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7. Abstract This report is intended to establish a baseline for the sample analyses to be completed by the 222-S, WSCF, 325, and LITCO laboratories during FY 1995.		

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FISCAL YEAR 1995 WORK SCOPE FOR
THE 222-S, WSCF, 325 AND LITCO LABORATORIES

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PREAMBLE

The Purpose of this report is to establish a baseline projection at the beginning of the fiscal year for the numbers and types of samples by program to be analyzed and to designate which laboratories will be analyzing them. Normally, this document would be issued in October and updated several times during the fiscal year. There were several drivers which prevented the timely completion of this document. Some of these uncertainties were evolution of new sampling and analysis strategy for tank sampling, continued shut-down and future mission reviews of the Pacific Northwest Laboratory 325 Laboratory, reduction of Environmental Restoration cleanup activities to focus on Columbia River shoreline sites, clarification of air sampling requirements, overall FY 1995 Hanford budget reductions, etc.

While this report still does not reflect clarification most of the uncertainties above, it still is needed to establish the baseline planning. This document is dated December 30, 1994, but the information is October 1994 vintage and will serve as that time point baseline.

Even as the ink is drying, several clarifications are being developed: the future mission of the 325 Laboratory is being refocused to Research and Development, the 222-S laboratory is being considered as the single site major analytical chemistry laboratory for greater than 10 MR samples, major reductions in air samples are evolving, and Tank Waste Remediation System funding will reduce Lockheed Idaho Technology Company (LITCO) work to standby support, etc. As these items will not all be finalized until the end of February 1995, the next revision of this plan is projected for mid-year and taken into account these major factors.

**FISCAL YEAR 1995 WORK SCOPE FOR
THE 222-S, WSCF, 325, AND
LITCO LABORATORIES**

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this report is to document the established baseline for sample analysis to be completed during Fiscal Year (FY) 1995. The analytical scope is limited to analysis funded by Hanford Programs and administered by Analytical Services. The laboratories participating in this scope of activity includes the 222-S laboratory, Waste Characterization Facility (WSCF), Pacific Northwest Laboratory (PNL) 325 Laboratory, and Lockheed Idaho Technology Company (LITCO) Laboratory. Commercial laboratory work load is also covered without distinction between individual labs which may receive the work. Laboratories excluded from this report include Plutonium finishing plant, Purex and the Environmental Analytical Laboratory (EAL).

1.2 BACKGROUND

After over forty years of defense-related activities, the Hanford Mission has changed from production to environmental restoration and waste management. With this change, the analytical services at Hanford have shifted from an emphasis on production support, research and development, and process control to the generation of legally defensible environmental data. Hanford laboratories are playing an increasingly important role as restoration activities progress and programs move toward final waste disposal; in the coming decade analytical needs are projected to show a significant increase.

As a result of the changes in the demand for analytical services to support Hanford Mission, the Hanford laboratories are faced with several problems including non-level sample loading, staffing inconsistencies, and difficulty meeting turn-around-times. Increased attention to the scheduling and planning of the Hanford Analytical Services on a site-wide basis will help to alleviate these problems.

To better plan for incoming workloads and schedule the work with the appropriate laboratory, a standard was needed to project the analytical effort required by each program so that they could be normalized and compared to all other analytical support programs. The Analytical Equivalency Unit (AEU) was created to meet this need. The AEU methodology allows heterogeneous and homogeneous samples to be measured and compared as a function of the level of effort involved. The use of AEU's provides a basis for the forecasting, scheduling, and monitoring of laboratory performance.

The AEU's for FY 1995 have been estimated based on best available sample projections from individual programs (Reference 1). These AEU's are scheduled for completion by 222-S, WSCF, 325, LITCO, and commercial laboratories. (See preamble).

1.3 SAMPLE CATEGORIES AND PROJECTIONS

The work scope covered by this report focuses on five Sample Categories (Environmental Remediation, Liquid Effluents, Solid Waste, TWRS, and Process Support). Table 1-1 provides a monthly distribution of samples by performing laboratory.

1.3.1 Environmental Remediation

Approximately 3,600 samples will be taken during FY 1995 in support of the Environmental Remediation Program. Approximately 3,400 are forecasted to be non-radioactive and will be analyzed by a commercial Laboratory. The remaining samples (200) are considered to be radioactive samples some being as high as 1000mR/beta-gamma and will be analyzed by the 222-S Laboratory for samples requiring RCRA data packages and 325 laboratory for samples requiring CERCLA data packages. All samples sent to commercial laboratories will be screened at the 222-S laboratory to ensure samples do not exceed license level of the commercial laboratories. Most of these samples are field samples from vapor extraction of 200 Area cribs. Other samples include ground water, soil, and biota samples.

1.3.2 Liquid Effluents

Approximately 5,700 samples will be taken during FY 1995 in support of startup and operations of the 200 area Effluent Treatment Facility and the 300 area Effluent Treatment Facility. The samples range from non-radioactive to approximately 100mR/hr beta-gamma. The WSCF Laboratory will analyze samples with less than 1mR/hr beta-gamma. The 222-S Laboratory will perform the analyses of samples greater than 1mR/hr beta-gamma.

1.3.3 Solid Waste

Approximately 5,100 samples will be taken in FY 1995 in support of the Solid Waste Program. Approximately 1,000 samples are forecasted to be non-radioactive and will be sent to a commercial Laboratory for analyses. The remaining samples (4,100) range as high as 100mR/hr beta-gamma and less than 200 nanocuries per gram alpha and will be analyzed at the 222-S Laboratory. The samples are expected to be mostly air monitoring samples but also includes drum waste, radiological samples and Waste Immobilization Demonstration samples.

Table 1-1

HANFORD SITE SAMPLE DISTRIBUTION FOR FY 1995

(SAMPLES)

FACILITY	PROGRAM	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
222-S														
	ER	300	300	300	300	300	300	300	300	300	300	300	300	300
	LIQUID EFFLUENTS	0	0	0	0	0	0	0	0	0	67	67	67	201
	PROCESS SUPPORT	10,833	10,833	10,833	10,833	10,833	10,833	10,833	10,833	10,833	10,833	10,833	10,833	108,333
	SOLID WASTE	340	340	340	340	340	340	340	340	340	340	340	340	3,400
	TWRS*	192	99	19	62	76	19	52	98	77	31	26	54	801
	SUB-TOTAL	11,865	11,582	11,492	11,536	11,555	11,492	11,526	11,568	11,550	11,572	11,586	11,588	115,830
WSCF														
	LIQUID EFFLUENTS	0	0	0	147	147	147	147	147	147	1,529	1,529	1,529	3,400
	SUB-TOTAL	0	0	0	147	147	147	147	147	147	1,529	1,529	1,529	3,400
325														
	ER	8	9	8	9	8	9	8	9	9	9	9	9	81
	TWRS*	0	14	13	34	28	68	28	55	17	74	76	47	287
	SUB-TOTAL	8	23	21	43	36	77	36	64	26	83	85	56	368
COMMERCIAL														
	ER	282	282	282	282	282	282	282	282	282	282	282	282	2,820
	SOLID WASTE	83	83	83	83	83	83	83	83	83	83	83	83	830
	SUB-TOTAL	365	365	365	365	365	365	365	365	365	365	365	365	3,650
GRAND TOTAL		12,089	11,981	11,879	12,091	12,098	12,092	12,074	12,100	12,090	12,546	12,544	12,613	121,030

* NUMBERS INCLUDE SOME SUB-SAMPLES WHICH WILL BE SENT TO LITCO

1.3.4 Tank Waste Remediation System (TWRS)

Approximately 1,260 samples will be taken in FY 1995. These consist of tank cores, augers and liquid grab samples in accordance with DNFSB-93-5 Recommendations, Evaporator support, Pretreatment, RCRA, and compatibility assessments. The samples are normally highly radioactive and will be analyzed at the 222-S Laboratory, 325 Laboratory and LITCO.

1.3.5 Process Support

Approximately 130,000 samples will be taken in FY 1995. These samples range from less than 1mR/hr beta-gamma to greater than 100mR/hr beta-gamma. The majority of these samples are air/stack monitoring samples but also include process control samples from processing plants, Tank Farms Operations, development support, and environmental samples. These samples will be analyzed at the 222-S Laboratory.

1.4 PLANNING ASSUMPTIONS

The following assumptions were used to establish the work scope for the 222-S, WSCF, 325 and LITCO Laboratories:

- All samples except TWRS and Evaporator operational campaign support will be sampled and received at the Laboratories at a relatively constant rate through out the Fiscal year.
- TWRS Tank core, augers and liquid grab will be sampled and received at the Laboratories in the approximate time frame established in the TWRS baseline schedule (Reference 2)
- Approximately half of ER samples taken in which the activity exceeds commercial laboratory limits will require RCRA data packages and the balance will require CERCLA data packages.
- Screening of commercial laboratory samples and all room/stack air samples will be performed at the 222-S laboratory. As WSCF startup proceeds some of these samples may be analyzed at WSCF.
- 325 laboratory will move from operational pause to ready to serve status by November 1, 1994.
- LITCO laboratory will be ready to start analyzing TWRS samples in October 1994.
- Approved shipping casks will be available to ship materials to LITCO by January 1, 1995.
- 222-S Hot Cell expansion will be in hot operation by November 1, 1994.

- Both 222-S and 325 Laboratories will have rotary extrusion capability in their Hot Cells by October 1, 1994.
- All safety screening analyses will be performed at either the 222-S or 325 Laboratories.
- LITCO will perform selected ferrocyanide safety resolution and pretreatment analyses. All LITCO samples will be extruded and materials prepared and packaged for shipment by one of Hanford's on site laboratories.
- Applied DQO's for TWRS samples as shown in Appendix A will not change. The following list of approved DQO's was used in establishing the analytical work load:

<u>DQO Title</u>	<u>Documentation Number/Rev</u>	<u>Issue date</u>
Safety Screening	WHC-SD-WM-SP-004, REV.0	2/23/94
Ferrocyanide	WHC-SD-WM-DQO-007, REV.0	8/11/94
Organic	WHC-SD-WM-DQO-006, REV.0	4/29/94
Flammable Gas	WHC-SD-WM-DQO-004, REV.0	5/13/94
Pretreatment	WHC-SD-WM-DQO-011, REV.0	8/03/94
Waste Compatibility	WHC-SD-WM-DQO-001, REV.0	3/04/94

- DQO's for RCRA and evaporator feed samples were not available. Assumed reduced DST RCRA analytes to short list similar to waste compatibility DQO and evaporator feed will be similar to past requirements.
- Favorable results from ferrocyanide tanks will allow a reduction of analyses after the fifth tank is completed.

1.5 LIMITATIONS

The FY 1995 analytical production is based upon receiving full laboratory funding of \$42 million for Analytical support from TWRS Liquid Effluent, Solid Waste, RCRA/Monitoring programs. Also it is assumed that Tank Waste Remediation Systems (TWRS) will deliver samples to the laboratories in the approximate time frames shown on the laboratory analytical plans (Appendix A). Timeliness of sample receipt is essential to maintaining production rates at or near capacity levels as little flexibility exists to recover schedules due to analytical system flow constraints. Options of diverting work allocated to commercial laboratories for fill in during extended TWRS down time are currently under evaluation.

1.6 SCOPE

The major sections of this work scope document and the topics covered are outlined briefly below.

Section 2.0 provides FY 1995 workload projections for the 222-S, WSCF, 325, LITCO and commercial laboratories. These projections are given in AEU's, which are more fully explained in subsection 2.1.

Section 3.0 discusses the workload distribution over the 12 month period for each of the laboratories.

Section 4.0 describes the change control process to be used in updating this work scope document.

Section 5.0 contains the references used in the preparation of this document.

2.0 WORKLOAD PROJECTIONS

2.1 ANALYTICAL EQUIVALENCY UNIT DEFINITION

One standard Analytical Equivalency Unit (AEU) is defined as the amount of effort required to perform the full suite of analyses on each segment and one core composite of a FY 1990 five-segment waste tank core sample and to report the results in a validatable Resource Conservation and Recovery Act (RCRA) - type data package within 180 days of the date the last segment of the core sample is taken. The AEU methodology allows comparisons to be made between the effort required to analyze a single-shell tank sample and other sample types.

2.2 BASES

The AEU values used in this report are based on the following:

- Safety screening will be 0.03 AEU per subsegment. This includes extrusion, completion of safety screening analytes and issuance of a 45 day report. (Reference 3)
- Safety Resolution will be 0.05 AEU per subsegment. This includes sample preparation, analysis of one safety resolution DQO analyte list and preparation of a validatable data package. (Reference 3)

Example: Tank BY - 105 has 44,000 gallons of sludge and 459,000 gallons of salt cake. This is a FeCN tank. There will be approximately 1 segment of sludge and 8 segments of salt cake per core from this tank. Safety screening and Ferrocyanide DQO's will be applied. The AEU calculation will be as follows:

1 segment FeCN sludge X 4 subsegment/segment X 0.03 AEU/Subsegment= 0.12
 8 segment salt cake X 2 subsegment/segment X 0.03 AEU/Subsegment= 0.48
 1 segment FeCN sludge X 4 subsegment/segment X 0.05 AEU/Subsegment= 0.20
 8 segment salt cake X 2 subsegment/segment X 0.05 AEU/Subsegment= 0.80
 1.6 AEU/Core

Note: The above reflects methodology of establishing AEU values for TWRS samples. The AEU values used in this report for non-TWRS samples were derived by comparing the relative complexity and number of analytes per sample with that of a TWRS sample. A relative proportional value was then assigned to the non-TWRS sample.

2.3 ESTIMATED ANALYTICAL EQUIVALENCY UNIT's FOR FY 1995

The total amount of analytical effort required of Hanford Laboratories (222-S, WSCF, & 325), LITCO and commercial laboratories for support of the TWRS, Environmental Remediation, Solid Waste, Liquid Effluents programs and facility support has been estimated in order to schedule work loads for FY 1995. Table 2-1 provides the total AEU's by program activity and shows the work split between laboratories. Work that is not completed within the fiscal year will be carried over and completed in FY 1996. A total sample load corresponding to approximately 130 AEU's are planned to be taken in FY 1995. The 222-S will receive AEU's, WSCF will receive 4.6 AEU's, 325 will receive 21 AEU's, LITCO will receive 8 AEU's, and Commercial laboratories will receive 20 AEU's.

TABLE 2-1 TOTAL FISCAL YEAR 1995 WORKLOAD PROJECTION							
Program Activity	Total AEU's	222-S AEU's	WSCF AEU's	325 AEU's	Comm.Lab	LITCO AEU's	FY95 Carry over
Environmental Remediation	12.4	1.2	--	1.2	10	--	0
Liquid Effluents	4.8	0.2	4.6	--	10	--	0
Solid Waste	10	--	--	--		--	14
TWRS	73	31	--	20			0
Process Support	30	30	--	--			
Total	130.0	62.4	4.6	21.2	20	8	14

3.0 WORKLOAD DISTRIBUTION

3.1 222-S LABORATORY

The 222-S Laboratory located in the 200 West Area is WHC's primary high level beta-gamma laboratory. It contains 6500 square meters of laboratory space, and includes 150 hoods and analytical hot cell space for 12 remote manipulators. A newly constructed Hot Cell facility has recently been completed which adds an additional 7 cells and 22 remote manipulators. Analytical support for environmental and effluent monitoring, chemical processing, and waste samples is provided at 222-S. The 222-S Analytical Laboratory also processes and screens all samples and determine which laboratories can perform the necessary analysis.

3.1.1 Workload Distribution For 222-S

63 AEU's have been scheduled to be performed in the 222-S laboratory. The work breakdown by program and estimated monthly production are shown in Table 3-1.

3.2 WSCF LABORATORY

WSCF is a newly constructed facility operated by WHC. The laboratory is located in the 600 Area of the Hanford Site just east of the 200 West Area and south of the Hanford Meteorology Station. Its primary purpose is to perform low-level radiological and chemical analysis on various types of samples taken from the Hanford Site. WSCF has approximately 2,000 square meters analytical space and has a design capacity of analyzing approximately 76,000 samples per year. Analyses include (1) Nuclear spectroscopy; (2) Organic analyses for volatiles, semi-volatiles, pesticides, and polychlorinated biphenyls; and (3) inorganic analyses for metals and nonmetals.

3.2.1 Workload Distribution For WSCF

Approximately 4.6 AEU's have been scheduled to be performed in the WSCF laboratory. The work breakdown by program and estimated monthly production are shown in Table 3-1.

3.3 325 LABORATORY

The 325 Laboratory operated by PNL is located within the 300 Area. The 325 Laboratory Complex includes analytical operations in the 325, 329, 3708, and 314 buildings. These facilities provide support to a wide variety of programs including; research and development, site environmental and safety monitoring, tank characterization and safety investigations, and the Hanford Site environmental restoration activities. The 325 Laboratory Complex is also capable of performing CERCLA/RCRA analyses for a limited sample capacity.

Table 3-1

HANFORD SITE SAMPLE DISTRIBUTION FOR FY 1995 (AEUs)

FACILITY	PROGRAM	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
222-S	ER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.2
	LIQUID EFFLUENTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3
	PROCESS SUPPORT	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	30.0
	TWRS	1.2	2.6	3.0	3.2	3.2	2.8	2.3	2.0	2.6	2.5	2.3	3.6	30.0
	SUB TOTAL	3.8	5.2	5.6	5.8	5.8	5.4	4.9	4.6	5.2	4.2	4.9	6.3	68.5
325	ER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.2
	TWRS*	0.0	0.1	0.5	0.8	1.5	2.0	2.6	2.6	2.1	2.4	2.4	2.9	20.0
	SUB TOTAL	0.1	0.2	0.6	0.9	1.6	2.1	2.7	2.7	2.2	2.5	2.5	3.0	21.2
WSCF	LIQUID EFFLUENTS	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	1.3	1.3	1.3	5.3
	SUB TOTAL	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	1.3	1.3	1.3	5.3
LITCO	TWRS	0.0	0.2	0.4	0.9	0.9	0.8	0.8	0.8	0.7	0.6	0.7	0.7	7.8
	SUB TOTAL	0.0	0.2	0.4	0.9	0.9	0.8	0.8	0.8	0.7	0.6	0.7	0.7	7.8
COMMERCIAL	ER/WM	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	11.2
	SOLID WASTE	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	11.2
	SUB TOTAL	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	22.4
GRAND TOTAL		5.4	7.0	7.6	8.4	8.9	10.0	10.2	9.0	9.7	8.7	9.2	10.6	112.9

3.3.1 Workload Distribution For 325

Approximately 21.2 AEU's have been scheduled to be performed in the 325 laboratory. The work breakdown by program and estimated monthly production are shown in table 3-1.

3.4 LOCKHEED IDAHO TECHNOLOGY COMPANY (LITCO)

During Fiscal Year 1994 LITCO upgraded their Chemical Processing Plant (CPP-627) cave, laboratory procedures, and equipment to meet TWRS specifications and process approximately 10 AEU's of TWRS work per year. Core samples will be extruded at Hanford hot cells, sub sampled or composited, packaged and shipped to LITCO. LITCO's work consists of receiving and preparing tank core samples for analysis, followed by leaching and/or dissolution; chemical separations; measurements of physical characteristics, inorganic, organic and radionuclide analytes; and reporting of results.

3.4.1 Workload Distribution For LITCO

Approximately 7.6 AEU's have been scheduled to be performed at LITCO. The breakdown by program and estimated monthly production are shown in Table 3-1.

4.0 CHANGE CONTROL PROCESS

Work Plans prepared to support production of 116 AEU during FY 1995 are subject to many factors including 1) Laboratories ability to perform at the designated production rates, 2) receipt of full funding, and 3) timely receipt of samples. Change in the above areas may impact the annual production goal. In order to document these changes/impacts this document will be updated as needed by means of an Engineering Change Notice (ECN).

5.0 REFERENCES

1. Hanford Analytical Sample Projections FY 1995 - FY 2000, ECN 166043, Document # WHC-SD-TI-608, Rev. 0.
2. Internal Memo, from G. A. Stanton, Jr., 7R320-94-03, "Baseline Sampling Schedule, Revision 3", September 22, 1994.
3. External Memo, C. Defigh-Price to J. M. Clark, DOE, 9451376, "Tank Waste Remediation System Minimum/Maximum Laboratory Capacity Strategy", February 28, 1994.

FY1995 TWRS SCHEDULE

REV.3.0

Sep. 30, 1994

										AEU's													
Sample	Cores/	Seg/	Total	Applied	Total	Sample																	
Tank	Mode	samples	core	Segs	DQO	Sub Seg	AEU	Date	Designated Laboratory	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Carry over	
U-106	liq grab	3	0	3	C	3	0.25	19-Sep-94	222-S	0.05	0.063	0.1	0.025	0	0	0	0	0	0	0	0	0	
BX-105	auger	2	1	2	SS	4	0.2	21-Sep-94	222-S	0.16	0	0	0	0	0	0	0	0	0	0	0	0	
AW-104	liq grab	3	0	3	SS, C, RCRA	3	0.53	28-Sep-94	222-S	0.027	0.106	0.133	0.212	0.053	0	0	0	0	0	0	0	0	
SY-103	push	2	15	30	SS, P, O	60	3.06	28-Sep-94	222-S	0.612	0.612	0.612	0.612	0.306	0.306	0	0	0	0	0	0	0	
AW-103	liq grab	3	0	3	C	3	0.15	05-Oct-94	222-S	0.008	0.03	0.038	0.06	0.015	0	0	0	0	0	0	0	0	
B-102	auger	2	1	2	SS	4	0.2	05-Oct-94	222-S	0.16	0.04	0	0	0	0	0	0	0	0	0	0	0	
AY-101	liq grab	3	0	3	SS, C, RCRA	3	0.53	10-Oct-94	222-S	0.053	0.106	0.106	0.212	0.106	0	0	0	0	0	0	0	0	
BY-106	rotary	2	13	26	SS, F (103)	104	4.772	28-Oct-94	222-S/ITCO	0	0.954	0.954	0.954	0.954	0.477	0.4772	0	0	0	0	0	0	
C-103	push	2	4	8	SS, O, P	16	2.1	02-Nov-94	222-S	0	0.42	0.42	0.42	0.42	0.21	0.21	0	0	0	0	0	0	
C-108	auger	2	1	2	SS, F (92)	8	0.6	02-Nov-94	222-S	0	0.12	0.12	0.12	0.12	0.06	0.06	0	0	0	0	0	0	
C-106	liq grab	3	0	3	C	3	0.15	02-Nov-94	222-S	0.008	0.03	0.038	0.06	0.015	0	0	0	0	0	0	0	0	
AP-106	liq grab	10	0	10	EVAP FEED	10	0.8	16-Nov-94	325	0	0.04	0.16	0.2	0.32	0.08	0	0	0	0	0	0	0	
C-102	auger	2	1	2	SS	4	0.2	16-Nov-94	325	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	
BY-105	rotary	2	9	18	SS, F (91)	72	3.596	29-Nov-94	222-S/ITCO	0	0	0.719	0.719	0.719	0.719	0.3596	0.3596	0	0	0	0	0	
AW-101	auger	3	1	3	crust hum	6	0.3	02-Dec-94	222-S	0	0	0.24	0.06	0	0	0	0	0	0	0	0	0	
C-105	push	2	3	6	SS, P	12	0.86	02-Dec-94	325	0	0	0.172	0.172	0.172	0.172	0.086	0.086	0	0	0	0	0	
AP-101	liq grab	10	0	10	EVAP FEED	10	0.8	12-Dec-94	222-S	0	0	0.04	0.16	0.2	0.32	0.08	0	0	0	0	0	0	
BY-108	auger	1	1	1	Proc. Dev	1	0.2	16-Dec-94	325	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0	
AZ-102	liq grab	3	0	3	C	3	0.15	19-Dec-94	222-S	0	0	0.008	0.03	0.038	0.06	0.015	0	0	0	0	0	0	
C-111	auger	2	1	2	SS, F (92)	8	0.6	03-Jan-95	325	0	0	0	0.12	0.12	0.12	0.12	0.06	0.06	0	0	0	0	
AZ-101	liq grab	3	0	3	C	3	0.15	04-Jan-95	222-S	0	0	0	0.008	0.03	0.038	0.06	0.015	0	0	0	0	0	
BY-104	rotary	2	7	14	SS, F (91)	56	2.508	05-Jan-95	222-S/ITCO	0	0	0	0.502	0.502	0.502	0.5016	0.2508	0.2508	0	0	0	0	
U-107	liq grab	3	0	3	C	3	0.15	11-Jan-95	222-S	0	0	0	0.008	0.03	0.038	0.06	0.015	0	0	0	0	0	
AX-104	auger	2	1	2	SS	4	0.2	17-Jan-95	325	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	
AP-103	liq grab	10	0	10	EVAP FEED	10	0.8	18-Jan-95	325	0	0	0	0.04	0.16	0.2	0.32	0.08	0	0	0	0	0	
C-101	push	2	2	4	SS	8	0.4	24-Jan-95	325	0	0	0	0.08	0.32	0	0	0	0	0	0	0	0	
U-103	liq grab	3	0	3	C	3	0.15	25-Jan-95	222-S	0	0	0	0.008	0.03	0.038	0.06	0.015	0	0	0	0	0	
AX-102	auger	2	1	2	SS, O	4	0.32	31-Jan-95	325	0	0	0	0	0.064	0.064	0.064	0.064	0.032	0.032	0	0	0	
U-105	liq grab	3	0	3	C	3	0.15	01-Feb-95	222-S	0	0	0	0	0.008	0.03	0.0375	0.06	0.015	0	0	0	0	
BY-103	rotary	2	8	16	SS, F (71)	64	2.44	02-Feb-95	222-S/ITCO	0	0	0	0	0.488	0.488	0.488	0.488	0.244	0.244	0	0	0	
U-108	liq grab	3	0	3	C	3	0.15	08-Feb-95	222-S	0	0	0	0	0.008	0.03	0.0375	0.06	0.015	0	0	0	0	
TY-104	auger	2	1	2	SS, F, O, P (92)	4	0.95	14-Feb-95	325	0	0	0	0	0.095	0.19	0.19	0.19	0.1425	0.095	0.048	0	0	
U-109	liq grab	3	0	3	C	3	0.15	15-Feb-95	222-S	0	0	0	0	0.008	0.03	0.0375	0.06	0.015	0	0	0	0	
B-103	auger	2	1	2	SS, O	4	0.32	22-Feb-95	325	0	0	0	0.132	0.064	0.064	0.064	0.048	0.032	0.016	0	0		
C-107	push	2	5	10	SS, P	20	1.5	22-Feb-95	325	0	0	0	0	0.15	0.3	0.3	0.3	0.225	0.15	0.075	0	0	
S-111	liq grab	3	0	3	C	3	0.15	23-Feb-95	222-S	0	0	0	0	0.008	0.03	0.0375	0.06	0.015	0	0	0	0	
S-112	liq grab	3	0	3	C	3	0.15	02-Mar-95	222-S	0	0	0	0	0	0.008	0.03	0.0375	0.06	0.015	0	0	0	
BY-108	rotary	2	5	10	SS, F, P (93)	40	2.9	03-Mar-95	325/ITCO	0	0	0	0	0	0.58	0.58	0.58	0.58	0.29	0.29	0	0	
AN-106	auger	2	1	2	SS	4	0.2	08-Mar-95	222-S	0	0	0	0	0	0.16	0.04	0	0	0	0	0	0	
xfer 96-1	liq grab	3	0	3	C	3	0.15	09-Mar-95	222-S	0	0	0	0	0	0	0.008	0.03	0.0375	0.06	0.015	0	0	
S-102	liq grab	3	0	3	SS, C, O	3	0.39	14-Mar-95	222-S	0	0	0	0	0	0	0.02	0.078	0.0975	0.156	0.039	0	0	
C-201	auger	2	1	2	SS	4	0.2	22-Mar-95	325	0	0	0	0	0	0.04	0.16	0	0	0	0	0	0	
C-110	push	2	4	8	SS, P	24	1.22	22-Mar-95	325	0	0	0	0	0	0.244	0.244	0.244	0.244	0.122	0.122	0	0	
xfer 96-1	liq grab	3	0	3	C	3	0.15	28-Mar-95	222-S	0	0	0	0	0	0	0	0.0075	0.03	0.0375	0.06	0.015	0	
SX-102	liq grab	3	0	3	C	3	0.15	31-Mar-95	222-S	0	0	0	0	0	0	0	0.0075	0.03	0.0375	0.06	0.015	0	
C-202	auger	2	1	2	SS	4	0.2	05-Apr-95	222-S	0	0	0	0	0	0	0.16	0.04	0	0	0	0	0	
SX-103	liq grab	3	0	3	C	3	0.15	07-Apr-95	222-S	0	0	0	0	0	0	0.0075	0.03	0.0375	0.06	0.015	0	0	
SX-104	liq grab	3	0	3	C	3	0.15	14-Apr-95	222-S	0	0	0	0	0	0	0.0075	0.03	0.0375	0.06	0.015	0	0	
C-203	auger	2	1	2	SS	4	0.2	19-Apr-95	222-S	0	0	0	0	0	0	0.1	0.1	0	0	0	0	0	
T-111	push	2	7	14	SS	28	0.84	19-Apr-95	325	0	0	0	0	0	0	0.42	0.42	0	0	0	0	0	
SX-105	liq grab	3	0	3	C	3	0.15	21-Apr-95	222-S	0	0	0	0	0	0	0.0075	0.03	0.0375	0.06	0.015	0	0	
BY-109	rotary	2	8	16	SS, P	32	1.492	24-Apr-95	222-S/ITCO	0	0	0	0	0	0	0.1492	0.2984	0.2984	0.298	0.149	0.0748	0	
xfer 96-1	liq grab	3	0	3	C	3	0.15	28-Apr-95	222-S	0	0	0	0	0	0	0	0.0075	0.03	0.038	0.06	0.015	0	
C-204	auger	2	1	2	SS	4	0.2	03-May-95	325	0	0	0	0	0	0	0	0.16	0.04	0	0	0	0	
AN-107	liq grab	3	0	3	SS, C, P, RCRA	3	1.03	05-May-95	325	0	0	0	0	0	0	0	0.206	0.206	0.206	0.206	0.103	0.103	
AW-103	liq grab	3	0	3	SS, P	3	0.4	12-May-95	222-S	0	0	0	0	0	0	0	0	0.08	0.08	0.08	0.08	0.04	
AW-101	push	2	22	44	SS, P	88	3.228	17-May-95	222-S	0	0	0	0	0	0	0	0.3228	0.6456	0.646	0.646	0.484	0.484	
B-112	auger	2	1	2	SS	4	0.2	17-May-95	222-S	0	0	0	0	0	0								