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Waste Tank Summary Report for Month Ending February 29, 1996

Prepared for the U.S. Department of Energy
Office of Environmental Restoration and
Waste Management

Westinghouse
Hanford Company Richland, Washington

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WASTE TANK SUMMARY REPORT

FOR MONTH ENDING FEBRUARY 29, 1996

B. M. HANLON

Date Published
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WASTE TANK SUMMARY REPORT

B. M. Hanlon

ABSTRACT

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 49 smaller catch 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-Richland Operations Office Order 5820.2A, Chapter I, Section 3.e. (3) (DOE-RL, 1990, Radioactive Waste Management, U. S. Department of Energy-Richland Operation Office, Richland, Washington) requiring the reporting of waste inventories and space utilization for Hanford Tank Farm Tanks.

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METRIC CONVERSION CHART		
1 inch	=	2.54 centimeters
1 foot	=	30.48 centimeters
1 gallon	=	3.80 liters
1 ton	=	0.90 metric tons

$$°F = \left(\frac{9}{5}\ °C\right) + 32$$

1 Btu/h = 2.930711 E-01 watts
(International Table)

WASTE TANK SUMMARY REPORT FOR MONTH ENDING FEBRUARY 29, 1996

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

I. WASTE TANK STATUS

Category	Quantity	Date of Last Change
In-Service Tanks[c]	28 double-shell	10/86
Out-of-Service Tanks[a]	149 single-shell	07/88
Assumed Leaker Tanks[f]	67 single-shell	7/93
Sound Tanks	28 double-shell 82 single-shell	1986 7/93
Interim Stabilized Tanks[b,d]	114 single-shell	10/95
Not Interim Stabilized [f]	35 single-shell	10/95
Intrusion Prevention Completed[e]	98 single-shell	09/91
Watch List Tanks [g] Total	48 single-shell 6 double-shell 54 tanks	11/94[h] 6/93

[a] Although all 149 single-shell tanks were removed from service (i.e., no longer authorized to receive waste) as of November 21, 1980, the category of "Out-of-Service" was not established until July 1988.

[b] Of the 114 tanks classified as Interim Stabilized, 61 are listed as Assumed Leakers. The total of 114 Interim Stabilized tanks includes four tanks that do not meet current established supernatant and interstitial liquid stabilization criteria: B-104, BX-103, T-102, and T-112. (These four tanks did meet the criteria in existence when they were declared Interim Stabilized). B-110, B-111, and U-110 were also originally listed as tanks which did not meet the criteria, but investigative studies concluded that these three tanks do meet the current Interim Stabilization criteria. (See Stabilization Table I-1 footnotes). These three tanks are Assumed Leakers but surveillance data do not show an indication of a continuing leak.

[c] Six double-shell tanks listed as "in service" are currently included on the Hydrogen Watch List and are thus prohibited from receiving waste in accordance with "Safety Measures for Waste Tanks at Hanford Nuclear Reservation," Section 3137 of the National Defense Authorization Act for Fiscal Year 1991, November 5, 1990, Public Law 101-510.

[d] Of the 48 single-shell tanks on Watch Lists, 20 have been Interim Stabilized.

[e] Of the 48 single-shell tanks on Watch Lists, 27 have completed Intrusion Prevention (this category replaced Interim Isolation). See Appendix C, Tank and Equipment Codes and Status Definitions, for "Intrusion Prevention" definition.

[f] Five of these tanks are Assumed Leakers. See Appendix H, Leak Volume Estimates, for more details. Tank SX-102 was declared an Assumed Leaker in May, and reclassified as Sound in July, 1993. See "Waste Tank Investigations" section of the July 1993 report for more details.

[g] See Tables A-1 through A-5 for more information on Watch List Tanks. Ten tanks (A-101, S-102, S-111, SX-103, SX-106, TX-118, TY-104, U-103, U-105, and U-107) are currently on more than one Watch List.

[h] Dates for the Watch List tanks are "officially added to the Watch List" dates. See Table A-1, Watch List Tanks, for further information.

II. WASTE TANK INVESTIGATIONS

This section includes all single-shell tanks or catch tanks which are showing surface level or interstitial liquid level (ILL) decreases, or drywell/ lateral radiation level increases in excess of established criteria.

There are currently no tanks under investigation for ILL decreases or drywell/lateral radiation level increases which exceed the criteria.

A. Assumed Leakers or Assumed Re-leakers: (See Appendix C for definition of "Re-leaker")

This section includes all single- or double-shell tanks or catch tanks for which an off-normal or unusual occurrence report has been issued for assumed leaks or re-leaks. Tanks/catch tanks will remain on this list until either a) completion of Interim Stabilization, or b) the updated occurrence report indicates that the tank/catch tank is not an assumed leaker.

There are currently no tanks for which an off-normal or unusual occurrence report has been issued for assumed leaks or re-leaks.

B. Tanks with increases indicating possible intrusions:

This section includes all single-shell tanks and related receiver tanks for which the surveillance data show that the surface level or ILL has met or exceeded the increase criteria, or are still being investigated.

244-AR Tanks and Sumps: Currently, all ventilation systems at 244-AR are shut down. Based on the weight factors for the sumps and tanks, Tank 001 contains 2300 gallons, Tank 002 contains 8100 gallons (some unknown amount of sludge), Tank 003 contains 2100 gallons, and Tank 004 contains 500 gallons. Intrusion water in Sump 003 continues to increase whenever rainfall occurs; the sump currently contains approximately 2400 gallons of water.

Tank 241-B-202. A steady increase in the surface level measurement has been observed since December 1984. The manual tape pencil plummet is contacting liquid. When the quarterly reading was obtained on October 6, 1992, the level was recorded as 144.75 inches, thus exceeding the 2.00-inch increase criteria from the established baseline of 142.50 inches. The surface level measurement was rechecked on October 9, 1992, at 145.50 inches, verifying the increase and that the criteria had been exceeded. Occurrence Report RL-WHC-TANKFARM-1993-0024 was issued February 13, 1993, as a result of the tank exceeding a 2.00-inch increase criteria from the established baseline of 142.50 inches. The increase criteria was changed from 2.00 inches to 3.00 inches in January 1996, per OSD-TI-151-00031. **The surface level measurement was 146.25 inches on February 29, 1996.** The monitoring frequency has been increased from quarterly to daily. This tank is Sound, Interim Stabilized, and Intrusion Prevention completed.

Resolution status: A new baseline was established at 145.50 inches as a temporary measure until the new photos could be taken. In-tank videos were taken on June 15, 1995. Comparison was made of the videos with the photos taken May 1985 and with a composite photo compiled from 1977 photos. In 1985, a thin layer of liquid had formed over the bright yellow-colored solids. In the 1995 videos, the solids can barely be seen beneath the liquid surface and have lost their color. The liquid is also darker in the videos, to the point that it looks oily. It should be noted, however, that the color difference may be due to lighting and the difference in media.

By comparing the sidewall-liquid interface as seen in the videos with that seen in the photos, it has been visually estimated that the tank has experienced at least a 2.00-inch liquid level increase since 1985.

It had rained earlier in the day prior to the videos being taken. Moisture could be seen on the internal circumference of the concrete manhole across from the observation port in videos taken of the dome. An assessment of the tank indicates the tank is experiencing an ongoing intrusion as is evidenced by the increased liquid level and moisture in the manhole.

Tank 241-BX-101. On September 2, 1993, the surface level increased from 10.00 to 12.00 inches, thus reaching the 1.00-inch increase criteria from the reference baseline of 11.00 inches. In-tank photographs show the manual tape donut plummet contacting liquid in a shallow pool. The tank has been rebaselined to 12.00 inches. **Surface level measurement was 12.25 inches on February 29, 1996.** This tank is an Assumed Leaker, Interim Stabilized, and Intrusion Prevention completed.

Resolution Status: Comparison of November 1988 photos with November 1994 videos shows evidence of an ongoing intrusion. The source of the intrusion must be verified by visual inspection of pits. No funds were allocated for performing intrusion investigations in FY 1995. FY 1996 funding has been allocated for intrusion investigation of BX-103. The investigation of this tank may be included with the BX-103 investigation.

Tank 241-BX-103. This tank has shown an erratic increase in surface level measurements since January 6, 1986. The FIC plummet is contacting liquid as indicated by in-tank photographs taken October 31, 1986. On January 18, 1993, the surface level measurement in this tank exceeded the 0.50-inch increase criteria from the reference baseline of 19.50 inches, and was verified on January 20, 1993. Discrepancy Report S&DA 93-522 was issued January 21, 1993. Occurrence Report RL-WHC-TANKFARM-1993-0036 was issued March 25, 1993. The baseline was adjusted to 20.50 inches with a 1.00-inch increase criteria on July 11, 1994, but the intrusion investigation is not yet complete. **The surface level measurement was 20.80 inches on February 29, 1996.** This tank is Sound, Interim Stabilized, and Intrusion Prevention completed.

Resolution status: The current level is greater than that prior to stabilization in November 1983. The tank was previously determined to have experienced an intrusion from 1977 to March 1983 (prior to stabilization). Subsequent isolation was expected to halt the intrusion, however, the intrusion is apparently ongoing. A visual survey of the area was performed to determine possible paths for precipitation to enter the tank. The weather covering on the pits and risers was found in place and undamaged. The existing grade is level and revealed no obvious draining problems. Design/isolation drawing review revealed that nozzles, floor drains and some transfer lines entering the heel pit have been left open. An in-tank video was taken on October 27, 1994. The video, compared with the most recent photos, verified that an increase in liquid level occurred. The current supernate volume has been estimated to be approximately 6000 gallons, indicating that the tank no longer meets the criteria for interim stabilization. The surface level has remained stable since January 1993, and within the limits of the new baseline.

A new in-tank video was taken February 20, 1996, and compared with the October 27, 1994, video. The new video shows a cloud of vapor rising briskly off the liquid surface. Whenever the camera was pointed upwards, water droplets appeared more like haze. Riser penetrations in the old video, that appeared to have accumulated exterior mineral deposits from water seepage, were now wet in the new video. The dome also looked damp. The strip of sludge/saltcake around the perimeter of the tank also appeared slightly narrower. Comparison of videos detected a change in the beachline. It is felt that the intrusion is not localized to one area, but probably a number of risers have poor seals between the metal surface and concrete dome.

A review of the historical surface level data reveals the increase has not leveled off. In fact, an increase of about 0.1 inch occurred during the beginning of February 1996, which was within the time frame of the recent snow storm melt.

To establish a more conclusive evaluation, digitization of both videos will be done in order to produce prints with which to perform side-by-side comparisons of beachlines, risers, etc. The intrusion investigation and corrective action will be completed before the tank is stabilized again.

Tank 241-BY-107. The fourth quarter 1995 manual tape surface level reading of 106.75 inches on October 1, 1995, exceeded the increase criteria of 3.00 inches above baseline. The first and second quarter readings were 104.00 inches in January and 103.75 inches in April 1995. The following three readings were taken in the third quarter: 107.00 inches on July 2, 106.50 inches on July 7, and 106.75 inches on July 28. The first quarter 1996 manual tape surface level reading was 103.75 inches on January 1, 1996. The LOW is the primary method of intrusion detection and is within tolerance.

Resolution Status: This tank had been experiencing a shallow, erratic decrease until January 1995. LOW data is steady and within expected parameters. The recent data which indicates an increase has occurred appears to be within the general range of previous data. Review of the most recent in-tank photos indicates the solids surface is highly irregular and the manual tape donut is over a depression. The donut is likely resting on the edge of the depression. The tank was rebaselined to 106.75 inches on January 3, 1996.

Tank 241-C-101: The first quarter 1996 manual tape surface level reading of 26.25 inches taken on January 1, 1996, is over the increase criteria of 3.00 inches above baseline. This tank has consistently read between 25.00 inches and 26.50 inches since 1981 until October 1994 when it dropped to 23.00 inches and remained there for the first three quarters of 1995. The tank was rebaselined to 23.00 inches.

Resolution Status: The waste surface is dry. A previous investigation into surface level anomalies in this tank revealed that the manual tape device itself is inadequate for a number of reasons including: (1) a pencil plummet was installed rather than a donut; (2) the method of attaching the plummet was improper, which may have led to the plummet separating from the tape; and (3) the riser in which the MT is installed contains an obstruction, possibly a donut lodged in the PVC liner. It was recommended to move the device to a different riser and/or install an ENRAF, but it was decided to first obtain in-tank videos to inspect the plummet and waste condition. Resolution is awaiting the in-tank video.

III. SURVEILLANCE AND WASTE TANK STATUS HIGHLIGHTS

1. Flammable Gas Issue Results in Administrative Controls on 121 Underground Waste Storage Tanks

As a precautionary measure to ensure worker safety, administrative controls were placed on the 121 underground waste storage tanks not already covered by Watch List controls. Safety analysis concerning the flammable gas issue will be required to allow a determination on the safe pumping of the tanks. Upon completion of the safety analysis, DOE-RL will review the results and make a determination if pumping can commence. The resolution of the flammable gas safety issue is necessary prior to initiating any type of activity affecting the tanks. The additional flammable gas controls have imposed limitations on continuing work toward meeting several Tri-Party Agreement milestones.

Westinghouse Hanford Company has recommended 25 tanks to be added to the Flammable Gas Watch List. (See also Item #3)

2. Single-Shell Tanks Saltwell Jet Pumping (See Table E-6 footnotes for further information)

NOTE: Tank Waste Remediation System Plant Review Committee shut pumping down in three BY tanks on October 16, 1995, because of flammable gas issues. See Item #1 above.

No pumping was done in the BY-tank farm during February 1996.

Tank 241-BY-103 - A total of 98.9 Kgallons has been pumped from this tank.

Tank 241-BY-106 - A total of 63.7 Kgallons has been pumped from this tank.

Tank 241-BY-109 - A total of 145.1 Kgallons has been pumped from this tank.

Tank 241-S-110 - Pumping began February 24, 1996. 1.7 Kgallons were pumped during February. A total of 187.6 Kgallons has been pumped from this tank.

Tank 241-T-107 - Pumping resumed February 7, 1996. 1.5 Kgallons were pumped. A total of 9.9 Kgallons has been pumped from this tank.

3. Single-Shell Tanks To Be Added to Hydrogen/Flammable Gas Watch List

Westinghouse Hanford Company (WHC) has completed the first phase of the evaluation of 177 high level waste tanks to determine if they qualify to be considered for inclusion on the Flammable Gas Watch List. Based on the results of this review, WHC recommended that 25 tanks be considered by DOE for addition to the Flammable Gas Watch List.

The analysis of the remaining 134 tanks will be completed by March 31, 1996.

4. Single-Shell Tank TPA Interim Stabilization Milestones

No TPA Interim Stabilization Milestones were completed in February 1996.

Change Request M-43-95-02 (TPA Milestone M-43-00, including two overdue interim TPA Milestones M-43-02A and 04A), was approved by Washington Department of Ecology (WDOE) on February 27, 1996.

New TPA Milestone M-43-09, "Complete Conceptual Design Report for Project W-314 Tank Farm Upgrades," due May 31, 1996, will complete the two overdue interim milestones.

New TPA Milestone M-43-10, "Start Definitive Design for Project W-314," due January 31, 1997, replaced Milestone M-43-04-T06, "Start Definitive Design for W-314," due January 31, 1996, which was deleted.

TPA Milestone M-41-09, "Start Interim Stabilization Pumping in Seven Single Shell Tanks in 241-S Farm," due by January 31, 1996, was missed as a result of the flammable gas issue and severe weather; WDOE rejected a change request submitted by DOE-RL to modify the Tri-Party Agreement.

5. Tank Waste Remediation System Safety Initiatives

The U. S. Secretary of Energy has directed that six safety initiatives be implemented in the Tank Waste Remediation System Program to accelerate the mitigation/resolution of the high priority waste tank safety issues at the Hanford Site. Forty-two milestones were established for accomplishing the initiatives.

No Safety Initiatives were scheduled to be completed in February 1996.

6. Flammable Gas Monitors (FGM)

Rapid procurement of six new flammable gas monitors will allow the resumption of saltwell pumping from single-shell tanks ahead of schedule, after the shutdown caused by flammable gas concerns. These new monitors can detect a full range of flammable gases and are portable, which will allow movement from tank to tank. Pumping began in Tanks 241-T-107 and S-110 in February 1996. FGMs are being installed in S-108 and T-104, with pumping expected to begin in March.

7. Characterization Progress Status (See Appendix J)

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.

Characterization Progress for February 1996:

Tanks which have been evaluated as "Complete"

AN-106, C-110

Tanks changed from "Need More Material" to In Progress"

AN-101, AN-107, AP-104, AP-108, AY-101, U-105 and U-107

Tanks with a "Report Under Review"

AN-102, BY-108, C-109, S-107

8. Evaporator Campaign 96-1

The various cold run (training) procedures are being conducted as a prerequisite for the Evaporator Project Campaign 96-1 which is targeted to start a monthly early on May 1, 1996, and to be completed by mid-June. This campaign will transfer concentrated slurry from Tank AW-106 to AP-101.

9. Gas Release Event

Tank AW-101 had a gas release vent that began about noon on Monday, February 5. The hydrogen concentration initially spiked to 2800 ppm from a 200 ppm baseline. It was 1300 ppm a few minutes later. The concentration then rose again, reaching a maximum of 3000 ppm after ten hours. The concentration was 2000 ppm on the morning of February 7.

The waste surface level has risen 0.15 inches, and a 0.1-inch w.g. spike was measured in the dome space.

A time-lapse tape is now continually recorded using the in-tank camera. The tape recorded Monday was reviewed, and no waste movement was seen.

10. Improved Liquid Level Measurement Technology

Four new Liquid Observation Well (LOW) vans have been delivered and are undergoing Operational Testing Procedures. These vans will provide a more accurate measure of liquid levels in the tanks. The vans have an improved detector, a more stable delivery system, and a computer-controlled depth and measurement system.

11. Controlled, Clean and Stable (CCS) Mission Goals

The Controlled, Clean, and Stable (CCS) Mission Goals are to substantially reduce the operations and maintenance costs for the Single-Shell Tank Farms, to operate within the safety envelope, remove pumpable liquid wastes and contaminated soils/debris, and to achieve compliance with near-term regulatory requirements.

To achieve these goals, several objectives have been established which define the approach to be taken. These objectives are:

Controlled: Provide remote monitoring for required instrumentation and implement controls required in the TWRS Authorization Basis.

Clean: Remove surface soil contamination and downpost the Tank Farm(s) to RBA/URMA/RA radiological control status, remove abandoned equipment, and place reusable equipment in compliant storage.

Stable: Remove pumpable liquids from the SSTs and Inactive Miscellaneous Underground Storage Tanks (IMUSTs) and isolate the tanks.

APPENDIX A

WASTE TANK SURVEILLANCE MONITORING TABLES

TABLE A-1. WATCH LIST TANKS (Sheet 1 of 3)

These tanks have been identified as Watch List Tanks in accordance with Public Law 101-510, Section 3137, " Safety Measures for Waste Tanks at Hanford Nuclear Reservation," (1990). These tanks have been identified as the Priority 1 Hanford Site Tank Farm Safety Issues: "Issues/situations that contain most necessary conditions that could lead to worker (onsite) or offsite radiation exposure through an uncontrolled release of fission products, e.g., Tank SY-101."

February 29, 1996

Single-Shell Tanks Tank No.		Category	Officially Added to Watch List
A-101	(2)	Hydrogen	1/91
	(10)	Organics	5/94
AX-101	(2)	Hydrogen	1/91
AX-102	(10)	Organics	5/94
AX-103	(2)	Hydrogen	1/91
B-103	(2)	Organics	1/91
BY-103	(2)	Ferrocyanide	1/91
BY-104	(2)	Ferrocyanide	1/91
BY-105	(2)	Ferrocyanide	1/91
BY-106	(2)	Ferrocyanide	1/91
BY-107	(2)	Ferrocyanide	1/91
BY-108	(2)	Ferrocyanide	1/91
BY-110	(2)	Ferrocyanide	1/91
BY-111	(2)	Ferrocyanide	1/91
BY-112	(2)	Ferrocyanide	1/91
C-102	(10)	Organics	5/94
C-103	(2)(4)	Organics	1/91
C-106	(1)(2)	High Heat Load	1/91
C-108	(2)	Ferrocyanide	1/91
C-109	(2)	Ferrocyanide	1/91
C-111	(2)	Ferrocyanide	1/91
C-112	(2)	Ferrocyanide	1/91

Single-Shell Tanks Tank No.		Category	Officially Added to Watch List
S-102	(2)	Hydrogen,	1/91
	(2)	Organics	1/91
S-111	(2)	Hydrogen	1/91
	(10)	Organics	5/94
S-112	(2)	Hydrogen	1/91
SX-101	(1)(2)	Hydrogen	1/91
SX-102	(1)(2)	Hydrogen	1/91
SX-103	(1)(2)	Hydrogen	1/91
	(10)	Organics	5/94
SX-104	(1)(2)	Hydrogen	1/91
SX-105	(1)(2)	Hydrogen	1/91
SX-106	(1)(2)	Hydrogen,	1/91
	(1)(2)	Organics	1/91
SX-109	(1)(2)	Hydrogen because other tanks vent thru it	1/91
T-107	(3)	Ferrocyanide	2/91
T-110	(2)	Hydrogen	1/91
T-111	(9)	Organics	2/94
TX-105	(2)	Organics	1/91
TX-118	(2)	Ferrocyanide,	1/91
	(2)	Organics	1/91
TY-101	(2)	Ferrocyanide	1/91
TY-103	(2)	Ferrocyanide	1/91
TY-104	(2)	Ferrocyanide	1/91
	(10)	Organics	5/94

Single-Shell Tanks Tank No.		Category	Officially Added to Watch List
U-103	(2)	Hydrogen	1/91
	(10)	Organics	5/94
U-105	(2)	Hydrogen	1/91
	(10)	Organics	5/94
U-106	(2)	Organics	1/91
U-107	(2)	Organics	1/91
	(8)	Hydrogen	12/93
U-108	(2)	Hydrogen	1/91
U-109	(2)	Hydrogen	1/91
U-111	(7)	Organics	8/93
U-203	(10)	Organics	5/94
U-204	(10)	Organics	5/94
48 Tanks			

Double-Shell Tanks Tank No.		Category	
AN-103	(1)(2)	Hydrogen	1/91
AN-104	(1)(2)	Hydrogen	1/91
AN-105	(1)(2)	Hydrogen	1/91
AW-101	(1)(5)	Hydrogen	6/93
SY-101	(1)(2)	Hydrogen	1/91
SY-103	(1)(2)	Hydrogen	1/91
6 Tanks			

54 tanks on Watch List (10 tanks are on more than one Watch List)

Ten tanks (A-101, S-102, S-111, SX-103, SX-106, TX-118, TY-104, U-103, U-105, and U-107,) are on more than one Watch List

See footnotes next page

TABLE A-1. WATCH LIST TANKS (Sheet 2 of 3)

February 29, 1996

Footnotes:

(1) These eight single-shell tanks and the six double-shell tanks on the Watch List are actively ventilated. See also Table A-2, footnote (2).

Although on various dates beginning in March 1990, WHC identified tanks containing ferrocyanide, organic salts, etc., which were then added to this report as Watch List tanks, the following official notifications were made to DOE-RL:

(2) Letter 9059124, H. D. Harmon, WHC, to R. E. Gerton, DOE-RL, "Safety Measures for Waste Tanks at Hanford Site, Richland, Washington," dated January 8, 1991, identified 23 ferrocyanide tanks, 23 tanks with potential for accumulation of flammable gas, eight organic tanks, and one high heat load tank, as being Watch List tanks. (52 tanks)

The ferrocyanide and hydrogen tanks were declared Unresolved Safety Questions (USQ); the organic tanks and the high heat load tank were within the safety envelope as defined by the safety analysis reports and were not designated as USQs. On March 1, 1994, the ferrocyanide USQ was closed. See Table A-2.

(3) Letter 9059124.1 (revision to 9059124 above), dated February 8, 1991, added T-107 to the Ferrocyanide Watch List. (53 tanks)

(4) Tank C-103 was declared a USQ per Unusual Occurrence Report RL-WHC-TANKFARM-1992-0069, issued September 1992, because of an organic layer covering the surface. This USQ was closed May 19, 1994.

(5) Letter 9354700, J. C. Fulton, WHC, to R. E. Gerton, DOE-RL, "Addition of Tank 241-AW-101 to Flammable Gas Watch List," dated June 3, 1993, added this double-shell tank to the Watch List. (54 tanks)

(6) Letter 93-CAB-223, J. H. Anttonen, DOE-RL, to President, WHC, "Resolution of Unreviewed Safety Question for Four Ferrocyanide Tanks, dated July 9, 1993, removed BX-110, BX-111, BY-101 and T-101 from the Ferrocyanide Watch List. (50 tanks)

(7) Letter 9353957, J. C. Fulton, WHC, to R. E. Gerton, DOE-RL, "Single-Shell Waste Tank 241-U-111," dated May 24, 1993, recommended this tank be included on the Organic Tanks Watch List. This tank was added to the Watch List on August 31, 1993. (51 tanks)

(8) Tank U-107 was declared a USQ per Occurrence Report RL-WHC-TANKFARM-1993-0115, issued December 1993, because of an increase in slurry growth. This tank is also on the Organics Watch List. (No change in total tanks on Watch List)

(9) Tank T-111 was added to the Organic Salts Watch List on February 28, 1994, upon recommendation by WHC Waste Tank Safety Program. (52 tanks)

(10) Ten tanks (A-101, AX-102, C-102, S-111, SX-103, TY-104, U-103, U-105, U-203, and U-204) were added to the Organic Salts Watch List, upon recommendation by WHC to DOE-RL, (Letter 9453328, M. A. Payne, WHC, to R. E. Gerton, DOE-RL, "Revision of the Organic Tanks Watch List," dated May 15, 1994,) and DOE-RL concurrence (Letter 94-SST-116, R. E. Gerton, DOE-RL, to President, WHC, Same Subject, dated May 25, 1994). Six of these tanks were already on the Watch List. (56 tanks)

(11) Two tanks were removed from the Ferrocyanide Watch List per letter 9406684, T. R. Sheridan, DOE-RL to President, WHC, "Approval to Remove Two Ferrocyanide Tanks, 241-BX-102 and 241-BX-106 From The Watch List," dated November 17, 1994. (54 tanks)

TABLE A-1. WATCH LIST TANKS (Sheet 3 of 3)

ADDITIONS/DELETIONS TO WATCH LISTS BY TANK

February 29, 1996

Added/Deleted dates may differ from dates that tanks were officially added to the Watch Lists. See Pages A-2, A-3 for official dates.

	Number of tanks on Watch Lists							Total Tanks (1)		
	Ferrocyanide		Hydrogen		Organics		High Heat	SST	DST	Total
1/91 - Original List (Response to Public Law 101-510)	23		23		8		1	47	5	52
Added 2/91 (revision to Original List)	1	(T-107)								
December 31, 1991	24		23		8		1	48	5	53
Added 8/92			1	(AW-101)						
December 31, 1992	24		24		8		1	48	6	54
Added 3/93					1	(U-111)				
Deleted 7/93	-4	(BX-110) (BX-111) (BY-101) (T-101)								
Added 12/93			1	(U-107)						
December 31, 1993	20		25		9		1	45	6	51
Added 2/94					1	(T-111)				
Added 5/94					10	(A-101) (AX-102) (C-102) (S-111) (SX-103) (TY-104) (U-103) (U-105) (U-203) (U-204)				
Deleted 11/94	-2	(BX-102) (BX-106)								
December 31, 1994	18		25		20		1	48	6	54

Legend: Public Law 101-510, "Safety Measures for Waste Tanks at Hanford Nuclear Reservation," Section 3137 of the National Defense Authorization Act for Fiscal Year 1991, November 5, 1990, (Wyden Amendment)

(1) Some tanks are on more than one list. As of December 31, 1994, ten SST tanks were on more than one list (A-101, S-102, S-111, SX-103, SX-106, TX-118, TY-104, U-103, U-105, and U-107).

TABLE A-2. TEMPERATURE MONITORING IN WATCH LIST TANKS (Sheet 1 of 2)

February 29, 1996

All Watch List tanks are reviewed for increasing temperature trends. Temperatures in these tanks are monitored continuously by the Tank Monitor And Control System (TMACS), unless indicated otherwise.

Temperatures are taken in the waste unless in-waste thermocouples are out of service. Temperatures below are the highest temperatures recorded in these tanks during this month, and do not exceed the maximum criteria limit for this month.

Temperatures in degrees F. Total Waste in Inches

Ferrocyanide (1)(2)(3)			Hydro/Flammable Gas(4)			Organic Salts			High Heat (5)(6)		
Tank No.	Temp.	Total Waste	Tank No.	Temp.	Total Waste	Tank No.	Temp.	Total Waste	Tank No.	Temp.	Total Waste
BY-103	80	153	A-101 (*)	150	347	A-101 (*)	150	347	C-106	149	72
BY-104	125	155	AX-101 (*)	132	272	AX-102 (*)	73	14	1 Tank		
BY-105	114	190	AX-103 (*)	110	40	B-103 (*)	61	17			
BY-106	123	241	S-102	110	207	C-102	85	149			
BY-107	95	104	S-111	95	224	C-103	118	66			
BY-108	107	90	S-112	87	239	S-102	110	207			
BY-110	117	152	SX-101	138	171	S-111	95	224			
BY-111	87	174	SX-102	150	203	SX-103	172	242			
BY-112	90	113	SX-103	172	243	SX-106	111	201			
C-108	74	19	SX-104	165	229	T-111	65	158			
C-109	78	19	SX-105	181	254	TX-105 (*)	98	228			
C-111	83	16	SX-106	111	201	TX-118	76	134			
C-112	81	33	SX-109	150	96	TY-104	63	24			
T-107	65	61	T-110	65	133	U-103	88	166			
TX-118	76	122	U-103	88	166	U-105	92	147			
TY-101	65	50	U-105	92	147	U-106	81	78			
TY-103	69	66	U-107	82	143	U-107	82	166			
TY-104	63	24	U-108	89	166	U-111	82	115			
18 Tanks			U-109	87	164	U-203	64	6			
			AN-103	113		U-204	60	9			
			AN-104	120		20 Tanks					
			AN-105	113							
			AW-101 (*)	104							
			SY-101	120							
			SY-103	100							
			25 Tanks								

(*) Temperatures in these eight tanks are taken manually on a weekly basis.

54 Tanks are on the Watch List (10 tanks are on more than one list: A-101, S-102, S-111, SX-103, SX-106, TX-118, TY-104, U-103, U-105, U-107)

See next page for footnotes

TABLE A-2. TEMPERATURE MONITORING IN WATCH LIST TANKS (sheet 2 of 2)

Footnotes:

Ferrocyanide:
Tanks containing >8 wt% sodium nickel ferrocyanide on an energy equivalent basis. Ferrocyanide in sufficient concentrations, if combined with near stoichiometric amounts of oxidizer can be combustible if sufficiently dry and heated to high temperatures or exposed to an ignition source of sufficient energy to heat the mixture. The temperature for exothermic reaction initiation has been measured for waste stimulants to be in the range of 220-270°C. Safety criteria have been defined for waste categories (SAFE and CONDITIONALLY SAFE) which preclude sustainable, rapid exothermic ferrocyanide reactions. Waste which meets these criteria cannot burn or explode. All tanks meet either SAFE or CONDITIONALLY SAFE criteria. The Unreviewed Safety Question (USQ) associated with these tanks was closed March 1, 1994.

Hydrogen/Flammable Gas:
Tanks which are suspected to have a significant potential for hydrogen/flammable gas generation, entrapment, and episodic release. The amount of flammable gas may exceed the Lower Flammability Limit during an episodic release. The presence of a flammable gas mixture and an ignition source would increase risk of a release of radioactive material to the environment. There is a USQ associated with these tanks because of the potential consequences of a radiological release resulting from a flammable gas burn, an event not analyzed in the SST Safety Analysis Report (SAR).

Organic Salts:
Single-shell tanks containing concentrations of organic salts ≥3 weight% of total organic carbon (TOC)(equivalent to 10 wt% sodium acetate). High concentrations of organic compounds/chemicals could support an exothermic reaction at temperatures above 171°C. Under certain scenarios involving overheating of the tank, such a mixture of organic solids could react rapidly, possibly damaging the tank and allowing a release of radioactive material. These tanks (with the exception of C-103), do not have an associated USQ because the presence of organic material was reviewed in the SAR. Double-shell tanks have >3 weight% TOC but are not on the Watch List because they contain mostly liquid, and there is no credible organic safety concern for tanks which contain mostly liquid.

High Heat:
Tanks which contain heat generating strontium rich sludge and require drainable liquid to be maintained in the tank to promote cooling. Only tank C-106 is on the High Heat Watch List because in the event of a leak, without water additions the tank could exceed temperature limits resulting in unacceptable structural damage. The tank is cooled through evaporation in conjunction with active ventilation. Water is periodically added as evaporation takes place.

(1) Tanks on the FeCN Watch List contain less than 83,000 gram mole of ferrocyanide, per WHC-SD-WM-ER-133-REV 0, "An Assessment of the Inventories of the FeCN Watch List Tanks," (Table 3-7), October 1991.

(2) The estimated heat load for all tanks on the FeCN Watch List is less than 10,100 Btu/hr (2.96 kW), as determined in WHC-EP-0709, "Estimation of the Heat Load in Waste Tanks Using Average Vapor Space Temperatures," December 1993.

(3) Two tanks (C-109, C-112) are classified SAFE, the other tanks on the Ferrocyanide Watch List are classified CONDITIONALLY SAFE, per definitions in Operating Specifications Document OSD-T-151-00030. No tanks are classified UNSAFE.

(4) Tank SX-109 has the potential for flammable gas accumulation only because other SX tanks vent through it.

(5) Tank C-106 is on the Watch List because in the event of a leak without water additions the tank could exceed temperature limits resulting in unacceptable structural damage.

(6) There are 19 single-shell tanks on active ventilation (eight are on the Watch List as indicated by an asterisk):

A-104)exhauster	SX-101 *	SX-107
A-105)out of service	SX-102 *	SX-108
C-104	SX-103 *	SX-109 *
C-105	SX-104 *	SX-110
C-106 *	SX-105 *	SX-111
	SX-106 *	SX-112
		SX-113

TABLE A-3. TEMPERATURE MONITORING IN NON-WATCH LIST TANKS

February 29, 1996

SINGLE-SHELL TANKS WITH HIGH HEAT LOADS (>40,000 Btu/hr)

Ten tanks have high heat loads for which temperature surveillance requirements are established by Safety Analysis Report SD-WM-SAR-006 REV 2, dated September 1990, and OSD-T-151-00013 D-9, dated November 1995. Only one of these tanks (241-C-106) is on the High Heat Watch List.

Temperatures in these tanks did not exceed SAR or OSD requirements for this month. All high heat load tanks with the exception of 241-A-104 and 241-A-105 are on active ventilation. All high heat load tanks are continuously monitored by the Tank Monitor and Control System (TMACS), with the exception of A-104 and A-105 which are taken manually, on a weekly basis.

Tank No.	Temperature (F.)	Total Waste In Inches
A-104	182	10
A-105	143	07
C-106 (*)	149	72
SX-107	169	43
SX-108	196	37
SX-109	150	86
SX-110	168	28
SX-111	193	51
SX-112	153	39
SX-114	188	71
10 Tanks		

(*) C-106 on High Heat Load Watch List

Highest temperature in 34 lateral thermocouples beneath A-105: 240

SINGLE SHELL TANKS WITH LOW HEAT LOADS (<40,000 Btu/hr)

There are 101 low heat load tanks; temperatures in those tanks connected to TMACS are taken continuously. Temperatures are manually taken semiannually in January and July in those tanks not yet connected to TMACS. All temperatures obtained were within historical ranges for the applicable tank. No temperatures have been obtained for several years in the 14 tanks listed below. Many of these tanks have no thermocouple tree.

Tank No.	Tank No.
BX-104	TX-101
BY-102	TX-102
BY-109	TX-110
C-204	TX-114
SX-115	TX-116
T-102	TX-117
T-105	U-104

TABLE A-4. SINGLE-SHELL TANKS MONITORING COMPLIANCE STATUS

149 TANKS (Sheet 1 of 6)
February 29, 1996

The following table indicates whether Single-Shell tank monitoring was in compliance with the requirements as specified in the applicable documents as of the last day of the applicable month:

NOTE:
All Watch List and High Heat tank temperature monitoring is in compliance. (5)
All Dome Elevation Survey monitoring is in compliance.
Lateral/Drywell monitoring (13)
Psychrometrics (2)
In-tank Photographs (3)
Pressure Monitoring (6)
CAM/RAMP Monitoring (7)
Vapor Monitoring (8)

LEGEND:	
(Shaded)	= in compliance with all applicable documentation
N/C	= noncompliance with applicable documentation
-357	= WHC-SD-WM-TI-357, "Waste Storage Tank Status and Leak Detection Criteria"
POP	= Plant Operation Procedure TO-040-650, "Obtain/Record SST Temperatures"
MT/FIC/ ENRAF	= Surface level measurement devices
OSR/SAR	= Operational Safety Requirements/Safety Analysis Report, SD-WM-SAR-006, and -SAR-034, latest revisions
OSD	= Operating Specifications Doc., OSD-T-151-00013, -00031
N/A	= Not applicable (not monitored, or no monitoring schedule)
None	= Applicable equipment not installed
O/S	= Out of Service
Neutron	= LOW readings taken by Neutron probe

Tank Number	Tank Category		Temperature Readings (5)(6)	Primary Leak Detection Source (9)	Surface Level Readings (1) (-357, OSR/SAR,OSD)			LOW Readings (-357) (9)
	Watch List(6)	High Heat			MT	FIC	ENRAF	Neutron
A-101	X			LOW	None	None		
A-102				None	None		None	None (11)
A-103				LOW	None	O/S	None	
A-104		X		None		None	None	None (11)
A-105		X		None		None	None	None(11)
A-106				None	None	None		None
AX-101	X			LOW	None	None		(14)
AX-102	X			None		None	None	None (11)
AX-103	X			None	None	None		
AX-104				None		None	None	None (11)
B-101				None	None		None	None
B-102				ENRAF	None	None		None (11)
B-103	X			None	None		None	O/S (11)
B-104				LOW		None	None	
B-105			O/S - N/C (16)	LOW		None	None	
B-106				FIC	None		None	None
B-107				None		None	None	None
B-108				None	None		None	None
B-109				None		None	None	None
B-110				LOW		None	None	
B-111				LOW	None		None	
B-112				ENRAF	None	None		None (11)
B-201				MT		None	None	None
B-202				MT		None	None	None
B-203				MT		None	None	None
B-204				MT		None	None	None
BX-101				MT		None	None	None (11)
BX-102				None		None	None	None
BX-103				FIC	None		None	None (11)
BX-104			O/S-N/C	FIC	None		None	None
BX-105				None	None		None	None (11)
BX-106				ENRAF	None	None		None (11)
BX-107				FIC	None		None	None

TABLE A-4. SINGLE-SHELL TANKS MONITORING COMPLIANCE STATUS
149 TANKS (Sheet 2 of 6)

Tank Number	Tank Category: Watch List(6)	Tank Category: High Heat	Temperature Readings (5)(6)	Primary Leak Detection Source (9)	Surface Level Readings (1) (-357, OSR/SAR,OSD): MT	Surface Level Readings (1): FIC	Surface Level Readings (1): ENRAF	LOW Readings (-357) (9): Neutron
BX-108				None		None	None	None (11)
BX-109				None	None	None		None
BX-110 (4)				None		None	None	None
BX-111 (4)				LOW		None	None	
BX-112				FIC	None		None	None
BY-101 (4)				LOW		None	None	
BY-102			O/S-N/C	LOW		None	None	
BY-103	X			LOW		None	None	
BY-104	X			LOW		None	None	
BY-105	X			LOW		None	None	
BY-106	X			LOW		None	None	
BY-107	X			LOW		None	None	
BY-108	X			None		None	None	None
BY-109			O/S-N/C	LOW	None		None	
BY-110	X			LOW		None	None	
BY-111	X			LOW		None	None	
BY-112	X			LOW		None	None	
C-101				None		None	None	None
C-102	X			None	None		None	None
C-103	X			ENRAF	None	None		None
C-104				None	None		None	None
C-105				None	None		None	None
C-106 (4)	X	X		ENRAF	None	None		None
C-107				ENRAF	None	None		None
C-108	X			None		None	None	None (11)
C-109	X			None		None	None	None (11)
C-110				MT		None	None	None
C-111	X			None		None	None	None (11)
C-112	X			None		None	None	None
C-201				None		None	None	None (11)
C-202				None		None	None	None (11)
C-203				None		None	None	None
C-204			O/S - N/C	None		None	None	None (11)
S-101				LOW	None	None		
S-102	X			LOW	None	None		
S-103				ENRAF	None	None		
S-104				None		None	None	
S-105				LOW	None	None		
S-106				ENRAF	None	None		
S-107				ENRAF	None	None		None
S-108				LOW		None		
S-109				ENRAF		None		
S-110				ENRAF		None		
S-111	X			ENRAF	None	None		
S-112	X			LOW	None	None		
SX-101	X			LOW	None	None		
SX-102	X			LOW	None	None		
SX-103	X			LOW	None	None		
SX-104	X			None	None	None		(13)
SX-105	X			LOW	None	None		
SX-106	X			ENRAF	None	None		
SX-107		X		None		None	None	None
SX-108		X		None		None	None	None

TABLE A-4. SINGLE-SHELL TANKS MONITORING COMPLIANCE STATUS 149 TANKS (Sheet 3 of 6)

Tank Number	Tank Category		Temperature Readings (5)(6)	Primary Leak Detection Source (9)	Surface Level Readings (1) (-357, OSR/SAR,OSD)			LOW Readings (-357) (9)
	Watch List(6)	High Heat			MT	FIC	ENRAF	Neutron
SX-109 (4)	X	X		None		None	None	None
SX-110		X		None		None	None	None (11)
SX-111		X		None		None	None	None
SX-112		X		None		None	None	None
SX-113				None		None	None	None (11)
SX-114		X		None		None	None	None
SX-115			O/S – N/C	None		None	None	None (11)
T-101 (4)				None		None		None
T-102			O/S – N/C	ENRAF	None	None		None (11)
T-103				None	None	None		None (11)
T-104				LOW		None		
T-105			O/S – N/C	None	None	None		None
T-106				None	None	None		None (11)
T-107	X			ENRAF	None	None		None
T-108				MT		None		None (11)
T-109				None	None	None		None (11)
T-110	X			LOW	None	None		
T-111	X			LOW	None	None		
T-112				ENRAF	None	None		None
T-201				MT		None	None	None
T-202				MT		None	None	None
T-203				None		None	None	None
T-204				MT		None	None	None
TX-101			O/S – N/C	ENRAF	None	None		None
TX-102			O/S –N/C	LOW		None	None	
TX-103				None	None		None	None
TX-104				None	None		None	None
TX-105	X			None			None	O/S–N/C (12)
TX-106				LOW			None	
TX-107				None	None		None	None (11)
TX-108				None	None		None	
TX-109				LOW	None	None		
TX-110			O/S – N/C	LOW		None	None	
TX-111				LOW		None	None	
TX-112				LOW		None	None	
TX-113				LOW		None	None	
TX-114			O/S – N/C	LOW		None	None	
TX-115				LOW		None	None	
TX-116			O/S – N/C	None		None	None	None
TX-117			O/S – N/C	LOW		None	None	
TX-118	X			LOW	None		None	
TY-101	X			None	None	None		None
TY-102				ENRAF	None	None		None (11)
TY-103	X			LOW	None	None		
TY-104	X			ENRAF	None	None		None (11)
TY-105				None		None		None
TY-106				None		None		None (11)
U-101				MT		None	None	None (11)
U-102				LOW	None	None		
U-103	X			ENRAF	None	None		
U-104			O/S – N/C	None		None	None	None
U-105	X			ENRAF	None	None		
U-106	X			ENRAF	None	None		

TABLE A-4. SINGLE-SHELL TANKS MONITORING COMPLIANCE STATUS 149 TANKS (Sheet 4 of 6)

Tank Number	Tank Category		Temperature Readings (5)(6)	Primary Leak Detection Source (9)	Surface Level Readings (1) (-357, OSR/SAR,OSD)			LOW Readings (-357) (9)
	Watch List(6)	High Heat			MT	FIC	ENRAF	Neutron
U-107	X			ENRAF	None	None		
U-108	X			LOW	None	None		
U-109	X			ENRAF	None	None		
U-110				None	None	None		None
U-111	X			LOW	None	None		
U-112				None		None	None	None (11)
U-201				MT		None	None	None
U-202				MT		None	None	None
U-203	X			None		None	None	None
U-204	X			MT		None	None	None
Catch Tanks and Special Surveillance Facilities								
A-302-A	N/A	N/A	N/A	(10)	None	None	None	None
A-302-B	N/A	N/A	N/A	(10)		None	None	None
ER-311	N/A	N/A	N/A	(10)	None		None	None
AX-152	N/A	N/A	N/A	(10)		None	None	None
AZ-151	N/A	N/A	N/A	(10)	None		None	None
AZ-154	N/A	N/A	N/A	(10)		None	None	None
BX-TK/SMP	N/A	N/A	N/A	(10)		None	None	None
A-244 TK/SMP	N/A	N/A	N/A	(10)	None	None	None	None
AR-204	N/A	N/A	N/A	(10)			None	None
A-417	N/A	N/A	N/A	(10)	None	None	None	None
A-350	N/A	N/A	N/A	(10)	None	None	None	None
CR-003	N/A	N/A	N/A	(10)	None	None	None	None
Vent Sta.	N/A	N/A	N/A	(10)		None	None	None
S-302	N/A	N/A	N/A	(10)	None		None	None
S-302-A	N/A	N/A	N/A	(10)	None		None	None
S-304	N/A	N/A	N/A	(10)	None		None	None
TX-302-B	N/A	N/A	N/A	(10)		None	None	None
TX-302-C	N/A	N/A	N/A	(10)	None		None	None
U-301-B	N/A	N/A	N/A	(10)	None		None	None
UX-302-A	N/A	N/A	N/A	(10)	None		None	None
S-141	N/A	N/A	N/A	(10)		None	None	None
S-142	N/A	N/A	N/A	(10)		None	None	None
Totals: 149 tanks	48 Watch List Tanks (4)	10 High Heat Tanks (4)	N/C: 15 tanks – (semiannual monitoring frequency) (5)		N/C: 0 tanks 0 catch tanks	N/C: 0 tanks 0 catch tanks	N/C: 0 tanks	N/C: 1 tank 65 tanks have LOWs

See Footnotes on next page

TABLE A-4. SINGLE-SHELL TANKS MONITORING COMPLIANCE STATUS 149 TANKS (Sheet 5 of 6)

Footnotes:

1. All SSTs have either manual tape, or FIC, (or ENRAF), with the exception of T-101, which has both manual tape and ENRAF, and S-108, which has a manual tape and an FIC. Tank T-101 also has a zip cord. All SST FICs are connected to CASS; however, the connection for many tanks is broken. For such cases, manual readings are taken. Manual surface level readings include readings taken by manual tape, manual readings of automatic FIC (if CASS is printing "0"), or automatic FIC. In some cases, the surface level readings are taken using a zip cord. While less accurate, such readings are acceptable for meeting the surface level reading requirements.

   ENRAF gauges are being installed to replace FICs, with the exception of C-106, which has both an ENRAF and an FIC. The ENRAF gauges are connected to TMACS, but many are currently being read manually from the field. See Table A-6 for list of ENRAF installations.

2. High heat tanks have active exhausters; psychrometrics can be taken in these tanks (A-104/105, C-105/106 SX-107, 108, 109, 110, 111, 112, and 114). The exhausters on A-104/105 have been down since October 1991; no readings are being taken. Psychrometric readings have not been taken in the SX high heat load tanks since July 1993. The frequency of psychrometric readings in SSTs is determined by the Cognizant Engineers for the applicable tank farms on an "as needed" basis," with the exception of tanks C-105/106. Hanford Federal Facility Agreement and Consent Order," Washington State Department of Ecology, U. S. Environmental Protection Agency, and U. S. Department of Energy," Fourth Amendment 1994 (Tri-Party Agreement) requires psychrometric readings to be taken in C-105/106 on a monthly frequency; readings were taken this month.
3. In-tank photographs are requested on an "as needed" basis. No in-tank photographs were taken between September 1990 and March 1993. In addition, in-tank videos are taken on an "as needed" basis.

4. Two tanks are on both category lists (C-106 and SX-109). In July 1993, C-105 was removed from the High Heat Load list and BX-110, BX-111, BY-101 and T-101 were removed from the Ferrocyanide Watch List.

5. Temperature readings may be regulated by OSD, -357, or POP. Additionally, high heat load tanks are regulated by OSR/SAR. Temperatures cannot be obtained in 14 tanks; nine of these are identified as O/S in WHC-SD-RE-TI-053, Riser Configuration Document for Single-Shell Tanks, latest revision. There are either no thermocouple trees in these 14 tanks, or trees have been cut off, covered over, or are otherwise unable to function. The OSD does not require readings or repair of out-of service thermocouples for the 101 low heat load (<40,000 Btu/h) tanks. However, the POP requires that attempts are to be made semiannually in January and July to obtain readings for these tanks.

   Temperatures for many tanks are monitored continuously by TMACS; see Table A-7, TMACS Installation and Monitoring Status.

6. "Safety Measures for Waste Tanks at Hanford Nuclear Reservation, Section 3137 of the National Defense Authorization Act for Fiscal Year 1991," November 5, 1990, Public Law 101-510, (Wyden Amendment) requires continuous pressure and temperature monitoring in tanks identified as having a serious potential for release of high level waste due to uncontrolled increases in temperature or pressure. WHC-EP-0422 REV 1, "A Plan to Implement Remediation of Waste Tank Safety Issues at the Hanford Site," December 1991, addresses these monitoring issues. WHC-EP-0600, Rev 1, "Status Report on Resolution of Waste Tank Safety Issues at the Hanford Site," issued May 1995, describes the resolution strategy for these safety issues.

7. Continuous Air Monitoring (CAM) compliance and Radiation Area Monitoring Panel (RAMP) compliance are not addressed in this table.

8. Continuous vapor/flammable gas monitoring is not addressed in this table.

9. Implementation of New Leak Detection Operating Specifications Document (OSD) - In early July 1994, a new leak detection OSD, WHC-OSD-151-T-00031, "Operating Specifications for Tank Farm Leak Detection," was implemented. This document formalized the leak detection actions that were started in late 1993. Single-shell tanks with the surface level measurement device contacting liquid, partial liquid, or floating crust surface, will be monitored for leak detection on a daily basis. Tanks with a solid surface will be monitored for leak detection on a weekly basis by taking neutron scan data from a Liquid Observation Well (LOW), if an LOW is present. Tanks with a solid surface but without LOWs will not be monitored for leak detection if the tank has been interim stabilized, until an LOW is installed. Non-interim-stabilized tanks will have drywell surveys taken as a backup on a monthly basis if surface or interstitial level measurement equipment is unavailable. The OSD specifies what leak detection methods are to be used for each tank, and the requirements if the readings are not taken on the required frequency or if equipment is out of service.

TABLE A-4. SINGLE-SHELL TANKS MONITORING COMPLIANCE STATUS
149 TANKS (Sheet 6 of 6)

10. Leak detection for the catch tanks is performed by monitoring for the buildup of liquid in the secondary containment (for most tanks with secondary containment) or for decrease in the liquid level for those tanks without secondary containment or secondary containment monitoring.

    Tanks 240-S-302 and 241-S-302-A are monitored for intrusions only, and are not subject to leak detection monitoring requirements until liquid is present above the intrusion level.

    Weight Time Factor is the surface level measuring device currently used in A-417, A-302-A, A-350 and A-Tank/Sump. DCRT CR-003 is inactive and measured in gallons.

11. Document WHC-SD-WM-TI-605, REV. 0, dated January 1994, describes the rationale for Liquid Observation Well (LOW) installation priority. This priority is based on tank leak status, tank surface condition, and tank stabilization status. Also included is a listing of tanks with the waste level being below two feet which have no priority assigned because no effort will be made to install LOWs in the near future. LOW probes are unable to accurately monitor interstitial liquid levels less than two feet high.

    Tanks which will not receive LOWs:

A-102	C-108	T-102
A-104	C-109	T-103
A-105	C-111	T-106
AX-102	C-201	T-108
AX-104	C-202	T-109
B-102	C-204	TX-107
B-103	SX-110	TY-102
B-112	SX-113	TY-104
BX-101	SX-115	TY-106
BX-103		U-101
BX-105		U-112
BX-106		
BX-108		

Total - 33 Tanks

12. SX-104 had two failed LOWs and interstitial liquid levels had not been recorded since late 1991. One failed LOW was removed and replaced on November 20, 1995. Liquid levels are being recorded. The riser in TX-105 has been removed; it has not been monitored since January 1987.

13. All drywells and lateral scans are done by request only, when required in addition to, or as a BACKUP for, a PRIMARY leak detection method, per OSD-T-151-00031. Currently, there are only two tanks which require drywell scans (C-105 and C-106); these are taken monthly.

    It was discovered that the riser contained an installed drywell in B-103, which was not documented in any plant drawings and therefore not under configuration control (Occurrence Report RL-WHC-TANKFARM-1995-0018, dated March 1, 1995).

    Only two tank farms, A and SX, have laterals. There are currently no functioning laterals and no plans to prepare these for use.

14. LOW reading taken by gamma rather than neutron sensor.

15. Dome loading surveys - the applicable OSD states that two benchmarks must be surveyed for each tank. Only one benchmark could be surveyed. In surveys taken in October 1995, only one benchmark each could be surveyed for B-110 and C-111. The second benchmark for B-110 was destroyed, and the second benchmark for C-111 was inaccessible. Management has been notified and applicable action will be taken.

16. Tank B-105: Temperatures in this non-watch list, low heat load tank, could not be taken in January 1996. Data sheet indicates the thermocouple house is broken at ground level and laying on the ground. Readings are 40 ^{o}F. on all available points.

TABLE A-5. DOUBLE-SHELL TANKS MONITORING COMPLIANCE STATUS

28 TANKS (Sheet 1 of 2)

February 29, 1996

The following table indicates whether Double-Shell tank monitoring was in compliance with the requirements as specified in the applicable documents as of the last day of the month indicated:

NOTE:

Dome Elevation Surveys are not required for DSTs.
Psychrometrics (2)
In-tank Photographs (3)
Pressure Monitoring (6)
CAM/RAMP Monitoring (7)
Vapor Monitoring (8)

LEGEND:	
(Shaded)	= In compliance with all applicable documentation
N/C	= Noncompliance with applicable documentation
-357	= WHC-SD-WM-TI-357, "Waste Storage Tank Status and Leak Detection Criteria"
M.T.	= Manual Tape
FIC/ENRAF	= Surface level measurement devices
OSR/SAR	= Operational Safety Requirements/Safety Analysis Report WHC-SD-WM-SAR-016, and WHC-SD-HS-SAR-010, latest revisions
OSD	= Operationing Specifications Doc., OSD-T-151-0007, latest revision
None	= no M.T., FIC or ENRAF installed
O/S	= Out of Service
W.F.	= Weight Factor
Rad.	= Radiation

Tank Number	Watch List	Temperature Readings (4) (OSD)	Surface Level Readings (1) (-357, OSR/SAR, OSD)			Radiation Readings: Leak Detection Pits (5) (-357, OSR/SAR, OSD)		Radiation Readings: Annulus (-357)
			M.T.	FIC	ENRAF	W.F.	Rad.	
AN-101					None		O/S	
AN-102					None		O/S	
AN-103	X			None			O/S	
AN-104	X			None			O/S	
AN-105	X			None			O/S	
AN-106					None		O/S	
AN-107					None		O/S	
AP-101					None	O/S	O/S	
AP-102					None	O/S	O/S	
AP-103					None	O/S	O/S	
AP-104					None	O/S	O/S	
AP-105					None	O/S	O/S	
AP-106					None	O/S	O/S	
AP-107					None	O/S	O/S	
AP-108					None	O/S	O/S	
AW-101	X			None			O/S	
AW-102					None		O/S	
AW-103					None		O/S	
AW-104				None			O/S	
AW-105					None		O/S	
AW-106					None		O/S	
AY-101				O/S	None			(9)
AY-102					None		O/S	(9)
AZ-101			O/S	None				(9)
AZ-102					None			(9)
SY-101	X							
SY-102				None				
SY-103	X			None				
Totals: 28 tanks	6 Watch List Tanks	N/C: 0	N/C: 0	N/C: 0	N/C: 0	N/C: 0	N/C: 0	N/C: 0

See footnotes next page.

TABLE A-5. DOUBLE-SHELL TANKS MONITORING COMPLIANCE STATUS
28 TANKS (Sheet 2 of 2)

Footnotes:

1. All DSTs have both manual tape and FIC. The manual tape is used when the FIC is out of service. N/C will be shown when no readings are obtained. ENRAF gauges are being installed to replace FICs, with the exception of SY-101, which has both. The ENRAF gauges are connected to TMACS, but some are currently being read manually. AN-104 manual tape is currently providing questionable readings.

2. Psychrometric readings are only taken on tanks with active exhausters; all DSTs have active exhausters. The frequency of psychrometric readings in DSTs is determined by the Cognizant Engineers for the applicable tank farms on an "as needed" basis. Currently, monthly readings are being taken on the SY-101 annulus exhaust, SY-102 tank and annulus exhaust, and SY-103 tank and annulus exhaust. SY-101 tank exhaust readings are not being taken until a port on the tank exhaust header becomes available for exhauster readings. No other psychrometric readings are currently being taken monthly.

3. In-tank photographs are requested on an "as needed" basis.

4. OSD specifies DST temperature limits, gradients, etc.

5. Failure of both leak detection systems requires repair of at least one system within 5 working days. Failure of one system only, repair must be within 10 workdays per -357 document. If the repair of out-of-service system exceeds these timeframes, all systems are N/C. Out-of-service systems which have not exceeded these timeframes will be shown as O/S.

6. "Safety Measures for Waste Tanks at Hanford Nuclear Reservation, Section 3137 of the National Defense Authorization Act for Fiscal Year 1991," November 5, 1990, Public Law 101-510, (Wyden Amendment) requires continuous pressure and temperature monitoring in tanks identified as having a serious potential for release of high-level waste due to uncontrolled increases in temperature or pressure. WHC-EP-0422 REV 1, "A Plan to Implement Remediation of Waste Tank Safety Issues at the Hanford Site," December 1991, addresses these monitoring issues. WHC-EP-0600, Rev 1, "Status Report on Resolution of Waste Tank Safety Issues at the Hanford Site," issued May 1995, describes the resolution strategy for these safety issues.

7. Continuous Air Monitoring (CAM) compliance and Radiation Area Monitoring Panel (RAMP) compliance are not addressed in this table.

8. Continuous vapor/flammable gas monitoring is not addressed in this table.

9. AY-101/102 and AZ-101/102 annulus are now monitored by an Annulus Leak Detection Probe Measurement rather than the annulus CAM.

TABLE A-6. ENRAF SURFACE LEVEL GAUGE INSTALLATION AND DATA INPUT METHODS

February 29, 1996

LEGEND:	
	Automatic = Automatically entered into TMACS and electronically transmitted to SACS
	Manual = EITHER manually entered into CASS by Field operators and electronically transmitted to SACS OR manually entered directly into SACS by Surveillance Support personnel, from Field Data sheets
	CASS = Computer Automated Surveillance System
	SACS = Surveillance Analysis Computer System
	TMACS = Tank Monitor and Control System

East Area

Tank No.		Installed	Data Input Method
A-101	SST	9/95	Manual
A-106	SST	1/96	Manual
AN-103	DST	8/95	Manual
AN-104	DST	8/95	Manual
AN-105	DST	8/95	Manual
AW-101	DST	8/95	Manual
AW-104	SST	1/96	Manual
AX-101	SST	9/95	Manual
AX-103	SST	9/95	Manual
AZ-101	DST	6/95	Manual
B-102	SST	2/95	Manual
B-112	SST	3/95	Manual
BX-106	SST	7/94	Automatic
BX-109	SST	8/95	Manual
C-103	SST	8/94	Automatic
C-106	SST	9/94	Automatic
C-107	SST	4/95	Automatic
Total: 17			

West Area

Tank No.		Installed	Data Input Method
S-101	SST	2/95	Manual
S-102	SST	5/95	Manual
S-103	SST	5/94	Automatic
S-105	SST	7/95	Manual
S-106	SST	6/94	Automatic
S-107	SST	6/94	Automatic
S-108	SST	7/95	Manual
S-109	SST	8/95	Manual
S-110	SST	8/95	Manual
S-111	SST	6/94	Automatic
S-112	SST	5/95	Manual
SX-101	SST	4/95	Manual
SX-102	SST	4/95	Manual
SX-103	SST	4/95	Manual
SX-104	SST	5/95	Manual
SX-105	SST	5/95	Manual
SX-106	SST	8/94	Automatic
SY-101	DST	7/94	Automatic
SY-102	DST	6/94	Manual
SY-103	DST	7/94	Manual
T-101	SST	5/95	Manual
T-102	SST	6/94	Automatic
T-103	SST	7/95	Manual
T-104	SST	12/95	Manual
T-105	SST	7/95	Manual
T-106	SST	7/95	Manual
T-107	SST	6/94	Automatic
T-108	SST	10/95	Manual
T-109	SST	9/94	Manual
T-110	SST	5/95	Manual
T-111	SST	7/95	Manual
T-112	SST	9/95	Manual
TX-101	SST	10/95	Manual
TX-103	SST	12/95	Manual
TX-109	SST	11/95	Manual
TY-101	SST	7/95	Automatic
TY-102	SST	9/95	Automatic
TY-103	SST	9/95	Automatic
TY-104	SST	6/95	Automatic
TY-105	SST	10/95	Automatic
TY-106	SST	10/95	Automatic
U-102	SST	1/96	Manual
U-103	SST	7/94	Automatic
U-105	SST	7/94	Automatic
U-106	SST	8/94	Automatic
U-107	SST	8/94	Automatic
U-108	SST	5/95	Manual
U-109	SST	7/94	Automatic
U-110	SST	12/95	Manual
U-111	SST	12/95	Manual
Total: 50			

67 ENRAFs installed: 23 automatically entered into TMACS
44 manually entered into CASS

TABLE A-7. TANK MONITOR AND CONTROL SYSTEM (TMACS) MONITORING STATUS (Sheet 1 of 4)

February 29, 1996

Note: Acceptance Testing has been completed on the following sensors.

Sensors Automatically Monitored by TMACS

		Temperatures					
Tank No.		Thermocouple Tree (TC)	Resistance Thermal Device (RTD)	Enraf Level Gauge	Pressure	Hydrogen	Gas Sample Flow
A-101	SST						
A-102	SST						
A-103	SST						
A-104	SST						
A-105	SST						
A-106	SST						
AN-101	DST	X			X		
AN-102	DST	X			X		
AN-103	DST	X			X		
AN-104	DST	X			X		
AN-105	DST	X			X		
AN-106	DST	X			X		
AN-107	DST	X			X		
AP-101	DST						
AP-102	DST						
AP-103	DST						
AP-104	DST						
AP-105	DST						
AP-106	DST						
AP-107	DST						
AP-108	DST						
AW-101	DST						
AW-102	DST						
AW-103	DST						
AW-104	DST						
AW-105	DST						
AW-106	DST						
AX-101	SST						
AX-102	SST						
AX-103	SST						
AX-104	SST						
AY-101	DST						
AY-102	DST						
AZ-101	DST						
AZ-102	DST						
B-101	SST						
B-102	SST						
B-103	SST						
B-104	SST						
B-105	SST						
B-106	SST						
B-107	SST						
B-108	SST						
B-109	SST						
B-110	SST						
B-111	SST						
B-112	SST						
B-201	SST						
B-202	SST						
B-203	SST						
B-204	SST						

TABLE A-7. TANK MONITOR AND CONTROL SYSTEM (TMACS) MONITORING STATUS (Sheet 2 of 4)

Note: Acceptance Testing has been completed on the following sensors.

		Sensors Automatically Monitored by TMACS					
		Temperatures					
Tank No.		Thermocouple Tree (TC)	Resistance Thermal Device (RTD)	Enraf Level Gauge	Pressure	Hydrogen	Gas Sample Flow
BX-101	SST	X					
BX-102	SST	X					
BX-103	SST	X					
BX-104	SST						
BX-105	SST	X					
BX-106	SST	X		X			
BX-107	SST	X					
BX-108	SST	X					
BX-109	SST	X					
BX-110	SST	X					
BX-111	SST	X					
BX-112	SST	X					
BY-101	SST	X					
BY-102	SST						
BY-103	SST	X	X				
BY-104	SST	X					
BY-105	SST	X					
BY-106	SST	X					
BY-107	SST	X	X				
BY-108	SST	X	X				
BY-109	SST						
BY-110	SST	X					
BY-111	SST	X					
BY-112	SST	X					
C-101	SST	X					
C-102	SST	X					
C-103	SST	X		X			
C-104	SST	X					
C-105	SST	X					
C-106	SST	X		X	X		
C-107	SST	X		X			
C-108	SST	X					
C-109	SST	X					
C-110	SST	X					
C-111	SST	X	X				
C-112	SST	X					
C-201	SST	X					
C-202	SST	X					
C-203	SST	X					
C-204	SST						
S-101	SST	X					
S-102	SST	X				X	X
S-103	SST	X		X			
S-104	SST	X					
S-105	SST	X					
S-106	SST	X		X			
S-107	SST	X		X			
S-108	SST	X					
S-109	SST	X					
S-110	SST	X					
S-111	SST	X		X		X	X
S-112	SST	X				X	X

TABLE A-7. TANK MONITOR AND CONTROL SYSTEM (TMACS) MONITORING STATUS (Sheet 3 of 4)

<u>Note: Acceptance Testing has been completed on the following sensors.</u>

Sensors Automatically Monitored by TMACS

Tank No.		Temperatures					
		Thermocouple Tree (TC)	Resistance Thermal Device (RTD)	Enraf Level Gauge	Pressure	Hydrogen	Gas Sample Flow
SX-101	SST	X				X	X
SX-102	SST	X				X	X
SX-103	SST	X				X	X
SX-104	SST	X				X	X
SX-105	SST	X				X	X
SX-106	SST	X		X		X	X
SX-107	SST	X					
SX-108	SST	X					
SX-109	SST	X				X	X
SX-110	SST	X					
SX-111	SST	X					
SX-112	SST	X					
SX-113	SST	X					
SX-114	SST	X					
SX-115	SST						
SY-101	DST	X		X	X	X	X (a)
SY-102	DST	X					
SY-103	DST	X				X	X
T-101	SST	X					
T-102	SST			X			
T-103	SST	X					
T-104	SST	X					
T-105	SST						
T-106	SST	X					
T-107	SST	X	X	X			
T-108	SST	X					
T-109	SST	X					
T-110	SST	X					
T-111	SST	X					
T-112	SST	X					
T-201	SST	X					
T-202	SST	X					
T-203	SST	X					
T-204	SST	X					
TX-101	SST						
TX-102	SST						
TX-103	SST						
TX-104	SST						
TX-105	SST						
TX-106	SST						
TX-107	SST						
TX-108	SST						
TX-109	SST						
TX-110	SST						
TX-111	SST						
TX-112	SST						
TX-113	SST						
TX-114	SST						
TX-115	SST						
TX-116	SST						
TX-117	SST						
TX-118	SST	X					

TABLE A-7. TANK MONITOR AND CONTROL SYSTEM (TMACS) MONITORING STATUS (Sheet 4 of 4)

Note: Acceptance Testing has been completed on the following sensors.

Sensors Automatically Monitored by TMACS

Tank No.		Temperatures		Enraf Level Gauge	Pressure	Hydrogen	Gas Sample Flow
		Thermocouple Tree (TC)	Resistance Thermal Device (RTD)				
TY-101	SST	X	X	X			
TY-102	SST	X		X			
TY-103	SST	X	X	X			
TY-104	SST	X	X	X			
TY-105	SST	X		X			
TY-106	SST	X		X			
U-101	SST	X					
U-102	SST	X					
U-103	SST	X		X		X	X
U-104	SST						
U-105	SST	X		X		X	X
U-106	SST	X		X			
U-107	SST	X		X		X	X
U-108	SST	X				X	X
U-109	SST	X		X		X	X
U-110	SST	X					
U-111	SST	X					
U-112	SST	X					
U-201	SST	X					
U-202	SST	X					
U-203	SST	X					
U-204	SST	X					
Total tanks		108	8	23	9 (b)	17 (c)	17 (a)

(a) Tank SY-101 has 2 gas sample flow sensors plus 2 vent flow sensors.

(b) Each tank has low and high range sensors (9x2=18 sensors)

(c) Each tank has low and high range sensors (17x2=34 sensors)

APPENDIX B

DOUBLE SHELL TANK WASTE TYPE AND SPACE ALLOCATION

TABLE B-1. DOUBLE-SHELL TANK WASTE TYPE AND SPACE ALLOCATION
FEBRUARY 1996

DOUBLE-SHELL TANK INVENTORY BY WASTE TYPE		SPACE DESIGNATED FOR SPECIFIC USE	
Complexed Waste (102-AN, 106-AN, 107-AN, 101-SY, 103-SY, 101-AY (DC))	5.34 Mgal	Spare Tanks (3) (1 Aging & 1 Non-Aging Waste Tank)	2.28 Mgal
Concentrated Phosphate Waste (102-AP)	1.1 Mgal	Segregated Tank Space (102-AP, 101-AY, 102-AN, 106-AN, 107-AN)	0.96 Mgal
Double-Shell Slurry and Slurry Feed (103-AN, 104-AN, 105-AN, 101-AP, 105-AP, 101-AW, 106-AW)	5.48 Mgal	Watch List Tank Space (103-AN, 104-AN, 105-AN, 101-SY, 103-SY, 101-AW)	0.72 Mgal
Aging Waste (NCAW) at 5M Na	1.22 Mgal	Priority/Operational Tank Space (2) (101-AN, 102-SY, 102-AW, 106-AW)	1.96 Mgal
Dilute in Aging Tanks (101-AZ, 102-AZ)	0.64 Mgal	Miscellaneous Head Space (101-AZ, 102-AZ, 104-AW, 106-AP)	0.11 Mgal
Dilute Waste (1) (101-AN, 103-AP, 106-AP, 107-AP, 108-AP 102-AW, 103-AW, 104-AW, 105-AW, 102-AY, 102-SY, 104-AP)	4.43 Mgal	Total Specific Use Space (02/29/96)	6.02 Mgal
		TOTAL DOUBLE-SHELL TANK SPACE	
NCRW,PFP and Settled Solids (103-AW, 105-AW, 102-SY, 102-AW, 104-AW, 106-AW, 102-AY)	1.49 Mgal	24 Tanks at 1140 Kgal	27.36 Mgal
		4 Tanks at 980 Kgal	3.92 Mgal
			31.28 Mgal
Total Inventory=	19.7 Mgal	Total Available Space	31.28 Mgal
		Double-Shell Tank Inventory	19.7 Mgal
		Space Designated for Specific Use	6.02 Mgal
		Remaining Unallocated Space	5.56 Mgal

(1) Was reduced in volume by -0.000 Mgal this month (Evaporator WVR)

(2) Reduced by Saltwell Liquid pumping, and PFP Operations

(3) 241-101-AY: A minumum liquid level is set to provide extra protection against any bottom uplifting of the tank's steel liner. WHC-SD-WM-TI-357, "Waste Storage Tank Status and Leak Detection Criteria," specifies 64 in. as the minimum surface level measurement when the annulus system is in operation, and 18 in. if the annulus ventilation system is shut down. See also OSD-T-151-0007, "Unclassified Operation Specifications for the 241 AN, 241AP, 241AW, 241AY and 241SY Tank Farms." Because of space availability, waste is stored in 102-AY, the aging waste spare tank. In case of a leak, the contents of 102-AY will be distributed to any other DST(s) having available space.

Note: Net change in total inventory since last month: +0.074 Mgal

WVPTOT

Table B-2. Double Shell Tank Waste Inventory for February 29, 1996 (page 1 of 2)

TANKS	INVENTORY	SOLIDS	TYPE	LEFT
101AW=	1127	84	DSSF	13
102AW=	96	55	DN	1044
103AW=	515	487	NCRW	625
104AW=	1124	267	DN	16
105AW=	411	300	NCRW	729
106AW=	535	217	DN	605
101AY=	932	83	DC	48
102AY=	760	32	DN	220
101AZ=	909	35	NCAW	71
102AZ=	951	95	NCAW	29
101AN=	1080	0	DN	60
102AN=	1081	89	CC	59
103AN=	955	373	DSS	185
104AN=	1059	264	DSSF	81
105AN=	1130	0	DSSF	10
106AN=	416	17	CC	724
107AN=	1058	134	CC	82
101SY=	1110	560	CC	30
102SY=	379	133	PT/DN	761
103SY=	745	4	CC	395
101AP=	736	0	DSSF	404
102AP=	1097	0	CP	43
103AP=	24	0	DN	1116
104AP=	1124	0	DN	16
105AP=	154	(*)0	DSSF	986
106AP=	134	0	DN	1006
107AP=	24	0	DN	1116
108AP=	28	0	DN	1112
TOTAL=	19694		TOTAL=	11586

(*) Solids Level in DSTs being evaluated; will adjust level when complete

TOTAL SPACE AVAILABLE	
NON-AGING	27360
AGING =	3920
TOTAL=	31280

SEGREGATED SPACE	
* 101AW=	13
102AP=	43
* 101SY=	30
* 103SY=	395
101AY=	48
102AN=	59
* 103AN=	185
* 104AN=	81
* 105AN=	10
106AN=	724
107AN=	82
TOTAL=	1670

(*) Watch List Tanks

MISC. HEADSPACE	
104AW=	16
101AZ=	71
102AZ=	29
TOTAL=	116

PRIORITY SPACE	
102SY=	761
101AN=	60
TOTAL=	821

INVENTORY CHANGE	
01/96 TOTAL	19620
02/96 TOTAL	19694
INCREASE	74

USABLE SPACE	
101AP=	404
103AP=	1116
104AP=	16
105AP=	986
106AP=	1006
107AP=	1116
108AP=	1112
103AW=	625
105AW=	729
102AY=	220
102AW=	1044
106AW=	605
TOTAL=	8979
EVAP. OPERATIONS	-1140
SPARES	-2280
USABLE LEFT=	5559

USABLE SPACE CHANGE	
01/96 TOTAL SPACE	5642
02/96 TOTAL SPACE	5559
DECREASE=	-83

PRIORITY SPACE CHANGE	
01/96 TOTAL SPACE	821
02/96 TOTAL SPACE	821
INCREASE=	0

Inventory Calculation by Waste Type:

COMPLEXED WASTE		
102AN=	1081	(CC)
106AN=	416	(CC)
107AN=	1058	(CC)
101SY=	1110	(CC & DSS)
103SY=	745	(CC, DSS & SWL)
101AY=	932	(DC)
TOTAL=	5342	

NCRW SOLIDS (PD)	
103AW=	487
105AW=	300
TOTAL=	787

PFP SOLIDS (PT)	
102SY=	133
TOTAL=	133

CONCENTRATED PHOSPHATE (CP)	
102AP=	1097
TOTAL=	1097

DILUTE WASTE (DN)	
103AP=	24
106AP=	134
107AP=	24
108AP=	28
101AN=	1080
102AW=	41
104AW=	857
102AY=	728
104AP=	1124
103AW=	28
105AW=	111
102SY=	246
TOTAL=	4425

NCAW (AGING WASTE) (@ 5M Na)	
101AZ=	791
102AZ=	434
AT 5M N	1225
DN=	635
TOTAL=	1860

DSS/DSSF	
101AP=	736
105AP=	154
103AN=	955
104AN=	1059
105AN=	1130
101AW=	1127
106AW=	318
TOTAL=	5479

GRAND TOTALS	
CC=	4410
DC=	932
NCRW SOLIDS=	787
DST SOLIDS=	571
PFP SOLIDS=	133
CP=	1097
NCAW=	1860
DSS/DSSF=	5479
DILUTE=	4425
TOTAL=	19694

NOTE: All Values are in Kilogallons.

INV0296

Table B-2. Double Shell Tank Waste Inventory for February 29, 1996 (page 2 of 2)

TOTAL AVAILABLE SPACE AS OF FEBRUARY 29, 1996:			11586 KGALS
	TANK	WASTE TYPE	AVAILABLE SPACE
SEGREGATED TANK SPACE:	* 101-AW	DSSF	13 KGALS
(*)Watch List Tanks	102-AP	CP	43 KGALS
	* 101-SY	CC/DSS	30 KGALS
	* 103-SY	CC/DSS	395 KGALS
	101-AY	DC	48 KGALS
	102-AN	CC	59 KGALS
	* 103-AN	DSS	185 KGALS
	* 104-AN	DSSF	81 KGALS
	* 105-AN	DSSF	10 KGALS
	106-AN	CC	724 KGALS
	107-AN	CC	82 KGALS
		TOTAL=	1670 KGALS
	AVAILABLE TANK SPACE=		11586 KGALS
	MINUS SEGREGATED SPACE=		-1670 KGALS
TOTAL AVAILABLE SPACE AFTER SEGREGATION=			9916 KGALS
	TANK	WASTE TYPE	AVAILABLE SPACE
PRIORITY TANK SPACE:	102-SY	DN	761 KGALS
	101-AN	DN	60 KGALS
		TOTAL=	821 KGALS
	AVAILABLE SPACE AFTER SEGREGATION=		9916 KGALS
	MINUS PRIORITY SPACE=		-821 KGALS
TOTAL AVAILABLE SPACE AFTER PRIORITY=			9095 KGALS
	TANK	WASTE TYPE	AVAILABLE SPACE
MISCELLANEOUS HEADSPACE:	104-AW	DN	16 KGALS
	101-AZ	AW	71 KGALS
	102-AZ	AW	29 KGALS
		TOTAL=	116 KGALS
	AVAILABLE SPACE AFTER PRIORITY=		9095 KGALS
	MINUS MISCELLANEOUS HEADSPACE=		-116 KGALS
TOTAL AVAILABLE SPACE AFTER HEADSPACE=			8979 KGALS
	TANK	WASTE TYPE	AVAILABLE SPACE
USABLE TANK SPACE:	101-AP	DSSF	404 KGALS
	103-AP	DN	1116 KGALS
	104-AP	DN	16 KGALS
	105-AP	DSSF	986 KGALS
	106-AP	DN	1006 KGALS
	107-AP	DN	1116 KGALS
	108-AP	DN	1112 KGALS
	103-AW	NCRW	625 KGALS
	105-AW	NCRW	729 KGALS
	102-AY	DN	220 KGALS
EVAPORATOR FEED TANK	102-AW	DN	1044 KGALS
EVAPORATOR RECEIVER TANK	106-AW	DSSF	605 KGALS
TOTAL AVAILABLE USABLE TANK SPACE=			8979 KGALS
EVAPORATOR OPERATIONAL TANK SPACE:			-1140 KGALS
SPARE TANK SPACE:			-2280 KGALS
TOTAL TANK SPACE AVAILABLE AFTER ALL DEDUCTIONS=			5559 KGALS

SEG0296

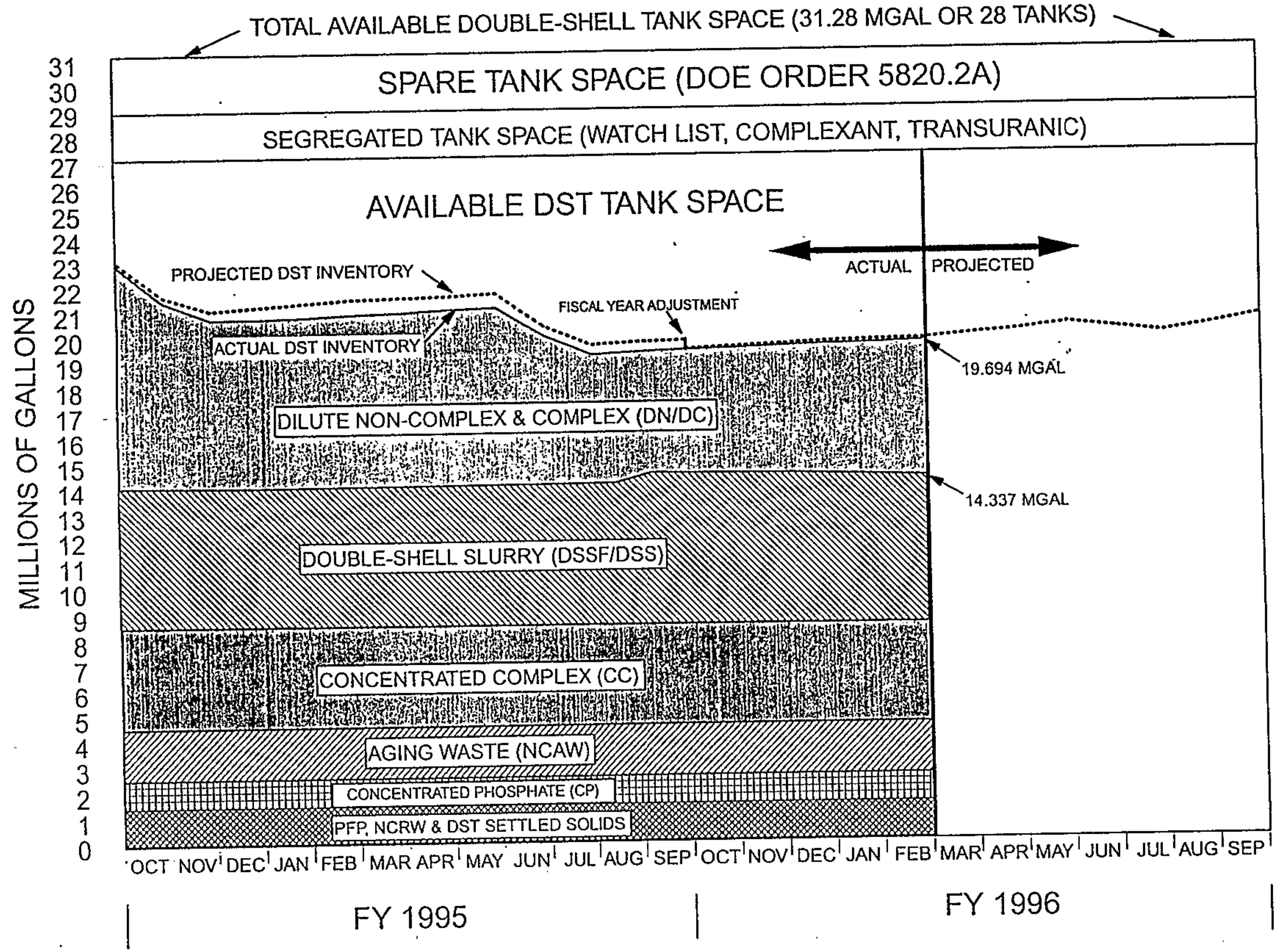

FIGURE B-1. TOTAL DOUBLE-SHELL TANK INVENTORY

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APPENDIX C

TANK AND EQUIPMENT CODE AND STATUS DEFINITIONS

C. TANK AND EQUIPMENT CODE/STATUS DEFINITIONS
February 29, 1996

1. TANK STATUS CODES

WASTE TYPE

AGING	Aging Waste (Neutralized Current Acid Waste [NCAW])
CC	Complexant Concentrate Waste
CP	Concentrated Phosphate Waste
DC	Dilute Complexed Waste
DN	Dilute Non-Complexed Waste
DSS	Double-Shell Slurry
DSSF	Double-Shell Slurry Feed
NCPLX	Non-Complexed Waste
PD/PN	Plutonium-Uranium Extraction (PUREX) Neutralized Cladding Removal Waste (NCRW), transuranic waste (TRU)
PT	Plutonium Finishing Plant (PFP) TRU Solids

TANK USE (DOUBLE-SHELL TANKS ONLY)

CWHT	Concentrated Waste Holding Tank
DRCVR	Dilute Receiver Tank
EVFD	Evaporate Feed Tank
SRCVR	Slurry Receiver Tank

2. SOLID AND LIQUID VOLUME DETERMINATION METHODS

F	Food Instrument Company (FIC) Automatic Surface Level Gauge
E	ENRAF Surface Level Gauge (being installed to replace FICs)
M	Manual Tape Surface Level Gauge
P	Photo Evaluation
S	Sludge Level Measurement Device

3. DEFINITIONS

WASTE TANKS - GENERAL

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.

Watch List Tank

An underground storage tank containing waste that requires special safety precautions because it may have a serious potential for release of high level radioactive waste because of uncontrolled increases in temperature or pressure. Special restrictions have been placed on these tanks by "Safety Measures for Waste Tanks at Hanford Nuclear Reservation," Section 3137 of the *National Defense Authorization Act for Fiscal Year 1991*, November 5, 1990, Public Law 101-510, (also known as the Wyden Amendment).

Characterization

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

WASTE TYPES

Aging Waste (AGING)

High level, first cycle solvent extraction waste from the PUREX plant (NCAW)

Concentrated Complexant (CC)

Concentrated product from the evaporation of dilute complexed waste.

Concentrated Phosphate Waste (CP)

Waste originating from the decontamination of the N Reactor in the 100 N Area. Concentration of this waste produces concentrated phosphate waste.

Dilute Complexed Waste (DC)

Characterized by a high content of organic carbon including organic complexants:

ethylenediaminetetra-acetic acid (EDTA), citric acid, and hydroxyethyl-ethylenediaminetriacetic acid (HEDTA), being the major complexants used. Main sources of DC waste in the DST system are saltwell liquid inventory (from SSTs).

Dilute Non-Complexed Waste (DN)

Low activity liquid waste originating from T and S Plants, the 300 and 400 Areas, PUREX facility (decladding supernatant and miscellaneous wastes), 100 N Area (sulfate waste), B Plant, saltwells, and PFP (supernate).

Double-Shell Slurry (DSS)

Waste that exceeds the sodium aluminate saturation boundary in the evaporator without exceeding receiver tank composition limits. For reporting purposes, DSS is considered a solid.

Double-Shell Slurry Feed (DSSF)

Waste concentrated just before reaching the sodium aluminate saturation boundary in the evaporator without exceeding receiver tank composition limits. This form is not as concentrated as DSS.

Non-complexed (NCPLX)

General waste term applied to all Hanford Site (NCPLX) liquors not identified as complexed.

PUREX Decladding (PD)

PUREX Neutralized Cladding Removal Waste (NCRW) is the solids portion of the PUREX plant neutralized cladding removal waste stream; received in Tank Farms as a slurry. NCRW solids are classified as transuranic (TRU) waste.

PFP TRU Solids (PT)
TRU solids fraction from PFP Plant operations.

Drainable Interstitial Liquid (DIL)
Interstitial liquid that is not held in place by capillary forces, and will therefore migrate or move by gravity. (See also Section 4)

Supernate
The liquid above the solids in waste storage tanks. (See also Section 4)

Ferrocyanide
A compound of iron and cyanide commonly expressed as FeCN. The actual formula for the ferrocyanide anion is $[Fe(CN)_6]^{-4}$.

WASTE STATUS

In-Service Tank
The waste classification of a tank being used, or planned for use, for the storage of liquid (in excess of a minimum supernatant liquid heel) in conjunction with production and/or waste processing.

Out-of-Service Tank
A tank which does not meet the definition of an in-service tank. Before September 1988, these tanks were defined as inactive in this report. (Note: All single-shell tanks are out of service.)

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 liquid. If the tank was jet pumped to achieve interim stabilization, then the jet pump flow must also have been at or below 0.05 gpm before interim stabilization criteria is met.

Jet Pump
The jet pump system includes 1) a jet assembly with foot valve mounted to the base of two pipes that extend from the top of the well to near the bottom of the well casing inside the saltwell screen, 2) a centrifugal pump to supply power fluid to the down-hole jet assembly, 3) flexible or rigid transfer jumpers, 4) a flush line, and 5) a flowmeter. The jumpers contain piping, valves, and pressure and limit switches.

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. The power fluid passes through a nozzle in the jet assembly and acts to convert fluid pressure head to velocity head, thereby reducing the pressure in the jet assembly chamber. The reduction in pressure allows the interstitial liquid to enter the jet assembly chamber and mix with the power fluid. Velocity head is converted to pressure head above the nozzle, lifting power fluid, and interstitial liquid to the pump pit. Pumping rates vary from 0.05 gallons 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. The saltwell screen portion of the casing is an approximately 10-foot length of 300 Series, 10-inch diameter, stainless steel pipe with screen openings (slots) of 0.05 inches.

Emergency Pumping Trailer
A 45-foot tractor-type trailer is equipped to provide storage space and service facilities for emergency pumping equipment: this consists of two dedicated jet pump jumpers and two jet pumps, piping and dip tubes for each, two submersible pumps and attached piping, and a skid-mounted Weight Factor Instrument Enclosure (WFIE) with an air compressor and electronic recording instruments. The skid also contains a power control station for the pumps, pump pit leak detection, and instrumentation. A rack for over 100 feet of overground double-contained piping is also in the trailer.

INTRUSION PREVENTION (ISOLATION) Single-Shell Tanks only

Partially Interim Isolated (PI)
The administrative designation reflecting the completion of the physical effort required for Interim Isolation except for isolation of risers and piping that is required for jet pumping or for other methods of stabilization.

Interim Isolated (II)
The administrative designation reflecting the completion of the physical effort required to minimize the addition of liquids into an inactive storage tank, process vault, sump, catch tank, or diversion box. In June 1993, Interim Isolation was replaced by Intrusion Prevention.

Intrusion Prevention (IP)
Intrusion Prevention is the administrative designation reflecting the completion of the physical effort required to minimize the addition of liquids into an inactive storage tank, process vault, sump, catch tank, or diversion box. Under no circumstances are electrical or instrumentation devices disconnected or disabled during the intrusion prevention process (with the exception of the electrical pump).

TANK 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.

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.

Assumed Re-Leaker

A condition that exists after a tank has been declared as an "assumed leaker" and then the surveillance data indicates a new loss of liquid attributed to a breach of integrity.

TANK INVESTIGATION

Intrusion

A term used to describe the infiltration of liquid into a waste tank.

SURVEILLANCE INSTRUMENTATION

Drywells

Drywells are vertical boreholes with 6-inch (internal diameter) carbon steel casings positioned radially around SSTs. These wells range between 50 and 250 feet in depth, and are monitored between the range of 50 to 150 feet. The wells are sealed when not in use. They are called drywells because they do not penetrate to the water table and are therefore usually "dry." There are 759 drywells.

Monitoring is done by gamma radiation or neutron-moisture sensors to obtain scan profiles of radiation or moisture in the soil as a function of well depth, which could be indicative of tank leakage. Two single-shell tanks (C-105 and C-106) are currently monitored monthly by gamma radiation sensors. The remaining drywells are monitored by gamma radiation sensors on request. Monitoring by neutron-moisture sensors is done only on request.

Laterals

Laterals are horizontal drywells positioned under single-shell waste storage tanks to detect radionuclides in the soil which could be indicative of tank leakage. These drywells are monitored by radiation detection probes. Laterals are 4-inch inside diameter steel pipes located 8 to 10 feet below the tank's concrete base. There are three laterals per tank. Laterals are located only in A and SX farms.

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 Computer Automated Surveillance System (CASS).

Automatic FIC

An automatic waste surface level measurement device is manufactured by the Food Instrument Company (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. The controller can provide a digital display of the data and also transmit the reading to the CASS. Some tanks have gauges connected to CASS and others are read manually.

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. The displacer is connected to a wire wound onto a precision measuring drum. A level causes a change in the weight of the displacer which will be detected by the force transducer. Electronics within the gauge causes the servo motor to adjust the position of the displacer and compute the tank level based on the new position of the displacer drum. The gauge displays the level in decimal inches. The first few ENRAFs that received remote reading capability transmit liquid level data via analog output to the Tank Monitor and Control System (TMACS). The remaining 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.

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. Alarms from the annunciators are received by CASS. Continuous Air Monitoring (CAM) alarms are also located in the annulus. The annulus conductivity probes and radiation detectors are the primary means of leak detection for all DSTs.

Liquid Observation Well (LOW)

In-tank liquid observation wells are used for monitoring the interstitial liquid level (ILL) in single-shell waste storage tanks. The wells are usually constructed of fiberglass or TEFZEL*-reinforced epoxy-polyester resin. There are a few LOWs constructed of steel. LOWs are sized to extend to within 1 inch of the bottom of the waste tank, are sealed at their bottom ends and have a nominal outside diameter of 3.5 inches. Two probes are used to

----

*TEFZEL, a trademark of E. I. du Pont de Nemours & Company monitor changes in the ILL; gamma and neutron, which can indicate intrusions or leakage by increases or decreases in the ILL. There are 61 LOWs (59 are in operation) installed in SSTs that contain or are capable of containing greater than 50 Kgallons of drainable interstitial liquid, and in two DSTs only. The LOWs installed in two DSTs, (102-SY and 103-AW Tanks), are constructed of steel and are used for special, rather than routine, surveillance purposes only.

Thermocouple (TC)

A thermocouple is a thermoelectric device used to measure temperature. More than one thermocouple on a device (probe) is called a thermocouple tree. In DSTs there may be one or more thermocouple trees in risers in the primary tank. In addition, in DSTs only, there are thermocouple elements installed in the insulating concrete, the lower primary tank knuckle, the secondary tank concrete foundation, and in the outer structural concrete.

These monitor temperature gradients within the concrete walls, bottom of the tank, and the domes. In SSTs, one or more thermocouples may be installed directly in a tank, although some SSTs do not have any trees installed. A single thermocouple (probe) may be installed in a riser, or lowered down an existing riser or LOW. There are also four thermocouple laterals beneath Tank 105-A in which temperature readings are taken in 34 thermocouples.

In-tank Photographs and Videos

In-tank photographs and videos may be taken to aid in resolving in-tank measurement anomalies and determine tank integrity. Photographs and videos help determine sludge and liquid levels by visual examination.

<u>TERMS/ACRONYMS</u>

CASS	Computer Automated Surveillance System
MT/FIC/ENRAF	Manual Tape, Food Instrument Corporation, ENRAF Corporation (surface level measurement devices)
OSD	Operating Specifications Document
OSR	Operational Safety Requirements (OSRs are sections in SARs - see below)
SAR	Safety Analysis Reports
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," Fourth Amendment, 1994 (Tri-Party Agreement)

USQ Unreviewed Safety Question

Wyden Amendment "Safety Measures for Waste Tanks at Hanford Nuclear Reservation," Section 3137 of the National Defense Authorization Act for Fiscal Year 1991, November 5, 1990, Public Law 101-510.

4. INVENTORY AND STATUS BY TANK - VOLUME CALCULATIONS/DEFINITIONS FOR TABLE E-6 (SINGLE-SHELL TANKS)

COLUMN HEADING	VOLUME CALCULATIONS/DEFINITIONS
Total Waste	Solids volume plus Supernatant liquid. Solids include sludge and saltcake (see definitions below)
Supernatant Liquid	Drainable Liquid Remaining minus Drainable Interstitial. Supernate is the clear liquid floating on the surface of the waste. Supernate is usually derived by subtracting the solids level measurement from the liquid level measurement. In some cases, the supernatant volume includes floating solid crusts because their volume cannot be measured. Photographs are useful in estimating the liquid volumes; the area of solids covered and the average depth can be estimated.
Drainable Interstitial Liquid	Drainable Liquid Remaining minus Supernate. Drainable interstitial liquid is calculated based on the saltcake and sludge volumes, using average porosity values or actual data for each tank, when available. Interstitial liquid is liquid that fills the interstitial spaces of the solids waste. Drainable interstitial liquid is calculated based on the saltcake and sludge volumes in the tank. The sum of the interstitial liquid contained in saltcake and sludge is the initial volume of drainable interstitial liquid. The volume reported as Drainable Interstitial Liquid is the initial volume of drainable interstitial liquid minus interstitial liquid removed by pumping.
Pumped This Month	Net total gallons of liquid pumped from the tank during the month. If supernate is present, pump production is first subtracted from the supernatant volume. The remainder is then subtracted from the drainable interstitial liquid volume. The total pumped volume is subtracted from drainable liquid remaining and pumpable liquid remaining. Pump production takes into account the amount of water added to the tank during the month (if any).
Total Pumped	Cumulative net total gallons of liquid pump from 1979 to date.

COLUMN HEADING	VOLUME CALCULATIONS/DEFINITIONS
Drainable Liquid Remaining	Supernate plus Drainable Interstitial. (See Supernatant Liquid and Drainable Interstitial Liquid above for definitions). The total Drainable Liquid Remaining is the sum of drainable interstitial liquid and supernate minus total gallons pumped.
Pumpable Liquid Remaining	Drainable Liquid Remaining minus undrainable heel volume. (Dish bottom tanks have a "heel" where liquids can collect: flat bottom tanks do not). (See Drainable Liquid Remaining and Pumped this Month for definitions). Not all drainable interstitial liquid is pumpable. It is assumed that drainable interstitial liquid on top of the undrainable heel in sludge or saltcake, is not jet pumpable. Therefore, pumpable interstitial liquid is the initial volume of drainable interstitial liquid minus the amount of interstitial liquid on top of the heel. The volume shown as Pumpable Liquid Remaining is the sum of pumpable interstitial liquid and supernate minus total gallons pumped.
Sludge	Solids formed during sodium hydroxide additions to waste. Sludge usually was in the form of suspended solids when the waste was originally received in the tank from the waste generator. In-tank photographs may be used to estimate the volume.
Saltcake	Results from crystallization and precipitation after concentration of liquid waste, usually in an evaporator. If saltcake is layered over sludge, it is only possible to measure total solids volume. In-tank photographs may be used to estimate the saltcake volume.
Solids Volume Update	Indicates the latest update of any change in the solids volume.
Solids Update Source - See Footnote	Indicates the source or basis of the latest solids volume update.
Last In-tank Photo	Date of last in-tank photographs taken.
Last In-tank Video	Date of last in-tank video taken.
See Footnotes for These Changes	Indicates any change made the previous month. A footnote explanation for the change follows the Inventory and Status by Tank section (Table E-6).

APPENDIX D

TANK FARM CONFIGURATION, STATUS, AND FACILITY CHARTS

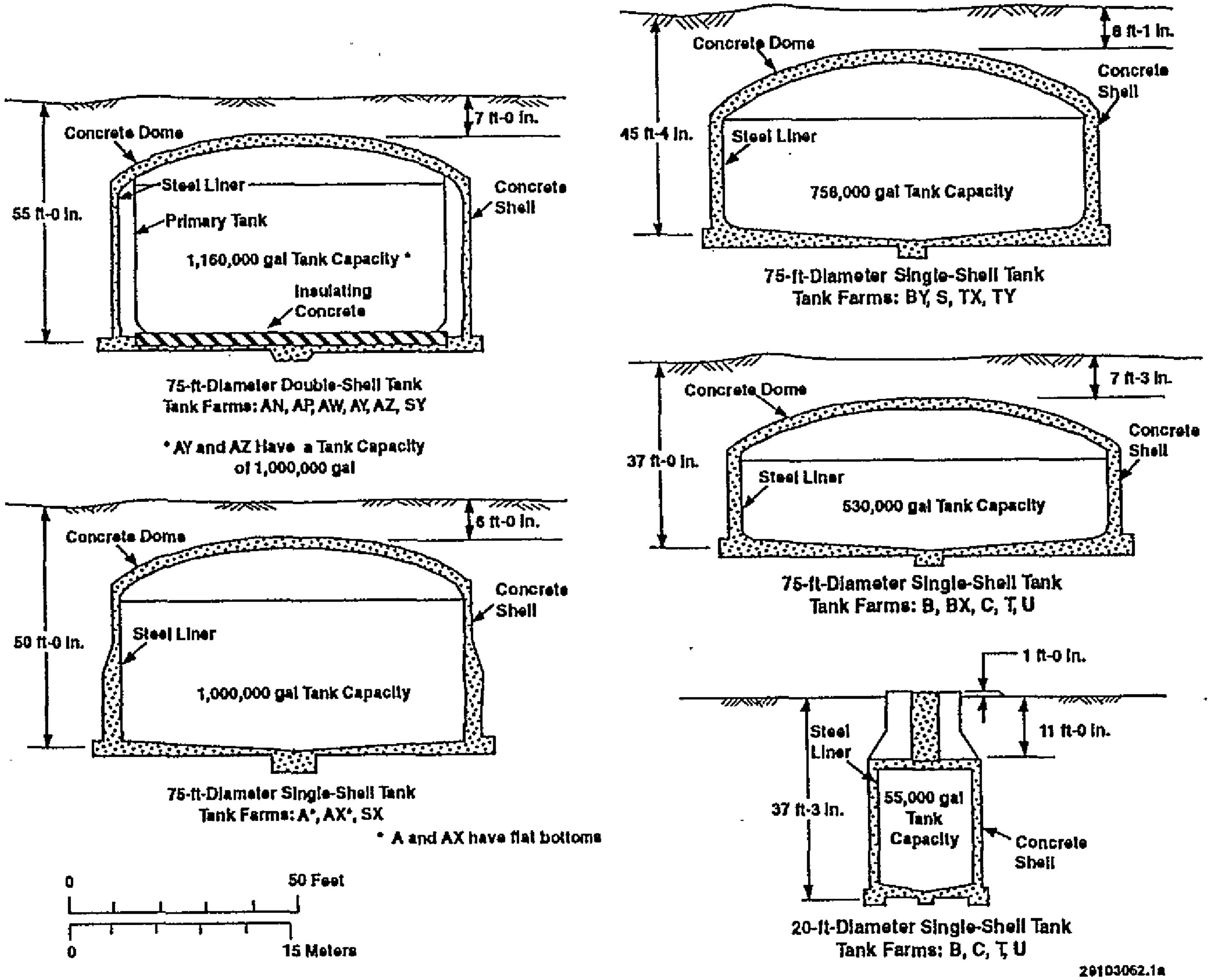

FIGURE D-1. HIGH-LEVEL WASTE TANK CONFIGURATION

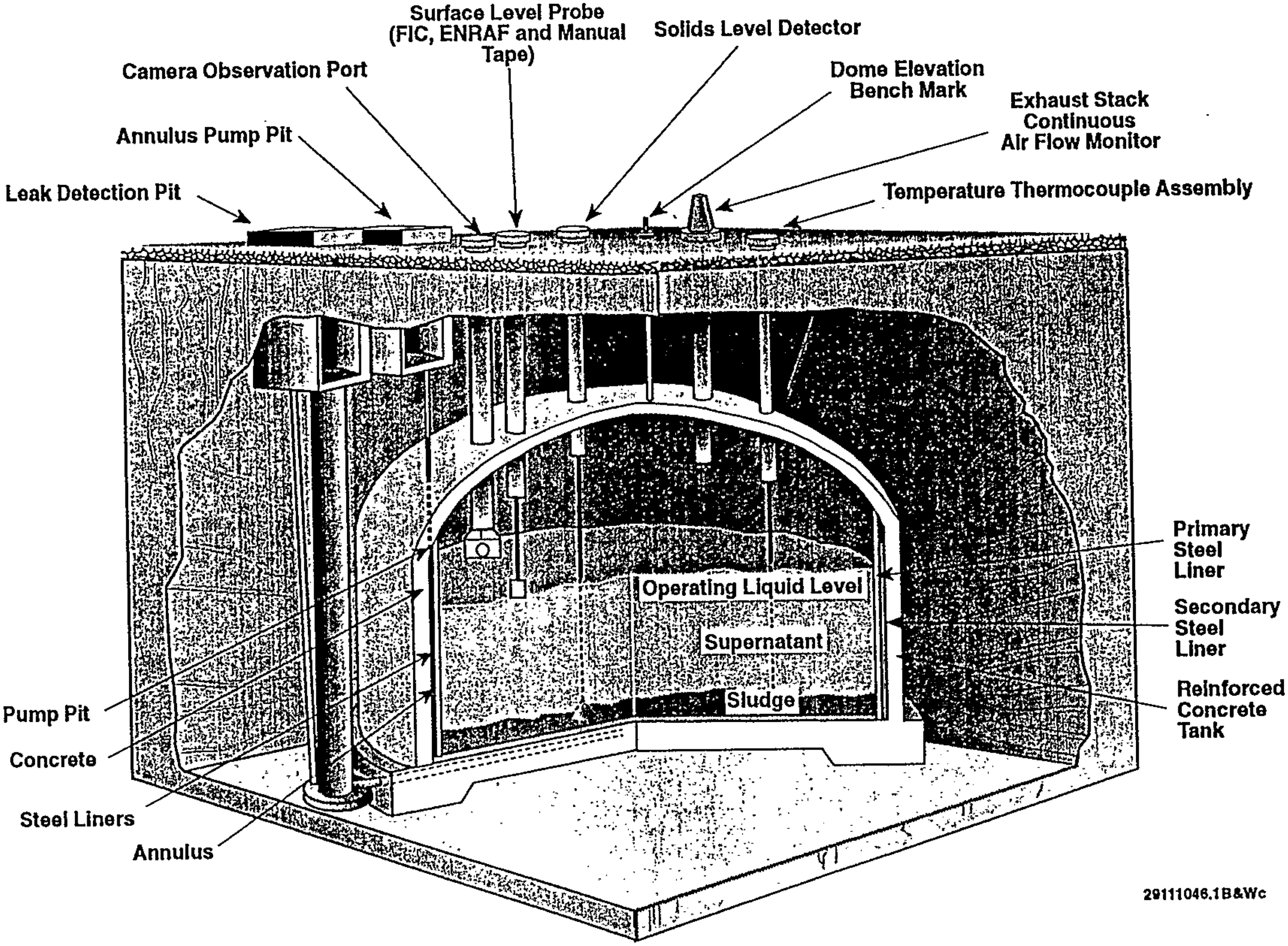

FIGURE D-2. DOUBLE-SHELL TANK INSTRUMENTATION CONFIGURATION

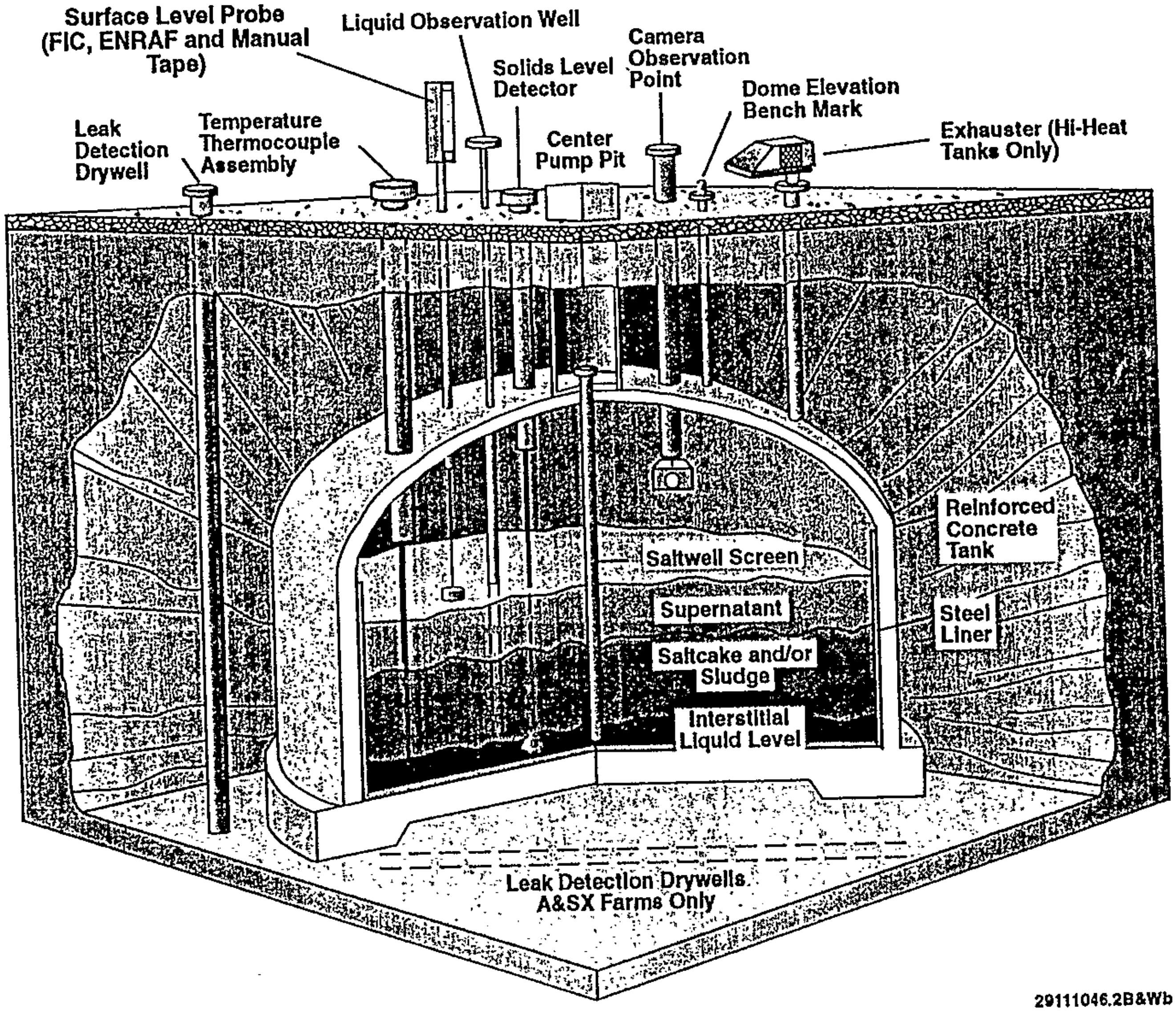

FIGURE D-3. SINGLE-SHELL TANK INSTRUMENTATION CONFIGURATION

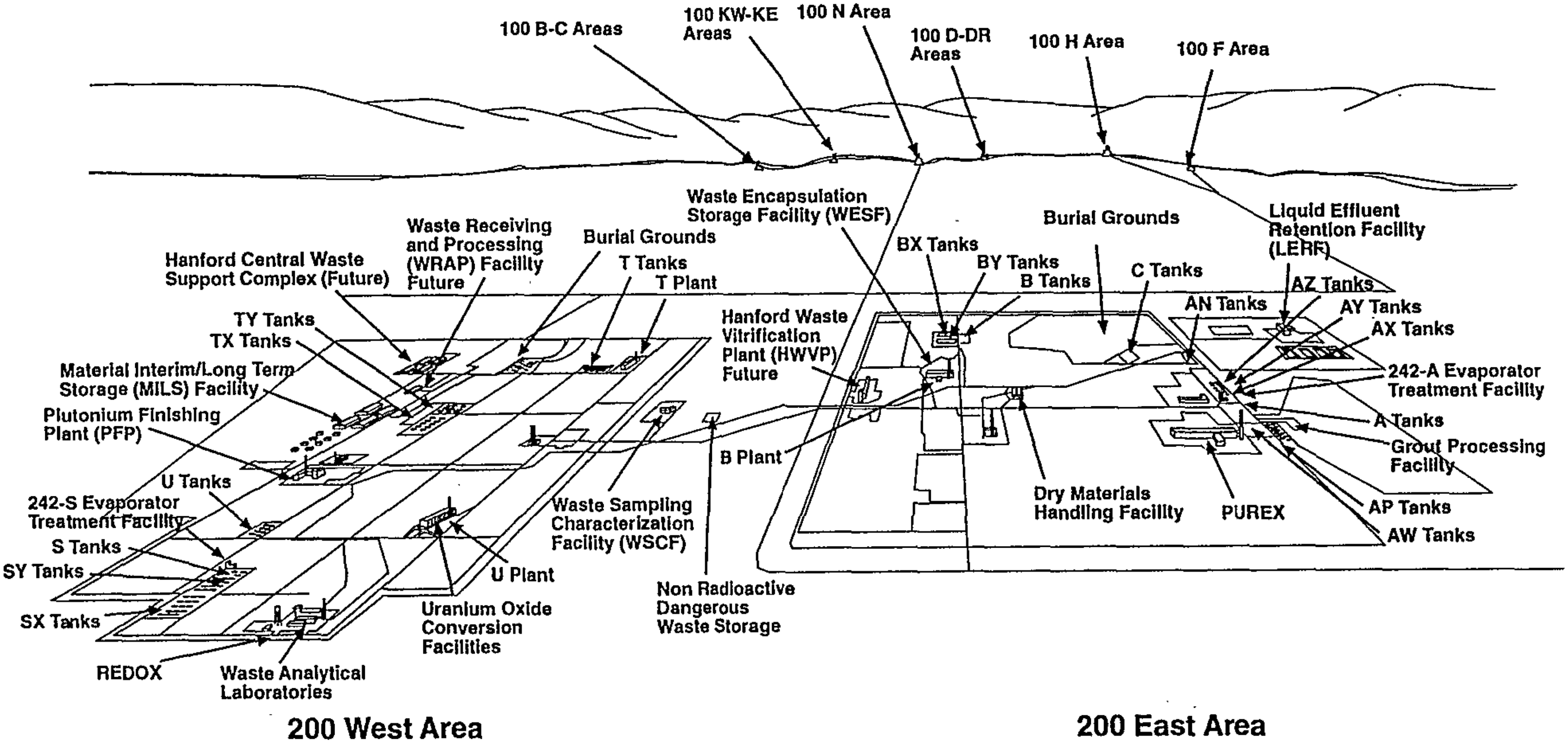

Figure D-4. Storage and Disposal Operations - 200 Area Facilities

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THE HANFORD TANK FARM FACILITY CHARTS (colored-coded foldouts)

ARE ONLY BEING INCLUDED IN THIS REPORT ON A QUARTERLY BASIS

(i. e., months ending March 31, June 30, September 30, December 31)

NOTE: COPIES OF THE FACILITY CHARTS CAN BE OBTAINED FROM

DENNIS BRUNSON, 200-E MEDIA SERVICE CENTER,

373-3140, 2750E/C-130

ALMOST ANY SIZE IS AVAILABLE, AND CAN BE LAMINATED.

Charge code required

APPENDIX E

MONTHLY SUMMARY
TANK USE SUMMARY
PUMPING RECORD, LIQUID STATUS AND PUMPABLE LIQUID REMAINING IN TANK FARMS
INVENTORY SUMMARY BY TANK FARM
INVENTORY AND STATUS BY TANK

TABLE E-1. MONTHLY SUMMARY

TANK STATUS

February 29, 1996

	200 EAST AREA	200 WEST AREA	TOTAL
IN SERVICE	25	3	28 (2)
OUT OF SERVICE	66	83	149
SOUND	59	51	110
ASSUMED LEAKER	32	35	67
INTERIM STABILIZED	58	56	114 (1)
ISOLATED			
PARTIAL INTERIM	21	30	51
INTRUSION PREVENTION COMPLETED	45	53	98

WASTE VOLUMES (Kgallons)

		200 EAST AREA	200 WEST AREA	TOTAL	SST TANKS	DST TANKS	TOTAL
SUPERNATANT							
AGING	Aging waste	1750	0	1750	0	1750	1750
CC	Complexant concentrate waste	1919	186	2105	3	2102	2105
CP	Concentrated phosphate waste	1098	0	1098	0	1098	1098
DC	Dilute complexed waste	854	1	855	2	853	855
DN	Dilute non-complexed waste	4227	0	4227	0	4227	4227
DN/PD	Dilute non-complex/PUREX TRU solids	227	0	227	0	227	227
DN/PT	Dilute non-complex/PFP TRU solids	0	309	309	0	309	309
NCPLX	Non-complexed waste	207	282	489	489	0	489
DSSF	Double-shell slurry feed	4285	48	4333	57	4276	4333
TOTAL SUPERNATANT		14567	826	15393	551	14842	15393
SOLIDS							
	Double-shell slurry	937	1103	2040	0	2040	2040
	Sludge	8030	5922	13952	11997	1955	13952
	Saltcake	6479	17523	24002	23242	760	24002
TOTAL SOLIDS		15446	24548	39994	35239	4755	39994
TOTAL WASTE		30013	25374	55387	35790	19597	55387
AVAILABLE SPACE IN TANKS		10507	1187	11694	0	11694 (2)	11694
DRAINABLE INTERSTITIAL		1978	4512	6490	6051	439	6490
DRAINABLE LIQUID REMAINING		16546	5336	21882	6601	15281	21882

(1) Includes four tanks that do not meet current established supernatant and interstitial liquid stabilization criteria (B-104, BX-103, T-102, T-112).

(2) Includes six double-shell tanks on Hydrogen Watch List not currently allowed to receive waste, 103-AN, 104-AN, 105-AN, 101-AW, 101-SY, and 103-SY.

TABLE E-2. TANK USE SUMMARY

February 29, 1996

TANK FARMS	IN SERVICE	OUT OF SERVICE	SOUND	ASSUMED LEAKER	ISOLATED TANKS PARTIAL INTERIM	ISOLATED TANKS INTRUSION PREVENTION	INTERIM STABILIZED TANKS
EAST							
A	0	6	3	3	2	4	5
AN	7 (2)	0	7	0	0	0	0
AP	8	0	8	0	0	0	0
AW	6 (2)	0	6	0	0	0	0
AX	0	4	2	2	1	3	3
AY	2	0	2	0	0	0	0
AZ	2	0	2	0	0	0	0
B	0	16	6	10	0	16	16 (1)
BX	0	12	7	5	6	6	12 (1)
BY	0	12	7	5	5	7	8
C	0	16	9	7	7	9	14
Total	25	66	59	32	21	45	58
WEST							
S	0	12	11	1	10	2	2
SX	0	15	5	10	6	9	9
SY	3 (2)	0	3	0	0	0	0
T	0	16	9	7	5	11	13 (1)
TX	0	18	10	8	0	18	18
TY	0	6	1	5	0	6	6
U	0	16	12	4	9	7	8
Total	3	83	51	35	30	53	56
TOTAL	28	149	110	67	51	98	114

(1) Includes four tanks that do not meet current established supernatant and interstitial liquid stabilization criteria (B-104, BX-103, T-102, and T-112). Investigative studies (WHC-SD-WM-ER-516 and -518, dated 10/5/95) determined that B-110, B-111, and U-110 did meet the current stabilization criteria; these tanks were removed from the original list of tanks not meeting the criteria.

(2) Six Double-Shell Tanks on the Hydrogen Tank Watch List are not currently in service (AN-103, 104, 105, AW-101, SY-101 and 103).

TABLE E-3. PUMPING RECORD, LIQUID STATUS AND PUMPABLE LIQUID REMAINING IN TANK FARMS

February 29, 1996

Waste Volumes (Kgallons)

TANK FARMS	PUMPED THIS MONTH	PUMPED FY TO DATE	CUMULATIVE TOTAL PUMPED 1979 TO DATE	SUPERNATANT LIQUID	DRAINABLE INTERSTITIAL REMAINING	DRAINABLE LIQUID REMAINING	PUMPABLE LIQUID REMAINING
EAST							
A	0.0	0.0	150.5	9	441	450	390
AN	N/A	N/A	N/A	5338	37	5375	N/A
AP	N/A	N/A	N/A	3008	0	3008	N/A
AW	N/A	N/A	N/A	2439	159	2598	N/A
AX	0.0	0.0	13.0	3	370	373	304
AY	N/A	N/A	N/A	1812	2	1814	N/A
AZ	N/A	N/A	N/A	1750	4	1754	N/A
B	0.0	0.0	0.00	15	164	179	80
BX	0.0	0.0	200.2	21	107	129	78
BY	0.0	9.2	1558.8	0	520	520	345
C	0.0	0.0	103.0	172	174	346	262
Total	0.0	9.2	2025.5	14567	1978	16546	1459
WEST							
S	1.7	1.7	789.9	58	1376	1432	1199
SX	0.0	0.0	113.2	63	1298	1361	1203
SY	N/A	N/A	N/A	495	237	732	N/A
T	1.5	2.1	44.8	34	182	216	150
TX	0.0	0.0	1205.7	5	250	255	0
TY	0.0	0.0	29.9	3	31	34	0
U	0.0	0.0	0.0	168	1138	1306	1104
Total	3.2	3.8	2183.5	826	4512	5336	3656
TOTAL	3.2	13.0	4209.0	15393	6490 (1)	21882	5115 (1)

(1) Volume based on 12.5% (sludge waste) and 45% (saltcake waste) liquid in solid (porosity) value. This is a conservative (high) estimate.

N/A = Not applicable for Double-Shell Tanks

TABLE E-4. INVENTORY SUMMARY BY TANK FARM

February 29, 1996

TANK FARM	TOTAL WASTE	AVAIL SPACE	*SUPERNATANT LIQUID VOLUMES (Kgallons)* AGING	CC	CP	DC	DN	DN/PD	DN/PT	DSSF	NCPLX	TOTAL	*SOLIDS VOLUME* DSS	SLUDGE	SALT CAKE	TOTAL
EAST																
A	1537	0	0	0	0	0	0	0	0	9	0	9	0	556	972	1528
AN	6779	1201	0	1916	0	0	1080	0	0	2342	0	5338	937	504	0	1441
AP	3008	5112	0	0	1098	0	1019	0	0	891	0	3008	0	0	0	0
AW	3770	3070	0	0	0	0	1169	227	0	1043	0	2439	0	1135	196	1331
AX	906	0	0	3	0	0	0	0	0	0	0	3	0	19	884	903
AY	1927	44	0	0	0	853	959	0	0	0	0	1812	0	115	0	115
AZ	1880	80	1750	0	0	0	0	0	0	0	0	1750	0	130	0	130
B	2057	0	0	0	0	0	0	0	0	0	15	15	0	1697	345	2042
BX	1493	0	0	0	0	0	0	0	0	0	21	21	0	1351	121	1472
BY	4680	0	0	0	0	0	0	0	0	0	0	0	0	719	3961	4680
C	1976	0	0	0	0	1	0	0	0	0	171	172	0	1804	0	1804
Total	30013	9507	1750	1919	1098	854	4227	227	0	4285	207	14567	937	8030	6479	15446
WEST																
S	5510	0	0	0	0	0	0	0	0	17	41	58	0	1166	4286	5452
SX	4419	0	0	0	0	1	0	0	0	0	62	63	0	1254	3102	4356
SY	2233	1187	0	186	0	0	0	0	309	0	0	495	1103	71	564	1738
T	2015	0	0	0	0	0	0	0	0	0	34	34	0	1981	0	1981
TX	7009	0	0	0	0	0	0	0	0	0	5	5	0	241	6763	7004
TY	638	0	0	0	0	0	0	0	0	0	3	3	0	571	64	635
U	3550	0	0	0	0	0	0	0	0	31	137	168	0	638	2744	3382
Total	25374	1187	0	186	0	1	0	0	309	48	282	826	1103	5922	17523	24548
TOTAL	55387	10694	1750	2105	1098	855	4227	227	309	4333	489	15393	2040	13952	24002	39994

TABLE E-5. INVENTORY AND STATUS BY TANK
DOUBLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME			VOLUME DETERMINATION					
TANK	WASTE MATL	TANK INTEGRITY	TANK USE	EQUIVA-LENT WASTE INCHES	TOTAL WASTE (Kgal)	AVAIL SPACE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAIN-ABLE INTER-STIT. (Kgal)	DRAIN-ABLE LIQUID REMAIN (Kgal)	PUMP-ABLE LIQUID REMAIN (Kgal)	DSS (Kgallons)	SLUDGE (Kgallons)	SALT CAKE	LIQUID VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
							AN TANK FARM STATUS												
AN-101	DN	SOUND	DRCVR	392.7	1080	60	1080	0	1080	1080	0	0	0	FM	S	08/22/89	0/ 0/ 0		
AN-102	CC	SOUND	CWHT	393.5	1082	58	993	3	996	993	0	89	0	FM	S	08/22/89	0/ 0/ 0		
AN-103	DSS	SOUND	CWHT	347.3	955	185	18	0	18	18	937	0	0	FM	S	08/22/89	10/29/87		
AN-104	DSSF	SOUND	CWHT	385.5	1060	80	796	25	821	799	0	264	0	FM	S	08/22/89	08/19/88		
AN-105	DSSF	SOUND	CWHT	410.2	1128	12	1128	0	1128	1128	0	0	0	FM	S	10/22/84	01/26/88		
AN-106	DSSF	SOUND	CWHT	151.6	417	723	400	0	400	400	0	17	0	FM	S	08/22/89	0/ 0/ 0		
AN-107	CC	SOUND	CWHT	384.4	1057	83	923	9	932	923	0	134	0	FM	S	08/22/89	09/01/88		
7 DOUBLE-SHELL TANKS				TOTALS:	6779	1201	5338	37	5375	5341	937	504	0						
							AP TANK FARM STATUS												
AP-101	DSSF	SOUND	DRCVR	268.0	737	403	737	0	737	737	0	0	0	FM	S	05/01/89	0/ 0/ 0		
AP-102	CP	SOUND	GRTFD	399.3	1098	42	1098	0	1098	1098	0	0	0	FM	S	07/11/89	0/ 0/ 0		
AP-103	DN	SOUND	DRCVR	9.1	25	1115	25	0	25	25	0	0	0	FM	S	10/13/88	0/ 0/ 0		
AP-104	DN	SOUND	GRTFD	303.3	834	306	834	0	834	834	0	0	0	FM	S	10/13/88	0/ 0/ 0		
AP-105	DSSF	SOUND	CWHT	56.0	154	986	154	0	154	154	0	0	0	FM	S	02/02/89	0/ 0/ 0		(a)
AP-106	DN	SOUND	DRCVR	38.9	107	1033	107	0	107	107	0	0	0	FM	S	10/13/88	0/ 0/ 0		
AP-107	DN	SOUND	DRCVR	9.1	25	1115	25	0	25	25	0	0	0	FM	S	10/13/88	0/ 0/ 0		
AP-108	DN	SOUND	DRCVR	10.2	28	1112	28	0	28	28	0	0	0	FM	S	10/13/88	0/ 0/ 0		
8 DOUBLE-SHELL TANKS				TOTALS:	3008	6112	3008	0	3008	3008	0	0	0						

TABLE E-5. INVENTORY AND STATUS BY TANK
DOUBLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME			VOLUME DETERMINATION					
TANK	WASTE MATL	TANK INTEGRITY	TANK USE	EQUIVA-LENT WASTE INCHES	TOTAL WASTE (Kgal)	AVAIL SPACE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAIN-ABLE INTER-STIT. (Kgal)	DRAIN-ABLE LIQUID REMAIN (Kgal)	PUMP-ABLE LIQUID REMAIN (Kgal)	DSS (Kgallons)	SLUDGE (Kgallons)	SALT CAKE	LIQUID VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
							AW TANK FARM STATUS												
AW-101	DSSF	SOUND	CWHT	409.8	1127	13	1043	2	1045	1043	0	84	0	FM	S	10/22/84	03/17/88		
AW-102	DN	SOUND	EVFD	34.5	95	1045	94	0	94	94	0	1	0	FM	S	02/29/84	02/02/83		
AW-103	DN/PD	SOUND	DRCVR	186.9	514	626	151	37	188	166	0	363	0	FM	S	02/01/89	0/ 0/ 0		
AW-104	DN	SOUND	DRCVR	408.7	1124	16	834	49	883	861	0	179	111	FM	S	03/05/87	02/02/83		
AW-105	DN/PD	SOUND	DRCVR	135.6	373	767	76	29	105	83	0	297	0	FM	S	03/05/87	0/ 0/ 0		
AW-106	DN	SOUND	SRCVR	195.3	537	603	241	42	283	261	0	211	85	FM	S	01/31/92	02/02/83		
6 DOUBLE-SHELL TANKS				TOTALS:	3770	3070	2439	159	2598	2508	0	1135	196						
							AY TANK FARM STATUS												
AY-101	DC	SOUND	DRCVR	340.4	936	44	853	2	855	853	0	83	0	FM	S	02/02/87	12/28/82		
AY-102	DN	SOUND	DRCVR	360.4	991	0	959	0	959	959	0	32	0	FM	S	02/10/88	04/28/81	(b)	
2 DOUBLE-SHELL TANKS				TOTALS:	1927	44	1812	2	1814	1812	0	115	0						
							AZ TANK FARM STATUS												
AZ-101	AGING	SOUND	CWHT	336.0	924	56	889	0	889	889	0	35	0	FM	S	09/30/90	08/18/83		
AZ-102	AGING	SOUND	DRCVR	347.6	956	24	861	4	865	861	0	95	0	FM	S	06/04/92	10/24/84		
2 DOUBLE-SHELL TANKS				TOTALS:	1880	80	1750	4	1754	1750	0	130	0						

TABLE E-5. INVENTORY AND STATUS BY TANK
DOUBLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME			VOLUME DETERMINATION					
TANK	WASTE MATL	TANK INTEGRITY	TANK USE	EQUIVA-LENT WASTE INCHES	TOTAL WASTE (Kgal)	AVAIL SPACE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAIN-ABLE INTER-STIT. (Kgal)	DRAIN-ABLE LIQUID REMAIN (Kgal)	PUMP-ABLE LIQUID REMAIN (Kgal)	DSS	SLUDGE (Kgallons)	SALT CAKE	LIQUID VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
SY TANK FARM STATUS																			
SY-101	CC	SOUND	CWHT	403.3	1109	31	19	237	256	250	530	0	560	FM	S	01/31/92	04/12/89		
SY-102	DN/PT	SOUND	DRCVR	138.2	380	760	309	0	309	309	0	71	0	FM	S	05/12/87	04/29/81		
SY-103	CC	SOUND	CWHT	270.5	744	396	167	0	167	167	573	0	4	FM	S	10/22/84	10/01/85		
3 DOUBLE-SHELL TANKS				TOTALS:	2233	1187	495	237	732	726	1103	71	564						
GRAND TOTAL					19597	11694	14842	439	15281	15145	2040	1955	760						

Note: +/- 1 Kgal differences are the result of computer rounding

Tank Farms	Available Space Calculations Used In This Document (Most Conservative)	Document SD-WM-TI-357* Operating Limit	Document SD-WM-TI-357* Tank Capacity	OSD-T-151-00007** Specification Limit
AN, AP, AW, SY	1,140,000 gal (414.5 in.)	1,144,000 gal (416 in.)	1,160,000 gal (421.8 in.)	1,160,500 gal (422 in.)
AY, AZ (Aging Waste)	980,000 gal (356.4 in.)	990,000 gal (360 in.)	1,000,000 gal (363.6 in.)	1,001,000 gal (364 in.)

* WHC-SD-WM-TI-357, "Waste Storage Tank Status and Leak Detection Criteria."
**WHC-OSD-T-151-00007, "Operating Specifications for 241-AN, AP, AW, AY, AZ, & SY Tank Farms."

Footnotes:
(a) Solids level in AP-105 is being evaluated; level will be adjusted when evaluation is complete.
(b) Tank AZ-102: Although the total waste exceeds the 980 Kgal specified for waste volume projections of available space, it does not exceed the operating limit criteria.

TABLE E-6. INVENTORY AND STATUS BY TANK
SINGLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME		VOLUME DETERMINATION					
TANK	WASTE MATERIAL	TANK INTEGRITY	STABIL/ ISOLATION STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAIN-ABLE INTER-STIT. (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAIN-ABLE LIQUID REMAIN (Kgal)	PUMP-ABLE LIQUID REMAIN (Kgal)	SLUDGE (Kgal)	SALTCAKE (Kgal)	LIQUIDS VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
						++++++ A FARM STATUS ++++++												
A-101	DSSF	SOUND	/PI	953	0	413	0.0	0.0	413	390	3	950	P	F	11/21/80	08/21/85		
A-102	DSSF	SOUND	IS/PI	41	4	2	0.0	39.5	6	0	15	22	P	FP	07/27/89	07/20/89		
A-103	DSSF	ASMD LKR	IS/IP	371	5	15	0.0	111.0	20	0	366	0	-	FP	06/03/88	12/28/88		
A-104	NCPLX	ASMD LKR	IS/IP	28	0	0	0.0	0.0	0	0	28	0	M	PS	01/27/78	06/25/86		
A-105	NCPLX	ASMD LKR	IS/IP	19	0	4	0.0	0.0	4	0	19	0	P	MP	08/23/79	08/20/86		
A-106	CP	SOUND	IS/IP	125	0	7	0.0	0.0	7	0	125	0	P	M	09/07/82	08/19/86		
6 SINGLE-SHELL TANKS			TOTALS	1537	9	441	0.0	150.5	450	390	556	972						
						++++++ AX FARM STATUS ++++++												
AX-101	DSSF	SOUND	/PI	748	0	320	0.0	0.0	320	298	3	745	P	F	05/06/82	08/18/87		
AX-102	CC	ASMD LKR	IS/IP	39	3	14	0.0	13.0	17	3	7	29	F	S	09/06/88	06/05/89		
AX-103	CC	SOUND	IS/IP	112	0	36	0.0	0.0	36	3	2	110	F	S	08/19/87	08/13/87		
AX-104	NCPLX	ASMD LKR	IS/IP	7	0	0	0.0	0.0	0	0	7	0	P	M	04/28/82	08/18/87		
4 SINGLE-SHELL TANKS			TOTALS:	906	3	370	0.0	13.0	373	304	19	884						

TABLE E-6. INVENTORY AND STATUS BY TANK
SINGLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME		VOLUME DETERMINATION					
TANK	WASTE MATERIAL	TANK INTEGRITY	STABIL/ ISOLATION STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAIN-ABLE INTER-STIT. (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAIN-ABLE LIQUID REMAIN (Kgal)	PUMP-ABLE LIQUID REMAIN (Kgal)	SLUDGE (Kgal)	SALTCAKE (Kgal)	LIQUIDS VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
							++++++ B FARM STATUS ++++++											
B-101	NCPLX	ASMD LKR	IS/IP	113	0	6	0.0	0.0	6	0	113	0	P	F	04/28/82	05/19/83		
B-102	NCPLX	SOUND	IS/IP	32	4	0	0.0	0.0	4	0	18	10	P	F	08/22/85	08/22/85		
B-103	NCPLX	ASMD LKR	IS/IP	59	0	0	0.0	0.0	0	0	59	0	F	F	02/28/85	10/13/88		
B-104	NCPLX	SOUND	IS/IP	371	1	46	0.0	0.0	47	40	301	69	M	M	06/30/85	10/13/88		
B-105	NCPLX	ASMD LKR	IS/IP	306	0	23	0.0	0.0	23	0	40	266	P	MP	12/27/84	05/19/88		
B-106	NCPLX	SOUND	IS/IP	117	1	6	0.0	0.0	7	0	116	0	F	F	03/31/85	02/28/85		
B-107	NCPLX	ASMD LKR	IS/IP	165	1	12	0.0	0.0	13	7	164	0	M	M	03/31/85	02/28/85		
B-108	NCPLX	SOUND	IS/IP	94	0	4	0.0	0.0	4	0	94	0	F	F	05/31/85	05/10/85		
B-109	NCPLX	SOUND	IS/IP	127	0	8	0.0	0.0	8	0	127	0	M	M	04/08/85	04/02/85		
B-110	NCPLX	ASMD LKR	IS/IP	246	1	22	0.0	0.0	23	17	245	0	MP	MP	02/28/85	03/17/88		
B-111	NCPLX	ASMD LKR	IS/IP	237	1	21	0.0	0.0	22	16	236	0	F	F	06/28/85	06/26/85		
B-112	NCPLX	ASMD LKR	IS/IP	33	3	0	0.0	0.0	3	0	30	0	F	F	05/31/85	05/29/85		
B-201	NCPLX	ASMD LKR	IS/IP	29	1	3	0.0	0.0	4	0	28	0	M	M	04/28/82	11/12/86	06/23/95	
B-202	NCPLX	SOUND	IS/IP	27	0	3	0.0	0.0	3	0	27	0	P	M	05/31/85	05/29/85	06/15/95	
B-203	NCPLX	ASMD LKR	IS/IP	51	1	5	0.0	0.0	6	0	50	0	PM	PM	05/31/84	11/13/86		
B-204	NCPLX	ASMD LKR	IS/IP	50	1	5	0.0	0.0	6	0	49	0	P	M	05/31/84	10/22/87		
16 SINGLE-SHELL TANKS			TOTALS	2057	15	164	0.0	0.0	179	80	1697	345						

TABLE E-6. INVENTORY AND STATUS BY TANK
SINGLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME		VOLUME DETERMINATION					
TANK	WASTE MATERIAL	TANK INTEGRITY	STABIL/ ISOLATION STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAIN-ABLE INTER-STIT. (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAIN-ABLE LIQUID REMAIN (Kgal)	PUMP-ABLE LIQUID REMAIN (Kgal)	SLUDGE (Kgal)	SALTCAKE (Kgal)	LIQUIDS VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
							++++++ BX FARM STATUS ++++++											
BX-101	NCPLX	ASMD LKR	IS/IP	43	1	0	0.0	0.0	1	0	42	0	P	M	04/28/82	11/24/88	11/10/94	
BX-102	NCPLX	ASMD LKR	IS/IP	96	0	4	0.0	0.0	4	0	96	0	P	M	04/28/82	09/18/85		
BX-103	NCPLX	SOUND	IS/IP	68	6	0	0.0	0.0	6	0	62	0	P	F	11/29/83	10/31/86	10/27/94	
BX-104	NCPLX	SOUND	IS/IP	99	3	30	0.0	17.4	33	27	96	0	F	F	09/22/89	09/21/89		
BX-105	NCPLX	SOUND	IS/IP	51	5	6	0.0	15.0	11	4	43	3	F	S	09/03/86	10/23/86		
BX-106	NCPLX	SOUND	IS/PI	38	0	0	0.0	14.0	0	0	38	0	MP	PS	08/01/95	05/19/88	07/17/95	
BX-107	NCPLX	SOUND	IS/PI	345	1	29	0.0	23.1	30	23	344	0	MP	P	09/18/90	09/11/90		
BX-108	NCPLX	ASMD LKR	IS/IP	26	0	1	0.0	0.0	1	0	26	0	M	PS	07/31/79	05/05/94		
BX-109	NCPLX	SOUND	IS/PI	193	0	13	0.0	8.2	13	8	193	0	FP	P	09/17/90	09/11/90		
BX-110	NCPLX	ASMD LKR	IS/PI	207	3	16	0.0	1.5	19	13	195	9	MP	M	10/31/94	07/15/94	10/13/94	
BX-111	NCPLX	ASMD LKR	IS/PI	162	1	1	0.0	116.9	3	1	52	109	M	M	04/06/95	05/19/94	02/28/95	
BX-112	NCPLX	SOUND	IS/PI	165	1	7	0.0	4.1	8	2	164	0	FP	P	09/17/90	09/11/90		
12 SINGLE-SHELL TANKS			TOTALS:	1493	21	107	0.0	200.2	129	78	1351	121						
							++++++ BY FARM STATUS ++++++											
BY-101	NCPLX	SOUND	IS/IP	387	0	5	0.0	35.8	5	0	109	278	P	M	05/30/84	09/19/89		
BY-102	NCPLX	SOUND	IS/PI	277	0	11	0.0	159.0	11	0	0	277	MP	M	05/01/95	09/11/87	04/11/95	
BY-103	NCPLX	ASMD LKR	/PI	400	0	15	0.0	98.9	15	9	5	395	MP	M	04/03/90	09/07/89		(a)
BY-104	NCPLX	SOUND	IS/IP	406	0	18	0.0	329.5	18	0	40	366	P	M	04/28/82	04/27/83		
BY-105	NCPLX	ASMD LKR	/PI	503	0	192	0.0	0.0	192	169	44	459	P	MP	04/28/82	07/01/86		
BY-106	NCPLX	ASMD LKR	/PI	642	0	200	0.0	63.7	200	163	95	547	P	MP	04/28/82	11/04/82		(b)
BY-107	NCPLX	ASMD LKR	IS/IP	266	0	25	0.0	56.4	25	0	60	206	P	MP	04/28/82	10/15/86		

TABLE E-6. INVENTORY AND STATUS BY TANK
SINGLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME		VOLUME DETERMINATION					
TANK	WASTE MATERIAL	TANK INTEGRITY	STABIL/ ISOLATION STATUS	TOTAL WASTE (Kgal)	SUPER- NATANT LIQUID (Kgal)	DRAIN- ABLE INTER- STIT. (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAIN- ABLE LIQUID REMAIN (Kgal)	PUMP- ABLE LIQUID REMAIN (Kgal)	SLUDGE (Kgal)	SALTCAKE (Kgal)	LIQUIDS VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
BY-108	NCPLX	ASMD LKR	IS/IP	228	0	9	0.0	27.5	9	0	154	74	MP	M	04/28/82	10/15/86		
BY-109	NCPLX	SOUND	/PI	423	0	28	0.0	145.1	28	4	83	340	F	PS	08/30/91	10/15/86		(c)
BY-110	NCPLX	SOUND	IS/IP	398	0	9	0.0	213.3	9	0	103	295	M	S	09/10/79	07/26/84		
BY-111	NCPLX	SOUND	IS/IP	459	0	0	0.0	313.2	0	0	21	438	P	M	04/28/82	10/31/86		
BY-112	NCPLX	SOUND	IS/IP	291	0	8	0.0	116.4	8	0	5	286	P	M	04/28/82	04/14/88		
12 SINGLE-SHELL TANKS			TOTALS:	4680	0	520	0.0	1558.8	520	345	719	3961						
						++++++ C FARM STATUS ++++++												
C-101	NCPLX	ASMD LKR	IS/IP	88	0	3	0.0	0.0	3	0	88	0	M	M	11/29/83	11/17/87		
C-102	DC	SOUND	IS/PI	316	0	30	0.0	46.7	30	17	316	0	F	FP	09/30/95	05/18/76	08/24/95	
C-103	NCPLX	SOUND	/PI	195	133	0	0.0	0.0	133	133	62	0	F	S	10/22/90	07/28/87		
C-104	CC	SOUND	IS/IP	295	0	11	0.0	0.0	11	5	295	0	FP	P	09/22/89	07/25/90		
C-105	NCPLX	SOUND	IS/PI	134	2	30	0.0	0.0	32	9	132	0	F	S	10/31/95	08/05/94	08/30/95	
C-106	NCPLX	SOUND	/PI	229	32	16	0.0	0.0	48	42	197	0	F	PS	04/28/82	08/05/94	08/08/94	
C-107	DC	SOUND	IS/PI	237	0	24	0.0	40.8	24	15	237	0	F	S	09/30/95	00/00/00		
C-108	NCPLX	SOUND	IS/IP	66	0	0	0.0	0.0	0	0	66	0	M	S	02/24/84	12/05/74	11/17/94	
C-109	NCPLX	SOUND	IS/IP	66	4	0	0.0	0.0	4	0	62	0	M	PS	11/29/83	01/30/76		
C-110	DC	ASMD LKR	IS/PI	178	1	28	0.0	15.5	29	15	177	0	F	FMP	06/14/95	08/12/86	05/23/95	
C-111	NCPLX	ASMD LKR	IS/IP	57	0	0	0.0	0.0	0	0	57	0	M	S	04/28/82	02/25/70	02/02/95	
C-112	NCPLX	SOUND	IS/PI	104	0	32	0.0	0.0	32	26	104	0	M	PS	09/18/90	09/18/90		

TABLE E-6. INVENTORY AND STATUS BY TANK
SINGLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME		VOLUME DETERMINATION					
TANK	WASTE MATERIAL	TANK INTEGRITY	STABIL/ ISOLATION STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAIN-ABLE INTER-STIT. (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAIN-ABLE LIQUID REMAIN (Kgal)	PUMP-ABLE LIQUID REMAIN (Kgal)	SLUDGE (Kgal)	SALTCAKE (Kgal)	LIQUIDS VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
C-201	NCPLX	ASMD LKR	IS/IP	2	0	0	0.0	0.0	0	0	2	0	P	MP	03/31/82	12/02/86		
C-202	EMPTY	ASMD LKR	IS/IP	1	0	0	0.0	0.0	0	0	1	0	P	M	01/19/79	12/09/86		
C-203	NCPLX	ASMD LKR	IS/IP	5	0	0	0.0	0.0	0	0	5	0	P	MP	04/28/82	12/09/86		
C-204	NCPLX	ASMD LKR	IS/IP	3	0	0	0.0	0.0	0	0	3	0	P	MP	04/28/82	12/09/86		
16 SINGLE-SHELL TANKS			TOTALS:	1976	172	174	0.0	103.0	346	262	1804	0						
++++++ S FARM STATUS ++++++																		
S-101	NCPLX	SOUND	/PI	427	12	84	0.0	0.0	96	90	244	171	F	PS	09/16/80	03/18/88		
S-102	DSSF	SOUND	/PI	549	0	230	0.0	0.0	230	208	4	545	P	FP	04/28/82	03/18/88		
S-103	DSSF	SOUND	/PI	248	17	85	0.0	0.0	102	79	10	221	M	S	11/20/80	06/01/89		
S-104	NCPLX	ASMD LKR	IS/IP	294	1	28	0.0	0.0	29	23	293	0	M	M	12/20/84	12/12/84		
S-105	NCPLX	SOUND	IS/IP	456	0	35	0.0	114.3	35	13	2	454	MP	S	09/26/88	04/12/89		
S-106	NCPLX	SOUND	/PI	479	4	186	0.0	97.0	190	168	28	447	P	FP	12/31/93	03/17/89	09/12/94	
S-107	NCPLX	SOUND	/PI	376	14	45	0.0	0.0	59	52	293	69	F	PS	09/25/80	03/12/87		
S-108	NCPLX	SOUND	/PI	604	0	127	0.0	151.6	127	105	4	600	P	MP	04/28/82	03/12/87		
S-109	NCPLX	SOUND	/PI	568	0	141	0.0	111.0	141	119	13	555	F	PS	09/30/75	08/24/84		
S-110	NCPLX	SOUND	/PI	390	0	110	1.7	187.6	108	101	131	259	F	PS	05/14/92	03/12/87		(d)
S-111	NCPLX	SOUND	/PI	596	10	195	0.0	3.3	205	134	139	447	P	FP	04/28/82	08/10/89		
S-112	NCPLX	SOUND	/PI	523	0	110	0.0	125.1	110	107	5	518	P	FP	12/31/93	03/24/87		
12 SINGLE-SHELL TANKS			TOTALS:	5510	58	1376	1.7	789.9	1432	1199	1166	4286						

TABLE E-6. INVENTORY AND STATUS BY TANK
SINGLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME		VOLUME DETERMINATION					
TANK	WASTE MATERIAL	TANK INTEGRITY	STABIL/ ISOLATION STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAIN-ABLE INTER-STIT. (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAIN-ABLE LIQUID REMAIN (Kgal)	PUMP-ABLE LIQUID REMAIN (Kgal)	SLUDGE (Kgal)	SALTCAKE (Kgal)	LIQUIDS VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
						++++++ SX FARM STATUS ++++++												
SX-101	DC	SOUND	/PI	456	1	145	0.0	0.0	146	124	112	343	P	FP	04/28/82	03/10/89		
SX-102	DSSF	SOUND	/PI	543	0	183	0.0	0.0	183	177	117	426	P	M	04/28/82	01/07/88		
SX-103	NCPLX	SOUND	/PI	652	1	232	0.0	0.0	233	211	115	536	F	S	07/15/91	12/17/87		
SX-104	DSSF	ASMD LKR	/PI	614	0	201	0.0	113.2	201	195	136	478	F	S	07/07/89	09/08/88		
SX-105	DSSF	SOUND	/PI	683	0	261	0.0	0.0	261	238	73	610	P	F	04/28/82	06/15/88		
SX-106	NCPLX	SOUND	/PI	538	61	194	0.0	0.0	255	233	12	465	F	PS	10/28/80	06/01/89		
SX-107	NCPLX	ASMD LKR	IS/IP	104	0	5	0.0	0.0	5	0	104	0	P	M	04/28/82	03/06/87		
SX-108	NCPLX	ASMD LKR	IS/IP	87	0	5	0.0	0.0	5	0	87	0	P	M	12/31/93	03/06/87		
SX-109	NCPLX	ASMD LKR	IS/IP	244	0	48	0.0	0.0	48	25	0	244	P	M	01/10/96	05/21/86		
SX-110	NCPLX	ASMD LKR	IS/IP	62	0	0	0.0	0.0	0	0	62	0	M	PS	10/06/76	02/20/87		
SX-111	NCPLX	ASMD LKR	IS/IP	125	0	7	0.0	0.0	7	0	125	0	M	PS	05/31/74	06/09/94		
SX-112	NCPLX	ASMD LKR	IS/IP	92	0	3	0.0	0.0	3	0	92	0	P	M	04/28/82	03/10/87		
SX-113	NCPLX	ASMD LKR	IS/IP	26	0	0	0.0	0.0	0	0	26	0	P	M	04/28/82	03/18/88		
SX-114	NCPLX	ASMD LKR	IS/IP	181	0	14	0.0	0.0	14	0	181	0	P	M	04/28/82	02/26/87		
SX-115	NCPLX	ASMD LKR	IS/IP	12	0	0	0.0	0.0	0	0	12	0	P	M	04/28/82	03/31/88		
15 SINGLE-SHELL TANKS			TOTALS:	4419	63	1298	0.0	113.2	1361	1203	1254	3102						

TABLE E-6. INVENTORY AND STATUS BY TANK
SINGLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME		VOLUME DETERMINATION					
TANK	WASTE MATERIAL	TANK INTEGRITY	STABIL/ ISOLATION STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAIN-ABLE INTER-STIT. (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAIN-ABLE LIQUID REMAIN (Kgal)	PUMP-ABLE LIQUID REMAIN (Kgal)	SLUDGE (Kgal)	SALTCAKE (Kgal)	LIQUIDS VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
						++++++ T FARM STATUS ++++++												
T-101	NCPLX	ASMD LKR	IS/PI	102	1	16	0.0	25.3	17	0	101	0	F	S	04/14/93	04/07/93		
T-102	NCPLX	SOUND	IS/IP	32	13	0	0.0	0.0	13	13	19	0	P	FP	08/31/84	06/28/89		
T-103	NCPLX	ASMD LKR	IS/IP	27	4	0	0.0	0.0	4	0	23	0	F	FP	11/29/83	07/03/84		
T-104	NCPLX	SOUND	/PI	445	3	47	0.0	0.0	50	44	442	0	P	MP	04/28/82	06/29/89		
T-105	NCPLX	SOUND	IS/IP	98	0	23	0.0	0.0	23	17	98	0	P	F	05/29/87	05/14/87		
T-106	NCPLX	ASMD LKR	IS/IP	21	2	0	0.0	0.0	2	0	19	0	P	FP	04/28/82	06/29/89		
T-107	NCPLX	ASMD LKR	/PI	173	0	10	1.5	9.9	10	4	173	0	P	FP	09/30/95	07/12/84		(e)
T-108	NCPLX	ASMD LKR	IS/IP	44	0	0	0.0	0.0	0	0	44	0	P	M	04/28/82	07/17/84		
T-109	NCPLX	ASMD LKR	IS/IP	58	0	0	0.0	0.0	0	0	58	0	M	M	12/30/84	02/25/93		
T-110	NCPLX	SOUND	/PI	379	3	39	0.0	0.0	42	36	376	0	P	FP	04/28/82	07/12/84		
T-111	NCPLX	ASMD LKR	IS/PI	446	0	34	0.0	9.6	34	29	446	0	P	FP	04/18/94	04/13/94	02/13/95	
T-112	NCPLX	SOUND	IS/IP	67	7	0	0.0	0.0	7	7	60	0	P	FP	04/28/82	08/01/84		
T-201	NCPLX	SOUND	IS/IP	29	1	3	0.0	0.0	4	0	28	0	M	PS	05/31/78	04/15/86		
T-202	NCPLX	SOUND	IS/IP	21	0	2	0.0	0.0	2	0	21	0	FP	P	07/12/81	07/06/89		
T-203	NCPLX	SOUND	IS/IP	35	0	4	0.0	0.0	4	0	35	0	M	PS	01/31/78	08/03/89		
T-204	NCPLX	SOUND	IS/IP	38	0	4	0.0	0.0	4	0	38	0	FP	P	07/22/81	08/03/89		
16 SINGLE-SHELL TANKS			TOTALS:	2015	34	182	1.5	44.8	216	150	1981	0						

TABLE E-6. INVENTORY AND STATUS BY TANK
SINGLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME		VOLUME DETERMINATION					
TANK	WASTE MATERIAL	TANK INTEGRITY	STABIL/ ISOLATION STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAIN-ABLE INTER-STIT. (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAIN-ABLE LIQUID REMAIN (Kgal)	PUMP-ABLE LIQUID REMAIN (Kgal)	SLUDGE (Kgal)	SALTCAKE (Kgal)	LIQUIDS VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
						++++++ TX FARM STATUS ++++++												
TX-101	NCPLX	SOUND	IS/IP	87	3	2	0.0	0.0	5	0	84	0	F	P	02/02/84	10/24/85		
TX-102	NCPLX	SOUND	IS/IP	217	0	22	0.0	94.4	22	0	0	217	M	S	08/31/84	10/31/85		
TX-103	NCPLX	SOUND	IS/IP	157	0	15	0.0	68.3	15	0	157	0	F	S	08/14/80	10/31/85		
TX-104	NCPLX	SOUND	IS/IP	65	1	14	0.0	3.6	15	0	0	64	F	FP	04/06/84	10/16/84		
TX-105	NCPLX	ASMD LKR	IS/IP	609	0	20	0.0	121.5	20	0	0	609	M	PS	08/22/77	10/24/89		
TX-106	NCPLX	SOUND	IS/IP	453	0	10	0.0	134.6	10	0	0	453	M	S	08/29/77	10/31/85		
TX-107	NCPLX	ASMD LKR	IS/IP	36	1	1	0.0	0.0	2	0	0	35	FP	FP	01/20/84	10/31/85		
TX-108	NCPLX	SOUND	IS/IP	134	0	0	0.0	13.7	0	0	0	134	P	FP	05/30/83	09/12/89		
TX-109	NCPLX	SOUND	IS/IP	384	0	10	0.0	72.3	10	0	0	384	F	PS	05/30/83	10/24/89		
TX-110	NCPLX	ASMD LKR	IS/IP	462	0	15	0.0	115.1	15	0	0	462	M	PS	05/30/83	10/24/89		
TX-111	NCPLX	SOUND	IS/IP	370	0	9	0.0	98.4	9	0	0	370	M	PS	07/26/77	09/12/89		
TX-112	NCPLX	SOUND	IS/IP	649	0	24	0.0	94.0	24	0	0	649	P	PS	05/30/83	11/19/87		
TX-113	NCPLX	ASMD LKR	IS/IP	607	0	16	0.0	19.2	16	0	0	607	M	PS	05/30/83	04/11/83	09/23/94	
TX-114	NCPLX	ASMD LKR	IS/IP	535	0	15	0.0	104.3	15	0	0	535	M	PS	05/30/83	04/11/83	02/17/95	
TX-115	NCPLX	ASMD LKR	IS/IP	640	0	19	0.0	99.1	19	0	0	640	M	S	03/25/83	06/15/88		
TX-116	NCPLX	ASMD LKR	IS/IP	631	0	23	0.0	23.8	23	0	0	631	M	PS	03/31/72	10/17/89		
TX-117	NCPLX	ASMD LKR	IS/IP	626	0	8	0.0	54.3	8	0	0	626	M	PS	12/31/71	04/11/83		
TX-118	NCPLX	SOUND	IS/IP	347	0	27	0.0	89.1	27	0	0	347	F	S	11/17/80	12/19/79		
18 SINGLE-SHELL TANKS			TOTALS:	7009	5	250	0.0	1205.7	255	0	241	6763						

TABLE E-6. INVENTORY AND STATUS BY TANK
SINGLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME		VOLUME DETERMINATION					
TANK	WASTE MATERIAL	TANK INTEGRITY	STABIL/ ISOLATION STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAIN-ABLE INTER-STIT. (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAIN-ABLE LIQUID REMAIN (Kgal)	PUMP-ABLE LIQUID REMAIN (Kgal)	SLUDGE (Kgal)	SALTCAKE (Kgal)	LIQUIDS VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
						++++++ TY FARM STATUS ++++++												
TY-101	NCPLX	ASMD LKR	IS/IP	118	0	0	0.0	8.2	0	0	118	0	P	F	04/28/82	08/22/89		
TY-102	NCPLX	SOUND	IS/IP	64	0	14	0.0	6.6	14	0	0	64	P	FP	06/28/82	07/07/87		
TY-103	NCPLX	ASMD LKR	IS/IP	162	0	5	0.0	11.5	5	0	162	0	P	FP	07/09/82	08/22/89		
TY-104	NCPLX	ASMD LKR	IS/IP	46	3	12	0.0	0.0	15	0	43	0	P	FP	06/27/90	11/03/87		
TY-105	NCPLX	ASMD LKR	IS/IP	231	0	0	0.0	3.6	0	0	231	0	P	M	04/28/82	09/07/89		
TY-106	NCPLX	ASMD LKR	IS/IP	17	0	0	0.0	0.0	0	0	17	0	P	M	04/28/82	08/22/89		
6 SINGLE-SHELL TANKS			TOTALS:	638	3	31	0.0	29.9	34	0	571	64						
						++++++ U FARM STATUS ++++++												
U-101	NCPLX	ASMD LKR	IS/IP	25	3	0	0.0	0.0	3	0	22	0	P	MP	04/28/82	06/19/79		
U-102	NCPLX	SOUND	/PI	374	18	126	0.0	0.0	144	122	43	313	P	MP	04/28/82	06/08/89		
U-103	NCPLX	SOUND	/PI	468	13	176	0.0	0.0	189	166	32	423	P	FP	04/28/82	09/13/88		
U-104	NCPLX	ASMD LKR	IS/IP	122	0	7	0.0	0.0	7	0	122	0	P	MP	04/28/82	08/10/89		
U-105	NCPLX	SOUND	/PI	418	37	142	0.0	0.0	179	157	32	349	FM	PS	09/30/78	07/07/88		
U-106	NCPLX	SOUND	/PI	226	15	68	0.0	0.0	83	61	26	185	F	PS	12/30/83	07/07/88		
U-107	DSSF	SOUND	/PI	406	31	147	0.0	0.0	178	156	15	360	F	S	12/30/83	10/27/88		
U-108	NCPLX	SOUND	/PI	468	24	172	0.0	0.0	196	174	29	415	F	S	12/30/83	09/12/84		
U-109	NCPLX	SOUND	/PI	463	19	163	0.0	0.0	182	160	48	396	F	F	11/13/77	07/07/88		
U-110	NCPLX	ASMD LKR	IS/PI	186	0	15	0.0	0.0	15	9	186	0	M	M	12/30/84	12/11/84		
U-111	DSSF	SOUND	/PI	329	0	122	0.0	0.0	122	99	26	303	PS	FPS	04/28/82	06/23/88		
U-112	NCPLX	ASMD LKR	IS/IP	49	4	0	0.0	0.0	4	0	45	0	P	MP	02/10/84	08/03/89		

TABLE E-6. INVENTORY AND STATUS BY TANK
SINGLE-SHELL TANKS
February 29, 1996

TANK STATUS				LIQUID VOLUME							SOLIDS VOLUME		VOLUME DETERMINATION					
TANK	WASTE MATERIAL	TANK INTEGRITY	STABIL/ ISOLATION STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAIN-ABLE INTER-STIT. (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAIN-ABLE LIQUID REMAIN (Kgal)	PUMP-ABLE LIQUID REMAIN (Kgal)	SLUDGE (Kgal)	SALTCAKE (Kgal)	LIQUIDS VOLUME METHOD	SOLIDS VOLUME METHOD	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
U-201	NCPLX	SOUND	IS/IP	5	1	0	0.0	0.0	1	0	4	0	M	S	08/15/79	08/08/89		
U-202	NCPLX	SOUND	IS/IP	5	1	0	0.0	0.0	1	0	4	0	M	S	08/15/79	08/08/89		
U-203	NCPLX	SOUND	IS/IP	3	1	0	0.0	0.0	1	0	2	0	M	S	08/15/79	06/13/89		
U-204	NCPLX	SOUND	IS/IP	3	1	0	0.0	0.0	1	0	2	0	M	S	08/15/79	06/13/89		
16 SINGLE-SHELL TANKS			TOTALS:	3550	168	1138	0.0	0.0	1306	1104	638	2744						
GRAND TOTAL				35790	551	6051	3.2	4209.0	6601	5115	11997	23242						

NOTES: +/- 1K gal differences are the result of rounding
Total Waste is calculated as the sum of Sludge and Saltcake plus Supernate.
The category "Interim Isolated" (II) was changed to "Intrusion Prevention" (IP) in June 1993. See section C. "Tank and Equipment Code and Status Definitions"
Stabilization information from WHC-SD-RE-TI-178 SST STABILIZATION RECORD, latest revision, or SST Stabilization or Cognizant Engineer

See footnotes on following page

TABLE E-6. INVENTORY AND STATUS BY TANK
SINGLE-SHELL TANKS
February 29, 1996

Footnotes:

(a) BY-103 - Pumping halted October 17, 1995, due to an Unreviewed Safety Question Evaluation because of flammable gas safety concerns.

(b) BY-106 - Pumping halted October 17, 1995, due to an Unreviewed Safety Question Evaluation because of flammable gas safety concerns.

(c) BY-109 - Pumping halted October 17, 1995, due to an Unreviewed Safety Question Evaluation because of flammable gas safety concerns.

(d) S-110 - Following information from Cognizant Engineer, Stabilization:
Pumping began February 24, 1996.
Total waste: 390 Kgal (No change)
Supernate: 0 Kgal (No change)
Drainable Interstitial Liquid: 110 Kgal (No change)
Pumped this Month: 1.7 Kgal
Total Pumped: 187.6 Kgal
Drainable Liquid Remaining: 108.3 Kgal
Pumpable Liquid Remaining: 101.3 Kgal
Sludge: 131 Kgal (No change)
Saltcake: 259 Kgal (No change)

(d) T-107 - Following information from Cognizant Engineer, Stabilization:
Pumping resumed February 7, 1996.
Total waste: 173 Kgal (No change)
Supernate: 0 Kgal (No change)
Drainable Interstitial Liquid: 11.4 Kgal
Pumped this Month: 0 Kgal
Total Pumped: 8.4 Kgal
Drainable Liquid Remaining: 11.4 Kgal
Pumpable Liquid Remaining: 5.6 Kgal
Sludge: 173 Kgal (No change)
Saltcake: 0 Kgal (No change)
Latest Solids Volume Update: September 30, 1995
Pumping was shut down on October 19, 1995, due to a pump seal leak, and resumed February 7, 1996.

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APPENDIX F

PERFORMANCE SUMMARY

TABLE F-1. PERFORMANCE SUMMARY (Sheet 1 of 2)

WASTE VOLUMES (Kgallons)

February 29, 1996

INCREASES/DECREASES IN WASTE VOLUMES STORED IN DOUBLE-SHELL TANKS

SOURCE		THIS MONTH	FY1996 TO DATE
B PLANT		14	48
PUREX TOTAL (1)		19	134
PFP (1)		0	0
T PLANT (1)		0	12
S PLANT (1)		0	12
300 AREAS (1)		13	28
400 AREAS (1)		0	0
SULFATE WASTE -100 N (2)		0	0
TRAINING/X-SITE (10)		0	0
TANK FARMS (6)		16	31
SALTWELL LIQUID (9)		0	22
OTHER GAINS		41	121
Slurry increase (3)	2		
Condensate	34		
Instrument change (7)	3		
Unknown (5)	2		
OTHER LOSSES		-29	-140
Slurry decrease (3)	-1		
Evaporation (4)	-20		
Instrument change (7)	0		
Unknown (5)	-8		
EVAPORATED		0	0
GROUTED		0	0
Total		74	268

INCREASES/DECREASES IN WASTE VOLUMES STORED IN SINGLE-SHELL TANK 241-C-106

SOURCE		THIS MONTH	FY1996 TO DATE
106-C (8)	Gains	0	18
	Losses	-6	-23
Total		-6 (*)	-5

(*) No cooling water was added in February

CUMULATIVE EVAPORATION - 1950 TO PRESENT WASTE VOLUME REDUCTION

FACILITY	
242-B EVAPORATOR (11)	7172
242-T EVAPORATOR (1950's) (11)	9181
IN-TANK SOLIDIFICATION UNIT 1 (12)	11876
IN-TANK SOLIDIFICATION UNIT 2 (12)	15295
IN-TANK SOLID. UNIT 1 & 2 (12) (after conversion of Unit 1 to a cooler for Unit 2)	7965
242-T (Modified) (11)	24471
242-S EVAPORATOR (13)	41983
242-A EVAPORATOR (14)	72572
B PLANT (Cell 23) (15)	1185
REDOX (14)	12393
Total	204093

Note: 242-A Evaporator was restarted April 15, 1994, after having been shut down April 1989.

Footnotes: See Next Page

TABLE F-1. PERFORMANCE SUMMARY
(Sheet 2 of 2)

Footnotes:

INCREASES/DECREASES IN WASTE VOLUMES

(1) Including Flush

(2) Sulfate waste is generated from ion exchange backflushing and sand filter clean out, resulting in sulfate waste (Na_2SO_4).

(3) Slurry increase/growth is caused by gas generation within the waste. The gas which is trapped in the waste expands in the tank causing the surface level and volume to increase. Slurry decrease results from the periodic release of gas in the waste.

(4) Aging waste tanks

(5) Unknown waste gains or losses may be the result of rounding calculations, clean water slowly leaking through a valve, changes in levels (expansion/contraction) because of ambient temperature changes, different measuring devices being used by Tank Farm operators, transfers taking place during the end of the month, Tank Farm activities such as miscellaneous water additions not associated with facility waste generation, or the addition of water which is added to aging waste tanks and then evaporated off.

(6) Includes Tank Farms miscellaneous flushes (flushes are used to "clean out" pipelines and reduce personnel exposure, reduce potential for waste incompatibility, prevent line plugging, and reduce waste content of potential spills or leaks).

(7) Liquid level measurement instrument changes from the automatic FIC to manual tape (and vice versa) result in unusual gains or losses because the manual tape may rest on an uneven crust surface giving a different reading from that of the automatic FIC. These instrument changes are made when the automatic FIC is out of service and the reading from the manual tape is used for reporting purposes. The reported reading reverts back to the automatic FIC when it is repaired.

(8) Water is periodically added to 106-C to provide evaporative cooling. Losses due to evaporation are calculated assuming all losses are evaporative losses. Some drywells are monitored weekly and some are monitored every two weeks on tank 106-C. If there are any indications of a leak from this tank, the assumption that all losses are due to evaporation will be reevaluated.

(9) Results from pumping of single-shell tanks to double-shell tanks.

(10) Tracks waste being sent to the double-shell tanks from the "Precampaign Training Run." Evaporator procedures require a training run at least once per year. This also includes pressure testing and flushing of cross-site transfer lines.

WASTE VOLUME REDUCTION

(11) Currently inoperative. These evaporator systems (242-B and 242-T) were installed in 1952 in each of the two operating areas to remove water from the waste, and ran for approximately 4 yr after which both units were shut down. The 242-T Evaporator was reactivated in December 1965, and shut down again in April 1976.

(12) Currently inoperative. These two in-tank solidification (ITS) units provided in-tank heating to promote in-tank boiling or evaporation. The ITS Unit 1 started up March 1965, and ITS Unit 2 started up February 1968. In August 1971, ITS Unit 1 was converted from an evaporator to a cooler for ITS Unit 2. Both units were shut down June 1974.

(13) Currently inoperative. The 242-S Evaporator-Crystallizer was started up November 1973, and shut down March 1980, when its processing campaign was completed. It is in standby mode with no future mission. This evaporator operates under a vacuum, employing evaporative concentration with subsequent crystallization and precipitation of salt crystals.

(14) Currently operative. The 242-A Evaporator-Crystallizer was started up March 1977, and shut down April 1989 because of regulatory issues, and remained shut down for subsequent upgrading. This evaporator operates under a vacuum, employing evaporative concentration with subsequent crystallization and precipitation of salt crystals (forming saltcake). The evaporator was restarted on April 15, 1994.

(15) Currently inoperative. Additional concentration of wastes was completed by using the concentrators at REDOX and B Plant. The REDOX concentrator was used from July 1967 to June 1972, while the B Plant concentrator was used from July 1967 to February 1968.

TABLE F-2. SUMMARY OF WASTE TRANSACTIONS IN THE DOUBLE-SHELL TANKS

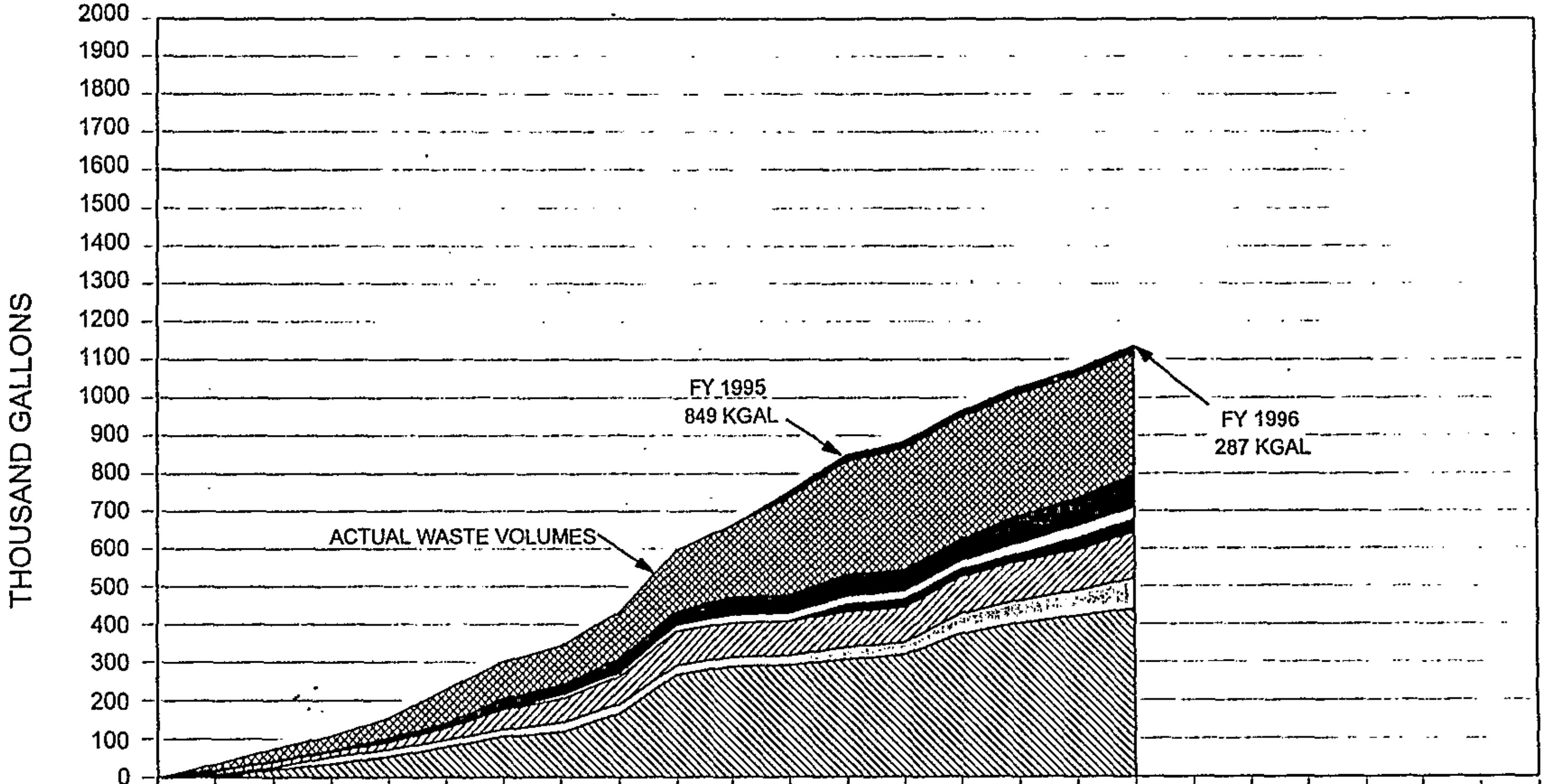
- There was a net change of +74 Kgals in the DST system for February 1996.
- The total DST inventory as of February 1996 is 19,694 Kgals.
- There was no Saltwell Liquid (SWL) pumping in the 200 East Area, in February due to the flammable gas issue.
- SWL pumping in 200 West Area restarted in February: This waste is being interm stored in a Double Contained Receiver Tank (DCRT), so none was received in the DSTs.
- There is a material balance discrepancy of about 3000 gallons, in tank 102-AY. On February 8th a Raw Water Usage sheet was filled out stating 7851 gallons of water was added to Tank 102-AY, the same day a Transfer Data Sheet was generated stating a transfer of 4125 gallons of water was transfered from TK-152-AX to Tank 102-AY. At the same time Tank 102-AYs liquid level only increased 9350 gallons. The gains were assumed correct and a loss of "Unknown" was logged to balance out the inventory.

FEBRUARY 1996 DST WASTE RECEIPTS					
FACILITY GENERATIONS		OTHER GAINS ASSOCIATED WITH		OTHER LOSSES ASSOCIATED WITH	
PUREX	19 Kgal (5AW)	SLURRY	+2 Kgal	SLURRY	-1 Kgal
B PLANT.	14 Kgal (6AP)	CONDENSATE	+34 Kgal	CONDENSATE	-20 Kgal
TANK FARMS	16 Kgal (1AZ, 2AY,2AW, 5AN)	INSTRUMENTATION	+3 Kgal	INSTRUMENTATION	-0 Kgal
300 AREA	13 Kgal (6AP)	UNKNOWN	+2 Kgal	UNKNOWN	-8 Kgal
TOTAL	62 Kgal	TOTAL	+41 Kgal	TOTAL	-29 Kgal

	ACTUAL DST WASTE RECEIPTS	PROJECTED DST WASTE RECEIPTS	MISC. DST CHANGES (+/-)	WVR(*)	NET DST CHANGE	TOTAL DST VOLUME
OCT95	35	75	-2	0	+33	19459
NOV95	81	77	-3	0	+78	19537
DEC95	63	91	-3	0	+60	19597
JAN96	46	**39**	-23	0	+23	19620
FEB96	62	**69**	+12	0	+74	19694
MAR96		**173**				
APR96		**135**				
MAY96		**229**				
JUN96		**310**		-500		
JUL96		293		-500		
AUG96		284				
SEP96		344				

(*) The Waste Volume Reduction (WVR) in June and July are Projected Evaporation from the 242-A Evaporator

NOTE: The Bolded/Shaded "PROJECTED DST WASTE RECEIPTS" Were Changed in January. These Changes Reflect Recent Waste Generation and Assumption Changes Request by Various Facilities and Projects.



	FY 1995												FY 1996											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
SWL WEST	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0							
SWL EAST	14	16	7	14	37	7	7	21	40	25	68	43	22	0	0	0	0							
100 AREA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
PFP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
400 AREA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
300 AREA	0	0	0	10	0	16	0	11	0	12	0	9	0	0	15	0	13							
S PLANT	5	0	0	0	0	0	6	0	6	5	0	0	0	0	7	5	0							
T PLANT	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	12	0							
TANK FARMS	8	4	0	4	13	22	10	9	19	0	1	1	1	4	6	4	16							
B PLANT	8	0	12	0	0	0	6	0	0	0	0	8	0	21	7	6	14							
PUREX	0	18	15	19	25	27	11	49	102	21	4	14	12	56	28	19	19							

FIGURE F-1. COMPARISON OF WASTE VOLUME GENERATIONS FOR HANFORD FACILITIES
(ALL VOLUMES IN KGALS)

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APPENDIX G

CATCH TANKS AND SPECIAL SURVEILLANCE FACILITIES

TABLE G-1. EAST AND WEST AREA CATCH TANKS AND SPECIAL SURVEILLANCE FACILITIES

ACTIVE - still running transfers through the associated diversion boxes or pipeline encasements

February 29, 1996

FACILITY	*LOCATION*	*PURPOSE (receives waste from:)*	*VOLUME OF CONTENTS (Gallons)*	*MONITORED BY*	*REMARKS*
EAST AREA					
241-A-302-A	A FARM	A-151 DB	1698	SACS/CASS/MT	PUMPED 08/11/92
241-ER-311	B PLANT	ER-151, ER-152 DB	5440	SACS/CASS/FIC	PUMPED 05/29/91
241-AX-152	AX FARM	AX-152 DB	2128	MANUALLY	DIAL O/S, USING MT, PUMPED 08/29/92
241-AZ-151	AZ FARM	AZ-152 DB, AZ LOOP SEAL	3017	SACS/CASS/FIC	VOLUME CHANGES DAILY
241-AZ-154	AZ FARM	AZ-102 HTG COIL STEAM CONDENSATE	0	SACS/CASS/MT	AUTOMATIC PUMP
244-BX-TK/SMP	BX COMPLEX	DCRT - RECEIVES FROM SEVERAL FARMS	17293	SACS/MANUALLY	USING MANUAL TAPE FOR TANK
244-A-TK/SMP	A COMPLEX	DCRT - RECEIVES FROM SEVERAL FARMS	1273	MCS	
A-350	A FARM	COLLECTS DRAINAGE	418	SACS/MANUALLY	
AR-204	AY FARM	RR CARS DURING TRANSFER TO REC. TKS	320	DIP TUBE	ALARMS ON CASS
A-417	A FARM	A-702 PROCESS CONDENSATE	9699	SACS/DIP TUBE	CWF
CR-003-TK/SMP	C FARM	DCRT	4653		MONITORED DAILY WHEN IN OPERATION
WEST AREA					
241-TX-302-C	TX FARM	TX-154 DB	5534	SACS/CASS/FIC	FIC REPAIRED
241-U-301-B	U FARM	U-151, U-152, U-153, U-252 DB	7895	SACS/CASS/FIC	RETURNED TO SERVICE 12/30/93
241-UX-302-A	U PLANT	UX-154 DB	2145	SACS/CASS/MFIC	INTRUSION FIC READING ONLY
241-S-304	S FARM	S-151 DB	2399	SACS/RS	OPERATIONAL 10/91, REPLACED S-302-A
244-S-TK/SMP	S FARM	DCRT - RECEIVES FROM SEVERAL FARMS	2996	SACS/MANUALLY	CWF
244-TX-TK/SMP	TX FARM	DCRT - RECEIVES FROM SEVERAL FARMS	22643	SACS/MANUALLY	MT
Vent Station Catch Tank		CROSS COUNTRY TRANSFER LINE	391	SACS/MANUALLY	MT

Total active facilities 18

Note: Readings may be taken manually or automatically by FIC (or ENRAF). All FIC/ENRAF are connected to CASS. All tanks on CASS (either auto or manual) are also on the SACS database. If automatic connections to CASS are broken, readings are taken manually. Manual readings include readings taken by manual tape, manual FIC, or manual readings of automatic FIC (if CASS is printing "0"). Readings may also be taken by zip cord, which are acceptable but less accurate.

LEGEND
- DB - Diversion Box
- DCRT - Double-Contained Receiver Tank
- TK - Tank
- SMP - Sump
- FIC - Food Instrument Corporation measurement device
- RS - Robert Shaw Instrument measurement device
- MFIC - Manual FIC
- MT - Manual Tape
- CWF - Weight Factor/SpG = Corrected Weight Factor
- CASS - Computer Automated Surveillance System
- SACS - Surveillance Automated Control System
- MCS - Monitor and Control System
- O/S - Out of Service

TABLE G-2. EAST AREA CATCH TANKS AND SPECIAL SURVEILLANCE FACILITIES

INACTIVE – no longer receiving waste transfers

February 29, 1996

FACILITY	*LOCATION*	*RECEIVED WASTE FROM:*	*VOLUME OF CONTENTS (Gallons)*	*MONITORED BY*	*REMARKS*
241-A-302-B	A FARM	A-152 DB	4831	CASS/MT	ISOLATED 1985, PROJECT B-138 INTERIM STABILIZED 1990
241-B-301-B	B FARM	B-151, B-152, B-153, B-252 DB	UNKNOWN	NM	ISOLATED 1985(1)
241-B-302-B	B FARM	B-154 DB	UNKNOWN	NM	ISOLATED 1985(1)
241-BX-302-A	BX FARM	BR-152, BX-153, BXR-152, BYR-152 DB	UNKNOWN	NM	ISOLATED 1985(1)
241-BX-302-B	BX FARM	BX-154 DB	UNKNOWN	NM	ISOLATED 1985(1)
241-BX-302-C	BX FARM	BX-155 DB	UNKNOWN	NM	ISOLATED 1985(1)
241-C-301-C	C FARM	C-151, C-152, C-153, C-252 DB	UNKNOWN	NM	ISOLATED 1985(1)
241-CX-70	HOT SEMI-	TRANSFER LINES	UNKNOWN	NM	ISOLATED, DECOMMISSION PROJ.
241-CX-72	WORKS	TRANSFER LINES	UNKNOWN	NM	SEE DWG H-2-95-501, 2/5/87
244-AR VAULT	A COMPLEX	BETWEEN FARMS & B-PLANT	UNKNOWN	NM	NOT ACTIVELY USED. SYSTEMS BEING ACTIVATED FOR FINAL CLEAN-OUT
244-BXR-TK/SMP-001	BX FARM	TRANSFER LINES	UNKNOWN	NM	INTERIM STABILIZED 1985(1)
244-BXR-TK/SMP-002	BX FARM	TRANSFER LINES	UNKNOWN	NM	INTERIM STABILIZED 1985(1)
244-BXR-TK/SMP-003	BX FARM	TRANSFER LINES	UNKNOWN	NM	INTERIM STABILIZED 1985(1)
244-BXR-TK/SMP-011	BX FARM	TRANSFER LINES	UNKNOWN	NM	INTERIM STABILIZED 1985(1)
361-B-TANK	B PLANT	DRAINAGE FROM B-PLANT	UNKNOWN	NM	INTERIM STABILIZED 1985(1)

Total East Area inactive facilities 15

LEGEND:
- DB – Diversion Box
- DCRT – Double-Contained Receiver Tank
- MT – Manual Tape
- CASS – Computer Automated Surveillance System
- TK – Tank
- SMP – Sump
- R – Usually denotes replacement
- NM – Not Monitored

(1) SOURCE: WASTE STORAGE TANK STATUS & LEAK DETECTION CRITERIA document

TABLE G-3. WEST AREA CATCH TANKS AND SPECIAL SURVEILLANCE FACILITIES

INACTIVE – no longer receiving waste transfers

February 29, 1996

FACILITY	LOCATION	RECEIVED WASTE FROM:	VOLUME OF CONTENTS (Gallons)	BY	REMARKS
240-S-302	S FARM	240-S-151 DB	1980	CASS/FIC *	ASSUMED LEAKER EPDA 85-04
241-S-302-A	S FARM	241-S-151 DB	7612	CASS/FIC *	ASSUMED LEAKER TF-EFS-90-042
			* FIC in intrusion mode		Partially filled with grout 2/91, determined still assumed leaker after leak test
241-S-302-B	S FARM	S ENCASEMENTS	UNKNOWN	NM	ISOLATED 1985(1)
241-SX-304(302)	SX FARM	SX-152 TRANSFER BOX, SX-151 DB	UNKNOWN	NM	ISOLATED 1985(1)
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	TX FARM	TX-155 DB	1460	CASS/MT	NEW MT INSTALLED 7/16/93
241-TY-302-A	TY FARM	TX-153 DB	UNKNOWN	NM	ISOLATED 1985(1)
241-TY-302-B	TY FARM	TY ENCASEMENTS	UNKNOWN	NM	ISOLATED 1985(1)
244-U-TK/SMP	U FARM	DCRT - RECEIVES FROM SEVERAL FARMS	UNKNOWN	NM	NOT YET IN USE
244-TXR VAULT	TX FARM	TRANSFER LINES	UNKNOWN	NM	INTERIM STABILIZED, MT REMOVED 1984(1)
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)
361-T-TANK	T PLANT	DRAINAGE FROM T-PLANT	UNKNOWN	NM	ISOLATED 1985(1)
361-U-TANK	U PLANT	DRAINAGE FROM U-PLANT	UNKNOWN	NM	INTERIM STABILIZED, MT REMOVED 1985(1)

Total West Area inactive facilities 16

LEGEND:
DB – Diversion Box
DCRT – Double-Contained Receiver Tank
TK – Tank
SMP – Sump
R – Usually denotes replacement
FIC – Food Instrument Corporation
MT – Manual Tape
O/S – Out of Service
CASS – Computer Automated Surveillance System
NM – Not Monitored

APPENDIX H

LEAK VOLUME ESTIMATES

TABLE H-1. SINGLE-SHELL TANK LEAK VOLUME ESTIMATES (4) (Sheet 1 of 4)

February 29, 1996

Tank No.	Date Declared Confirmed or Assumed Leaker (3)	Volume (2)(4) (Gallons)	Associated KiloCuries 137 cs (10)	Interim Stabilized Date (12)	Leak Estimate Updated	Leak Estimate Reference
241-A-103	1987	5500 (9)		6/88	1987	(j)
241-A-104	1975	500 to 2500	0.8 to 1.8 (q)	9/78	1983	(a)(q)
241-A-105 (1)	1963	10000 to 277000	85 to 760 (b)	7/79	1991	(b),(c)
241-AX-102	1988	3000 (9)		9/88	1989	(h)
241-AX-104	1977	-- (7)		8/81	1989	(g)
241-B-101	1974	-- (7)		3/81	1989	(g)
241-B-103	1978	-- (7)		2/85	1989	(g)
241-B-105	1978	-- (7)		12/84	1989	(g)
241-B-107	1980	8000 (9)		3/85	1986	(d),(f)
241-B-110	1981	10000 (9)		3/85	1986	(d)
241-B-111	1978	-- (7)		6/85	1989	(g)
241-B-112	1978	2000		5/85	1989	(g)
241-B-201	1980	1200 (9)		8/81	1984	(e),(f)
241-B-203	1983	300 (9)		6/84	1986	(d)
241-B-204	1984	400 (9)		6/84	1989	(g)
241-BX-101	1972	-- (7)		9/78	1989	(g)
241-BX-102	1971	70000	50 (l)	11/78	1986	(d)
241-BX-108	1974	2500	0.5 (l)	7/79	1986	(d)
241-BX-110	1976	-- (7)		8/85	1989	(g)
241-BX-111	1984	-- (7)		3/95	1993	(g),(r)
241-BY-103	1973	<5000		N/A	1983	(a)
241-BY-105	1984	-- (7)		N/A	1989	(g)
241-BY-106	1984	-- (7)		N/A	1989	(g)
241-BY-107	1984	15100 (9)		7/79	1989	(g)
241-BY-108	1972	<5000		2/85	1983	(a)
241-C-101	1980	20000 (9,11)		11/83	1986	(d)
241-C-110	1984	2000		5/95	1989	(g)
241-C-111	1968	5500 (9)		3/84	1989	(g)
241-C-201 (5)	1988	550		3/82	1987	(i)
241-C-202 (5)	1988	450		8/81	1987	(i)
241-C-203	1984	400 (9)		3/82	1986	(d)
241-C-204 (5)	1988	350		9/82	1987	(i)
241-S-104	1968	24000 (9)		12/84	1989	(g)
241-SX-104	1988	6000 (9)		N/A	1988	(k)
241-SX-107	1964	<5000		10/79	1983	(a)
241-SX-108 (6)	1962	2400 to 35000	17 to 140 (m) (q)	8/79	1991	(m) (q)
241-SX-109 (6)	1965	<10000	<40 (n)	5/81	1992	(n)
241-SX-110	1976	5500 (9)		8/79	1989	(g)
241-SX-111	1974	500 to 2000	0.6 to 2.4 (l) (q)	7/79	1986	(d) (q)
241-SX-112	1969	30000	40 (l)	7/79	1986	(d)
241-SX-113	1962	15000	8 (l)	11/78	1986	(d)
241-SX-114	1972	-- (7)		7/79	1989	(g)
241-SX-115	1965	50000	21 (o)	9/78	1992	(o)
241-T-101	1992	7500 (9)		4/93	1992	(p)
241-T-103	1974	<1000 (9)		11/83	1989	(g)
241-T-106	1973	115000 (9)	40 (l)	8/81	1986	(d)
241-T-107	1984	-- (7)		N/A	1989	(g)
241-T-108	1974	<1000 (9)		11/78	1980	(f)
241-T-109	1974	<1000 (9)		12/84	1989	(g)
241-T-111	1979, 1994 (13)	<1000 (9)		2/95	1994	(f)(t)
241-TX-105	1977	-- (7)		4/83	1989	(g)
241-TX-107	1984	2500		10/79	1986	(d)
241-TX-110	1977	-- (7)		4/83	1989	(g)
241-TX-113	1974	-- (7)		4/83	1989	(g)
241-TX-114	1974	-- (7)		4/83	1989	(g)
241-TX-115	1977	-- (7)		9/83	1989	(g)
241-TX-116	1977	-- (7)		4/83	1989	(g)
241-TX-117	1977	-- (7)		3/83	1989	(g)
241-TY-101	1973	<1000 (9)		4/83	1980	(f)
241-TY-103	1973	3000	0.7 (l)	2/83	1986	(d)
241-TY-104	1981	1400 (9)		11/83	1986	(d)
241-TY-105	1960	35000	4 (l)	2/83	1986	(d)
241-TY-106	1959	20000	2 (l)	11/78	1986	(d)
241-U-101	1959	30000	20 (l)	9/79	1986	(d)
241-U-104	1961	55000	0.09 (l)	10/78	1986	(d)
241-U-110	1975	5000 to 8100 (9)	0.05 (q)	12/84	1986	(d) (q)
241-U-112	1980	8500 (9)		9/79	1986	(d)
67 Tanks		<600,000 - 900,000 (8)				

N/A = not applicable (not yet interim stabilized)

Footnotes: See next page

TABLE H-1. SINGLE-SHELL TANK LEAK VOLUME ESTIMATES (Sheet 2 of 4)

Footnotes:

(1) Current estimates (see reference b) are that 610 Kgal of cooling water was added to Tank 241-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 Kgallons to 277 Kgallons) is based on the following (see References).

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

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

3. 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.

4. 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.

	Low Estimate	High Estimate
Prior to August 1968	5,000	15,000
August 1968 to November 1970	5,000	30,000
November 1970 to December 1978	0	232,000
Totals	10,000	277,000

(2) These leak volume estimates 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 241-U-104 was suspected of leaking in 1956. The leak was "confirmed" in 1961. This report lists the "assumed leaker" date as 1961. Using present standards, Tank 241-U-104 would have been declared as assumed leaker in 1956. In 1984, the criteria designations of "suspected leaker," "questionable integrity," "confirmed leaker," "declared leaker," "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) There has been an effort in the past few years to reevaluate these leak volume estimates, however, the activity is not currently funded.

(5) 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.

(6) The increasing radiation levels in drywells and laterals associated with these three tanks could be indicative of a continuing leak or movement of existing radionuclides in the soil. There is no conclusive way to confirm these observations.

(7) 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 (10). For more details see reference (g). The total leak volume estimate for these tanks is 150 Kgallons (rounded to the nearest 10 Kgallons), for an average of approximately 8 Kgallons for each of the 19 tanks.

(8) The total has been rounded to the nearest 50 Kgallons. Upperbound values were used in many cases in developing these estimates. It is likely that some of these tanks have not actually leaked.

TABLE H-1. SINGLE-SHELL TANK LEAK VOLUME ESTIMATES
(Sheet 3 of 4)

(9) 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.

(10) The curie content listed is as listed in the reference document and is not decayed to a consistent date; therefore, a cumulative total is inappropriate.

(11) Tank 241-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 reference (q) and (s): refer to reference (s) for information on the potential for there to have been leaks from other C-farm tanks (specifically, C-102, C-103, and C-109).

(12) 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.

(13) 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 stabilized on February 22, 1995.

(14) 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.

TABLE H-1. SINGLE-SHELL TANK LEAK VOLUME ESTIMATES
(Sheet 4 of 4)

References:

(a) Murthy, K.S., et al, June 1983, Assessment of Single-Shell Tank Residual Liquid Issues at Hanford Site, Washington, PNL-4688, Pacific Northwest Laboratory, Richland, Washington.

(b) WHC, 1991a, Tank 241-A-105 Leak Assessment, WHC-MR-0264, Westinghouse Hanford Company, Richland, Washington.

(c) WHC, 1991b, Tank 241-A-105 Evaporation Estimate 1970 Through 1978, WHC-EP-0410, Westinghouse Hanford Company, Richland, Washington.

(d) Smith, D. A., January 1986, Single-Shell Tank Isolation Safety Analysis Report, SD-WM-SAR-006, Rev. 1, Westinghouse Hanford Company, Richland, Washington.

(e) McCann, D. C., and T. S. Vail, September 1984, Waste Status Summary, RHO-RE-SR-14, Rockwell Hanford Operations, Richland, Washington.

(f) Catlin, R. J., March 1980, Assessment of the Surveillance Program of the High-Level Waste Storage Tanks at Hanford, Hanford Engineering Development Laboratory, Richland, Washington.

(g) Baumhardt, R. J., May 15, 1989, Letter to R. E. Gerton, U.S. Department of Energy-Richland Operations Office, Single-Shell Tank Leak Volumes, 8901832B R1, Westinghouse Hanford Company, Richland, Washington.

(h) WHC, 1990a, Occurrence Report, Surface Level Measurement Decrease in Single-Shell Tank 241-AX-102, WHC-UO-89-023-TF-05, Westinghouse Hanford Company, Richland, Washington.

(i) Groth, D. R., July 1, 1987, Internal Memorandum to R. J. Baumhardt, Liquid Level Losses in Tanks 241-C-201, -202 and -204, 65950-87-517, Westinghouse Hanford Company, Richland, Washington.

(j) Groth, D. R. and G. C. Owens, May 15, 1987, Internal Memorandum to J. H. Roecker, Tank 103-A Integrity Evaluation, Westinghouse Hanford Company, Richland, Washington.

(k) Campbell, G. D., July 8, 1988, Internal Memorandum to R. K. Welty, Engineering Investigation: Interstitial Liquid Level Decrease in Tank 241-SX-104, 13331-88-416, Westinghouse Hanford Company, Richland, Washington.

(l) ERDA, 1975, Final Environmental Statement Waste Management Operations, Hanford Reservation, Richland, Washington, ERDA-1538, 2 vols., U.S. Energy Research and Development Administration, Washington, D.C.

(m) WHC, 1992a, Tank 241-SX-108 Leak Assessment, WHC-MR-0300, Westinghouse Hanford Company, Richland, Washington.

(n) WHC, 1992b, Tank 241-SX-109 Leak Assessment, WHC-MR-0301, Westinghouse Hanford Company, Richland, Washington.

(o) WHC, 1992c, Tank 241-SX-115 Leak Assessment, WHC-MR-0302, Westinghouse Hanford Company, Richland, Washington.

(p) WHC, 1992d, Occurrence Report, "Apparent Decrease in Liquid Level in Single Shell Underground Storage Tank 241-T-101, Leak Suspected; Investigation Continuing," RL-WHC-TANKFARM-1992-0073, Westinghouse Hanford Company, Richland, Washington.

(q) WHC-1990b, A History of the 200 Area Tank Farms, WHC-MR-0132, Westinghouse Hanford Company, Richland, Washington.

(r) WHC, 1993, Occurrence Report, Single-Shell Underground Waste Storage Tank 241-BX-111 Surface Level Decrease and Change From Steady State Condition, RL-WHC-TANKFARM-1993-0035, Westinghouse Hanford Company, Richland, Washington.

(s) WHC, 1993a, Assessment of Unsaturated Zone Radionuclide Contamination Around Single-Shell Tanks 241-C-105 and 241-C-106, WHC-SD-EN-TI-185, REV 0A, Westinghouse Hanford Company, Richland, Washington.

(t) WHC, 1994, Occurrence Report, "Apparent Liquid Level Decrease in Single Shell Underground Storage Tank 241-T-111; Declared an Assumed Re-Leaker," RL-WHC-TANKFARM-1994-0009, Westinghouse Hanford Company, Richland, Washington.

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APPENDIX I

INTERIM STABILIZATION STATUS

TABLE I-1. SINGLE-SHELL TANKS INTERIM STABILIZATION STATUS (Sheet 1 of 2)

February 29, 1996

Tank Number	Tank Integrity	Interim Stabilized Date (1)	Stabilized Method
A-101	SOUND	N/A	
A-102	SOUND	08/89	SN
A-103	ASMD LKR	06/88	AR
A-104	ASMD LKR	09/78	AR
A-105	ASMD LKR	07/79	AR
A-106	SOUND	08/82	AR
AX-101	SOUND	N/A	
AX-102	ASMD LKR	09/88	SN
AX-103	SOUND	08/87	AR
AX-104	ASMD LKR	08/81	AR
B-101	ASMD IKR	03/81	SN
B-102	SOUND	08/85	SN (2)
B-103	ASMD IKR	02/85	SN
B-104	SOUND	06/85	SN
B-105	ASMD IKR	12/84	AR
B-106	SOUND	03/85	SN
B-107	ASMD LKR	03/85	SN
B-108	SOUND	05/85	SN
B-109	SOUND	04/85	SN
B-110	ASMD LKR	12/84	AR
B-111	ASMD LKR	06/85	SN
B-112	ASMD LKR	05/85	SN
B-201	ASMD LKR	08/81	AR (3)
B-202	SOUND	05/85	AR
B-203	ASMD LKR	06/84	AR
B-204	ASMD LKR	06/84	AR
BX-101	ASMD LKR	09/78	AR
BX-102	ASMD LKR	11/78	AR
BX-103	SOUND	11/83	AR (2)
BX-104	SOUND	09/89	SN
BX-105	SOUND	03/81	SN
BX-106	SOUND	07/95	SN
BX-107	SOUND	09/90	JET
BX-108	ASMD LKR	07/79	SN
BX-109	SOUND	09/90	JET
BX-110	ASMD LKR	08/85	SN (4)
BX-111	ASMD LKR	03/95	JET
BX-112	SOUND	09/90	JET
BY-101	SOUND	05/84	JET
BY-102	SOUND	04/95	JET
BY-103	ASMD LKR	N/A	
BY-104	SOUND	01/85	JET
BY-105	ASMD LKR	N/A	
BY-106	ASMD LKR	N/A	
BY-107	ASMD LKR	07/79	JET
BY-108	ASMD LKR	02/85	JET
BY-109	SOUND	N/A	
BY-110	SOUND	01/85	JET
BY-111	SOUND	01/85	JET
BY-112	SOUND	06/84	JET

Tank Number	Tank Integrity	Interim Stabilized Date (1)	Stabilized Method
C-101	ASMD LKR	11/83	AR
C-102	SOUND	9/85	JET
C-103	SOUND	N/A	
C-104	SOUND	09/89	SN
C-105	SOUND	10/95	AR (5)
C-106	SOUND	N/A	
C-107	SOUND	9/85	JET
C-108	SOUND	03/84	AR
C-109	SOUND	11/83	AR
C-110	ASMD LKR	05/95	JET
C-111	ASMD LKR	03/84	SN
C-112	SOUND	09/90	AR
C-201	ASMD LKR	03/82	AR
C-202	ASMD LKR	08/81	AR
C-203	ASMD LKR	03/82	AR
C-204	ASMD LKR	09/82	AR
S-101	SOUND	N/A	
S-102	SOUND	N/A	
S-103	SOUND	N/A	
S-104	ASMD LKR	12/84	AR
S-105	SOUND	09/88	JET
S-106	SOUND	N/A	
S-107	SOUND	N/A	
S-108	SOUND	N/A	
S-109	SOUND	N/A	
S-110	SOUND	N/A	
S-111	SOUND	N/A	
S-112	SOUND	N/A	
SX-101	SOUND	N/A	
SX-102	SOUND	N/A	
SX-103	SOUND	N/A	
SX-104	ASMD LKR	N/A	
SX-105	SOUND	N/A	
SX-106	SOUND	N/A	
SX-107	ASMD LKR	10/79	AR
SX-108	ASMD LKR	08/79	AR
SX-109	ASMD LKR	05/81	AR
SX-110	ASMD LKR	08/79	AR
SX-111	ASMD LKR	07/79	SN
SX-112	ASMD LKR	07/79	AR
SX-113	ASMD LKR	11/78	AR
SX-114	ASMD LKR	07/79	AR
SX-115	ASMD LKR	09/78	AR
T-101	ASMD LKR	04/93	SN
T-102	SOUND	03/81	AR (2)(3)
T-103	ASMD LKR	11/83	AR
T-104	SOUND	N/A	
T-105	SOUND	06/87	AR
T-106	ASMD LKR	08/81	AR
T-107	ASMD LKR	N/A	

Tank Number	Tank Integrity	Interim Stabilized Date (1)	Stabilized Method
T-108	ASMD LKR	11/78	AR
T-109	ASMD LKR	12/84	AR
T-110	SOUND	N/A	
T-111	ASMD LKR	02/95	JET
T-112	SOUND	03/81	AR (2)(3)
T-201	SOUND	04/81	AR (3)
T-202	SOUND	08/81	AR
T-203	SOUND	04/81	AR
T-204	SOUND	08/81	AR
TX-101	SOUND	02/84	AR
TX-102	SOUND	04/83	JET
TX-103	SOUND	08/83	JET
TX-104	SOUND	09/79	SN
TX-105	ASMD LKR	04/83	JET
TX-106	SOUND	06/83	JET
TX-107	ASMD LKR	10/79	AR
TX-108	SOUND	03/83	JET
TX-109	SOUND	04/83	JET
TX-110	ASMD LKR	04/83	JET
TX-111	SOUND	04/83	JET
TX-112	SOUND	04/83	JET
TX-113	ASMD LKR	04/83	JET
TX-114	ASMD LKR	04/83	JET
TX-115	ASMD LKR	09/83	JET
TX-116	ASMD LKR	04/83	JET
TX-117	ASMD LKR	03/83	JET
TX-118	SOUND	04/83	JET
TY-101	ASMD LKR	04/83	JET
TY-102	SOUND	09/79	AR
TY-103	ASMD LKR	02/83	JET
TY-104	ASMD LKR	11/83	AR
TY-105	ASMD LKR	02/83	JET
TY-106	ASMD LKR	11/78	AR
U-101	ASMD LKR	09/79	AR
U-102	SOUND	N/A	
U-103	SOUND	N/A	
U-104	ASMD LKR	10/78	AR
U-105	SOUND	N/A	
U-106	SOUND	N/A	
U-107	SOUND	N/A	
U-108	SOUND	N/A	
U-109	SOUND	N/A	
U-110	ASMD LKR	12/84	AR
U-111	SOUND	N/A	
U-112	ASMD LKR	09/79	AR
U-201	SOUND	08/79	AR
U-202	SOUND	08/79	SN
U-203	SOUND	08/79	AR
U-204	SOUND	08/79	SN

LEGEND:
AR - Administratively interim stabilized
JET - Saltwell jet pumped to remove drainable interstitial liquid
SN - Supernate pumped (Non-Jet pumped)
N/A - Not yet interim stabilized
ASMD LKR - Assumed Leaker

Interim Stabilized Tanks	114
Not Yet Interim Stabilized	35
Total Single-Shell Tanks	149

Footnotes: See next page

TABLE I-1. SINGLE-SHELL TANKS INTERIM STABILIZATION STATUS (sheet 2 of 2)

Footnotes:

(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) Originally, seven tanks did not meet current established supernatant and interstitial liquid interim stabilization criteria. Investigative studies have now indicated that the following four tanks do not meet the current criteria (but did meet the criteria in existence when they were declared interim stabilized):

B-104
BX-103
T-102, 112

The following three tanks have been determined to meet the current stabilization criteria:

B-110, 111
U-110

Reference: WHC-SD-WM-ER-516-REV0, "Interim Stabilization Status of SSTs B-104, B-110, B-111, T-102, T-112, and U-110," and WHC-SD-WM-ER-518-REV0, "Investigation of Liquid Intrusion in 241-BX-103," both dated October 5, 1995.

(3) Interim Stabilization data are missing on four tanks. These tanks were Administratively Interim Stabilized.

B-201
T-102, 112, 201

(4) BX-110 was Interim Stabilized by Supernate Pumping in August 1985. Jet pumping began in December 1993 and soon stopped because of equipment failure. Due to low net volume pumped, major equipment failure, and ALARA, it was decided jet pumping would not resume. An in-tank video was taken in October 1994. Re-evaluation after review of the video indicated 1.5 Kgallons of waste was pumped. (Almost 3 Kgallons of water flushes were needed to produce 1.5 Kgallons tank waste.)

(5) C-105 was Interim Stabilized administratively on October 30, 1995. No jet pumping occurred in this tank, nor does interstitial liquid level data exist for this tank. There are no diptubes or LOWs installed. Approximately 12 Kgallons of liquid waste was evaporated between May 1993 and October 1995. An in-tank video taken August 30, 1995, revealed a shallow supernatant pool surrounded by a 5-8 foot solids waste shore. The volume of supernate is estimated as 2 Kgallons. The tank currently meets the established criteria for declaring single-shell tanks Interim Stabilized.

TABLE I-2. TRI-PARTY AGREEMENT SINGLE-SHELL TANK STABILIZATION SCHEDULE

TPA	EARLY START	EARLY FINISH	1994–1999
M-41-01-T2	30SEP94A	28JUL95A	C-FARM 102,107,110
M-41-01-T2	31MAY94A	30APR96	BY FARM 102,109
M-41-08	31AUG96	30APR97	U FARM 102
M-41-09	24FEB96A	23MAY97	S FARM 101,103,106,107,108,109,110
M-41-10	30APR96	31DEC98	A FARM 101 & AX FARM 101
M-41-11	31AUG96	30SEP97	U FARM 103,105,108,109
M-41-12	10AUG95A	1MAY98	BX FARM 106 & BY-103,106 BY-105 Pumping Dates to be Renegotiated
M-41-13	31AUG96	31JAN98	U FARM 106,107,111
M-41-14	30JUN97	30NOV99	S FARM 111,112 & SX FARM 101,102,103,104,105
M-41-15	30JUN97	31MAR99	S FARM 102 & SX FARM 106
M-41-16	31MAR98	31AUG98	T FARM 104
M-41-16A	31MAY94A	8FEB95A	T FARM 111
M-41-17	30AUG95A	31MAR96	T FARM 107
M-41-18	30APR98	31JUL98	T FARM 110
M-41-19	30SEP98	31MAR99	C FARM 103

Target Date	31DEC95
Plot Date	29FEB96
Data Date	29FEB96
Project Start	31MAR93
Project Finish	31DEC99

Activity Bar/Early Dates
Critical Activity
Progress Bar
Target Dates
Milestone/Flag Activity

SHI2 Sheet 1 of 1

TWRS
SST Stabilization
Current Progress -vs- TPA

Progress as of 2/29/96

Date	Revision	Checked	Approved

APPENDIX J

CHARACTERIZATION PROGRESS STATUS

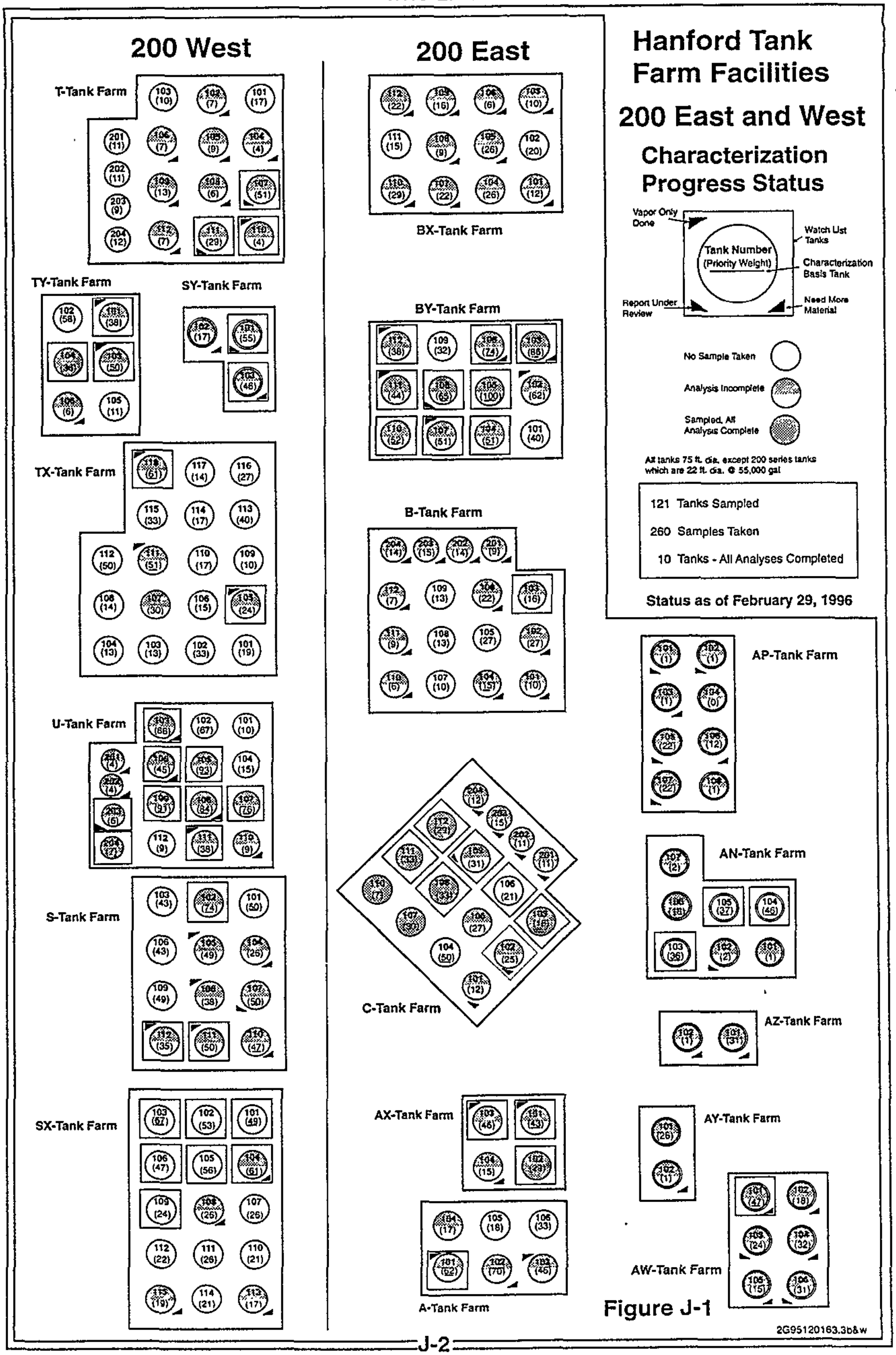
200 West
200 East
Hanford Tank Farm Facilities
200 East and West
Characterization Progress Status
Vapor Only Done
Watch List Tanks
Tank Number (Priority Weight)
Characterization Basis Tank
Report Under Review
Need More Material
No Sample Taken
Analysis Incomplete
Sampled, All Analysis Complete
All tanks 75 ft. dia. except 200 series tanks which are 22 ft. dia. @ 55,000 gal
121 Tanks Sampled
260 Samples Taken
10 Tanks - All Analyses Completed
Status as of February 29, 1996
T-Tank Farm
TY-Tank Farm
SY-Tank Farm
TX-Tank Farm
U-Tank Farm
S-Tank Farm
SX-Tank Farm
BX-Tank Farm
BY-Tank Farm
B-Tank Farm
C-Tank Farm
AX-Tank Farm
A-Tank Farm
AP-Tank Farm
AN-Tank Farm
AZ-Tank Farm
AY-Tank Farm
AW-Tank Farm
2G95120163.3b&w

Figure J-1

CHARACTERIZATION PROGRESS STATUS CHART

Legend:

200 West - 200 East	The chart divides the two areas.
Tank Farms	Each tank farm is represented by a rough schematic of the tank layout and a heading naming the farm.
Circles	Tanks are depicted by a circle for single-shell tanks and a double circle for double-shell tanks.
Boxes	A thin line box around a tank inside a tank farm denotes "Watch List" status, in concurrence with Table A-1 of this document.
Numbers in Circles	The top number is the tank number. The number in parentheses is a weighted priority number, described in WHC-SD-WM-TA-164, "Tank Waste Characterization Basis." The numbers can be compared to each other to gain appreciation of relative priority: the higher the number, the greater the priority to sample and analyze.
Underlined Numbers	If a number in parenthesis is underlined, it is denoted as a "Characterization Basis Tank," as described in WHC-SD-WM-TA-164, "Tank Waste Characterization Basis." These are key tanks taken from the priority list that are of principal interest to the Characterization Program.
Circle Shading	The shading in the circle indicates the degree to which sampling and analysis are complete per requirements described in applicable Data Quality Objectives (DQOs). If blank, no characterization sampling has taken place. If fully shaded, the sampling and analysis are complete for each DQO applicable to that tank. Tanks in which characterization has begun but is not complete are designated by being half shaded.
Corner Triangles	Small triangles near a tank circle give further information on half-shaded tanks. Upper left corner triangles indicate that vapor samples have been taken from the tank. Lower left-hand corner triangles indicate that the tank has been sampled, analyzed, and a formal report has been written on the condensed phase sampling. Further status of the tank will be determined after review of the report is complete. Lower right-hand corner triangles indicate that some review has been completed and it has been determined that more sampling is needed to resolve the DQO requirements. Absence of triangles from a half shaded tank indicates recent condensed phase sampling.

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