing Air System
8. Electrical Distribution System
9. Crane/Hoist System
10. CAM System
11. OSR Related System

9 3 1 2 8 9 8 0 6 2 1

APPENDIX C

WORK PACKAGE CONTENTS ARRANGEMENT

1.0 WORK PACKAGE

A Work Package consists of forms, documents, procedures, permits, work instructions, etc. required to accomplish a work item. Work Packages created using either the Work Request Method or Work Request-Combined Form method shall be assembled in standard formats, within a Document Record Folder (DRF). These formats are discussed in the following sections:

2.0 WORK REQUEST (J-1) WORK PACKAGE

The initial Work Package is assembled by insetting the Work Request (J-1) onto the left hand side of the DRF using an ACCO fastener or equivalent. The Work Release Sheet (J-8), Partial Release Sheet (J-9), if used, and Modification Impact Review Form (J-6), for modification packages only, are placed on top of the Work Request (J-1) on the left hand side of the folder in ascending order.

On the right hand side of the DRF, in descending order are the Work Change Notice(s) (J-7), if used; the Resolution/Retest Form (J-4) with required procedures, drawings, etc..

3.0 WORK REQUEST-COMBINED FORM WORK PACKAGE

The initial Work Package is assembled by inserting the Work Request-Combined Form (J-2) with procedures, etc. onto the right hand side of the DRF using an ACCO fastener or equivalent. Any Work Change Notices (J-7) required are placed on top of the Work Request-Combined Form (J-2).

On the left hand side of the DRF, in descending order, is the Partial Release Sheet (J-9), if used, and the Work Release Sheet (J-8).

9 3 1 2 3 9 8 1 6 2 2

APPENDIX D

WORK PACKAGE STATUS INDICATOR SYSTEM
(sheet 1 of 3)

1.0 WORK PACKAGE TRACKING

A work item is tracked during the Job Control System (JCS) process from assignment of a document number until it is vaulted. The status and location of the Work Package is identified on the document record folder and tracking office record log.

2.0 STATUS INDICATORS

A status indicator is used to indicate the status of a Work Package. The status indicator is a two-part indicator. The first part indicates the step of the JCS process and the second part indicates the action that is being performed within the step. Table 1 summarizes the status indicators used in each of the nine steps of the JCS process. The following is a brief description of what each indicator means:

2.1 WORK ITEM IDENTIFICATION

No status indicator is required.

2.2 WORK ITEM VALIDATION

No status indicator is required.

2.3 WORK PACKAGE PREPARATION (WPP)

A Work Package that has been initiated and is in the WPP step is statused with one of the following status indicators:

1. WPP-RES - A Work Package in the WPP step that has not yet been resolved.

2. WPP-APP - A Work Package in the WPP step which is being processed for approval.

2.4 PRE-WORK REVIEW (PWR)

A Work Package that has been approved and is being reviewed is statused with one of the following status indicators:

APPENDIX D

WORK PACKAGE STATUS INDICATOR SYSTEM
(sheet 2 of 3)

1. WRK-CRQ - A Work Package that is in review by the facility reviewing organization.

2. PWR-PSR - A Work Package that is in review by planners and/or schedulers.

2.5 PLANNING AND SCHEDULING

A Work Package that has been approved and reviewed and ready to plan and schedule for work is statused with one of the following status indicators:

1. SCH-MAT - A Work Package that is ready to schedule but is awaiting material.

2. SCH-CDN - A Work Package that is ready to schedule but is awaiting the right facility conditions.

3. SCH-RES - A Work Package that is ready to schedule but is awaiting the availability of resources (i.e., outside vendor, NDE, etc.).

4. SCH-RTW - A Work Package that is ready to work.

2.6 PREPARE FOR WORK AND RELEASE

No indicators are used during this step.

2.7 PERFORM WORK (WRK)

A Work Package that has been released to work is statused with one of the following status indicators:

1. WRK-CRQ - A Work Package that has been released to work but requires coordination to resolve a constraint before it can work.

2. WRK-REL - A Work Package that has been released to work in the facility.

3. WRK-SHP - A Work Package that has been released for shop work without being formally released for work in the facility.

4. WRK-PMP - A Preventive Maintenance Work Package released for work which does not require formal release for work.

APPENDIX D

WORK PACKAGE STATUS INDICATOR SYSTEM
(sheet 3 of 3)

5. WRK-NON - A Work Package that was scheduled to work but for some reason was not released.

6. WRK-SOP - A Work Package which had been released but then had work suspended leaving the equipment in an operable condition

2.8 WORK COMPLETION AND RETEST (FWC)

A Work Package that has completed work and is ready for retest in statused with one of the following status indicators:

1. FWC-RET - A Work Package that has completed work and is now in retest.

2. FWC-LTR - A Work Package that has completed work but the retest cannot be performed until a later time period when facility condition can be met.

2.9 POST REVIEW AND DOCUMENTATION (CMP)

A Work Package that has completed work, has had a successful retest, if applicable, and is ready for Post Review and Documentation shall be statused with one of the following status indicators:

1. CMP-POR - A completed Work Package that is in Post Review.

2. CMP-DOC - A completed Work Package that is being reviewed for documentation.

Work Packages which have completed processing through the JCS and have been forwarded for record retention filing, shall be statused with one of the following status indicators:

1. RET-CMP - A completed Work Package that has been processed through all steps of the JCS and is being filed for record retention.

2. RET-CAN - A Work Package that during the JCS process was canceled and is being filed for record retention.

APPENDIX E

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APPENDIX F

WORK DOCUMENT
MINIMUM APPROVAL REQUIREMENT TABLE

IMPACT LEVEL	COGNIZANT ENGINEER	COGNIZANT ENGINEER MANAGER	QUALITY ASSURANCE REPRESENTATIVE	SAFETY REPRESENTATIVE
1	A	D(2)	A	A
2	A	D(2)	A	A
3 PR	A	D(2)	A	A(3)
4	A	D(2)		

(1) Minimum approval requirements are identified within the BOLD LINE. Other minimum approvals may be required by the customer. Projects/Programs/Departments/Divisions may also identify additional approval and review requirements in their respective management plan.

(2) Cognizant engineer manager approval has been delegated per Paragraph 3.4 of this procedure.

(3) Approval required when relative to occupational safety items or hazards. Post review only required for documents not previously approved.

KEY: A - Approval D - Designee PR - Post Review

APPENDIX G

VALID RESOURCE CODES

NUMERICALLY BY CODE

00 No Craft/Job Title
01 Storekeeper
02 Train Crew
04 Nuclear Operator
05 Power Operator
06 Coal Handler
07 Business Machine Technician
08 Auto Mechanic
09 Heavy Duty Mechanic
10 Locomotive Mechanic
11 Sheet Metal Mechanic
12 Trackman
13 Crane Operator
14 Bus/Heavy Truck Driver
15 Carpenter
16 Janitor
17 Serviceman/Light Truck Driver
18 Instrument Technician
19 Printer/Duplicator
20 Telephone Repairman/Installer
21 Lineman
22 Electrician
23 Millwright
24 Pipefitter
25 Painter
29 Locksmith
31 Cement Finisher
32 Process Crane Operator
33 Boilermaker
34 Glazier
35 Ironworker
36 Laundry Worker
37 Insulator
38 Sign Painter
39 Stock & Tool Attendant
40 Welder
41 Firefighter
49 Machinist/Tool & Die Maker
54 Radiation Protection Technician
55 Auto Body Repair
56 SMTO/Material Coordinator
59 Switchboard Operator
60 Chem Tech
61 TPI* - Crane
62 TPI* - Elevator
63 TPI* - Pressure Vessel
64 TPI* - Special
80 Fabrication Specialist
81 Manufacturing Engineer
82 Weld Specialist
83 Planner
84 Administration Specialist
85 Material Planner
86 Clerical
87 Tool Engineer
88 Manager
89 Scheduler
QA Quality Assurance
QC Quality Control

APPENDIX H

MODE CODES

	MODE CODE	DEFINITIONS
1.	HDE-D	HEAD END MUST BE DOWN TO PERFORM WORK.
2.	HDE-O	HEAD END CAN BE OPERATING WHEN PERFORMING WORK.
3.	N/A	NOT APPLICABLE
4.	NCL-D	N-CELL MUST BE DOWN TO PERFORM WORK.
5.	NCL-O	N-CELL CAN BE OPERATING WHEN PERFORMING WORK.
6.	OPR	SYSTEM CAN BE OPERATING WHEN PERFORMING WORK.
7.	OUT	SYSTEM MUST BE DOWN TO PERFORM WORK.
8.	SXE-D	SOLVENT EXTRACTION MUST BE DOWN TO PERFORM WORK.
9.	SE-O	SOLVENT EXTRACTION CAN BE OPERATING WHEN PERFORMING WORK.

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Attachment G

Referenced in response to
Action Item: 10

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Westinghouse Hanford Company — **Internal Memo**

From: PUREX Operations — 17200-92-054
Phone: 3-4494 S5-66
Date: July 31, 1992
Subject: NEW ADMINISTRATIVE LIMITS ON PROCESS TANK VOLUMES

To: Operations Managers
Operations Supervisors S5-65

cc:	J. G. Adler	S6-19	L. F. Perkins	S6-15
	K. W. Gray	S5-51	R. C. Roal	S6-08
	D. G. Harlow	S6-17	W. E. Ross	T7-11
	G. L. Kunkle	S5-75	C. A. Sams	S6-20
	D. D. Leitch	S5-66	R. V. Skinner	S6-08
	J. C. Midgett	S6-15	G. R. Tardiff	S6-18
	W. A. Peiffer	S6-18	RWB:File/lb	

New administrative control limits have been established for all PUREX process tanks. They are as follows:

- The shift surveillance managers have full authority over tank operations when the tank capacity is ≤70%. This is considered to be normal operation.

- To operate any PUREX tank between 70% and 90% of capacity, verbal authorization must be obtained from the PUREX Operations Manager. The shift log shall include the date and time that this authorization was granted. The shift log shall also include the date and time that this authorization was rescinded. The verbal authorization shall be valid for no more than 72 hours. Written authorization may also be granted and has no time limit.

- Operation of any dangerous waste tank (E5, F11, F15, F16, F18, G7, U3, U4) above 90% is not authorized.

- Non-dangerous waste tanks may be operated above 90% with verbal authorization obtained from the Manager, PUREX/UO_3 Plant. The shift log shall include the date and time that this authorization was granted. The shift log shall also include the date and time that this authorization was rescinded. The verbal authorization shall be valid for no more than 72 hours. Written authorization may also be granted and has no time limit.

If there are further questions, please contact me.

Ronald W. Bailey

R. W. Bailey
Manager

aabk

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Attachment H

Referenced in response to
Action Item: 10

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Westinghouse
Hanford Company

Internal
Memo

From: PUREX/UO_3 Plant 17000-92-157
Phone: 3-4999 S6-15
Date: July 29, 1992
Subject: RETRAINING ON DANGEROUS WASTE REGULATIONS FOR PUREX OPERATIONS PERSONNEL

To: R. W. Bailey S5-66

cc: J. G. Adler S6-19
G. J. LeBaron S6-19
R. C. Roal S6-08
JCM:JGA File/LB

Reference: Internal memo, J. C. Midgett to R. W. Bailey, et al., "Tank Overflow Corrective Actions," 17000-92-129, dated July 1, 1992.

In the referenced letter under corrective action #4, I directed you to develop and conduct specific retraining for all Operations personnel. The purpose of this memo is to provide you with additional guidance regarding what my expectations are for this retraining.

The retraining must reemphasize the requirements of the Washington Administrative Code (WAC) Chapter 173-303, "Dangerous Waste Regulations." The retraining will cover the liquid radioactive wastes, containerized solid waste, the waste in the PUREX canyon waste pile, and the waste in the PUREX storage tunnels. Specifics on how the regulations affect the PUREX Plant will be covered. Also, discussion on which plant and administrative procedures apply to the regulations should be covered. Specific areas for emphasis should include spill response, classification, and reporting; land disposal restrictions; identification of where dangerous wastes are stored and accumulated (satellite areas, less-than-90-day storage pad, tank systems, etc.,); the requirements for routine surveillances; and the importance of proper conduct of operations.

It is still my expectation that you will be directly involved in the retraining and that retraining of PUREX Operations personnel will be completed by August 31, 1992.

J. C. Midgett
Manager

jw

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Attachment I

Referenced in response to
Action Item: 10

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ENVIRONMENTAL SPILL* CHECKLIST

Date _____ Time _____ Received by _____

Part 1: Information From Caller

1. Identity of spilled material: _____ MSDS No.: _____
2. Is this a product or a waste? _____
3. Amount of spilled material: _____
4. Location of the spill: _____
5. Spilled to: ☐ Ground ☐ Asphalt ☐ Concrete ☐ Secondary Containment ☐ Inside ☐ Other _____
6. Date and time of spill: _____
7. When was spill discovered? _____
8. Cause of spill: ☐ Equipment ☐ Personnel ☐ Procedural ☐ Design ☐ Other _____
9. Explain cause of spill: _____
10. Immediate actions (containment, neutralization, etc.): _____
11. Future actions (waste cleanup, procedure revision, etc.): _____
12. Impact (environmental, injuries, property damage, etc.): _____
13. Name of person reporting incident: _____ Phone No.: _____
14. Associated facility: _____
15. Facility manager: _____
16. Has this incident been reported to the ONC (6-2900) as an Off-Normal Event? _____

    If not, why not? _____

NOTE: MRP 5.14, Appendix F, Group 2 (Environmental) Category B (Release of Hazardous Substances/ Regulated Pollutants/Oil), Off-Normal criterion (a) requires off-normal event reports for hazardous material spills.

Part 2: Designation and Pertinent Regulations

Spill/Release Designation: Contact Debi Tureman (6-4646), Shari Crowner (6-4036), Glenn Triner (6-4852), Rick Austin (6-4277), or Mandy Pascual (6-4839)

☐ Ecology Dangerous ☐ CERCLA RQ (Dangerous Waste) ☐ CERCLA RQ (Radionuclides)

☐ SARA Title III RQ ☐ NPDES ☐ TCAPCA

☐ DOE Order 5484.1 ☐ Toxic Substances (PCB) ☐ PSD

☐ Applicable Reportable Quantity: _____ ☐ None

☐ Other: _____

*The term spill includes nonroutine releases.

A-6000-428 (02/92)

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Attachment J

Referenced in response to
Action Item: 10

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DON'T SAY IT — *Write It!*

DATE: May 4, 1992

TO: Distribution

FROM: Dennis Washenfelder

Telephone: 3-2641

cc: D. G. Harlow
LB

SUBJECT: INITIATION OF PUREX PLANT DAY SHIFT PROCESS ENGINEER ASSIGNMENT

Effective May 4, 1992, an engineer from the PUREX Process Technology Support section will be assigned full time to the plant as the day shift process engineer. The job instruction for this position is provided with this DSI as Attachment 1.

The assignment will rotate monthly. The list of engineers assigned through September 1992, is provided as Attachment 2. This is an additional assignment to the existing work load. When an engineer is assigned as the day shift process engineer, the chief responsibility will be to fulfill the requirements of the position. Delays in completion of other assignments while acting as the day shift process engineer are expected.

If changes in monthly assignments or scope of the position occur, they will be provided to the PUREX Operations manager and the PUREX Process Engineering manager for dissemination in the plant.

Please call me if you have any questions.

ATTACHMENT 1

REV. C
05/04/02

PUREX Plant Day Shift Process Engineer

This information describes the duties of the PUREX engineer assigned to the plant as the Day Shift Process Engineer. The position rotates once a month among individuals in the PUREX Process Technology Support section staff. Absences, including 8 x 9's day off coverage, vacations, and illnesses will be covered by the alternate listed on the rotation schedule. Holiday and weekend coverage are not provided; cognizant engineers or cognizant engineer managers should be called in the event of need.

Duties

The objective of the Day Shift Process Engineer position is to preserve close communication/liaison among the operating, the process engineering, and the plant engineering groups. The engineer provides formal day-to-day interface and follows up between operations and engineering on plant priority items. He surveils routine operations for trends which could indicate potential out-of-limit operation. Many of these activities are described in detail in Process Engineering Department Desk Instructions T22 0-00 940, "SHIFT ENGINEERS GUIDE - PUREX PROCESS CONTROL," January, 1984. The plant walkdown checklist attached to this instruction identifies the major checkpoints and key indicators to be examined during the plant rounds.

<u>Assigned Daily Activities</u>:

1. Meeting attendance:
   - Attend 7:05 a.m. morning meeting
   - Hold the 11:30 a.m. Monday-Wednesday-Friday meeting in the MO-273 Conference Room, or in the PUREX Process Engineering Manager's office, providing review of plant activities, including work plans, surveillances, and off-standard conditions for followup by cognizant engineers and managers
   - Attend the 3:45 p.m. afternoon planning meeting
   - Attend the 7:30 a.m. Wednesday Engineering meeting.

   At these meetings, discuss plant status and engineering needs as the engineering representative.

2. Review Daily Operating Plan and the Daily Operating Report; review the Shift Manager's log; inspect Procedure Change Authorization (PCA) records and sign off completed PCAs; convey operations, maintenance, and other groups' concerns to the appropriate engineer and engineer manager.

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3. Make the plant walkdown, including Central, Headend, and Power Control rooms, looking for problems and verifying satisfactory operation. Review data sheets; verify that red-circled OSR items have been acted upon. Bring any unexplained plant discrepancies to the attention of the Shift Manager.

4. Review current laboratory data needed by the plant, such as RCRA analyses for waste transfers, and stack monitoring data; assure data are within expected limits; follow up on missing data which were scheduled to have been completed by the time of your review.

5. When requested by the cognizant engineers, follow up on key jobs under way in the plant.

6. Notify cognizant engineers of changes in their areas of assigned responsibility, which require their attention.

7. Complete Process Control Log Book entries, according to the requirements specified in WHC-CM-5-9, PUREX/UO3 Plant Administration Manual, Section 3.21, "Logkeeping," Revision 0. Enter important operating status, problems detected, and follow-up activities initiated that day.

Qualifications:
Phase II certified, or Phase I certified working under the direct technical supervision of a Phase II certified engineer.

Plant Walkdown Checklist

This checklist identifies the plant checkpoints and key status indicators to be examined during plant rounds. The checklist is intended to make the engineering reviews uniform, and as a training tool to assure newly assigned engineers complete a comprehensive inspection.

I. Attend Morning meeting.

II. Review Shift Office information:
- A) Shift log book
- B) Plan of the Day
- C) Daily Operation Report
- D) Interim Procedure Changes (IPCs)
- E) Procedure Change Authorizations (PCAs)
- F) Shift Manager/others review.

III. Make notifications/followup on problems identified in II.

IV. Walk down plant:
- A) Central Control Room
  1. Review data sheets
  2. Look at tank instrumentation for problems:
     - a) Pens inking/charts turning
     - b) Purgerators at mid-scale
     - c) Other problems
  3. Talk to operators about status and problems they've found
  4. Make notifications/followup on problems identified.

V. Repeat "IV." for other control rooms.

VI. Walk down P&O Gallery and 211-A Facility:*
- A) Look for leaks
- B) Listen for strange sounds
- C) Examine 211-A Facility sumps for changes.

VII. Provide summary at 11:30 a.m. Engineering Meeting.

VIII. Complete remaining duties.

IX. Attend afternoon meeting.

* Include Sample Gallery, N Cell, and other similar unoccupied areas, approximately once/week.

ATTACHMENT 2

DAY SHIFT PROCESS ENGINEER

MONTHLY ROTATION

MONTH	NAME	8 X 9 ALTERNATE *
May 1992	Dave B. Parkman	Sean M. Eiholzer
June 1992	Sean M. Eiholzer	Michelle L. DeVries
July 1992	Michelle L. DeVries	Paul R. Ethington
August 1992	Paul R. Ethington	Ravi K. Bhatia
September 1992	Ravi K. Bhatia	Dave B. Parkman

* For 8 x 9 work schedule coverage, day off will be adjusted to assure Friday coverage.

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Enclosure 2

RECOMMENDED CORRECTIONS TO THE FACT SHEET

Reference: Letter, Dave Nylander, Ecology, to J. P. Hamric, DOE,-RL and R. J. Bliss, WHC, Dangerous Waste Compliance Inspection for PUREX Tank F-18, dated July 16, 1992.

During review of the fact sheet, several factual errors were noted. The following list identifies those errors, recommends corrections, and provides justification for the corrections.

1. Correction to Facility/Location: Text reading "...Tank 18-F..." should be changed to "...Tank F-18..." This is a more accurate identification of the tank.

2. Comment on Activity and Background: It is understood that this finding addresses only the spills to secondary containment from Tank F18 that occurred at the PUREX Plant on January 3, 1992, and January 6, 1992. In reading the Activity and Background sections of the finding, it appears that some information from other unrelated events is being included. Items number 3, 4, 6, and 7 below attempt to provide the correct information related to the Tank F18 spills.

3. Correction to Activity: The text reading "Overflow of Uranyl Nitrate Hexahydrate Waste..." is not accurate. Based on the type of materials being handled within the PUREX Plant, a more accurate description is "Overflow of Acidic Liquid Waste..." The overflowed material was not uranyl nitrate hexahydrate product material. It is possible that the overflowed waste may contain low concentrations of uranyl nitrate hexahydrate as uranium and nitrate ions. Based on process knowledge and analytical data, the waste is primarily water and dilute nitric acid.

4. Correction to Background: The text reading "The canyon contains a concentrator which separates waste. As the waste flows through the system, it is divided and sent to different holding tanks according to its properties." This is not an accurate description of the PUREX Plant in its current non-operating condition. Because the PUREX Plant is not processing irradiated fuel, the concentrator in question is not in operation. The aqueous waste generated within the PUREX Plant is not being separated by the concentrator. This section of text is incorrect and should be deleted.

5. Correction to Background: The text reading "...a capacity of 5,000 gallons..." is not correct. The actual capacity of the tanks is slightly higher. The text should be changed to read "...a nominal capacity of 5,000 gallons..."

6. Correction to Background: The text reading "... it contains uranyl nitrate hexahydrate...because of its corrosive hazard." is not an accurate description of the waste in Tank F18. As discussed in item 3, the waste in Tank F18 is better described as a waste consisting of water and dilute nitric acid contaminated with radionuclides. Based on process knowledge and analytical data, a more accurate description of the waste would be as follows: "...it contains an acidic liquid waste. This waste can contain a combination of radionuclides and heavy metals (with cadmium and chromium concentrations occasionally exceeding the regulatory limits). The acidic liquid waste from Tank F18 is considered a radioactive mixed waste because of the radioactive constituents, with the possibility that concentrations of specific hazardous constituents and/or characteristics may exceed the regulatory limits, and that the pH may be less than 2 or greater than 12.5."

7. Correction to Background: The text reading "...F-11 Concentrator bottoms..." is not currently correct. In the current non-operating condition, the F-11 Concentrator is not operational and is not generating any bottoms. This text should be deleted.

8. Correction to Finding #1: The text reading "...a sump alarm (WFR-F18-1) indicated that there..." is not correct. Part of the description of events is missing. Per Occurrence Report RL-WHC-PUREX-1992-0016, the correct text should read "... a sump alarm (WFA-SFB-1) sounded, indicating an overflow of Tank F18. At the time of the overflow, the Tank F18 level instrument (WFR-F18-1) indicated that there..."

9. Correction to Finding #1: The text reading "...nitrate was added..." and "...nitrate solution caused..." is not correct. Nitrite solution is added to the PUREX Plant waste tanks, not nitrate. Change the text to read "...nitrite was added..." and "...nitrite solution caused..."

APPENDIX C-3

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.

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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 Plant (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.

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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 <u>very</u> 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 with 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.

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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, however 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 the 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 the 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. All 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. All older ventilation systems are fabricated with the HEPA filters mounted permanently inside the

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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)

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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.

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* 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, where 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 may 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 assure safe operations.

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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.

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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 determination. 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 older 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.

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APPENDIX C-3A

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-4

NOTICE OF NONCOMPLIANCE T PLANT COMPLEX

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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
7601 W. Clearwater, Suite 102 • Kennewick, Washington 99336 • (509) 546-2990

September 22, 1992

CERTIFIED MAIL

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

EPA/State
ID Number: (WA7890008967)

Date and Time of Inspection(s):
May 11, 1992, 1015 - 1315 hours
May 26, 1992, 1420 - 1630 hours
May 29, 1992, 1200 - 1600 hours

Mr. Tom Anderson, President
Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352

Dear Mr. Wagoner and Mr. Anderson:

Re: Dangerous Waste Compliance Inspection of T-Plant

Thank you for the assistance of United States Department of Energy (USDOE-RL) and Westinghouse Hanford Company (WHC) personnel during the inspection of T-Plant in May 1992. As we discussed with facility representatives after the inspection, there were several areas of non-compliance with the Washington State Dangerous Waste Regulations (Chapter 173-303 WAC) at T-Plant which need to be resolved. Responsibility for completion of corrective action items of this letter is directed to WHC. Responsibility for verification of completion on the enclosed compliance certificate is directed to USDOE-RL, the facility owner.

The violations documented in the T-Plant inspection report identify a failure by WHC to properly manage dangerous waste. The majority of WAC 173-303 requirements violated are basic to every dangerous waste generator in Washington. It is incumbent upon USDOE-RL and WHC to take any actions necessary to ensure these types of deficiencies do not exist at other facilities on the Hanford site.

The Washington State Department of Ecology (Ecology) has chosen, in this case, not to issue a formal enforcement action (enforcement order and/or penalty); 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.

This compliance action is being taken under the authorities granted to Ecology by RCW 70.105.095 (Hazardous Waste Management) and using the policy guidance of the Department. Generator activities on the Hanford facility that are not performed within a permitted Treatment, Storage or Disposal (TSD) unit are not included in the Hanford Federal Facility Agreement and Consent Order (TPA). T-Plant is not a TSD unit as defined in the TPA. Therefore, Ecology does not intend on entering into dispute resolution as outlined in TPA Article VII, paragraph 28, and does not expect a 21-day rebuttal to this compliance letter. Ecology feels that allowing T-Plant to determine most of the corrective action specifics will expedite attaining compliance with the dangerous waste regulations.

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

CLASS I VIOLATIONS

WAC 173-303-070 - Designation of Dangerous Waste

- failure to designate solid waste as dangerous waste

WAC 173-303-145 - Spills and Discharges

- failure to report spills of hazardous waste to the environment

WAC 173-303-170 - Requirements for Generators of Dangerous Waste

- failure to designate waste per subsection (1)(a)
- failure to maintain waste stored for longer than ninety days in accordance with the TSD requirements of WAC 173-303-200 per subsection (3)

WAC 173-303-200 - Accumulating Dangerous Waste On-Site

- failure to ship wastes off-site in 90 days or less to a designated facility per subsection (1)(a)
- failure to indicate accumulation start dates per subsection (1)(c)
- failure to label containers (drums) "hazardous waste" or "dangerous waste" per subsection (1)(d)

WAC 173-303-210 - Generator Recordkeeping

- failure to provide training records for review by Ecology inspectors at the time of inspection per subsection (6)

WAC 173-303-320 - General Inspection

- failure to follow an inspection plan, maintain logs, and perform corrective actions per subsections (1), (2)(d), and (3)

WAC 173-303-330 - Personnel Training

- failure to adequately train personnel responsible for the control and handling of dangerous waste per subsection (1)
- failure to develop and implement a written dangerous waste training program for facility personnel per subsection (2)

WAC 173-303-630 - Use and Management of Containers

- failure to place and store dangerous waste in containers in good condition per subsection (2)
- failure to indicate major risks of wastes per subsection (3)

WAC 173-303-640 - Tank Systems

- failure to assess tank system integrity per subsection (2)
- failure to provide secondary containment per subsection (4)
- failure to follow general operating requirements per subsection (5)
- failure to respond to leakage per subsection (7)

CLASS II VIOLATIONS

WAC 173-303-350 - Contingency Plan and Emergency Procedures

- failure to maintain an updated contingency plan per subsection (3)(d)

WAC 173-303-630 - Use and Management of Containers

- failure to perform weekly inspections per subsection (6)

WAC 173-303-640 - Tank Systems

o failure to perform daily inspections per subsection (6)

In order to correct the identified violations of WAC 173-303, please complete the following six items within the time frames specified. Please be advised that failure to correct these non-compliant items may result in the issuance of an administrative order and/or penalty under RCW 70.105.095 (Hazardous Waste Management).

1. Within twenty (20) calendar days of receipt of this letter WHC shall identify, by physical inspection and document review, the condition of all dangerous or mixed waste stored at the T-Plant facility. This identification shall include individual container numbers, storage location, accumulation date, waste identification and waste codes, sample dates for undesignated or "unknown" waste, waste quantity, container condition and condition of labeling. Provide a report of all findings from the investigation to Ecology within 20 calendar days of receipt of this letter.

2. Within thirty (30) calendar days of receipt of this letter WHC shall provide a specific program for correcting all deficiencies identified in item 1. This program shall identify accomplishment dates and proposed disposal locations. It shall be incorporated into the existing T-Plant corrective action program. For all deficiencies identified, a "root cause" shall be determined so the facility will be able to develop appropriate long-term corrective actions once short-term problems are corrected. All corrective actions from previous investigations and the investigation required in item 1 must be completed by November 25, 1992. Provide this all-inclusive corrective action program to Ecology within 30 calendar days of receipt of this letter.

3. Within thirty (30) calendar days of receipt of this letter WHC shall implement a facility-specific training program for all dangerous waste workers at the T-Plant facility. The requirements of WAC 173-303-330 must be incorporated into the training plan. Provide a copy of the issued training plan to Ecology within 30 calendar days of receipt of this letter.

4. Within ten (10) calendar days of receipt of this letter WHC shall implement a program to ensure inspections of T-Plant are compliant with all applicable WAC 173-303 requirements.

5. Within ten (10) calendar days of receipt of this letter WHC shall provide Ecology with a detailed inventory of all T-Plant dangerous waste inspection records over the required five year retention period. The inventory shall document all missing inspection records as well as those that are available.

6. Within fifteen (15) calendar days of receipt of this letter WHC shall perform a detailed review of all available inspection records identified in item 5. Provide Ecology with a listing of all uncorrected deficiencies and corrective actions within 15 calendar days of receipt of this letter. All corrective actions must be completed on or before November 25, 1992.

Please do not hesitate to call me at (509) 546-2990 or Steve Moore 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 Compliance." Please complete and submit the enclosed Certificate of Compliance to Steve Moore by October 23, 1992.

Sincerely,

Dave Nylander

David Nylander, Office Manager
Nuclear and Mixed Waste Management Program
Washington State Department of Ecology

DN:sm
Enclosures:
1. Certificate of Compliance
2. Fact sheet

cc: Ms. June Hennig, Director
Waste Management Division
U. S. Department of Energy
Richland Field Office

Mr. H. E. McGuire, Vice President
Restoration and Remediation
Westinghouse Hanford Company

Mr. Gerry Faulk, Plant Manager
T-Plant
Westinghouse Hanford Company

Mr. Dale McKenney, Assistant Plant Manager
T-Plant
Westinghouse Hanford Company

Mr. Roger Stanley, Program Manager
Nuclear and Mixed Waste Management Program
Washington State Department of Ecology

Mr. Dave Jansen, Hanford Project Manager
Nuclear and Mixed Waste Management Program
Washington State Department of Ecology

Mr. G. Thomas Tebb, RCRA Unit Supervisor
Nuclear and Mixed Waste Management Program
Washington State Department of Ecology

Please complete and return this form to Steve Moore, Washington State Department of Ecology, 7601 W. Clearwater Avenue, Suite 102, Kennewick, Washington 99336, by October 23, 1992.

CERTIFICATE OF COMPLIANCE

As a legal representative of the U.S. Department of Energy, I certify that to the best of my knowledge, the compliance of the T-Plant facility located on the Hanford Reservation, 200 West Area, Facility ID Number WA7890008967 is as shown below.

COMPLIANCE STATUS

(A facility representative shall list the completion date and initial for each item.)

Items of Non-compliance	Due Date	Date Completed	Initials	Comments
Item 1	_____	_____	_____	_____
Item 2	_____	_____	_____	_____
Item 3	_____	_____	_____	_____
Item 4	_____	_____	_____	_____
Item 5	_____	_____	_____	_____
Item 6	_____	_____	_____	_____

_____ _____

Signature of USDOE-RL Representative Date

T-Plant Compliance Inspection Fact Sheet

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

Operator Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Facility/Location T-Plant, 200 West Area - Hanford Federal Reservation

Contact Dale McKenney, T-Plant Assistant Plant Manager
(509) 373-1713

Activity Compliance inspection conducted in response to a spill report.

Background

T-Plant is a canyon-type facility located in the 200 West Area of the Hanford Federal Reservation. The primary mission of T-Plant is the radioactive decontamination of equipment from other facilities on the Hanford site. Highly radioactive decontamination work is done in the canyon area of building 221-T, and lower level decontamination is done in the 2706-T building. The primary waste streams from T-Plant are the acids and caustics used in the various decontamination processes. The plant is currently being recertified to perform decontamination work after being shutdown for reorganization and renovation. The 2706-T facility is expected to be operational during 1992, and the 221-T canyon is scheduled to be back in operation in 1993. Smaller waste streams consist of used oils, solvents, paints, rags, exhaust ventilation filters, spill absorbent, and other materials generated by operations at an industrial facility.

Findings

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

Finding #1 FAILURE TO PROVIDE TRAINING RECORDS TO ECOLOGY INSPECTORS

WAC 173-303-210 Generator recordkeeping. (6) All generator records, including plans required by this chapter, shall be made available and furnished upon request by the director.

Ecology inspectors requested training records verbally on May 11, 1992. On May 26, 1992 Ecology inspectors requested to be provided personnel training records for review both verbally and in writing. WHC refused to provide personnel training records to Ecology inspectors on both occasions.

Finding #2 INADEQUATE PERSONNEL TRAINING PLAN

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 position related to dangerous waste management at the facility, the job title, the job description, and the name of the employee filling each job. . . (b) A written description of the type and amount of both introductory and continuing training required for each position; and (c) Records documenting that facility personnel have received and completed the training required by this section.

Ecology inspectors requested and were provided with copies of the written training plan used by T-Plant. The plan in use is not a facility-specific plan, rather it is one that covers all 200 Area operators or supervisors. T-Plant provided a draft plant-specific plan and acknowledged that no current plant-specific plan is in use. The draft plan does not meet WAC 173-303-330 requirements.

Finding #3 INADEQUATE PERSONNEL TRAINING

WAC 173-303-330 Personnel training. (1) . . . This program must teach personnel to perform their duties in a way that ensures the facility's compliance with this chapter 173-303 WAC, must teach facility personnel dangerous waste management procedures . . . relevant to the positions in which they are employed. . .

Review of completed surveillance logs and interviews with operations personnel directly responsible for conducting surveillances and supervisors who review hazardous waste surveillances revealed that training covering dangerous waste management procedures was inadequate. Their lack of training is evidenced by:

1) the inconsistences in the documentation of hazardous waste inspections,

2) the unacceptable dangerous waste management found at T-Plant,

3) the lack of documentation necessary to substantiate training,

4) interviews of T-Plant employees revealing some required training was not provided, and

5) failure to implement a facility-specific training program.

Finding #4 EXCEEDING NINETY DAY STORAGE LIMIT

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. (2) For the purposes of this section, the ninety-day accumulation period begins on the date that: (a) The generator first generates a dangerous waste . . .

The following are examples of dangerous waste stored at T-Plant for longer than ninety days:

1) A drum of waste stored in the 2706-T less than ninety day storage area was labeled as Hazardous Waste, D-008, and marked with an accumulation date of December 5, 1990.

2) A drum of waste stored in the Non-Radioactive less than ninety day storage area was labeled "Toluene solution", and marked with an accumulation date of January 1, 1988.

3) Several other drums within this 2706-T area were labeled or marked "Hazardous Waste"; however, no accumulation dates were marked. According to the T-Plant Hazardous Waste Coordinator, many of the hazardous waste drums without accumulation dates marked were stored there for longer than ninety days.

4) Railcar #18581 was not transferred to tank farms before ninety days were exceeded.

Finding #5 INADEQUATE WEEKLY INSPECTIONS

WAC 173-303-320 General inspection. (1) The owner or operator shall inspect his facility to prevent malfunctions and deterioration, operator errors, and discharges which may cause or lead to the release of dangerous waste constituents to the environment, or a threat to human health. . . . (2) The owner or operator shall develop and follow a written schedule for inspecting . . . (a) He must keep the schedule at the facility; (b) The schedule must identify the types of problems which are to be looked for during inspections; (c) The schedule shall indicate the frequency of inspection for specific items. . . . (d) The owner or operator shall keep an inspection log or summary, including at least the date and time of the inspection, the printed name and the handwritten signature of the inspector, a notation of the observations made, an account of spills or discharges in accordance with WAC 173-303-145, and the date and nature of any repairs or remedial actions taken. The log or summary must be kept at the facility for at least five years from the date of inspection. (3) The owner or operator shall remedy any problems revealed by the inspection, on a schedule which prevents hazards to the public health and environment. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

Ecology's review of weekly inspection records revealed uncorrected deficiencies, missing reports (April 29, 1992), and failure by inspectors and supervisors to initiate corrective actions. The deficiencies identified in the surveillance logs were numerous and repetitive. When interviewed, the responsible supervisor could not provide any reason for repeatedly failing to remedy discrepancies identified by weekly surveillances.

9 3 1 2 8 9 0 6 8 9

Finding #6 IMPROPER STORAGE OF HAZARDOUS WASTE

WAC 173-303-170 Requirements for generators of dangerous waste.
(1)(a) The generator shall be responsible for designating his waste as DW or EHW.

WAC 173-303-200 Accumulating dangerous waste on-site. (1) A generator, not to include transporters as referenced in WAC 173-303-240(3), 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. (b) The waste is placed in containers and the generator complies with WAC 173-303-630 (2), (3), (4), (5), (6), (8), and (9), or the waste is placed in tanks and the generator complies with WAC 173-303-640 (2) through (10) . . . (c) The date upon which each period of accumulation begins is marked and clearly visible for inspection on each container; (d) While being accumulated on site, each container and tank is labeled or marked clearly . . . (e) The generator complies with the requirements for facility operators contained in WAC 173-303-330 through 173-303-360 . . .

WAC 173-303-630 Use and management of containers. (1) Applicability. The regulations in this section apply to owners and operators of all dangerous waste facilities that store containers of dangerous waste. (2) Condition of containers. If a container holding dangerous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the owner or operator must transfer the dangerous waste from the container to a container that is in good condition or manage the waste in some other way that complies with the requirements of chapter 173-303 WAC. In addition, the owner or operator must address leaks and spills in accordance with the applicable provisions of WAC 173-303-145 and 173-303-360. (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 . . . (4) Compatibility of waste with containers. The owner or operator must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the dangerous waste to be stored . . . (5) Management of containers. (a) A container holding dangerous waste must always be closed, except when it is necessary to add or remove waste. (b) A container holding dangerous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak. . . . (6) Inspections. At least weekly, the owner or operator must inspect areas where containers are stored . . .

WAC 173-303-640 Tank systems. (1) Applicability. (a) The regulations in WAC 173-303-640 apply to owners and operators of facilities that use tank systems to treat or store dangerous waste, except as (b) and (c) of this subsection provides otherwise. . . . (4) Containment and detection of releases. (a) In order to prevent the release of dangerous waste or dangerous constituents to the environment, secondary containment that meets the requirements of the subsection must be provided . . .

Inspection of waste storage areas, record reviews, and interviews by Ecology revealed the following deficiencies in waste storage facility construction, waste labeling, waste designation, and container condition:

1) Several drums in the 2706-T yard where stored as DW, but not designated or labeled as DW.

2) The less than ninety day storage pad in the 2706-T yard collects rainwater and sends it into the T-Plant canyon where it is pumped to tank cars for transfer to the tank farms as radioactive waste for disposal into underground double shell tanks. The pad was constructed prior to 1986 and does not have to meet the containment requirements of WAC 173-303-630 (7). However, it is not considered the best management practice for protecting waste containers from the rain. This practice has led to the intrusion of the water into the drums causing waste liquids to spill to the cracked concrete pad.

3) Sodium hydroxide storage tank SQ-141 and tank EP-143 outside of the 221-T building have been labeled as DW storage tanks. These tanks do not meet many of the requirements for waste storage.

4) Reports of a deteriorating caustic waste drum, also documented on surveillance reports as leaking to the environment, and the oil/water drum with the pinhole leak are examples of incompatible and deteriorated waste containers.

5) Used HEPA filters where observed being stored open to the environment or in deteriorated cardboard boxes. These filters are radioactive and typically would be designated as DW because of the chemical used to test them. The filters were not designated or labeled as DW, and had no accumulation start dates.

Finding #7 UNREPORTED RELEASE OF DANGEROUS WASTE TO THE ENVIRONMENT

WAC 173-303-145 Spills and discharges. (1) Purpose and applicability. This section sets forth the requirements for any person responsible for a spill or discharge, except when such release is otherwise permitted under state or federal law. . . . This section shall apply when any dangerous waste or hazardous substance is intentionally or accidentally spilled or discharged . . . regardless of the quantity of dangerous waste or hazardous substance. (2) Notification. Any person who is responsible for a nonpermitted spill or discharge shall immediately notify the individuals and authorities described for the following situations: (a) For spills or discharges onto the ground or into groundwater or surface water . . . Also, notify the appropriate regional office of the Department of Ecology. . . . (3) Mitigation and control. The person responsible for a nonpermitted spill or discharge shall take appropriate immediate action to protect human health and the environment . . . (a) In addition, the Department may require the person responsible for a spill

or discharge to: (i) Clean up all released dangerous wastes or hazardous substances . . . (ii) Designate and treat, store or dispose of all soils, waters, or other materials contaminated by the spill or discharge . . .

Ecology inspectors, on May 11, 1992, observed residue on the soil around the transfer points of the product storage tanks (SQ-141 and SQ-142) and tank EP-143 outside of building 221-T. After Ecology identified this apparent leakage, the transfer piping was removed and the connections to the tank were blank flanged. Ecology was unable to find any notification of this release or any record of notification from the Occurrence Notification Center. This leakage had been identified on several weekly surveillance reports by facility operators, but corrective action was not performed. There was no evidence that the soil contaminated by these spills was remediated. Ecology recognizes that the spill reporting requirements have changed, but the occurrences identified above took place while the quoted regulation was in effect.

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STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

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

SEP 1992
Received
Hank McGuire

September 24, 1992

Certified Mail

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

Mr. Tom Anderson, President
Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352

NC: WHH
RSL
GWG
DEM

Dear Mr. Wagoner and Mr. Anderson:

Re: Dangerous Waste Compliance Letter from Inspection of T-Plant

During the September 23, 1992 meeting between the U.S. Department of Energy (DOE-RL), Westinghouse Hanford Company (WHC), and the Department of Ecology representatives to discuss the referenced compliance letter, a request was made by both DOE-RL and WHC representatives to extend the response deadlines for administrative reasons. DOE-RL and WHC stated that compliance with the items identified would be jeopardized because of the review process that formal responses require. Ecology acknowledged their concerns and the three parties agreed to the following:

1. In items one through six of the compliance letter, all requirements for information submittal to Ecology will be deferred until November 2, 1992. Ecology will expect all reports identified in the six compliance items, along with the comprehensive certification of completion, in the submittal.

2. The time lines specified for completion of the six compliance items will not be affected by the deferred reporting times.

Please do not hesitate to call me at (509) 546-2990 or Steve Moore at (509) 546-2977 should you have questions or require clarification on this matter.

Sincerely,

Dave Nylander

Dave Nylander, Office Manager
Nuclear and Mixed Waste Management Program
Washington State Department of Ecology

DN:sm

cc: June Hennig, DOE-RL
M. E. McGuire, WHC
Garry Faulk, WHC
Dale McKenney, WHC
Roger Stanley, Ecology
Dave Jansen, Ecology
G. Thomas Tebb, Ecology

APPENDIX C-4A

RESPONSE TO NOTICE OF NONCOMPLIANCE T PLANT COMPLEX

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

93-RPA-021

NOV 0 2 1992

Mr. David 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 OF T-PLANT

This letter and enclosure provides the U.S. Department of Energy, Richland Field Office (RL) and Westinghouse Hanford Company (WHC) response to your September 22, 1992, letter to John D. Wagoner regarding the Dangerous Waste Compliance Inspection of T-Plant. Per the agreement reached at the September 23, 1992, meeting at the Ecology's Kennewick office, this is a consolidated and unified response in which RL and WHC will provide responses to all pertinent issues and the specific requested information in Items 1 to 6 of your letter.

Since September 23, 1992, meetings with Ecology's Inspector Mr. Steve Moore have occurred on a regular basis to review the status of the corrective action responses identified in your letter. The plans and schedules presented in the enclosed responses to Items 1 through 6 are consistent with the information discussed with and schedules agreed to with Mr. Moore.

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 respond with a plan and schedule of actions to any notice of violation within 21 days of receipt of notice. Your September 24, 1992, letter extended the period for response in this case to November 2, 1992.

We do not agree with Ecology's statement in the September 22, 1992, letter that generator activities on the Hanford Site that are not performed within a permitted Treatment, Storage, or Disposal Facility (TSD) unit are not included in the Tri-Party Agreement. Page 1, Paragraph 2, last sentence of the Tri-Party Agreement states: "RCRA compliance, and TSD permitting, closure, and post-closure care (except HSWA corrective action) shall be governed by Part 2 of this Agreement." Furthermore, paragraph 28 also states: "If Ecology determines that DOE is violating any RCRA permit or interim status requirement or other applicable requirement, it shall notify DOE in writing of the alleged violation, actions necessary to achieve compliance and a schedule for doing so" (underline is emphasis added). Thus, we believe that RL's generator activities are covered by the Tri-Party Agreement.

Our concern is further strengthened by Article XXVII which provides for grant moneys to cover Ecology's implementation of this Agreement". Of the three Ecology employees who conducted the T-Plant inspections, the salaries of two are 100 percent funded and the third is 50 percent funded by the monies provided by the grants. Since there is no express exclusion of generator activities in the Tri-Party Agreement, and Ecology has sought and cannot now assert that generator activities are outside the Tri-Party Agreement. Further discussions of this matter between our agencies may be appropriate.

As we indicated in our June 5, 1992, response to the Dangerous Waste Compliance Inspection for Tank 241-SY-101, we have been unable to identify a basis or citation for requiring a certificate of compliance, as was included in the enclosure to your May 14, 1992, letter, and is contained once again in your September 22, 1992, letter. We will continue, as we have done in the past, to document the compliance status of our facility in the documentation developed in our environmental management program. Such documentation will be kept at facilities and in our record keeping files as appropriate.

In closing, the alleged violations noted in your letter are being seriously evaluated. We are working closely with the Ecology Inspector to assure that our planned actions are appropriate and timely. Specific responses to Items 1 through 6 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 M. J. Furman, Waste Management Division on (509) 376-7062.

Sincerely,

James D. Bauer

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

EAP:PJK

Enclosure w/Attachments (4)

cc: G. W. Faulk, WHC
G. W. Jackson, WHC
P. J. Mackey, WHC

ENCLOSURE

RL RESPONSE TO ITEMS 1 THROUGH 6 OF THE
SEPTEMBER 22, 1992 LETTER FROM
DAVE NYLANDER, ECOLOGY TO JOHN WAGONER, RL

Item 1. *<u>Within twenty (20) calendar days</u> of receipt of this letter WHC shall identify, by physical inspection and document review, the condition of all dangerous or mixed waste stored at the T-Plant facility. This identification shall include individual container numbers, storage location, accumulation date, waste identification and waste codes, sample dates for undesignated or "unknown" waste, waste quantity, container condition and condition of labeling. Provide a report of all findings from the investigation to Ecology within 20 calendar days receipt of this letter."*

A complete facility walkdown and inventory of dangerous and/or mixed waste has been conducted. The areas encompassed by this inventory are the 221-T Building (canyon, galleries, headend), the 214-T Chemical Storage Facility, the 221-TA Ventilation Supply Building, the 277-T Storage Facility, the 271-T Building (including basement shop areas), the 2706-T Facility (including the fenced yard), the 291-T Ventilation Stack Complex, the 292-T Facility, the 2715-T Paint Shop, and the T Plant Complex grounds and support facilities (change rooms, etc).

The summary inventory is included as Attachment 1 to this letter. This represents the known inventory of hazardous waste and the condition of said waste as of October 26, 1992.

It should be noted that 170 drums were located within the 2706-T Facility yard at the time of the Ecology inspections. All of these drums have now been opened and a visual inspection of the contents conducted (superficial only, the drum contents were not sorted) . Drums believed to contain hazardous substances have been segregated and moved to the <90 day storage pad (11 drums). These drums have been labeled as hazardous wastes and the accumulation date indicated as ">90 days". Resources have been dedicated to appropriately characterize, package and ship these drums to a permitted storage facility. Fifty drums were identified as containing low-level, non-regulated wastes. The contents of these drums were transferred to burial boxes for disposal. The remaining 106 drums are considered to be low-level and/or non-regulated wastes based on the visual inspection. These drums will be sorted into burial boxes for disposal, per the schedule indicated in the attached action plan (Attachment 2). If hazardous substances are discovered during this sort, then they will be handled and dispositioned appropriately.

"2. *<u>Within thirty (30) calendar days</u> of receipt of this letter WHC shall provide a specific program for correcting all deficiencies identified in item 1. This program shall identify accomplishment*

dates and proposed disposal locations. It shall be incorporated into the existing T-Plant corrective action program. For all deficiencies identified, a "root cause" shall be determined so the facility will be able to develop appropriate long-term corrective actions once short-term problems are corrected. All corrective actions from previous investigations and the investigation required in item 1 must be completed by November 25, 1992. Provide this all-inclusive corrective action program to Ecology within 30 calendar days of receipt of this letter."

Root causes have been evaluated in the identification and development of appropriate long-term corrective actions. As has been discussed with Mr. Steve Moore, Ecology, specific actions include: 1. dedicated staff to manage T-Plant waste in accordance with regulatory requirements; 2. development of a new Environmental Control manual; 3. expanded training of personnel to handle waste in accordance with applicable regulations and requirements. An action plan for resolution of T Plant hazardous waste issues is provided in Attachment 2 to this letter. The majority of the issues will be resolved by the November 25, 1992 action date with the exception of the following:

- "High Dose Drag-off Box". The dose rate associated with this drag-off box is approximately 300-500 mrem/hr at contact. Process knowledge indicates that a centrifuge bowl is within the box which, depending on orientation, can read up to 350 Rem/hr at contact. This high dose rate, precludes immediate dispositioning of the drag-off box. A schedule of actions associated with the proper dispositioning of the drag-off box will be prepared by July 1, 1993.

- "Installation of New Storage Modules". The new storage modules have been onsite since early August. The storage modules will be in place following completion of construction. The present schedule calls for placement of the modules by December 31, 1992.

"3. Within thirty (30) calendar days of receipt of this letter WHC shall implement a facility-specific training program for all dangerous waste workers at the T-Plant facility. The requirements of WAC 173-303-330 must be incorporated into the training plan. Provide a copy of the issued training plan to Ecology within 30 calendar days of receipt of this letter."

A facility-specific training plan has been developed and implemented which meets the requirements of WAC 173-303-330. The training plan is provided in Attachment 3. Continued evolution of this training plan is expected, with development of more T Plant specific coursework and certifications over the next fiscal year.

"4. Within ten (10) calendar days of receipt of this letter WHC shall implement a program to ensure inspections of T-Plant are compliant with all applicable WAC 173-303 requirements."

A comparison was made of the WAC 173-303 requirements for inspections and inspections performed at T Plant. A summary of this comparison, provided in Attachment 4, shows that the WAC 173-303 inspection requirements are met by procedures and surveillances in place at T Plant.

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"5. *<u>Within ten (10) calendar days</u> of receipt of this letter WHC shall provide Ecology with a detailed inventory of all T-Plant dangerous waste inspection records over the required five year retention period. The inventory shall document all missing inspection records as well as those that are available."*

The inventory of records requested in Item 5 is provided in Attachment 5. This inventory was completed for all existing records, which start in 1987. As can be noted in the attachment, the surveillance form and procedures have changed several times. Many of the items noted in earlier inspection records, although not documented as closed, have been determined to be inapplicable.

"6. *<u>Within fifteen (15) calendar days</u> of receipt of this letter WHC shall perform a detailed review of all available inspection records identified in item 5. Provide Ecology with a listing of all uncorrected deficiencies and corrective actions within 15 calendar days of receipt of this letter. All corrective actions must be completed on or before November 25, 1992.*

A listing of items noted in the inspection records and their closure status is provided in Attachment 6. Schedules for resolution of any open items are included in the action plan (Attachment 2).

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Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED AT THE 2706-T FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

2706-T <90 DAY STORAGE PAD:

o 221T-92-000182 : THIS DRUM IS THE SATELLITE ACCUMULATION DRUM FOR LEAD CONTAMINATED PAINT CHIPS. THE DRUM IS NOW FULL AND NEEDS TO BE SHIPPED.

ACCUMULATION DATE: 09/21/92
WASTE IDENTIFICATION: LEAD CONTAMINATED PAINT CHIPS.
WASTE CODES: D008
SAMPLE DATE: N/A
CONTAINER TYPE:* 55 GALLON GALVANIZED DRUM WITH 90 MIL LINER
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

o 221T-92-000272 : THIS DRUM WAS A "UNKNOWN LLW" DRUM. INSPECTION OF THIS DRUM REVEALED THAT THIS DRUM CONTAINS PAPER, PLASTIC AND RAGS CONTAMINATED WITH A ACID CHEMICAL (AS VERIFIED BY FIELD PH TEST).

ACCUMULATION DATE: >90 DAYS
WASTE IDENTIFICATION: UNKNOWN
WASTE CODES: UNKNOWN
SAMPLE DATE: 10/23/92
CONTAINER TYPE:* YELLOW 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: POOR (NO LABELS EXIST)

o 221T-92-000273 : THIS DRUM WAS A "UNKNOWN LLW" DRUM. INSPECTION REVEALED THAT THIS DRUM CONTAINS FOUR BAGS OF RAGS. FIELD TEST REVEALED THAT THESE RAGS ARE NEUTRAL.

ACCUMULATION DATE: >90 DAYS
WASTE IDENTIFICATION: UNKNOWN
WASTE CODES: UNKNOWN
SAMPLE DATE: 10/23/92
CONTAINER TYPE:* YELLOW 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: POOR (NO LABELS EXIST)

* CONTAINER TYPE WOULD INDICATE WASTE QUANTITY. IF DRUM IS LOCATED ON <90 DAY PAD THEN DRU WOULD BE FULL (55 GALLON QUANTITY). IF DRUM IS IN A SATELLITE ACCUMULATION AREA THEN DRU IS NOT FULL (< 55 GALLON QUANTITY).

Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED AT THE 2706-T FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

<u>2706-T <90 DAY STORAGE PAD:</u>

o 221T-92-000274 : THIS DRUM WAS A "UNKNOWN LLW" DRUM. INSPECTION REVEALED THAT THIS DRUM CONTAINS APPROXIMATELY 10 GALLONS OF A UNKNOWN LIQUID IN A 90 MIL LINER. FIELD PH TEST REVEALED THAT THIS LIQUID IS NEUTRAL.

ACCUMULATION DATE: >90 DAYS
WASTE IDENTIFICATION: UNKNOWN
WASTE CODES: UNKNOWN
SAMPLE DATE: 10/23/92
CONTAINER TYPE:* YELLOW 55 GALLON DRUM WITH A 90 MIL LINER
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: POOR (NO LABELS EXIST)

o 221T-92-000275 : THIS DRUM WAS A "UNKNOWN LLW" DRUM. INSPECTION REVEALED THAT THIS DRUM CONTAINS RAGS THAT ARE CONTAMINATED WITH A CAUSTIC CHEMICAL. FIELD PH TEST REVEALED THAT THESE RAGS ARE NEUTRAL.

ACCUMULATION DATE: >90 DAYS
WASTE IDENTIFICATION: UNKNOWN
WASTE CODES: UNKNOWN
SAMPLE DATE: 10/23/92
CONTAINER TYPE:* YELLOW 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: POOR (NO LABELS EXIST)

o 221T-92-000280 : THIS DRUM WAS A "UNKNOWN LLW" DRUM. INSPECTION REVEALED THAT THIS DRUM CONTAINS RAGS THAT ARE CONTAMINATED WITH A CAUSTIC CHEMICAL. FIELD PH TEST CONIFIRMED CAUSTIC CONTAMINATION ON THESE RAGS.

ACCUMULATION DATE: >90 DAYS
WASTE IDENTIFICATION: UNKNOWN
WASTE CODES: UNKNOWN
SAMPLE DATE: 10/23/92
CONTAINER TYPE:* YELLOW 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: POOR (NO LABELS EXIST)

Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED AT THE 2706-T FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

2706-T <90 DAY STORAGE PAD:

o 221T-92-000282 : THIS DRUM WAS A "UNKNOWN LLW" DRUM. INSPECTION REVEALED THAT THIS DRUM CONTAINS A 35 GALLON DRUM WITH KITTY ABSORBENT, SMELLS LIKE SOLVENT.

ACCUMULATION DATE: >90 DAYS
WASTE IDENTIFICATION: UNKNOWN
WASTE CODES: UNKNOWN
SAMPLE DATE: 10/23/92
CONTAINER TYPE:* YELLOW 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: POOR (NO LABELS EXIST)

o 221T-92-000284 : THIS DRUM WAS A "UNKNOWN LLW" DRUM. INSPECTION REVEALED THAT THIS DRUM CONTAINS UNKNOWN OILS AND GREASES.

ACCUMULATION DATE: >90 DAYS
WASTE IDENTIFICATION: UNKNOWN
WASTE CODES: UNKNOWN
SAMPLE DATE: 10/23/92
CONTAINER TYPE:* YELLOW 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: POOR (NO LABELS EXIST)

o 221T-92-000285 : THIS DRUM WAS A "UNKNOWN LLW" DRUM. INSPECTION REVEALED THAT THIS DRUM CONTAINS PLASTIC AND RAGS. FIELD PH TEST REVEALED THAT THESE ITEMS ARE NEUTRAL.

ACCUMULATION DATE: >90 DAYS
WASTE IDENTIFICATION: UNKNOWN
WASTE CODES: UNKNOWN
SAMPLE DATE: 10/23/92
CONTAINER TYPE:* YELLOW 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: POOR (NO LABELS EXIST)

Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED AT THE 2706-T FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

2706-T <90 DAY STORAGE PAD:

o 221T-92-000286 : THIS DRUM WAS A "UNKNOWN LLW" DRUM. INSPECTION REVEALED THAT THIS DRUM CONTAINS APPROXIMATELY 28 SAMPLE JARS THAT ARE FULL OF GROUT, ONE BOTTLE OF CUTTING FLUID, ONE BAG OF RAGS AND ONE SMALL PLASTIC BAG WITH FLUID IN IT. FIELD PH TEST REVEALED THAT THE RAGS ARE NEUTRAL.

ACCUMULATION DATE: >90 DAYS
WASTE IDENTIFICATION: UNKNOWN
WASTE CODES: UNKNOWN
SAMPLE DATE: 10/23/92
CONTAINER TYPE:* YELLOW 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: POOR (NO LABELS EXIST)

o 221T-92-000287 : THIS DRUM WAS A "UNKNOWN LLW" DRUM. INSPECTION REVEALED THAT THIS DRUM CONTAINS UNKNOWN GREASE AND OIL.

ACCUMULATION DATE: >90 DAYS
WASTE IDENTIFICATION: UNKNOWN
WASTE CODES: UNKNOWN
SAMPLE DATE: 10/23/92
CONTAINER TYPE:* WHITE 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: POOR (NO LABELS EXIST)

Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED AT THE 2706-T FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

2706-T SATELLITE ACCUMULATION AREA:

o 221T-92-000048 : THIS DRUM IS THE SATELLITE ACCUMULATION DRUM FOR MISCELLANEOUS REGULATED PAINT WASTE.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: REGULATED PAINT WASTE
WASTE CODES: UNKNOWN
SAMPLE DATE: N/A
CONTAINER TYPE:* YELLOW 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: GOOD

o 221T-92-000057 : THIS DRUM IS THE SATELLITE ACCUMULATION DRUM FOR REGULATED OILY RAGS.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: REGULATED OILY RAGS
WASTE CODES: UNKNOWN
SAMPLE DATE: N/A
CONTAINER TYPE:* YELLOW 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: GOOD

o 221T-92-000053 : THIS DRUM IS THE SATELLITE ACCUMULATION DRUM FOR EMPTY AEROSOL CANS.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: EMPTY AEROSOL CANS
WASTE CODES: UNKNOWN
SAMPLE DATE: N/A
CONTAINER TYPE: * YELLOW 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: GOOD

Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED AT THE 2706-T FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

2706-T SATELLITE ACCUMULATION AREA:

o 221T-92-000047 : THIS DRUM IS THE SATELLITE ACCUMULATION DRUM FOR MISCELLANEOUS LLW.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: MISCELLANEOUS LLW
WASTE CODES: UNKNOWN
SAMPLE DATE: N/A
CONTAINER TYPE: * YELLOW 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: GOOD

o 221T-92-000052 : THIS DRUM IS THE SATELLITE ACCUMULATION DRUM FOR USED REGULATED OIL.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: REGULATED OIL
WASTE CODES: UNKNOWN
SAMPLE DATE: N/A
CONTAINER TYPE: * BLACK 55 GALLON BUNG DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: GOOD

o 221T-92-000277 : THIS DRUM IS THE SATELLITE ACCUMULATION DRUM FOR RADIOACTIVE CONTAMINATED LEAD.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: LEAD
WASTE CODES: UNKNOWN
SAMPLE DATE: N/A
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM WITH 90 MIL LINER
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED AT THE 2706-T FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

2706-T YARD AREA:

o 106 "UNKNOWN LLW" DRUM:

A PRELIMINARY INSPECTION HAS BEEN PERFORMED ON THESE DRUMS, THIS INSPECTION REVEALED THAT THESE DRUMS ARE RADIOACTIVELY CONTAMINATED. THEREFORE, EFFORTS WILL BE MADE TO MOVE THESE DRUMS INTO THE 221-T TRAIN TUNNEL AND A MORE DETAILED INSPECTION WILL BE PERFORMED. KNOWLEDGE OF WHETHER OR NOT THESE DRUMS CONTAIN ANY HAZARDOUS MATERIALS IS UNKNOWN AT THIS TIME.

FULL BURIAL BOX STAGING AREA:

o 221T-92-000115 and 221T-92-000116 :

THESE TWO PIN# HAVE BEEN ISSUED TO THE TWO 44"H x 58"W x 82"L METAL BURIAL BOXES THAT ARE LOCATED IN THE "FULL BURIAL BOX STAGING AREA", WHICH IS LOCATED JUST OUTSIDE OF THE PARAMETER FENCE AND WEST OF THE 2706-T BUILDING. THESE TWO METAL BURIAL BOXES CONTAIN SIX 24" x 24" x 12" HEPA FILTERS THAT WERE USED THROUGHOUT THE T-PLANT FACILITY. THE SAMPLE RESULTS FROM THESE FILTERS INDICATE THAT THESE HEPA FILTERS ARE TO BE DISPOSED OF AS DANGEROUS WASTE.

ACCUMULATION DATE: >90 DAYS
WASTE IDENTIFICATION: DOP
WASTE CODES:
SAMPLE DATE: 08/10/92
CONTAINER TYPE: METAL BURIAL BOX
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED AT THE T-PLANT FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

211-T < 90 DAY STORAGE PAD:

- o 221T-92-000267
- o 221T-92-000268
- o 221T-92-000269

THESE DRUMS WHERE GENERATED WHEN T-PLANT OPERATORS CLEANED OUT TWO OLD METAL TUBS THA ARE LOCATED IN THE "BONE-YARD" AREA. THE TWO METAL TUBS THAT THIS "UNKNOWN" CHEMICAL FROM HAD PREVIOUSLY BEEN CLEANED-OUT. STILL, T-PLANT MANAGEMENT WAS NOT HAPPY WITH TH APPEARANCE OF THESE TWO TUBS. THEREFORE, T-PLANT OPERATORS WHERE INSTRUCTED TO REMOVE REMAINING CHEMICAL RESIDUE FROM THE INSIDE OF THESE TUBS. CONSEQUENTLY, THE TRUE IDEN OF THE CHEMICAL THAT IS CONTAINED IN THE THREE DRUMS THAT ARE IDENTIFIED ABOVE, IS UNKNOWN.

ACCUMULATION DATE: 09/29/92
WASTE IDENTIFICATION: UNKNOWN
WASTE CODES: UNKNOWN
SAMPLE DATE: 10/21/92
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM WITH 90 MIL POLY LINER
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

271-T CAGE SATELLITE ACCUMULATION AREA:

- o 221T-92-000118 : THIS DRUM IS A SATELLITE ACCUMULATION FOR NON-RADIOACTIVE CONTAMINATED LEAD.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: LEAD
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED
AT THE T-PLANT FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

271-T CAGE SATELLITE ACCUMULATION AREA:

o 221T-92-000288 : THIS DRUM IS A SATELLITE ACCUMULATION FOR MITA COPIER TONER CARTRIDGES.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: TONER CARTRIDGES
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

o 221T-92-000289 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM FOR NON-PCB CONTAMINATED LIGHT BALLAST.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: NON-PCB LIGHT BALLAST
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

o 221T-92-000290 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM FOR PCB CONTAMINATED LIGHT BALLAST.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: PCB LIGHT BALLAST
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED AT THE T-PLANT FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

271-T CAGE SATELLITE ACCUMULATION AREA:

o 221T-92-000291 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM FOR REGULATED OILY RAGS.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: REGULATED OILY RAGS
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

o 221T-92-000292 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM FOR NON-REGULATED MISCELLANEOUS PAINT WASTE.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: NON-REGULATED PAINT WASTE
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

o 221T-92-000293 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM FOR NON-REGULATED PAINT CANS.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: REGULATED PAINT CANS
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED
AT THE T-PLANT FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

271-T CAGE SATELLITE ACCUMULATION AREA:

o 221T-92-000294 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM FOR AEROSOL CANS.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: AEROSOL CANS
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

o 221T-92-000295 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM FOR REGULATED MISCELLANEOUS PAINT WASTE.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: REGULATED PAINT WASTE
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

o 221T-92-000296 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM FOR NON-REGULATED OILY RAGS.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: NON-REGULATED OILY RAGS
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

o 221T-92-000305 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM FOR NON-REGULATED LIQUID WASTE OIL.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: NON-REGULATED WASTE OIL
WASTE CODES:
SAMPLE DATE: 10/21/92
CONTAINER TYPE: * BLACK 55 GALLON BUNG DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: GOOD

Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED
AT THE T-PLANT FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

271-T CAGE SATELLITE ACCUMULATION AREA:

o 221T-92-000300 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM INCANDESCENT LIGHT BULBS.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: LEAD
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * 55 GALLON GALVANIZED DRUM
CONTAINER CONDITION: EXCELLENT
CONDITION OF LABELS: GOOD

2715-T SATELLITE ACCUMULATION AREA:

o 221T-92-000297 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM FOR REGULATED LIQUID PAINT WASTE.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: REGULATED WASTE PAINT
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * BLACK 55 GALLON BUNG DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: GOOD

o 221T-92-000298 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM FOR REGULATED MISCELLANEOUS PAINT WASTE.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: REGULATED MISCELLANEOUS PAINT WASTE
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * BLACK 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: GOOD

Attachment 1

HAZARDOUS WASTE THAT IS PRESENTLY BEING STORED AT THE T-PLANT FACILITY FOR DISPOSITION.

OCTOBER 26, 1992

271-T AMU SATELLITE ACCUMULATION AREA:

o 221T-92-000299 : THIS DRUM IS A SATELLITE ACCUMULATION DRUM FOR NON-REGULATED CRUSHED FLUORESCENT LIGHT TUBES.

ACCUMULATION DATE: N/A
WASTE IDENTIFICATION: CRUSHED LIGHT TUBES
WASTE CODES:
SAMPLE DATE: N/A
CONTAINER TYPE: * BLACK 55 GALLON DRUM
CONTAINER CONDITION: GOOD
CONDITION OF LABELS: GOOD

o 271-T, AMU SATELLITE ACCUMULATION FOR SPENT BATTERIES:

THIS AREA HAS A LARGE VARIETY OF SPENT BATTERIES. EFFORTS ARE BEING MADE TO INVENTORY AND DISPOSE OF THESE BATTERIES. AGAIN, RESOURCES AND PRIORITY HAS TAMPERED THIS EFFORT UP TO THIS POINT.

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Attachment 2

ACTION PLAN

106 drums in 2706-T yard: From initial sort actions, these drums are assumed to be LLW. See schedule for time frame for completion.

T Plant inspection deficiencies:

Batteries in AMU SAA: The SAA must have a chain installed around the area; containers labeled, locked, and inventoried. See schedule for time frame for completion.

Legacy waste (RMW): There are 14 drums on the 2706-T < 90 day pad that must be sampled. Drum 221T-92-000305 must be sampled because current inventory sheet is not correct. See schedule for time frame for completion.

SQ Tanks: See Action Plan and schedule for time frame for completion.

Low level drag off box in canyon: See Work Plan and schedule for time frame for completion.

High level drag off box in canyon: See schedule for Work Plan preparation and schedule for time frame for completion.

HEPA filters: See schedule for time frame for shipping.

Storage modules: See schedule for time frame for completion.

Attachment 2

ACTION PLAN RELATED TO TANKS SQ-141 AND SQ-143

In Finding #6, item 3, Ecology indicates that the product storage tanks (SQ-141 and SQ-143) represent violations with the 90 day waste accumulation limit (WAC 173-303-200), as well as the tank system regulations (WAC 173-303-640). WHC disputes this item of the finding. Tank SQ-141 was operated as a product storage tank. Upon removal from service, all remaining product was removed to the extent possible with existing equipment. Dangerous waste has never been stored in Tank SQ-141. A detailed action plan for the tank is described below.

Tank SQ-143 was originally a product storage tank. It was later converted into a radioactive waste staging tank. Upon removal from service, all waste was removed from the tank to the extent possible using existing equipment. All waste was removed prior to the effective date of RCRA and is not subject to the dangerous waste regulations. A detail action plan for the tank is also described below.

TANK SQ-141

This tank is 17000 gallon bulk chemical storage tank that was used to store sodium hydroxide during T-Plant operations as a chemical processing facility and as a decontamination facility.

Prior to 1980, Tank SQ-141 was pumped empty to the maximum extent possible with existing equipment and was then removed from service. The tank contains a residual sodium hydroxide heel. WHC asserts that this residual was abandoned prior to the effective date of RCRA and is not subject to the Dangerous Waste Regulations. The tank will be remediated as part of RCRA corrective action.

WHC personnel labeled this tank as containing hazardous waste. Upon reevaluation it is has been determined that labeling the tank was overly conservative and the hazardous waste label has been removed.

In order to adequately justify removing the label the following strategy has been developed to address the residual heel.

A. Characterize the tank contents. Sample, analyze and estimate volume of caustic in the tank. Confirm non-radioactive status, and determine quality of product. If the product is of such low quality that it can no longer be used, it will be designated as waste and removed from the tank within 90 days of designation.

B. Survey Hanford contractor organizations and off-site organizations for potential use of the material as product. The results of the characterization effort may influence this activity. If a viable use for the material is identified, the material will be transferred to that organization as soon as possible.

9 3 1 2 8 9 8 0 7 1 6

Attachment 2

C. Remove the material from the tank. This may involve the use of contractors, assuming the non-radioactive status of the material is confirmed.

D. Transport the material to user organization. If no user organization is identified, dispose of the material as waste within 90 days of the determination that no user is available. The disposal activity may also be contracted.

TANK SQ-143

This is a 17000 gallon tank that was used initially used as a bulk chemical product storage tank during operation of T-Plant as a chemical processing facility.

Tank SQ-143 was utilized until the mid 1960's as a storage and sampling tank for solutions generated in decontamination of equipment in 2706-T, the T-Plant low level decontamination facility. Decontamination solutions were transferred from 2706-T to SQ-143 and sampled. Samples were analyzed for radioactive constituents. If below preset limits the solution was discharged to a crib, conversely if above limits, the solution was transferred into the 221-T building solution tanks and disposed of by transfer to Tank Farms.

Currently the tank contains an unknown residual amount of sludge that remained in the tank when decontamination solutions were pumped out. Best available information is that the tank was emptied to the maximum extent possible with existing equipment, but not flushed. Although T-Plant personnel had labeled this tank as containing hazardous waste, a reevaluation has determined that this was overly conservative. It is the position of WHC that because there is no regulatory guidance on what constitutes an empty tank and that the waste was removed to the maximum extent possible, the tank is considered empty. In addition, the tank was emptied prior to 1980. The residual heel was abandoned prior to the effective date of RCRA and is not subject to the Dangerous Waste Regulations. The tank will be remediated as part of RCRA corrective action.

The dangerous waste label has been removed. In order to justify the removal of the label, the following is a plan of action to address the residual heel.

A. Characterize the tank contents. Sample, analyze and estimate volume of sludge in the tank.

B. Develop a technique to allow the sludge to be removed from the tank.

C. Procure and or contract for any equipment that will be needed to facilitate sludge removal.

D. Remove and dispose of the sludge.

E. Decontaminate the tank of hazardous components using an appropriate technique.

Attachment 2

TANKS SQ-142 AND SQ-145

Even though the September 22, 1992 letter did not mention these tanks, it is felt that a notation that the tanks have been inspected and have been determined that they are empty (photographs are available) is in order. The tanks will be cleaned using appropriate techniques.

Attachment 2

WORK PLAN SWPE-WP-0039 (ONE-TIME)
SEGREGATING OF WASTE IN THE LOW LEVEL BURIAL BOX LINER IN 221-T CANYON

I. GENERAL DESCRIPTION

This work plan provides instructions for segregating the material in the in the burial box liner located at section 17 in the 221-T canyon. This liner is filled with miscellaneous trash and waste generated during normal canyon activities during the past several years.

Segregation of the material in this liner is necessary to certify that hazardous constituents as defined by the Washington Administrative Code and the Environmental Protection Agency regulations are handled appropriately.

The liner contents will be segregated into radioactive waste and radioactive mixed waste components, packaged appropriately, and disposed of.

II. PREPLANNING/COORDINATION

A section of the canyon deck will be prepared so that the material in the burial box liner can be removed from the liner and separated. Operations personnel, including an operations supervisor, and a representative of the T-Plant environmental group will determine if each item removed from the burial box liner is to be categorized as radioactive mixed waste or radioactive waste. Each item will be segregated according to this classification and inventoried as it is placed in a container for disposal.

Fifty-five gallon waste drums will be prepared for each waste category encountered in the burial box liner. Potentially several different types of waste, such as aerosol cans, oily rags, F listed waste (anything that has been saturated by tank waste), lead, and so on will be found in the burial box liner.

The burial box liner is approximately seven feet deep. Personnel will enter the liner to rig material for the crane to remove from the liner or to remove smaller items. Prior to personnel entry confined space entry requirements will be met.

Scaffolding will be erected next to the burial box liner to allow access.

A Pre-Job Safety Meeting shall be conducted and shall be documented by agenda (Attachment A) and attendance sheet (Attachment B). This meeting is to insure all personnel performing work on this task receive adequate instruction to perform all activities is a safe manner. The applicable Radiation Work Permit (RWP) will be reviewed as part of this meting. ALARA principles including time, distance, and shielding will be discussed.

Attachment 2

APPLICABLE SAFETY DOCUMENTS: The following documents apply to all work performed under this work plan.

* Radiation Protection Manual, WHC-CM-4-10
* Radiation Work Requirements and Permits Manual, WHC-CM-4-15, Vol. 2
* Industrial Safety Manual, WHC-CM-4-3, Vol. 1-3
* Alara Program Manual, WHC-CM-4-11
* T-Plant Safety Analysis Report (SAR), SD-CP-SAR-007, Rev. 0

All work performed shall be conducted in accordance with Temporary Radiation Work Permit T-T-050. The Temporary RWP is included with the work plan.

If closed containers are found ie drums,sealed bags,buckets stage them on the foil paper but do not open them. Personnel opening unknown containers will be required to be in supplied air.

The T-Plant canyon ventilation system shall be operating during performance of this work. If for any reason the canyon differential pressure as indicated in the operating gallery (room 220) on D1 CAN 1 drops below 0.025 inches of water personnel shall make an orderly controlled evacuation of the canyon. The 291-T system should be operating rather than the roof exhaust system to improve contamination control.

III. TOOLS AND SUPPLIES

Protective clothing per Temporary RWP T-T-050.
Reparatory protection per Temporary RWP T-T-050.
55 gallon galvanized drums with 90 mil liners, quantity as determined during work
Foil back paper
Steel choker cables
Ladders (as needed)
75 ton crane as needed
Leather gloves for handling items from liner.
Safety toe shoes

IV. PROCEDURE

A. PREPARATION FOR SEGREGATION ACTIVITY

1. Clear space on canyon deck adjacent to burial box liner at section 17 sufficient to layout material from liner

2. Cover cleared space on canyon deck with foil back paper for contamination control.

3. Riggers erect scaffolding next to burial box liner to allow access to liner.

3. Prepare two 55 gallon drums for use (assign PIN numbers).

4. Position two 55 gallon galvanized steel drums on foil back paper to receive RMW of different categories. Position additional 55 gallon galvanized drums as determined necessary during performance of work.

B. PERFORM SEGREGATION OF WASTE

CAUTION: Operational Health Physics representative will establish dose rates prior to work and will monitor during work activity.

1. Crane operator retrieve items that he is able to retrieve, without assistance, from liner using 75 ton crane and place items on foil back paper.

HPT HOLD POINT
HPT to perform survey of liner to determine dose rates, contamination levels and the need for air samples.
Dose Rate _____
Contamination Levels _____
Air Samples Required Yes____ No____
HPT sign off_____ Date _____

2. Position ladder(s) so that personnel entry can be made into burial box liner.

3. Have atmosphere in burial box liner checked to ensure safe entry.

4. Rig items in liner so that crane operator can move them to the foil back paper.

CAUTION: When any item is to be lifted by the crane operator all personnel are to stay clear of the load and the travel path.

5. With assistance of Operations Supervisor and/or Environmental Group representative determine waste category of each item.

6. Dispose of each item of RMW in the appropriate 55 gallon drum.

NOTE: Each item placed into a 55 gallon drum will be recorded on an inventory sheet (Attachment C) for that drum. Record all pertinent data on inventory sheet.

7. Rig items of radioactive waste (not mixed) so that the crane operator can return them to the liner.

8. Crane operator return items of radioactive waste that he can pick up with crane to liner.

NOTE: Each item placed into liner will be recorded on an inventory sheet (Attachment C). Record all pertinent data on inventory sheet.

Attachment 2

9. Return remaining radioactive waste to liner, including foil back paper that was used to cover the floor.

10. Remove drums of RMW from canyon to <90 day storage pad.

Attachment 2

PRE-JOB SAFETY MEETING AGENDA
ATTACHMENT A

A Pre-Job Safety Meeting shall be conducted prior to the start of work as outlined in the accompanying work plan. This meeting shall be run in accordance to this agenda and documented on the accompanying attendance sheet. The meeting is held to insure that all involved personnel receive adequate knowledge of the task and instruction on safe performance of the job.

SAFETY MEETING AGENDA

TOPIC	COMPLETION CHECK OFF
1. Discuss the job to be accomplished	
a. Explain the task to be done	_____
b. Cover work package components	_____
c. Cover work plan details	_____
c-1 General description	_____
c-2 Preplanning/coordination	_____
c-3 Safety (general)	_____
c-4 Tools and supplies	_____
c-5 Preparation for segregation	_____
c-6 Segregation activity	_____
2. Discuss specific safety items	
a. Radiation levels expected, personnel requirements	_____
b. Discuss special RWP/respiratory requirements	_____
c. Discuss crane safety	_____
d. Discuss drum handling safety	_____
e. Discuss confined space entry requirements	_____
f. Discuss importance of properly filling out inventory sheets	_____
g. Discuss ladder safety	_____
h. Discuss protective clothing requirements (leather gloves,safety shoes)	_____
i. Discuss lifting safety	_____
j. Use caution when entering liner to rig items for crane to lift	_____
k. Discuss response to canyon CAM alarms	_____
l. Discuss notification and response to building emergency alarms	_____

Attachment 2

PRE-JOB SAFETY MEETING ATTENDANCE SHEET
ATTACHMENT B

PERSONNEL	PAYROLL NUMBER	DATE

Manager conducting the meeting _____

Date _____

Attachment 2

WASTE INVENTORY SHEET
ATACHMENT C

FACILITY: T-PLANT

Page ___ of ___

PACKAGE IDENTIFICATION NUMBER (PIN): _____

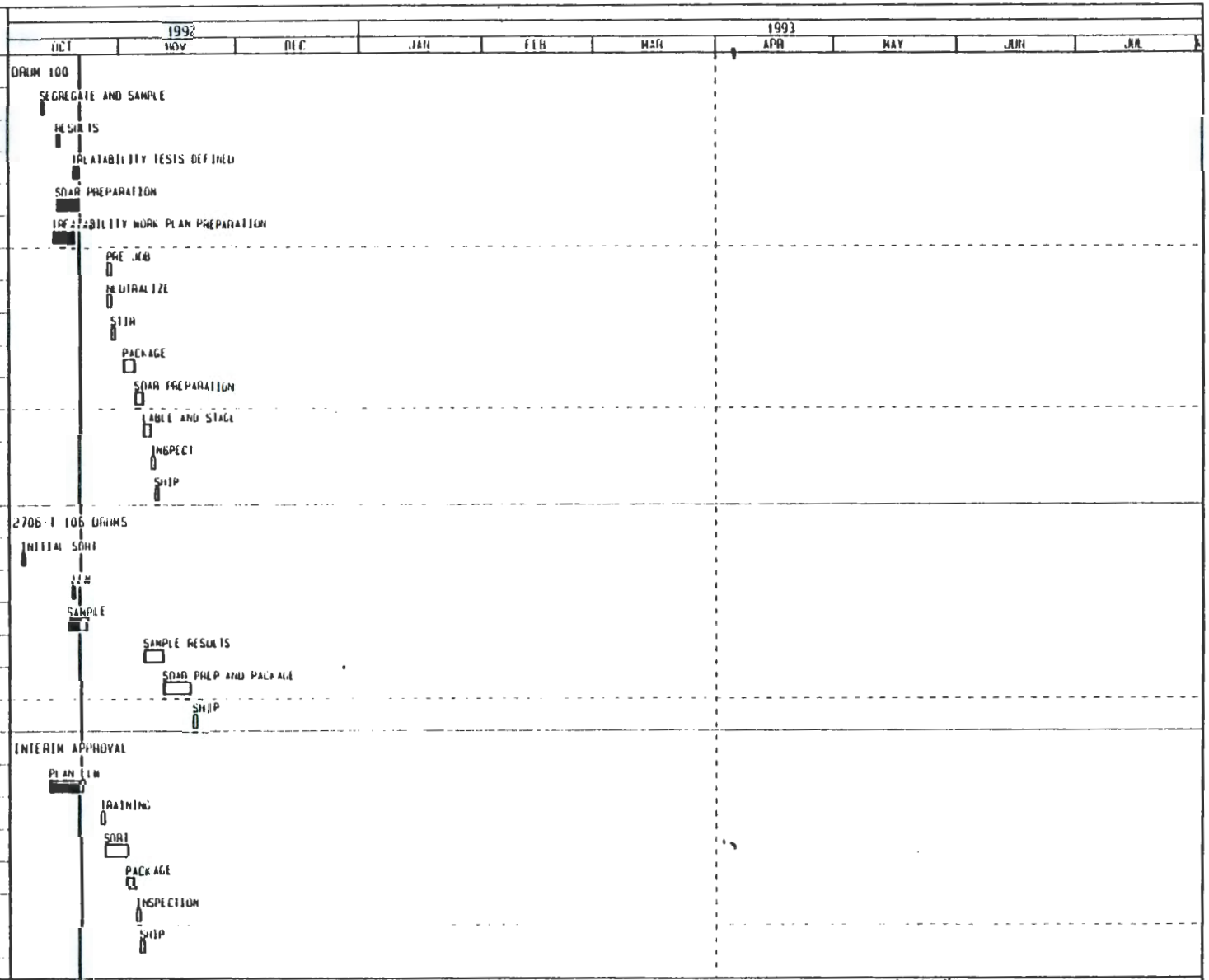
Item	Date	Initial	Description	Weight	Rad Survey	Notes

9 3 1 2 8 9 8 0 7 2 5

Attachment 2

Reviewed by:_____ Date_____

ACTIVITY ID	EARLY START	EARLY FINISH
100055	12OCT92A	12OCT92A
100060	16OCT92A	16OCT92A
100065	20OCT92A	21OCT92A
100070	16OCT92A	21OCT92A
100075	15OCT92A	20OCT92A
100080	29OCT92	29OCT92
100085	29OCT92	29OCT92
100090	30OCT92	30OCT92
100091	2NOV92	4NOV92
100092	5NOV92	6NOV92
100093	7NOV92	8NOV92
100094	9NOV92	9NOV92
100095	10NOV92	10NOV92
100098	7OCT92A	7OCT92A
100100	20OCT92A	20OCT92A
100106	19OCT92A	23OCT92
100107	7NOV92	11NOV92
100108	12NOV92	18NOV92
100109	20NOV92	20NOV92
100115	14OCT92A	22OCT92
100120	27OCT92	27OCT92
100125	28OCT92	2NOV92
100135	3NOV92	4NOV92
100140	5NOV92	5NOV92
100145	6NOV92	6NOV92



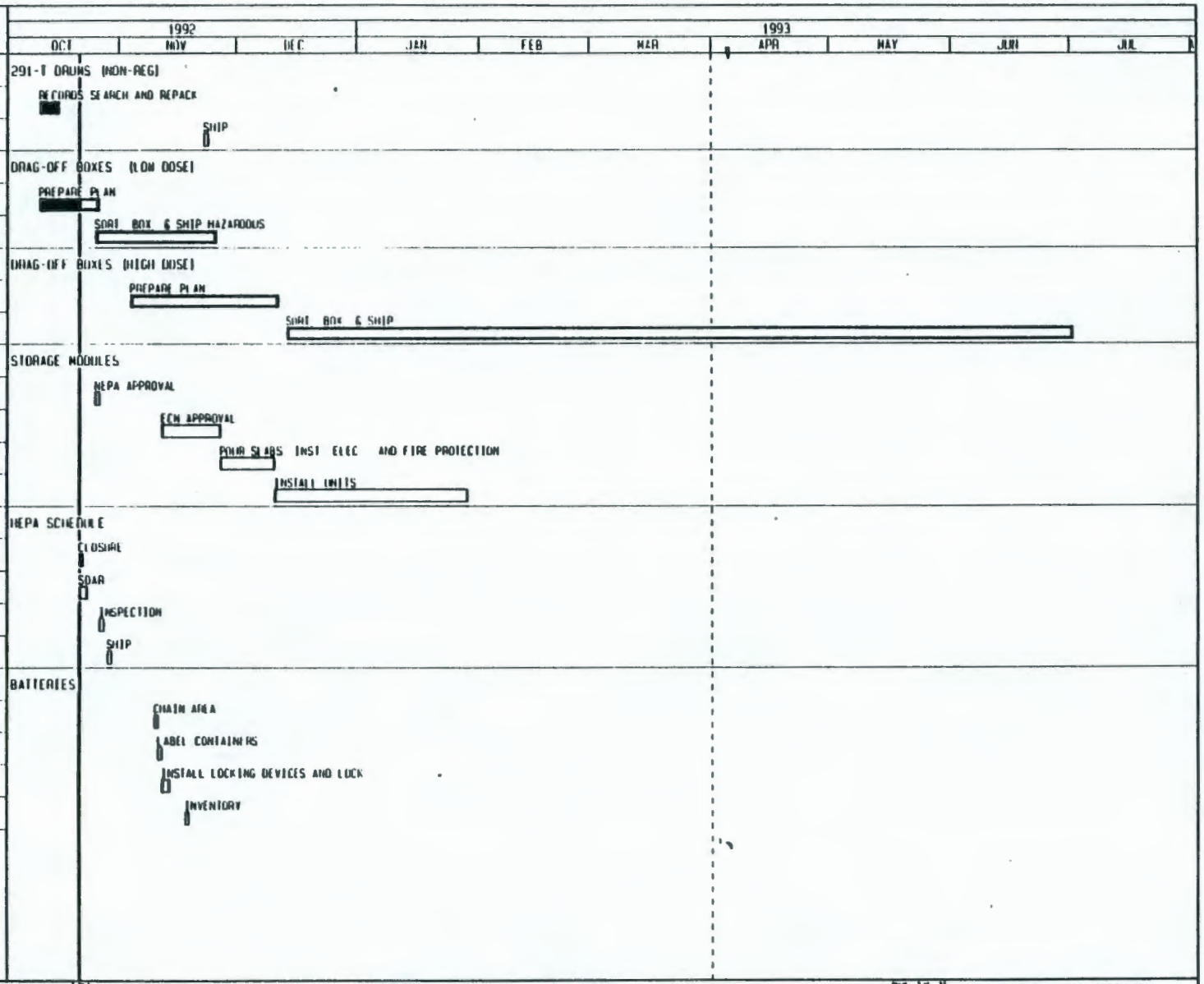
WASTE AND DECONTAMINATION SERVICES
WESTINGHOUSE HANFORD CO
T PLANT DEFICIENCIES

PREPARED BY JAMES B. HAES / 3-9258

Date	Revision	Checked	Approved

9 3 1 2 8 9 8 0 7 2 8

ACTIVITY ID	EARLY START	EARLY FINISH
100150	12OCT92A	16OCT92A
100155	23NOV92	23NOV92
100190	12OCT92A	26OCT92
100195	26OCT92	25NOV92
100200	4NOV92	11DEC92
100205	14DEC92	1JAN93
100005	26OCT92	26OCT92
100010	12NOV92	26NOV92
100015	27NOV92	10DEC92
100020	11DEC92	28JAN93
100025	22OCT92A	22OCT92A
100030	22OCT92A	23OCT92
100035	27OCT92	27OCT92
100040	29OCT92	29OCT92
100160	10NOV92	10NOV92
100165	11NOV92	11NOV92
100170	12NOV92	13NOV92
100175	18NOV92	18NOV92



Plot Date 26OCT92
Data Date 22OCT92
Project Start 5OCT92
Project Finish 1JAN93

N.E. Primavera Systems, Inc.

Critical Tasks
Critical Milestones
Progress Bar
Milestones

NASTE AND DECONTAMINATION SERVICES
WESTINGHOUSE HANFORD CO
T PLANT DEFICIENCIES

PREPARED BY JAMES R. HAGG / 3-9250

Date	Revision	Checked	Approved

Attachment 3

WHC-IP-0863 T Plant Facilities Hazardous Waste Training Plan

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Distribution of Responsibility for T Plant Training. 38

Attachment 3

WHC-IP-0863 T Plant Facilities Hazardous Waste Training Plan

1.0 Introduction

In accordance with Washington Administrative Code (WAC), Chapter 173-303, "Dangerous Waste Regulations", The Facility Operator of a less than 90-day accumulation area or a Treatment Storage Unit are required to have a written training plan. WAC 173-303-300, Accumulating Dangerous Waste on-site requires compliance with WAC-173-303-330, Personnel Training. This training plan complies with WAC 173-303-330.

2.0 Personnel Training

T Plant/340 facility training program uses existing courses. The program was designed to ensure that the T Plant is operated and maintained in accordance with requirements of the EPA, Ecology, the Occupational Safety and Health Administration, and the U.S. Department of Energy.

The T Plant/340 Facility training program is designed to prepare employees to operate and maintain T Plant in a safe, effective, efficient, and environmentally sound manner. In addition to preparing employees to operate and maintain T Plant under normal conditions, the program ensures that employees are prepared to respond in a prompt and effective manner should abnormal or emergency conditions occur. Emergency response training is consistent with emergency responses outlined in the T Plant Complex Building Emergency Plan.

The T Plant/340 Facility training program includes training courses that cover training requirements for Nuclear Operators, Operations Supervisors, and Operations Managers who operate T Plant. T Plant/340 Facility, in cooperation with Technical Training; Nuclear Safety; Industrial Health, Safety, & Fire Protection. Operations Support/Engineering Services; Fleet Operations, Transportation, and Maintenance Services; and other applicable organizations, is responsible for the development and administration of the comprehensive training program for employees assigned to, or involved with, T Plant. T Plant/340 Facility is responsible for identifying training requirements for T Plant personnel and for providing personnel training. Training requirements for personnel outside of T Plant is the responsibility of that persons management. The responsibilities of the various organizations are discussed in Section 5.0.

3.0 Job Titles and Descriptions

Each employee is assigned a job title (from the salaried nonexempt or bargaining unit classifications) or position (from the exempt classifications). The job description contains four elements. One of the four elements is contained in this Training Plan, the other three are maintained by WHC Human Resources. Human Resources maintains the requisite skills, education and other qualifications associated with the employees position. Job titles and positions for employees who are associated with managing dangerous waste at T Plant are listed in the following sections with brief descriptions of associated responsibilities as those responsibilities pertain to the control and handling of dangerous waste at T Plant.

3.1 T Plant/340 Facility Manager

Responsibilities of the T Plant/340 Facility manager include the following:

- Operating and maintaining T Plant in compliance with U.S. Department of Energy directives and WHC policies and procedures
- Serve as alternate Building Emergency Director (BED)
- Complying with all applicable hazardous and dangerous waste policies, procedures, and regulations
- Recruiting and developing a trained cadre of managers, professionals, nonexempt, and bargaining unit employees
- Ensuring safe and disciplined operations by trained personnel who implement policies and procedures
- Ensuring that documents related to the safe operation and maintenance of T Plant are accurate and up to date
- Ensuring the proper allocation of resources necessary to support operations, maintenance, and modification required for safe process operation, and to meet production schedules
- Providing operational requirements for support organizations to plan and provide services/resources when needed
- Promoting safe operations of T Plant
- Provide a safe working environment for T Plant personal
- Responding to abnormal and/or emergency conditions according to established procedures.

3.2 T Plant Facility Operations Manager

Responsibilities of the T Plant Facility Operations manager include the following:

- Supervising, coordinating, and directing the activities of T Plant Operations supervisors
- Responding to and providing remedial guidance and decisions for operations anomalies, off normal conditions, and equipment malfunctions
- Serve as building emergency director
- Promoting safe operations of T Plant
- Enforcing safety, housekeeping, and general operating rules

3.2 T Plant Facility Operations Manager (cont.)

- Maintaining control over T Plant operations in accordance with established WHC operating procedures and policies, U.S. Department of Energy Orders, and federal and state regulations
- Conducting operations according to established procedures and work plans
- Direct and control the transfer of waste
- Meeting quality assurance requirements
- Determining the status of and resolving action items arising from audits, inspections, and unusual occurrences
- Training and/or arranging training for operations personnel and qualified
- Supervising emergency response and recovery actions
- Maintaining administrative controls of T Plant Facilities and operations
- Maintaining essential records
- Maintain training as required
- Supervising procedure compliance
- Minimizing injuries and/or equipment damage
- Ensuring compliance with operating limits and specifications
- Conducting pre-job safety and planning meetings with personnel involved with T Plant operations
- Ensuring that radiation exposure and dangerous waste exposure are maintained ALARA
- Coordinating the recovery from, and measuring and reestablishing control of, unplanned releases to the environment and other emergency conditions

3.3 T Plant Operations Supervisor

Responsibilities of the T Plant Operations supervisors include:

- Supervising, coordinating, and directing the activities of the nuclear operators
- Promoting safe operation of T Plant
- Enforcing safety, housekeeping, and general operating rules

9 3 1 2 8 9 8 0 7 3 3

3.3 T Plant Operations Supervisor (cont.)

- Conducting operations according to established procedures or work plan
- Maintaining control over T Plant operations in accordance with established WHC operating procedures and policies, U.S. Department of Energy Orders, federal and state regulations
- Recognizing nonstandard conditions and taking appropriate action
- Training and/or arranging training for personnel
- Ensuring that nuclear operators are trained and qualified
- Maintaining essential records
- Maintaining administrative controls
- Supervising procedure compliance
- Conducting pre-job safety and planning meetings with personnel involved with T Plant operations
- Notifying T Plant/340 Facility management of any unplanned releases to the environment
- Minimizing injuries and/or equipment damage
- Ensuring compliance with operating limits and specifications
- Ensuring that radiation exposure and dangerous waste exposure are maintained ALARA
- Responding to abnormal and/or emergency conditions according to established procedures and as directed by the BED
- Maintain appropriate documentation for work performed at T Plant
- Implement hazardous waste packaging, shipping requirements
- Oversee On-The-Job training for Nuclear Operators.

3.4 Nuclear Operator

Nuclear Operators include Operator Trainee, Nuclear Operator, Nuclear Process Operators, and Lead Nuclear Process Operators. Responsibilities of the nuclear operators include the following:

- Performing operations work activities in accordance with current supporting documentation

3.4 Nuclear Operator (cont.)

- Attending T Plant operations work plan and pre-job safety meetings
- Escort supporting crafts and visitors entering T Plant
- Handling, receiving, storage, inventory, usage, and disposal of hazardous material
- Conducting and documenting routine inspections
- Assisting truck drivers in loading and unloading trucks at T Plant
- Packaging and labeling mixed waste and low-level mixed waste for shipment
- Performing sampling as required by procedure
- Providing surveillance of T Plant to assess conditions
- Responding to abnormal and/or emergency conditions according to established procedures and as directed by the BED
- Minimize injuries and/or equipment damage
- Ensuring minimization of hazardous material when receiving, using, and disposing.
- Maintain training as required
- Recognizing nonstandard conditions and take appropriate actions
- Assist in training operation personal on OJT
- Compliance and documentation of all operating limits and specifications
- Assisting in maintaining ALARA for radiation Exposures and dangerous waste exposures when supporting outside organization personal

3.5 Health Physics Supervisor

Responsibilities of the Health Physics supervisor include the following:

- Providing health physics support for T Plant
- Providing current radiation work permits for all personnel working at T Plant
- Overseeing on-the-job training for health physics technicians
- Providing direction and guidance to T Plant personnel concerning radiological conditions

9 3 1 2 8 9 8 0 7 3 5

3.5 Health Physics Supervisor (cont.)

- Providing immediate health physics support in an emergency
- Responding to abnormal and/or emergency conditions according to established procedures and as directed by the BED

3.6 Health Physics Technician

Health physics technicians include health physics technician-trainees, health physics technicians, and senior health physics technicians. Responsibilities of the health physics technicians include the following:

- Operating radiation and contamination sampling systems
- Issuing supplemental dosimeters and "WRAM" personal as required
- Providing dose rate monitoring support
- Surveying personnel exiting radiation areas
- Maintaining all radiation equipment records
- Establish personal protective equipment requirements necessary for entry into radiation and contamination areas
- Responding to all radiation alarms
- Collecting air samples
- Locating radiation and contamination boundary perimeters for nuclear operators when fences and barriers are being erected
- Performing routine surveillance
- Documenting all support provided for personnel at T Plant
- Overseeing work activities to ensure that radiation and dangerous waste exposure are maintained ALARA
- Responding to abnormal and/or emergency conditions according to established procedures and as directed by the BED

3.7 Operations Support/Engineering Manager

Responsibilities of the Operations Support/Engineering manager include the following:

- Ensuring that the staff is knowledgeable of procedures, equipment, buildings, and processes such that the staff can identify problem areas and provide remedial action in a timely fashion

3.7 Operations Support/Engineering Manager (cont.)

- Planning and integrating all resources required to meet design objectives, schedules, and milestones identified on cost account plans and master schedules
- Negotiating and integrating supporting work from organizations
- Conducting regular self-monitoring and appraisal of group performance and taking appropriate action when deemed necessary to improve group performance
- Overseeing and directing the activities of the cognizant/process engineering staff such that T Plant can be operated in a safe, efficient, and technically sound manner
- Ensuring that T Plant process equipment, procedures, designs, etc., comply with U.S. Department of Energy Orders, federal and state regulations, national standards, and applicable WHC engineering procedures and management standards
- Issuing and maintaining or providing oversight and review of T Plant operating documentation, operating procedures, flowsheets, sample schedules, specifications, system test plans and procedures, operational safety requirements, and other documents necessary to operate T Plant
- Performing routine and comprehensive evaluations of the T Plant systems to ensure compliance with system control requirements, procedure compliance, and equipment performance, assessing problem areas, and implementing timely corrective actions
- Recruiting, training, certifying, appraising, and developing a highly competent and professional engineering staff to carry out the group's responsibilities
- Performing root-cause analyses as required to determine equipment-, system-, or personnel-induced failures of maintenance systems or equipment, performing failure history analyses, and recommending changes as appropriate
- Review waste volume projections (solid and liquid)

3.8 FACILITY ENGINEERING

Responsibilities of the Facility Engineers include the following:

- Developing, revising, and reviewing all operating procedures
- Issuing, tracking, and closing out all occurrence reports
- Reviewing all new and future projects planned for T Plant
- Supporting tours, audits, and readiness reviews of T Plant

3.8 Facility Engineering (cont.)

- Providing the operating organizations with equipment and buildings that can be operated safely and productively
- Preparing and/or approving engineering design documents and drawings that are in compliance with applicable WHC policies and procedures, and instructions and are in accordance with recognized national standards and codes
- Preparing all engineering change notices as specified
- Maintaining and updating design engineering drawing files
- Preparing and approving equipment and material specifications for new design and equipment purchase requisitions including quality statements and impact levels
- Performing business information data reviews on new designs, equipment, and materials, and approving vendor business information data systems qualifications
- Acting as the point of contact for resolution and disposition of nonconformance material and equipment via the Material Review Board
- Preparing design criteria, performing and approving design analysis, and assigning impact levels on design
- Preparing and approving excavation permits and tie-in permits
- Preparing, issuing, and ensuring technical correctness of T Plant operating procedures, and preparing and issuing procedure departure authorizations that are correct and that support process changes
- Performing daily, routine, and comprehensive evaluations of T Plant process parameters to ensure compliance with procedures
- Maintaining T Plant instrument and equipment flow diagrams that are technically correct and that reflect the current configuration of the system
- Reviewing and approving engineering change notices for applicable system equipment changes
- Preparing and approving T Plant system test plans, and work plans
- Reviewing and approving T Plant work authorizations and assigning impact levels
- Providing technical direction for spill responses
- Providing input to dangerous waste and environmental permit applications

3.8 Facility Engineering (cont.)

- Responding to abnormal and/or emergency conditions according to established procedures as directed by the BED

3.9 Maintenance Planners, Maintenance Engineers

Responsibilities of the Maintenance Planners, Maintenance Engineers as pertain to hazardous waste at T Plant include the following:

- Evaluating reviewing and modifying maintenance procedures and work plans, and ensuring that procedures are current and accurate
- Provide direction to Maintenance craft by resolving work packages under the direction of the Facility Engineer
- Provide direction to Maintenance craft by writing, modifying, and issuing preventive maintenance procedures
- Order parts and materials required for maintenance activities

3.10 Environmental Control Manager/Engineer

Responsibilities of the Environmental Control manager and engineers include the following:

- Over-viewing T Plant environmental issues
- Reviewing and approving dangerous waste handling procedures
- Assessing dangerous waste handling problem areas and implementing timely actions
- Ensuring that T Plant are in compliance with dangerous waste and environmental regulations
- Reviewing and approving dangerous waste and environmental data for T Plant
- Ensuring adherence to the EPA and Ecology reporting requirements
- Reviewing and approving new or revised permit applications
- Serving as a point of contact for dangerous waste and environmental issues for T Plant
- Directing and coordinating T Plant dangerous waste and environmental program corrective actions status to achieve compliance with hazardous material and dangerous waste permit applications

3.10 Environmental Control Manager/Engineer (cont.)

- Coordinating the review and submittal of environmental data for the following:
  - Annual dangerous waste report
  - Waste minimization report
  - The *Superfund Amendments and Re-authorization Act of 1986* (SARA) 312 inventory
  - SARA 313 releases
  - EPA/Ecology surveys

- Preparing and providing input to reporting of the following:
  - Spill information
  - Interim status compliance
  - Ecology and the EPA reporting requirements

- Ensuring the development and review of new or revised permit applications including the following:
  - Part A notifications
  - Part B permit applications
  - Closure plan applications
  - Clean air permit application
  - National Pollution Discharge Elimination System permit applications and well registrations

- Ensuring implementation of permitting requirements and conducting periodic surveillances of compliance assessment with permit applications. Ensuring the maintenance of active permits in an up-to-date condition

- Resolving regulatory interpretations required to operate T plant through interfacing with environmental organizations, DOE-RL, Ecology, the EPA, and applicable health departments

- Assessing dangerous waste handling problem areas and implementing corrective action at T Plant

- Maintaining tracking of dangerous waste.

3.11 Quality Assurance/Quality Control Manager and Quality Assurance/Quality Control Engineer/Specialist.

Responsibilities of the QA/QC manager, engineers, and specialists include the following:

- Providing planning to ensure that requisite quality is attained and ensuring compliance with technical requirements

- Selecting and assigning qualified personnel to implement QA/QC policies and procedures

- Implementing a surveillance program to ensure that responsible organizations are in compliance with company and DOE policies and procedures

3.11 Quality Assurance/Quality Control Manager and Quality Assurance/Quality Control Engineer/Specialist (cont.)

- Managing and directing inspection activities
- Developing and implementing systems to identify, control, and disposition nonconforming conditions and items
- Providing investigative and verification support to include sound recommendations leading to prompt corrective actions
- Investigating, analyzing, and evaluating reported nonconformance and approving disposition actions
- Reviewing status reports, audit reports, inspection reports, nonconformance reports, and unusual occurrence reports to determine existing or potential problems
- Establishing inspection procedures and controls necessary to resolve quality problems.
- Obtaining commitments from management to determine root causes, take corrective action to solve problems and perform follow up to ensure the effectiveness of actions taken
- Reviewing and approving engineering drawings, specifications, and other technical documents for incorporation of quality requirements
- Planning and performing surveillance to assess compliance with quality requirements, issuing reports of findings, and performing follow up to verify effectiveness of corrective actions
- Performing Q/A review of design, procurement, program and project planning, procedures, specifications, occurrence reporting, readiness reviews, surveillance and assessments, audits, trend analysis, corrective actions, and documentation
- Assisting in studies, development, testing, and analysis of designs, processes, and procedures
- Performing duties within the scope of the incumbents' abilities and the technical complexity of the system.
- Performing inspections to verify compliance to established requirements
- Performing scheduled and unscheduled surveillances documenting results, and performing follow-up verification of corrective actions
- Assisting in tabulating, charting, and analyzing quality assurance data
- Researching and compiling information to evaluate quality performance trends.

3.12 Industrial Health Safety and Fire Protection Manager and Engineer

Responsibilities of the Industrial Health Safety and Fire Protection manager and engineers include the following:

- Supporting operations and activities through the provision of industrial hygiene, industrial safety, fire protection, and radiation safety expertise, assistance, and services
- Providing guidance for consistent, effective implementation of occupational health and safety requirements
- Assisting the line organizations in developing cost-effective occupational health and safety plans, systems, controls, procedures and training
- Assisting the line organizations in preparing designs, specifications, work packages, incident and occurrence reports, corrective action plans, procurement documents and specifications; in conducting hazard evaluations, risk analyses and self-assessments
- Supplying or assisting in the procurement of services for health and safety engineering, and chemical monitoring, respiratory protection, safety training resources, and medical scheduling
- Administering programs to control chemical, and industrial hazard exposures, and promoting improved occupational health and safety performance throughout operations
- Administering work permitting systems and assisting in preparation of hazardous and radiation work permits, where applicable; excavation permits; core-drill permits; and welding, cutting, and braising permits
- Directing, advising, and assisting in the investigation and resolution of health and safety related complaints, employee concerns, accidents, occurrences, and conditions
- Assisting in the identification and application of lessons learned
- Conducting or assisting in inspections and walk-throughs, pre-occupancy inspections, etc., and administering the Safety Observer Program
- Maintaining and coordinating active ALARA and safety awareness programs to minimize hazard exposures, increasing health and safety awareness, alerting personnel to known hazards, and recognizing positive safety performance
- Providing expertise and administrative support to the President's Safety Council, Accident Prevention Council, and similar organization-specific activities

3.12 Industrial Health Safety and Fire Protection Manager and Engineer (cont.)

- Monitoring health and safety experience, providing performance and trend reports, and maintaining employee health and safety records
- Representing management in interfaces with the DOE-RL and other contractors regarding occupational health and safety programs, experience, and records
- Preparing and issuing health and safety performance measures, indicators, and trend analyses
- Preparing and submitting health and safety experience reports as required by the U.S. Department of Energy and other governmental agencies
- Developing and submitting to Pacific Northwest Laboratory the Hanford Environmental Health Foundation employee radiation and chemical exposure records
- Maintaining occupational health and safety records as required by the U.S. Department of Energy and applicable management.

3.13 Nuclear Safety Assurance Manager and Engineer

Responsibilities of the Nuclear Safety Assurance managers and engineers include the following:

- Supporting management activities and programs through the performance and conduct of independent safety review and surveillance to ensure compliance with the letter and intent of applicable safety regulations, standards, directives, and recognized good practices
- Developing and interpreting policy, standards, and programs to assist in achieving and maintaining full compliance with occupational health and safety requirements and nuclear safety requirements
- Reviewing external standards, public laws, and U.S. Department of Energy Orders and directives
- Incorporating the appropriate requirements into policy, standards, and programs for safety
- Reviewing T Plant documents, operations, and programs to ensure compliance
- Maintaining an organization staffed qualified to interpret and apply the U.S. Department of Energy Orders and other mandated requirements or recommended practices relative to radiation protection, and nuclear safety

3.13 Nuclear Safety Assurance Manager and Engineer

- Establishing and interpreting nuclear safety policies, standards, and limits, and originating Level 2 safety manuals to be used in operations,
- Providing and conducting independent audits, appraisals, assessments and surveillances in the technical safety areas for the purpose of determining compliance with U.S. Department of Energy Orders, other agency standards, and other applicable requirements, as appropriate
- Identifying deficiencies that require corrective action and following up corrective actions taken
- Conducting multi-discipline safety design and document reviews for the purpose of verifying compliance with mandated statutory nuclear safety requirements, standards, and recommended practices
- Administering and coordinating contract 'work for others' relative to nuclear safety support requests
- Representing management in interfaces with the U.S. Department of Energy, other contractors, federal, state, and local agencies relative to nuclear safety regulation and compliance
- Eliciting and facilitating program improvements
- Interfacing with management, the U.S. Department of Energy, and other organizations and personnel in the conduct of assigned responsibilities.

3.14 Maintenance Manager

Responsibilities of the Maintenance manager include the following:

- Ensuring compliance with requirements, applicable WHC policies, programs, regulations, and U.S. Department of Energy directives to ensure personnel safety, environmental compliance, and public safety
- Providing assistance to equipment and system efforts through direct support to maintenance and providing person-in-charge services for complex maintenance and/or installation activities
- Identifying preventive maintenance requirements and deficiencies
- Providing for continued input and development of the equipment history file in support of trend analysis reviews and specific problem resolution
- Providing direct technical guidance support to the maintenance group in conjunction with the cognizant system engineer

3.14 Maintenance Manager (cont.)

- Supervising, coordinating, and directing the activities of the Maintenance supervisors
- Promoting safe maintenance practices at the T Plant
- Enforcing safety, housekeeping, and operating rules
- Conducting maintenance activities according to established procedures
- Ensuring that supervisors and crafts are trained
- Arranging training for maintenance personnel
- Ensuring that radiation exposure and dangerous waste exposure are maintained ALARA
- Responding to abnormal and/or emergency conditions according to established procedures as directed by the BED

3.15 Maintenance Supervisor and Plant Engineer

Responsibilities of the Maintenance Supervisors and Plant Engineers include the following:

- Supervising, coordinating, and directing the activities of maintenance crafts
- Promoting safe maintenance practices at T Plant
- Enforcing safety, housekeeping, and operating rules
- Conducting maintenance activities according to established procedures
- Identifying off-normal conditions and taking appropriate action
- Ensuring that maintenance crafts are trained
- Maintaining essential records
- Supervising emergency response and recovery actions at the direction of the BED
- Conducting pre-job safety and planning meetings with personnel involved with T Plant work control
- Minimizing injuries and/or equipment damage

3.15 Maintenance Supervisor and Plant Engineer (cont.)

- Ensuring that radiation exposure and dangerous waste exposure are maintained ALARA
- Responding to abnormal and/or emergency conditions according to established procedures
- Assuming charge during emergencies until properly relieved by upper management as described in the building emergency plan
- Proper handling of waste generated through maintenance activities

3.16 Maintenance Crafts

Crafts include electricians, instrument technicians, iron workers/riggers, millwrights, pipefitters, and welders. Responsibilities of the maintenance crafts include the following:

- Providing routine schedule and emergency maintenance services
- Providing dedicated scheduled, and emergency, state-of-the-art service for T Plant equipment and systems
- Responding to abnormal and/or emergency conditions according to established procedures
- Correct handling of hazardous waste generated through maintenance activities

3.17 Grounds Maintenance & Equipment Operations Manager

Responsibilities of the Grounds Maintenance & Equipment Operations (GMEO) manager as they pertain to the handling of dangerous waste at T Plant include the following:

- Supervising and coordinating the activities of GMEO and Equipment Operations supervisors and other employees
- Promoting safe operations of heavy-duty trucks and equipment
- Ensuring that operations are conducted according to established procedures
- Maintaining administration controls
- Enforcing safety and operating rules
- Ensuring proper response to dangerous waste spills from trucks
- Implementing training requirements for supervisors and heavy-duty truck drivers

3.17 Grounds Maintenance & Equipment Operations Manager (cont.)

- Ensuring that essential training and qualification records are maintained
- Ensuring that radiation exposure and dangerous waste exposure are maintained ALARA.

3.18 Grounds Maintenance and Equipment Operations Supervisor

Responsibilities of the Grounds Maintenance and Equipment Operations supervisors as they pertain to handling of dangerous waste at T Plant include the following:

- Supervising, coordinating, and directing the activities of truck drivers and other employees within GMEO
- Maintaining control over truck operations (including the transport of dangerous waste) in accordance with established operating procedures, policies, U.S. Department of Energy Orders, and federal and state regulations
- Recognizing off normal conditions and taking appropriate action
- Maintaining essential records
- Ensuring procedure compliance
- Conducting safety and planning meetings with personnel involved with dangerous waste transport and loading and/or unloading operations
- Ensuring that the truck drivers are trained and qualified to operate trucks and to transport hazardous material or dangerous waste
- Enforcing safety and operating rules
- Ensuring compliance with operating limits and government regulations for operating trucks and transporting hazardous material or dangerous waste
- Ensuring that radioactive exposure and dangerous waste exposure are maintained ALARA
- Reviewing completed truck pre-trip inspection form before hazardous material or dangerous waste is transported
- Reviewing and distributing hazardous material or dangerous waste transport waste tracking form and daily log
- Ensuring proper response to dangerous and/or hazardous waste spills from trucks

3.18 Grounds Maintenance and Equipment Operations Supervisor (cont.)

- Ensuring that GMEO, Equipment Operations management and T Plant management is notified of dangerous waste spills.

3.19 Grounds Maintenance and Equipment Operations Truck Driver

Responsibilities of Grounds Maintenance and Equipment Operations heavy-duty truck drivers as they pertain to the handling of dangerous waste at T Plant include the following:

- Performing work activities in accordance with current operation procedures
- Attending applicable pre-job safety meetings
- Observing all safety precautions related to transport operations
- Responding to a spill or emergency in accordance with current procedures as directed by T Plant emergency response personal
- Notifying Road, Delivery, and Equipment Operations management in the event of a spill or emergency
- Reviewing dangerous waste shipping forms
- Inspecting dangerous waste containers for proper labeling
- Visually Inspect for integrity of dangerous waste containers
- Signing the dangerous waste shipping forms
- Loading the truck with the assistance of T Plant operations personal
- Ensuring proper dangerous waste placards are mounted and visible on the truck and trailer
- Transporting dangerous waste containers
- Completing the daily log sheet
- Providing copies of dangerous waste shipping forms and daily logs to GMEO.

3.20 Crane and Rigging Services Supervisor

Responsibilities of the Crane and Rigging Services supervisors as they pertain to the handling of dangerous waste at T Plant include the following:

- Provide expertise to T Plant as required to insure safe and proper hoisting and rigging practices
- Recognizing off normal conditions and taking appropriate action
- Training and/or arranging training for personnel
- Maintaining essential records
- Ensuring procedure compliance
- Enforcing safety and operating rules
- Ensuring that radioactive exposure and dangerous waste exposure are maintained ALARA
- Reviewing and distributing hazardous material or dangerous waste transport waste tracking forms and daily logs
- Ensuring proper response to dangerous waste spills resulting from hoisting and rigging operations
- Ensuring that Crane and Rigging Services management is notified of dangerous waste spills.

3.21 Crane Operators and Riggers/Ironworkers and Truck Drivers

Responsibilities of the Riggers/Ironworkers as they pertain to the handling of dangerous waste at T Plant include the following:

- Performing work activities in accordance with current operation procedures
- Attending applicable pre-job safety meetings
- Observing all safety precautions related to hoisting and rigging
- Responding to a spill or emergency in accordance with current procedures and as directed by the T Plant BED
- Notifying Crane and Rigging Services management in the event of a spill or emergency
- Ensuring that transport of dangerous waste is in accordance with the schedule list
- Provide hoisting and rigging services in accordance with approved procedures

3.21 Crane Operators and Riggers/Ironworkers (cont.)

- Inspecting dangerous waste containers for proper labeling
- Inspecting integrity of dangerous waste containers
- Loading the truck

3.22 Rail Operations Manager

Responsibilities of the Rail Operations manager as they pertain to the handling of dangerous waste at T Plant include the following:

- Supervising and coordinating the activities of Rail operations personal
- Promoting safe operations of railroad equipment
- Ensuring that operations are conducted according to established procedures
- Enforcing safety and operating rules
- Ensuring proper response to dangerous waste spills
- Implementing training requirements for train engineers and support personal
- Ensuring that essential training and qualification records are maintained
- Ensuring that radiation exposure and dangerous waste exposure are maintained ALARA.

3.23 Rail Operations

Responsibilities of Rail Operations as they pertain to the handling of dangerous waste at T Plant include the following:

- Performing work activities in accordance with current operation procedures
- Attending applicable pre-job safety meetings
- Observing all safety precautions related to transport operations
- Responding to a spill or emergency in accordance with current procedures and as directed by the T Plant emergence response team
- Notifying Rail Operations management in the event of a spill or emergency

3.23 Rail Operations (cont.)

- Ensuring that transport of dangerous waste is in accordance with the schedule list
- Completing pre-inspection of train at the beginning of a shift
- Reviewing dangerous waste shipping form
- Signing the dangerous waste shipping form
- Delivery of hazardous waste tank car
- Siting of tank car as directed by T Plant personal
- Transporting and delivery of tank car
- Transporting dangerous waste containers
- Completing the daily log sheet
- Providing copies of dangerous waste tracking forms and daily logs to the rail operations supervisor.

3.24 Hanford Fire Department

Responsibilities of the Hanford Fire Department personnel as they pertain to the handling of dangerous waste at T Plant include the following:

- Responding to emergencies
- Providing fire suppression for fires and explosions
- Assisting in the control and containment of radioactive, mixed and/or dangerous waste and hazardous material accidents or incidents as directed by the facility management
- Providing emergency medical attention for injured personnel.

3.25 Sampling mobile Lab Manager/Technician

- Direct and control of Hazardous materials
- Train and/or arrange training
- Collect RCRA and CERCLA Protocol Samples
- Package samples
- Ship samples to analysis labs

4.0 Training Content, Frequency, and Techniques

This section provides an overview of job-specific training provided to personnel in job positions discussed in the previous sections. In addition to normal operating conditions, personnel with these job positions are instructed on communications and alarm systems and on the proper response to abnormal conditions and emergencies such as fire, radiological incidents, dangerous waste incidents, and shutdown of operations.

4.1 Overview of Training for Specific Positions

All T Plant personnel receive applicable general, unit-specific, and job-specific training. The courses are given in classroom settings, on-the-job training, self-study units, and computer-based training.

4.1.1 T Plant/340 Facility Manager Training

The T Plant/340 Facility manager completes specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of T Plant/340 Facility contingency plans and use of emergency and monitoring equipment.

The T Plant/340 Facility manager is the alternate Building Emergency Director (BED) and as such has all training required of the BED.

4.1.2 T Plant Facility Operations Manager Training

The T Plant Facility Operations manager completes specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of T Plant contingency plans and use of emergency and monitoring equipment. The T Plant Facility Operations manager is required to be qualified for the assigned job through a systematic process as determined by management.

The T Plant Facility Operations manager has been assigned the responsibilities of Building Emergency Director and as such has had BED training and provides facility specific training for the building emergency response team.

4.1.3 T Plant Operations Supervisor Training

The T Plant Operations supervisors complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of T Plant contingency plans and use of emergency and monitoring equipment. The T Plant Operations supervisors are required to be qualified for the assigned jobs through a systematic process as determined by management. The T Plant operations supervisor is required to provide pre-job briefings for all routine and non-routine tasks performed by operations at T Plant. The length of the pre-job briefing is dependent on the how often the task is performed, the hazards involved, and the degree of difficulty.

4.1.4 Nuclear Operator Training

Nuclear operators complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include implementation of T Plant contingency plans, routine inspections, and use of emergency and monitoring equipment.

Nuclear operators are required to be certified for assigned jobs. Those who are certified complete appropriate dangerous waste training. Operators recertify for assigned jobs at least biennially. Operators must complete the progression tests (general radio-chemical operator and plant specific courses) at least annually. Once a nuclear operator reaches the nuclear process operator level, the progression tests are referred to as re-qualification tests and are a biennial requirement supplemented by an intervening biennial emergency procedures and abnormal plant conditions test. The combination of re-qualification tests and the emergency procedures and abnormal plant conditions tests ensures that nuclear process operators continue to comply with the annual emergency training requirement.

A facility specific course is currently being generated to certify operators as T Plant hazardous waste handlers.

4.1.5 Health Physics Supervisor Training

The health physics supervisor completes specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of T Plant contingency plans and use of emergency and monitoring equipment.

4.1.6 Health Physics Technician Training

The health physics technicians complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses.

The courses address T Plant procedures, U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of T Plant contingency plans and use of emergency and monitoring equipment.

The health physics technicians are required to be certified for assigned jobs. The health physics technicians must certify for the level at which they are assigned work (i.e., health physics technician or senior health physics technician). They must complete their next-level certification tests between 15 and 18 months after they arrive at the current level. Once health physics technicians reach the senior health physics technician level, they must recertify at least biennially thereafter. The health physics technicians also must complete corresponding general and specific on-the-job training for each level.

The health physics technicians must complete the appropriate on-the-job training at least every 4 years thereafter. All health physics technicians must comply with the emergency procedures and abnormal plant conditions requirements and must complete the hazardous worker training refresher course at least annually. Compliance is accomplished by health physics technicians completing the requirement with a written test or an on-the-job training checklist in alternating years.

4.1.7 Operations Support/Engineering Manager Training

The Operations Support/Engineering manager completes specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of T Plant contingency plans and use of emergency and monitoring equipment.

4.1.8 Facility Engineers Training

The facility engineers complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address WHC policies and procedures, U.S. Department of Energy directives, federal and state regulations. Engineers are also encouraged to take courses sponsored by companies outside of Westinghouse in their areas of expertise. The courses include the implementation of T Plant contingency plans and use of emergency and monitoring equipment.

4.1.9 Maintenance Planners, Maintenance Engineers Training

The maintenance planners and maintenance engineers complete specific courses in preparation for their work assignments including planning and scheduling, work package preparation, impact level determination, national codes and standards, and hazardous material and dangerous waste handling.

4.1.10 Environmental Control Manager Training

The Environmental Engineering/ Safety Analysis Reports manager and the environmental compliance officer complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses, Federal and State hazardous waste regulations, and waste shipping and handling requirements. The courses address U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of T Plant contingency plans and use of emergency and monitoring equipment.

4.1.11 Quality Assurance/Quality Control Manager and Quality Assurance/Quality Control Engineer/Specialist Training

The QA/QC manager and QA/QC engineers and specialists complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address applicable waste management procedures, U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of applicable contingency plans and use of emergency and monitoring equipment.

The Quality Control inspectors complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address applicable waste management procedures, U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of applicable contingency plans and use of emergency and monitoring equipment.

4.1.12 Industrial Safety and Fire Protection Manager and Engineer Training

The Occupational Health and Safety manager and engineers complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address applicable waste management procedures, U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of applicable contingency plans and use of emergency and monitoring equipment.

4.1.13 Nuclear Safety Assurance Manager and Engineer Training

The Health and Safety Assurance managers and engineers complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address applicable waste management procedures, U.S. Department of Energy directives, applicable policies, and federal and state regulations.

4.1.14 Maintenance Manager Training

The Maintenance manager and maintenance engineers complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address T Plant procedures, U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of T Plant contingency plans and use, inspection, repair, and replacement of emergency and monitoring equipment.

4.1.15 Maintenance Supervisor Training

The Maintenance supervisors complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address T Plant procedures, U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of T Plant contingency plans and use, inspection, repair, and replacement of emergency and monitoring equipment. The maintenance supervisor is required to provide pre-job briefings for all maintenance tasks performed at T Plant. The length of the pre-job briefing is dependent on the how often the task is performed, the hazards involved, and the degree of difficulty.

4.1.16 Maintenance Crafts Training

Maintenance crafts complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address T Plant procedures, U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of T Plant contingency plans and use, inspection, repair, and replacement of emergency and monitoring equipment.

4.1.17 Grounds Maintenance and Equipment Operations Manager Training

The Road, Delivery, and Equipment Operations manager completes specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address Fleet Operations,Transportation, and Maintenance Services waste management procedures (including implementation of applicable contingency plans), and use of emergency and monitoring equipment.

4.1.18 Grounds Maintenance and Equipment Operations Supervisor Training

The Road, Delivery, and Equipment Operations supervisors complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address Fleet Operations, Transportation, and Maintenance Services waste management procedures (including implementation of applicable contingency plans), and use of emergency and monitoring equipment.

4.1.19 Grounds Maintenance and Equipment Operations Heavy-Duty Truck Driver Training

The Grounds Maintenance and Equipment Operations heavy-duty truck drivers complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address Fleet Operations, Transportation, and Maintenance Services waste management procedures (including implementation of applicable contingency plans), and routine inspections and use of emergency and monitoring equipment.

The Road, Delivery, and Equipment Operations heavy-duty truck drivers are required to be qualified for assigned jobs (e.g., hazardous material carrier/driver and valid Washington State commercial drivers license, Class A, with hazardous material endorsement). Those who are qualified complete appropriate dangerous waste training annually. Drivers must re-qualify for their assigned jobs at least biennially. Drivers must renew their commercial drivers licenses and complete the Washington State hazardous material endorsement test every 4 years and complete a U.S. Department of Transportation physical to be medically certified biennially. The combination of re-qualification courses and renewing the Washington State commercial drivers license, Class A, with hazardous material endorsement, ensures that drivers continue to comply with the annual emergency training requirements.

4.1.20 Crane and Rigging Services Supervisor Training

The Crane and Rigging Services supervisors completes specific courses in preparation for work assignments, including hazardous materials and dangerous waste training courses. The courses address applicable waste management procedures (including implementation of applicable contingency plans), and use of emergency and monitoring equipment.

4.1.21 Riggers/Ironworkers Training

The Riggers/Ironworkers complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address applicable waste management procedures (including implementation of applicable contingency plans), and routine inspections and use of emergency and monitoring equipment. The Riggers are required to be qualified for assigned jobs.

4.1.22 Rail Operations Manager Training

The rail operations manager completes specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses for transporters. The courses address applicable waste management procedures (including implementation of applicable contingency plans), and use of emergency and monitoring equipment.

4.1.23 Rail Operations Training

The railroad operations crew are trained in courses specific to railroad operations including hazardous material, dangerous waste, and hazardous material carrier driver training. The courses address applicable waste management procedures and use of emergency and monitoring equipment.

4.1.24 Hanford Fire Department Training

The Hanford Fire Department personnel complete specific courses in preparation for work assignments, including hazardous material and dangerous waste training courses. The courses address applicable waste management procedures, U.S. Department of Energy directives, applicable policies, and federal and state regulations. The courses include the implementation of applicable contingency plans and use of emergency and monitoring equipment.

Hanford Fire Department fire fighters meet the requirements of the National Fire fighters Protection Association [NFPA 472 and 1001 (NFPA 1989)], 29 CFR 1910.1200 and 1910.120 (paragraph Q), and the Washington State requirements for emergency medical personnel response (WAC 118-40-190).

4.1.25 Sampling Mobile Labs Training

Sampling Mobile labs personnel have training in handling Hazardous materials including the requirements associated with collecting and handling of RCRA and CERCLA Protocol Sampling.

4.1.26 Nonessential Personnel Training

Employees not identified as essential personnel and other U.S. Department of Energy-contractor personnel who must enter T Plant are required to complete "Facility Orientation" or must be escorted. Non-U.S. Department of Energy-contractor personnel must complete a security and safety orientation before working in or around T Plant.

9 3 1 2 8 9 8 0 7 5 8

4.2 Job Positions and Training

Job positions dealing with hazardous waste fall into four general categories with different levels of authority and training requirements. Training is based on the job category and the need based on the job description.

4.2.1 Shipper

The shipper insures compliance with Federal and State codes and regulations. The shipper also provides direction to other organizations as required to insure a complete understanding of the requirements dealing with hazardous materials and dangerous waste.

4.2.2 Management

Management must be able to take control of a situation, provide direction to return conditions to a safe and stable state, and provide a plan to fully recover and prevent recurrence. Management involved in emergency planing is required to have a thorough understanding of the facility and hazardous waste management practices.

4.2.3 General workers

General workers fall into three categories at T Plant. The workers who generate, package, and handle hazardous waste. Waste handlers require training specific to the facility and to the type of waste and handling required.
Transportation personal transport the waste from the facility to the TSD facility and require a thorough understanding of the requirement for transporting waste.
Procedure writers provide direction to the facility operations and maintenance personal. The procedure writers need to be aware of when they are causing waste to be generated, how to handle waste, and ways to minimize waste.

4.2.4 All Employees

All employees need to have an awareness of hazardous waste requirements. To be able to recognize when a spill is occurring, and know who to report the spill to. All employees must have the basic knowledge necessary to protect them self from hazardous chemicals.

5.0 Training Manager

The T Plant Training Manager is responsible for the over all training plan for T Plant personal. The training manager with the assistance of other T Plant managers defines the training requirements for T Plant personal. The responsibility for insuring that all personal have the required training is shared among T Plant management; Technical Training; Occupational Health and Safety; Solid Waste Engineering Services; Fleet Operations, Transportation, Maintenance Services; and other applicable

5.0 Training Manager (Cont.)

organizations. This distribution of training responsibilities is on page 38. Using the system noted on page 38. T Plant can access training resources and experts in many different areas of hazardous material, dangerous waste, and industrial safety, rather than relying on the knowledge of one person or a small number of individuals. General responsibilities for training are discussed in the following sections.

5.1 T Plant/340 Facility Management Responsibilities

T Plant/340 Facility has the following responsibilities related to training:

- Establishing training requirements for T Plant personal
- Establish facility specific training as required by 29 CFR 1200, 29 CFR 120, and WAC 173-303-330.
- Requesting and/or conducting training
- Maintaining field training records and certifications
- Tracking retraining.

5.2 Training and Education Responsibilities

Section groups with technical training responsibilities are listed in the following sections.

5.2.1 Training Integration and Support

Training Support and Accreditation is responsible for the following:

- Conducting job analysis
- Designing training programs
- Developing training programs
- Providing training program accreditation assistance.

5.2.2 Health and Safety Training

Health and Safety Technical Training is responsible for the following:

- Developing and implementing general training courses to comply with federal and state regulations

- Conducting safety training courses

- Conducting radiation safety training courses

5.2.3 Environmental Training

Environmental training is responsible for the following:

- Developing and implementing general training courses to comply with U.S. Department of Energy directives and federal and state regulations
- Conducting hazardous material and dangerous waste handling and management courses.
- Conducting respiratory protection classes.

5.2.4 Training Records

Training Records is responsible for the following:

- Operating and maintaining central training record files
- Notifying management of retraining requirements for employees.

5.2.5 Radiological Safety Training

Health Physics Technical Training is responsible for the following:

- Establishing health physics personnel training requirements
- Developing and conducting health physics on-the-job training
- Maintaining health physics technician field training records and certifications
- Tracking health physics technician retraining.

5.2.6 Fundamentals Training

Fundamentals Training is responsible for the following:

- Developing training courses and programs for processing and analytical laboratories employees
- Developing and providing study material and examinations
- Tracking retraining
- Preparing and administering examinations
- Conducting laboratory fundamentals training for new hires
- Coordinating classes and other training requirements to complete and maintain certifications or qualifications
- Conducting laboratory on-the-job training

5.2.6 Fundamentals Training

- Developing and maintaining on-the-job training requirements
- Providing instruction for selected courses.

5.2.7 Operations Technical Training

Operations technical Training is responsible for the following:

- Develop update and maintain training courses/program for T Plant employees
- Develop, update, and maintain manuals, lesson plans, exam bank, OJT, and study guides.
- Administering and documenting examinations
- Coordinating classes and other training requirements to complete and maintain certifications
- Developing and maintaining On-The-Job training requirements.
- Conduct classroom instruction and/or demonstrations
- Track retraining

5.2.8 Maintenance Training

Maintenance training is responsible for developing training materials and providing instruction for maintenance personnel.

5.3 Occupational Health and Safety Responsibilities

Training responsibilities for this organization include the following:

- Maintaining current knowledge of Occupational Safety and Health Administration regulations
- Ensuring compliance with Occupational Safety and Health Administration regulations through audits, design and procedure reviews, and surveillances
- Providing instructions for selected safety classes
- Consulting with Technical Training in the development and reevaluation of current training programs.

8.0 Implementation of Training Program

Qualification for T Plant personnel is required before working without supervision. Qualification requires personnel to successfully complete identified classroom and on-the-job training requirements. Qualification requires management to successfully complete self-study, classroom, and on-the-job training requirements. Training content is reviewed and updated as appropriate.

General training of new employees is to be completed within the first 6 months of assignment to T Plant. After the initial training, employees are required to re-qualify annually or biennially as applicable. Unqualified employees are not permitted to work at the T Plant without the supervision of a qualified and/or certified employee. The Facility Operations manager is responsible for ensuring that new employees are trained and that qualifications and certifications are maintained. the training requirements for all T Plant Personnel, by job classification, as directed by WHC-CM-5-34, Section 1.8 "Training Administration".

Official training record files for T Plant employees are stored in the Training Records Information System. This database is managed by the Technical Training Records organization. Technical Training Records inputs the completed training records into a computer file. The computer file is accessible on a local area network to allow remote accessing of employee training records via a computer terminal. A tickler file is available from the database to inform the Facility Operations manager when training is within 90 days of expiration. A computerized copy of completed training and qualifications for T Plant employees is available at the facility or from the T Plant/340 Facility management. Training records for supporting organizations also are stored in the Training Records Information System, and copies of completed training and qualifications are available at the respective organization's locations. Training records on former employees will be kept for 3 years from the date the employee last worked at T Plant.

Specific employee training records are protected under the Privacy Act and as such and are not releasable.

9.0 Training Requirements

The following courses, arranged according to the four categories implement the classroom program requirements for dangerous waste management. After personnel are categorized, the training courses must be evaluated for applicability. Please note that only the initial training course title is listed, even though the re-qualification training course title may differ.

6.0 Relevance of Training to Job Position

The training program for T Plant was developed after an initial job analysis was completed. Tasks performed by the responsible organizations were identified and evaluated to determine training requirements. In addition, training needs are assessed in relation to current federal and state regulations on a continual basis. These evaluations could result in modifying or adding new material to the current training program.

Qualification is required for the T Plant Operations manager, T Plant Operations supervisors, and nuclear operators who work in T Plant. To become qualified, an employee must successfully complete classroom training and on-the-job training. Classroom instruction is designed to provide employees with fundamental knowledge required to perform work safely at T Plant.

On-the-job training requires personnel to gain experience with what is contained in the operating procedures. All work that involves hazardous material and dangerous waste is performed according to approved operating procedures and assorted documents; therefore, an understanding of procedures is crucial to ensure the proper and safe operation of T Plant. Understanding is accomplished by having individuals perform, simulate, and/or describe a particular task as specified by the appropriate operating procedure. The individual demonstrating the required skills and knowledge under the direct supervision of a trained experienced supervisor

A Facility specific course is currently being generated to certify Operators as T Plant Hazardous Waste Handlers.

7.0 Training to Emergency Response

Effective response to emergencies, and familiarity with emergency equipment and emergency systems, are covered under the classroom and on-the-job training requirements.

Federal and state regulations require that personnel be able to respond effectively to emergencies and that personnel be familiar with emergency procedures, emergency equipment, and emergency systems. Specific topics addressed include the following:

- Building emergency director training
- T Plant building emergency plan checklist training

Attachment 4

T PLANT INSPECTION MATRIX

The purpose of this Inspection Matrix is to provide a mechanism to ensure the requirements of WAC 173-303-320 are met at T Plant. This matrix serves primarily as a schedule that indicates the frequency of inspection for specific items as required by WAC 173-303.

Instructions for using this matrix are as follows: Table 1 provides a list of all the inspections/surveillance performed at T Plant related to dangerous or mixed waste management. The frequency of these inspections and the procedure that directs the inspections are also identified. The scope of each inspection is detailed in the procedure itself.

As an alternative, Table 2 can be used to identify which items are inspected by each type of inspection. In Table 2 the first column "Content of Inspection", lists all the items that WAC 173-303 requires to be inspected at a waste management facility. The number, "#", in the center column corresponds to the type of inspection found in Table 1. The far right hand column, "Organization", reflects the organization within T Plant that is responsible for inspecting that item.

Table 1

Type of Inspection	Freq.	Procedure
1) 90 Day Pads (Operations)	weekly	DO-040-016
2) 90 Day Pads (Env. Control)	monthly	Env. Control Manual
3) Satellite Accumulation Areas (Operations)	weekly	DO-040-016
4) Satellite Accumulation Areas (Env. Control)	monthly	Env. Control Manual
5) Nonroutine surveillance	monthly	Env. Control Manual
6) Emergency response equipment	weekly	In progress - Estimated completion November 25, 1992
7) TSD tank systems	daily	DO-040-001
8) Ignitable and reactive waste storage areas	yearly	N/A

9 3 1 2 8 9 8 0 7 6 5

Attachment 4

Table 2

Content of Inspection	#	Organization
Condition of containers	1-4	Operations and Env. Control
Integrity of storage pad containment system	1	Operations
Container labeling	1-4	Operations and Env. Control
Closure of containers	1,3	Operations
Aisle space	1	Operations
Accumulated liquid in containment system	1,2	Operations and Env. Control
Fire extinguishers	6,2	Operations and Env. Control
Spill response kits	6,2	Operations and Env. Control
Eye washes	6,2	Operations and Env. Control
Emergency communication system	6	Operations
Safety showers	6	Operations
Spill prevention controls	7	Operations
Overfill prevention controls	7	Operations
Tank system labels	7	Operations
Tank levels	7	Operations
Orphan drums	5	Env. Control
Nonreported spills	5	Env. Control
Unapproved hazardous waste and material storage locations	5	Env. Control
Ignitable and reactive waste storage locations	8	Hanford Fire Department

9 3 1 2 8 9 8 0 7 6 6

WEEKLY INSPECTION LOG
GENERATING FACILITY TEMPORARY
HAZARDOUS WASTE STORAGE AREA

DATE _____

FACILITY _____

LOCATION _____

	STATUS		
	NO PROBLEMS NOTED	REQUIRED REMEDIAL ACTIONS/DATE	SEE COMMENTS
1. CONTAINER CONDITION AND COMPLIANCE			
A. CLOSED	☐	☐ _____	☐
B. STRUCTURAL DEFECTS	☑	☐ _____	☐
C. CORROSION	☑	☐ _____	☐
D. LABELS REQUIRED	☑	☐ _____	☐
E. EVIDENCE OF SPILLS OR LEAKING	☑	☐ _____	☐
F. INCOMPATIBLE CONTAINERS SEPARATED	☑	☐ _____	☐
G. CONTAINER ACCUMULATION DATE COMPLIANT	☑	☐ _____	☐
2. SAFETY/EMERGENCY EQUIPMENT			
A. ABSORBENTS	☑	☐ _____	☐
B. OVERPACK DRUMS	☑	☐ _____	☐
C. EYEWASH	☑	☐ _____	☐
D. FIRE EXTINGUISHER	☑	☐ _____	☐
E. COMMUNICATION EQUIPMENT	☑	☐ _____	☐
F. PROTECTIVE CLOTHING	☑	☐ _____	☐
G. RESPIRATORS/CARTRIDGES	N/A	☐ _____	☐

3. COMMENTS

4. STATUS OF OUSTANDING ACTIONS PREVIOUS INSPECTION

5. INSPECTOR SIGNATURE

PRINT NAME _____

SIGN NAME _____

9312.8980767

1987 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
MAR: WEEK #2 03/12/87	YES	#1, ITEMS A,B,D	#1,ITEM A-CLOSED #1,ITEM B-CLOSED #1,ITEM D-CLOSED
MAR: WEEK #3 03/16/87	YES	#1, ITEM C	#1,ITEM C-CLOSED
MAR: WEEK #4 03/23/87 AND 03/31/87	YES	#1, ITEM A	#1,ITEM A-CLOSED
APR: WEEK #1 04/06/87	YES	NONE	N/A
ARP: WEEK #2 04/13/87	YES	NONE	N/A
APR: WEEK #3 04/20/87	YES	NONE	N/A

NOTE: PAST DANGEROUS WASTE INSPECTION RECORDS FOR T-PLANT DID NOT START UNTIL MARCH 12,1987.

1987 SUMMARY: 9 3 1 2 8 9 8 0 7 6 9

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
APR: WEEK #4 04/28/87	YES	NONE	N/A
MAY: WEEK #1 05/04/87	YES	NONE	N/A
MAY: WEEK #2 05/11/87	YES	NONE	N/A
MAY: WEEK #3 05/19/87	YES	NONE	N/A
MAY: WEEK #4 05/26/87	YES	NONE	N/A
JUNE: WEEK #1 06/02/87	YES	NONE	N/A
JUNE: WEEK #2 06/09/87	YES	NONE	N/A
JUNE: WEEK #3 06/16/87	YES	NONE	N/A
JUNE: WEEK #4 06/22/87 AND 06/30/87	YES	NONE	N/A

1987 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
JULY: WEEK #1 07/07/87	YES	NONE	N/A
JULY: WEEK #2 07/14/87	YES	NONE	N/A
JULY: WEEK #3 07/21/87	YES	NONE	N/A
JULY: WEEK #4 07/28/87	YES	NONE	N/A
AUG: WEEK #1 08/04/87	YES	NONE	N/A
AUG: WEEK #2 08/10/87	YES	#1 ITEM E	#1,ITEM E-CLOSED
AUG: WEEK #3 08/17/87	YES	NONE	N/A
AUG: WEEK #4 08/24/87 AND 08/31/87	YES	NONE	N/A
SEPT: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A
SEPT: WEEK #2 09/08/87 AND 09/14/87	YES	NONE	N/A

1987 SUMMARY: 9 3 1 2 8 9 8 0 7 7 1

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
SEPT: WEEK #3 09/21/87	YES	NONE	N/A
SEPT: WEEK #4 09/28/87	YES	NONE	N/A
OCT: WEEK #1 10/05/87	YES	NONE	N/A
OCT: WEEK #2 10/12/87	YES	NONE	N/A
OCT: WEEK #3 10/19/87	YES	NONE	N/A
OCT: WEEK #4 10/26/87	YES	NONE	N/A
NOV: WEEK #1 11/02/87	YES	NONE	N/A
NOV: WEEK #2 11/09/87	YES	NONE	N/A
NOV: WEEK #3 11/16/87	YES	NONE	N/A
NOV: WEEK #4 11/23/87 AND 11/30/87	YES	NONE	N/A
DEC: WEEK #1 12/07/87	YES	NONE	N/A

1987 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
DEC: WEEK #2 12/14/87	YES	NONE	N/A
DEC: WEEK #3 12/21/87	YES	NONE	N/A
DEC: WEEK #4 12/28/87	YES	NONE	N/A

WEEKLY INSPECTION LOG
GENERATING FACILITY TEMPORARY
HAZARDOUS WASTE STORAGE AREA

DATE _____

FACILITY _____

LOCATION _____

	STATUS		
	NO PROBLEMS NOTED	REQUIRED REMEDIAL ACTIONS/DATE	SEE COMMENTS
1. CONTAINER CONDITION AND COMPLIANCE			
A. CLOSED	☐	☐ _____	☐
B. STRUCTURAL DEFECTS	☐	☐ _____	☐
C. CORROSION	☐	☐ _____	☐
D. LABELS REQUIRED	☐	☐ _____	☐
E. EVIDENCE OF SPILLS OR LEAKING	☐	☐ _____	☐
F. INCOMPATIBLE CONTAINERS SEPARATED	☐	☐ _____	☐
G. CONTAINER ACCUMULATION DATE COMPLIANT	☐	☐ _____	☐
2. SAFETY/EMERGENCY EQUIPMENT			
A. ABSORBENTS	☐	☐ _____	☐
B. OVERPACK DRUMS	☐	☐ _____	☐
C. EYEWASH	☐	☐ _____	☐
D. FIRE EXTINGUISHER	☐	☐ _____	☐
E. COMMUNICATION EQUIPMENT	☐	☐ _____	☐
F. PROTECTIVE CLOTHING	☐	☐ _____	☐
G. RESPIRATORS/CARTRIDGES	☐	☐ _____	☐

3. COMMENTS

4. STATUS OF OUSTANDING ACTIONS PREVIOUS INSPECTION

5. INSPECTOR SIGNATURE

_____
PRINT NAME

_____
SIGN NAME

1988 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE	LIST OF NOTED DEFICIENCIES	DEFICIENCY OPEN OR CLOSED
JAN: WEEK #1 01/04/88	YES	NONE	N/A
JAN: WEEK #2 01/11/88	YES	NONE	N/A
JAN: WEEK #3 01/18/88	YES	NONE	N/A
JAN: WEEK #4 01/25/88	YES	NONE	N/A
FEB: WEEK #1 02/01/88	YES	NONE	N/A
FEB: WEEK #2 02/08/88	YES	NONE	N/A
FEB: WEEK #3 02/16/88	YES	NONE	N/A
FEB: WEEK #4 02/23/88 AND 02/29/88	YES	NONE	N/A
MAR: WEEK #1 03/07/88	YES	NONE	N/A
MAR: WEEK #2 03/14/88	YES	NONE	N/A
MAR: WEEK #3 03/21/88	YES	NONE	N/A
MAR: WEEK #4 03/28/88	YES	NONE	N/A

1988 SUMMARY: 9 3 1 2 8 9 8 0 7 7 5

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE	LIST OF NOTED DEFICIENCIES	DEFICIENCY OPEN OR CLOSED
APR: WEEK #1 04/04/88	YES	NONE	N/A
APR: WEEK #2 04/11/88	YES	NONE	N/A
APR: WEEK #3 04/18/88	YES	NONE	N/A
APR: WEEK #4 04/25/88	YES	NONE	N/A
MAY: WEEK #1 05/02/88	YES	NONE	N/A
MAY: WEEK #2 05/09/88	YES	NONE	N/A
MAY: WEEK #3 05/16/88	YES	NONE	N/A
MAY: WEEK #4 05/23/88 AND 05/31/88	YES	NONE	N/A
JUNE: WEEK #1 06/06/88	YES	NONE	N/A
JUNE: WEEK #2 06/13/88	YES	NONE	N/A
JUNE: WEEK #3 06/20/88	YES	NONE	N/A
JUNE: WEEK #4 06/27/88	YES	NONE	N/A

1988 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE	LIST OF NOTED DEFICIENCIES	DEFICIENCY OPEN OR CLOSED
JULY: WEEK #1 07/06/88	YES	NONE	N/A
JULY: WEEK #2 07/11/88	YES	NONE	N/A
JULY: WEEK #3 07/18/88	YES	NONE	N/A
JULY: WEEK #4 07/25/88	YES	NONE	N/A
AUG: WEEK #1 08/02/88	YES	NONE	N/A
AUG: WEEK #2 08/10/88	YES	NONE	N/A
AUG: WEEK #3 08/17/88	YES	NONE	N/A
AUG: WEEK #4 08/22/88 AND 08/29/88	YES	NONE	N/A
SEPT: WEEK #1 09/06/88	YES	NONE	N/A
SEPT: WEEK #2 09/12/88	YES	NONE	N/A
SEPT: WEEK #3 09/20/88	YES	NONE	N/A
SEPT: WEEK #4 09/27/88	YES	NONE	N/A

9 3 1 2 8 9 8 0 7 7 7

1988 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE	LIST OF NOTED DEFICIENCIES	DEFICIENCY OPEN OR CLOSED
OCT: WEEK #1 10/03/88	YES	NONE	N/A
OCT: WEEK #2 10/10/88	YES	NONE	N/A
OCT: WEEK #3 10/17/88	YES	NONE	N/A
OCT: WEEK #4 10/24/88 AND 10/31/88	YES	NONE	N/A
NOV: WEEK #1 11/07/88	YES	NONE	N/A
NOV: WEEK #2 11/14/88	YES	NONE	N/A
NOV: WEEK #3 11/21/88	YES	NONE	N/A
NOV: WEEK #4 11/29/88	YES	NONE	N/A
DEC: WEEK #1 12/06/88	YES	NONE	N/A
DEC: WEEK #2 12/13/88	YES	NONE	N/A
DEC: WEEK #3 12/20/88	YES	NONE	N/A
DEC: WEEK #4 12/27/88	YES	NONE	N/A

WEEKLY INSPECTION LOG
TEMPORARY HAZARDOUS WASTE STORAGE AREA
SATTELITE ACCUMULATION AREA

DATE ___ ___ PERFORMED BY ___ _____
PRINT NAME

211-T 90 DAY STORAGE PAD.	ACTION REQUIRED YES	NO
STORAGE PAD		
1. HOUSEKEEPING		
A. CHAIN IN PLACE	___	___
B. WARNING SIGNS IN PLACE	___	___
C. FREE OF DEBRIS	___	___
2. DRUM STORAGE		
A. DRUMS PROPERLY LABELED	___	___
B. SEGREGATED BY COMPATIBILITY	___	___
C. DRUM INTEGRITY	___	___
· CORROSION	___	___
· DAMAGE	___	___
· LEAKS	___	___
· SEALED	___	___
D. DRUMS CONTAINING LIQUID ON PALLETS	___	___
E. ACCUMULATION DATES COMPLIANT	___	___
SATTELITE ACCUMULATION		
1. 221-T SECTION 17 PIPE GALLERY		
A. CONTAINER FREE OF DAMAGE	___	___
B. DRUM PROPERLY LABELED	___	___
C. CONTENT INVENTORY SHEET	___	___
2. 2706-T SLUDGE COLLECTION DRUM		
A. CONTAINER FREE OF DAMAGE	___	___
B. DRUM PROPERLY LABELED	___	___
3. 271-T OIL STORAGE CAGE		
A. CONTAINER FREE OF DAMAGE	___	___
B. DRUM PROPERLY LABELED	___	___
C. CONTENT INVENTORY SHEET	___	___

SAFETY/EMERGENCY EQUIPMENT

		YES	NO
1.	ABSORBENTS AVAILABLE		
2.	OVERPACK DRUMS		
3.	SAFETY SHOWER/EYEWASH		
4.	FIRE EXTINGUISHER		
5.	COMMUNICATION EQUIPMENT		
6.	PROTECTIVE CLOTHING		
7.	RESPIRATORS/CHEMICAL CARTRIDGES		

ACTION REQUIRED COMMENTS

STATUS: OUTSTANDING ACTIONS FROM PREVIOUS INSPECTION -

INSPECTOR SIGNATURE _____

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1989 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE	LIST OF NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
JAN: WEEK #1 01/04/89	YES	NONE	N/A
JAN: WEEK #2 01/10/89	YES	NONE	N/A
JAN: WEEK #3 01/17/89	YES	NONE	N/A
JAN: WEEK #4 01/23/89	YES	NONE	N/A
FEB: WEEK #1 02/07/89	YES	NONE	N/A
FEB: WEEK #2 02/14/89	YES	"211T 90 DAY STORAGE PAD" #1,ITEM B. WARNING SIGNS NOT IN PLACE. #1,ITEM C. TUMBLEWEEDS AND DEBRIS IN PAD.	THESE ITEMS ARE CLOSED.
FEB: WEEK #3 02/21/89	YES	NONE	N/A
FEB: WEEK #4 02/28/89	YES	NONE	N/A
MAR: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A

1989 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
MAR: WEEK #2 03/09/89 AND 03/14/89	YES	03/09/92 - "211T 90 DAY STORAGE PAD" #1, ITEM B. WARNING SIGNS NOT IN PLACE. #1, ITEM C. TUMBLEWEEDS/ DEBRIS IN PAD.	THESE ITEMS ARE CLOSED.
MAR: WEEK #3 03/21/89	YES	NONE	N/A
MAR: WEEK #4 03/28/89	YES	NONE	N/A
APR: WEEK #1 04/04/89	YES	NONE	N/A
APR: WEEK #2 04/10/89	YES	NONE	N/A
APR: WEEK #3 04/17/89	YES	NONE	N/A
APR: WEEK #4 04/24/89	YES	NONE	N/A
MAY: WEEK #1 05/02/89	YES	NONE	N/A
MAY: WEEK #2 05/09/89	YES	NONE	N/A

9 3 1 2 8. 9 8 0 7 8 2

1989 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
MAY: WEEK #3 05/16/89	YES	NONE	N/A
MAY: WEEK #4 05/23/89 AND 05/30/89	YES	NONE	N/A
JUNE: WEEK #1 06/06/89	YES	NONE	N/A
JUNE: WEEK #2 06/12/89	YES	NONE	N/A
JUNE: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A
JUNE: WEEK #4 06/27/89	YES	"211T 90 DAY STORAGE PAD" #1, ITEM C. TUMBLEWEED/DEBRIS LOCATED IN PAD.	THESE ITEMS ARE CLOSED.
JULY: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A
JULY: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A
JULY: WEEK #3 07/20/89	YES	NONE	N/A

1989 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
JULY: WEEK #4 07/24/89	YES	"SATELLITE ACCUMULATION" #2,ITEM A. CONTAINER NOT FREE OF DAMAGE. #2,ITEM B. DRUM NOT PROPERLY LABELED.	#2,ITEM A-CLOSED #2,ITEM B-OPEN
AUG: WEEK #1 08/03/89	YES	"SATELLITE ACCUMULATION" #2,ITEM C. THIRTEEN (13) DRUMS ARE FULL.	THIS ITEM IS CLOSED
AUG: WEEK #2 08/08/89	YES	"211T 90 DAY STORAGE PAD" #1,ITEM A. CHAIN NOT IN PLACE. "SATELLITE ACCUMULATION" #1,ITEM A. CONTAINER NOT FREE OF DAMAGE. #1,ITEM B. DRUM NOT PROPERLY LABELED. #1,ITEM C. NO CONTENT INVENTORY. #2,ITEM C. THIRTEEN (13) DRUMS ARE FULL. * LABELED DRUM PROPERLY ON 8/1	"SATELLITE ACCUMULATION" #1,ITEM A-CLOSED #1,ITEM B-CLOSED #1,ITEM C-OPEN #2,ITEM C-CLOSED
AUG: WEEK #3 08/16/89	YES	"SATELLITE ACCUMULATION" #2,ITEM C. THIRTEEN (13) DRUMS ARE FULL.	THIS ITEM IS CLOSED

1989 SUMMARY: 9 3 1 2 8 9 3 0 7 8 4

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
AUG: WEEK #4 08/22/89 AND 08/29/89	YES	08/22/89 "SATELLITE ACCUMULATION" #2,ITEM B. DRUM NOT PROPERLY LABELED. 08/29/89 #2,ITEM C. THIRTEEN (13) DRUMS ARE FULL.	#2,ITEM B-OPEN #2,ITEM C-CLOSED
SEPT: WEEK #1 09/05/89	YES	NONE	N/A
SEPT: WEEK #2 09/12/89	YES	NONE	N/A
SEPT: WEEK #3 09/19/89	YES	"SATELLITE ACCUMULATION" #2,ITEM C. THIRTEEN (13) DRUMS ARE FULL.	THIS ITEM IS CLOSED
SEPT: WEEK #4 09/27/89	YES	"SATELLITE ACCUMULATION" #2,ITEM C. THIRTEEN (13) DRUMS ARE FULL.	THIS ITEM IS CLOSED
OCT: WEEK #1 10/03/89	YES	"SATELLITE ACCUMULATION" #2,ITEM C. THIRTEEN (13) DRUMS ARE FULL.	THIS ITEM IS CLOSED
OCT: WEEK #2 10/10/89	YES	"SATELLITE ACCUMULATION" #2,ITEM C. THIRTEEN (13) DRUMS ARE FULL. #3,ITEM D. DRUM FULL #4,ITEM D. DRUM FULL #7,ITEM C.NO CONTENT INVENTORY SHEET.	#2,ITEM C-CLOSED #3,ITEM D-CLOSED #4,ITEM D-CLOSED #7,ITEM C-OPEN

1989 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
OCT: WEEK #3 10/17/89	YES	"SATELLITE ACCUMULATION" #2,ITEM C. THIRTEEN (13) DRUMS ARE FULL. #3,ITEM D. DRUM FULL #4,ITEM D. DRUM FULL	#2,ITEM C-CLOSED #3,ITEM D-CLOSED #4,ITEM D-CLOSED
OCT: WEEK #4 10/25/89 AND 10/31/89	YES	"SATELLITE ACCUMULATION" #3,ITEM D. DRUM FULL #4,ITEM D. DRUM FULL #7,ITEM C.NO CONTENT INVENTORY SHEET.	#3,ITEM D-CLOSED #4,ITEM D-CLOSED #7,ITEM C-OPEN
NOV: WEEK #1 11/01/89	YES	NONE	N/A
NOV: WEEK #2 11/09/89 AND 11/14/89	YES	NONE	N/A
NOV: WEEK #3 11/21/89	YES	NONE	N/A
NOV: WEEK #4 11/28/89	YES	NONE	N/A
DEC: WEEK #1 12/06/89	YES	"SATELLITE ACCUMULATION AREAS" #9,ITEM D. FULL DRUM	#9,ITEM D-CLOSED

1989 SUMMARY: 9 3 1 2 8 9 8 0 7 8 6

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
DEC: WEEK #2 12/12/89	YES	"SATELLITE ACCUMULATION" THREE DRUMS WERE IDENTIFIED AS NEEDING INVENTORY SHEETS.	THIS ITEM STILL NEEDS SOME WORK- OPEN
DEC: WEEK #3 12/19/89	YES	"SATELLITE ACCUMULATION" THREE DRUMS WERE IDENTIFIED AS NEEDING INVENTORY SHEETS.	THIS ITEM STILL NEEDS SOME WORK- OPEN
DEC: WEEK #4 12/27/89	YES	"SATELLITE ACCUMULATION" THREE DRUMS WERE IDENTIFIED AS NEEDING INVENTORY SHEETS.	THIS ITEM STILL NEEDS SOME WORK- OPEN

WEEKLY INSPECTION LOG
TEMPORARY HAZARDOUS WASTE STORAGE AREA
SATTELITE ACCUMULATION AREA

DATE ___ ___ PERFORMED BY ___ _____
PRINT NAME

211-T 90 DAY STORAGE PAD.	ACTION REQUIRED YES	NO
STORAGE PAD		
1. HOUSEKEEPING		
A. CHAIN IN PLACE	___	___
B. WARNING SIGNS IN PLACE	___	___
C. FREE OF DEBRIS	___	___
2. DRUM STORAGE		
A. DRUMS PROPERLY LABELED	___	___
B. SEGREGATED BY COMPATIBILITY	___	___
C. DRUM INTEGRITY	___	___
· CORROSION	___	___
· DAMAGE	___	___
· LEAKS	___	___
· SEALED	___	___
D. DRUMS CONTAINING LIQUID ON PALLETS	___	___
E. ACCUMULATION DATES COMPLIANT	___	___
SATTELITE ACCUMULATION		
1. 221-T SECTION 17 PIPE GALLERY		
A. CONTAINER FREE OF DAMAGE	___	___
B. DRUM PROPERLY LABELED	___	___
C. CONTENT INVENTORY SHEET	___	___
2. 2706-T SLUDGE COLLECTION DRUM		
A. CONTAINER FREE OF DAMAGE	___	___
B. DRUM PROPERLY LABELED	___	___
3. 271-T OIL STORAGE CAGE		
A. CONTAINER FREE OF DAMAGE	___	___
B. DRUM PROPERLY LABELED	___	___
C. CONTENT INVENTORY SHEET	___	___

SAFETY/EMERGENCY EQUIPMENT

		YES	NO
1.	ABSORBENTS AVAILABLE		
2.	OVERPACK DRUMS		
3.	SAFETY SHOWER/EYEWASH		
4.	FIRE EXTINGUISHER		
5.	COMMUNICATION EQUIPMENT		
6.	PROTECTIVE CLOTHING		
7.	RESPIRATORS/CHEMICAL CARTRIDGES		

ACTION REQUIRED COMMENTS

STATUS: OUTSTANDING ACTIONS FROM PREVIOUS INSPECTION -

INSPECTOR SIGNATURE _____

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1990 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

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DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE	LIST OF THE NOTED DEFICIENCIES	DEFICIENCY OPEN OR CLOSED.
JAN: WEEK #1 01/02/90	YES	* THREE DRUMS LOCATED IN THE 271T SAA, WERE IDENTIFIED AS NEEDING INVENTORY SHEETS. * NO SAFETY SHOWER NEAR THE SAA.	THESE ITEMS ARE OPEN
JAN: WEEK #2 01/09/90	YES	* THREE DRUMS LOCATED IN THE 271T SAA, WERE IDENTIFIED AS NEEDING INVENTORY SHEETS. * NO SAFETY SHOWER NEAR THE SAA.	THESE ITEMS ARE OPEN
JAN: WEEK #3 01/16/90	YES	* THREE DRUMS LOCATED IN THE 271T SAA, WERE IDENTIFIED AS NEEDING INVENTORY SHEETS. * NO SAFETY SHOWER NEAR THE SAA.	THESE ITEMS ARE OPEN
JAN: WEEK #4 01/23/90 AND 01/30/90	YES	* THREE DRUMS LOCATED IN THE 271T SAA, WERE IDENTIFIED AS NEEDING INVENTORY SHEETS. * NO SAFETY SHOWER NEAR THE SAA.	THESE ITEMS ARE OPEN

1990 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

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DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE	LIST OF THE NOTED DEFICIENCIES	DEFICIENCY OPEN OR CLOSED.
FEB: WEEK #1 02/05/90	YES	NONE	N/A
FEB: WEEK #2 02/12/90	YES	NONE	N/A
FEB: WEEK #3 02/20/90	YES	NONE	N/A
FEB: WEEK #4 02/28/90	YES	NONE	N/A
MAR: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A
MAR: WEEK #2 03/08/90	YES	NONE	N/A
MAR: WEEK #3 03/15/90	YES	NONE	N/A
MAR: WEEK #4 03/22/90 AND 03/28/90	YES	NONE	N/A
APR: WEEK #1 04/05/90	YES	NONE	N/A

1990 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

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DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE	LIST OF THE NOTED DEFICIENCIES	DEFICIENCY OPEN OR CLOSED.
APR: WEEK #2 04/13/90	YES	NONE	N/A
APR: WEEK #3 04/20/90	YES	NONE	N/A
APR: WEEK #4 4/27/90	YES	NONE	N/A
MAY: WEEK #1 05/04/90	YES	NONE	N/A
MAY: WEEK #2 05/10/90	YES	NONE	N/A
MAY: WEEK #3 05/21/90	YES	NONE	N/A
MAY: WEEK #4 05/29/90	YES	NONE	N/A
JUNE: WEEK #1 06/04/90	YES	NONE	N/A
JUNE: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A

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1990 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

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DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE	LIST OF THE NOTED DEFICIENCIES	DEFICIENCY OPEN OR CLOSED.
JUNE: WEEK #3 06/15/90	YES	NONE	N/A
JUNE: WEEK #4 06/26/90	YES	NONE	N/A
JULY: WEEK #1 07/06/90	YES	NONE	N/A
JULY: WEEK #2 07/12/90	YES	NONE	N/A
JULY: WEEK #3 07/18/90	YES	NONE	N/A
JULY: WEEK #4 07/26/90	YES	NONE	N/A
AUG: WEEK #1 08/02/90	YES	NONE	N/A
AUG: WEEK #2 08/09/90	YES	NONE	N/A

1990 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

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DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE3	LIST OF THE NOTED DEFICIENCIES	DEFICIENCY OPEN OR CLOSED.
AUG: WEEK #3 08/15/90	YES	NONE	N/A
AUG: WEEK #4 08/23/90 AND 08/30/90	YES	NONE	N/A
SEPT: WEEK #1 09/06/90	YES	NONE	N/A
SEPT: WEEK #2 09/14/90 AND 09/20/90	YES	NONE	N/A
SEPT: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A
SEPT: WEEK #4 09/27/90	YES	NONE	N/A
OCT: WEEK #1 10/04/90	YES	NONE	N/A

1990 SUMMARY: 9 3 1 2 8 9 8 0 7 9 4

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

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DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE	LIST OF THE NOTED DEFICIENCIES	DEFICIENCY OPEN OR CLOSED.
OCT: WEEK #2 10/11/90	YES	NONE	N/A
OCT: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A
OCT: WEEK #4 10/25/90	YES	NONE	N/A
NOV: WEEK #1 11/02/90	YES	NONE	N/A
NOV: WEEK #2 11/09/90	YES	NONE	N/A
NOV: WEEK #3 11/16/90	YES	NONE	N/A
NOV: WEEK #4 11/29/90	YES	NONE	N/A
DEC: WEEK #1	NO	MISSING INSPEC. RECORD	N/A
DEC: WEEK #2	NO	MISSING INSPEC. RECORD	N/A
DEC: WEEK #3	NO	MISSING INSPEC. RECORD	N/A
DEC: WEEK #4	NO	MISSING INSPEC. RECORD	N/A

WEEKLY SURVEILLANCE LOG

90-DAY STORAGE AREAS AND SATELLITE ACCUMULATION AREAS

Performed by: _____ Date: _____
(Print Name)

Time: _____

	ACTION REQUIRED YES	NO
A.1 Tanks SQ-141 and SQ-142		
a. Safety hazards?	___	___
b. Leaks and/or accumulation of liquids?	___	___
c. Integrity of tanks?	___	___
d. Comments: _____		
A.2 Chemical Loading Pad and Sump		
a. Safety hazards?	___	___
b. Leaks and/or accumulation of liquids?	___	___
c. Integrity of ramp and diked area?	___	___
d. Liquid standing in drain catch basin?	___	___
e. Comments: _____		
A.3 271-T Loading Pad and Sump		
a. Safety hazards?	___	___
b. Leaks and/or accumulation of liquids?	___	___
c. Integrity of ramp and diked area?	___	___
d. Liquid standing in drain catch basin?	___	___
e. Debris in sump pits?	___	___
f. Housekeeping?	___	___
g. Liquid level in sump pits?	___	___
h. Comments: _____		

9 3 1 2 8 9 8 0 7 9 5

	ACTION REQUIRED YES	NO
A.4 Hazardous Waste 90-Day Storage Pad		
a. Safety hazards?	___	___
b. Leaks and/or accumulation of liquids?	___	___
c. Integrity of fence, roof, ramp and diked area?	___	___
d. Liquid standing in drain catch basin?	___	___
e. Drums located in standing water?	___	___
f. Drums are segregated by compatibility?	___	___
g. Total drums stored on the pad? _____		
h. Verify the integrity of the drums:		
Corrosion?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
i. The following signs are posted:		
Hazardous Waste 90-Day Storage		
Authorized Personnel Only		
Contact Hazardous Waste Coordinator L. W. Roberts 3-1713	___	___
Danger! No Smoking, Matches, or Open Lights	___	___
j. Gate locked?	___	___
k. Safety/Emergency equipment in place:		
Absorbent Available?	___	___
Overpack Drums?	___	___
Safety Shower/Eyewash?	___	___
Fire Extinguisher?	___	___
Communication Equipment?	___	___
Protective Clothing?	___	___
Respirators/Chemical Cartridges?	___	___
l. Condition of drum labels?	___	___
m. Comments: _____		

A.5 2706-T 90-Day Storage Pad

a. Safety hazards?	___	___
b. Leaks and/or accumulation of liquids?	___	___
c. Integrity of pad?	___	___
d. Drums are separated by compatibility?	___	___
e. Drums located in standing water?	___	___

	ACTION REQUIRED YES	NO
f. Total drums stored on the pad? _____		
g. Verify the integrity of the drums:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
h. The following signs are posted:		
Hazardous Waste 90-Day Storage		
Authorized Personnel Only		
Contact Hazardous Waste Coordinator L. W. Roberts 3-1713	___	___
Danger! No Smoking, Matches, or Open Lights	___	___
i. Safety/Emergency equipment in place:		
Absorbent Available?	___	___
Overpack Drums?	___	___
Safety Shower/Eyewash?	___	___
Fire Extinguisher?	___	___
Communication Equipment?	___	___
Protective Clothing?	___	___
Respirators/Chemical Cartridges?	___	___
j. Condition of drum labels?	___	___

k. Comments: _____

A.6 271-T Maintenance Shop Non-PCB 1st Floor (SAA-1)

a. Storage area is identified and maintained?	___	___
b. Only Non-PCB waste material is stored in drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___

	ACTION REQUIRED YES	NO
f. SAA-1 Satellite Accumulation Area Non-PCB	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		

A.6 271-T Maintenance Shop Aerosol Cans (SAA-2)

a. Storage area is identified and maintained?	___	___
b. Only aerosol cans are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: SAA-2 Satellite Accumulation Area Aerosol Cans	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		

A.6 271-T Storage Cage Area PCB Storage (SAA-3)

a. Storage area is identified and maintained?	___	___
b. Only PCB waste material is stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___

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	ACTION REQUIRED YES	NO
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
SAA-3 PCB Storage- Caution containing PCB	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

A.6 271-T Storage Cage Area, Crushed Light Bulb Drum (SAA-4)

a. Storage area is identified and maintained?	___	___
b. Only crushed light bulbs are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
SAA-4 Satellite Accumulation Area Crushed Light Bulbs	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

A.6 271-T Storage Cage Area, Regulated Paint Cans (SAA-5)

a. Storage area is identified and maintained?	___	___
b. Only regulated paint cans are stored in the drums?	___	___

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	ACTION REQUIRED YES	NO
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: SAA-6 Satellite Accumulation Area Regulated Paint Cans	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

A.6 271-T Storage Cage Area, Regulated Oil Rags (SAA-6)

a. Storage area is identified and maintained?	___	___
b. Only regulated oil rags are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: SAA-6 Satellite Accumulation Area Regulated Oil Rags	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

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	ACTION REQUIRED YES	NO
A.6 271-T Storage Cage Area, Non-Regulated Paint Rags & Misc (SAA-7)		
a. Storage area is identified and maintained?	___	___
b. Only non-regulated paint cans are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: SAA-7 Satellite Accumulation Area Non-Regulated Paint Rags & Misc.	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		
A.6 271-T Storage Cage Area, Non-Regulated Paint Cans (SAA-8)		
a. Storage area is identified and maintained?	___	___
b. Only regulated paint cans are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: SAA-8 Satellite Accumulation Area Non-Regulated Paint Cans	___	___

	ACTION REQUIRED YES	NO
g. Condition of drum labels?	___	___
h. Comments: _____		

A.6 271-T Storage Cage Area, Non-Regulated Paint Cans (SAA-9)

a. Storage area is identified and maintained?	___	___
b. Only non-regulated latex paint are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: SAA-9 Satellite Accumulation Area Non-Regulated Paint Cans	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		

A.6 271-T Storage Cage Area, Non-Regulated Latex Paint (SAA-10)

a. Storage area is identified and maintained?	___	___
b. Only regulated liquid paint are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___

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	ACTION REQUIRED YES	NO
f. The following signs are posted: SAA-10 Satellite Accumulation Area Non-Regulated Latex Paint	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		

A.6 271-T Storage Cage Area, Regulated Liquid Paint (SAA-11)

a. Storage area is identified and maintained?	___	___
b. Only regulated liquid paint is stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: SAA-11 Satellite Accumulation Area Regulated Liquid Paint	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		

A.6 271-T Storage Cage Area, Non-Regulated Waste Oil (SAA-12)

a. Storage area is identified and maintained?	___	___
b. Only non-regulated waste oil is stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___

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	ACTION REQUIRED YES	NO
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
SAA-12 Satellite Accumulation Area		
Non-Regulated Waste Oil	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

A.7 Regulated Paint Cans - 2706-T Outside Back Pad

a. Storage area is identified and maintained?	___	___
b. Only regulated paint cans and misc. are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
Satellite Accumulation Area	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

9 3 1 2 8 9 8 0 8 0 4

	ACTION REQUIRED YES	NO
A.7 Non-Regulated Waste Oil - 2706-T Outside Back Pad		
a. Storage area is identified and maintained?	___	___
b. Only non-regulated waste oil stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: Satellite Accumulation Area	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		
A.7 Empty Aerosol Cans - 2706-T Outside Back Pad		
a. Storage area is identified and maintained?	___	___
b. Only empty aerosol cans stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: Satellite Accumulation Area	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		

9 3 1 2 8 9 8 0 8 0 5

	ACTION REQUIRED YES	NO
A.7 Non-Regulated Paint Cans - 2706-T Outside Back Pad		
a. Storage area is identified and maintained?	___	___
b. Only non-regulated paint cans stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
Satellite Accumulation Area	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

_____

_____

Operator Signature _____

Manager Signature _____

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1991 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

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DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DIFICIENCIES	DEFICIENCY OPEN OR CLOSED.
JAN: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A
JAN: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A
JAN: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A
JAN: WEEK #4	NO	MISSING INSPECTION RECORD.	N/A
FEB: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A
FEB: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A
FEB: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A

1991 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

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DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DIFICIENCIES	DEFICIENCY OPEN OR CLOSED.
FEB: WEEK #4	NO	MISSING INSPECTION RECORD.	N/A
MAR: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A
MAR: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A
MAR: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A
MAR: WEEK #4	NO	MISSING INSPECTION RECORD.	N/A
APR: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A
APR: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A
APR: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A
APR: WEEK #4	NO	MISSING INSPECTION RECORD.	N/A
MAY: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A
MAY: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A
MAY: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A
MAY: WEEK #4	NO	MISSING INSPECTION RECORD.	N/A

1991 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

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DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DIFICIENCIES	DEFICIENCY OPEN OR CLOSED.
JUNE: WEEK #1 06/07/91	YES	* PROCEDURE DO-040-016 REV. A-0 * A.2, ITEMS B & D A.3, ITEMS B & D A.4, ITEMS K & L A.5, ITEM J	A.2,ITEM B-OPEN, D-OPEN A.3,ITEM B-OPEN, D-OPEN A.4,ITEM K-CLOSED, L-CLOSED A.5,ITEM J-CLOSED
JUNE: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A
JUNE: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A
JUNE: WEEK #4 06/21/91	YES	* PROCEDURE DO-040-016 REV. A-0 * A.2, ITEMS B & D A.3, ITEMS D & G A.4, ITEMS K & L A.6,(SAA-1) ITEM C&F A.6,(SAA-2) ITEM C&E A.6,(SAA-5) ITEM C A.6,(SAA-6) ITEM C A.6,(SAA-7) ITEM C&E A.6,(SAA-8) ITEM C A.7,(REG PAINT CANS) ITEM C. A.7,(NON-REG OIL) ITEM C. A.7,(MT AEROSOL CAN) ITEM C.	A.2,ITEM B-OPEN, D-OPEN A.3,ITEM D-OPEN, G-OPEN A.4,ITEM K-CLOSED, L-CLOSED A.6,(SAA-1),ITEM C-CLOSED, F-CLOSED A.6,(SAA-2),ITEM C-CLOSED, E-CLOSED A.6,(SAA-5),ITEM C-OPEN A.6,(SAA-6),ITEM C-CLOSED A.6,(SAA-7),ITEM C-CLOSED, E-CLOSED A.6,(SAA-8),ITEM C-CLOSED A.7,(REG PAINT CANS),ITEM C-OPEN A.7,(NON REG OIL),ITEM C-OPEN A.7,(MT AEROSOL CANS),ITEM C-OPEN

1991 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DIFICIENCIES	DEFICIENCY OPEN OR CLOSED.
JULY: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A
JULY: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A
JULY: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A
JULY: WEEK #4 07/22/91	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM L A.6,(SAA-6) ITEM G	A.4,ITEM L-CLOSED A.6,(SAA-6),ITEM G-CLOSED
AUG: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A
AUG: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A
AUG: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A

1991 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

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DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DIFICIENCIES	DEFICIENCY OPEN OR CLOSED.
AUG: WEEK #4 08/21/91 AND 08/29/91	YES	* PROCEDURE DO-040-016 REV. A-0 * A.1, ITEMS A & B A.2, ITEMS A,B,C,D A.3, ITEMS A,E,F A.4,ITEM A,D,F,I,K,L A.5, ITEMS I,J A.6,(SAA-1) ITEM A,D A.6,(SAA-2) ITEM A A.6,(SAA-4) ITEM A A.6,(SAA-5) ITEM C,F A.6,(SAA-6) ITEM A,B A.6,(SAA-7) ITEM A A.6,(SAA-8) ITEM A A.6,(SAA-9) ITEMS A,B,C,F A.6,(SAA-10) ITEM C A.6,(SAA-12) ITEMS A,C,F,G A.7,(REG PAINT CANS) ITEMS C, F A.7,(NON-REG OIL) ITEM G A.7,(MT AEROSOL CAN) ITEM C,E,F A.7,(NON-REG PAINT) ITEM D,G	A.1,ITEM A-OPEN, B-CLOSED A.2,ITEM A-CLOSED, B-OPEN, C-CLOSED D-OPEN A.3,ITEM A-CLOSED, E-OPEN, F-CLOSED A.4,ITEM A-CLOSED, D-CLOSED, F-CLOSED, I-OPEN, K-CLOSED, L-CLOSED A.5,ITEM I-CLOSED, J-CLOSED A.6,(SAA-1),ITEM A-OPEN, D-CLOSED A.6,(SAA-2),ITEM A-CLOSED A.6,(SAA-4),ITEM A-CLOSED A.6,(SAA-5),ITEM C-OPEN, F-CLOSED A.6,(SAA-6),ITEM A-OPEN, B-CLOSED A.6,(SAA-7),ITEM A-OPEN A.6,(SAA-8),ITEM A-OPEN A.6,(SAA-9),ITEM A-CLOSED, B-OPEN, C- OPEN F-OPEN A.6,(SAA-10),ITEM C-CLOSED A.6,(SAA-12),ITEM A-OPEN, C-OPEN, F- CLOSED G-OPEN A.7,(REG PAINT CAN),ITEM C-OPEN, F- CLOSED A.7,(NON-REG OIL),ITEM G-OPEN A.7,(MT AEROSOL CAN),ITEM C-OPEN, E- CLOSED F-CLOSED A.7,(NON REG PAINT),ITEM D-CLOSED, G- OPEN
SEPT: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A

1991 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DIFICIENCIES	DEFICIENCY OPEN OR CLOSED.
SEPT: WEEK #2 09/09/91 AND 09/12/91	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM I,L A.6,(SAA-3) ITEM F A.6,(SAA-5) ITEM C	A.4,ITEM I-OPEN, L-CLOSED A.6,(SAA-3),ITEM OPEN A.6,(SAA-5),ITEM C-OPEN
SEPT: WEEK #3	NO	MISSING INSPEC. RECORD.	N/A
SEPT: WEEK #4 09/26/91	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM K A.6,(SAA-3) ITEM F	A.4,ITEM K-CLOSED A.6,(SAA-3),ITEM F-OPEN
OCT: WEEK #1 10/04/91	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM I,L A.5, ITEMS B,E,G,H,I,J,K A.6,(SAA-3) ITEM F A.6,(SAA-5) ITEM C	A.4,ITEM I-OPEN, L-CLOSED A.5,ITEM B-CLOSED, E-CLOSED, G-CLOSED, H-OPEN, I-CLOSED, J-CLOSED, K-CLOSED A.6,(SAA-3),ITEM F-OPEN A.6,(SAA-5),ITEM C-OPEN
OCT: WEEK #2	NO	MISSING INSPEC. RECORD.	N/A
OCT: WEEK #3	NO	MISSING INSPEC. RECORD.	N/A
OCT: WEEK #4 10/25/91	YES	* PROCEDURE DO-040-016 REV. A-0 * A.2, ITEM D A.4, ITEM I,L A.5, ITEM B,E,G,H,I,J,K A.6,(SAA-5) ITEM C	A.2,ITEM D-OPEN A.4,ITEM I-OPEN, L-CLOSED A.5,ITEM B-CLOSED, E-CLOSED, G-CLOSED, H-OPEN, I-CLOSED, J-CLOSED, K-CLOSED A.6,(SAA-5),ITEM C-OPEN

DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DIFICIENCIES	DEFICIENCY OPEN OR CLOSED.
NOV: WEEK #1 11/07/91	YES	* PROCEDURE DO-040-016 REV. A-0 * A.I, ITEM B A.2, ITEM A,B,D A.3, ITEM A,B,D A.4, ITEM I,K,L A.5 ITEM B,E,I,J,K A.6,(SAA-3) ITEM F A.6,(SAA-5) ITEM C	A.1,ITEM B-CLOSED A.2,ITEM A-CLOSED, B-OPEN, D-OPEN A.3,ITEM A-CLOSED, B-OPEN, D-OPEN A.4,ITEM I-OPEN, K-CLOSED, L-CLOSED A.5,ITEM B-CLOSED, E-CLOSED,I-CLOSED, J-CLOSED, K-CLOSED A.6,(SAA-3),ITEM F-OPEN A.6,(SAA-5),ITEM C-OPEN
NOV: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A
NOV: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A
NOV: WEEK #4	NO	MISSING INSPECTION RECORD.	N/A
DEC: WEEK #1 12/03/91	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM A,L A.5, ITEM B,G	A.4,ITEM A-CLOSED, L-CLOSED A.5,ITEM B-CLOSED, G-CLOSED
DEC: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A
DEC: WEEK #3 12/18/91	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM A,L A.5, ITEM B,G	A.4,ITEM A-CLOSED, L-CLOSED A.5,ITEM B-CLOSED, G-CLOSED

DATE THAT THE INSPECTION WAS PERFORMED.	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF NOTED DIFICIENCIES	DEFICIENCY OPEN OR CLOSED.
DEC: WEEK #4 12/27/91 AND 12/30/91	YES	* PROCEDURE DO-040-016 REV. A-0 * A.1, ITEM B A.2, ITEM B,D A.4, ITEM F,H,K,L A.5, ITEM A,B,C,D,E,H,I,J,K A.6,(SAA-2) ITEM B,C A.6,(SAA-3) ITEMS B,D,F A.6,(SAA-5) ITEM C,F A.6,(SAA-9) ITEM B,F A.6,(SAA-12) ITEM C A.7,(REG PAINT CANS) ITEMS A,C,D,E,F,G A.7,(NON-REG OIL) ITEMS A,C,F,G A.7,(MT AEROSOL CAN) ITEMS C,E,F,G A.7,(NON-REG PAINT) ITEMS B,C,E,F,G	A.1,ITEM B-CLOSED A.2,ITEM B-OPEN, D-OPEN A.4,ITEM F-CLOSED, H-CLOSED, K-CLOSED, L-CLOSED A.5,ITEM A-CLOSED, B-CLOSED, C-CLOSED, D-CLOSED, E-CLOSED, H-OPEN, I-CLOSED, J-CLOSED, K-CLOSED A.6,(SAA-2),ITEM B-CLOSED, C-CLOSED A.6,(SAA-3),ITEM B-CLOSED, D-CLOSED, F-OPEN A.6,(SAA-5),ITEM C-OPEN, F-CLOSED A.6,(SAA-9),ITEM B-OPEN, F-OPEN A.6,(SAA-12),ITEM C-OPEN A.7,(REG PAINT CANS),ITEM A-OPEN, C- OPEN, D-CLOSED, E-CLOSED, F-CLOSED, G-OPEN A.7,(NON REG OIL),ITEM A-OPEN, C-OPEN, F-CLOSED, G-OPEN A.7,(MT AEROSOL CANS),ITEM C-OPEN, E-CLOSED, F-CLOSED, G-OPEN A.7,(NON REG PAINT),ITEM B-OPEN, C- OPEN, E-CLOSED, F-CLOSED, G-OPEN

WEEKLY SURVEILLANCE LOG

90-DAY STORAGE AREAS AND SATELLITE ACCUMULATION AREAS

Performed by: _____ Date: _____
(Print Name)

Time: _____

	ACTION REQUIRED YES	NO
A.1 Tanks SQ-141 and SQ-142		
a. Safety hazards?	___	___
b. Leaks and/or accumulation of liquids?	___	___
c. Integrity of tanks?	___	___
d. Comments: _____		
A.2 Chemical Loading Pad and Sump		
a. Safety hazards?	___	___
b. Leaks and/or accumulation of liquids?	___	___
c. Integrity of ramp and diked area?	___	___
d. Liquid standing in drain catch basin?	___	___
e. Comments: _____		
A.3 271-T Loading Pad and Sump		
a. Safety hazards?	___	___
b. Leaks and/or accumulation of liquids?	___	___
c. Integrity of ramp and diked area?	___	___
d. Liquid standing in drain catch basin?	___	___
e. Debris in sump pits?	___	___
f. Housekeeping?	___	___
g. Liquid level in sump pits?	___	___
h. Comments: _____		

	ACTION REQUIRED YES	NO
A.4 Hazardous Waste 90-Day Storage Pad		
a. Safety hazards?	___	___
b. Leaks and/or accumulation of liquids?	___	___
c. Integrity of fence, roof, ramp and diked area?	___	___
d. Liquid standing in drain catch basin?	___	___
e. Drums located in standing water?	___	___
f. Drums are segregated by compatibility?	___	___
g. Total drums stored on the pad? _____		
h. Verify the integrity of the drums:		
Corrosion?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
i. The following signs are posted:		
Hazardous Waste 90-Day Storage Authorized Personnel Only Contact Hazardous Waste Coordinator L. W. Roberts 3-1713	___	___
Danger! No Smoking, Matches, or Open Lights	___	___
j. Gate locked?	___	___
k. Safety/Emergency equipment in place:		
Absorbent Available?	___	___
Overpack Drums?	___	___
Safety Shower/Eyewash?	___	___
Fire Extinguisher?	___	___
Communication Equipment?	___	___
Protective Clothing?	___	___
Respirators/Chemical Cartridges?	___	___
l. Condition of drum labels?	___	___
m. Comments: _____		

A.5 2706-T 90-Day Storage Pad

a. Safety hazards?	___	___
b. Leaks and/or accumulation of liquids?	___	___
c. Integrity of pad?	___	___
d. Drums are separated by compatibility?	___	___
e. Drums located in standing water?	___	___

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	ACTION REQUIRED YES	NO
f. Total drums stored on the pad? _____		
g. Verify the integrity of the drums:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
h. The following signs are posted:		
Hazardous Waste 90-Day Storage		
Authorized Personnel Only		
Contact Hazardous Waste Coordinator		
L. W. Roberts 3-1713	___	___
Danger! No Smoking, Matches, or Open Lights	___	___
i. Safety/Emergency equipment in place:		
Absorbent Available?	___	___
Overpack Drums?	___	___
Safety Shower/Eyewash?	___	___
Fire Extinguisher?	___	___
Communication Equipment?	___	___
Protective Clothing?	___	___
Respirators/Chemical Cartridges?	___	___
j. Condition of drum labels?	___	___

k. Comments: _____

A.6 271-T Maintenance Shop Non-PCB 1st Floor (SAA-1)

a. Storage area is identified and maintained?	___	___
b. Only Non-PCB waste material is stored in drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___

	ACTION REQUIRED YES	NO
f. SAA-1 Satellite Accumulation Area Non-PCB		
g. Condition of drum labels?	___	___
h. Comments: _____		

A.6 271-T Maintenance Shop Aerosol Cans (SAA-2)

a. Storage area is identified and maintained?	___	___
b. Only aerosol cans are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: SAA-2 Satellite Accumulation Area Aerosol Cans	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		

A.6 271-T Storage Cage Area PCB Storage (SAA-3)

a. Storage area is identified and maintained?	___	___
b. Only PCB waste material is stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___

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	ACTION REQUIRED YES	NO
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
SAA-3 PCB Storage- Caution containing PCB	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

A.6 271-T Storage Cage Area, Crushed Light Bulb Drum (SAA-4)

a. Storage area is identified and maintained?	___	___
b. Only crushed light bulbs are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
SAA-4 Satellite Accumulation Area Crushed Light Bulbs	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

A.6 271-T Storage Cage Area, Regulated Paint Cans (SAA-5)

a. Storage area is identified and maintained?	___	___
b. Only regulated paint cans are stored in the drums?	___	___

	ACTION REQUIRED YES	NO
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
SAA-6 Satellite Accumulation Area Regulated Paint Cans	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

A.6 271-T Storage Cage Area, Regulated Oil Rags (SAA-6)

a. Storage area is identified and maintained?	___	___
b. Only regulated oil rags are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
SAA-6 Satellite Accumulation Area Regulated Oil Rags	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

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	ACTION REQUIRED YES	NO
A.6 271-T Storage Cage Area, Non-Regulated Paint Rags & Misc (SAA-7)		
a. Storage area is identified and maintained?	___	___
b. Only non-regulated paint cans are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: SAA-7 Satellite Accumulation Area Non-Regulated Paint Rags & Misc.	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		
A.6 271-T Storage Cage Area, Non-Regulated Paint Cans (SAA-8)		
a. Storage area is identified and maintained?	___	___
b. Only regulated paint cans are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: SAA-8 Satellite Accumulation Area Non-Regulated Paint Cans	___	___

	ACTION REQUIRED YES	NO
g. Condition of drum labels?	___	___
h. Comments: _____		

A.6 271-T Storage Cage Area, Non-Regulated Paint Cans (SAA-9)

a. Storage area is identified and maintained?	___	___
b. Only non-regulated latex paint are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: SAA-9 Satellite Accumulation Area Non-Regulated Paint Cans	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		

A.6 271-T Storage Cage Area, Non-Regulated Latex Paint (SAA-10)

a. Storage area is identified and maintained?	___	___
b. Only regulated liquid paint are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___

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	ACTION REQUIRED YES	NO
f. The following signs are posted: SAA-10 Satellite Accumulation Area Non-Regulated Latex Paint	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

A.6 271-T Storage Cage Area, Regulated Liquid Paint (SAA-11)

a. Storage area is identified and maintained?	___	___
b. Only regulated liquid paint is stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted: SAA-11 Satellite Accumulation Area Regulated Liquid Paint	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

A.6 271-T Storage Cage Area, Non-Regulated Waste Oil (SAA-12)

a. Storage area is identified and maintained?	___	___
b. Only non-regulated waste oil is stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___

	ACTION REQUIRED YES	NO
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
SAA-12 Satellite Accumulation Area Non-Regulated Waste Oil	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		

A.7 Regulated Paint Cans - 2706-T Outside Back Pad

a. Storage area is identified and maintained?	___	___
b. Only regulated paint cans and misc. are stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
Satellite Accumulation Area	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		

9 3 1 2 9 9 8 0 8 2 4

	ACTION REQUIRED YES	NO
A.7 Non-Regulated Waste Oil - 2706-T Outside Back Pad		
a. Storage area is identified and maintained?	___	___
b. Only non-regulated waste oil stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
Satellite Accumulation Area	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		
A.7 Empty Aerosol Cans - 2706-T Outside Back Pad		
a. Storage area is identified and maintained?	___	___
b. Only empty aerosol cans stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
Satellite Accumulation Area	___	___
g. Condition of drum labels?	___	___
h. Comments: _____		

	ACTION REQUIRED YES	NO
A.7 Non-Regulated Paint Cans - 2706-T Outside Back Pad		
a. Storage area is identified and maintained?	___	___
b. Only non-regulated paint cans stored in the drums?	___	___
c. Content inventory sheet stored with drum?	___	___
d. Drum full? Enter full date: _____	___	___
e. Verify the integrity of the drum:		
Corrosion?	___	___
Damage?	___	___
Bulging?	___	___
Leaking?	___	___
Sealed?	___	___
f. The following signs are posted:		
Satellite Accumulation Area	___	___
g. Condition of drum labels?	___	___

h. Comments: _____

_____

_____

Operator Signature _____

Manager Signature _____

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
JAN: WEEK #1 01/06/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.1, ITEM B A.4, ITEM I A.5, ITEMS A,B,C,D,E,I,J,K A.6,(SAA-5) ITEM C,F A.6,(SAA-9) ITEM B,F A.6,(SAA-12) ITEM C A.7,(REG PAINT CANS) ITEM A,C,D,F,G A.7,(MT AIR.CANS), C A.7,(NON-REG PAINT CANS) ITEM B,C,F,G	A.1,ITEM B-CLOSED A.4,ITEM I-OPEN A.5,ITEM A-CLOSED, B-CLOSED C-CLOSED, D-CLOSED, E-CLOSED, I-CLOSED, J-CLOSED, K-CLOSED A.6,(SAA-5),ITEM C-OPEN, ITEM F-CLOSED A.6,(SAA-9),ITEM B-OPEN, ITEM F-OPEN A.6,(SAA-12),ITEM C-OPEN A.7,(REG PAINT), ITEM A-OPEN, C-OPEN, D-CLOSED, F-CLOSED,G-OPEN A.7,(MT AEROSOL CANS),ITEM C-OPEN A.7,(NR PAINT),ITEM B-OPEN C-OPEN, F-CLOSED, G-OPEN
JAN: WEEK #2	NO	MISS. INSPEC. RECORD.	N/A

1992 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
JAN: WEEK #3 01/15/92	YES	*PROCEDURE # DO-040-016 REV. A-0 * A.1, ITEM B. A.4, ITEM J. A.5, ITEMS A - E A.5, ITEMS I - K A.6, (SAA-5) ITEM C,F A.6, (SAA-9) ITEM B,F A.6, (SAA-12) ITEM C A.7,(REG PAINT CANS) ITEM A, C, D, F, G. A.7(NON-REG OIL)ITM. C,G A.7,(MT AEROSOL),ITEM C A.7,(NON-REG PAINT) ITEMS B, F, G.	A.1,ITEM B-CLOSED A.4,ITEM J-CLOSED A.5,ITEM A-CLOSED, B-CLOSED, C-CLOSED, D-CLOSED, E-CLOSED, I-CLOSED,J-CLOSED A.6,(SAA-5),ITEM C-OPEN, ITEM F-CLOSED A.6,(SAA-9),ITEM B-OPEN, ITEM F-OPEN A.6,(SAA-12),ITEM C - OPEN A.7,(REG PAINT CANS),ITEM A-OPEN C-OPEN, D-CLOSED, F-CLOSED,G-OPEN A.7,(NR OIL),ITEM C-OPEN, ITEM G-OPEN A.7,(MT AEROSOL CANS),ITEM C-OPEN A.7,(NR PAINT),ITEM B-OPEN, F-CLOSED, G-OPEN

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
JAN: WEEK #4 01/24/92 AND 01/28/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.1, ITEM A A.3, ITEM B,D,E A.4, ITEM B,F,I,K,L A.5, ITEM A,B,D,G,J,K A.6,(SAA-1) ITEMS A,B,E,F A.6,(SAA-2) ITEMS A,B,F,G A.6,(SAA-4) ITEMS A,B,E,F A.6,(SAA-5) ITEMS A,B,E A.6,(SAA-6) ITEMS A,B,E,F A.6,(SAA-7) ITEMS A,B,E,F A.6,(SAA-8) ITEMS A,B,E,F A.6,(SAA-12) ITEMS A,B,C,E,F A.7,(REG PAINT CANS) ITEMS B,E A.7,(NON-REG OIL) ITEM E A.7,(MT AEROSOL CAN) ITEM E A.7,(NON-REG PAINT) ITEMS A,B,E,F	A.1,ITEM A-OPEN A.3,ITEM B-OPEN, D-OPEN, E-OPEN A.4,ITEM B-CLOSED,ITEM F-CLOSED I-OPEN, K-CLOSED, L-CLOSED A.5,ITEM A-CLOSED, B-CLOSED, D-CLOSED, G-CLOSED, J-CLOSED, K-CLOSED A.6,(SAA-1),ITEM A-OPEN, B-OPEN, E-CLOSED, F-CLOSED A.6,(SAA-2),ITEM A-CLOSED, B-CLOSED, F-OPEN, G-OPEN A.6,(SAA-4),ITEM A-CLOSED, B-CLOSED, E-CLOSED, F-CLOSED A.6,(SAA-5),ITEM A-OPEN, B-OPEN, E-CLOSED A.6,(SAA-6),ITEM A-OPEN, B-CLOSED E-CLOSED, F-CLOSED A.6,(SAA-7),ITEM A-OPEN, B-CLOSED E-CLOSED, F-CLOSED A.6,(SAA-8),ITEM A-OPEN, B-CLOSED E-CLOSED, F-CLOSED A.6,(SAA-12),ITEM A-OPEN, B-OPEN C-OPEN, E-CLOSED, F-CLOSED A.7,(REG PAINT CANS),ITEM B-OPEN, E-CLOSED A.7,(NON-REG OIL),ITEM E-CLOSED A.7,(MT AEROSOL),ITEM E-CLOSED A.7,(NR PAINT),ITEM A-OPEN, B-OPEN, E-CLOSED, F-CLOSED

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
FEB: WEEK #1 02/04/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEMS B,I,J,K,L A.5, ITEMS G,J A.6,(SAA-1) ITEM A,B A.6,(SAA-3) ITEM G A.6,(SAA-12) ITEM C A.7,(REG PAINT CANS) ITEMS A,F,G A.7,(NON-REG OIL) ITEMS B,G A.7,(MT AEROSOL CAN) ITEM C A.7,(NON-REG PAINT) ITEMS B,C,G	A.4,ITEM B-CLOSED, I-OPEN, J-CLOSED, K-CLOSED, L-CLOSED A.5,ITEM G-CLOSED, J-CLOSED A.6,(SAA-1),ITEM A-OPEN, B-OPEN A.6,(SAA-3),ITEM G-OPEN A.6,(SAA-12),ITEM C-OPEN A.7,(REG PAINT CAN),ITEM A-OPEN, F-CLOSED, G-OPEN A.7,(NR OIL),ITEM B-OPEN, G-OPEN A.7,(MT AEROSOL CAN),ITEM C-OPEN A.7,(NR PAINT),ITEM B-OPEN,C-OPEN G-OPEN
FEB: WEEK #2 02/10/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.1, ITEM B A.2, ITEM B A.3, ITEMS B,D,E A.4, ITEM L A.5, ITEMS E,G,K A.7,(NON-REG PAINT) ITEM G	A.1,ITEM B-CLOSED A.2,ITEM B-OPEN A.3,ITEM B-OPEN, D-OPEN, E-OPEN A.4,ITEM L-CLOSED A.5,ITEM E-CLOSED, G-CLOSED, K-CLOSED A.7,(NR PAINT),ITEM G-OPEN

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
FEB: WEEK #3 02/21/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.1, ITEMS A,B A.2, ITEM D A.3, ITEMS B,D,G A.4, ITEMS B,D,F,I,K,L A.5, ITEMS A,E,G,I,K A.6,(SAA-1) ITEMS A,B,F A.6,(SAA-2) ITEMS A,B,G A.6,(SAA-4) ITEMS A,B,E,F A.6,(SAA-5) ITEMS A,B,F A.6,(SAA-6) ITEMS A,B,F A.6,(SAA-7) ITEMS A,B,F A.6,(SAA-8) ITEMS A,B,F A.6,(SAA-12) ITEMS A,B,C,F A.7,(REG PAINT CANS) ITEMS E,G A.7,(NON-REG OIL) ITEMS E,G A.7,(MT AEROSOL CAN) ITEMS B,E,F,G A.7,(NON-REG PAINT) ITEMS B,E,F,G	A.1,ITEM A-OPEN, B-CLOSED A.2,ITEM D-OPEN A.3,ITEM B-OPEN, D-OPEN, G-OPEN A.4,ITEM B-CLOSED, D-CLOSED, F-CLOSED, I-OPEN, K-CLOSED, L-CLOSED A.5,ITEM A-CLOSED, E-CLOSED, G-CLOSED, I-CLOSED, K-CLOSED A.6,(SAA-1),ITEM A-OPEN, B-OPEN, F-CLOSED A.6,(SAA-2),ITEM A-CLOSED, B-CLOSED, G-OPEN A.6,(SAA-4),ITEM A-CLOSED, B-CLOSED, E-CLOSED, F-CLOSED A.6,(SAA-5),ITEM A-OPEN, B-OPEN, F-CLOSED A.6,(SAA-6),ITEM A-OPEN, B-CLOSED F-CLOSED A.6,(SAA-7),ITEM A-OPEN, B-CLOSED F-CLOSED A.6,(SAA-8),ITEM A-OPEN, B-CLOSED F-CLOSED A.6,(SAA-12),ITEM A-OPEN, B-OPEN, C-OPEN, F-CLOSED A.7,(REG PAINT CAN),ITEM E-CLOSED G-OPEN A.7,(NR OIL),ITEM E-CLOSED,G-OPEN A.7,(MT AEROSOL CAN),ITEM B-OPEN, E-CLOSED, F-CLOSED, G-OPEN A.7,(NR PAINT),ITEM B-OPEN, E-CLOSED, F-CLOSED, G-OPEN

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
FEB: WEEK #4 02/24/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.2, ITEMS D A.3, ITEMS B,D,E A.4,ITEM L A.5, ITEM I,K A.7,(REG PAINT CANS) ITEMS E A.7,(NON-REG OIL) ITEM E,G A.7,(MT AEROSOL CAN) ITEM E,F,G A.7,(NON-REG PAINT) ITEM B,E,F,G	A.2,ITEM D-OPEN A.3,ITEM B-OPEN, D-OPEN, E-OPEN A.4,ITEM L-CLOSED A.5,ITEM I-CLOSED, K-CLOSED A.7,(REG PAINT CAN),ITEM E-CLOSED A.7,(NR OIL),ITEM E-CLOSED,G-OPEN A.7,(MT AEROSOL CAN), ITEM E-CLOSED, F-CLOSED, G-OPEN A.7,(NR PAINT),ITEM B-OPEN, E-CLOSED, F-CLOSED, G-OPEN

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
MAR: WEEK #1 03/04/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.1, ITEMS A,B A.2, ITEMS B,D A.3, ITEMS B,D A.4, ITEMS B,D,F,I,J,K,L A.5, ITEMS A,G,J,K A.6,(SAA-1) ITEM E,F A.6,(SAA-2) ITEM B,G A.6,(SAA-4) ITEM B,E A.6,(SAA-5) ITEM A A.6,(SAA-6) ITEM A A.6,(SAA-7) ITEM A,F A.6,(SAA-8) ITEM A,F A.6,(SAA-12) ITEMS A,C,F A.7,(REG PAINT CANS) ITEMS E,G A.7,(NON-REG OIL) ITEMS B,E,G A.7,(MT AEROSOL CAN) ITEMS B,E,G A.7,(NON-REG PAINT) ITEMS B,E,G	A.1,ITEM A-OPEN, B-CLOSED A.2,ITEM B-OPEN, D-OPEN A.3,ITEM B-OPEN, D-OPEN A.4,ITEM B-CLOSED, D-CLOSED, F-CLOSED, I-OPEN, J-CLOSED, K-CLOSED, L-CLOSED A.5,ITEM A-CLOSED, G-CLOSED, J-CLOSED, K-CLOSED A.6,(SAA-1),ITEM E-CLOSED, F-CLOSED A.6,(SAA-2),ITEM B-CLOSED,G-OPEN A.6,(SAA-4),ITEM B-CLOSED, E-CLOSED A.6,(SAA-5),ITEM A-OPEN A.6,(SAA-6),ITEM A-OPEN A.6,(SAA-7),ITEM A-OPEN,F-CLOSED A.6,(SAA-8),ITEM A-OPEN,F-CLOSED A.6,(SAA-12),ITEM A-OPEN,C-OPEN, F-CLOSED A.7,(REG PAINT CAN),ITEM E-CLOSED G-OPEN A.7,(NR OIL),ITEM B-OPEN, E-CLOSED, G-OPEN A.7,(MT AEROSOL CAN),ITEM B-OPEN, E-CLOSED, G-OPEN A.7,(NR PAINT),ITEM B-OPEN, E-CLOSED, G-OPEN

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
MAR: WEEK #2 03/11/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.I, ITEM B A.2, ITEM B,D A.3, ITEM B A.4, ITEM L A.5 ITEM B,G,I,J A.6,(SAA-1) ITEM A,B A.6,(SAA-4) ITEM B,C A.6,(SAA-5) ITEM C A.6,(SAA-6) ITEM C A.6,(SAA-7) ITEM C A.6,(SAA-8) ITEM C A.6,(SAA-12) ITEM C A.7,(REG PAINT CANS) ITEMS A,G A.7,(NON-REG OIL) ITEMS A,B,C,E,G A.7,(MT AEROSOL CAN) ITEMS A,G A.7,(NON-REG PAINT) ITEMS A,C,E,G	A.1,ITEM B-CLOSED A.2,ITEM B-OPEN, ITEM D-OPEN A.3,ITEM B-OPEN A.4,ITEM L-CLOSED A.5,ITEM B-CLOSED, G-CLOSED, I-CLOSED, J-CLOSED A.6,(SAA-1),ITEM A-OPEN, B-OPEN A.6,(SAA-4),ITEM B-CLOSED, C-CLOSED A.6,(SAA-5),ITEM C-OPEN A.6,(SAA-6),ITEM C-CLOSED A.6,(SAA-7),ITEM C-CLOSED A.6,(SAA-8),ITEM C-CLOSED A.6,(SAA-12),ITEM C-OPEN A.7,(REG PAINT CANS),ITEM A-OPEN, G-OPEN A.7,(NON-REG OIL),ITEM A-OPEN, B-OPEN, C-OPEN, E-CLOSED, G-OPEN A.7,(MT AEROSOL CAN),ITEM A-OPEN, G-OPEN A.7,(NON-REG PAINT),ITEM A-OPEN, C-OPEN, E-CLOSED, G-OPEN

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
MAR: WEEK #3 03/17/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEMS K,L A.5, ITEM I A.7,(REG PAINT CAN) ITEM E A.7,(NON-REG OIL) ITEMS E,G A.7,(MT AEROSOL CAN) ITEMS E,F A.7,(NON-REG PAINT) ITEMS B,E,F,G	A.4,ITEM K-CLOSED, L-CLOSED A.5,ITEM I-CLOSED A.7,(REG PAINT CAN),ITEM E-CLOSED A.7,(NON-REG OIL),ITEM E-CLOSED, G-OPEN A.7,(MT AEROSOL CAN), ITEM E-CLOSED, F-CLOSED A.7,(NON-REG PAINT),ITEM B-OPEN, E-CLOSED, F-CLOSED,G-OPEN
MAR: WEEK #4 03/25/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM L A.5, ITEM I A.7,(REG PAINT CAN) ITEM E A.7,(NON-REG OIL) ITEM E,G A.7,(MT AEROSOL CANS) ITEMS E,F A.7,(NON-REG PAINT) ITEMS B,E,F,G	A.4,ITEM L-CLOSED A.5,ITEM I-CLOSED A.7,(REG PAINT CAN),ITEM E-CLOSED A.7,(NON-REG OIL),ITEM E-CLOSED, G-OPEN A.7,(MT AEROSOL CAN), ITEM E-CLOSED, F-CLOSED A.7,(NON-REG PAINT),ITEM B-OPEN, E-CLOSED, F-CLOSED, G-OPEN
APR: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
APR: WEEK #2 04/14/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEMS B,C,F,I,K,L,M A.5, NOT IN ORDER A.6,(SAA-2) ITEM A,B A.7,(REG PAINT CAN) ITEM E A.7,(NON-REG OIL) ITEMS E,G A.7,(MT AEROSOL CAN) ITEMS E,G A.7,(NON-REG PAINT) ITEMS B,E,F,G	A.4,ITEM B-CLOSED, C-CLOSED, F-CLOSED, I-OPEN, K-CLOSED, L-CLOSED, M-CLOSED A.5,ITEM-CLOSED A.6,(SAA-2),ITEM A-CLOSED, B-CLOSED A.7,(REG PAINT CAN),ITEM E-CLOSED A.7,(NON-REG OIL),ITEM E-CLOSED, G-OPEN A.7,(MT AEROSOL CAN),ITEM E-CLOSED, G-OPEN A.7,(NON REG PAINT),ITEM B-OPEN, E-CLOSED, F-CLOSED, G-OPEN
APR: WEEK #3	NO	MISSING INSPECTION RECORD.	N/A

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
APR: WEEK #4 04/29/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.1, ITEM B A.2, ITEM A,C,D A.3, ITEM B,F A.4, ITEM E,K,L A.5, ITEM A,B,C,D,E,G,H,I,J,K A.6,(SAA-2) ITEM C A.6,(SAA-3) ITEMS C,F,G A.6,(SAA-4) ITEMS A,B,C,D,E,F,G A.6,(SAA-5) ITEM C A.6,(SAA-9) ITEMS A,B,C,D,E,F,G A.6,(SAA-10) ITEMS A,B,C,D,E,F,G A.6,(SAA-11) ITEMS A,B,C,D,E,F,G A.6,(SAA-12) ITEM C A.7,(REG PAINT CAN) ITEMS A,B,C,D,E,F,G A.7,(NON-REG OIL) ITEM A,B,C,D,E,F,G A.7,(MT AEROSOL CANS) ITEMS A,B,C,D,E,F,G A.7,(NON-REG PAINT) ITEMS A,B,C,D,E,F,G	A.1,ITEM B-CLOSED A.2,ITEM A-CLOSED, C-CLOSED,D-OPEN A.3,ITEM B-OPEN, F-CLOSED A.4,ITEM E-CLOSED, K-CLOSED,L-CLOSED A.5,ITEM A-CLOSED, B-CLOSED, C-CLOSED, D-CLOSED, E-CLOSED, G-CLOSED, H-OPEN, I-K=CLOSED A.6,(SAA-2),ITEM C-CLOSED A.6,(SAA-3),ITEM C-OPEN, F-OPEN, G-OPEN A.6,(SAA-4),ITEM A-CLOSED, B-CLOSED, C-CLOSED,D-CLOSED, E-CLOSED, F-CLOSED, G-CLOSED A.6,(SAA-5),ITEM C-OPEN A.6,(SAA-9),ITEM A-CLOSED, B-OPEN, C-OPEN, D-CLOSED, E-CLOSED, F-OPEN, G-CLOSED A.6,(SAA-10),ITEM A-CLOSED, B-G=CLOSED A.6,(SAA-11),ITEM A-CLOSED, B-OPEN, C-CLOSED, D-CLOSED, E-CLOSED, F-CLOSED, G-OPEN A.6,(SAA-12),ITEM C-OPEN A.7,(REG PAINT),ITEM A-OPEN, B-OPEN, C-OPEN, D-CLOSED, E-CLOSED, F-CLOSED, G-OPEN A.7,(NR OIL),ITEM A-OPEN, B-OPEN, C-OPEN, D-E=CLOSED, G-OPEN A.7,(MT AEROSOL),ITEM A-OPEN, B-OPEN,C-OPEN,D-F=CLOSED,G-OPEN A.7,(NR PAINT),ITEM A-OPEN,B-OPEN C-OPEN, D-F=CLOSED, G-OPEN

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
MAY: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A
MAY: WEEK #2	NO	MISSING INSPECTION RECORD.	N/A
MAY: WEEK #3 05/15/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.1, ITEM C A.2, ITEM B A.3, ITEM B,D,G A.4, ITEM F,H,I,L,M A.5, ITEM J A.6,(SAA-2) ITEM C A.6,(SAA-3)ITEM F,G A.6,(SAA-4)ITEM A,F A.6,(SAA-5) ITEM C A.6,(SAA-6) ITEM G A.6,(SAA-12) ITEMS C,E,G	A.1,ITEM C-CLOSED A.2,ITEM B-OPEN A.3,ITEM B-OPEN, D-OPEN, G-OPEN A.4,ITEM F-CLOSED, H-CLOSED, I-OPEN, L-CLOSED, M-CLOSED A.5,ITEM J-CLOSED A.6,(SAA-2),ITEM C-CLOSED A.6,(SAA-3),ITEM F-OPEN, G-OPEN A.6,(SAA-4),ITEM A-CLOSED, F-CLOSED A.6,(SAA-5),ITEM C-OPEN A.6,(SAA-6),ITEM G-CLOSED A.6,(SAA-12),ITEM C-OPEN, E-CLOSED, G-OPEN

1992 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
MAY: WEEK #4 05/27/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM L,M A.5, ITEM J A.6,(SAA-2) ITEM C,G,H A.6,(SAA-3)ITEM F,G A.6,(SAA-4) ITEMS A,F,G A.6,(SAA-11) ITEMS A,G A.6,(SAA-12) ITEM G A.7,(REG PAINT CAN) ITEM A A.7,(NON-REG OIL) ITEM A A.7,(MT AEROSOL CAN) ITEM A A.7,(NON-REG PAINT) ITEM A	A.4,ITEM L-CLOSED, M-CLOSED A.5,ITEM J-CLOSED A.6,(SAA-2),ITEM C-CLOSED, G-OPEN, H-CLOSED A.6,(SAA-3),ITEM F-OPEN, G-OPEN A.6,(SAA-4),ITEM A-CLOSED, F-CLOSED, G-CLOSED A.6,(SAA-11),ITEM A-CLOSED, G-OPEN A.6,(SAA-12),ITEM G-OPEN A.7,(REG PAINT CAN),ITEM A-OPEN A.7,(NR OIL),ITEM A-OPEN A.7,(MT AEROSOL CAN),ITEM A-OPEN A.7,(NR PAINT),ITEM A-OPEN
JUNE: WEEK #1 06/03/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM M A.5, ITEM J A.6,(SAA-2) ITEMS C,D,G,H A.6,(SAA-3)ITEM F,G A.6,(SAA-4)ITEM A,G A.6(SAA-11)ITEM A,G A.6(SAA-12)ITEM B,G A.7(REG PAINT CAN) ITEMS A,G A.7(NR OIL)ITEM A,G	A.4,ITEM M-CLOSED A.5,ITEM J-CLOSED A.6,(SAA-2),ITEM C-CLOSED, D-CLOSED, G-OPEN, H-CLOSED A.6,(SAA-3),ITEM F-OPEN, G-OPEN A.6,(SAA-4),ITEM A-CLOSED, G-CLOSED A.6,(SAA-11),ITEM A-CLOSED, G-OPEN A.6,(SAA-12),ITEM B-OPEN, G-OPEN A.7,(REG PAINT CAN),ITEM A-OPEN G-OPEN A.7,(NR OIL),ITEM A-OPEN,G-OPEN

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
JUNE: WEEK #2 06/09/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM H,L,M A.6,(SAA-2) ITEM A,B,C,G,H A.6,(SAA-3)ITEM F,G A.6,(SAA-4) ITEMS A,F,G A.6,(SAA-7) ITEM B A.6,(SAA-11) ITEMS A,G A.7,(REG PAINT CAN) ITEM A A.7,(NON-REG OIL) ITEM A A.7,(MT AEROSOL CAN) ITEM A A.7,(NON-REG PAINT) ITEM A	A.4,ITEM H-CLOSED, L-CLOSED, M-CLOSED A.6,(SAA-2),ITEM A-CLOSED, B-CLOSED, C-CLOSED, G-OPEN, H-CLOSED A.6,(SAA-3),ITEM F-OPEN, G-OPEN A.6,(SAA-4),ITEM A-CLOSED, F-CLOSED, G-CLOSED A.6,(SAA-7),ITEM B-CLOSED A.6,(SAA-11),ITEM A-CLOSED,G-OPEN A.7,(REG PAINT CAN),ITEM A-OPEN A.7,(NR OIL),ITEM A-OPEN A.7,(MT AEROSOL CAN),ITEM A-OPEN A.7,(NR PAINT),ITEM A-OPEN
JUNE: WEEK #3 06/17/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM H A.5, ITEM H,I A.6,(SAA-2) ITEMS C,E,G,H A.6,(SAA-3)ITEM F,G A.6,(SAA-4)ITEM A,G A.6,(SAA-7) ITEM B A.6,(SAA-8) ITEM C A.6,(SAA-9)ITEM B,F A.6,(SAA-12)ITEM C A.7(NR OIL)ITEM B,G	A.4,ITEM H-CLOSED A.5,ITEM H-OPEN, I-CLOSED A.6,(SAA-2),ITEM C-CLOSED, E-CLOSED, G-OPEN, H-CLOSED A.6,(SAA-3),ITEM F-OPEN, G-OPEN A.6,(SAA-4),ITEM A-CLOSED, G-CLOSED A.6,(SAA-7),ITEM B-CLOSED A.6,(SAA-8),ITEM C-CLOSED A.6,(SAA-9),ITEM B-OPEN, F-OPEN A.6,(SAA-12),ITEM C-OPEN A.7,(NR OIL),ITEM B-OPEN, G-OPEN

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
JUNE: WEEK #4 06/23/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM H,K,M A.5, ITEM H,I,J A.6,(SAA-2) ITEMS C,E,H A.6,(SAA-3)ITEM F,G A.6,(SAA-4) ITEMS A,G A.6,(SAA-9) ITEMS B,F,G A.6,(SAA-12) ITEMS C,G A.7,(REG PAINT CAN) ITEM A A.7,(NON-REG OIL) ITEM A,G A.7,(MT AEROSOL CAN) ITEM A A.7,(NON-REG PAINT) ITEM A	A.4,ITEM H-CLOSED, K-CLOSED M-CLOSED A.5,ITEM H-OPEN, I-CLOSED, J-CLOSED A.6,(SAA-2),ITEM C-CLOSED, E-CLOSED, H-CLOSED A.6,(SAA-3),ITEM F-OPEN, G-OPEN A.6,(SAA-4),ITEM A&G-CLOSED A.6,(SAA-9),ITEM B-OPEN, F-OPEN, G-CLOSED A.6,(SAA-12),ITEM C-OPEN, G-OPEN A.7,(REG PAINT),ITEM A-OPEN A.7,(NR OIL),ITEM A-OPEN, G-OPEN A.7,(MT AEROSOL CAN),ITEM A-OPEN A.7,(NR PAINT),ITEM A-OPEN

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1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
JULY: WEEK #1	NO	MISSING INSPECTION RECORD.	N/A
JULY: WEEK #2 07/08/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.2, ITEM D A.4, ITEM D,L,M A.5, ITEM I,J A.6,(SAA-2) ITEMS C,G,H A.6,(SAA-3)ITEM F,G A.6,(SAA-4) ITEM A A.6,(SAA-9)ITEM F,G A.6,(SAA-12)ITEM C A.7,(REG PAINT CAN) ITEM A A.7,(NON-REG OIL) ITEM A A.7,(MT AEROSOL CAN) ITEM A A.7,(NON-REG PAINT) ITEM A	A.2,ITEM D-OPEN A.4,ITEM D-CLOSED, L-CLOSED, M-CLOSED A.5,ITEM I-CLOSED, J-CLOSED A.6,(SAA-2),ITEM C-CLOSED, G-CLOSED, H-CLOSED A.6,(SAA-3),ITEM F-OPEN, G-OPEN A.6,(SAA-4),ITEM A-CLOSED A.6,(SAA-9),ITEM F-OPEN, G-CLOSED A.6,(SAA-12),ITEM C-OPEN A.7,(REG PAINT),ITEM A-OPEN A.7,(NR OIL),ITEM A-OPEN A.7,(MT AEROSOL),ITEM A-OPEN A.7,(NR PAINT),ITEM A-OPEN

1992 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
JULY: WEEK #3 07/14/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM H,L,M A.5, ITEM H,I,J,K A.6,(SAA-1) ITEM G A.6,(SAA-2) ITEMS C,G,H A.6,(SAA-3)ITEM F,G A.6,(SAA-4)ITEM A,G A.6,(SAA-7) ITEM G A.6,(SAA-12)ITEM C A.7,(REG PAINT CAN) ITEM A,G A.7,(NON-REG OIL) ITEM A,G A.7,(MT AEROSOL.CAN) ITEM A,G A.7,(NON-REG PAINT) ITEM A,G	A.4,ITEM H-CLOSED, L-CLOSED M-CLOSED A.5,ITEM H-OPEN, I-CLOSED, J-CLOSED, K-CLOSED A.6,(SAA-1),ITEM G-CLOSED A.6,(SAA-2),ITEM C-CLOSED, G-OPEN, H-CLOSED A.6,(SAA-3),ITEM F-OPEN, G-OPEN A.6,(SAA-4),ITEM A-CLOSED, G-CLOSED A.6,(SAA-7),ITEM ITEM G-OPEN A.6,(SAA-12),ITEM C-OPEN A.7,(REG PAINT),ITEM A-OPEN, G-OPEN A.7,(NR OIL),ITEM A-OPEN, G-OPEN A.7,(MT AEROSOL),ITEM A-OPEN, G-OPEN A.7,(NR PAINT),ITEM A-OPEN,G-OPEN

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

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DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
JULY: WEEK #4 07/22/92	YES	* PROCEDURE DO-040-016 REV. A-0 * A.4, ITEM H,L A.5, ITEM G,I,J,K A.6,(SAA-1) ITEM G A.6,(SAA-2) ITEMS C,E,G,H A.6,(SAA-3)ITEM F,G A.6,(SAA-4)ITEM A,G A.6,(SAA-7) ITEM G A.6(SAA-12)ITEM C,G A.7,(REG PAINT CAN) ITEM A,G A.7,(NON-REG OIL) ITEM A,G A.7,(MT AEROSOL CAN) ITEM A,G A.7,(NON-REG PAINT) ITEM A,G	A.4,ITEM H-CLOSED, L-CLOSED A.5,ITEM G-CLOSED, I-CLOSED, J-CLOSED, K-CLOSED A.6,(SAA-1),ITEM G-CLOSED A.6,(SAA-2),ITEM C-CLOSED, E-CLOSED, G-OPEN, H-CLOSED A.6,(SAA-3),ITEM F-OPEN, G-OPEN A.6,(SAA-4),ITEM A-CLOSED, G-CLOSED A.6,(SAA-7),ITEM ITEM G-OPEN A.6,(SAA-12),ITEM C-OPEN,G-OPEN A.7,(REG PAINT),ITEM A-OPEN, G-OPEN A.7,(NR OIL),ITEM A-OPEN, G-OPEN A.7,(MT AEROSOL),ITEM A-OPEN, G-OPEN A.7,(NR PAINT),ITEM A-OPEN,G-OPEN

Figure 1. T Plant Weekly Inspection Log Sheet
Sheet 1 of 2

T PLANT WEEKLY INSPECTION LOG SHEET Page 1 of 2 Date of Inspection _____ Time of Inspection _____ Inspection Item	271-T Cage Satellite Accum. Area		211-T <90-day Storage Area		2706-T Satellite Accum. Area		2706-T <90-day Storage Area		2715 Satellite Accumu. Cabinet		Temp. Satellite Accum. Areas (if applicable)		Temp. Satellite Accum. Area (if applicable)		271-T AHU Satellite Accum. Area	
a. Areas in and around area are free of combustibles such as tumbleweeds, paper, rags, trash, etc.	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
b. Fire lanes and inspection aisles are a minimum of 30 inches wide and are clear and unobstructed.	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
c. Containment system (e.g., curbing, flooring, etc.) is free of cracks or gaps.	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
d. Containers are elevated (i.e., palletized) or are otherwise protected from contact with accumulated liquids.	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
e. Markers/barricades (chain barricades, chain-link fences, etc.) around the area are intact and in good condition.	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
f. Area postings are intact, unobscured, legible, and in good condition.	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
g. Area is generally dry. There is no standing water or excessive snow accumulation in the area.	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
h. Containers are free of punctures, dents, bulges, penetrating scratches, loose lids, corrosion, or other damage/deterioration (where possible to detect).	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
i. Containers are closed and show no evidence of spilling or leakage, such as moisture on the sides or underneath (where possible to detect).	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
j. Containers are stored in a manner which will not rupture the containers or cause them to leak (where possible to detect).	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO

Figure 1. T Plant Weekly Inspection Log Sheet
Sheet 2 of 2

T PLANT WEEKLY INSPECTION LOG SHEET Page 2 of 2 Date of Inspection _____ Time of Inspection _____ Inspection Item	271-T Cage Satellite Accum. Area		211-T <90-day Storage Area		2706-T Satellite Accum. Area		2706-T <90-day Storage Area		2715 Satellite Accumu. Cabinet		Temp. Satellite Accum. Areas (if applicable)		Temp. Satellite Accum. Area (if applicable)		271-T AHU Satellite Accum. Area	
k. Container marking/labeling is intact, unobscured, legible, in good condition, and contain the words "hazardous waste" or "dangerous waste".	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
l. Incompatible wastes are separated (acids, bases, flammables, combustibles, reactives, oxidizers).	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
m. All waste stored in the area is listed on the waste inventory.	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
n. Containers have an accumulation date on the marking/labeling and have not exceed this date by 70 days (20 days for PCB waste).	N/A		YES	NO	N/A		YES	NO	N/A		N/A		N/A		N/A	
o. Containers are locked to prevent unauthorized additions.	YES	NO	N/A		YES	NO	N/A		YES	NO	YES	NO	YES	NO	YES	NO

COMMENTS (If NO was circled in any of the above areas, provide an explanation of the conditions found).

INSPECTOR: _____ (sign) _____ (print)

CORRECTIVE ACTIONS (this section must be completed if any items above were checked NO).

SUPERVISOR: _____ DATE: _____

1992 SUMMARY:

WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
AUG: WEEK #1 08/05/92	YES	* PROCEDURE DO-040-016 REV. A-1 * "271-T CAGE SAA" ITEMS D,M "211-T <90 DAY PAD" ITEMS B,M,N "2706-T SAA" ITEMS D,O "2706T <90 DAY PAD" ITEMS M,N "271-T AMU SAA" ITEMS B,D,K,O	"271-T CAGE SAA",ITEM D-OPEN, ITEM M-OPEN "211-T <90 DAY PAD",ITEM B-CLOSED ITEM M-OPEN, ITEM N-CLOSED "2706-T SAA",ITEM D-CLOSED, ITEM O-OPEN "2706-T <90 DAY PAD",ITEM M-OPEN, ITEM N-OPEN "271-T AMU SAA",ITEM B-OPEN, ITEM D-OPEN, ITEM K-OPEN, ITEM O-OPEN
AUG: WEEK #2 08/10/92	YES	* PROCEDURE DO-040-016 REV. A-1 * "271-T CAGE SAA" ITEMS D,M "211-T <90 DAY PAD" ITEMS M,N "2706-T SAA" ITEMS D,O "2706T <90 DAY PAD" ITEMS M,N "271-T AMU SAA" ITEMS B,D,K,O	"271-T CAGE SAA",ITEM D-OPEN, ITEM M-OPEN "211-T <90 DAY PAD",ITEM B-CLOSED ITEM M-OPEN, ITEM N-CLOSED "2706-T SAA",ITEM D-CLOSED; ITEM O-OPEN "2706-T <90 DAY PAD",ITEM M-OPEN, ITEM N-OPEN "271-T AMU SAA",ITEM B-OPEN, ITEM D-OPEN, ITEM K-OPEN, ITEM O-OPEN

1992 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
AUG: WEEK #3 08/19/92	YES	* PROCEDURE DO-040-016 REV. A-1 * "271-T CAGE SAA" ITEMS D,M "211-T <90 DAY PAD" ITEMS M "2706-T SAA" ITEMS D,O "2706T <90 DAY PAD" ITEMS M,N "271-T AMU SAA" ITEMS D,K,O	"271-T CAGE SAA",ITEM D-OPEN, ITEM M-OPEN "211-T <90 DAY PAD",ITEM B-CLOSED ITEM M-OPEN "2706-T SAA",ITEM D-CLOSED, ITEM O-OPEN "2706-T <90 DAY PAD",ITEM M-OPEN, ITEM N-OPEN "271-T AMU SAA",ITEM D-OPEN, ITEM K-OPEN,ITEM O-OPEN
AUG: WEEK #4 08/25/92	YES	* PROCEDURE DO-040-016 REV. A-1 * "271-T CAGE SAA" ITEMS M "2706-T SAA" ITEMS D,M,O "2715 SAA" ITEM M "271-T AMU SAA" ITEMS A,B,D,E,K,O	"271-T CAGE SAA",ITEM M-OPEN "2706-T SAA",ITEM D-CLOSED, ITEM M-OPEN, ITEM O-OPEN "2715 SAA", M-OPEN, "271-T AMU SAA",ITEM A-CLOSED, ITEM B-OPEN, ITEM D-OPEN, ITEM E-OPEN, ITEM K-OPEN, ITEM O-OPEN

1992 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
SEPT: WEEK #1 09/01/92	YES	* PROCEDURE DO-040-016 REV. A-1 * "271-T CAGE SAA" ITEMS A,M "211T <90 DAY PAD" ITEM M "2706-T SAA" ITEMS M,O "271-T AMU SAA" ITEMS A,B,E,F,M,O	"271-T CAGE SAA",ITEM A-CLOSED, ITEM M-OPEN "211-T <90 DAY PAD",ITEM M-OPEN "2706-T SAA",ITEM M-OPEN, ITEM O-OPEN "271-T AMU SAA",ITEM A-CLOSED, ITEM B-OPEN,ITEM E-OPEN, ITEM F-OPEN,ITEM M-OPEN, ITEM O-OPEN
SEPT: WEEK #2 09/11/92	YES	* PROCEDURE DO-040-016 REV. A-1 * "271-T CAGE SAA" ITEMS M "211-T <90 DAY PAD" ITEMS M "2706-T SAA" ITEMS M,O "2706T <90 DAY PAD" ITEMS M "271-T AMU SAA" ITEMS A,B,E,F,O	"271-T CAGE SAA", ITEM M-OPEN "211-T <90 DAY PAD",ITEM M-OPEN "2706-T SAA",ITEM M-OPEN, ITEM O-OPEN "2706-T <90 DAY PAD",ITEM M-OPEN "271-T AMU SAA",ITEM A-CLOSED, ITEM B-OPEN,ITEM E-OPEN, ITEM F-OPEN,ITEM O-OPEN

1992 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

attachment 5

DATE THAT THE INSPECTION WAS PERFORMED	INSPECTION RECORD AVAILABLE/ON FILE.	LIST OF THE NOTED DEFICIENCIES.	DEFICIENCY OPEN OR CLOSED.
SEPT: WEEK #3 09/18/92	YES	* PROCEDURE DO-040-016 REV. A-1 * "271-T CAGE SAA" ITEMS M "211T <90 DAY PAD" ITEM M "2706-T SAA" ITEMS M,O "271-T AMU SAA" ITEMS E,F,O	"271-T CAGE SAA", ITEM M-OPEN "211-T <90 DAY PAD",ITEM M-OPEN "2706-T SAA",ITEM M-OPEN, ITEM O-OPEN "271-T AMU SAA",ITEM E-OPEN, ITEM F-OPEN,ITEM O-OPEN

1992 SUMMARY:
WEEKLY SURVEILLANCE LOGS OF THE <90 DAY HAZARDOUS WASTE STORAGE AND SATELLITE ACCUMULATION AREAS AT THE T-PLANT FACILITY

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SEPT: WEEK #4 09/22/92 AND 09/30/92	YES	* PROCEDURE DO-040-016 REV. A-1 * "271-T CAGE SAA" ITEMS M "211-T <90 DAY PAD" ITEMS K,M,N "2706-T SAA" ITEMS M,O "2706T <90 DAY PAD" ITEMS K,M,N "2715 SAA" ITEM K "271-T AMU SAA" ITEMS B,E,F,K,O	"271-T CAGE SAA", ITEM M-OPEN "211-T <90 DAY PAD", ITEM K-CLOSED,ITEM M-OPEN, ITEM N-CLOSED "2706-T SAA",ITEM M-OPEN, ITEM O-OPEN "2706-T <90 DAY PAD", ITEM K-CLOSED, ITEM M-OPEN, ITEM N-OPEN "2715 SAA",ITEM K-OPEN "271-T AMU SAA",ITEM B-OPEN, ITEM E-OPEN,ITEM F-OPEN, ITEM K-OPEN, ITEM O-OPEN

Attachment 6

SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
A5 - < 90 DAY PAD ITEM I	01/06/92 01/24/92 01/28/92 02/04/92 02/21/92 03/04/92 04/14/92 05/15/92	SIGNS POSTED	CLOSED 10/20/92 BY VISUAL INSPECTION
SAA-5 ITEM C	01/06/92 01/15/92 03/11/92 04/29/92 05/15/92	INVENTORY SHEET AVAILABLE	CLOSED 10/10/92 BY VISUAL INSPECTION
ITEM A	01/24/92 01/28/92 02/21/92 03/04/92	AREA IDENTIFIED	NO LONGER A SEPARATE SAA*
ITEM B	01/24/92 01/28/92 02/21/92	ONLY REGULATED PAINT CANS	CLOSED 10/10/92 BY VISUAL INSPECTION - EMPTY CANS ARE NOT REGULATED
SAA-9 ITEM B	01/06/92 01/15/92 04/29/92 06/17/92 06/23/92	LATEX PAINT ONLY	CLOSED 10/10/92 BY VISUAL INSPECTION - EMPTY CANS DISPOSED OF
ITEM C	04/29/92	INVENTORY SHEET AVAILABLE	CLOSED 10/10/92 BY VISUAL INSPECTION
ITEM F	01/06/92 01/15/92 04/29/92 06/17/92 06/23/92 07/08/92	SIGNS POSTED	NO LONGER A SEPARATE SAA*

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SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
A7 - REGULATED PAINT CANS			
ITEM A	01/06/92 01/15/92 02/04/92 03/11/92 04/29/92 05/27/92 06/03/92 06/09/92 06/23/92 07/08/92 07/14/92 07/22/92	STORAGE AREA IDENTIFIED	NO LONGER A SEPARATE SAA**
ITEM B	01/24/92 01/28/92 04/29/92	ONLY REGULATED PAINT	CLOSED 10/12/92 BY VISUAL INSPECTION
ITEM C	01/06/92 01/15/92 04/29/92	INVENTORY SHEET AVAILABLE	CLOSED 10/12/92 BY VISUAL INSPECTION
ITEM G	01/06/92 01/15/92 02/04/92 02/21/92 03/04/92 03/11/92 06/03/92 07/14/92 07/22/92	DRUMS LABELED	CLOSED 10/12/92 BY VISUAL INSPECTION

SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
A7 - EMPTY AEROSOL CANS			NO LONGER A SEPARATE SAA**
ITEM B	02/21/92 03/04/92 03/11/92 04/29/92 05/27/92 06/09/92 06/23/92 07/08/92 07/14/92 07/22/92	ONLY EMPTY CANS	CLOSED 10/12/92 BY VISUAL INSPECTION
ITEM C	01/06/92 01/15/92 04/29/92	INVENTORY SHEET AVAILABLE	CLOSED 10/12/92 BY VISUAL INSPECTION
ITEM G	02/21/92 02/24/92 03/04/92 03/11/92 04/14/92 04/29/92 07/14/92 07/22/92	DRUMS LABELED	CLOSED 10/12/92 BY VISUAL INSPECTION

SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
A7 - NON REGULATED PAINT ITEM A	01/24/92 01/28/92 03/11/92 04/29/92 05/27/92 06/09/92 06/23/92 07/08/92 07/14/92 07/22/92	AREA IDENTIFIED	NO LONGER A SEPARATE SAA** CLOSED 10/13/92 BY VISUAL INSPECTION
ITEM B	01/06/92 01/15/92 02/21/92 02/24/92 03/04/92 03/17/92 02/25/92 04/14/92 04/29/92	ONLY NON REGULATED PAINT	CLOSED 10/13/92 BY VISUAL INSPECTION
ITEM C	01/06/92 03/11/92 04/29/92	INVENTORY SHEET AVAILABLE	CLOSED 10/13/92 BY VISUAL INSPECTION
ITEM G	01/06/92 01/15/92 01/10/92 02/21/92 02/24/92 03/04/92 03/11/92 03/17/92 03/25/92 04/14/92 04/29/92 07/14/92 07/22/92	DRUMS LABELED	CLOSED 10/13/92 BY VISUAL INSPECTION
2706 T 90 DAY PAD ITEM H	04/29/92 06/17/92 06/23/92 07/14/92	SIGNS POSTED	CLOSED - NO SMOKING IS PERMITTED IN AN SCA.

SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
A7 - NON REGULATED OIL ITEM A	01/24/92 01/28/92 03/11/92 04/29/92 05/27/92 06/03/92 06/09/92 06/23/92 07/07/92 07/14/92 07/22/92	AREA IDENTIFIED	NO LONGER A SEPARATE SAA** CLOSED 10/13/92 BY VISUAL INSPECTION - NO DRUM EXISTS
ITEM B	01/24/92 01/28/92 03/04/92 03/11/92 04/29/92 06/17/92	ONLY NON REGULATED OIL	CLOSED 10/13/92 BY VISUAL INSPECTION - NO DRUM EXISTS
ITEM C	01/06/92 01/15/92 02/04/92 02/11/92 04/29/92	INVENTORY SHEET AVAILABLE	CLOSED 10/13/92 BY VISUAL INSPECTION - MO DRUM EXISTS
ITEM G	01/15/92 02/21/92 02/24/92 03/03/92 03/11/92 03/17/92 03/25/92 04/14/92 04/29/92 06/03/92 06/17/92 06/23/92 07/14/92 07/22/92	DRUM LABELED	CLOSED 10/13/92 BY VISUAL INSPECTION - NO DRUM EXISTS
SQ TANKS ITEM A	02/21/92 03/04/92	SAFETY HAZARD	OPEN - SEE ACTION PLAN - ATTACHMENT 2

SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
271 T LOADING PAD AND SUMP ITEM B	01/24/92 01/28/92 02/10/92 02/21/92 02/24/92 04/04/92 04/11/92 04/29/92 05/15/92	LEAKS	CLOSED - THIS AREA IS NOT CLASSIFIED AS A < 90 DAY PAD OR SAA.
ITEM D	01/24/92 01/28/92 02/10/92 02/21/92 02/24/92 03/04/92 05/15/92	STANDING LIQUID	
ITEM E	01/24/92 01/28/92 02/24/92	DEBRIS IN PITS	
ITEM G	02/21/92 05/15/92	LIQUIDS IN SUMP PITS	
SAA-1 ITEM A	01/24/92 01/28/92 01/04/92 02/21/92 03/11/92	AREA IDENTIFIED	CLOSED - NO LONGER A SEPARATE SAA***
ITEM B	01/24/92 01/28/92 02/21/92 03/11/92	ONLY NON-PCB'S	DRUM CONSOLIDATED WITH NON-PCB DRUM IN 271-T SAA

SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
SAA-2 ITEM F	01/24/92 01/28/92	SIGNS POSTED	CLOSED - NO LONGER A SEPARATE SAA***
ITEM G	01/24/92 01/28/92 02/21/92 03/04/92 05/27/92 06/03/92 06/09/92 06/17/92 07/14/92 07/22/92	DRUMS LABELED	CLOSED 10/10/92 BY VISUAL INSPECTION
SAA-6 ITEM A	01/24/92 01/28/92 02/21/92 03/04/92	AREA IDENTIFIED	CLOSED - NO LONGER A SEPARATE SAA*
SAA-7 ITEM A	01/24/92 01/28/92 02/21/92 03/04/92	AREA IDENTIFIED	CLOSED - NO LONGER A SEPARATE SAA*
ITEM G	07/14/92 07/22/92	DRUMS LABELED	CLOSED 10/10/92 BY VISUAL INSPECTION
SAA-8 ITEM A	01/24/92 01/28/92 02/21/92 03/04/92	AREA IDENTIFIED	CLOSED - NO LONGER A SEPARATE SAA*

SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
SAA-12 ITEM A	02/21/92 03/04/92	AREA IDENTIFIED	CLOSED - NO LONGER A SEPARATE SAA*
ITEM B	02/21/92	ONLY NON REGULATED OIL	OPEN - SEE ACTION PLAN FOR DRUM 221T-92-000305 - ATTACHMENT 2
ITEM C	02/04/92 03/04/92 03/11/92 04/29/92 05/15/92 06/17/92 06/23/92 07/08/92 07/14/92 07/22/92	INVENTORY SHEET AVAILABLE	CLOSED 10/10/92 BY VISUAL INSPECTION
ITEM G	05/15/92 05/27/92 06/03/92 06/23/92 07/22/92	DRUMS LABELED	CLOSED 10/10/92 BY VISUAL INSPECTION
CHEMICAL LOADING PAD AND SUMP ITEM A	02/21/92	SAFETY HAZARD	THIS AREA IS NOT CLASSIFIED AS A < 90 DAY PAD OR SAA.
ITEM B	02/10/92 03/04/92 03/11/92 04/29/92 05/15/92	LEAKS	
ITEM D	02/24/92 03/04/92 03/11/92 07/08/92	STANDING LIQUID	

SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
SAA-3			NO LONGER A SEPARATE SAA*
ITEM C	04/29/92	INVENTORY SHEET AVAILABLE	CLOSED 10/10/92 BY VISUAL INSPECTION
ITEM F	04/29/92 05/15/92 05/27/92 06/03/92 06/09/92 06/17/92 06/23/92 07/08/92 07/14/92 07/22/92	SIGNS POSTED	CLOSED 10/10/92 BY VISUAL INSPECTION
ITEM G	04/29/92 05/15/92 05/27/92 06/03/92 06/09/92 06/17/92 06/23/92 07/08/92 07/14/92 07/22/92	DRUMS LABELED	CLOSED 10/10/92 BY VISUAL INSPECTION
SAA-11			NO LONGER A SEPARATE SAA*
ITEM B	04/29/92	ONLY REGULATED LIQUID PAINT	CLOSED 10/10/92 - NO DRUM EXISTS IN THIS LOCATION FOR THIS WASTE STREAM
ITEM G	05/27/92 06/03/92 06/09/92	DRUMS LABELED	

SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
271-T CAGE SAA ITEM D	08/05/92 08/10/92 08/19/92	ELEVATED CONTAINERS	CLOSED 10/19/92 BY VISUAL INSPECTION
ITEM M	08/05/92 08/10/92 08/19/92 08/25/92 09/01/92 09/11/92 09/18/92 09/22/92 09/30/92	WASTE STORED IS LISTED ON INVENTORY SHEETS	CLOSED 10/19/92 BY VISUAL INSPECTION
211 T < 90 DAY PAD ITEM M	08/05/92 08/10/92 08/19/92 08/25/92 09/01/92 09/11/92 09/18/92 09/22/92 09/30/92	WASTE STORED IS LISTED ON INVENTORY SHEETS	CLOSED 10/19/92 BY VISUAL INSPECTION
2706-T SAA ITEM M	08/25/92 09/01/92 09/11/92 09/18/92 09/22/92 09/30/92	WASTE STORED IS LISTED ON INVENTORY SHEETS	CLOSED 10/19/92 BY VISUAL INSPECTION
ITEM O	08/05/92 08/10/92 08/19/92 08/25/92 09/01/92 09/11/92 09/18/92 09/22/92 09/30/92	LOCKED CONTAINERS	CLOSED 10/19/92 BY VISUAL INSPECTION

SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
2706 T < 90 DAY PAD			
ITEM M	08/05/92 08/10/92 08/19/92 09/11/92 09/22/92 09/30/92	WASTE STORED IS LISTED ON INVENTORY SHEETS	CLOSED 10/19/92 BY VISUAL INSPECTION
ITEM N	08/05/92 08/10/92 08/19/92 09/22/92 09/30/92	ACCUMULATION DATE AND LESS THAN 70 DAYS	OPEN - LEGACY WASTE ITEM - SEE ACTION PLAN - ATTACHMENT 2

SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
271 T AMU SAA ITEM B	08/05/92 08/10/92 08/25/92 09/01/92 09/11/92 09/22/92 09/30/92	FIRE LANES AND INSPECTION ISLES	CLOSED 10/15/92 BY VISUAL INSPECTION
ITEM D	08/05/92 08/10/92 08/19/92 08/25/92	ELEVATED CONTAINERS	CLOSED 10/15/92 BY VISUAL INSPECTION
ITEM E	08/25/92 09/01/92 09/11/92 09/18/92 09/22/92 09/30/92	MARKERS/BARRACADE AROUND AREA	OPEN - AREAS NEEDS CHAIN INSTALLED - ATTACHMENT 2
ITEM F	09/01/92 09/11/92 09/18/92 09/22/92 09/30/92	POSTINGS	CLOSED 10/15/92 BY VISUAL INSPECTION
ITEM K	08/05/92 08/10/92 08/19/92 08/25/92 09/22/92 09/30/92	CONTAINERS LABLED	OPEN - CONTAINERS MUST HAVE LABLES APPLIED - ATTACHMENT 2
ITEM M	09/01/92	WASTE STORED IS LISTED ON INVENTORY SHEETS	OPEN - CONTAINERS MUST BE INVENTORIED - ATTACHMENT 2
ITEM O	08/05/92 08/10/92 08/19/92 08/25/92 09/01/92 09/11/92 09/18/92 09/22/92 09/30/92	LOCKED CONTAINERS	OPEN - CONTAINERS MUST HAVE LOCKING MECHANISMISM INSTALLED - ATTACHMENT 2

SURVEILLANCE ITEM	DATE NOTED	DESCRIPTION	RESOLUTION
2715 SAA ITEM M	08/25/92	WASTE STORED IS LISTED ON INVENTORY SHEETS	CLOSED 10/20/92 BY VISUAL INSPECTION
ITEM K	09/22/92 09/30/92	CONTAINERS LABLED	CLOSED 10/20/92 BY VISUAL INSPECTION

* This was a drum located in 271-T cage SAA. The drum now has a PIN number.

** This was a drum located in 2706-T yard. The drum now has a PIN number.

*** This was a drum located in 271-T Maintenance Shop. The drum now has a PIN number.

APPENDIX C-5

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.

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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 preferable 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 achi compliance with interim status requirements.

Description/Justification of Change

These interim milestones will establish actions necessary for single-shell tank 241-101-T 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 Ecol detailing options, the feasibility of each option, the amount of time necess to implement each option assuming an accelerated schedule, and comparat overall implementation costs associated with securing secondary containment 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 Tank 241-101-T may expedite certain aspects of Milestone M-07-01, M-07-02, and M-07-03. T 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 fig D-1 work schedules).

Approvals ___ Approved ___ Disapproved

DOE — Date

EPA — Date

Ecology — Date

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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.

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APPENDIX C-5A

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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