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|--|------------------------------|---|--------------------------------------|---|---------------------------------|
| (1) Document Number: HNF-EP-0182 | (2) New Revision Number: 205 | <input type="checkbox"/> New | <input type="checkbox"/> Page Change | <input checked="" type="checkbox"/> Full Revision | <input type="checkbox"/> Cancel |
| (3) Impacted Documents: HNF-EP-0182, Rev. 204 | | | (4) File Index Number: N/A | | |
| | | | (5) Effective Date: April 30, 2005 | | |
| (6) Document Title: Waste Tank Summary Report for Month Ending April 30, 2005 | | | | | |
| (7) Change/Release Description: Complete revision - Tables and text updated each month to reflect new status | | | | | |
| (8) Change Justification: DOE-ORP requires this document to be revised and issued monthly | | | | | |
| (9) Approvals: | | | | | |
| (a) Author (Print/Sign): A.N. Naiknimbalkar <i>[Signature]</i> | | | Date: 6/22/05 | | |
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| (c) Reviewer (Optional, Print/Sign): | | | Date: | | |
| (d) Reviewer (Optional, Print/Sign): | | | Date: | | |
| (10) Distribution: | | | | (11) No. of Pages: 42 | |
| (a) Name | (b) MSIN | (a) Name | (b) MSIN | Release Stamp | |
| | | | | <div style="border: 2px solid black; padding: 10px; width: fit-content; margin: auto;"> <p style="font-size: 1.2em; margin: 0;">JUN 23 2005</p> <p style="margin: 0;">DATE: 4</p> <p style="margin: 0; text-align: center;">HANFORD RELEASE</p> <p style="margin: 0;">ID: 8</p> </div> | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| (12) HDCS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | (13) Release Type: <input checked="" type="checkbox"/> Public Release <input type="checkbox"/> Internal Release | | | |
| (14) Release Approval (Print/Sign): Mark A. Williams <i>[Signature]</i> | | | Date: 6/22/05 | | |

WASTE TANK SUMMARY REPORT FOR MONTH ENDING APRIL 30, 2005

AN Naiknimbalkar

CH2M HILL HANFORD GROUP, INC.

Richland, WA 99352

U.S. Department of Energy Contract DE-AC27-99RL14047

EDT/ECN: DRF

UC:

Cost Center:

Charge Code:

B&R Code:

Total Pages: 42

Key Words: MONTHLY REPORT, WASTE TANK SUMMARY

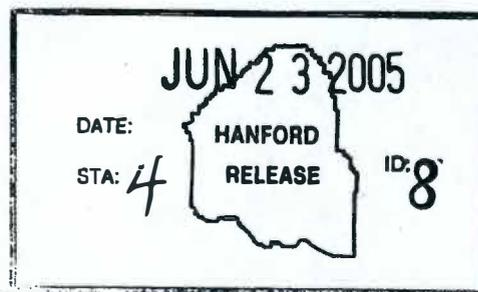
Abstract: See page 9 (Purpose and Scope)

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Release Approval

6/22/05
Date



Release Stamp

Approved For Public Release

0065644

HNF-EP-0182, Rev.205

Waste Tank Summary Report for Month Ending April 30, 2005

A. N. Naiknimbalkar
CH2M HILL Hanford Group, Inc.

RECEIVED
JUL 12 2005

EDMC

Date Published
June 2005

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

CH2MHILL

Hanford Group, Inc.

Richland, Washington

Contractor for the U.S. Department of Energy
Office of River Protection under Contract DE-AC27-99RL14047

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Waste Tank Summary Report for Month Ending April 30, 2005

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

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Hanford Group, Inc.

Richland, Washington

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ACRONYMS

| | |
|------------------|--|
| BBI | Best Basis Inventory |
| CH2M HILL | CH2M HILL Hanford Group, Inc. |
| DCRT | Double-Contained Receiver Tank |
| DIL | Drainable Interstitial Liquid |
| DLR | Drainable Liquid Remaining |
| DST | Double-Shell Tank |
| FSAR | Final Safety Analysis Report effective October 18, 1999 |
| Gal | Gallon |
| GPM | Gallons Per Minute |
| ILL | Interstitial Liquid |
| Kgal | Kilogallons |
| IS | Interim Stabilized |
| MT/FIC/ ENRAF | Manual Tape, Food Instrument Corporation, ENRAF Corporation (surface level measurement devices) |
| OSD | Operating Specifications Document |
| PFP | Plutonium Finishing Plant |
| SHMS | Standard Hydrogen Monitoring System |
| SST | Single-Shell Tank |
| SWL | Salt Well Liquid |
| TMACS | Tank Monitor and Control System |
| TPA | Hanford Federal Facility Consent and Compliance Order, "Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy," as amended (Tri-Party Agreement) |
| TSR | Technical Safety Requirement |
| TWINS | Tank Waste Information Network System |
| USQ | Unreviewed Safety Question |

GLOSSARY

General

Characterization - Characterization is understanding the Hanford tank waste chemical, physical, and radiological properties to the extent necessary to ensure safe storage and interim operation, and ultimate disposition of the waste.

Drainable Interstitial Liquid (DIL) - Drainable Interstitial Liquid is calculated based on saltcake and sludge volumes, calculated porosity values. Interstitial liquid is the liquid that fills the interstitial spaces of the solids waste. The sum of the interstitial liquid contained in saltcake and sludge minus an adjustment for capillary height is the initial volume of DIL. Interstitial liquid that is not held in place by capillary forces will, therefore, migrate or move with gravity.

Drainable Liquid Remaining (DLR) - The total Drainable Liquid Remaining is the sum of drainable interstitial liquid and supernatant.

Supernatant Liquid - The liquid above the solids or in large liquid pools covered by floating solids in waste storage tanks.

Total Waste - For purposes of this document, solids volume (sludge and saltcake including liquids) plus supernatant liquid.

Waste Tank Safety Issue - A potentially unsafe condition in the handling of waste material in underground storage tanks that requires corrective action to reduce or eliminate the unsafe condition. There are currently no waste tank safety issues.

Interim Stabilization (Single-Shell Tanks only)

Interim Stabilized (IS) - A tank which contains less than 50 Kgallons of drainable interstitial liquid and less than 5 Kgallons of supernatant. If the tank was jet pumped to achieve interim stabilization, then the jet pump flow or saltwell screen inflow must also have been at or below 0.05 gpm before interim stabilization criteria are met.

Jet Pump - The centrifugal pump and jet assembly are needed to pump the interstitial liquid from the saltwell screen into the pump pit, nominally a 40-foot elevation rise. Pumping rates vary from 0.05 to about 4 gpm.

Saltwell Screen - The saltwell system is a 10-inch diameter saltwell casing consisting of a stainless steel saltwell screen welded to a Schedule 40 carbon steel pipe. The casing and screen are to be inserted into the 12-inch tank riser located in the pump pit. The stainless steel screen portion of the system will extend through the tank waste to near the bottom of the tank.

Retrieval/Closure-(Single-Shell Tanks only)

Closure (C) - Final closure of the operable units (tank farms) shall be defined as regulatory approval of completion of closure actions and commencement of post-closure actions. For the purposes of this agreement (Hanford Federal Facility Agreement and Consent Order Change Control Form, Change Number M-45-02-03), all units located within the boundary of each tank farm will be closed in accordance with Washington Administrative Code 173-303-610.

Retrieval (R) - The process of removing, to the maximum extent practical, all the waste from a given underground storage tank. The retrieval process is selected specific to each tank and accounts for the waste type stored and the access and support systems available. Generally, retrieval is focused on removal of solids from the tank.

Tank Integrity

Assumed Leaker - The integrity classification of a waste storage tank for which surveillance data indicate a loss of liquid attributed to a breach of integrity.

Sound - The integrity classification of a waste storage tank for which surveillance data indicate no loss of liquid attributed to a breach of integrity.

Surveillance Instrumentation

Annulus - The annulus is the space between the inner and outer shells on DSTs only. Drain channels in the insulating and/or supporting concrete carry any leakage to the annulus space where conductivity probes are installed. The annulus conductivity probes and radiation detectors are the primary means of leak detection for all DSTs.

Automatic FIC - An automatic waste surface level measurement device is manufactured by the Food Instrument Corporation (FIC). The instrument consists of a conductivity electrode (plummet) connected to a calibrated steel tape, a steel tape reel housing and a controller that automatically raises and lowers the plummet to obtain a waste surface level reading. All FIC gauges are read manually. FICs are being replaced by ENRAF detectors (see below).

Drywells - Historically, the drywells were monitored with gross logging tools as part of a secondary leak monitoring system. In some cases, neutron-moisture sensors were used to monitor moisture in the soil as a function of well depth, which could be indicative of tank leakage. The routine gross gamma logging data were stored electronically from 1974 through 1994; a program was initiated in 1995 to log each of the available drywells in each tank farm with a spectral gamma logging system. The spectral gamma logging system provides quantitative values for gamma-emitting radionuclides. The baseline spectral gamma logging database is available electronically.

Spectral drywell scans can be run by special request. A select subset of drywells is routinely monitored by the Vadose Zone Characterization Project to assess movement of gamma-emitting radionuclides in the subsurface.

ENRAF 854 ATG Level Detector - FICs and some manual tapes are in the process of being replaced by the ENRAF ATG 854 level detector. The ENRAF gauge, fabricated by ENRAF Incorporated, determines waste level by detecting variations in the weight of a displacer suspended in the tank waste. ENRAFs and future installations will transmit digital level data to TMACS via an ENRAF Computer Interface Unit (CIU). The CIU allows fully remote communication with the gauge, minimizing tank farm entry.

Laterals - Laterals are horizontal drywells positioned 8 to 10 feet under single-shell waste storage tanks, 3 per tank, to detect radionuclides in the soil which could be indicative of tank leakage. These drywells can be monitored by radiation detection probes. Laterals are located only in A and SX farms. There are currently no functioning laterals and no plan to prepare them for use.

Liquid Observation Well (LOW) - In-tank liquid observation wells are used for monitoring the ILL in single-shell tanks. The wells are usually constructed of fiberglass or TEFZEL-reinforced epoxy-polyester resin (TEFZEL is a trademark of E. I. du Pont de Nemours & Company). A few LOWs constructed of steel. Gamma and neutron probes are used to monitor changes in the ILL, and can indicate intrusions or leakage by increases or decreases in the ILL. There are 70 LOWs installed in SSTs that contain or are capable of containing greater than 50 Kgallons of drainable interstitial liquid. All of the LOWs are monitored weekly with the exception of TX-108 which is monitored by request only. Two LOWs installed in DSTs SY-102 and AW-103 are used for special, rather than routine, surveillance purposes only.

Surface Levels - The surface level measurements in all waste storage tanks are monitored by manual or automatic conductivity probes, and recorded and transmitted or entered into the Surveillance Analysis Computer System.

Thermocouple (TC) - A thermocouple is a thermoelectric device used to measure temperature. More than one thermocouple element on a device (probe) is called a thermocouple tree.

METRIC CONVERSION CHART

| METRIC CONVERSION CHART | | |
|--|---|-------------------|
| 1 inch | = | 2.54 centimeters |
| 1 foot | = | 30.48 centimeters |
| 1 gallon | = | 3.79 liters |
| 1 ton | = | 0.91 metric tons |
| $^{\circ}\text{F} = \left(\frac{9}{5}^{\circ}\text{C}\right) + 32$ | | |
| 1 Btu/h = 0.2931 watts (International Table) | | |

1.0 PURPOSE AND SCOPE

This report is the official inventory for radioactive waste stored in underground tanks in the 200 Areas at the Hanford Site. Data that depict the status of stored radioactive waste and tank vessel integrity are contained within the report. This report provides data on each of the existing 177 large underground waste storage tanks and 60 smaller miscellaneous underground storage tanks and special surveillance facilities, and supplemental information regarding tank surveillance anomalies and ongoing investigations. This report is intended to meet the requirement of U.S. Department of Energy Order 435.1 (DOE-HQ, August 28, 2001, Radioactive Waste Management, U.S. Department of Energy-Washington, D.C.) requiring the reporting of waste inventories and space utilization for the Hanford Site Tank Farm tanks.

2.0 WASTE TANK STATUS

Note: Changes from the previous month are in **bold print**.

| | | |
|---|--|---|
| Double-Shell Tanks (DST) | 28 double-shell | 10/86 - date last DST tank was completed |
| Single-Shell Tanks (SST) | 149 single-shell | 1966 - date last SST tank was completed |
| Assumed Leaker Tanks | 67 single-shell | 07/93 - date last Assumed Leaker was identified |
| Sound Tanks | 28 double-shell 82 single-shell | 1986 - date DSTs determined sound 07/93 - date last SST determined sound |
| Interim Stabilized Tanks ^a (IS) | 149 single-shell | 03/04 - date last IS occurred ^a |
| Retrieval ^b | 13 single-shell | 03/05 - date last Retrieval completed |
| Misc. Underground Storage Tanks (MUST) and Special Surveillance Facilities (Active) | 10 Tanks East Area 7 Tanks West Area | 03/01 - last date a tank was added or removed from MUST list |
| Misc. Underground Storage Tanks (IMUST) and Special Surveillance Facilities (Inactive) ^c | 18 Tanks East Area 25 Tanks West Area | 11/01 - last date a tank was added or removed from IMUST list |

Footnotes:

^a Tanks are declared Interim Stabilized when pumping stops; the tank may be placed in evaluation at this time. Tank U-108 was placed in evaluation on March 18, 2004, due to major equipment failure; documentation was completed August 16 and the declaration letter sent to DOE-RL on September 8, 2004.

Saltwell pumping for the tanks covered by the Consent Decree was completed in March 2004. (Tank C-106 is not included in the Consent Decree and is not Interim Stabilized; Retrieval was completed December 31, 2003). Interim Stabilization documentation has not yet been completed on two tanks: BY-106 and S-111. The Consent Decree table and footnotes have been removed from this document; all actions in this decree have been completed.

^b Tank status for C-104, C-201, C-202, C-203, C-204, S-102, S-103, S-105 and S-106 was changed to "Retrieval," effective October 2002. Tank status for C-103, C-105, C-106, and S-112 was changed to "Retrieval" in October 2003. Retrieval was completed for tank C-106 on December 31, 2003. Retrieval was completed for tank C-203 on March 24, 2005, letter issued to DOE on March 31, 2005. Hanford Federal Facility Agreement and Consent Order (signed August 2004) modified Milestone M-45-00C (Change Order M-45-04-01) changing the regulatory requirements for retrieval of waste in tanks S-103, S-105, and S-106. "Retrieval" status in these tanks is thereby rescinded to allow focusing on the retrieval of wastes and the interim closure of all Waste Management Area C-Farm Single-Shell Tanks.

^c Tables 5-2. and 5-3., the Inactive Miscellaneous Underground Storage Tanks (IMUST) now reflect only those tanks managed by CH2M HILL Hanford Group, Inc. (CH2M HILL).

2.1 WASTE TANK STATUS HIGHLIGHTS

Table 2-1. Single-Shell Tanks in Retrieval Status

| Tank Number | Comments |
|------------------|--|
| 241-C-101 | |
| 241-C-102 | |
| 241-C-103 | |
| 241-C-104 | |
| 241-C-105 | |
| 241-C-106 | Declared "Retrieval Completed," December 31, 2003 |
| 241-C-107 | |
| 241-C-108 | |
| 241-C-109 | |
| 241-C-110 | |
| 241-C-111 | |
| 241-C-112 | |
| 241-C-200 series | C-203- Declared "Retrieval Completed," March 24, 2005 |
| 241-S-102 | Retrieval initiated on December 17, 2004 |
| 241-S-103 | Status rescinded by HFFACO, August 2004 |
| 241-S-105 | Status rescinded by HFFACO, August 2004 |
| 241-S-106 | Status rescinded by HFFACO, August 2004 |
| 241-S-112 | Retrieval in progress |

Table 2-2. Single-Shell Tanks Declared Interim Stabilized
(confirmation letter to DOE not yet sent)

| Tank Number | Comments |
|-------------|---|
| 241-BY-106 | December 31, 2003 (in evaluation) |
| 241-S-111 | December 15, 2003 (in evaluation-major equipment failure) |

Tank AX-103

The interstitial liquid level (ILL) readings are taken quarterly via neutron probe in a liquid observation well (LOW) in this tank. On December 12, 2004, the LOW reading indicated a 2.7-inch decrease from the previous reading (July 5); a repeated reading on December 16 confirmed the decrease. Problem evaluation report (PER)/Occurrence Report RP 2004-0070 "Tank 241-AX-103 Liquid Waste Level Below Established Baseline" was issued.

The LOW reading frequency was increased to weekly. An Assessment team was formed and the assessment process initiated per TFC-ENG-CHEM-D-42, "Tank Leak Assessment Process." The LOW level has increased from the December 12 reading. The LOW level continues to fluctuate with most readings within the tolerance limit of the baseline. Preliminary analysis indicates that the ILL LOW readings are responding to changes in barometric pressure.

The surface level (ENRAF) has shown no change. A level reading in the leak detection pit was obtained on March 31, 2005. The leak detection pit reading showed no increase that would be indicative of a tank leak.

Three of the drywells surrounding AX-103 were logged on March 1 and 2, 2005. All seven drywells surrounding have been logged since January 1, 2005 and the readings show no evidence of any anomalous increase in gamma activity that would be indicative of a tank leak.

The assessment team met on April 20, 2005 and reached a consensus that a leak from tank AX-103 was highly unlikely. Tank 241-AX-103 Leak Assessment Report, RPP-RPT-26501 is being prepared to document the assessment.

3.0 DOUBLE-SHELL TANKS MONTHLY SUMMARY TABLES

Table 3-1. Inventory and Status by Tanks - Double-Shell Tanks.

| All volume data obtained from Tank Waste Information Network System (TWINS) | | | | | | | | |
|---|----------------|---------------------|--------------------|------------------------|---------------------------|---------------|-----------------|----------------------|
| Tank | Tank Integrity | Tank Level (inches) | Total Waste (Kgal) | Available Space (Kgal) | Waste Volumes | | | Solids Volume Update |
| | | | | | Supernatant Liquid (Kgal) | Sludge (Kgal) | Saltcake (Kgal) | |
| 241-AN TANK FARM STATUS | | | | | | | | |
| AN-101 | SOUND | 348 | 957 | 187 | 926 | 0 | 31 | 12/31/03 |
| AN-102 | SOUND | 388 | 1068 | 76 | 914 | 0 | 154 | 01/01/05 |
| AN-103 | SOUND | 348 | 958 | 186 | 499 | 0 | 459 | 06/30/99 |
| AN-104 | SOUND | 384 | 1055 | 89 | 610 | 0 | 445 | 06/30/99 |
| AN-105 | SOUND | 409 | 1125 | 19 | 587 | 0 | 538 | 01/31/03 |
| AN-106 | SOUND | 339 | 932 | 212 | 883 | 32 | 17 | 01/30/05 |
| AN-107 | SOUND | 400 | 1101 | 43 | 871 | 0 | 230 | 12/31/03 |
| 7 TANKS - TOTAL | | | 7196 | 812 | 5290 | 32 | 1874 | |
| 241-AP TANK FARM STATUS | | | | | | | | |
| AP-101 | SOUND | 406 | 1115 | 29 | 1115 | 0 | 0 | 05/01/89 |
| AP-102 | SOUND | 398 | 1094 | 50 | 1071 | 23 | 0 | 05/31/02 |
| AP-103 | SOUND | 325 | 893 | 251 | 893 | 0 | 0 | 05/31/96 |
| AP-104 | SOUND | 399 | 1098 | 46 | 1098 | 0 | 0 | 10/13/88 |
| AP-105 | SOUND | 414 | 1138 | 6 | 1049 | 0 | 89 | 06/30/99 |
| AP-106 | SOUND | 412 | 1134 | 10 | 1134 | 0 | 0 | 10/13/88 |
| AP-107 | SOUND | 75 | 317 | 827 | 317 | 0 | 0 | 10/13/88 |
| AP-108 | SOUND | 416 | 1032 | 112 | 1032 | 0 | 0 | 10/13/88 |
| 8 TANKS - TOTAL | | | 7821 | 1331 | 7709 | 23 | 89 | |
| 241-AW TANK FARM STATUS | | | | | | | | |
| AW-101 | SOUND | 410 | 1128 | 16 | 732 | 0 | 396 | 01/31/03 |
| AW-102 | SOUND | 202 | 555 | 570 | 548 | 7 | 0 | 03/31/04 |
| AW-103 | SOUND | 399 | 1097 | 47 | 784 | 273 | 40 | 07/21/04 |
| AW-104 | SOUND | 390 | 1072 | 72 | 849 | 66 | 157 | 06/30/99 |
| AW-105 | SOUND | 152 | 419 | 725 | 156 | 263 | 0 | 06/30/99 |
| AW-106 | SOUND | 327 | 899 | 245 | 616 | 0 | 283 | 04/01/04 |
| 6 TANKS - TOTAL | | | 5170 | 1675 | 3685 | 609 | 876 | |
| 241-AY TANK FARM STATUS | | | | | | | | |
| AY-101 | SOUND | 64 | 180 | 821 | 84 | 96 | 0 | 06/30/99 |
| AY-102 | SOUND | 330 | 912 | 89 | 761 | 151 | 0 | 04/01/04 |
| 2 TANKS - TOTAL | | | 1092 | 910 | 845 | 247 | 0 | |
| 241-AZ TANK FARM STATUS | | | | | | | | |
| AZ-101 | SOUND | 323 | 886 | 115 | 834 | 52 | 0 | 06/30/98 |
| AZ-102 | SOUND | 356 | 978 | 23 | 873 | 105 | 0 | 06/30/99 |
| 2 TANKS - TOTAL | | | 1864 | 138 | 1707 | 157 | | |
| 241-SY TANK FARM STATUS | | | | | | | | |
| SY-101 | SOUND | 146 | 400 | 744 | 125 | 0 | 275 | 06/30/99 |
| SY-102 | SOUND | 375 | 1079 | 65 | 934 | 145 | 0 | 09/30/03 |
| SY-103 | SOUND | 270 | 741 | 403 | 399 | 0 | 342 | 06/30/99 |
| 3 TANKS - TOTAL | | | 2220 | 1212 | 1458 | 145 | 617 | |

Notes: 1 Kgal differences are the result of computer rounding
 Supernatant + Sludge (includes liquid) + Saltcake (includes liquid) = Total Waste
 Available Space Volumes include restricted space
 Tanks AN-103, AN-104, AN-105, AW-101, SY-101 and SY-103 contain retrained gas in the saltcake

Table 3-2. Double-Shell Tank Space Allocation, Inventory and Waste Receipts (all volumes in kgallons)

| | | | |
|---------------------------|--------|----------------------------------|--------|
| TOTAL DST CAPACITY | | TOTAL DST WASTE INVENTORY | |
| TOTAL= | 31,441 | INVENTORY ON 4/30/05 | 25,363 |
| | | INVENTORY ON 3/31/05 | 25,313 |
| | | CHANGE = | 50 |

| ALLOCATION OF REMAINING DST SPACE | |
|------------------------------------|---------|
| TOTAL DST CAPACITY = | 31,441 |
| WASTE INVENTORY = | -25,363 |
| (*) DEDICATED OPERATIONAL SPACE = | -2,000 |
| (**) RESTRICTED USAGE SPACE = | -1,722 |
| (***) EMERGENCY SPACE ALLOCATION = | -1,200 |
| REMAINING AVAILABLE SPACE = | 1,156 |

(*) Dedicated Operational Space is assumed to equal 2 Mgal for SST retrieval, cross-site transfer receiver, and evaporator feed and slurry.
 (**) Restricted space associated with flammable gas Waste Group A and tanks controlled for waste feed delivery per Feed Control List, HNF-SD-WM-OCD-015, Tank Farms Waste Transfer Compatibility report. These tanks are: AN-102, -103, -104, -105, -107; AP-101; AW-101, -103, -105; AY-102, and SY-103 (AY-102 is allowed to receive condensate only). Restricted Space does not include Feed Control List tanks AY-101, AZ-102, and SY-102, which are allowed to receive limited types of waste.
 (***) Emergency Space Allocation adjusted in July 2003 per HNF-3484 Rev. 4, includes space for WTP returns.

| APRIL DST WASTE RECEIPTS | | | | | |
|--------------------------|----|-----------------------------|---|------------------------------|---|
| FACILITY GENERATIONS | | OTHER GAINS ASSOCIATED WITH | | OTHER LOSSES ASSOCIATED WITH | |
| 222-S | 0 | SLURRY | 0 | SLURRY | 3 |
| TANK FARMS | 6 | CONDENSATE | 6 | CONDENSATE | 4 |
| C-203 | 0 | INSTRUMENTATION | 0 | INSTRUMENTATION | 0 |
| S-102 | 0 | MISCELLANEOUS GAINS | 3 | MISCELLANEOUS LOSSES | 5 |
| S-112 | 47 | | | | |
| TOTAL = 53 | | TOTAL = 9 | | TOTAL = 12 | |

| WASTE RECEIPT AND EVAPORATOR METRIC | | | | | |
|-------------------------------------|--------------------|-------------------------|---------|----------------|------------------|
| DATE | DST WASTE RECEIPTS | MISC. DST CHANGES (+/-) | WVR (1) | NET DST CHANGE | TOTAL DST VOLUME |
| 4/05 | 53 | -3 | 0 | 50 | 25,363 |

(1) WVR is total (before flush) waste volume reduction for 242-A Evaporator

| IMPLEMENTATION OF DST SPACE OPTIONS METRIC (TPA MILESTONE M-46-21) | | | |
|---|---|-------------------|--------------------|
| DATE | INITIATIVES | GAINS TO DATE (1) | GAINS DURING MONTH |
| 4/05 | INCREASE DST FILL HEIGHT | 0 | 0 |
| | NET EVAPORATOR WVR (2) | 1830 | 0 |
| | RESERVE EMERGENCY SPACE COMPLIANT WITH DOE O435.1 | 1100 | 0 |
| | USE RESTRICTED HEADSPACE | 0 | 0 |
| | TOTAL | 2930 | 0 |

(1) DST tank space gains since 10/1/02.
 (2) WVR is net (after flush) waste volume reduction for 242-A Evaporator

4.0 SINGLE-SHELL TANKS MONTHLY SUMMARY TABLES

Table 4-1. Inventory and Status by Tanks - Single-Shell Tanks (sheet 1 of 4).

All volume data obtained from Tank Waste Information Network System (TWINS)

| Tank Number | Tank Integrity | Tank Status | Total Waste (Kgal) | Waste Volumes | | | | | | Sludge (Kgal) | Salt-cake (Kgal) | Solids Volume Update |
|--------------------------------|----------------|-------------|--------------------|----------------------------|--------------------------------------|--------------------------|---------------------|-----------------------------------|------|---------------|------------------|----------------------|
| | | | | Super-natant Liquid (Kgal) | Drainable Interstitial Liquid (Kgal) | Pumped this Month (Kgal) | Total Pumped (Kgal) | Drainable Liquid Remaining (Kgal) | | | | |
| 241-A TANK FARM STATUS | | | | | | | | | | | | |
| A-101 | SOUND | IS(4) | 320 | 0 | 37 | 0 | 543 | 37 | 3 | 317 | 06/30/04 | |
| A-102 | SOUND | IS | 40 | 3 | 9 | 0 | 40 | 12 | 0 | 37 | 01/31/03 | |
| A-103 | ASMD LKR | IS | 370 | 4 | 87 | 0 | 111 | 92 | 2 | 364 | 01/01/02 | |
| A-104 | ASMD LKR | IS | 28 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 01/27/78 | |
| A-105 | ASMD LKR | IS | 37 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 10/31/00 | |
| A-106 | SOUND | IS | 79 | 0 | 9 | 0 | 0 | 9 | 50 | 29 | 01/01/02 | |
| 6 TANKS - TOTAL | | | 874 | | | | | | 120 | 747 | | |
| 241-AX TANK FARM STATUS | | | | | | | | | | | | |
| AX-101 | SOUND | IS | 358 | 0 | 44 | 0 | 369 | 44 | 3 | 355 | 12/31/03 | |
| AX-102 | ASMD LKR | IS | 30 | 0 | 0 | 0 | 13 | 0 | 6 | 24 | 01/01/02 | |
| AX-103 | SOUND | IS | 107 | 0 | 22 | 0 | 0 | 22 | 8 | 99 | 09/30/03 | |
| AX-104 | ASMD LKR | IS | 7 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 01/01/02 | |
| 4 TANKS - TOTAL | | | 502 | | | | | | 24 | 478 | | |
| 241-B TANK FARM STATUS | | | | | | | | | | | | |
| B-101 | ASMD LKR | IS | 109 | 0 | 20 | 0 | 0 | 20 | 28 | 81 | 01/01/02 | |
| B-102 | SOUND | IS | 32 | 4 | 7 | 0 | 0 | 11 | 0 | 28 | 06/30/99 | |
| B-103 | ASMD LKR | IS | 56 | 0 | 10 | 0 | 0 | 10 | 1 | 55 | 01/01/02 | |
| B-104 | SOUND | IS | 374 | 0 | 45 | 0 | 0 | 45 | 309 | 65 | 01/01/02 | |
| B-105 | ASMD LKR | IS | 290 | 0 | 20 | 0 | 0 | 20 | 28 | 262 | 01/01/02 | |
| B-106 | SOUND | IS | 123 | 1 | 8 | 0 | 0 | 9 | 122 | 0 | 12/31/03 | |
| B-107 | ASMD LKR | IS | 161 | 0 | 23 | 0 | 0 | 23 | 86 | 75 | 01/01/02 | |
| B-108 | SOUND | IS | 92 | 0 | 19 | 0 | 0 | 19 | 27 | 65 | 06/30/04 | |
| B-109 | SOUND | IS | 125 | 0 | 23 | 0 | 0 | 23 | 50 | 75 | 01/01/02 | |
| B-110 | ASMD LKR | IS | 245 | 1 | 27 | 0 | 0 | 28 | 244 | 0 | 01/01/02 | |
| B-111 | ASMD LKR | IS | 242 | 1 | 23 | 0 | 0 | 24 | 241 | 0 | 01/01/02 | |
| B-112 | ASMD LKR | IS | 35 | 3 | 2 | 0 | 0 | 5 | 15 | 17 | 01/01/02 | |
| B-201 | ASMD LKR | IS | 29 | 0 | 5 | 0 | 0 | 5 | 29 | 0 | 07/01/04 | |
| B-202 | SOUND | IS | 28 | 0 | 4 | 0 | 0 | 4 | 28 | 0 | 07/01/04 | |
| B-203 | ASMD LKR | IS | 50 | 1 | 5 | 0 | 0 | 6 | 49 | 0 | 07/01/04 | |
| B-204 | ASMD LKR | IS | 49 | 1 | 5 | 0 | 0 | 6 | 48 | 0 | 07/01/04 | |
| 16 TANKS - TOTAL | | | 2040 | | | | | | 1305 | 723 | | |
| 241-BX TANK FARM STATUS | | | | | | | | | | | | |
| BX-101 | ASMD LKR | IS | 48 | 0 | 4 | 0 | 0 | 4 | 48 | 0 | 01/01/02 | |
| BX-102 | ASMD LKR | IS | 79 | 0 | 0 | 0 | 0 | 0 | 79 | 0 | 06/30/04 | |
| BX-103 | SOUND | IS | 75 | 13 | 4 | 0 | 0 | 15 | 62 | 0 | 01/01/83 | |
| BX-104 | SOUND | IS | 100 | 3 | 4 | 0 | 17 | 7 | 97 | 0 | 01/01/02 | |
| BX-105 | SOUND | IS | 72 | 5 | 4 | 0 | 15 | 9 | 42 | 25 | 01/01/05 | |
| BX-106 | SOUND | IS | 38 | 0 | 4 | 0 | 14 | 4 | 10 | 28 | 01/01/05 | |
| BX-107 | SOUND | IS | 347 | 0 | 37 | 0 | 23 | 37 | 347 | 0 | 09/18/90 | |
| BX-108 | ASMD LKR | IS | 31 | 0 | 4 | 0 | 0 | 4 | 31 | 0 | 01/31/01 | |
| BX-109 | SOUND | IS | 193 | 0 | 25 | 0 | 8 | 25 | 193 | 0 | 09/17/90 | |
| BX-110 | ASMD LKR | IS | 205 | 1 | 35 | 0 | 2 | 36 | 65 | 139 | 01/01/01 | |
| BX-111 | ASMD LKR | IS | 189 | 0 | 6 | 0 | 117 | 6 | 32 | 157 | 01/01/02 | |
| BX-112 | SOUND | IS | 164 | 1 | 9 | 0 | 4 | 10 | 163 | 0 | 01/01/02 | |
| 12 TANKS - TOTAL | | | 1541 | | | | | | 1169 | 349 | | |

Table 4-1. Inventory and Status by Tank - Single-Shell Tanks (sheet 2 of 4).

| All volume data obtained from Tank Waste Information Network System (TWINS) | | | | | | | | | | | | |
|---|----------------|-------------|--------------------|-------------------------------|--------------------------------------|--------------------------|---------------------|-----------------------------------|------|---------------|------------------|----------------------|
| Tank Number | Tank Integrity | Tank Status | Total Waste (Kgal) | Waste Volumes | | | | | | Sludge (Kgal) | Salt-cake (Kgal) | Solids Volume Update |
| | | | | Super-natant Liquid (Kgal) | Drainable Interstitial Liquid (Kgal) | Pumped this Month (Kgal) | Total Pumped (Kgal) | Drainable Liquid Remaining (Kgal) | | | | |
| 241-BY TANK FARM STATUS | | | | | | | | | | | | |
| BY-101 | SOUND | IS | 370 | 0 | 24 | 0 | 36 | 24 | 37 | 333 | 01/01/02 | |
| BY-102 | SOUND | IS | 279 | 0 | 40 | 0 | 159 | 40 | 0 | 279 | 06/30/04 | |
| BY-103 | ASMD LKR | IS | 417 | 0 | 58 | 0 | 96 | 58 | 9 | 408 | 01/31/03 | |
| BY-104 | SOUND | IS | 358 | 0 | 51 | 0 | 330 | 51 | 45 | 313 | 01/01/02 | |
| BY-105 | ASMD LKR | IS | 481 | 0 | 47 | 0 | 45 | 47 | 48 | 433 | 03/31/03 | |
| BY-106 | ASMD LKR | IS | 462 | - | - | 0 | 99 | - | 32 | 430 | 12/31/03 | |
| BY-107 | ASMD LKR | IS | 272 | 0 | 42 | 0 | 56 | 42 | 16 | 256 | 06/30/04 | |
| BY-108 | ASMD LKR | IS | 222 | 0 | 33 | 0 | 28 | 33 | 40 | 182 | 01/01/02 | |
| BY-109 | SOUND | IS | 287 | 0 | 37 | 0 | 157 | 37 | 24 | 263 | 06/30/04 | |
| BY-110 | SOUND | IS | 366 | 0 | 20 | 0 | 213 | 20 | 43 | 323 | 01/01/02 | |
| BY-111 | SOUND | IS | 301 | 0 | 14 | 0 | 313 | 14 | 0 | 301 | 06/30/04 | |
| BY-112 | SOUND | IS | 286 | 0 | 24 | 0 | 116 | 24 | 2 | 284 | 03/31/02 | |
| 12 TANKS - TOTAL | | | 4101 | | | | | | 296 | 3805 | | |
| 241-C TANK FARM STATUS | | | | | | | | | | | | |
| C-101 | ASMD LKR | IS/R | 88 | 0 | 4 | 0 | 0 | 4 | 88 | 0 | 11/29/83 | |
| C-102 | SOUND | IS/R | 316 | 0 | 62 | 0 | 47 | 62 | 316 | 0 | 09/30/95 | |
| C-103 | SOUND | IS/R | 75 | 4 | 10 | 0 | 114 | 11 | 71 | 0 | 12/31/03 | |
| C-104 | SOUND | IS/R | 259 | 0 | 29 | 0 | 0 | 29 | 259 | 0 | 01/01/02 | |
| C-105 | SOUND | IS/R | 132 | 0 | 10 | 0 | 0 | 10 | 132 | 0 | 02/29/00 | |
| C-106 | SOUND | /R | 3 | Retrieval Completed, 12/31/03 | | | - | - | 3 | 0 | 12/31/03 | |
| | | | | See Footnote (1), page 18 | | | | | | | | |
| C-107 | SOUND | IS/R | 247 | 0 | 30 | 0 | 41 | 30 | 247 | 0 | 06/30/04 | |
| C-108 | SOUND | IS/R | 66 | 0 | 4 | 0 | 0 | 4 | 66 | 0 | 02/24/84 | |
| C-109 | SOUND | IS/R | 63 | 0 | 4 | 0 | 0 | 4 | 63 | 0 | 06/30/04 | |
| C-110 | ASMD LKR | IS/R | 178 | 1 | 37 | 0 | 16 | 38 | 177 | 0 | 06/14/95 | |
| C-111 | ASMD LKR | IS/R | 57 | 0 | 4 | 0 | 0 | 4 | 57 | 0 | 06/30/04 | |
| C-112 | SOUND | IS/R | 104 | 0 | 6 | 0 | 0 | 6 | 104 | 0 | 09/18/90 | |
| C-201 | ASMD LKR | IS/R | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 01/01/02 | |
| C-202 | ASMD LKR | IS/R | 0 | See Footnote (2), page 18 | | | 0 | 0 | 0 | 0 | 0 | 06/30/04 |
| C-203 | ASMD LKR | IS/R | 0 | Retrieval Completed, 03/24/05 | | | - | - | 0 | 0 | 0 | 03/24/05 |
| | | | | See Footnote (5), page 18 | | | | | | | | |
| C-204 | ASMD LKR | IS/R | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 01/31/03 | |
| 16 TANKS - TOTAL | | | 1591 | | | | | | 1586 | 0 | | |
| 241-S TANK FARM STATUS | | | | | | | | | | | | |
| S-101 | SOUND | IS | 352 | 0 | 45 | 0 | 67 | 45 | 235 | 117 | 04/31/04 | |
| S-102 | SOUND | /R | - | Retrieval in progress | | | - | - | - | - | - | |
| | | | | See Footnote (6), page 18 | | | | | | | | |
| S-103 | SOUND | IS (3) | 237 | 1 | 45 | 0 | 24 | 46 | 9 | 227 | 06/30/04 | |
| S-104 | ASMD LKR | IS (4) | 288 | 0 | 49 | 0 | 0 | 49 | 132 | 156 | 12/20/84 | |
| S-105 | SOUND | IS (3) | 406 | 0 | 42 | 0 | 114 | 42 | 2 | 404 | 01/01/02 | |
| S-106 | SOUND | IS (3) | 455 | 0 | 26 | 0 | 204 | 26 | 0 | 455 | 02/28/01 | |
| S-107 | SOUND | IS | 358 | 0 | 42 | 0 | 83 | 42 | 320 | 38 | 02/04/04 | |
| S-108 | SOUND | IS | 550 | 0 | 4 | 0 | 200 | 4 | 5 | 545 | 01/01/02 | |
| S-109 | SOUND | IS | 533 | 0 | 16 | 0 | 34 | 16 | 13 | 520 | 06/30/01 | |
| S-110 | SOUND | IS | 389 | 0 | 30 | 0 | 203 | 30 | 96 | 293 | 01/01/02 | |
| S-111 | SOUND | IS (4) | 411 | - | - | 0 | 100 | - | 76 | 335 | 06/30/04 | |
| S-112 | SOUND | /R | - | Retrieval in progress | | | - | - | - | - | - | |
| | | | | See Footnote (7), page 18 | | | | | | | | |
| 12 TANKS - TOTAL | | | 4403 | | | | | | 1312 | 3090 | | |

Table 4-1. Inventory and Status by Tank - Single-Shell Tanks (sheet 3 of 4).

| All volume data obtained from Tank Waste Information Network System (TWINS) | | | | | | | | | | | | |
|---|----------------|-------------|--------------------|----------------------------|--------------------------------------|--------------------------|---------------------|-----------------------------------|---------------|------------------|----------------------|--|
| Waste Volumes | | | | | | | | | | | | |
| Tank Number | Tank Integrity | Tank Status | Total Waste (Kgal) | Super-natant Liquid (Kgal) | Drainable Interstitial Liquid (Kgal) | Pumped this Month (Kgal) | Total Pumped (Kgal) | Drainable Liquid Remaining (Kgal) | Sludge (Kgal) | Salt-cake (Kgal) | Solids Volume Update | |
| 241-SX TANK FARM STATUS | | | | | | | | | | | | |
| SX-101 | SOUND | IS | 419 | 0 | 43 | 0 | 33 | 44 | 144 | 275 | 06/30/04 | |
| SX-102 | SOUND | IS | 341 | 0 | 36 | 0 | 98 | 36 | 55 | 286 | 08/31/04 | |
| SX-103 | SOUND | IS | 509 | 0 | 40 | 0 | 134 | 40 | 78 | 431 | 09/30/03 | |
| SX-104 | ASMD LKR | IS | 446 | 0 | 48 | 0 | 231 | 48 | 136 | 310 | 04/30/00 | |
| SX-105 | SOUND | IS | 375 | 0 | 39 | 0 | 153 | 39 | 63 | 312 | 12/31/02 | |
| SX-106 | SOUND | IS | 396 | 0 | 37 | 0 | 148 | 37 | 0 | 396 | 01/31/03 | |
| SX-107 | ASMD LKR | IS | 94 | 0 | 7 | 0 | 0 | 7 | 94 | 0 | 07/01/04 | |
| SX-108 | ASMD LKR | IS | 74 | 0 | 0 | 0 | 0 | 0 | 74 | 0 | 06/30/04 | |
| SX-109 | ASMD LKR | IS | 241 | 0 | 0 | 0 | 0 | 0 | 66 | 175 | 07/01/04 | |
| SX-110 | ASMD LKR | IS | 56 | 0 | 0 | 0 | 0 | 0 | 49 | 7 | 07/01/04 | |
| SX-111 | ASMD LKR | IS | 115 | 0 | 11 | 0 | 0 | 11 | 98 | 17 | 07/01/04 | |
| SX-112 | ASMD LKR | IS | 75 | 0 | 6 | 0 | 0 | 6 | 75 | 0 | 07/01/04 | |
| SX-113 | ASMD LKR | IS | 19 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 01/01/02 | |
| SX-114 | ASMD LKR | IS | 155 | 0 | 30 | 0 | 0 | 30 | 126 | 29 | 07/01/04 | |
| SX-115 | ASMD LKR | IS | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 01/01/02 | |
| 15 TANKS - TOTAL | | | 3319 | | | | | | 1081 | 2238 | | |
| 241-T TANK FARM STATUS | | | | | | | | | | | | |
| T-101 | ASMD LKR | IS | 99 | 0 | 16 | 0 | 25 | 16 | 37 | 62 | 06/30/04 | |
| T-102 | SOUND | IS | 32 | 13 | 3 | 0 | 0 | 16 | 19 | 0 | 08/31/84 | |
| T-103 | ASMD LKR | IS | 27 | 4 | 3 | 0 | 0 | 7 | 23 | 0 | 11/29/83 | |
| T-104 | SOUND | IS | 317 | 0 | 31 | 0 | 150 | 31 | 317 | 0 | 11/30/99 | |
| T-105 | SOUND | IS | 98 | 0 | 5 | 0 | 0 | 5 | 98 | 0 | 05/29/87 | |
| T-106 | ASMD LKR | IS | 22 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 01/01/01 | |
| T-107 | ASMD LKR | IS | 173 | 0 | 34 | 0 | 11 | 34 | 173 | 0 | 05/31/96 | |
| T-108 | ASMD LKR | IS | 16 | 0 | 4 | 0 | 0 | 4 | 5 | 11 | 01/01/01 | |
| T-109 | ASMD LKR | IS | 62 | 0 | 11 | 0 | 0 | 11 | 0 | 62 | 01/01/02 | |
| T-110 | SOUND | IS | 370 | 1 | 48 | 0 | 50 | 49 | 369 | 0 | 03/31/02 | |
| T-111 | ASMD LKR | IS | 447 | 0 | 38 | 0 | 10 | 38 | 447 | 0 | 01/01/02 | |
| T-112 | SOUND | IS | 67 | 7 | 4 | 0 | 0 | 11 | 60 | 0 | 04/28/82 | |
| T-201 | SOUND | IS | 30 | 2 | 4 | 0 | 0 | 6 | 28 | 0 | 07/01/04 | |
| T-202 | SOUND | IS | 20 | 0 | 3 | 0 | 0 | 3 | 20 | 0 | 07/01/04 | |
| T-203 | SOUND | IS | 36 | 0 | 5 | 0 | 0 | 5 | 36 | 0 | 07/01/04 | |
| T-204 | SOUND | IS | 36 | 0 | 5 | 0 | 0 | 5 | 36 | 0 | 07/01/04 | |
| 16 TANKS - TOTAL | | | 1852 | | | | | | 1690 | 135 | | |
| 241-TX TANK FARM STATUS | | | | | | | | | | | | |
| TX-101 | SOUND | IS | 91 | 0 | 7 | 0 | 0 | 7 | 74 | 17 | 01/01/02 | |
| TX-102 | SOUND | IS | 217 | 0 | 27 | 0 | 94 | 27 | 2 | 215 | 03/31/03 | |
| TX-103 | SOUND | IS | 145 | 0 | 18 | 0 | 68 | 18 | 0 | 145 | 01/01/02 | |
| TX-104 | SOUND | IS | 69 | 2 | 9 | 0 | 4 | 11 | 34 | 33 | 06/30/04 | |
| TX-105 | ASMD LKR | IS | 576 | 0 | 25 | 0 | 122 | 25 | 8 | 568 | 01/01/02 | |
| TX-106 | SOUND | IS | 348 | 0 | 37 | 0 | 135 | 37 | 5 | 343 | 03/31/02 | |
| TX-107 | ASMD LKR | IS | 29 | 0 | 7 | 0 | 0 | 7 | 0 | 29 | 01/31/03 | |
| TX-108 | SOUND | IS | 127 | 0 | 8 | 0 | 14 | 8 | 6 | 121 | 06/30/04 | |
| TX-109 | SOUND | IS | 363 | 0 | 6 | 0 | 72 | 6 | 363 | 0 | 01/01/02 | |
| TX-110 | ASMD LKR | IS | 467 | 0 | 14 | 0 | 115 | 14 | 37 | 430 | 01/01/02 | |
| TX-111 | SOUND | IS | 364 | 0 | 10 | 0 | 98 | 10 | 43 | 321 | 06/30/04 | |
| TX-112 | SOUND | IS | 634 | 0 | 26 | 0 | 94 | 26 | 0 | 634 | 01/01/02 | |
| TX-113 | ASMD LKR | IS | 638 | 0 | 18 | 0 | 19 | 18 | 93 | 545 | 06/30/04 | |
| TX-114 | ASMD LKR | IS | 532 | 0 | 17 | 0 | 104 | 17 | 4 | 528 | 01/01/02 | |
| TX-115 | ASMD LKR | IS | 553 | 0 | 25 | 0 | 99 | 25 | 8 | 545 | 06/30/04 | |
| TX-116 | ASMD LKR | IS | 599 | 0 | 21 | 0 | 24 | 21 | 66 | 533 | 04/30/03 | |
| TX-117 | ASMD LKR | IS | 480 | 0 | 10 | 0 | 54 | 10 | 29 | 451 | 06/30/04 | |
| TX-118 | SOUND | IS | 247 | 0 | 31 | 0 | 89 | 31 | 0 | 247 | 06/30/04 | |
| 18 TANKS - TOTAL | | | 6479 | | | | | | 772 | 5705 | | |

Table 4-1. Inventory and Status by Tank - Single-Shell Tanks (sheet 4 of 4).

| All volume data obtained from Tank Waste Information Network System (TWINS) | | | | | | | | | | | |
|---|----------------|-------------|--------------------|----------------------------|--------------------------------------|--------------------------|---------------------|-----------------------------------|---------------|------------------|----------------------|
| | | | Waste Volumes | | | | | | | | |
| Tank Number | Tank Integrity | Tank Status | Total Waste (Kgal) | Super-natant Liquid (Kgal) | Drainable Interstitial Liquid (Kgal) | Pumped this Month (Kgal) | Total Pumped (Kgal) | Drainable Liquid Remaining (Kgal) | Sludge (Kgal) | Salt-cake (Kgal) | Solids Volume Update |
| 241-TY TANK FARM STATUS | | | | | | | | | | | |
| TY-101 | ASMD LKR | IS | 119 | 0 | 2 | 0 | 8 | 2 | 72 | 47 | 01/31/03 |
| TY-102 | SOUND | IS | 69 | 0 | 13 | 0 | 7 | 13 | 0 | 69 | 01/01/02 |
| TY-103 | ASMD LKR | IS | 154 | 0 | 23 | 0 | 12 | 23 | 103 | 51 | 06/30/04 |
| TY-104 | ASMD LKR | IS | 44 | 1 | 4 | 0 | 0 | 5 | 43 | 0 | 03/31/02 |
| TY-105 | ASMD LKR | IS | 231 | 0 | 12 | 0 | 4 | 12 | 231 | 0 | 04/28/82 |
| TY-106 | ASMD LKR | IS | 16 | 0 | 1 | 0 | 0 | 1 | 16 | 0 | 01/01/02 |
| 6 TANKS - TOTALS | | | 633 | | | | | | 465 | 167 | |
| 241-U TANK FARM STATUS | | | | | | | | | | | |
| U-101 | ASMD LKR | IS | 23 | 0 | 4 | 0 | 0 | 4 | 23 | 0 | 06/30/04 |
| U-102 | SOUND | IS | 327 | 1 | 37 | 0 | 87 | 38 | 43 | 283 | 12/31/02 |
| U-103 | SOUND | IS(4) | 417 | 1 | 33 | 0 | 99 | 34 | 11 | 405 | 01/01/05 |
| U-104 | ASMD LKR | IS | 122 | 0 | 0 | 0 | 0 | 0 | 122 | 0 | 01/01/02 |
| U-105 | SOUND | IS | 353 | 0 | 44 | 0 | 88 | 44 | 32 | 321 | 03/30/01 |
| U-106 | SOUND | IS | 170 | 2 | 36 | 0 | 39 | 39 | 0 | 168 | 06/30/04 |
| U-107 | SOUND | IS | 294 | 0 | 32 | 0 | 135 | 32 | 15 | 279 | 12/31/03 |
| U-108 | SOUND | IS | 434 | 0 | 46 | 0 | 115 | 46 | 29 | 405 | 09/30/04 |
| U-109 | SOUND | IS(4) | 401 | 0 | 47 | 0 | 78 | 47 | 35 | 366 | 04/30/02 |
| U-110 | ASMD LKR | IS | 176 | 0 | 16 | 0 | 0 | 16 | 176 | 0 | 01/01/02 |
| U-111 | SOUND | IS | 222 | 0 | 31 | 0 | 86 | 31 | 26 | 196 | 08/31/03 |
| U-112 | ASMD LKR | IS | 45 | 0 | 4 | 0 | 0 | 4 | 45 | 0 | 02/10/84 |
| U-201 | SOUND | IS | 4 | 1 | 1 | 0 | 0 | 2 | 3 | 0 | 06/30/03 |
| U-202 | SOUND | IS | 4 | 1 | 0 | 0 | 0 | 1 | 3 | 0 | 06/30/03 |
| U-203 | SOUND | IS | 3 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 06/30/03 |
| U-204 | SOUND | IS | 3 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 06/30/03 |
| 16 TANKS - TOTALS | | | 2998 | | | | | | 567 | 2423 | |

Note: +/- 1 Kgal difference in volumes is due to rounding.

Footnote:

- (1) C-106: Volumes: Total waste 2771 gallons, liquids 85 gallons, per RPP-19866, Rev. 1, "Calculation for the Post-Retrieval Waste Volume Determination for Tank 241-C-106," dated February 26, 2004.
- (2) C-202: Volumes: Total waste 490 gallons, and sludge 490 gallons, per Best-Basis Inventory.
- (3) Hanford Federal Facility Agreement and Consent Order (signed August 2004) modified Milestone M-45-00C (Change Order M-45-04-01) changed the regulatory requirements for retrieval of waste in tanks S-103, S-105, and S-106. "Retrieval" status in these tanks is thereby rescinded.
- (4) Tank A-101 contains retained gas in saltcake; tanks S-102, S-111, U-103, and U-109 contain retained gas in saltcake and sludge.
- (5) C-203: Volumes: Total waste 139 gallons, and sludge 139 gallons, per RPP-CALC-25672, Rev. 0, "Calculation for the Post-Retrieval Waste Volume Determination for Single-Shell Tank C-103," dated March 31, 2005.
- (6) S-102: Volume estimate as of March 21, 2005: Total waste 390,000 gallons.
- (7) S-112: Volume estimate as of April 14, 2005: Total waste 34,000 gallons.

Table 4-2. Single-Shell Tanks Interim Stabilization Status (Sheet 1 of 2).

| Tank Number | Tank Integrity | Interim Stabilization Date (1) | Interim Stabilization Method | Tank Number | Tank Integrity | Interim Stabilization Date (1) | Interim Stabilization Method |
|-------------|----------------|--------------------------------|------------------------------|-------------|----------------|--------------------------------|------------------------------|
| A-101 | SOUND | 11/03 | JET (16) | BY-107 | ASMD LKR | 07/79 | JET |
| A-102 | SOUND | 08/89 | SN | BY-108 | ASMD LKR | 02/85 | JET |
| A-103 | ASMD LKR | 06/88 | AR | BY-109 | SOUND | 07/97 | JET |
| A-104 | ASMD LKR | 09/78 | AR (3) | BY-110 | SOUND | 01/85 | JET |
| A-105 | ASMD LKR | 07/79 | AR | BY-111 | SOUND | 01/85 | JET |
| A-106 | SOUND | 08/82 | AR | BY-112 | SOUND | 06/84 | JET |
| AX-101 | SOUND | 06/03 | JET (9) | C-101 | ASMD LKR | 11/83 | AR |
| AX-102 | ASMD LKR | 09/88 | SN | C-102 | SOUND | 09/95 | JET (2) |
| AX-103 | SOUND | 08/87 | AR | C-103 | SOUND | 07/03 | JET (11) |
| AX-104 | ASMD LKR | 08/81 | AR | C-104 | SOUND | 09/89 | SN |
| B-101 | ASMD LKR | 03/81 | SN | C-105 | SOUND | 10/95 | AR |
| B-102 | SOUND | 08/85 | SN | C-106 | SOUND | Retrieval Completed 12/31/03 | |
| B-103 | ASMD LKR | 02/85 | SN | C-107 | SOUND | 09/95 | JET |
| B-104 | SOUND | 06/85 | SN | C-108 | SOUND | 03/84 | AR |
| B-105 | ASMD LKR | 12/84 | AR | C-109 | SOUND | 11/83 | AR |
| B-106 | SOUND | 03/85 | SN | C-110 | ASMD LKR | 05/95 | JET |
| B-107 | ASMD LKR | 03/85 | SN | C-111 | ASMD LKR | 03/84 | SN |
| B-108 | SOUND | 05/85 | SN | C-112 | SOUND | 09/90 | AR |
| B-109 | SOUND | 04/85 | SN | C-201 | ASMD LKR | 03/82 | AR |
| B-110 | ASMD LKR | 12/84 | AR | C-202 | ASMD LKR | 08/81 | AR |
| B-111 | ASMD LKR | 06/85 | SN | C-203 | ASMD LKR | Retrieval Completed 03/24/05 | |
| B-112 | ASMD LKR | 05/85 | SN | C-204 | ASMD LKR | 09/82 | AR |
| B-201 | ASMD LKR | 08/81 | AR (3) | S-101 | SOUND | 12/03 | JET (18) |
| B-202 | SOUND | 05/85 | AR (2) | S-102 | SOUND | Retrieval in progress | |
| B-203 | ASMD LKR | 06/84 | AR | S-103 | SOUND | 04/00 | JET |
| B-204 | ASMD LKR | 06/84 | AR | S-104 | ASMD LKR | 12/84 | AR |
| BX-101 | ASMD LKR | 09/78 | AR (3) | S-105 | SOUND | 09/88 | JET |
| BX-102 | ASMD LKR | 11/78 | AR | S-106 | SOUND | 02/01 | JET |
| BX-103 | SOUND | 11/83 | AR (2) (3) | S-107 | SOUND | 08/03 | JET (13) |
| BX-104 | SOUND | 09/89 | SN | S-108 | SOUND | 12/96 | JET |
| BX-105 | SOUND | 03/81 | SN | S-109 | SOUND | 06/01 | JET |
| BX-106 | SOUND | 07/95 | SN | S-110 | SOUND | 01/97 | JET |
| BX-107 | SOUND | 09/90 | JET | S-111 | SOUND | 12/03 | Jet (17) |
| BX-108 | ASMD LKR | 07/79 | SN | S-112 | SOUND | Retrieval in progress | |
| BX-109 | SOUND | 08/90 | JET | SX-101 | SOUND | 08/03 | JET (12) |
| BX-110 | ASMD LKR | 08/85 | SN | SX-102 | SOUND | 08/03 | JET (14) |
| BX-111 | ASMD LKR | 03/95 | JET | SX-103 | SOUND | 05/03 | JET (8) |
| BX-112 | SOUND | 09/90 | JET | SX-104 | ASMD LKR | 04/00 | JET |
| BY-101 | SOUND | 05/84 | JET | SX-105 | SOUND | 08/02 | JET (6) |
| BY-102 | SOUND | 04/95 | JET | SX-106 | SOUND | 05/00 | JET |
| BY-103 | ASMD LKR | 11/97 | JET (2) | SX-107 | ASMD LKR | 10/79 | AR |
| BY-104 | SOUND | 01/85 | JET | SX-108 | ASMD LKR | 08/79 | AR |
| BY-105 | ASMD LKR | 03/03 | JET | SX-109 | ASMD LKR | 05/81 | AR |
| BY-106 | ASMD LKR | 12/03 | JET (19) | SX-110 | ASMD LKR | 08/79 | AR |

Table 4-2. Single-Shell Tanks Interim Stabilization Status (Sheet 2 of 2).

| Tank Number | Tank Integrity | Interim Stabilization Date (1) | Interim Stabilization Method | Tank Number | Tank Integrity | Interim Stabilization Date (1) | Interim Stabilization Method |
|-------------|----------------|--------------------------------|------------------------------|-------------|----------------|--------------------------------|------------------------------|
| SX-111 | ASMD LKR | 07/79 | SN | TX-111 | SOUND | 04/83 | JET |
| SX-112 | ASMD LKR | 07/79 | AR | TX-112 | SOUND | 04/83 | JET |
| SX-113 | ASMD LKR | 11/78 | AR | TX-113 | ASMD LKR | 04/83 | JET |
| SX-114 | ASMD LKR | 07/79 | AR | TX-114 | ASMD LKR | 04/83 | JET |
| SX-115 | ASMD LKR | 09/78 | AR (3) | TX-115 | ASMD LKR | 09/83 | JET |
| T-101 | ASMD LKR | 04/93 | SN | TX-116 | ASMD LKR | 04/83 | JET |
| T-102 | SOUND | 03/81 | AR (2)(3) | TX-117 | ASMD LKR | 03/83 | JET |
| T-103 | ASMD LKR | 11/83 | AR | TX-118 | SOUND | 04/83 | JET |
| T-104 | SOUND | 11/99 | JET | TY-101 | ASMD LKR | 04/83 | JET |
| T-105 | SOUND | 06/87 | AR | TY-102 | SOUND | 09/79 | AR |
| T-106 | ASMD LKR | 08/81 | AR | TY-103 | ASMD LKR | 02/83 | JET |
| T-107 | ASMD LKR | 05/96 | AR | TY-104 | ASND KJR | 11/83 | AR |
| T-108 | ASMD LKR | 11/78 | AR | TY-105 | ASMD LKR | 02/83 | JET |
| T-109 | ASMD LKR | 12/84 | AR | TY-106 | ASMD LKR | 11/78 | AR |
| T-110 | SOUND | 01/00 | JET | U-101 | ASMD LKR | 09/79 | AR |
| T-111 | ASMD LKR | 02/95 | JET | U-102 | SOUND | 06/02 | JET (5) |
| T-112 | SOUND | 03/81 | AR (2)(3) | U-103 | SOUND | 09/00 | JET |
| T-201 | SOUND | 04/81 | AR (3) | U-104 | ASMD LKR | 10/78 | AR |
| T-202 | SOUND | 08/81 | AR | U-105 | SOUND | 03/01 | JET |
| T-203 | SOUND | 04/81 | AR | U-106 | SOUND | 03/01 | JET |
| T-204 | SOUND | 08/81 | AR | U-107 | SOUND | 10/03 | JET (15) |
| TX-101 | SOUND | 02/84 | AR | U-108 | SOUND | 03/04 | (20) |
| TX-102 | SOUND | 04/83 | JET | U-109 | SOUND | 04/02 | JET (4) |
| TX-103 | SOUND | 08/83 | JET | U-110 | ASMD LKR | 12/84 | AR |
| TX-104 | SOUND | 09/79 | SN | U-111 | SOUND | 06/03 | JET (10) |
| TX-105 | ASMD LKR | 04/83 | JET | U-112 | ASMD LKR | 09/79 | AR |
| TX-106 | SOUND | 06/83 | JET | U-201 | SOUND | 08/79 | AR |
| TX-107 | ASMD LKR | 10/79 | AR | U-202 | SOUND | 08/79 | SN |
| TX-108 | SOUND | 03/83 | JET | U-203 | SOUND | 08/79 | AR |
| TX-109 | SOUND | 04/83 | JET | U-204 | SOUND | 08/79 | SN |
| TX-110 | ASMD LKR | 04/83 | JET | | | | |

| | | | |
|----------------|---|--------------------------|-----|
| LEGEND: | | | |
| AR | Administratively Interim Stabilized | Interim Stabilized Tanks | 149 |
| JET | Saltwell Jet Pumped to Remove Drainable Interstitial Liquid | Total Single-Shell Tanks | 149 |
| SN | Supernatant Pumped (Non-Jet Pumped) | | |
| ASMD LKR | Assumed Leaker | | |
| N/A | Not yet Interim Stabilized | | |

Table 4-2. - Footnotes: (in chronological order)

- (1) These dates indicate when the tanks were actually interim stabilized. In some cases, the official interim stabilization documents were issued at a later date.
- (2) Although tanks 241-BX-103, T-102, and T-112 met the interim stabilization administrative procedure at the time they were stabilized, they no longer meet the updated administrative procedure. The tanks were re-evaluated in 1996 and a letter was issued to DOE-RL recommending that no further pumping be performed on these tanks, based on an economic evaluation. In February 2000, it was determined that five tanks no longer met the stabilization criteria (241-

Table 4-2. – Footnotes continued

- BX-103, T-102, and T-112 exceed the supernatant criteria, and BY-103 and C-102 exceed the Drainable Interstitial Liquid [DIL] criteria).
- An intrusion investigation was completed on tank 241-B-202 in 1996 and it was determined that this tank no longer meets the recently updated administrative procedure for 200 series tanks.
- (3) Original interim stabilization data are missing on four tanks: 241-B-201, T-102, T-112, and T-201. In February 2001, three additional tanks were added to those missing stabilization data: 241-A-104, BX-101, and SX-115.
 - (4) Tank 241-U-109 was declared Interim Stabilized on April 5, 2002. The declaration letter to DOE was issued on June 20, 2002. The surface is primarily a brown colored waste with irregular patches of white salt crystal. Approximately 70% of the waste surface is covered by the salt formations. The waste surface appears dry and shows signs of cracking due to saltwell pumping. There is no visible liquid within the tank.
 - (5) Tank 241-U-102 was declared Interim Stabilized on June 19, 2002. The declaration letter to DOE was issued June 28, 2002. The surface is primarily a gray-brown colored cracked waste with irregular patches of white salt crystal. Approximately 50% of the waste surface is covered by the salt formations. The waste surface appears dry and shows signs of cracking due to saltwell pumping. There is approximately a 5-foot wide pool of visible liquid within the saltwell screen depression.
 - (6) Tank 241-SX-105 was declared Interim Stabilized on August 1, 2002; the declaration letter to DOE was issued August 20, 2002. The surface is a rough, yellowish-gray saltcake waste with an irregular surface of visible cracks and shelves due to saltwell pumping. The waste surface appears to be dry and shows no standing water within the tank.
 - (7) Tank 241-BY-105 was declared Interim Stabilized on March 7, 2003; the declaration letter to DOE was issued March 25, 2003. An in-tank video was taken January 5, 2003. The surface is a rough, yellowish brown saltcake waste with an irregular surface of visible lumps and shelves that were created as the surface was dried out by saltwell pumping. The waste surface appears to be dry and shows no standing water within the tank. A large hole around the saltwell screen shows no evidence of supernatant liquid.
 - (8) Tank 241-SX-103 was declared Interim Stabilized on May 31, 2003; the declaration letter to DOE was issued June 13, 2003. An in-tank video was taken December 31, 2001. The upper waste surface is uneven and rough, with many cracks and shelves due to surface drying caused by saltwell pumping. All estimations regarding waste dimensions were obtained by comparison with known dimensions of installed in-tank equipment.
 - (9) Tank 241-AX-101 was declared Interim Stabilized on June 2, 2003. The declaration letter to DOE was issued January 19, 2004. An in-tank video was taken November 5, 2003. The surface is a dry flaky, crystalline, yellowish-white saltcake waste in a fairly uniform surface of large cracks that were created as the surface dried out by saltwell pumping. The surface is dry and shows no standing water in the tank.
 - (10) Tank 241-U-111 was declared Interim Stabilized on June 25, 2003, due to major equipment failure; the declaration letter to DOE was issued July 14, 2003. An in-tank video was taken March 25, 2003. The surface is a dry, crusty, flat surface saltcake waste with a fairly uniform surface of large cracks and pocked holes that were created as the surface was dried out by saltwell pumping. The waste surface is dry and shows no standing water.
 - (11) Tank 241-C-103 was declared Interim Stabilized on July 11, 2003, due to major equipment failure; the declaration letter to DOE was issued August 13, 2003. An in-tank video was taken March 3, 2003. The surface is a dry-cracked brown sludge type waste, which appears to be relatively level and to have more cracking near the tank walls. There is a roughly 3-foot diameter supernatant pool around the saltwell screen. There are also small supernatant pools around two risers and many liquid pockets across the center waste surface. The ENRAF is out of service and there is no liquid observation well (LOW) installed in the tank.
 - (12) Tank 241-SX-101 was declared Interim Stabilized on August 14, 2003; the declaration letter to DOE was issued August 22, 2003. An in-tank video was taken August 6, 2003. The surface is a rough, yellowish gray saltcake waste with an irregular surface of visible cracks and shelves that were created as the waste was dried out by saltwell pumping. The waste surface appears to be dry and shows no standing water. A cylindrical pool (approximately 5 foot diameter) around the saltwell screen shows evidence of apparent supernatant liquid, but upon closer examination, was determined to be interstitial liquid.

Table 4-2. – Footnotes continued

- (13) Tank 241-S-107 was declared Interim Stabilized on August 28, 2003, due to major equipment failure. Interim Stabilization documentation was issued February 4, 2004; the declaration letter to DOE was issued February 26, 2004. An in-tank video was taken December 12, 2003. The waste appears as a flat, dark, sludge-type waste with an irregular surface of visible cracks created as the waste dried out from saltwell pumping. The waste surface appears to be dry except for a small pool surrounding the saltwell screen.
- (14) Tank 241-SX-102 was declared Interim Stabilized on August 28, 2003, due to major equipment failure. The declaration letter to DOE was issued August 4, 2004. An in-tank video was taken December 10, 2003. The waste is a rough, yellowish-tray saltcake with an irregular surface of visible cracks and shelves that were created as the waste was dried out by saltwell pumping. The waste surface appears to be dry and shows no standing water on the surface.
- (15) Tank 241-U-107 was declared Interim Stabilized on October 7, 2003. The declaration letter to DOE was issued January 19, 2004. An in-tank video was taken February 4, 2003. The surface is a smooth, brownish saltcake with irregular patches of white salt crystals created as the waste was dried out from saltwell pumping. The waste surface appears to be dry and shows no standing water on the surface.
- (16) Tank 241-A-101 was declared Interim Stabilized on November 10, 2003. The declaration letter to DOE was issued June 30, 2004. An in-tank video was taken September 5, 2003. The waste appears as a flat, dark, sludge-type waste with an irregular surface with white clumps of a saltcake-type material. Cracks in the waste surface were created as the waste was dried out by saltwell pumping. The waste surface is dry except for a small pool around the saltwell screen.
- (17) Tank 241-S-111 was declared Interim Stabilized on December 15, 2003, due to major equipment failure. This tank is in evaluation to confirm interim stabilization criteria have been met.
- (18) Tank 241-S-101 was declared Interim Stabilized on December 29, 2003. The declaration letter to DOE was issued April 30, 2004. An in-tank video was taken March 2, 2004. The waste appears to be a flat, dark, sludge-type waste with an irregular surface with white clumps of saltcake. Also visible are cracks in the waste surface that were created as the waste was dried out by saltwell pumping. The waste surface is dry except for this small pool.
- (19) Tank BY-106 was declared Interim Stabilized on December 31, 2003. This tank is in evaluation to confirm interim stabilization criteria have been met.
- (20) Tank U-108 was declared Interim Stabilized on March 18, 2004, due to major equipment failure. The declaration letter to DOE was issued September 8, 2004. An in-tank video was taken March 8, 2004. The waste is a smooth, brownish saltcake waste with irregular patches of white salt crystals that were created as the waste was dried out by saltwell pumping. The surface appears to be dry with evidence of cracking and no standing water.

Table 4-3. Single-Shell Tank Leak Volume Estimates (Sheet 1 of 2)

| Tank Number | Confirmed or Assumed Leaker (3) | Estimated Leak Volume Gallons (2) | Interim Stabilized (11) | Leak Estimate | |
|--------------------|---------------------------------|-----------------------------------|-------------------------|---------------|-----------|
| | | | | Updated | Reference |
| 241-A-103 | 1987 | 5500 (8) | 06/88 | 1987 | (j) |
| 241-A-104 | 1975 | 500 to 2500 | 09/78 | 1983 | (a)(p) |
| 241-A-105 (1) | 1963 | 10000 to 270000 | 07/79 | 1991 | (b)(c) |
| 241-AX-102 | 1988 | 3000 (8) | 09/88 | 1989 | (h) |
| 241-AX-104 | 1977 | -- (6) | 08/81 | 1989 | (g) |
| 241-B-101 | 1974 | -- (6) | 03/81 | 1989 | (g) |
| 241-B-103 | 1978 | -- (6) | 02/85 | 1989 | (g) |
| 241-B-105 | 1978 | -- (6) | 12/84 | 1989 | (g) |
| 241-B-107 | 1980 | 8000 (8) | 03/85 | 1986 | (d)(f) |
| 241-B-110 | 1981 | 10000 (8) | 03/85 | 1986 | (d) |
| 241-B-111 | 1978 | -- (6) | 06/85 | 1989 | (g) |
| 241-B-112 | 1978 | 2000 | 05/85 | 1989 | (g) |
| 241-B-201 | 1980 | 1200 (8) | 08/81 | 1984 | (e)(f) |
| 241-B-203 | 1983 | 300 (8) | 06/84 | 1986 | (d) |
| 241-B-204 | 1984 | 400 (8) | 06/84 | 1989 | (g) |
| 241-BX-101 | 1972 | -- (6) | 09/78 | 1989 | (g) |
| 241-BX-102 | 1971 | 70000 | 11/78 | 1986 | (d) |
| 241-BX-108 | 1974 | 2500 | 07/79 | 1986 | (d) |
| 241-BX-110 | 1976 | -- (6) | 08/85 | 1989 | (g) |
| 241-BX-111 | 1984 (13) | -- (6) | 03/95 | 1993 | (g) |
| 241-BY-103 | 1973 | <5000 | 11/97 | 1983 | (a) |
| 241-BY-105 | 1984 | -- (6) | 03/03 | 1989 | (g) |
| 241-BY-106 | 1984 | -- (6) | N/A | 1989 | (g) |
| 241-BY-107 | 1984 | 15100 (8) | 07/79 | 1989 | (g) |
| 241-BY-108 | 1972 | <5000 | 02/85 | 1983 | (a) |
| 241-C-101 | 1980 | 20000 (8)(10) | 11/83 | 1986 | (d) |
| 241-C-110 | 1984 | 2000 | 05/95 | 1989 | (g) |
| 241-C-111 | 1968 | 5500 (8) | 03/84 | 1989 | (g) |
| 241-C-201 (4) | 1988 | 550 | 03/82 | 1987 | (i) |
| 241-C-202 (4) | 1988 | 450 | 08/81 | 1987 | (i) |
| 241-C-203 | 1984 | 400 (8) | 03/82 | 1986 | (d) |
| 241-C-204 (4) | 1988 | 350 | 09/82 | 1987 | (i) |
| 241-S-104 | 1968 | 24000 (8) | 12/84 | 1989 | (g) |
| 241-SX-104 | 1988 | 6000 (8) | 04/00 | 1988 | (k) |
| 241-SX-107 | 1964 | <5000 | 10/79 | 1983 | (a) |
| 241-SX-108 (5)(14) | 1962 | 2400 to 35000 | 08/79 | 1991 | (l)(p)(s) |
| 241-SX-109 (5)(14) | 1965 | <10000 | 05/81 | 1992 | (m)(s) |
| 241-SX-110 | 1976 | 5500 (8) | 08/79 | 1989 | (g) |
| 241-SX-111 (14) | 1974 | 500 to 2000 | 07/79 | 1986 | (d)(s) |
| 241-SX-112 (14) | 1969 | 30000 | 07/79 | 1986 | (d)(s) |
| 241-SX-113 | 1962 | 15000 | 11/78 | 1986 | (d) |
| 241-SX-114 | 1972 | -- (6) | 07/79 | 1989 | (g) |
| 241-SX-115 | 1965 | 50000 | 09/78 | 1992 | (n) |
| 241-T-101 | 1992 | 7500 (8) | 04/93 | 1992 | (o) |
| 241-T-103 | 1974 | <1000 (8) | 11/83 | 1989 | (g) |
| 241-T-106 | 1973 | 115000 (8) | 08/81 | 1986 | (d) |

Table 4-3. Single-Shell Tank Leak Volume Estimates (Sheet 2 of 2)

| Tank Number | Confirmed or Assumed Leaker (3) | Estimated Leak Volume Gallons (2) | Interim Stabilized (11) | Leak Estimate | |
|----------------|---------------------------------|-----------------------------------|-------------------------|---------------|-----------|
| | | | | Updated | Reference |
| 241-T-107 | 1984 | -- (6) | 05/96 | 1989 | (g) |
| 241-T-108 | 1974 | <1000 (8) | 11/78 | 1980 | (f) |
| 241-T-109 | 1974 | <1000 (8) | 12/84 | 1989 | (g) |
| 241-T-111 | 1979, 1994 (12) | <1000 (8) | 02/95 | 1994 | (f)(r) |
| 241-TX-105 | 1977 | -- (6) | 04/83 | 1989 | (g) |
| 241-TX-107 (5) | 1984 | 2500 | 10/79 | 1986 | (d) |
| 241-TX-110 | 1977 | -- (6) | 04/83 | 1989 | (g) |
| 241-TX-113 | 1974 | -- (6) | 04/83 | 1989 | (g) |
| 241-TX-114 | 1974 | -- (6) | 04/83 | 1989 | (g) |
| 241-TX-115 | 1977 | -- (6) | 09/83 | 1989 | (g) |
| 241-TX-116 | 1977 | -- (6) | 04/83 | 1989 | (g) |
| 241-TX-117 | 1977 | -- (6) | 03/83 | 1989 | (g) |
| 241-TY-101 | 1973 | <1000 (8) | 04/83 | 1980 | (f) |
| 241-TY-103 | 1973 | 3000 | 02/83 | 1986 | (d) |
| 241-TY-104 | 1981 | 1400 (8) | 11/83 | 1986 | (d) |
| 241-TY-105 | 1960 | 35000 | 02/83 | 1986 | (d) |
| 241-TY-106 | 1959 | 20000 | 11/78 | 1986 | (d) |
| 241-U-101 | 1959 | 30000 | 09/79 | 1986 | (d) |
| 241-U-104 | 1961 | 55000 | 10/78 | 1986 | (d) |
| 241-U-110 | 1975 | 5000 to 8100 (8) | 12/84 | 1986 | (d)(p) |
| 241-U-112 | 1980 | 8500 (8) | 09/79 | 1986 | (d) |
| 67 Tanks | | | | | |

Table 4-3. - Footnotes:

- (1) Current estimates [see Reference (b)] are that 610 Kgallons of cooling water was added to tank A-105 from November 1970 to December 1978 to aid in evaporative cooling. In accordance with Dangerous Waste Regulations [Washington Administrative Code 173-303-070 (2)(a)(ii), as amended, Washington State Department of Ecology, 1990, Olympia, Washington], any of this cooling water that has been added and subsequently leaked from the tank must be classified as a waste and should be included in the total leak volume. In August 1991, the leak volume estimate for this tank was updated in accordance with the WAC regulations. Previous estimates excluded the cooling water leaks from the total leak volume estimates because the waste content (concentration) in the cooling water which leaked should be much less than the original liquid waste in the tank (the sludge is relatively insoluble). The total leak volume estimate in this report (10 to 277 Kgallons) is based on the following (see References):

- a. Reference (b) contains an estimate of 5 to 15 Kgallons for the initial leak prior to August 1968.

Reference (b) contains an estimate of 5 to 30 Kgallons for the leak while the tank was being sluiced from August 1968 to November 1970.

Reference (b) contains an estimate of 610 Kgallons of cooling water added to the tank from November 1970 to December 1978, but it was estimated that the leakage was small during this period. This reference contains the statement "Sufficient heat was generated in the tank to evaporate most, and perhaps nearly all, of this water." This results in a low estimate of zero gallons leakage from November 1970 to December 1978.

- b. Reference (c) contains an estimate that 378 to 410 Kgallons evaporated out of the tank from November 1970 to December 1978. Subtracting the minimum evaporation estimate from the cooling water added estimate provides a range from 0 to 232 Kgallons of cooling water leakage from November 1970 to December 1978.

Table 4-3. - Footnotes continued

| | <u>Low Estimate</u> | <u>High Estimate</u> |
|--------------------------------|---------------------|----------------------|
| Prior to August 1968 | 5,000 | 15,000 |
| August 1968 to November 1970 | 5,000 | 30,000 |
| November 1970 to December 1978 | <u>0</u> | <u>232,000</u> |
| Totals | 10,000 | 277,000 |

- (2) Tank leak volume estimates presented here are being updated as a result of additional vadose zone data, tank leak volume assessments and review of tanks for retrieval/closure consideration. Future revisions of the tank summary report will include updated leak volume and radionuclide inventory estimates by farm and will include near surface and vadose contamination from sources in addition to tank leaks that will be used for tank closure planning and performance assessments. Tank leak volume estimates presented here do not include (with some exceptions), such things as: (a) cooling/raw water leaks, (b) intrusions (rain infiltration) and subsequent leaks, (c) leaks inside the tank farm but not through the tank liner (surface leaks, pipeline leaks, leaks at the joint for the overflow or fill lines, etc.), and (d) leaks from catch tanks, diversion boxes, encasements, etc.
- (3) In many cases, a leak was suspected long before it was identified or confirmed. For example, Reference (d) shows that tank U-104 was suspected of leaking in 1956. The leak was confirmed in 1961. This report lists the "assumed leaker" date of 1961. Using present standards, tank U-104 would have been declared an assumed leaker in 1956. In 1984, the criteria designations of "suspected leaker," "questionable integrity," "confirmed leaker," "declared leaker," and "borderline and dormant" were merged into one category now reported as "assumed leaker." See Reference (f) for explanation of when, how long, and how fast some of the tanks leaked. It is highly likely that there have been undetected leaks from single-shell tanks because of the nature of their design and instrumentation.
- (4) The leak volume estimate date for these tanks is before the declared leaker date because the tank was in a suspected leaker or questionable integrity status; however, a leak volume had been estimated prior to the tank being reclassified.
- (5) The increasing radiation levels in drywells and laterals associated with these three tanks could be indicating continuing leak or movement of existing radionuclides in the soil. There is no conclusive way to confirm these observations. (Repeat spectral drywell scans are not part of the current Tank Farm leak detection program but can be run on request a special needs arise. A select subset of drywells is routinely monitored by the Vadose Zone Characterization Project to assess movement of gamma-emitting radionuclides in the subsurface. There are currently no functioning laterals and no plan to prepare them for use).
- (6) Methods were used to estimate the leak volumes from these 19 tanks based on the assumption that their cumulative leakage is approximately the same as for 18 of the 24 tanks identified in footnote (9). For more details see Reference (g). The total leak volume estimate for these tanks is 150 Kgallons (rounded to the nearest Kgallon), for an average of approximately 8 Kgallons for each of 19 tanks.
- (7) The total has been rounded to the nearest 50 Kgallons. Upper bound values were used in many cases in developing these estimates. It is likely that some of these tanks have not actually leaked.
- (8) Leak volume estimate is based solely on observed liquid level decreases in these tanks. This is considered to be the most accurate method for estimating leak volumes.
- (9) The curie content shown is as listed in the reference document and is not decayed to a consistent date: therefore, a cumulative total is inappropriate.
- (10) Tank C-101 experienced a liquid level decrease in the late 1960s and was taken out of service and pumped to a minimum heel in December 1969. In 1970, the tank was classified as a "questionable integrity" tank. Liquid level data show decreases in level throughout the 1970s and the tank was saltwell pumped during the 1970s, ending in April 1979. The tank was reclassified as a "confirmed leaker" in January 1980. See References (p) and (q); refer to Reference (q) for information on the potential for there to have been leaks from other C-farm tanks (specifically, C-102, C-103, and C-109).
- (11) These dates indicate when the tanks were declared to be interim stabilized. In some cases, the official interim stabilization documents were issued at a later date. Also, in some cases, the field work associated with interim stabilization was completed at an earlier date.

Table 4-3. Footnotes continued

- (12) Tank T-111 was declared an "assumed re-leaker" on February 28, 1994, due to a decreasing trend in surface level measurement. This tank was pumped, and interim stabilization completed on February 22, 1995.
- (13) Tank BX-111 was declared an "assumed re-leaker" in April 1993. Preparations for pumping were delayed, following an administrative hold placed on all tank farm operations in August 1993. Pumping resumed and the tank was declared interim stabilized on March 15, 1995.
- (14) The leak volume and curie release estimates on tanks SX-108, SX-109, SX-111, and SX-112 have been re-evaluated using a Historical Leak Model [see Reference (s)]. In general, the model estimates are much higher than the values listed in the table, both for volume and curies released. The values listed in the table do not reflect this revised estimate because, "In particular, it is worth emphasizing that this report was never meant to be a definitive update for the leak baseline at the Hanford Site. It was rather meant to be an attempt to view the issue of leak inventories with a new and different methodology." (This quote is from the first page of the referenced report).
- (15) Tri-Party Agreement milestones (M-45 series) were developed that establish a formalized approach for evaluating impacts on groundwater quality of loss of tank wastes to the vadose zone underlying these tank farms.

SST Vadose Zone Project drilling and testing activities near tank BX-102 were completed in March 2001. A borehole (299-E33-45) was drilled through the postulated uranium plume resulting from the 1951 tank BX-102 overfill event to confirm the presence of uranium, define its present depth, and survey other contaminants of interest such as Tc-99. Samples were collected for laboratory analyses.

Borehole W33-46, adjacent to tank B-110, was drilled to a depth of approximately 190 feet in July 2001. Soil samples were collected for analysis as part of the tank farm vadose zone characterization activities.

On July 31, 2002, the Washington State Department of Ecology issued a letter-directive which suggested a path forward in dealing with the high ⁹⁹Tc activity in groundwater at well 299-W23-19 near tank SX-115. No formal remediation is required, however, extensive purging of the well is to be done concurrent with quarterly sampling. In addition, an array of specific conductivity probes is to be placed in the well to monitor the electrical properties of the water (⁹⁹Tc activity is directly proportional to electrical conductivity). A data logger with remote reading capability together with the specific conductivity probes was installed and fully operational on March 11, 2003.

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5.0 MISCELLANEOUS UNDERGROUND STORAGE TANKS AND SPECIAL SURVEILLANCE FACILITIES

Table 5-1. East and West Area Miscellaneous Underground Storage Tanks and Special Surveillance Facilities.

| ACTIVE - still running transfers through the associated diversion boxes or pipeline encasements | | | | | |
|---|------------|--|-----------------|-------------------|---|
| Facility | Location | Receives Waste From: | Waste (Gallons) | Monitored By: | Remarks |
| EAST AREA | | | | | |
| 241-A-302-A | A Farm | A-151 DB | 663 | SACS/ENRAF/TMACS | |
| 241-ER-311 | B Plant | ER-151, ER-152 DB | 1825 | SACS/ENRAF/Manual | |
| 241-AZ-151 | AZ Farm | AZ-702 Condensate | 4847 | SACS/ENRAF/TMACS | Volume changes daily - pumped to AZ-101 or AY-102 as needed |
| 241-AZ-154 | AZ Farm | | 25 | SACS/MT | |
| 244-BX-TK-SMP | BX Complex | DCRT - Receives from several farms | 19544 | SACS/MT | Receives transfers and is pumped as needed |
| 244-A-TK/SMP | A Complex | DCRT - Receives from several farms | 6306 | MCS/SACS/WTF | WTF - Receives transfers and is pumped as needed |
| A-350 | A Farm | Collects drainage | 310 | MCS/SACS/WTF | WTF (uncorrected), pumped as needed |
| AR-204 | AY Farm | Tanker trucks from various facilities | 925 | DIP TUBE | |
| A-417 | A Farm | | 1176 | SACS/WTF | WTF |
| CR-003-TK-SMP | C Farm | DCRT | 2170 | ZIP CORD | Zip cord installed; MT removed; more accurate conversion table used |
| WEST AREA | | | | | |
| 241-TX-302-C | T Plant | TX-154 DB | 180 | SACS/ENRAF/TMACS | |
| 241-U-301-B | U Farm | U-151, 152, 153, 252 DB | 1452 | SACS/ENRAF/Manual | Pumped to SY-101, 12/03 |
| 241-UX-302-A | U Plant | UX-154 | 1741 | SACS/ENRAF/Manual | Rain intrusion 2/03; recalibration caused decrease 6/03 |
| 241-S-304 | S Farm | S-151 DB | 135 | SACS/ENRAF/Manual | Sump not alarming |
| 244-S-TK/SMP | S Farm | From SSTs for transfer to SY-102 | 9365 | SACS/Manual | WTF |
| 244-TX-TK/SMP | TX Farm | From SSTs and PFP for transfer to SY-102 | 15085 | SACS/Manual | Received from 241-Z, tank D-5, 11/04 |
| Vent Station Catch Tank | | Cross Site Transfer Line | 505 | SACS/Manual | MT. Rain intrusion, 1/03 |
| Total Active Facilities - 17 | | | | | |

| LEGEND: | |
|---------------------|--|
| DB | Diversion Box |
| DCRT | Double-Contained Receiver Tank |
| ENRAF, MT, Zip Cord | Surface Level Measurement Devices |
| MCS | Monitor and Control System |
| Manual | Not connected to any automated system |
| O/S | Out of Service |
| PFP | Plutonium Finishing Plant |
| SACS | Surveillance Automated Control System |
| SST | Single-Shell Tank |
| TMACS | Tank Monitor and Control System |
| WTF | Weight Factor (can be recorded as WTF, WTF [uncorrected] or CWF [uncorrected]) |

Table 5-2. East Area Inactive Miscellaneous Underground Storage Tanks and Special Surveillance Facilities.

| INACTIVE - No longer receiving waste transfers - currently managed by Tank Farm Contractor | | | | | |
|--|---------------|-------------------------------------|-----------------|---------------|---|
| Facility | Location | Received Waste From: | Waste (Gallons) | Monitored By: | Remarks |
| 209-E-TK-111 | 209 E Bldg. | Decon Catch Tank | Unknown | NM | Removed from service 1988 |
| 241-A-302-B | A Farm | A-152 DB | 6071 | SACS/MT | Isolated 1985, Project B-138, Interim Stabilized 1990, rain intrusion |
| 241-AX-151 | N. of PUREX | PUREX | Unknown | NM | Isolated 1985 |
| 241-AX-152 | AX Farm | AX-152 DB | 0 | SACS/MT | Declared Assumed Leaker, pumped to AY-102, 3/01, no longer being used |
| 241-B-301-B | B Farm | B-151, 152, 153, 252 DB | 22250 | NM | Isolated 1985 (1) |
| 241-B-302-B | B Farm | B-154 DB | 4930 | NM | Isolated 1985 (1) |
| 241-BX-302-A | BX Farm | BR-152, BX-153, BXR-152, BYR-152 DB | 840 | NM | Isolated 1985 (1) |
| 241-BX-302-B | BX Farm | BX-154 DB | 1040 | NM | Isolated 1985 (1) |
| 241-BX-302-C | BX Farm | BX-155 DB | 870 | NM | Isolated 1985 (1) |
| 241-BY-ITS2-TK 1 | BY Farm | Vapor condenser | Unknown | NM | Isolated |
| 241-BY-ITS2-TK 2 | BY Farm | Heater Flush Tank | Unknown | NM | Stabilized 1977 |
| 241-C-301-C | C Farm | C-151, 152, 153, 252 DB | 10470 | NM | Isolated 1985 (1) |
| 241-ER-311A | SW of B Plant | ER-151 DB | Empty | NM | Abandoned in place 1954 |
| 241-AR Vault | A Complex | Between farms and B Plant | Unknown | NM | Stabilized 8/03, RPP-12051 |
| 241-BXR-TK/SMP-001 | BX Farm | Transfer lines | 7200 | NM | Interim Stabilization 1985 (1) |
| 241-BXR-TK/SMP-002 | BX Farm | Transfer Lines | 2180 | NM | Interim Stabilization 1985 (1) |
| 241-BXR-TK/SMP-003 | BX Farm | Transfer Lines | 1810 | NM | Interim Stabilization 1985 (1) |
| 241-BXR-TK/SMP-004 | BX Farm | Transfer Lines | 7100 | NM | Interim Stabilization 1985 (1) |
| Total East Area Inactive Facilities - 18 | | | | | |

| LEGEND: | |
|---------|---------------------------------------|
| DB | Diversion Box |
| MT | Surface Level measurement Device |
| NM | Not Monitored |
| SACS | Surveillance Automated Control System |
| TK, SMP | Tank, Sump |

(1) WHC-SD-WM-TI-356, Waste Storage Tank Status and Leak Detection Criteria, Rev. 0, September 30, 1988

Table 5-3. West Area Inactive Miscellaneous Underground Storage Tanks and Special Surveillance Facilities.

| INACTIVE - No longer receiving waste transfers - currently managed by Tank Farm Contractor | | | | | |
|--|--|---------------------------|-----------------|---------------|---|
| Facility | Location | Received Waste From: | Waste (Gallons) | Monitored By: | Remarks |
| 213-W-TK-1 | E. of 213-W Compactor Facility | Water Retention Tank | Unknown | NM | Contains only water |
| 231-W-151-001 | N. of Z Plant | 231-Z Floor drains | Unknown | NM | Inactive, last data 1974 |
| 231-W-151-002 | N. of Z Plant | 231-Z Floor drains | Unknown | NM | Inactive, last data 1974 |
| 240-S-302 | S Plant | 240-S-151-DB | 8116 | | Assumed Leaker, EPDA 85-04 |
| 241-S-302-A | S Farm | 241-S-151-DB | 0 | | Assumed Leaker TF-EFS-90-042 |
| | Partially filled with grout 2/91, determined to be an Assumed Leaker after leak test. No surface level or intrusion readings obtainable. S-304 (active) replaced S-302 | | | | |
| 241-S-302-B | SX Farm | S Encasements | Empty | NM | Isolated 1985 (1) |
| 241-SX-302 (SX-304) | SX Farm | SX-151 DB, 151 TB | Unknown | NM | Isolated 1987 |
| 241-T-301 | T Farm | DB T-151, 151, 153, 252 | Unknown | NM | Isolated 1985 (T-301-B) |
| 241-TX-302 | TX Farm | TX-153 DB | Unknown | NM | Isolated 1985 (1) |
| 241-TX-302-X-B | TX Farm | TX Encasements | Unknown | NM | Isolated 1985 (1) |
| 241-TX-302-B | E. of TX Farm | TX-155 DB | 3254 | SACS/ENRAF | New ENRAF installed 9/02 |
| 241-TX-302-B(R) | E. of TX Farm | TX-155 DB | Unknown | NM | Isolated, replaced TX-302-B |
| 241-TY-302-A | TY Farm | TX-153 DB | Unknown | NM | Isolated 1985 (1) |
| 241-TY-302-B | TY Farm | TY Encasements | Empty | NM | Isolated 1985 (1) |
| 241-Z-8 | E. of Z Plant | Recuplex waste | Unknown | NM | Isolated, 1974, 1975 |
| 242-T-135 | T Evaporator | T Evaporator | Unknown | NM | Isolated |
| 242-TA-R1 | T Evaporator | Z Plant waste | Unknown | NM | Isolated |
| 243-S-TK-1 | NW of S Farm | Personnel Decon. Facility | Empty | NM | Isolated |
| 244-TXR-TK/SMP-001 | TX Farm | Transfer lines | Unknown | NM | Interim Stabilized, MT removed 1984 (1) |
| 244-TXR-TK/SMP-002 | TX Farm | Transfer lines | Unknown | NM | Interim Stabilized, MT removed 1984 (1) |
| 244-TXR-TK/SMP-003 | TX Farm | Transfer lines | Unknown | NM | Interim Stabilized, MT removed 1984 (1) |
| 244-UR-001 Vault TK | U Farm | Tank, Sump and Cell | 4220 | NM | Stabilized 1985 |
| 244-UR-002 Vault TK | U Farm | Tank, Sump and Cell | 1400 | NM | Stabilized 1985 |
| 244-UR-003 Vault TK | U Farm | Tank, Sump and Cell | 5996 | NM | Stabilized 1985 |
| 244-UR-004 Vault TK | U Farm | Tank, Sump and Cell | Empty | NM | Stabilized 1985 |
| Total East Area Inactive Facilities - 25 | | | | | |

| LEGEND: | |
|------------|--|
| DB, TD | Diversion Box, Transfer Box |
| FIC, ENRAF | Surface Level Measurement Devices |
| MT | Manual Tape - Surface Level measurement Device |
| NM | Not Monitored |
| SACS | Surveillance Automated Control System |
| TK, SMP | Tank, Sump |
| SACS | Surveillance Automated Control System |
| TK, SMP | Tank, Sump |

(1) WHC-SD-WM-TI-356, Waste Storage Tank Status and Leak Detection Criteria, Rev. 0, September 30, 1988

APPENDIX A - TANK CONFIGURATION AND FACILITIES CHARTS

Figure A-1. High Level Waste Tank Configurations

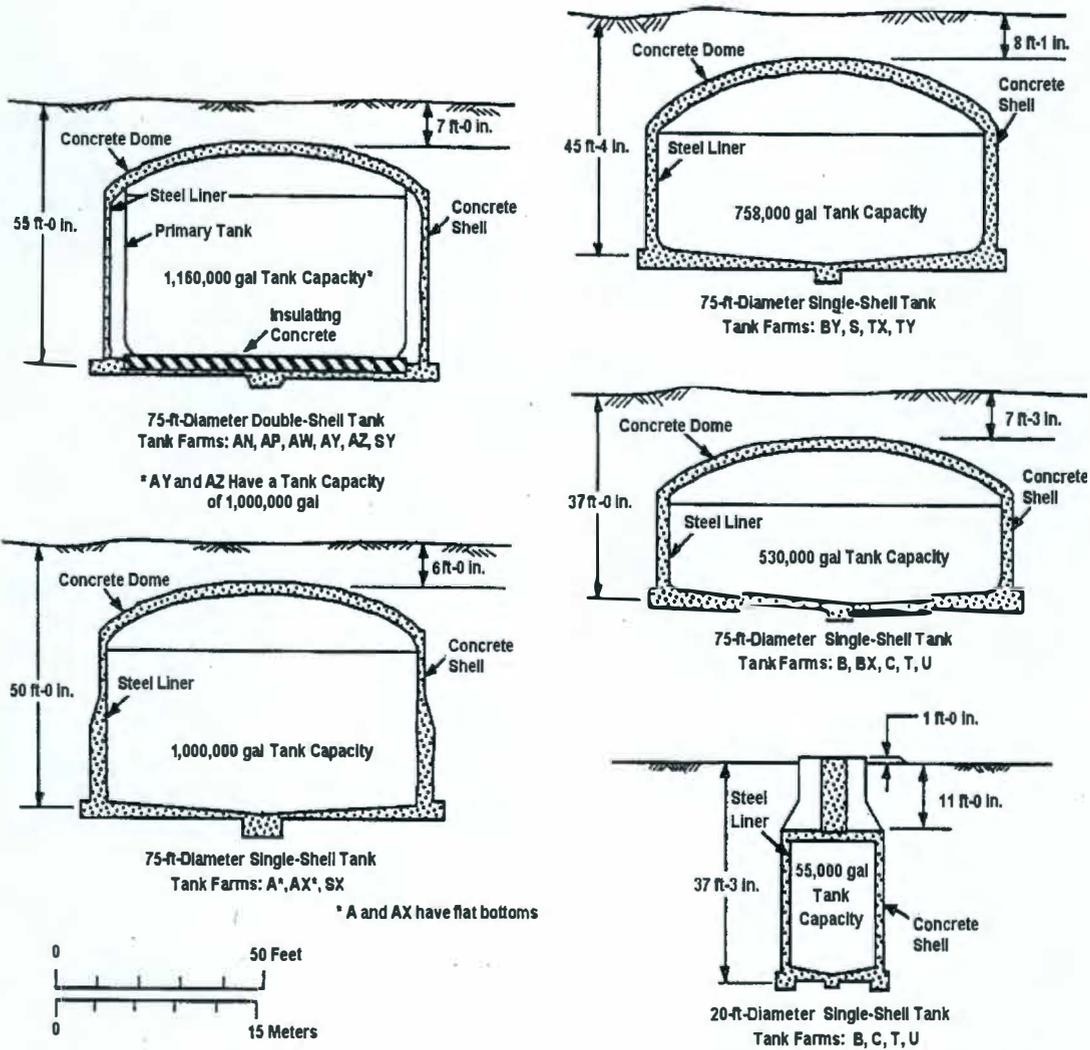


Figure A-2. Double-Shell Tank Instrumentation Configuration

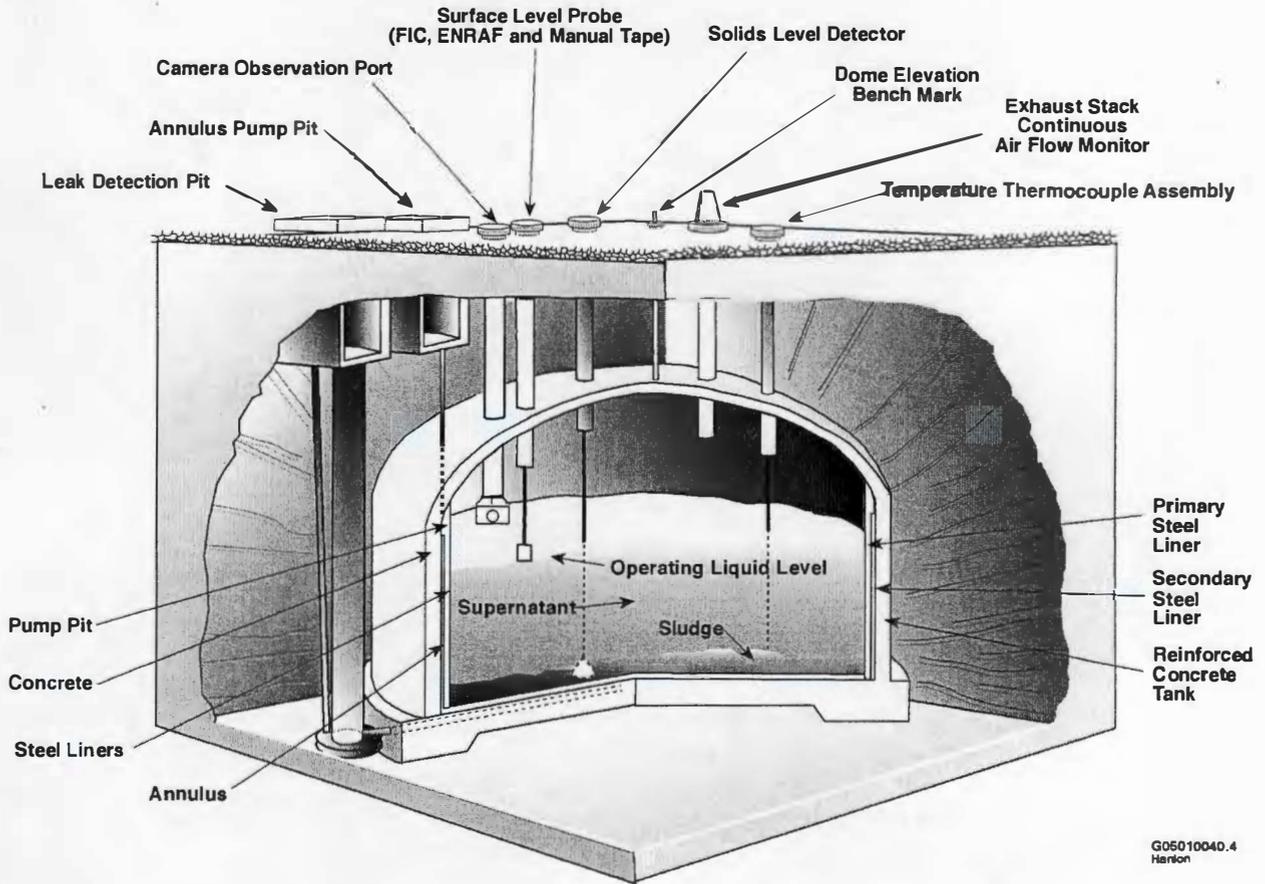
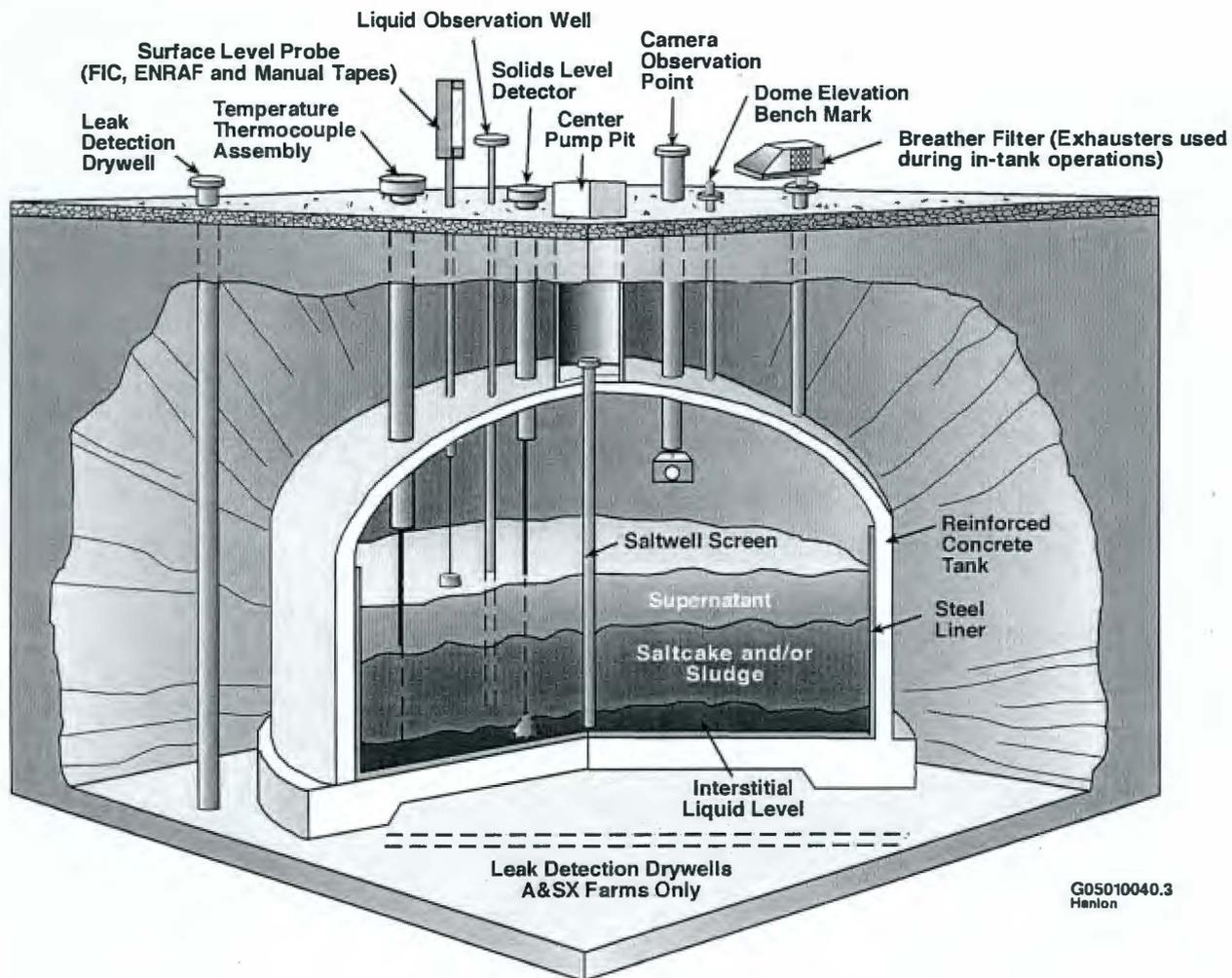


Figure A-3. Single-Shell Tank Instrumentation Configuration



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