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**ENVIRONMENTAL
RESTORATION
PROGRAM**

**Results of Fall 1994 Sampling
of Gunitite and Associated Tanks
at the Oak Ridge National Laboratory,
Oak Ridge, Tennessee**

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DEPARTMENT OF ENERGY

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Energy Systems Environmental Restoration Program
ORNL Environmental Restoration Program

**Results of Fall 1994 Sampling
of Gunite and Associated Tanks
at the Oak Ridge National Laboratory,
Oak Ridge, Tennessee**

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PREFACE

This Technical Memorandum, *Results of Fall 1994 Sampling of Gunitite and Associated Tanks at the Oak Ridge National Laboratory, Oak Ridge, Tennessee* (ORNL/ER/Sub/87-99053/74) (TM 01-08) was developed under Work Breakdown Structure 1.4.12.6.1.01.41.12.02.11 (Activity Data Sheet 3301, "WAG 1"). This document provides the Environmental Restoration Program with analytical results from liquid and sludge samples from the Gunitite and Associated Tanks (GAAT). Information provided in this report forms part of the technical basis for criticality safety, systems safety, engineering design, and waste management as they apply to the GAAT treatability study and remediation.

CONTENTS

Page

ACRONYMS	iii
INTRODUCTION	1
FIELD SAMPLING	2
ANALYSES	4
QUALITY ASSURANCE AND DATA VALIDATION	5
ANALYTICAL RESULTS	5
SUMMARY OF RESULTS	6

APPENDIXES

A	FIELD OBSERVATIONS	A-1
B	TANK CONTENT LEVELS	B-1
C	TANK CONTENT VOLUME ESTIMATES	C-1
D	DATA QUALITY EVALUATION (VALIDATION)	D-1
E	ANALYTICAL METHODOLOGY	E-1
F	GAAT ANALYTICAL RESULTS AND LABORATORY OBSERVATIONS	F-1
G	SUMMARY OF KEY PARAMETERS	G-1

ACRONYMS

CASD	Chemical and Analytical Sciences Division
EPA	Environmental Protection Agency
GAAT	Gunite and associated tanks
NTF	North Tank Farm
OREIS	Oak Ridge Environmental Information System
ORNL	Oak Ridge National Laboratory
OU	operable unit
PCB	polychlorinated biphenyl
QC	quality control
RCRA	Resource Conservation and Recovery Act
RI/FS	remedial investigation/feasibility study
RMAL	Radioactive Materials Analytical Laboratory
SAP	sampling and analysis plan
STF	South Tank Farm
TCLP	toxicity characteristic leaching procedure
TM	technical memorandum
TRU	transuranic

INTRODUCTION

This technical memorandum (TM) documents the August–November 1994 sampling and analysis of 12 underground radioactive waste tanks at Oak Ridge National Laboratory (ORNL). These tanks are part of the Gunitite and Associated Tanks (GAAT) Operable Unit (OU), and the sampling campaign is part of the ongoing GAAT remedial investigation/feasibility study (RI/FS) process. This TM reports both field observations (e.g., liquid and sludge depths) and analytical results. Analytical results are also available from the Oak Ridge Environmental Information System (OREIS) data base under the project name GAAT (PROJ_NAME = WAG 1 Gunitite and Associated Tanks OU 1).

The sampling plan is documented in the "ORNL Inactive Waste Tanks Sampling and Analysis Plan" (SAP), ORNL/RAP/LTR-88/24 dated April 1988, as amended by "Addendum 1: ORNL Inactive Tanks Sampling and Analysis Plan" dated August 1994. Field team instructions are presented in ORNL RI/FS Project Field Work Guide 01-WG-20, "Field Work Guide for Sampling of Gunitite and Associated Tanks." Field sampling was conducted under the programmatic and procedural umbrella of the ORNL RI/FS Program, and analyses were in accordance with ORNL Chemical and Analytical Sciences Division (CASD) procedures. The sampling and analysis campaign is intended to provide data for criticality safety, systems safety, engineering design, and waste management as they apply to the GAAT treatability study and remediation.

Tanks sampled were W-1, W-2, W-3, and W-4 in the North Tank Farm (NTF); W-5, W-6, W-7, W-8, W-9, W-10, and W-11 in the South Tank Farm (STF); and TH-4, east of STF. Both liquid and sludge (when present) samples were collected. Analysis began immediately upon receipt of the samples and preliminary results were reported in December 1994. Data validation and data base preparation were completed in January 1995.

This TM is organized as a brief discussion followed by series of appendices that include field measurements, analytical results, and narratives. This TM does not attempt to analyze the data; a follow-up document is scheduled for that purpose.

FIELD SAMPLING

Samples were collected through existing tank risers. Initially the SAP called for 250-mL samples, but low activity in the liquids resulted in high detection limits, so the sample volume was changed to 500 mL. Using a peristaltic pump, two liquid samples were taken from tanks containing 6 ft or more of liquid—one at $\frac{1}{4}$ and one at $\frac{3}{4}$ of the total depth. Otherwise, tanks were sampled at the middle of the liquid depth.

Sludge samples were collected in a 1-in.-diam. tube lowered vertically into the sludge. Clear Lexan tubes were used for soft sludges so that any layering could be observed. Stainless steel tubes with a honed edge were driven by hand into the sludge bed in an attempt to collect any hardpan sludge on the tank floor.

Before each sample was taken, the depth of the liquid and sludge was measured using the top-of-riser elevation as a reference—the liquid level by a standard water level meter designed for use in wells, and the sludge by a sludge probe based on a photoelectric eye. When the probe is lowered into the sludge, it registers the light reduction and a tone is generated. The water level meter is very accurate, but the sludge probe is less so. Based on some trial-and-error and duplicate measurements, plus the design of a probe that has the "eye" recessed about 1 in. from the face, the sludge probe is accurate to approximately ± 1 in.

Appendix A summarizes the field observations: tank number, sample date, sample location, depth measurements, sample number, sample medium, liquid temperature, sample depth, and field radiological measurements. Appendix A also includes a table of the sample locations that describes the port from which each sample was collected. Appendix B is a graphical representation of the depth data, along with transuranic (TRU) waste classification information (discussed later). The sludge depths presented in Appendix B are based on in situ field measurements taken by the optical sludge probe.

The total volume of both sludge and liquid is an important data point for analysis of the tank contents. Appendix C presents volume estimates based on measured depths and simplified tank geometries. Because of removal and treatment considerations, the sludge volume is most important

and is presented as a range of estimates. Typically, a number of sludge depth values are available for each tank, including both in-place measurements with the optical probe and measurements of the height of the recovered sludge column in the Lexan sample tubes. The low estimate, based on the lowest depth measured in the tank or as retrieved in the clear Lexan tube, is likely biased low because recovery is less than 100% with the sample tubes. Similarly, the high estimate is based on the highest recorded depth. The best estimate took into consideration field notes, equipment characteristics, and multiple measurements to judge the most likely true sludge depth at the point measured/sampled. Liquid volumes are presented both inclusive and exclusive of the sludge.

All of these estimates include two major simplifications, the first of which is to neglect the shape of the tank bottoms—typically both dish-shaped and slightly tilted. Because most depth measurements were taken in the middle of the tank (the bottom of the dish), the sludge and liquid estimates are likely biased high. The other simplification is to neglect the sludge/debris piles observed in video inspections of the tanks. These piles are not very high and are restricted to an area within a few feet of the tank wall opposite the 1982 sluicing nozzle location. This assumption biases the sludge volume estimate slightly low. It must also be emphasized that these volume estimates are based on a single-point measurement in tanks that have up to 2000 ft² of floor area.

When the field sampling was completed, the sampling team was debriefed. The following observations may be of interest to some data users.

- The sample team said that what is known as "hard sludge" is more accurately described as "dense sludge." They received good tactile feedback from the sampling tool and could feel a gradual thickening of the sludge, but no distinct hardpan was evident. The feel of the sample tool on the concrete tank bottom was very distinct. The laboratory technicians who emptied the tubes reinforced this observation.
- The sludge generally rinsed clean from the outside of the sampling tool with a gentle stream of water, although some small clayey pieces adhered to the sample tube.
- Except for tanks W-5 and W-10, all of the sludges appeared to have similar textures. The only variations are colors.

- Tank W-10 contains "trash" including cotton string, pieces of plastic, and concrete chips up to the size of a dime that prevented the sampler from closing on the first two tries.
- Tank W-5 contains almost no sludge, and the sample team was able to see what they thought was the concrete bottom of the tank at the west port. The team scraped the sample tube along the bottom at the west port and retrieved a small amount of "sludge" that consisted mostly of small white flakes (thought to be concrete chips).
- A discrepancy exists between the sludge probe reading and the depth of sludge retrieved from tank W-6. In four instances, the probe read approximately 2 in. but 7- to 8-in. cores were recovered. In all other tanks, the probe depth correlated with the recovered core height.
- Liquids from the tanks tend to be pale yellow, but those from W-3 and W-4 are bright yellow.

ANALYSES

Samples were analyzed by the ORNL CASD. The lead laboratory was ORNL's Radioactive Materials Analytical Laboratory (RMAL) in Building 2026. Appendix D (Section D2) lists certain analyses performed at other ORNL laboratories, but all analytical work was performed on site and coordinated through RMAL.

Analyses were based on either ORNL procedures or Environmental Protection Agency (EPA) methods modified to account for radiological considerations. The laboratory exceeded the minimum reporting requirements for the metals analyses. In some cases, deviations were required to overcome sample matrix effects. Appendix E lists the methods used and provides a narrative of deviations as reported by the laboratory. Other analyses, primarily physical and engineering properties such as solubility, viscosity, friability, X-ray diffraction, and scanning electron microscopy, are ongoing and will be reported elsewhere.

QUALITY ASSURANCE AND DATA VALIDATION

Field sampling quality was ensured by adherence to ORNL-approved plans, procedures, and field work guides. These documents include requirements for training, records keeping, field QC checks, and personnel responsibilities. Several field oversight surveillances were conducted by Bechtel, Energy Systems, and the Department of Energy to ensure that activities were performed in accordance with appropriate requirements. Results of these surveillances were documented in reports issued to management, and records were maintained appropriately. Actions were tracked and these surveillances resulted in no adverse findings or corrective actions.

The analytical data were validated in accordance with ORNL RI/FS project procedures and EPA protocols. Because these data are to be used primarily for engineering studies rather than an enforcement action, the lowest level of validation (known as Level I) was performed. This level consists primarily of review of results including reported values, 2σ uncertainties, and laboratory QC results. Raw data were generally not examined, although data with no summary reports required examination of raw data. The uncertainty values for uranium isotopics by mass spectrometry are 1σ uncertainties.

The GAAT data were found to be of sufficient quality for the intended uses. Rejected data were limited to the silver analyses. Appendix D discusses the data validation process and results and includes a list of validation codes for use in interpreting the reported results.

ANALYTICAL RESULTS

Appendix F presents the analytical results by tank [analyte name, method, results (or detection limit), uncertainty values, validation codes and qualifiers], reported on an as-received (i.e., wet weight) basis. The appendix also includes photographs of the samples collected in Lexan tubes and the laboratory description sheet for the as-received sample tubes. Also included are photographs of small octahedral crystals that were found in the sludge sample from tank W-6, and identified by X-ray diffraction analysis as $\text{Na}_7(\text{PO}_4)\text{F} \cdot 19\text{H}_2\text{O}$ (sodium fluorobiphosphate).

SUMMARY OF RESULTS

Data issues addressed in the SAP include criticality safety, systems safety, engineering design, and waste management. Appendix G presents a table of some key parameters that can be compared with regulatory or procedural limits. TRU classification, polychlorinated biphenyl (PCB) contamination, and Resource Conservation and Recovery Act (RCRA) toxicity characteristic metals are all of interest for waste classification purposes, and criticality ratios are used in nuclear criticality safety evaluations. As shown in the table, various tanks contain TRU waste (see also Appendix B), PCB contamination exceeding 2 ppm, and RCRA toxicity characteristic metals. Total metals analysis rather than toxicity characteristic leaching procedure (TCLP) was performed on these solid samples, and the results were compared with RCRA toxicity characteristic equivalent limits (20 times the TCLP limit to account for the 20:1 dilution in the TCLP). The total metals analyses are equivalent to TCLP.

A planned follow-up TM will include statistical and regulatory/procedural analyses of the GAAT data.

APPENDIX A
FIELD OBSERVATIONS

GAAT SAMPLING SUMMARY

Field Observations

Tank No.	Date Sampled	Sample Location	Total Tank Depth (ft)	Depth to Liquid (ft)	Depth to Sludge (ft)	Sample No.	Sample Medium	Liquid Temp. (°C)	Sample Depth (ft)	Sample Dose Rate (mR/h or cpm)
W-1	17 Aug 94	East port	12.5	9.59	None detected	W01L201	Liquid	---	11.0	720 cpm
	16 Nov 94	East port		9.61		W01L231 s		20.1	11.0	
W-2	17 Aug 94	East port	12.5	10.12	None detected	W02L202	Liquid	---	11.3	1600 cpm
	16 Nov 94	East port		10.17		W02L232 s		20.9	11.3	
W-3	18 Aug 94	Port at base of water level gage	19.67	10.3	19.3	W03L203	Liquid	---	12.5	2200 cpm
	1 Sep 94					W03L204		---		
W-4	18 Aug 94	Port at base of water level gage	19.0	11.82	17.7	W03S212	S sludge	---	---	15 OW
	8 Sep 94					W04L205		---		
W-5	12 Sep 94	Center port	25.0	22.47	25.0	W04S216	S sludge	---	14.7	2000 cpm
	24 Oct 94					W05L218		---		
W-6	13 Sep 94	Center port	24.4	15.34	24.2	W05S230	H sludge	---	23.7	10,000 cpm
	17 Nov 94					W06L219		---		
W-7	17 Nov 94	Center port	24.5	15.38	24.2	W06L220	S sludge	---	17.5	28,000 cpm
	17 Nov 94					W06S221		---		
W-8	17 Nov 94	Center port	24.67	---	24.0	W06S233 a	S sludge	---	---	6000 cpm
	11 Oct 94					W06S234 a		---		
W-9	5 Oct 94	Center port	24.5	20.22	24.3	W06S235 a	S sludge	---	22.2	45 OW?
	5 Oct 94					W07S22		---		
W-10	5 Oct 94	Center port	24.5	20.22	24.3	W07S229 d	S sludge	---	22.2	46 CW
	5 Oct 94					W08L223		---		
W-11	5 Oct 94	Center port	24.5	20.22	24.3	W08S224	S sludge	---	22.2	180 OW
	5 Oct 94					W08S224		---		

Tank No.	Date Sampled	Sample Location	Total Tank Depth (ft)	Depth to Liquid (ft)	Depth to Sludge (ft)	Sample No.	Sample Medium	Liquid Temp. (°C)	Sample Depth (ft)	Sample Dose Rate (mR/h or cpm)
W-9	29 Sep 94 11 Oct 94	Center port Center port	24.25	21.24	24.25	W09L222 W09S227	Liquid S sludge	19.5	22.75	50,000 cpm 70 CW 80 OW
W-10	6 Oct 94 7 Oct 94	South port South port	19.5	13.36	19.0	W10L225 W10S226	Liquid S sludge	18.3	16.2	36 OW? 1200 OW?
W-11	22 Aug 94	Port at base of level gage	12.33	10.42	none detected	W11L206/7	Liquid	---	11.4	200 cpm (bkg)
TH-4	23 Aug 94 7 Sep 94	Instrument port	14.92	5.12	12.6	TH4L208/9 TH4L210/11 TH4S213 TH4S214 TH4H215	Liquid Liquid S sludge S sludge H sludge	--- ---	6.9 10.5	700 cpm --- 25,000 cpm

NOTES:

- 1) Liquid, sludge, and total tank depths measured from top of sample port. Liquid measured with water level meter and sludge probe, sludge measured with sludge probe. Note that some sludge samples were different thickness than indicated by sludge probe.
- 2) cpm - counts per minute
OW - open window reading with Ro2a (OW assumed if not specified)
CW - closed window reading with Ro2a
bkg - background
H - hard (sludge)
S - soft (sludge)
? - indicates that the logbook was unclear
- 3) Radiation results are all contact readings from sample containers.
- 4) Gross beta readings were taken with an ASP-1 instrument with HP-260 probe.
- 5) Gross alpha readings were taken with an ASP-1 instrument with Bieron A-50 probe.
- 6) Tank TH-4 had 10 cpm alpha reading on swipe from sludge sampler after rinsing.
Organic vapor readings of 12 to 20 ppm above background were measured just inside the sample port.
- 7) Sludges appeared homogeneous, tan to dark brown in color. In addition, W-4 soft sludge had a narrow layer of bright yellow sludge. A layer of yellow sludge was also detected in the upper soft sludge sample from TH-4.
- 8) Liquids clear, low suspended solids, and discolored with a yellow/green tint.
- 9) Sludge in Tank W-10 contained a lot of debris in the form of concrete chips, plastic tab, and string.
- 10) Code following sample numbers: "d" duplicate, "a" archive, "s" special analysis (i.e., criticality only).

SAMPLE LOCATIONS

STATION	STATION_DESCRIPTION	SAMPLE_ID
01.TK001	Tank W-1, East 4 in. Port	W-01L201
01.TK001	Tank W-1, East 4 in. Port	W-01L231
01.TK002	Tank W-2, East 4 in. Port	W-02L202
01.TK002	Tank W-2, East 4 in. Port	W-02L232
01.TK003	Tank W-3, 12 in. Port at water level guage	W-03L203
01.TK003	Tank W-3, 12 in. Port at water level guage	W-03L204
01.TK003	Tank W-3, 12 in. Port at water level guage	W-03S212
01.TK004	Tank W-4, 12 in. Port at water level guage	W-04H217
01.TK004	Tank W-4, 12 in. Port at water level guage	W-04L205
01.TK004	Tank W-4, 12 in. Port at water level guage	W-04S216
01.TK005	Tank W-5, Center 24 in. Port	W-05L218
01.TK006	Tank W-6, Center 24 in. Port	W-06L219
01.TK006	Tank W-6, Center 24 in. Port	W-06L220
01.TK006	Tank W-6, Center 24 in. Port	W-06S221
01.TK007	Tank W-7, Center 24 in. Port	W-07S228
01.TK007	Tank W-7, Center 24 in. Port	W-07S229
01.TK008	Tank W-8, Center 24 in. Port	W-08L223
01.TK008	Tank W-8, Center 24 in. Port	W-08S224
01.TK009	Tank W-9, Center 24 in. Port	W-09L222
01.TK009	Tank W-9, Center 24 in. Port	W-09S227
01.TK010	Tank W-10, South 30 in. Port	W-10L225
01.TK010	Tank W-10, South 30 in. Port	W-10S226
01.TK011	Tank W-11, 12 in. Port at water level guage	W-11L206
01.TK011	Tank W-11, 12 in. Port at water level guage	W-11L207
01.TK012	Tank TH-4, 12 in. Instrument Port	TH-4H215
01.TK012	Tank TH-4, 12 in. Instrument Port	TH-4L208
01.TK012	Tank TH-4, 12 in. Instrument Port	TH-4L210
01.TK012	Tank TH-4, 12 in. Instrument Port	TH-4S213
01.TK012	Tank TH-4, 12 in. Instrument Port	TH-4S214
01.TK013	Tank W-5, West 24 in. Port	W-05S230

APPENDIX B
TANK CONTENT LEVELS

APPENDIX C
TANK CONTENT VOLUME ESTIMATES

GAAT Sludge Volume Estimate - Fall 1994 Sampling Campaign

Tank Name	Diam (ft)	Area (sq. ft)	MinDepth (ft)	MaxDepth (ft)	BestDepth (ft)	MinVol (cu. ft)	MaxVol (cu. ft)	BestVol (cu. ft)	MinVol (gal)	MaxVol (gal)	BestVol (gal)
W-1	12	113	0.00	0.10	0.00	0	11	0	0	85	0
W-2	12	113	0.00	0.10	0.00	0	11	0	0	85	0
W-3	25	491	0.27	0.37	0.37	133	182	182	991	1,359	1,359
W-4	25	491	0.75	1.30	1.30	368	638	638	2,754	4,773	4,773
W-5	50	1963	0.00	0.10	0.10	0	196	196	0	1,469	1,469
W-6	50	1963	0.20	0.75	0.60	393	1,473	1,178	2,937	11,015	8812
W-7	50	1963	0.50	0.67	0.60	982	1,316	1,178	7,343	9,840	8812
W-8	50	1963	0.10	0.30	0.20	196	589	393	1,469	4,406	2937
W-9	50	1963	0.00	0.10	0.10	0	196	196	0	1,469	1,469
W-10	50	1963	0.50	0.50	0.50	982	982	982	7,343	7,343	7,343
W-11	8	50	0.00	0.10	0.00	0	5	0	0	38	0
TH-4	20	314	2.08	2.32	2.32	653	729	729	4,888	5,452	5,452

C-1

Total = 27,726 47,333 42,426

GAAT Total Content Volume Estimate - Fall 1994 Sampling Campaign

ContentDept (ft)	ContentVol (cu. ft)	SludgeVol (cu. ft)	Supernatant (cu. ft)	Tot.Contents Supernatant (gal)
W-1	2.90	328	0	2,453
W-2	2.35	266	0	1,988
W-3	0.37	4,599	182	34,404
W-4	7.18	3,524	638	26,363
W-5	2.53	4,968	196	37,158
W-6	9.06	17,789	1,178	133,064
W-7	0.67	1,316	137	9,840
W-8	4.25	8,345	393	62,420
W-9	3.01	5,910	196	44,208
W-10	6.14	12,056	982	90,178
W-11	1.91	96	0	718
TH-4	9.80	3,079	729	23,029

Total = 465,823 423,397

APPENDIX D
DATA QUALITY EVALUATION
(VALIDATION)

D1. INTRODUCTION

The GAAT characterization activity involved collecting and analyzing numerous liquid and sludge samples from the tanks to provide a basis for evaluation and selection of remediation alternatives. This evaluation of data quality and limitations was intended to inform the users which data were usable and which were either unusable or potentially biased.

The data presented in this TM, except for rejected data, were determined to be usable following the technical evaluation described below.

D2. DATA SOURCES

Sample analyses were performed by the ORNL CASD. The metals, wet chemistry, and most radiochemical analyses were performed at the RMAL; uranium and plutonium isotopic analyses were performed at the Transuranium Research Laboratory; and PCB analyses were performed by the Analytical Services Organization.

D3. VALIDATION LEVEL

Radiological parameter, metal, PCB, TOC, and anion data were validated. Density, carbonate, bicarbonate, alpha spectrometry, gross water, hydroxide, pH, total suspended solids, and total dissolved solids were not validated because of insufficient data or minimal QC required by the method. Density and pH duplicate analyses were spot-checked and were acceptable.

An agreement was reached with Environmental Restoration (ER) Division that the data generated for the GAAT characterization would receive a Level 1 validation, which does not include evaluation of raw data. All sample results and associated QC, where available, were evaluated.

D4. DATA REVIEW AND VALIDATION

This section describes the review of the data associated with this characterization activity. Because no national guidelines exist for review and qualification of SW-846 methods or for radiological methods, a project-developed protocol was used and is described here.

Review and Validation of Chemical Data

Chemical data were validated to determine their level of usability or uncertainty by evaluating various aspects of the measurement process to provide the data user with an indication of the quality for a particular data set and an idea of the usability of the data. The data were examined to evaluate the potential for false negatives and to ensure that known false positives were eliminated.

Metals data were validated using project-developed guidelines for SW-846 methodologies, and PCBs and wet chemistry parameters were validated using project-specific protocols based on standard guidelines for Contract Laboratory Program (CLP) validation. Data were evaluated using the information supplied by ORNL. If items could not be evaluated because information was missing, this was noted in the validation narrative. Data were not qualified based on missing information. Following validation, review qualifiers were assigned to indicate the data usability. A validation code was assigned to indicate whether the data had been determined to be valid (VV) or invalid (VI). Table D-1 presents a list of validation codes, review qualifiers, and qualification codes.

Sample W-07S229, a field duplicate of W-07S228, was collected in a plastic tube, and W-07S228 was collected in a stainless steel tube. The relative percent difference (RPD) was calculated on these samples and evaluated. Limits of 20% RPD were applied to liquids and 35% RPD to sludges.

Aroclor data were validated using a CLP evaluation procedure and spike recovery limits of 60% to 150%. It is not known whether internal limits were developed from control charts as mandated by SW-846 methodology.

As described earlier, the chemical data received a Level 1 validation. Spot checks of density and pH duplicate analyses displayed good precision. This validation approach ensured comparability within the data set with respect to the presence or absence of qualifiers.

Established QC limits and performance levels are addressed in SW-846. Items addressed during data validation were

- holding times,
- blanks,
- surrogate recovery (PCB only),
- ICP interference check sample (metals only),
- duplicate sample analyses,
- matrix spike/matrix spike duplicate analyses,
- methods used,
- overall assessment of data for a case, and
- field duplicate RPDs.

Any problems encountered are reflected in the qualification code and discussed in the data assessment.

Review and Validation of Radiological Data

A Level 1 validation was performed on the radiological data using Project Procedure 1503.2, "Data Review for Radiological Data," Rev. 2. Level 1 radiological validation includes an assessment of

- holding times,
- detection limits (where provided),
- blanks (where provided)
 - method
 - instrument,
- chemical/tracer recoveries,

- laboratory control samples (where provided),
- matrix spike recoveries (where provided),
- duplicate analyses (where provided),
- field duplicate RPDs,
- methodology employed, and
- overall assessment of data for a case.

Appropriate review qualifiers, qualification codes, and validation codes were assigned following this review. The rationale for all qualified data was presented in the data assessment accompanying each package.

D5. DATA LIMITATIONS

Chemical Data Limitations

PCBs. There were no significant data limitations associated with the Aroclor data. Three samples were estimated because of low surrogate recoveries, which could result in a negative bias in the associated sample concentrations. One sample exceeded the extraction-to-analysis holding time, but this was not believed to have a significant impact due to the relative stability of the Aroclors. Poor precision and accuracy were observed for the matrix spike and matrix spike duplicate, but no sample qualification was performed.

Samples analyzed for PCBs were not corrected for moisture content; concentrations would be significantly higher if reported on a dry weight basis. No positive detects for Aroclors greater than 10 ppm were confirmed by GC/MS.

Metals. Samples analyzed for metals were qualified primarily because of low spike recoveries. Elements exhibiting poor recovery included silver, mercury, thallium, lead, antimony, and iron. Silver was the only compound rejected for poor spike recovery; 54% of the silver data were acceptable. All other compounds were estimated. Minimal problems were observed for the continuing calibration standard recoveries for nickel, calcium, and iron. The field duplicate displayed

high RPDs for barium, boron, and iron. Most QC problems observed indicate potential underestimated sample concentrations.

Metal results were reported on a wet weight basis, and a correction for moisture content would result in a significant increase in concentration.

Wet chemistry. Minimal data limitations were observed in the wet chemistry parameters. Two bromide and sulfate results were estimated because of unacceptable blind control samples. The data bias could not be determined because no data were supplied for evaluation of the blind controls. One sample missed the holding time for carbon analysis, which might indicate a low bias in the data. Eight samples were estimated because the nitrate and sulfate matrix spikes had high recoveries, thus suggesting positive bias. Method 9060 for carbon analyses requires a minimum of one blank per sample batch. No blank information was reported or provided for the carbon analyses, and the data were not validated against this missing information.

All data were reported on a wet weight basis. A moisture correction would result in a significant increase in concentration. All "less than" values are instrument detection limits multiplied by the dilution factor. This modification defines these values as sample quantitation levels (SQLs).

Radiological Data Limitations

The radiological parameters generally displayed minimal data limitations. Most samples analyzed for total plutonium were analyzed in one batch, which resulted in estimation of 18 samples because of precision problems. One gamma background sample displayed minimal concentrations of cesium-137, but these background levels were subtracted from the sample results. The data were unaffected. W075228 displayed elevated MDAs for the gamma results (Eu-152/155) because aliquots were reduced due to elevated cesium activity. Three samples were estimated because of low gravimetric recovery for total strontium. The field duplicate displayed high RPDs for europium-154 and plutonium-244 by mass spectrometry.

Uranium and plutonium isotopics were analyzed by isotope ratio mass spectroscopy (IRMS). Uncertainties for the uranium isotopic data are 1σ , which represents a 68% confidence level. No

preparation blank was evaluated because one was not analyzed. Standards were analyzed with each batch to correct for bias due to mass discrimination and instrument dead time and were evaluated by ORNL CASD. No information for these was provided for validation. During the analysis of isotopic plutonium, the analyst noted that americium was observed, but no particular isotope was noted. Validation of uranium and plutonium isotopics by mass spectroscopy was limited due to a lack of QC information provided. The validation of these analyses strictly indicates isotopic abundances that were greater or less than the instrument detection limit. "Less than" values represent isotopes that were below the lowest abundance that could be detected.

Tanks W-1 and W-2 were reanalyzed for isotopic uranium by ICP/MS. All other isotopic uranium samples were analyzed by IRMS.

The values reported for the radiological parameters represent the wet sample; results are not moisture corrected. All other "less than" values are representative of minimal detectable activities calculated from the background value for that sample.

D6. METHODS OF ANALYSIS

The methods of analysis employed for the chemical and radiological analyses are presented in Appendix E.

D7. UNITS OF MEASURE

Units of measure for all reported parameters are listed in Table D-2.

D8. CONCLUSION

The data used to characterize the GAAT waste have been evaluated for quality. The review consisted of a Level 1 validation where blanks, spikes, duplicates, matrix spikes, holding times, and preservation were evaluated. Chemical data, with the exception of PCBs and wet chemistry, were validated against a project-specific validation procedure base on SW-846. Aroclor and wet chemistry data were validated using a CLP evaluation procedure. Radiological data were validated against

project-specific validation procedures. Data limitations have been reflected through the application of review qualifiers. All data were reported on a wet weight basis and were not corrected for moisture, and the resulting low bias should be considered when evaluating the data. Data that did not meet minimum quality standards were rejected; silver was the only rejected analyte.

Based on the review of the GAAT data set, it has been determined that the data are of sufficient quality, with the limitations outlined above, for use in the characterization of waste in the GAAT.

Table D-1. Validation codes, review qualifiers, and qualification codes

Review Qualifiers

U - Undetected
 J - Estimated Detect
 UJ - Estimated Nondetect
 R - Rejected
 - - Unqualified Result

Validation Codes

VV - Verified/Valid
 VI - Verified/Invalid

Qualification Codes

Radiological Data

B - Sample results $\leq 5X$ the blank, or blank is contaminated
 C - Certificate for spike unavailable
 E - Associated error is $\geq$ the result
 H - Missed 6-month holding time
 I - Instrument problems in analysis
 M - Matrix problem in analysis
 N - Tentatively identified radionuclide
 P - Procedural problem in analysis
 D - Duplicate difference if $>2\sigma$ or 25 % (35 % for solids) when sample results $> 5X$ MDA
 S - Problem with spike recovery (J $< 75\%$ or $> 125\%$ recovery if results are $>MDA$; UJ $> 125\%$ if $< MDA$; R $< 75\%$ if $< MDA$)
 T - Problem with tracer recovery (J < 30 and R $< 15\%$)
 -- No problems requiring the qualification of results

Inorganic Data

1 - Holding times	11 - Detection limit
2 - Sample preservation	12 - Standards
3 - Sample custody	13 - N/A
4 - Missing deliverables	14 - Other
5A - Calibration (initial)	15 - Furnace QC
5B - Calibration (continuing)	16 - ICP serial dilution
6 - Field blank	17 - Chemical recovery
7 - Lab blank	18 - Trip blank
8 - Matrix spike	19 - N/A
9 - Duplicate or matrix spike duplicate	20 - Linear range exceeded
10 - Laboratory control sample (LCS)	21 - Potential range exceeded
11 - Detection limit	22 - Sample lost in analysis

Table D-1 (continued)

Polychlorinated Biphenyls (PCBs)

- H - Holding times were exceeded
- M - Tuning (bromofluorobenzene or decafluorotriphenylphosphine) was not compliant
- R - Relative response factor was < 0.05
- C - Percent relative standard deviation or percent difference was outside of QC limits
- B - Presumed contamination from method blank
- T - Presumed contamination from trip blank
- F - Presumed contamination from field blank
- S - Surrogate recovery was outside of QC limits
- Q - MS/MSD recovery was poor or RPD was high
- E - Field duplicates showed poor agreement
- I - Internal standard performance was unsatisfactory
- + - False positive (reported compound was not present)
- - False negative (compound was present but not reported)
- \$ - Reported result or other information was incorrect
- ? - TIC identity or reported retention time has been changed
- D - Original analyses, dilutions, resanalysis, or duplicate data that should not be used because another more technically sound analysis is available
- P - Instrument performance for pesticides was poor
- * - Unusual problems with the data that have been described in the data summary
- Z - The QC level of validation has been reduced
- X - A difference between the original hardcopy and the electronic data was found
- ! - Designated as a QC sample

Wet Chemistry

- H - Holding time exceeded
 - S - Standard out of SOW/SOP specifications
 - C - Correlation coefficient < 0.995
 - R - Percent recovery calibration (initial and continuing) out of control
 - B - Presumed contamination from blank results
 - L - LCS percent recovery out of control limits
 - E - Duplicate sample results not within control
 - Q - MSD, MS, or RPD out of control limits
 - F - Field duplicates showed poor agreement
 - \$ - Reported result or other information was incorrect
 - * - Unusual problems with the data that have been described in the data summary
 - Z - The QC level of validation has been reduced
-

Table D-2. ORNL Units of measure

Parameter	Solid	Liquid
PCBs	mg/kg	NA
Metals	$\mu\text{g/g}$	$\mu\text{g/mL}$
Total carbon	$\mu\text{g/g}$	$\mu\text{g/mL}$
Anions	$\mu\text{g/g}$	$\mu\text{g/mL}$
Density	g/mL	g/mL
$\text{CO}_3/\text{HCO}_3/\text{OH}$	NA	mol/L
Alpha spectrometry	%	%
Gamma spectroscopy	Bq/g	Bq/mL
Gross fissile	$\mu\text{g/g}$	$\mu\text{g/mL}$
Gross alpha/beta	Bq/g	Bq/mL
Total radioactive strontium	Bq/g	Bq/mL
Plutonium-total	Bq/g	Bq/mL
Plutonium-isotopic (MS)	at. %	at. %
Uranium-total (ICP/MS)	NA	$\mu\text{g/mL}$
Uranium isotopic (MS)	at. %	at. %
pH	pH	pH
Gross water	% moisture	NA

APPENDIX E
ANALYTICAL METHODOLOGY

ANALYTICAL METHODOLOGY

The analytical procedures followed to generate the data on the GAAT project sludges and liquids are listed in the table following this text. This additional discussion on selected procedures and techniques provides brief descriptions of analytical processes and documents any deviations from the procedures.

METAL MEASUREMENTS

Sample Preparation for Metals and Radiochemical Analyses

Samples were prepared for all metal and radiochemical analyses by microwave digestion. The digestion procedures followed were SW-846 Method 3015, *Microwave Assisted Digestion of Aqueous Samples and Extracts*; and Method 3051, *Microwave Assisted Digestion of Sediments, Sludges, Soils, and Oils*.

Liquid samples were prepared by filtering the samples using Whatman 20-micron ashless filter paper. Forty mL of the filtered sample was then transferred into a Teflon microwave vessel, and 5 mL of 15.8 M HNO₃ was added for the digestion.

Sludge samples were prepared by weighing 0.5 g of sample into a Teflon microwave vessel and adding 10 mL of 15.8 M HNO₃. The digestates were filtered using Whatman 20-micron ashless filter paper. There was no appreciable residue left on the filter for any sludge digested.

Metal Analysis by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

A Spectroflame - ICP Model FAO-05 was modified for use with radioactive samples by isolating the ICP torch box in a stainless steel enclosure for containment of radioactivity. The optic system for the ICP contains three polychromators and a monochromator. The three polychromators allow for the simultaneous measurement of up to 22 metals and the monochromator is used for sequential measurement of analytes with emission wavelengths between 210 and 800 nanometers. This system uses quartz fiber optics to carry light emitted from the plasma to the spectrometer, which

makes it particularly well suited for radioactive sample analysis. A Meinhard Type K nebulizer was used for all sample analyses.

Metal Analysis by Graphite Furnace Atomic Absorption (GFAA)

The instrumentation employed for GFAA measurements was a Perkin-Elmer 5100 AA system with an HGA-600 furnace option. Zeeman-effect background correction was employed for all GFAA measurements. The spectrometer is in a stainless steel enclosure, similar to the ICP system, to allow measurements on radioactive samples. The technique used for all GFAA samples was an approach called the stabilized temperature platform furnace (STPF) concept, which was developed by Perkin-Elmer Corporation. The STPF approach is based on a number of principles, including the use of the L'vov platform, fast electronics, quantitation by peak area, matrix modifiers, pyrolytically coated graphite tubes, fast heating of the furnace, no flow or support gas during the atomization step, and Zeeman-effect background correction. STPF results in increased sensitivity and lower detection limits. The furnace temperature program included a cool-down step to ambient temperature before the atomization step.

Mercury Analysis by Cold Vapor Technique

The mercury cold vapor technique was performed using an MHS-20 (Mercury-Hydride System) attachment for the Perkin-Elmer 5100 AA system. The MHS-20 included a heated 10-cm quartz cell that is placed in the flame AA light path of the 5100 system, a sample handling system, and a system controller for programming the addition of reductant and reaction times. The signal from the spectrometer is then processed by the 5100 system computer. Peak heights were used for quantitation.

TRU-Spec™ Cleanup

Sludge samples that contained high levels of uranium and thorium had excessive spectral interferences in the analysis of several metals (aluminum, antimony, beryllium, copper, magnesium, silver, and vanadium). The uranium and thorium were removed through recently developed techniques using extraction chromatography, specifically the use of a commercially available

EiChrom TRU-Spec™ column. The sludge digestate is passed through the column followed by a 4 *M* HNO₃ wash. All actinides, which include uranium and thorium, are removed from the sample solution. The acid wash is diluted to a known volume and then analyzed by ICP.

Comments on Metal Analyses

Mercury was analyzed by the cold vapor technique. Arsenic and selenium were determined by GFAA. All other metals were determined by ICP.

Metal preparation and analysis were conducted using the protocols established in SW-846 methods. When excessive spectral interference was encountered during ICP analysis due to high uranium and thorium levels, a portion of the sample digestate was put through a TRU-Spec™ separation and this extract was analyzed per method 6010A.

Three integrations were analyzed for ICP measurements and two were analyzed for GFAA and MHS measurements. The reported errors are equal to twice the standard deviation of the instrumental measurements.

ANION MEASUREMENTS AND CARBON ANALYSIS

Common Anions

Liquid samples and a water wash/dissolution of sludge samples were analyzed for bromide, chloride, fluoride, nitrate, phosphate, and sulfate. A Dionex series 4500i ion chromatograph configured with a pulsed electrochemical detector operating in the conductivity mode was used. A carbonate eluant was used with a Dionex IonPac AS4A anion exchange column for the anion separation.

Carbon Analysis

Samples were analyzed for carbon content using a Dohrmann DC-90 carbon analyzer. For liquid samples, total carbon (TC) and total inorganic carbon (IC) were measured directly. Total

organic carbon (TOC) results were obtained by taking the difference between TC and IC. The TC was measured by direct sample injection into a 0.2% phosphoric acid carrier stream and transported to a combustion tube packed with cobalt oxide and heated to a temperature of 900°C. The furnace was continually sparged with oxygen. All carbon in the sample was converted to carbon dioxide and transported through scrubber systems to a nondispersive infrared (IR) detector. Liquids were assayed for IC by sample injection into a phosphoric acid bath that converted the carbonates in the samples to carbon dioxide gas. The phosphoric acid bath was continually sparged with oxygen that transported the evolved carbon dioxide to the IR detector. For solid samples, TC was measured directly by weighing an aliquot of sample onto a platinum boat and then placing the boat into an 800°C furnace that was continuously sparged with oxygen. The combustion gases were directed to the IR detector via the scrubber systems. TOC was measured directly in the same manner with the exception that after the aliquot was weighed onto the platinum boat, two drops of 50% nitric acid were placed the sample and then dried at 80°C for 20 min to drive off the inorganic carbon prior to analysis. IC results were obtained by taking the difference, for each burn, between TC and TOC, and then averaging them.

Hydroxide/Carbonate/Bicarbonate Analysis

Samples were titrated for alkalinity with 0.1 *M* HCl. A Brinkman 686 Titroprocessor connected to a computer with extended graphing capabilities was used to conduct the titrations.

Comments on Anion, Carbon, and Alkalinity Analyses

The presence of small aliphatic acids (formate and acetate) interfered with the determination of fluoride in some of the liquid samples. In all cases, though, the interference was able to be electronically corrected for using the Dionex software program.

Sludge samples were prepared by placing 1 g of sludge in 10 mL of water and agitating for 10 min. The slurry was then filtered and the filtrate was analyzed for anion content.

The calibration curves for anion analyses were constructed from one blank and five calibration standards traceable to National Institute for Standards and Technology (NIST) standards.

To check the ion chromatograph's calibration, an independently prepared calibration check and a blind QC sample were analyzed. Acceptance criteria for the calibration check was $\pm 10\%$ and the results for the blind QC sample had to be accepted before the analysis was performed. A continuing calibration standard was analyzed in accordance with Method 9056, but due to the complexity of the sample matrices being analyzed the acceptance criterion of the CCV was extended to $\pm 15\%$ vs $\pm 5\%$. The Dohrmann carbon analyzer was calibrated per manufacturer's instructions using a one-point calibration curve. The calibration standard was prepared using reagent grade potassium hydrogen phthalate that was weighed against weights that are NIST-traceable.

Interferences due to the presence of weak acids and bases in the liquid samples hindered the ability to obtain adequate titration curves. "Less than" values were calculated using information generated from the titration curves, pH, and inorganic carbon measurements.

Two replicate measurements were analyzed for the anions and four for carbons. The reported errors are equal to twice the standard deviation of the instrumental measurements.

MISCELLANEOUS MEASUREMENTS

Isotopic Determination of Uranium

To determine uranium isotopes, an extraction was performed on all samples (with the exception of the supernatants from tanks W-1 and W-2) using a Bio-Rad Dowex 1 X 4 resin column. The sample was converted to the Cl^- form, made 8 M with HCl , then poured through a column conditioned with 8 M HCl . The uranium was stripped from the column using 8 M HNO_3 and analyzed by thermal ionization mass spectrometry to determine uranium isotopes. A NIST certified isotopic standard (NBS 010) was analyzed with each batch to determine the bias associated with isotope ratio measurements. Due to the low levels of uranium present in tanks W-1 and W-2, the supernatants were concentrated and analyzed by ICP-MS for uranium isotopes.

Sludge pH

Due to the radiation hazard and sample quantities, sludge pH was determined on a smaller portion than is specified in Method 9045A. One- to two-gram portions were used vs the 10 g specified. The ratio between sample and reagent was maintained in all measurements.

Bulk Density

A small portion of sludge was submersed in 4 M NaOH. The volume and weight change was noted, and bulk density was calculated.

Solid Measurements

All total suspended and dissolved solid measurements for liquid samples were performed on 10-mL sample portions.

RADIOCHEMICAL MEASUREMENTS

Gross Alpha/Alpha Spectrometry

Regardless of preparation method (TRU-Spec™ or microwave dissolution), all samples were pipetted onto clean 2-in. stainless steel planchets and evaporated to dryness slowly. After evaporation, the planchets were heated to a dull red glow over a Bunsen burner to fix the activity on the planchet. The amount of each sample plated was determined by the estimated activity of that sample. The plates were then allowed to cool before counting on a Tennelec LB4000 low-level alpha/beta counter equipped with 2-pi gas flow proportional detectors. This system, when used in the alpha-only mode, provides the gross alpha activity of the plated sample. Background subtraction, sample dilutions, and correction for activity absorption due to solids were considered in the final calculation of sample activity. It should be noted that errors were based on counting statistics, not on error propagation. A duplicate and a blind control sample were analyzed with each batch of 20 samples. In many cases, more than one duplicate was analyzed per batch.

After gross alpha measurement, the planchets were analyzed for alpha nuclides using Tennelec TC256 alpha spectrometers with passive implanted planar silicon (PIPS) detectors and the ND9900 data acquisition system. The system identifies alpha isotopes based on their distinct energy peaks. These energy peaks are evaluated and the relative percentage of each isotope is determined. Based on these percentages, the activity of each detected nuclide can be calculated from the gross alpha result. An Amersham standard plate containing ^{241}Am , ^{239}Pu , and ^{244}Cm was used to perform an energy calibration of the alpha spectrometer before use.

Gross Beta

Due to the volatility of cesium, which was a problem with these samples, gross beta (gross activity) measurements were performed by liquid scintillation counting (LSC). Unlike gas flow proportional counting, preparation for LSC does not require heating. Preparation involved adding an aliquot of digested sample (0.1 to 2.0 mL, depending on the estimated sample activity) and 15 mL of Ultima Gold™ scintillation cocktail to a 20-mL plastic scintillation vial. The samples were vortexed and counted on a Packard 2500 TR liquid scintillation counter for gross beta activity. A blank, a blind control sample, and a $^{90}\text{Sr}/^{90}\text{Y}$ standard were counted along with each batch of samples. Calculated results used the value of the blank for background subtraction.

Gamma Spectrometry

Up to 10 mL of the microwave-digested sample was pipetted into plastic scintillation vials and brought to a final volume of 10 mL, if necessary. The sample volume used was determined by the estimated activity of that sample and the observed dead time of the instrument. These vials were then counted on a high-purity germanium detector with a nominal 25% efficiency and Canberra, Nuclear Data's (ND) AccuSpec™ Genie-PC system. This system identifies gamma emitting nuclides based on their corresponding gamma ray energies. Background is counted on a routine basis and any identified peaks in the background are automatically subtracted from the sample spectra using ND software. To check instrument performance, blind QC samples are analyzed daily prior to sample counting and recorded in a QA/QC data base. Any "flags" on the QC check are investigated and/or corrected prior to sample counting.

Strontium-90 Analysis

Determination of strontium-90 requires a separation to remove interference caused by yttrium-90 during beta counting. Procedure AC-MM-2-21807 utilizes an extraction chromatographic column that absorbs strontium under high acid conditions while yttrium is eluted. The strontium may be eluted from the column by the addition of a low (0.1 *M*) nitric acid solution. This procedure was used on the GAAT samples to isolate strontium-90. A stable strontium carrier was added to the samples before application to the column for yield determination. When the strontium was eluted from the column, the eluents were dried down on 2-in. stainless steel planchets, weighed, and flamed over a Bunsen burner. Yield corrections were determined by the recovered weight of the carrier on the planchet and applied to the final strontium-90 result. For some of the samples, due to high activity of the sample and matrix factors, measurement of the carrier weight was complicated. For these samples, a $^{90}\text{Sr}/^{90}\text{Y}$ standard was applied to the column and used for yield corrections.

Instrument backgrounds were considered in measurements of all GAAT samples. A blank was analyzed to ensure that background activity due to the method was negligible. Blind control samples were also analyzed with each batch of samples.

Total Plutonium Analysis

Determination of total plutonium requires a separation of plutonium from other alpha emitters in the sample that interfere in subsequent alpha measurements. Procedure AC-MM-2-31621, using an organic solvent, thenoyltrifluoroacetone, to extract plutonium from acidic media, was used on the GAAT samples. After sample extraction, an aliquot of the organic phase was dried down on a 1-in. stainless steel plate and flamed over a Bunsen burner. The plate was analyzed for total plutonium activity using a Nuclear Measurements Corporation PCC 11T, 2-pi gas flow proportional counter. Instrument background subtractions were applied to all sample results. A plutonium QC sample was analyzed with each batch of samples. Isotopic plutonium was further analyzed by thermal ionization mass spectrometry.

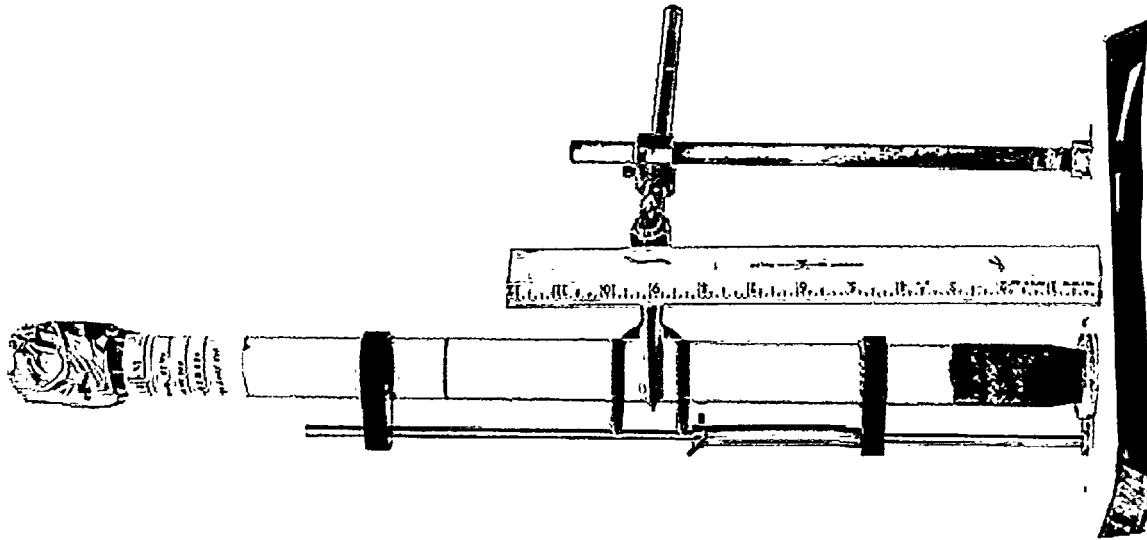
ANALYTICAL METHODS

Methods	Analysis
Test Methods for Evaluating Solid Waste, Physical/Chemical, SW-846, 3RD Edition, Update 1, July 1992 • Method 6010A • Method 7000A • Method 7470 • Method 7471 • Method 9060 • Method 9040 • Method 9045A • Method 8081	Metals determined by inductively coupled plasma (ICP) Metals determined by graphite furnace atomic absorption (GFAA) Mercury determination in liquids Mercury determination in solids Carbon analyses for sludges and liquids pH of liquids pH of sludges PCBs
Test Methods for Evaluating Solid Waste, Physical/Chemical, SW-846, 3RD Edition, Proposed Update 2, November 1992 • Method 9056 • Method 3015 • Method 3051	Anion determination in liquids and sludges Microwave digestion of liquids Microwave digestion of sludges
Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983 • Method 160.1 • Method 160.2	Total dissolved solids in liquids Total suspended solids in liquids
Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma and Mass Spectroscopy, EPA/600/4-91/010, April 1991 • Method 200.8	Isotopic determination of uranium
ORNL Procedures • Density of Liquids and Solids, AC-MM-11011 • Total Pu by Thenoyltrifluoroacetone Extraction Method, AC-MM2-31621 • Metrohm Potentiometric Titrations AC-MM-1003105 • Sample Management in the Radioactive Materials Analytical Laboratory, CASD-OP-RML-AD02 • Total Radioactive Strontium in Aqueous Solutions: Extraction Chromatography Method, AC-MM-2-21807 • Operation of Packard 2500TR Liquid Scintillation Counter, AC-MM-2-1111 • Operation of Nuclear Measurement Corporation Proportional Alpha Counting System, AC-MM-2-00356	Sludge and liquid densities Total Pu determination on sludges and liquids All liquid titrations Sample and data management Radioactive strontium Beta emitting radionuclides Gross alpha/beta radioactivity

Methods	Analysis
• General Procedure for Isotopic Composition Measurement by Thermal Ionization Mass Spectrometry, AC-MM-40100 • Gross Alpha Measurement in Aqueous or Organic Solutions, AC-MM-9 002301 • Alpha Spectrometry with the ND9900 Data Acquisition System, AC-MM-1-003115 • Alpha and Gamma-Ray Spectrometry with the ND9900 Data Acquisition System, AC-MM-2-21996 • Multielement Comparative Neutron Activation Analysis, AC-MM-222003	Isotopic determination of uranium and plutonium Gross alpha determination Alpha emitting radionuclides Gamma emitting radionuclides Gross fissile

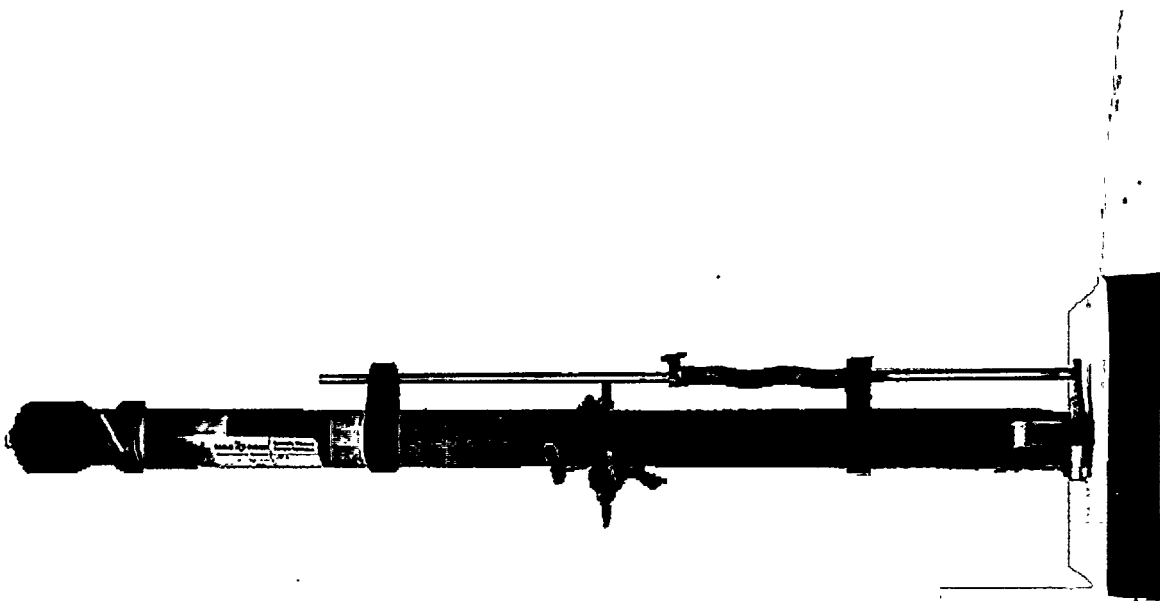
APPENDIX F

GAAT ANALYTICAL RESULTS AND LABORATORY OBSERVATIONS



W05S230
IPA ANALIS
7182 940001-140

9429-94



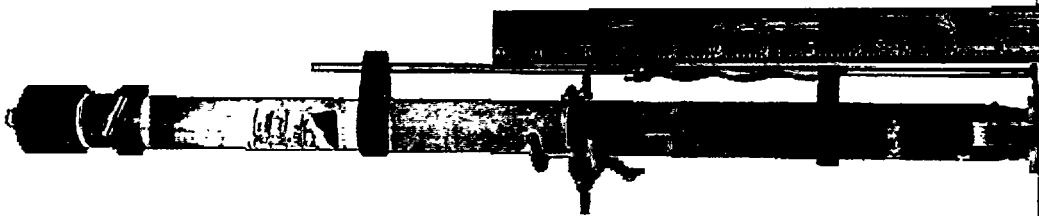
W03S212
IPA ANALIS
7182 940001-140

7124-94



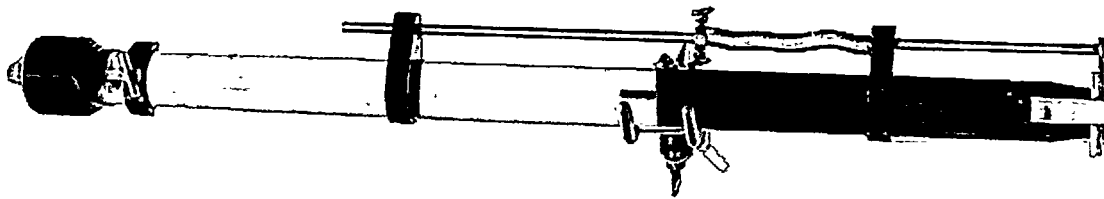
WO4F217
IPA ANALIS
7190 9:0909-041

7129-94



WO4S216
IPA ANALIS
7189 9:0909-040

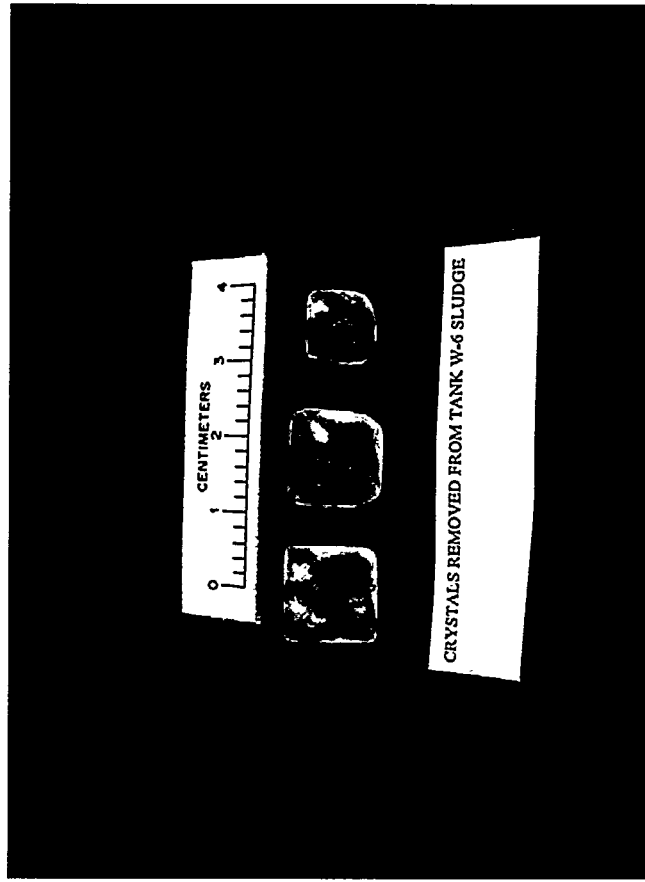
7128-94



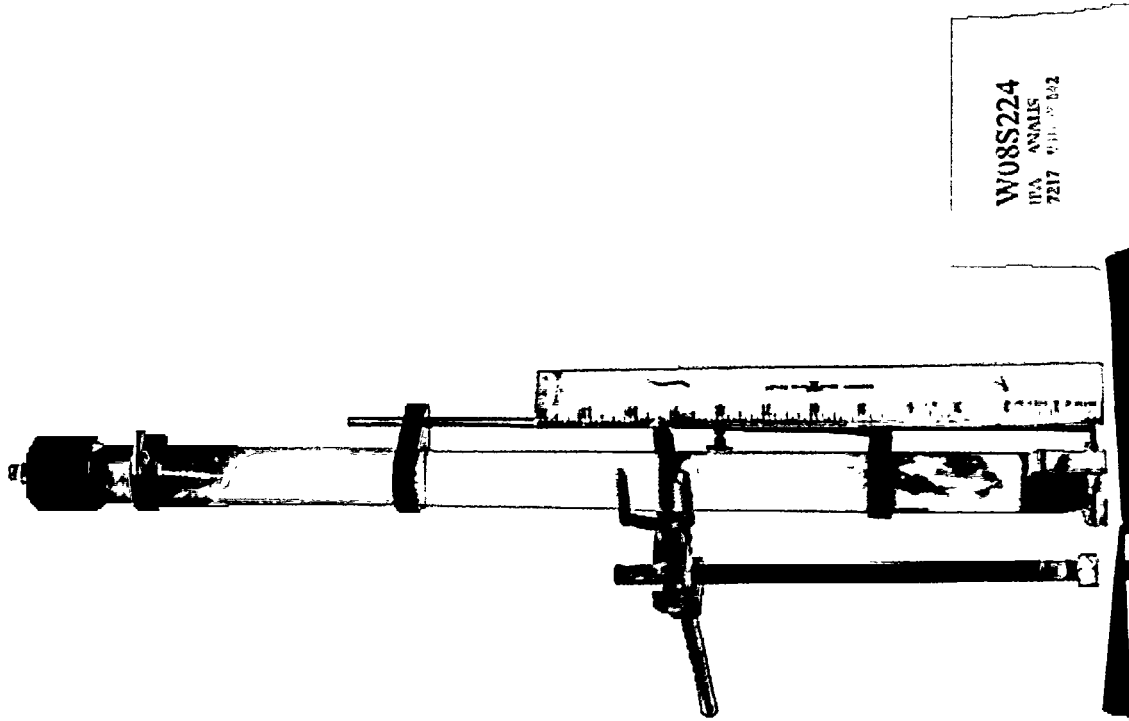
IPA 7196

W06S2211

7130-94

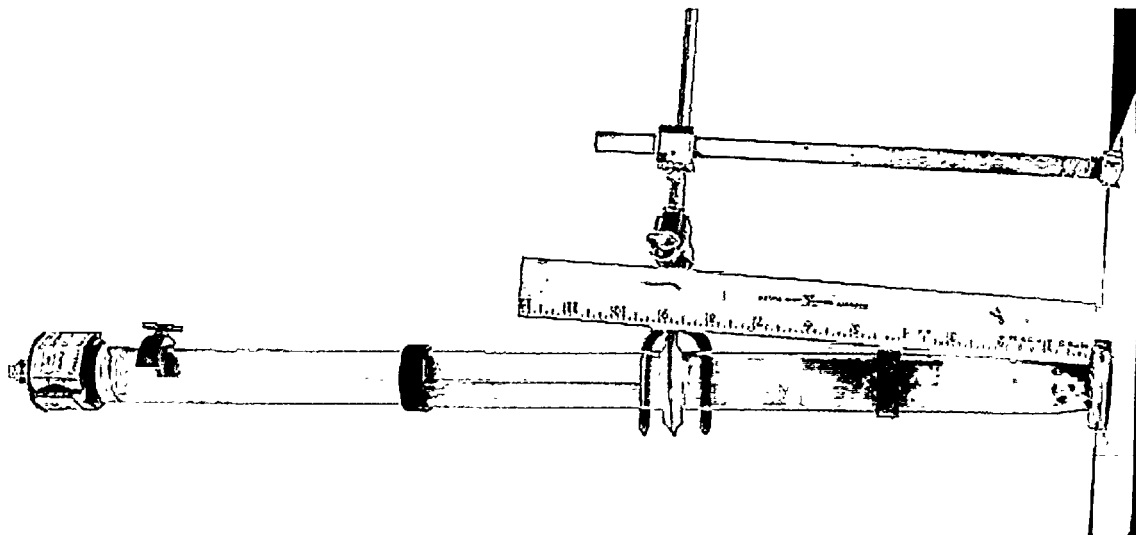


10597-94



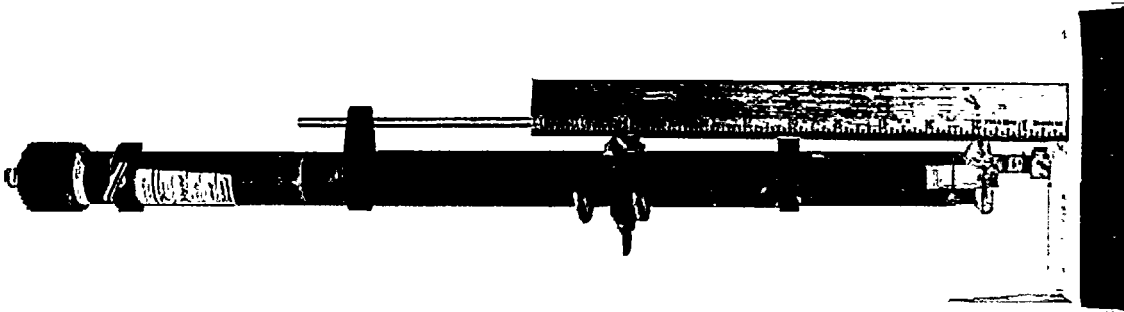
W08S224
IPA ANALIS
7217 9111 05 042

7859-94



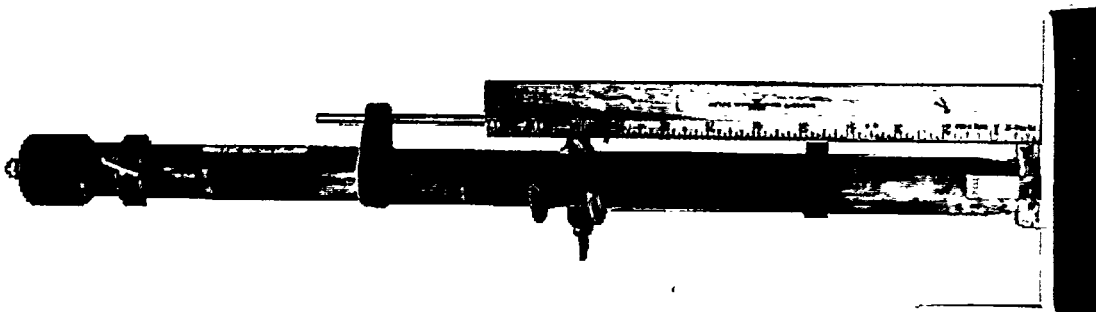
W07S229
IPA ANALIS
7223 91101 1-0855

7954-94



TH4S214
ITA ANALIS
7186 940007-1101

7126-94



TH4S213
ITA ANALIS
7186 940007-029

7125-94

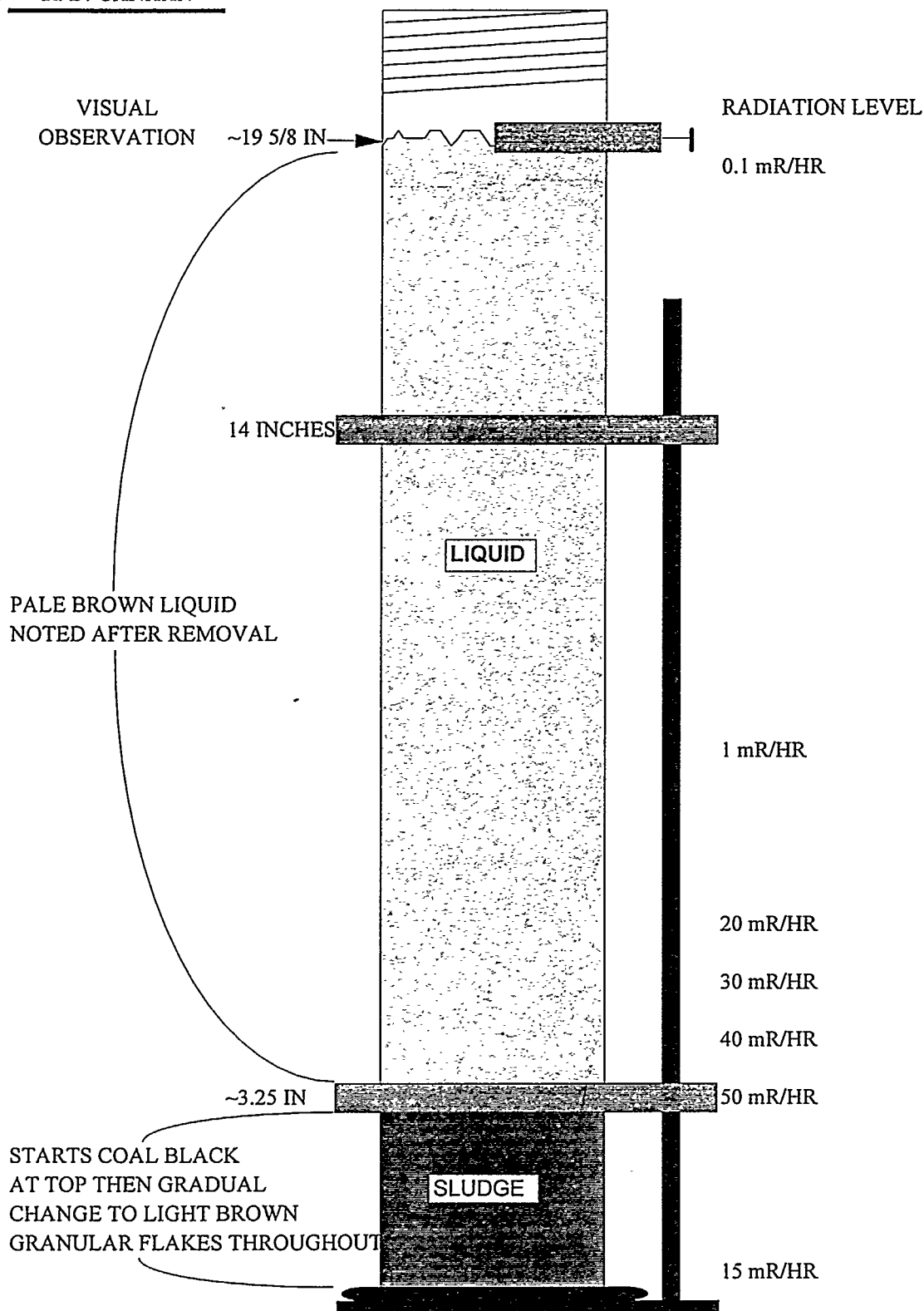
GUNITE COLUMN DATA

TANK # WO3S212
PA 7182
ANALIS # 940901-140
ANALYST R. D. CANAAN

CALCULATED VOLUMES

	LEVEL (IN VOLUME (mL))	
LIQUID	19.625	211
SLUDGE	3.25	42

DATE SEPARATED: 9/14/94



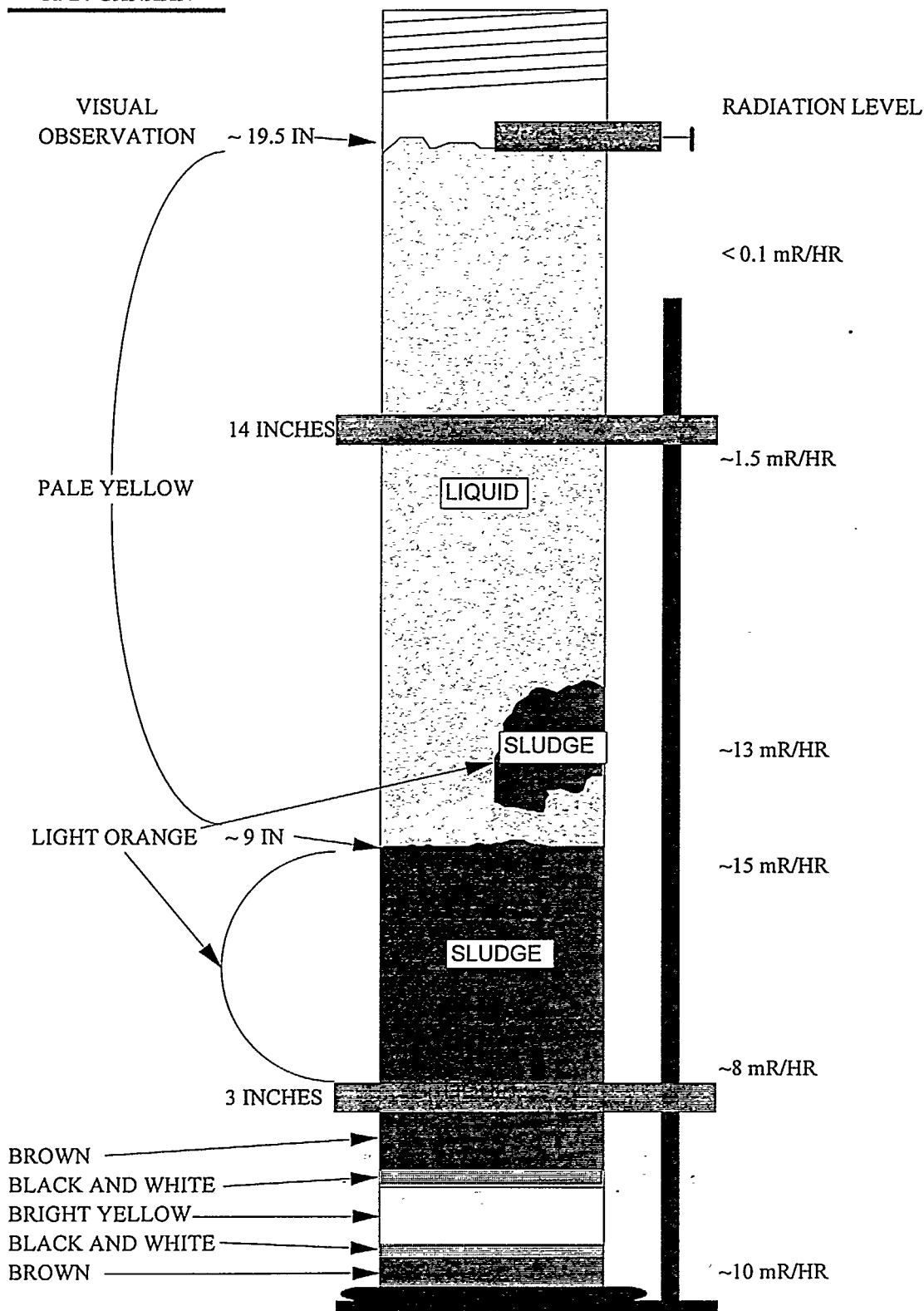
GUNITE COLUMN DATA

TANK # WO4S216
 PA 7189
 ANALIS # 940909-040
 ANALYST R. D. CANAAN

CALCULATED VOLUMES

	LEVEL (IN VOLUME (mL))	
LIQUID	19.5	135
SLUDGE	9	116

DATE SEPARATED: 9/16/94



GUNITE COLUMN DATA

TANK # WO4H217

PA 7190

ANALIS # 940909-041

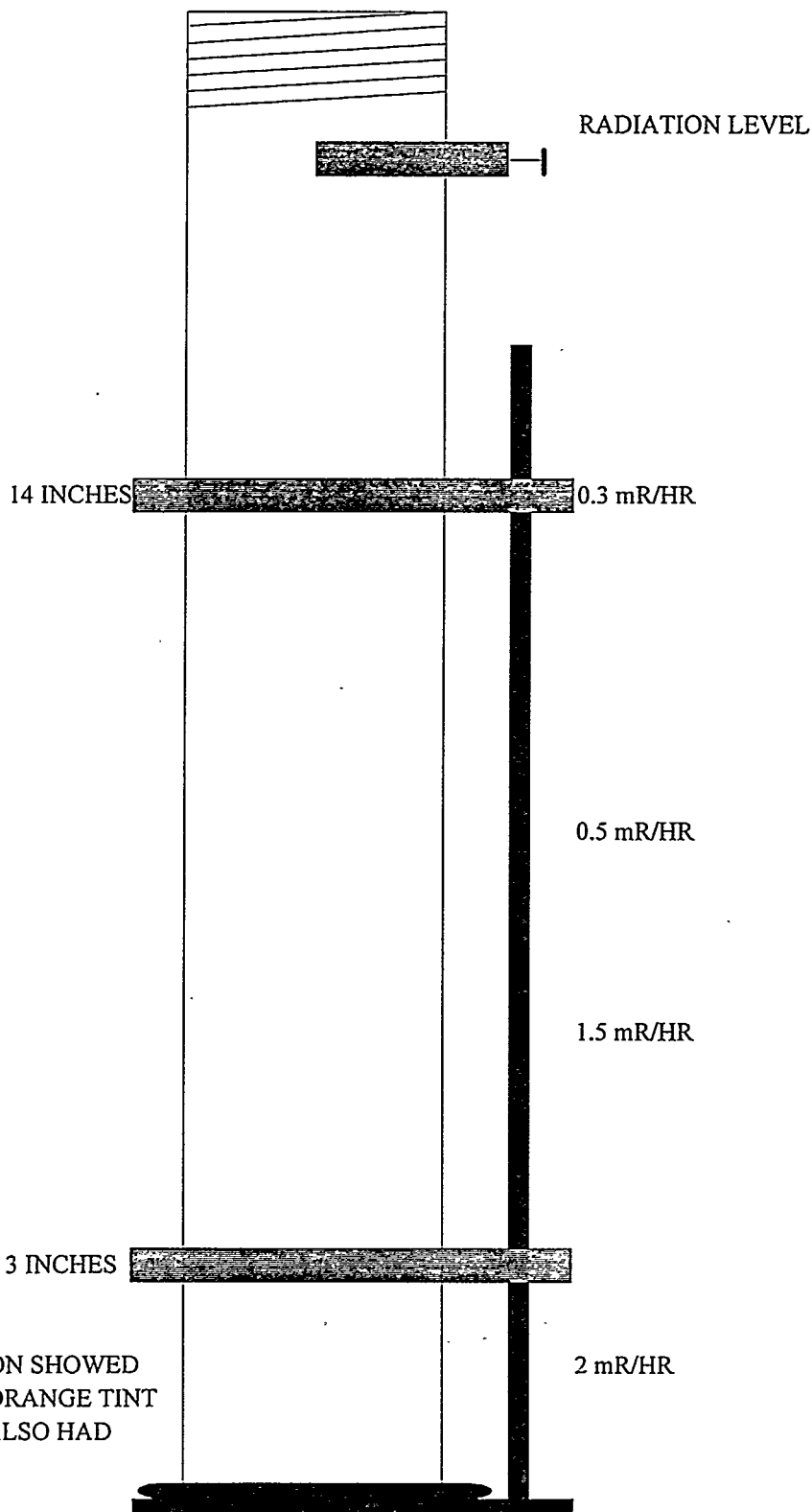
ANALYST R. D. CANAAN

OBSERVED VOLUMES

	LEVEL (IN VOLUME (mL))	
LIQUID	0	200
SLUDGE	0	20

DATE SEPARATED: 9/14/94

STEEL TUBE
NO VISUAL OBSERVATION
POSSIBLE



POST SEPARATION OBSERVATION SHOWED
YELLOW TINT TO LIQUID AND ORANGE TINT
TO THE SLUDGE. THE SLUDGE ALSO HAD
GRANULAR TEXTURE

GUNITE COLUMN DATA

TANK # W05S230
PA 7250
ANALIS # 941025-022
ANALYST R. D. CANAAN

CALCULATED VOLUMES

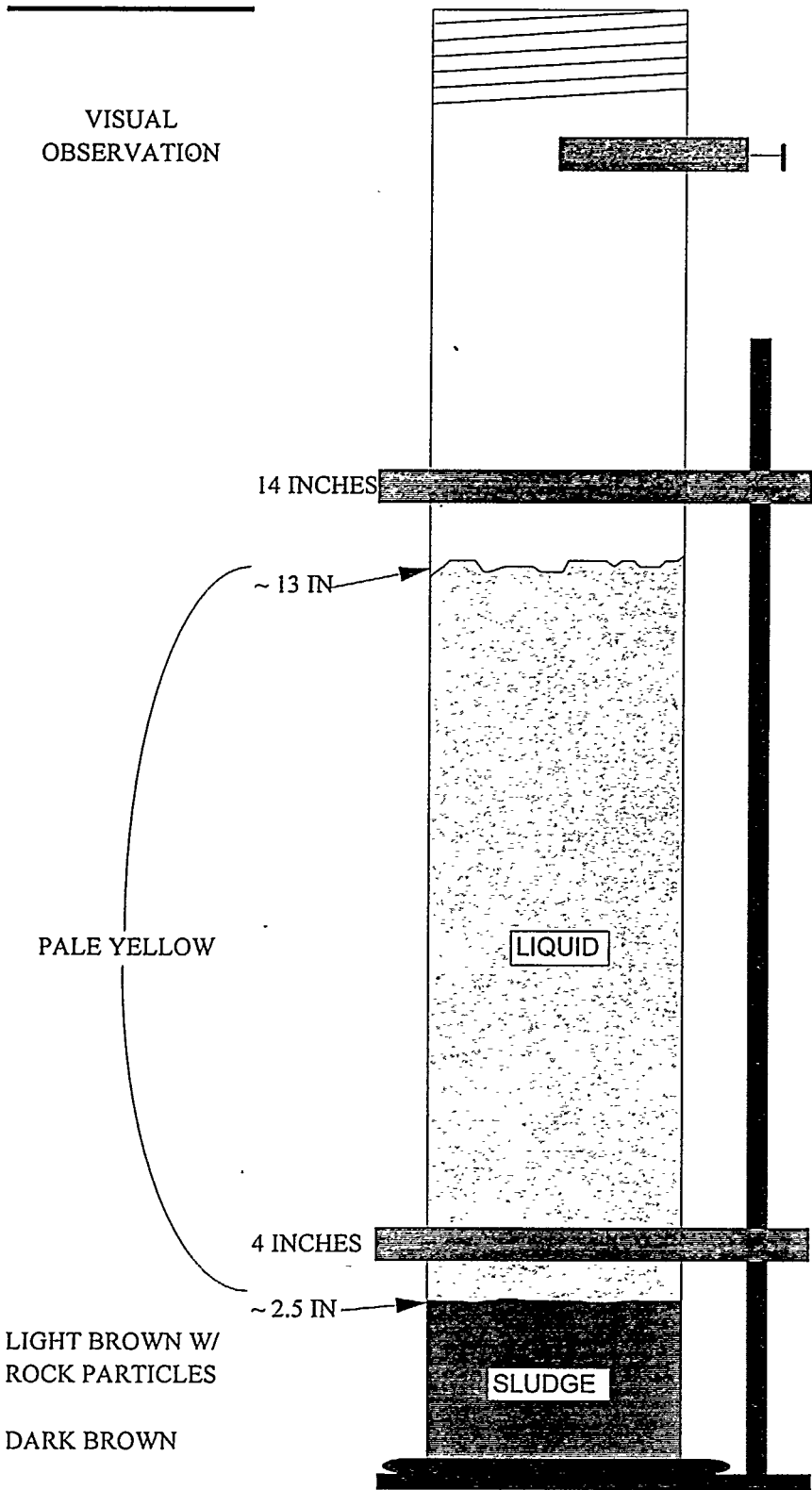
	LEVEL (IN VOLUME (mL))	
LIQUID	13	135
SLUDGE	2.5	32

DATE SEPARATED: 10/31/94

VISUAL
OBSERVATION

RADIATION LEVEL

UNABLE TO PERFORM DUE TO
LEAKAGE FROM TUBE



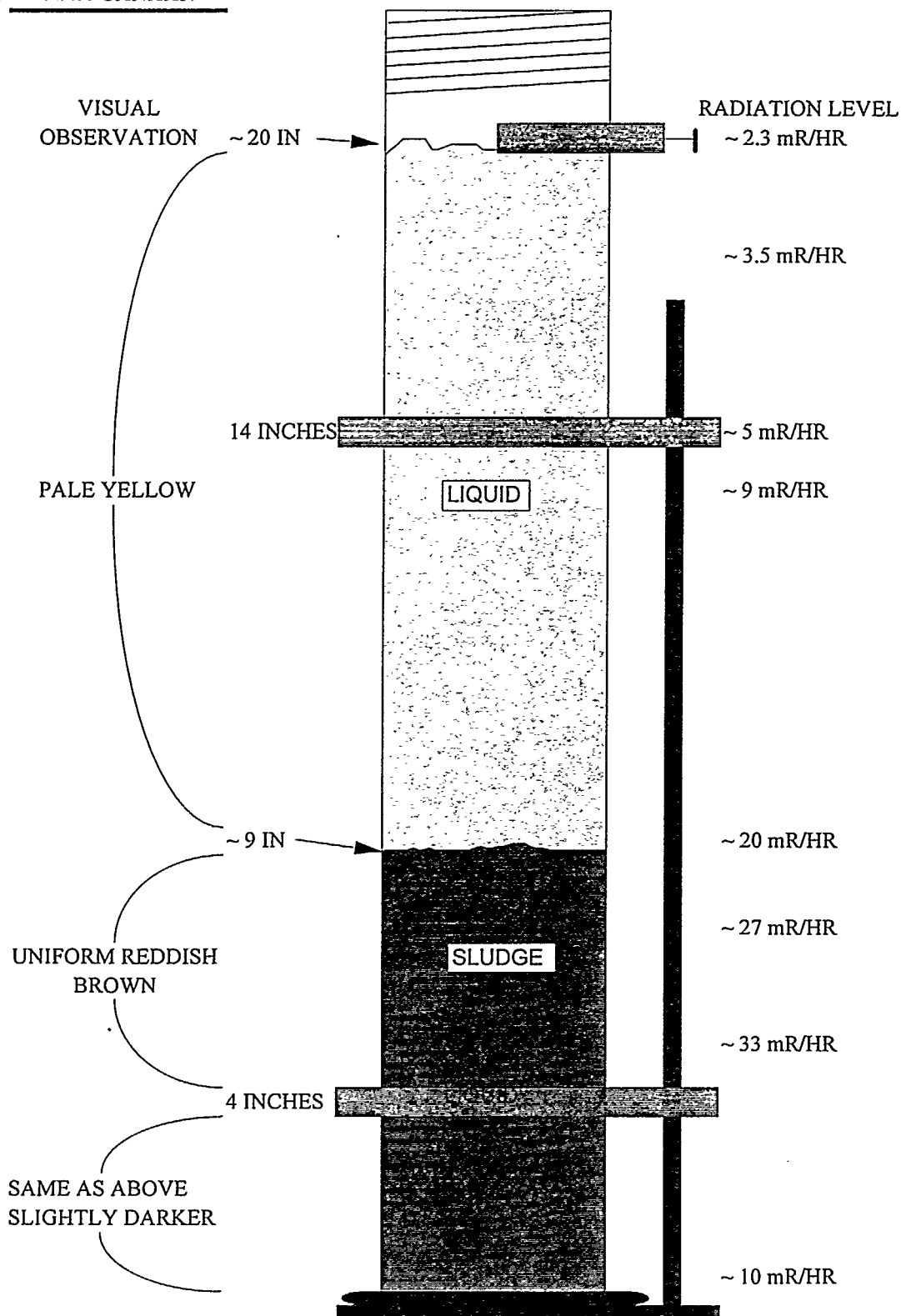
GUNITE COLUMN DATA

TANK # WO6S221
 PA 7196
 ANALIS # 940913-193
 ANALYST R. D. CANAAN

CALCULATED VOLUMES

	LEVEL (IN VOLUME (mL))	
LIQUID	20	142
SLUDGE	9	116

DATE SEPARATED: 9/20/94



GUNITE COLUMN DATA

TANK # W07S228

PA 7223

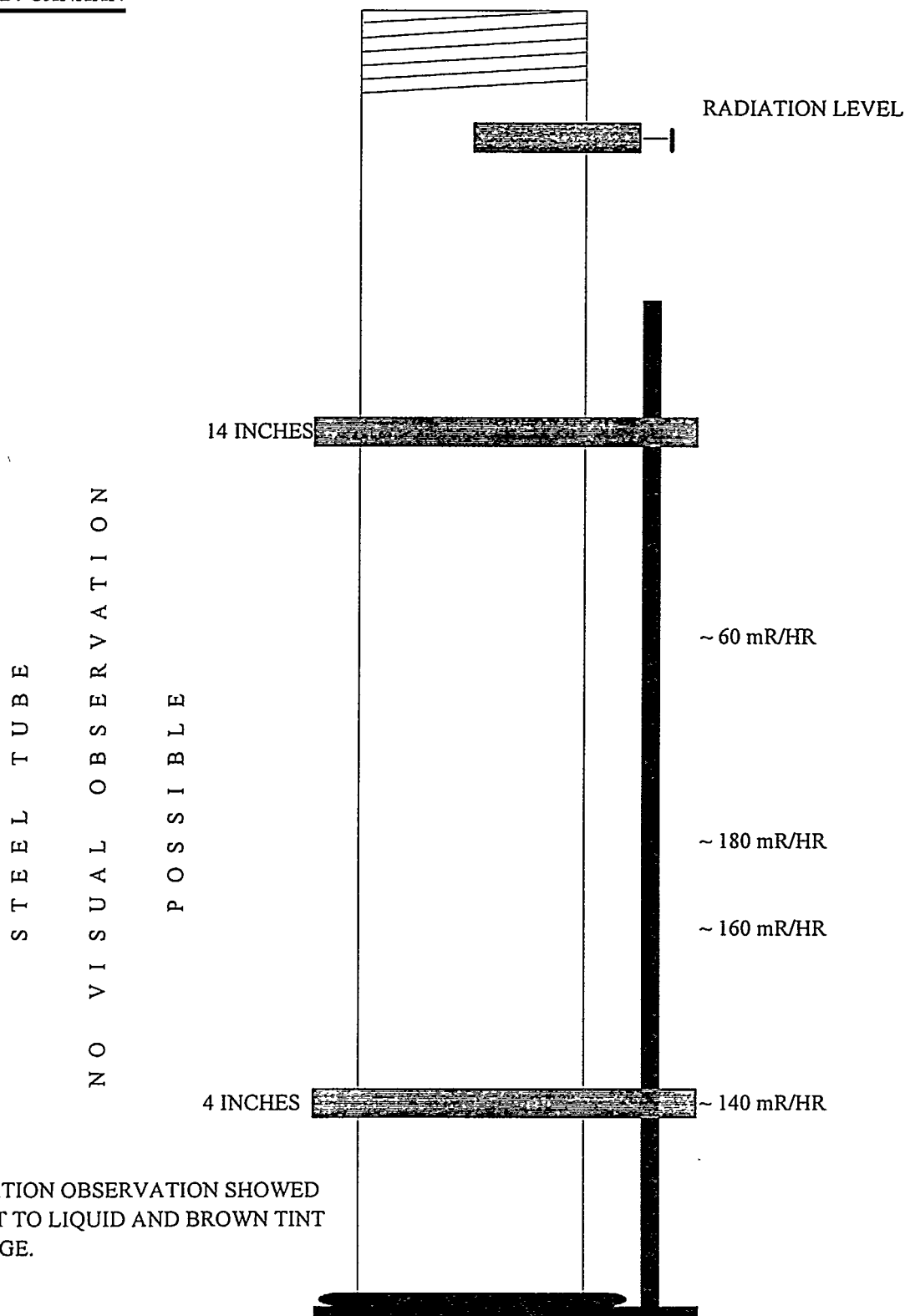
ANALIS # 941011-084

ANALYST R. D. CANAAN

OBSERVED VOLUMES

	LEVEL (IN VOLUME (mL))	
	0	60
LIQUID	0	60
SLUDGE	0	80

DATE SEPARATED: 10/14/94



AFTER SEPARATION OBSERVATION SHOWED
YELLOW TINT TO LIQUID AND BROWN TINT
TO THE SLUDGE.

GUNITE COLUMN DATA

TANK # W07S229

PA 7223

ANALIS # 941011-085

ANALYST R. D. CANAAN

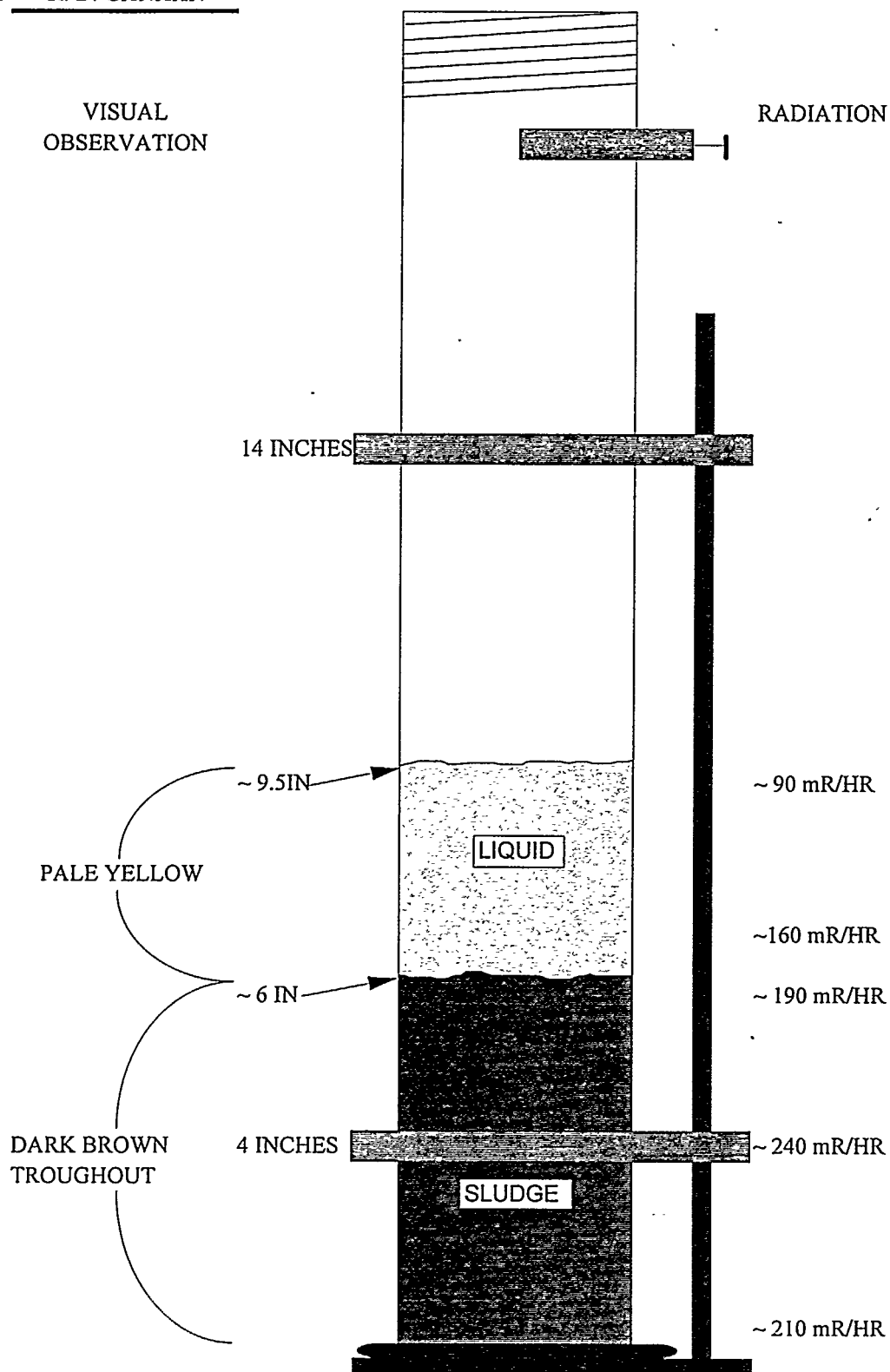
CALCULATED VOLUMES

	LEVEL (IN VOLUME (mL))	
LIQUID	9.5	45
SLUDGE	6	77

DATE SEPARATED: 10/14/94

VISUAL
OBSERVATION

RADIATION LEVEL



GUNITE COLUMN DATA

TANK # W08S224

PA 7217

ANALIS # 941005-142

ANALYST R. D. CANAAN

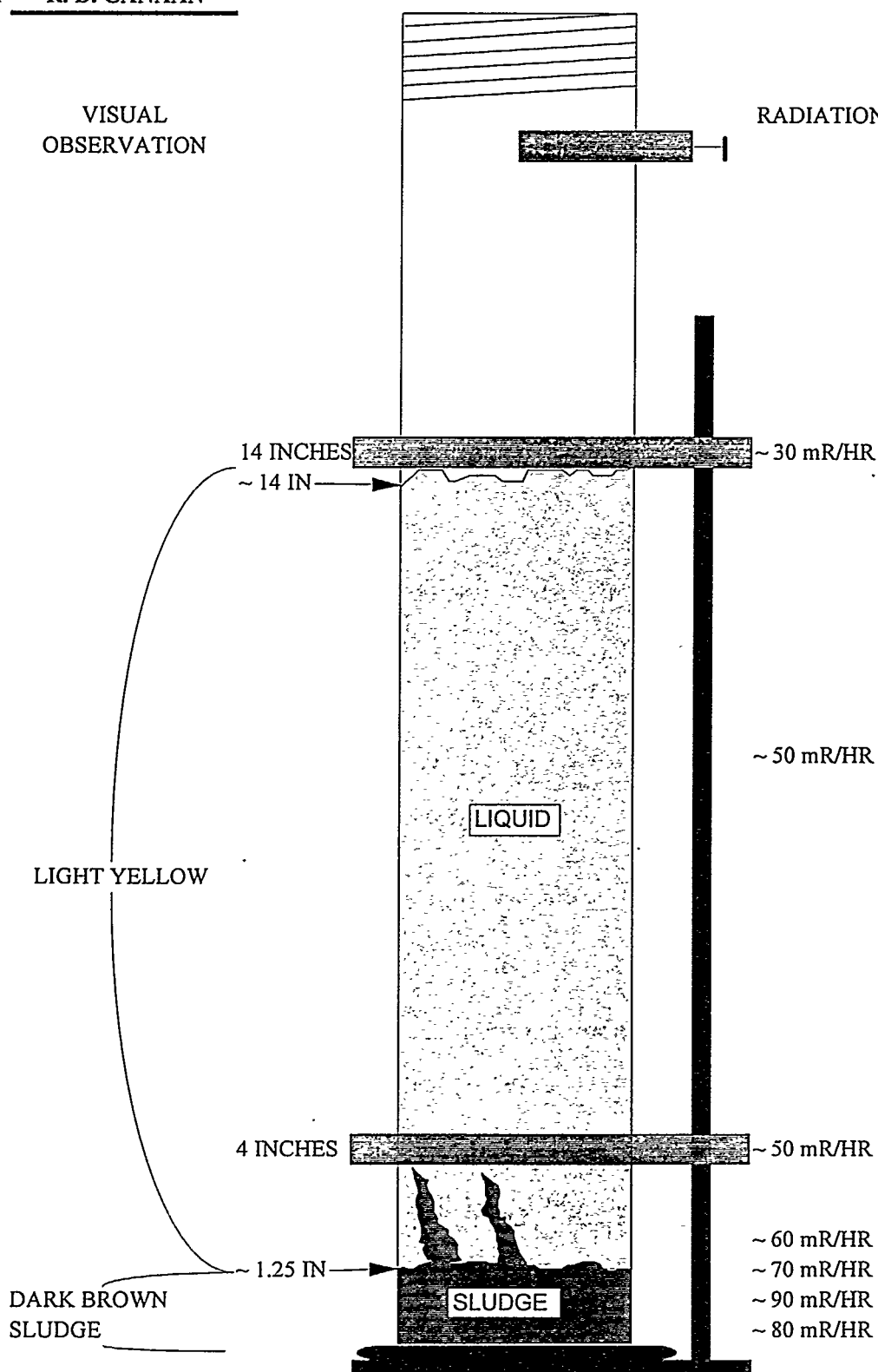
CALCULATED VOLUMES

	LEVEL (IN VOLUME (mL))	
LIQUID	14	164
SLUDGE	1.25	16

DATE SEPARATED: 10/6/94

VISUAL
OBSERVATION

RADIATION LEVEL



GUNITE COLUMN DATA

TANK # W09S227

PA 7222

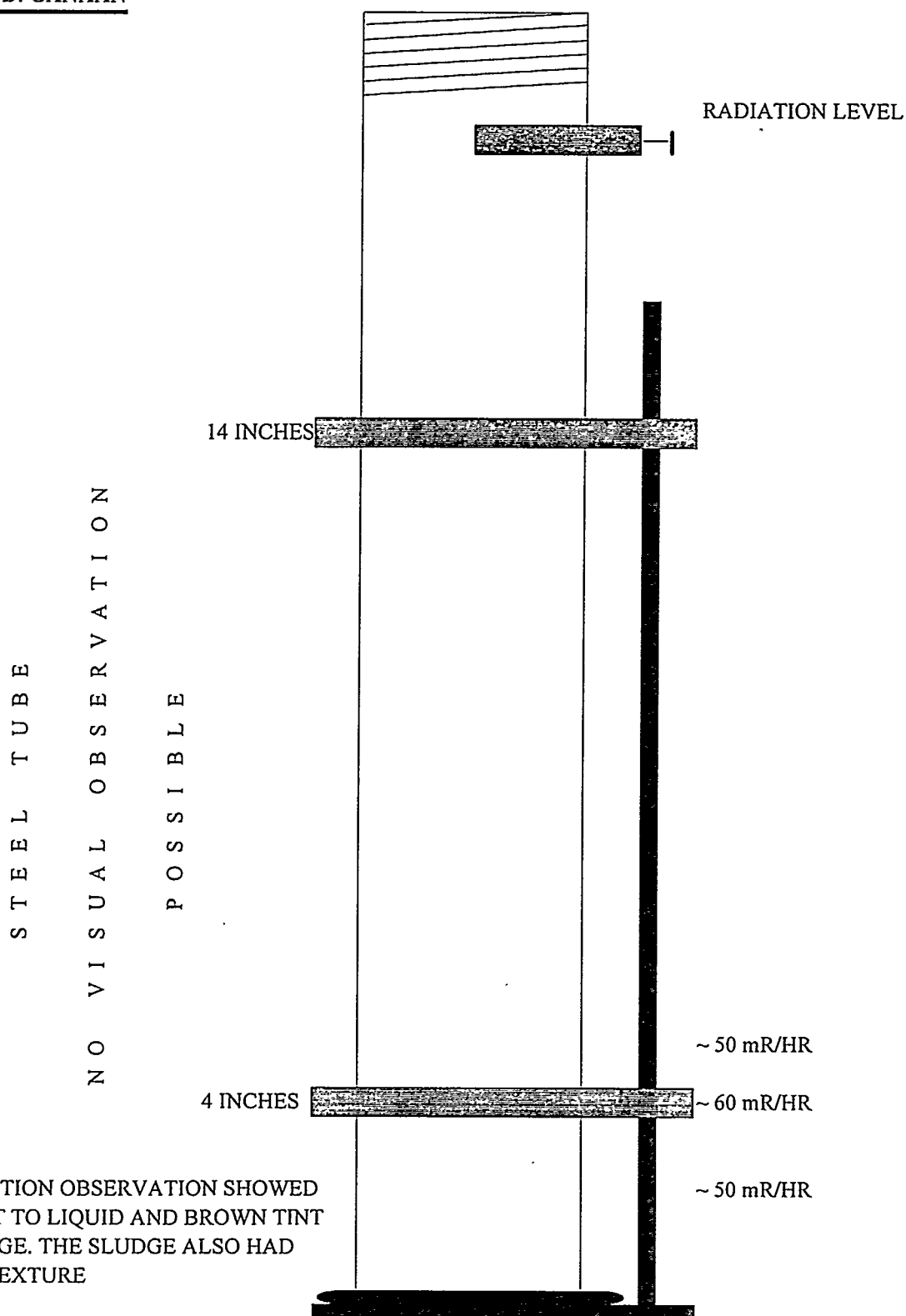
ANALIS # 941011-029

ANALYST R. D. CANAAN

OBSERVED VOLUMES

	LEVEL (IN VOLUME (mL))	
LIQUID	0	120
SLUDGE	0	60

DATE SEPARATED: 10/14/94



GUNITE COLUMN DATA

TANK # TH4S213

PA 7186

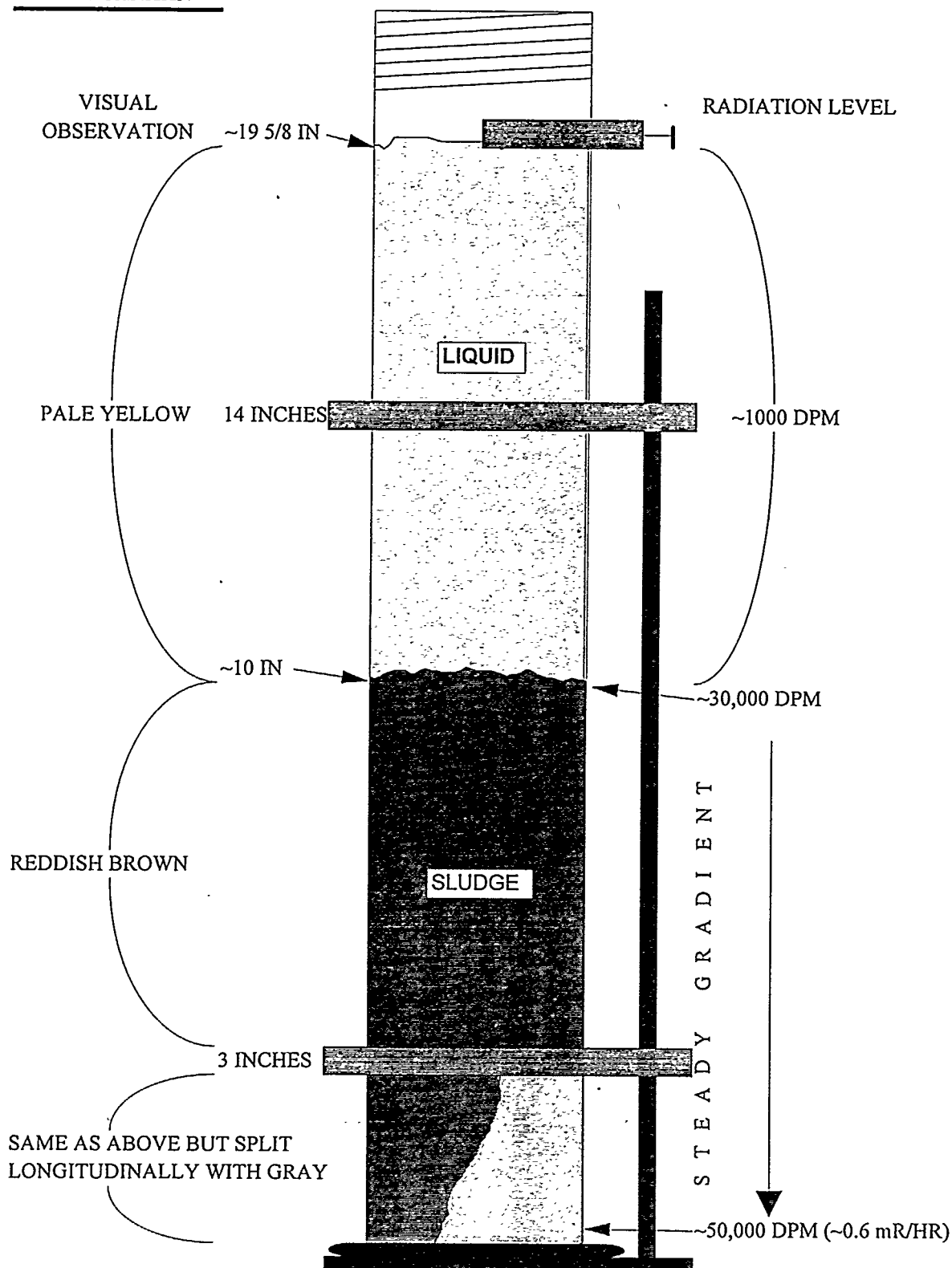
ANALIS # 940907-029

ANALYST R. D. CANAAN

CALCULATED VOLUMES

	LEVEL (IN VOLUME (mL))	
LIQUID	19.625	124
SLUDGE	10	129

DATE SEPARATED: 9/16/94



GUNITE COLUMN DATA

TANK # TH4S214

PA 7186

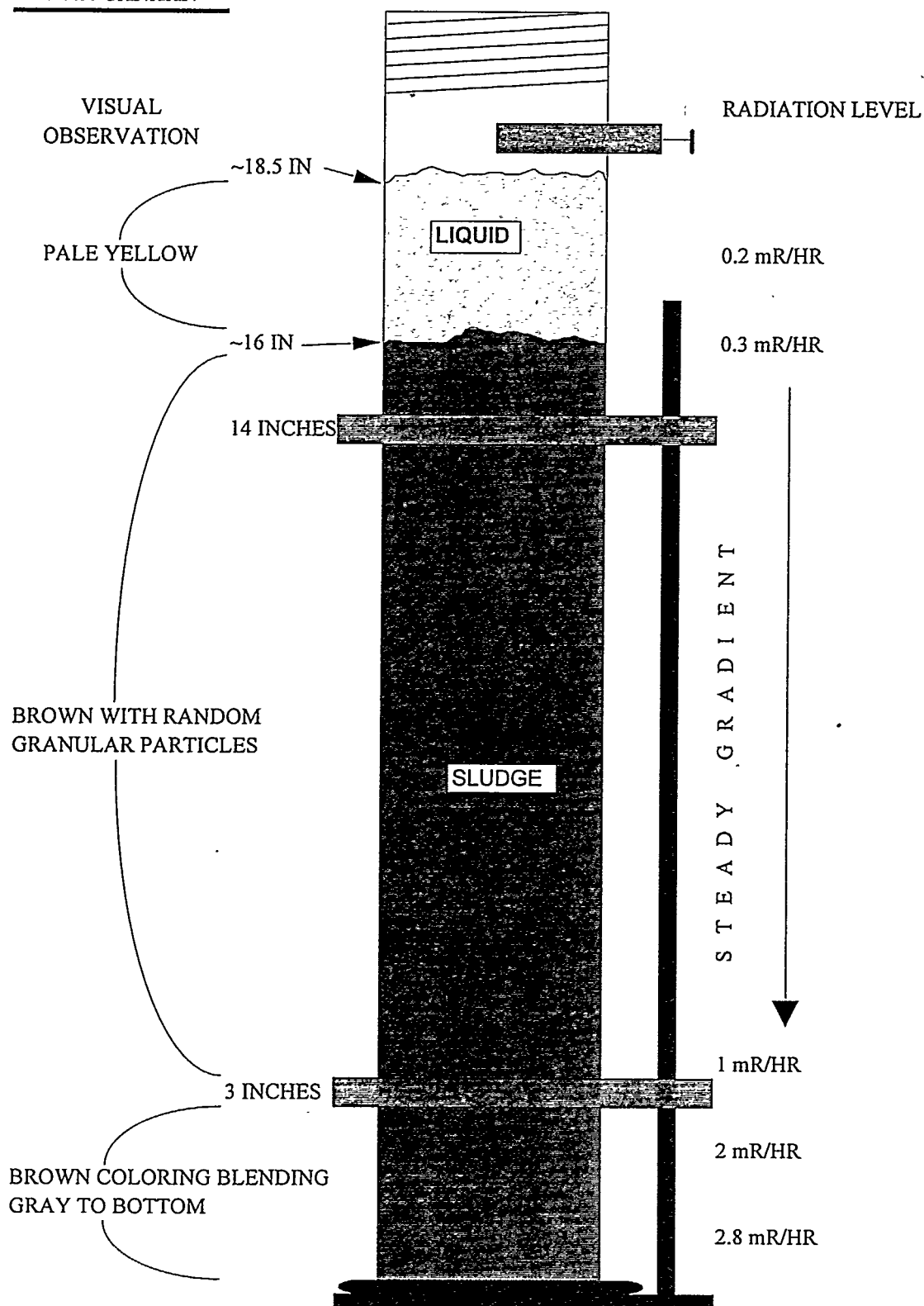
ANALIS # 940907-030

ANALYST R. D. CANAAN

CALCULATED VOLUMES

	LEVEL (IN VOLUME (mL))	
LIQUID	18.5	32
SLUDGE	16	206

DATE SEPARATED: 9/16/94



GUNITE COLUMN DATA

TANK # TH4H215

PA 7187

ANALIS # 940907-031

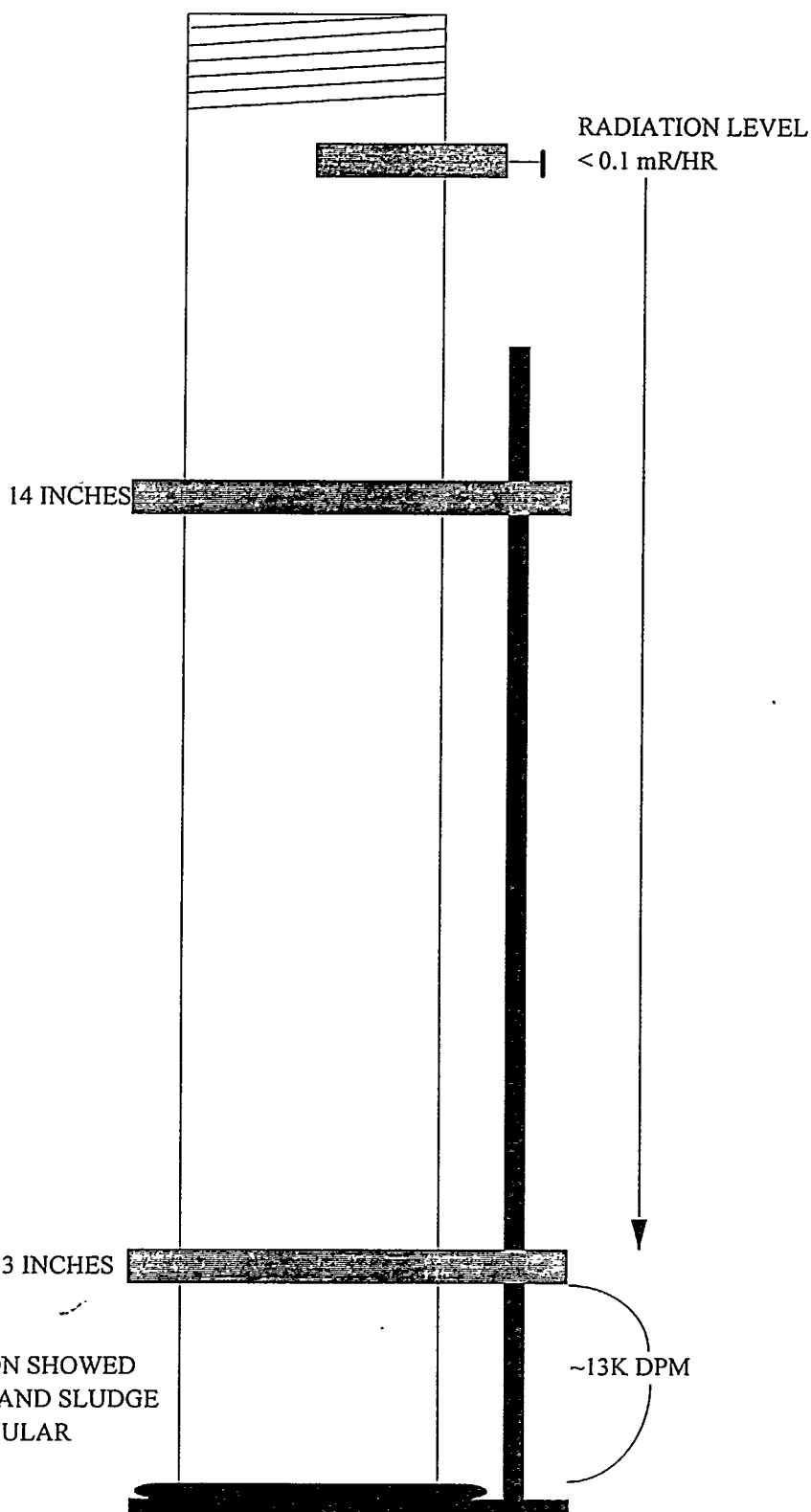
ANALYST R. D. CANAAN

OBSERVED VOLUMES

	LEVEL (IN VOLUME (mL))	
LIQUID	0	4
SLUDGE	0	10

DATE SEPARATED: 9/14/94

STEEL TUBE
NO VISUAL OBSERVATION
POSSIBLE



POST SEPARATION OBSERVATION SHOWED
YELLOW TINT TO BOTH LIQUID AND SLUDGE
THE SLUDGE ALSO HAD A GRANULAR
TEXTURE

TANK W-1

SAMPLE_ID	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	REV_QUAL	QUAL_CODE
W-01L201	LIQUID	2 21807	TOT-RAD-SR	180	10		Bq/ml		
W-01L201	LIQUID	2 31621	PU(TOTAL)	.025	.011		Bq/ml	J	D
W-01L201	LIQUID	AC-MM-2 21996	CO-60			<.2	Bq/ml	U	
W-01L201	LIQUID	AC-MM-2 21996	CS-137	6.8	.2		Bq/ml		
W-01L201	LIQUID	AC-MM-2 21996	EU-152			<.9	Bq/ml	U	
W-01L201	LIQUID	AC-MM-2 21996	EU-154			<.5	Bq/ml	U	
W-01L201	LIQUID	AC-MM-2 21996	EU-155			<.6	Bq/ml	U	
W-01L201	LIQUID	AC-MM-9 002301	G-ALPHA	3	.4		Bq/ml		
W-01L201	LIQUID	BETA SCINT	G-BETA	420	10		Bq/ml		
W-01L201	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	.165			mg/ml		
W-01L201	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	.755			mg/ml		
W-01L201	LIQUID	MASS SPEC	U-233 BY MS	.49	.03		ATOM %		
W-01L201	LIQUID	MASS SPEC	U-234 BY MS	.02	.01		ATOM %		
W-01L201	LIQUID	MASS SPEC	U-235 BY MS	1.81	.05		ATOM %		
W-01L201	LIQUID	MASS SPEC	U-236 BY MS	.06	.01		ATOM %		
W-01L201	LIQUID	MASS SPEC	U-238 BY MS	97.62	.08		ATOM %		
W-01L201	LIQUID	MM 1 003105	CO3			<.1	Mol/l		
W-01L201	LIQUID	MM 1 003105	HCO3			<.1	Mol/l		
W-01L201	LIQUID	MM 1 003105	OH			<.1	Mol/l		
W-01L201	LIQUID	MM 1 1011	DENSITY	1.002	0.001		g/ml		
W-01L201	LIQUID	NAA	G-FISSILE(TOT)	6.0E-4	0.1E-3		ug/ml		
W-01L201	LIQUID	SW846 6010A	AG			<.006	ug/ml	U	
W-01L201	LIQUID	SW846 6010A	AL	.247	.0139		ug/ml		
W-01L201	LIQUID	SW846 6010A	B	.033	.00696		ug/ml	U	7
W-01L201	LIQUID	SW846 6010A	BA	.0704	0		ug/ml		
W-01L201	LIQUID	SW846 6010A	BE			<.00108	ug/ml	U	
W-01L201	LIQUID	SW846 6010A	CA	42.5	.372		ug/ml		
W-01L201	LIQUID	SW846 6010A	CD			<.0072	ug/ml	U	
W-01L201	LIQUID	SW846 6010A	CO			<.0084	ug/ml	U	
W-01L201	LIQUID	SW846 6010A	CR			<.0048	ug/ml	U	
W-01L201	LIQUID	SW846 6010A	CU	.00612	.00096		ug/ml	U	7
W-01L201	LIQUID	SW846 6010A	FE	.187	.0295		ug/ml	U	7
W-01L201	LIQUID	SW846 6010A	K	15.4	.112		ug/ml		
W-01L201	LIQUID	SW846 6010A	MG	5.94	.029		ug/ml		
W-01L201	LIQUID	SW846 6010A	MN			<.00108	ug/ml	U	
W-01L201	LIQUID	SW846 6010A	NA	6.56	.0593		ug/ml		
W-01L201	LIQUID	SW846 6010A	NI			<.0108	ug/ml	U	
W-01L201	LIQUID	SW846 6010A	SB			<.156	ug/ml	U	
W-01L201	LIQUID	SW846 6010A	SI	5.54	.0838		ug/ml		
W-01L201	LIQUID	SW846 6010A	SR	.117	.00072		ug/ml		
W-01L201	LIQUID	SW846 6010A	TH			<.048	ug/ml	U	
W-01L201	LIQUID	SW846 6010A	U			<.084	ug/ml	U	
W-01L201	LIQUID	SW846 6010A	V			<.024	ug/ml	U	
W-01L201	LIQUID	SW846 6010A	ZN			<.024	ug/ml	U	
W-01L201	LIQUID	SW846 7000A	AS			<.006	ug/ml	U	
W-01L201	LIQUID	SW846 7000A	PB			<.006	ug/ml	UJ	15
W-01L201	LIQUID	SW846 7000A	SE			<.006	ug/ml	U	
W-01L201	LIQUID	SW846 7000A	TL			<.25	ug/ml	UJ	5A,5B,8
W-01L201	LIQUID	SW846 7470	HG	.0072	.00024		ug/ml		
W-01L201	LIQUID	SW846 9040	PH	8.29			Std Units		
W-01L201	LIQUID	SW846 9056	BR			<.5	ug/ml	U	
W-01L201	LIQUID	SW846 9056	CL	6.9	0		ug/ml		
W-01L201	LIQUID	SW846 9056	F	3	0		ug/ml		
W-01L201	LIQUID	SW846 9056	NO3	8	2.7		ug/ml		
W-01L201	LIQUID	SW846 9056	PO4			<.2	ug/ml	U	
W-01L201	LIQUID	SW846 9056	SO4	12.6	1		ug/ml		
W-01L201	LIQUID	SW846 9060	TC	33	18		ug/ml		
W-01L201	LIQUID	SW846 9060	TIC	29	6		ug/ml		
W-01L201	LIQUID	SW846 9060	TOC	4	18		ug/ml		
W-01L231	LIQUID	EPA 600 200.8	U TOTAL-ICPMS	35.7			ug/l		
W-01L231	LIQUID	EPA 600 200.8	U-233 BY ICPMS	0.2			ug/l		
W-01L231	LIQUID	EPA 600 200.8	U-234 BY ICPMS			<.1	ug/l	U	
W-01L231	LIQUID	EPA 600 200.8	U-235 BY ICPMS	0.7			ug/l		
W-01L231	LIQUID	EPA 600 200.8	U-236 BY ICPMS	0.1			ug/l	U	
W-01L231	LIQUID	EPA 600 200.8	U-238 BY ICPMS	34.8			ug/l		
W-01L231	LIQUID	MASS SPEC	U-233 BY MS	0.53	0.01		ATOM %		
W-01L231	LIQUID	MASS SPEC	U-234 BY MS	0.03	0.01		ATOM %		

TANK W-1

SAMPLE_ID	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	REV_QUAL	QUAL_CODE
W-01L231	LIQUID	MASS SPEC	U-235 BY MS	1.87	0.01		ATOM %		
W-01L231	LIQUID	MASS SPEC	U-236 BY MS	0.07	0.01		ATOM %		
W-01L231	LIQUID	MASS SPEC	U-238 BY MS	97.50	0.01		ATOM %		

TANK W-2

SAMPLE_ID	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	REV_QUAL	QUAL_CODE
W-02L202	LIQUID	1 003115	G-ALPHA NP-237	100.			%		
W-02L202	LIQUID	2 21807	TOT-RAD-SR	190	10		Bq/ml		
W-02L202	LIQUID	2 31621	PU(TOTAL)	.01	.007		Bq/ml	J	D
W-02L202	LIQUID	AC-MM-2 21996	CS-137	10	1		Bq/ml		
W-02L202	LIQUID	AC-MM-2 21996	CO-60			<.3	Bq/ml	U	
W-02L202	LIQUID	AC-MM-2 21996	EU-152			<.2	Bq/ml	U	
W-02L202	LIQUID	AC-MM-2 21996	EU-154			<.8	Bq/ml	U	
W-02L202	LIQUID	AC-MM-2 21996	EU-155			<.9	Bq/ml	U	
W-02L202	LIQUID	AC-MM-9 002301	G-ALPHA	2.7	.4		Bq/ml		
W-02L202	LIQUID	BETA SCINT	G-BETA	460	10		Bq/ml		
W-02L202	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	0.545			mg/ml		
W-02L202	LIQUID	EPA 600 160.2	OT SUSP SOLID	0.890			mg/ml		
W-02L202	LIQUID	MASS SPEC	U-235 BY MS	1.6	.05		ATOM %		
W-02L202	LIQUID	MASS SPEC	U-236 BY MS	.06	.01		ATOM %		
W-02L202	LIQUID	MASS SPEC	U-234 BY MS	.05	.01		ATOM %		
W-02L202	LIQUID	MASS SPEC	U-233 BY MS	1.01	.06		ATOM %		
W-02L202	LIQUID	MASS SPEC	U-238 BY MS	97.28	.08		ATOM %		
W-02L202	LIQUID	MM 1 003105	OH			<.1	Mol/l		
W-02L202	LIQUID	MM 1 003105	HCO3			<.1	Mol/l		
W-02L202	LIQUID	MM 1 003105	CO3			<.1	Mol/l		
W-02L202	LIQUID	MM 1 1011	DENSITY	1.000	0.002		g/ml		
W-02L202	LIQUID	NAA	G-FISSILE(TOT)	3.0E-3	0.1E-3		ug/ml		
W-02L202	LIQUID	SW846 6010A	V			<.024	ug/ml	U	
W-02L202	LIQUID	SW846 6010A	SR	.0953	.00144		ug/ml		
W-02L202	LIQUID	SW846 6010A	ZN			<.024	ug/ml	U	
W-02L202	LIQUID	SW846 6010A	AG			<.006	ug/ml	UJ	8
W-02L202	LIQUID	SW846 6010A	TH			<.048	ug/ml	U	
W-02L202	LIQUID	SW846 6010A	CR			<.0048	ug/ml	U	
W-02L202	LIQUID	SW846 6010A	NA	51.9	.319		ug/ml		
W-02L202	LIQUID	SW846 6010A	MN			<.00108	ug/ml	U	
W-02L202	LIQUID	SW846 6010A	MG	7.85	.118		ug/ml		
W-02L202	LIQUID	SW846 6010A	SI	3.86	.0782		ug/ml		
W-02L202	LIQUID	SW846 6010A	FE	.037	.0122		ug/ml	U	7
W-02L202	LIQUID	SW846 6010A	NI	.0116	.0156		ug/ml	U	7
W-02L202	LIQUID	SW846 6010A	CU	.0048	.00048		ug/ml	U	7
W-02L202	LIQUID	SW846 6010A	K	38.8	.674		ug/ml		
W-02L202	LIQUID	SW846 6010A	CO			<.0084	ug/ml	U	
W-02L202	LIQUID	SW846 6010A	CD			<.0072	ug/ml	U	
W-02L202	LIQUID	SW846 6010A	CA	28.2	.437		ug/ml		
W-02L202	LIQUID	SW846 6010A	BE			<.00108	ug/ml	U	
W-02L202	LIQUID	SW846 6010A	BA	.0569	.00048		ug/ml		
W-02L202	LIQUID	SW846 6010A	B	.0397	.00384		ug/ml	U	7
W-02L202	LIQUID	SW846 6010A	AL	.0242	.013		ug/ml	U	7
W-02L202	LIQUID	SW846 6010A	U	1.00E-1	7.44E-2		ug/ml		
W-02L202	LIQUID	SW846 6010A	SB			<.156	ug/ml	U	
W-02L202	LIQUID	SW846 6010A	PB	.0066	.00012		ug/ml	U	7
W-02L202	LIQUID	SW846 7000A	TL			<.25	ug/ml	UJ	5A,5B,8
W-02L202	LIQUID	SW846 7000A	AS			<.006	ug/ml	U	
W-02L202	LIQUID	SW846 7000A	SE			<.006	ug/ml	U	
W-02L202	LIQUID	SW846 7470	HG	.003	.0006		ug/ml	U	7
W-02L202	LIQUID	SW846 9040	PH	8.68			Std Units		
W-02L202	LIQUID	SW846 9056	SO4	12.6	0.1		ug/ml		
W-02L202	LIQUID	SW846 9056	BR			<.5	ug/ml	U	
W-02L202	LIQUID	SW846 9056	CL	5.8	.1		ug/ml		
W-02L202	LIQUID	SW846 9056	F	6.4	0.1		ug/ml		
W-02L202	LIQUID	SW846 9056	NO3	4	.3		ug/ml		
W-02L202	LIQUID	SW846 9056	PO4	2.4	0.1		ug/ml		
W-02L202	LIQUID	SW846 9060	TOC	11	8		ug/ml		
W-02L202	LIQUID	SW846 9060	TIC	50	13		ug/ml		
W-02L202	LIQUID	SW846 9060	TC	61	24		ug/ml		
W-02L232	LIQUID	EPA 600 200.8	U-233 BY ICPMS	1.4			ug/l		
W-02L232	LIQUID	EPA 600 200.8	U-234 BY ICPMS			<.1	ug/l	U	
W-02L232	LIQUID	EPA 600 200.8	U TOTAL-ICPMS	128.6			ug/l		
W-02L232	LIQUID	EPA 600 200.8	U-238 BY ICPMS	125			ug/l		
W-02L232	LIQUID	EPA 600 200.8	U-236 BY ICPMS			<.1	ug/l	U	
W-02L232	LIQUID	EPA 600 200.8	U-235 BY ICPMS	2.2			ug/l		
W-02L232	LIQUID	MASS SPEC	U-235 BY MS	1.54	0.01		ATOM %		

TANK W-2

SAMPLE_ID	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	REV_QUAL	QUAL_CODE
W-02L232	LIQUID	MASS SPEC	U-236 BY MS	0.07	0.01		ATOM %		
W-02L232	LIQUID	MASS SPEC	U-234 BY MS	0.04	0.01		ATOM %		
W-02L232	LIQUID	MASS SPEC	U-233 BY MS	1.11	0.01		ATOM %		
W-02L232	LIQUID	MASS SPEC	U-238 BY MS	97.24	0.02		ATOM %		

TANK W-3

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-03L203	LIQUID	1 003115	G-ALPHA U-233/234	86.7			%			
W-03L203	LIQUID	1 003115	G-ALPHA U-238	13.3			%			
W-03L203	LIQUID	2 21807	TOT-RAD-SR	2.6	.2		Bq/ml			
W-03L203	LIQUID	2 31621	PU(TOTAL)	.03	.013		Bq/ml			
W-03L203	LIQUID	AC-MM-2 21996	CO-60			<.3	Bq/ml		U	
W-03L203	LIQUID	AC-MM-2 21996	CS-137	470	10		Bq/ml			
W-03L203	LIQUID	AC-MM-2 21996	EU-152			<.2	Bq/ml		U	
W-03L203	LIQUID	AC-MM-2 21996	EU-154			<.8	Bq/ml		U	
W-03L203	LIQUID	AC-MM-2 21996	EU-155			<.3	Bq/ml		U	
W-03L203	LIQUID	AC-MM-9 002301	G-ALPHA	5.6	.6		Bq/ml			
W-03L203	LIQUID	BETA SCINT	G-BETA	.560	10		Bq/ml			
W-03L203	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	2.72			mg/ml			
W-03L203	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	1.47			mg/ml			
W-03L203	LIQUID	MASS SPEC	U-233 BY MS	.0091	.0001		ATOM %			
W-03L203	LIQUID	MASS SPEC	U-234 BY MS	.0058	.0001		ATOM %			
W-03L203	LIQUID	MASS SPEC	U-235 BY MS	.7127	.0015		ATOM %			
W-03L203	LIQUID	MASS SPEC	U-236 BY MS	.0029	.0001		ATOM %			
W-03L203	LIQUID	MASS SPEC	U-238 BY MS	99.2695	.001		ATOM %			
W-03L203	LIQUID	MM 1 003105	CO3			<.1	Mol/l			
W-03L203	LIQUID	MM 1 003105	HCO3			<.1	Mol/l			
W-03L203	LIQUID	MM 1 003105	OH			<.1	Mol/l			
W-03L203	LIQUID	MM 1 1011	DENSITY	1.004	0.002		g/ml			
W-03L203	LIQUID	NAA	G-FISSILE(TOT)	0.86	0.09		ug/ml			
W-03L203	LIQUID	SW846 6010A	AG	.0917	.00744		ug/ml		J	8
W-03L203	LIQUID	SW846 6010A	AL	.886	.0293		ug/ml			
W-03L203	LIQUID	SW846 6010A	B	.175	.00576		ug/ml			
W-03L203	LIQUID	SW846 6010A	BA	.0124	.00048		ug/ml			
W-03L203	LIQUID	SW846 6010A	BE			<.00108	ug/ml		U	
W-03L203	LIQUID	SW846 6010A	CA	19.8	.233		ug/ml			
W-03L203	LIQUID	SW846 6010A	CD			<.0072	ug/ml		U	
W-03L203	LIQUID	SW846 6010A	CO	.0162	.0228		ug/ml			
W-03L203	LIQUID	SW846 6010A	CR	4.75	.0569		ug/ml			
W-03L203	LIQUID	SW846 6010A	CU			<.0024	ug/ml		U	
W-03L203	LIQUID	SW846 6010A	FE	.128	.0262		ug/ml		U	7
W-03L203	LIQUID	SW846 6010A	K	18.7	.343		ug/ml			
W-03L203	LIQUID	SW846 6010A	MG	3.6	.0281		ug/ml			
W-03L203	LIQUID	SW846 6010A	MN	.0163	.00024		ug/ml			
W-03L203	LIQUID	SW846 6010A	NA	1050	14.7		ug/ml			
W-03L203	LIQUID	SW846 6010A	NI	.0569	.0178		ug/ml			
W-03L203	LIQUID	SW846 6010A	SB			<.156	ug/ml		U	
W-03L203	LIQUID	SW846 6010A	SI	4.9	.0554		ug/ml			
W-03L203	LIQUID	SW846 6010A	SR	.0336	.00024		ug/ml			
W-03L203	LIQUID	SW846 6010A	TH	3.31	.115		ug/ml			
W-03L203	LIQUID	SW846 6010A	U	127	1.7		ug/ml			
W-03L203	LIQUID	SW846 6010A	V			<.024	ug/ml		U	
W-03L203	LIQUID	SW846 6010A	ZN			<.024	ug/ml		U	
W-03L203	LIQUID	SW846 7000A	AS			<.006	ug/ml		UJ	15
W-03L203	LIQUID	SW846 7000A	PB			<.006	ug/ml		UJ	15
W-03L203	LIQUID	SW846 7000A	SE	.0096	.00432		ug/ml			
W-03L203	LIQUID	SW846 7000A	TL			<.25	ug/ml		UJ	5A,5B,8,15
W-03L203	LIQUID	SW846 7470	HG	.0066	.0072		ug/ml			
W-03L203	LIQUID	SW846 9040	PH	9.41			Std Units			
W-03L203	LIQUID	SW846 9056	BR			<.5	ug/ml		U	
W-03L203	LIQUID	SW846 9056	CL	7.2	.4		ug/ml			
W-03L203	LIQUID	SW846 9056	F			<.5	ug/ml		U	
W-03L203	LIQUID	SW846 9056	NO3			<.1	ug/ml		U	
W-03L203	LIQUID	SW846 9056	PO4	458	11		ug/ml			
W-03L203	LIQUID	SW846 9056	SO4	335	6		ug/ml			
W-03L203	LIQUID	SW846 9060	TC	541	18		ug/ml			
W-03L203	LIQUID	SW846 9060	TIC	344	4		ug/ml			
W-03L203	LIQUID	SW846 9060	TOC	197	20		ug/ml			
W-03L204	LIQUID	1 003115	G-ALPHA U-233/234	78			%			
W-03L204	LIQUID	1 003115	G-ALPHA U-238	22			%			
W-03L204	LIQUID	2 21807	TOT-RAD-SR	2.9	.2		Bq/ml			
W-03L204	LIQUID	2 31621	PU(TOTAL)	.37	.04		Bq/ml			
W-03L204	LIQUID	AC-MM-2 21996	CO-60			<.4	Bq/ml		U	
W-03L204	LIQUID	AC-MM-2 21996	CS-137	820	20		Bq/ml			
W-03L204	LIQUID	AC-MM-2 21996	EU-152			<.2	Bq/ml		U	
W-03L204	LIQUID	AC-MM-2 21996	EU-154			<.7	Bq/ml		U	
W-03L204	LIQUID	AC-MM-2 21996	EU-155			<.3	Bq/ml		U	
W-03L204	LIQUID	AC-MM-9 002301	G-ALPHA	13	1		Bq/ml			
W-03L204	LIQUID	BETA SCINT	G-BETA	960	10		Bq/ml			
W-03L204	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	6.535			mg/ml			
W-03L204	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	2.225			mg/ml			
W-03L204	LIQUID	MASS SPEC	U-233 BY MS	.0104	.0001		ATOM %			
W-03L204	LIQUID	MASS SPEC	U-234 BY MS	.0056	.0001		ATOM %			
W-03L204	LIQUID	MASS SPEC	U-235 BY MS	.7088	.0011		ATOM %			
W-03L204	LIQUID	MASS SPEC	U-236 BY MS	.003	.0001		ATOM %			
W-03L204	LIQUID	MASS SPEC	U-238 BY MS	99.2722	.0065		ATOM %			
W-03L204	LIQUID	MM 1 003105	CO3			<.1	Mol/l			
W-03L204	LIQUID	MM 1 003105	HCO3			<.1	Mol/l			
W-03L204	LIQUID	MM 1 003105	OH			<.1	Mol/l			
W-03L204	LIQUID	MM 1 1011	DENSITY	1.006	0.002		g/ml			
W-03L204	LIQUID	NAA	G-FISSILE(TOT)	1.92	0.2		ug/ml			
W-03L204	LIQUID	SW846 6010A	AG	.197	.00336		ug/ml		J	8
W-03L204	LIQUID	SW846 6010A	AL	9.4	.0773		ug/ml			

TANK W-3

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-03L204	LIQUID	SW846 6010A	B	.215	.0154		ug/ml			
W-03L204	LIQUID	SW846 6010A	BA	.0224	.00024		ug/ml			
W-03L204	LIQUID	SW846 6010A	BE			<.00108	ug/ml		U	
W-03L204	LIQUID	SW846 6010A	CA	11.1	.144		ug/ml			
W-03L204	LIQUID	SW846 6010A	CD			<.0072	ug/ml		U	
W-03L204	LIQUID	SW846 6010A	CO	.0406	.0216		ug/ml			
W-03L204	LIQUID	SW846 6010A	CR	10.5	.0571		ug/ml			
W-03L204	LIQUID	SW846 6010A	CU			<.0024	ug/ml		U	
W-03L204	LIQUID	SW846 6010A	FE	.327	.024		ug/ml		U	7
W-03L204	LIQUID	SW846 6010A	K	20.8	.107		ug/ml			
W-03L204	LIQUID	SW846 6010A	MG	.792	.0173		ug/ml			
W-03L204	LIQUID	SW846 6010A	MN	.0338	.00048		ug/ml			
W-03L204	LIQUID	SW846 6010A	NA	2360	16.1		ug/ml			
W-03L204	LIQUID	SW846 6010A	NI	.0955	.0137		ug/ml			
W-03L204	LIQUID	SW846 6010A	SB			<.156	ug/ml		U	
W-03L204	LIQUID	SW846 6010A	SI	5.26	.0998		ug/ml			
W-03L204	LIQUID	SW846 6010A	SR	.0294	.00072		ug/ml			
W-03L204	LIQUID	SW846 6010A	TH	7.31	.175		ug/ml			
W-03L204	LIQUID	SW846 6010A	U	284	4.82		ug/ml			
W-03L204	LIQUID	SW846 6010A	V			<.024	ug/ml		U	
W-03L204	LIQUID	SW846 6010A	ZN			<.024	ug/ml		U	
W-03L204	LIQUID	SW846 7000A	AS			<.006	ug/ml		UJ	15
W-03L204	LIQUID	SW846 7000A	PB			<.006	ug/ml		UJ	15
W-03L204	LIQUID	SW846 7000A	SE	.0101	.00312		ug/ml			
W-03L204	LIQUID	SW846 7000A	TL			<.25	ug/ml		UJ	5A,5B,8,15
W-03L204	LIQUID	SW846 7470	HG	.0336	.00084		ug/ml			
W-03L204	LIQUID	SW846 9040	PH	10.59			Std Units			
W-03L204	LIQUID	SW846 9056	BR			<.5	ug/ml		U	
W-03L204	LIQUID	SW846 9056	CL	9.5	.2		ug/ml			
W-03L204	LIQUID	SW846 9056	F			<.5	ug/ml		U	
W-03L204	LIQUID	SW846 9056	NO3	2.1	.1		ug/ml			
W-03L204	LIQUID	SW846 9056	PO4	674	83		ug/ml			
W-03L204	LIQUID	SW846 9056	SO4	529	6		ug/ml			
W-03L204	LIQUID	SW846 9060	TC	876	28		ug/ml			
W-03L204	LIQUID	SW846 9060	TIC	543	25		ug/ml			
W-03L204	LIQUID	SW846 9060	TOC	334	78		ug/ml			
W-03S212	SOFT SLUDGE	1 003115	G-ALPHA CM-244	1.5			%			
W-03S212	SOFT SLUDGE	1 003115	G-ALPHA PU-238,AM-241	3.4			%			
W-03S212	SOFT SLUDGE	1 003115	G-ALPHA PU-239/240+D	56.2			%			
W-03S212	SOFT SLUDGE	1 003115	G-ALPHA U-233/234,TH-22	22			%			
W-03S212	SOFT SLUDGE	1 003115	TOTPU PU-238	1.4			%			
W-03S212	SOFT SLUDGE	1 003115	TOTPU PU-239/240	98.6			%			
W-03S212	SOFT SLUDGE	2 21807	TOT-RAD-SR	580000	120000		Bq/g			
W-03S212	SOFT SLUDGE	2 31621	PU(TOTAL)	4900	100		Bq/g		J	D
W-03S212	SOFT SLUDGE	AC-MM-2 21996	CO-60			<50	Bq/g		U	
W-03S212	SOFT SLUDGE	AC-MM-2 21996	CS-137	46000	1000		Bq/g			
W-03S212	SOFT SLUDGE	AC-MM-2 21996	EU-152			<220	Bq/g		U	
W-03S212	SOFT SLUDGE	AC-MM-2 21996	EU-154			<130	Bq/g		U	
W-03S212	SOFT SLUDGE	AC-MM-2 21996	EU-155			<450	Bq/g		U	
W-03S212	SOFT SLUDGE	AC-MM-9 002301	G-ALPHA	12000	1000		Bq/g			
W-03S212	SOFT SLUDGE	BETA SCINT	G-BETA	1000000	100000		Bq/g			
W-03S212	SOFT SLUDGE	ICP	PB			<71.4	ug/g		UJ	8
W-03S212	SOFT SLUDGE	ICP	TL			<25.2	ug/g		U	
W-03S212	SOFT SLUDGE	MASS SPEC	PU-238 BY MS	0.02	0.01		ATOM %		J	M
W-03S212	SOFT SLUDGE	MASS SPEC	PU-239 BY MS	98.24	0.06		ATOM %			
W-03S212	SOFT SLUDGE	MASS SPEC	PU-240 BY MS	1.70	0.03		ATOM %			
W-03S212	SOFT SLUDGE	MASS SPEC	PU-241 BY MS	0.02	0.01		ATOM %			
W-03S212	SOFT SLUDGE	MASS SPEC	PU-242 BY MS	0.02	0.01		ATOM %			
W-03S212	SOFT SLUDGE	MASS SPEC	PU-244 BY MS			<.01	ATOM %		U	
W-03S212	SOFT SLUDGE	MASS SPEC	U-233 BY MS	.0015	.0001		ATOM %			
W-03S212	SOFT SLUDGE	MASS SPEC	U-234 BY MS	.0053	.0001		ATOM %			
W-03S212	SOFT SLUDGE	MASS SPEC	U-235 BY MS	.7234	.0036		ATOM %			
W-03S212	SOFT SLUDGE	MASS SPEC	U-236 BY MS	.0006	.0001		ATOM %			
W-03S212	SOFT SLUDGE	MASS SPEC	U-238 BY MS	99.2692	.0034		ATOM %			
W-03S212	SOFT SLUDGE	MM 1 1011	DENSITY	1.07			g/ml			
W-03S212	SOFT SLUDGE	NAA	G-FISSILE(TOT)	859	86		ug/g			
W-03S212	SOFT SLUDGE	ORGANICS	AROCOR-1016			<120	ug/kg	U	U	
W-03S212	SOFT SLUDGE	ORGANICS	AROCOR-1221			<120	ug/kg	U	U	
W-03S212	SOFT SLUDGE	ORGANICS	AROCOR-1232			<120	ug/kg	U	U	
W-03S212	SOFT SLUDGE	ORGANICS	AROCOR-1242			<120	ug/kg	U	U	
W-03S212	SOFT SLUDGE	ORGANICS	AROCOR-1248	3.00			ug/kg	J		
W-03S212	SOFT SLUDGE	ORGANICS	AROCOR-1254	9.00			ug/kg	JB	U	
W-03S212	SOFT SLUDGE	ORGANICS	AROCOR-1260			<240	ug/kg	U	U	
W-03S212	SOFT SLUDGE	SAP Add 1 Rev1	GROSS WATER	57.6			% MOISTURE			
W-03S212	SOFT SLUDGE	SW846 6010A	AG			<1.05	ug/g		U	
W-03S212	SOFT SLUDGE	SW846 6010A	AL	51100	298		ug/g			
W-03S212	SOFT SLUDGE	SW846 6010A	B			<2.52	ug/g		U	
W-03S212	SOFT SLUDGE	SW846 6010A	BA	9.01	.126		ug/g			
W-03S212	SOFT SLUDGE	SW846 6010A	BE			<.189	ug/g		U	
W-03S212	SOFT SLUDGE	SW846 6010A	CA	7160	37		ug/g			
W-03S212	SOFT SLUDGE	SW846 6010A	CD	1.3	.21		ug/g			
W-03S212	SOFT SLUDGE	SW846 6010A	CO			<1.47	ug/g		U	
W-03S212	SOFT SLUDGE	SW846 6010A	CR	468	4.12		ug/g		J	8
W-03S212	SOFT SLUDGE	SW846 6010A	CU	17.5	.168		ug/g			
W-03S212	SOFT SLUDGE	SW846 6010A	FE	2890	9.87		ug/g			
W-03S212	SOFT SLUDGE	SW846 6010A	K	381	119		ug/g			

TANK W-3

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-03S212	SOFT SLUDGE	SW846 6010A	MG	303	3.11		ug/g			
W-03S212	SOFT SLUDGE	SW846 6010A	MN	127	.714		ug/g			
W-03S212	SOFT SLUDGE	SW846 6010A	NA	16900	371		ug/g			
W-03S212	SOFT SLUDGE	SW846 6010A	NI	5.71	2.23		ug/g			
W-03S212	SOFT SLUDGE	SW846 6010A	SB			<27.3	ug/g		U	
W-03S212	SOFT SLUDGE	SW846 6010A	SI	509	4.87		ug/g		J	8
W-03S212	SOFT SLUDGE	SW846 6010A	SR	17.5	.126		ug/g			
W-03S212	SOFT SLUDGE	SW846 6010A	TH			<336	ug/g		U	
W-03S212	SOFT SLUDGE	SW846 6010A	U	128000	1070		ug/g			
W-03S212	SOFT SLUDGE	SW846 6010A	V			<4.2	ug/g		U	
W-03S212	SOFT SLUDGE	SW846 6010A	ZN	18.2	.21		ug/g			
W-03S212	SOFT SLUDGE	SW846 7000A	AS			<1.05	ug/g		U	
W-03S212	SOFT SLUDGE	SW846 7000A	SE			<1.05	ug/g		U	
W-03S212	SOFT SLUDGE	SW846 7471	HG	6.42	1.76		ug/g			
W-03S212	SOFT SLUDGE	SW846 9045A	PH	10.47			Std Units			
W-03S212	SOFT SLUDGE	SW846 9056	BR			<5	ug/g		U	
W-03S212	SOFT SLUDGE	SW846 9056	CL			<4.6	ug/g		U	
W-03S212	SOFT SLUDGE	SW846 9056	F	23.7	2.4		ug/g			
W-03S212	SOFT SLUDGE	SW846 9056	NO3	87	1		ug/g		J	Q
W-03S212	SOFT SLUDGE	SW846 9056	PO4	3240	9		ug/g			
W-03S212	SOFT SLUDGE	SW846 9056	SO4	318	2		ug/g		J	Q
W-03S212	SOFT SLUDGE	SW846 9060	TC	5100	1300		ug/g			
W-03S212	SOFT SLUDGE	SW846 9060	TIC			<2400	ug/g		U	
W-03S212	SOFT SLUDGE	SW846 9060	TOC	5300	1700		ug/g			

TANK W-4

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-04H217	HARD SLUDGE	1 003115	G-ALPHA CM-244	4.2			%			
W-04H217	HARD SLUDGE	1 003115	G-ALPHA PU-239/24	4.9			%			
W-04H217	HARD SLUDGE	1 003115	G-ALPHA U-234	47.1			%			
W-04H217	HARD SLUDGE	1 003115	G-ALPHA U-238	43.8			%			
W-04H217	HARD SLUDGE	1 003115	TOTPU PU-2349/240	100			%			
W-04H217	HARD SLUDGE	2 21807	TOT-RAD-SR	1.9E4	0.1E4		Bq/g			
W-04H217	HARD SLUDGE	2 31621	PU(TOTAL)	210	30		Bq/g		J	D
W-04H217	HARD SLUDGE	AC-MM-2 21996	CO-60			<27	Bq/g		U	
W-04H217	HARD SLUDGE	AC-MM-2 21996	CS-137	2.0E4	0.1E4		Bq/g			
W-04H217	HARD SLUDGE	AC-MM-2 21996	EU-152			<150	Bq/g		U	
W-04H217	HARD SLUDGE	AC-MM-2 21996	EU-154			<67	Bq/g		U	
W-04H217	HARD SLUDGE	AC-MM-2 21996	EU-155			<150	Bq/g		U	
W-04H217	HARD SLUDGE	AC-MM-9 002301	G-ALPHA	4.7E3	0.2E3		Bq/g			
W-04H217	HARD SLUDGE	BETA SCINT	G-BETA	7.0E4	0.1E4		Bq/g			
W-04H217	HARD SLUDGE	ICP	PB			<73.4	ug/g		UJ	8
W-04H217	HARD SLUDGE	ICP	TL			<25.9	ug/g		U	
W-04H217	HARD SLUDGE	MASS SPEC	PU-238 BY MS	0.38	0.05		ATOM %			
W-04H217	HARD SLUDGE	MASS SPEC	PU-239 BY MS	98.51	0.06		ATOM %			
W-04H217	HARD SLUDGE	MASS SPEC	PU-240 BY MS	1.09	0.02		ATOM %			
W-04H217	HARD SLUDGE	MASS SPEC	PU-241 BY MS			<.01	ATOM %		U	
W-04H217	HARD SLUDGE	MASS SPEC	PU-242 BY MS			<.01	ATOM %		U	
W-04H217	HARD SLUDGE	MASS SPEC	PU-244 BY MS			<.01	ATOM %		U	
W-04H217	HARD SLUDGE	MASS SPEC	U-233 BY MS			<.001	ATOM %		U	
W-04H217	HARD SLUDGE	MASS SPEC	U-234 BY MS	0.006	0.001		ATOM %			
W-04H217	HARD SLUDGE	MASS SPEC	U-235 BY MS	0.72	0.009		ATOM %			
W-04H217	HARD SLUDGE	MASS SPEC	U-236 BY MS	0.0004	0.0002		ATOM %			
W-04H217	HARD SLUDGE	MASS SPEC	U-238 BY MS	99.27	0.001		ATOM %			
W-04H217	HARD SLUDGE	NAA	G-FISSILE(TOT)	1200	100		ug/g			
W-04H217	HARD SLUDGE	SAP Add 1 Rev1	GROSS WATER	71.1			% MOISTURE			
W-04H217	HARD SLUDGE	SW846 6010A	AG			<1.08	ug/g		U	
W-04H217	HARD SLUDGE	SW846 6010A	AL	8.15E+02	9.55E+00		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	B			<2.59	ug/g		U	
W-04H217	HARD SLUDGE	SW846 6010A	BA	5.49E+00	4.32E-02		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	BE			<.194	ug/g		U	
W-04H217	HARD SLUDGE	SW846 6010A	CA	6.20E+02	1.73E+00		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	CD	1.97E+00	6.05E-01		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	CO			<1.51	ug/g		U	
W-04H217	HARD SLUDGE	SW846 6010A	CR	1.58E+02	9.94E-01		ug/g		J	8
W-04H217	HARD SLUDGE	SW846 6010A	CU	6.03E+00	6.48E-01		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	FE	2.94E+02	4.75E-01		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	K	2.51E+02	1.57E+01		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	MG	6.62E+01	3.11E+00		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	MN	4.72E+01	3.02E-01		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	NA	2.50E+04	1.21E+02		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	NI	6.50E+00	1.17E+00		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	SB			<28.1	ug/g		U	
W-04H217	HARD SLUDGE	SW846 6010A	SI	1.90E+02	5.75E+00		ug/g		J	8
W-04H217	HARD SLUDGE	SW846 6010A	SR	3.22E+00	8.64E-02		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	TH			<345	ug/g		U	
W-04H217	HARD SLUDGE	SW846 6010A	U	1.86E+05	6.21E+02		ug/g			
W-04H217	HARD SLUDGE	SW846 6010A	V			<4.32	ug/g		U	
W-04H217	HARD SLUDGE	SW846 6010A	ZN	1.26E+01	3.02E+00		ug/g			
W-04H217	HARD SLUDGE	SW846 7000A	AS			<1.08	ug/g		U	
W-04H217	HARD SLUDGE	SW846 7000A	SE			<1.08	ug/g		U	
W-04H217	HARD SLUDGE	SW846 7471	HG	3.41E+00	2.59E-01		ug/g			
W-04L205	LIQUID	1 003115	G-ALPHA U-233/234	50.6			%			
W-04L205	LIQUID	1 003115	G-ALPHA U-238	49.4			%			
W-04L205	LIQUID	1 003115	TOTPU PU-239/240	100			%			
W-04L205	LIQUID	2 21807	TOT-RAD-SR	200	10		Bq/ml		J	T
W-04L205	LIQUID	2 31621	PU(TOTAL)	.074	.018		Bq/ml		J	D
W-04L205	LIQUID	AC-MM-2 21996	CO-60			<.3	Bq/ml		U	
W-04L205	LIQUID	AC-MM-2 21996	CS-137	1100	100		Bq/ml			
W-04L205	LIQUID	AC-MM-2 21996	EU-152			<2	Bq/ml		U	
W-04L205	LIQUID	AC-MM-2 21996	EU-154			<.8	Bq/ml		U	
W-04L205	LIQUID	AC-MM-2 21996	EU-155			<4	Bq/ml		U	
W-04L205	LIQUID	AC-MM-9 002301	G-ALPHA	37	1		Bq/ml			
W-04L205	LIQUID	BETA SCINT	G-BETA	1700	100		Bq/ml			
W-04L205	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	7.89			mg/ml			
W-04L205	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	2.43			mg/ml			
W-04L205	LIQUID	MASS SPEC	U-233 BY MS	.0002	.0001		ATOM %			
W-04L205	LIQUID	MASS SPEC	U-234 BY MS	.0054	.0001		ATOM %			
W-04L205	LIQUID	MASS SPEC	U-235 BY MS	.7102	.0059		ATOM %			
W-04L205	LIQUID	MASS SPEC	U-236 BY MS	.0026	.0001		ATOM %			
W-04L205	LIQUID	MASS SPEC	U-238 BY MS	99.2816	.0058		ATOM %			
W-04L205	LIQUID	MM 1 003105	CO3			<.1	Mol/l			
W-04L205	LIQUID	MM 1 003105	HCO3			<.1	Mol/l			
W-04L205	LIQUID	MM 1 003105	OH			<.1	Mol/l			
W-04L205	LIQUID	MM 1 1011	DENSITY	1.008	0.005		g/ml			
W-04L205	LIQUID	NAA	G-FISSILE(TOT)	9.76	0.98		ug/ml			
W-04L205	LIQUID	SW846 6010A	AG	1.07	.00696		ug/ml		J	8
W-04L205	LIQUID	SW846 6010A	AL	2.3	.0542		ug/ml			
W-04L205	LIQUID	SW846 6010A	B	.0916	.00672		ug/ml		U	7
W-04L205	LIQUID	SW846 6010A	BA	.165	.00168		ug/ml			
W-04L205	LIQUID	SW846 6010A	BE			<.00108	ug/ml		U	
W-04L205	LIQUID	SW846 6010A	CA	47.1	.732		ug/ml			
W-04L205	LIQUID	SW846 6010A	CD			<.0072	ug/ml		U	

TANK W-4

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-04L205	LIQUID	SW846 6010A	CO	.19	.011		ug/ml			
W-04L205	LIQUID	SW846 6010A	CR	6.95	.0667		ug/ml			
W-04L205	LIQUID	SW846 6010A	CU			<.0024	ug/ml		U	
W-04L205	LIQUID	SW846 6010A	FE	.448	.0281		ug/ml			
W-04L205	LIQUID	SW846 6010A	K	21.3	.0581		ug/ml			
W-04L205	LIQUID	SW846 6010A	MG			<.024	ug/ml		U	
W-04L205	LIQUID	SW846 6010A	MN	.173	.00096		ug/ml			
W-04L205	LIQUID	SW846 6010A	NA	2200	4.06		ug/ml			
W-04L205	LIQUID	SW846 6010A	NI	.233	.0187		ug/ml			
W-04L205	LIQUID	SW846 6010A	SB			<.156	ug/ml		U	
W-04L205	LIQUID	SW846 6010A	SI	2.36	.0348		ug/ml			
W-04L205	LIQUID	SW846 6010A	SR	.262	.00312		ug/ml			
W-04L205	LIQUID	SW846 6010A	TH	39.6	.202		ug/ml			
W-04L205	LIQUID	SW846 6010A	U	1540	11.6		ug/ml			
W-04L205	LIQUID	SW846 6010A	V			<.024	ug/ml		U	
W-04L205	LIQUID	SW846 6010A	ZN			<.024	ug/ml		U	
W-04L205	LIQUID	SW846 7000A	AS			<.006	ug/ml		UJ	15
W-04L205	LIQUID	SW846 7000A	PB	.0558	.00072		ug/ml		U	7
W-04L205	LIQUID	SW846 7000A	SE	.0128	.00048		ug/ml			
W-04L205	LIQUID	SW846 7000A	TL			<.25	ug/ml		UJ	5A,5B,8
W-04L205	LIQUID	SW846 7470	HG	.0036	.00036		ug/ml			
W-04L205	LIQUID	SW846 9040	PH	9.79			Std Units			
W-04L205	LIQUID	SW846 9056	BR			<.5	ug/ml		U	
W-04L205	LIQUID	SW846 9056	CL	28.1	1.8		ug/ml			
W-04L205	LIQUID	SW846 9056	F	12.9	.3		ug/ml			
W-04L205	LIQUID	SW846 9056	NO3	1580	40		ug/ml			
W-04L205	LIQUID	SW846 9056	PO4	38.4	5.9		ug/ml			
W-04L205	LIQUID	SW846 9056	SO4	823	32		ug/ml			
W-04L205	LIQUID	SW846 9060	TC	461	14		ug/ml			
W-04L205	LIQUID	SW846 9060	TIC	461	21		ug/ml			
W-04L205	LIQUID	SW846 9060	TOC			<15	ug/ml		U	
W-04S216	SOFT SLUDGE	1 003115	G-ALPHA CM-244	4.1			%			
W-04S216	SOFT SLUDGE	1 003115	G-ALPHA PU-239/24	6.3			%			
W-04S216	SOFT SLUDGE	1 003115	G-ALPHA U-234	40.3			%			
W-04S216	SOFT SLUDGE	1 003115	G-ALPHA U-238	49.2			%			
W-04S216	SOFT SLUDGE	1 003115	TOTPU PU-239/240	100			%			
W-04S216	SOFT SLUDGE	2 21807	TOT-RAD-SR	4.0E4	0.1E4		Bq/g		J	T
W-04S216	SOFT SLUDGE	2 31621	PU(TOTAL)	298	35		Bq/g		J	D
W-04S216	SOFT SLUDGE	AC-MM-2 21996	CO-60			<23	Bq/g		U	
W-04S216	SOFT SLUDGE	AC-MM-2 21996	CS-137	3.8E4	0.1E4		Bq/g			
W-04S216	SOFT SLUDGE	AC-MM-2 21996	EU-152			<140	Bq/g		U	
W-04S216	SOFT SLUDGE	AC-MM-2 21996	EU-154			<64	Bq/g		U	
W-04S216	SOFT SLUDGE	AC-MM-2 21996	EU-155			<220	Bq/g		U	
W-04S216	SOFT SLUDGE	AC-MM-9 002301	G-ALPHA	5.7E3	0.3E3		Bq/g			
W-04S216	SOFT SLUDGE	BETA SCINT	G-BETA	1.2E5	0.1E5		Bq/g			
W-04S216	SOFT SLUDGE	ICP	PB			<78.9	ug/g		UJ	8
W-04S216	SOFT SLUDGE	ICP	TL			<27.8	ug/g		U	
W-04S216	SOFT SLUDGE	MASS SPEC	PU-238 BY MS	0.05	0.01		ATOM %		J	M
W-04S216	SOFT SLUDGE	MASS SPEC	PU-239 BY MS	98.51	0.04		ATOM %			
W-04S216	SOFT SLUDGE	MASS SPEC	PU-240 BY MS	1.43	0.04		ATOM %			
W-04S216	SOFT SLUDGE	MASS SPEC	PU-241 BY MS			<.01	ATOM %		U	
W-04S216	SOFT SLUDGE	MASS SPEC	PU-242 BY MS			<.01	ATOM %		U	
W-04S216	SOFT SLUDGE	MASS SPEC	PU-244 BY MS			<.01	ATOM %		U	
W-04S216	SOFT SLUDGE	MASS SPEC	U-233 BY MS			<.0001	ATOM %		U	
W-04S216	SOFT SLUDGE	MASS SPEC	U-234 BY MS	0.0057	0.0001		ATOM %			
W-04S216	SOFT SLUDGE	MASS SPEC	U-235 BY MS	0.7219	0.0007		ATOM %			
W-04S216	SOFT SLUDGE	MASS SPEC	U-236 BY MS	0.0012	0.0001		ATOM %			
W-04S216	SOFT SLUDGE	MASS SPEC	U-238 BY MS	99.2711	0.0001		ATOM %			
W-04S216	SOFT SLUDGE	MM 1 1011	DENSITY	1.35			g/ml			
W-04S216	SOFT SLUDGE	NAA	G-FISSILE(TOT)	1360	100		ug/g			
W-04S216	SOFT SLUDGE	ORGANICS	AROCLOR-1016			<120	ug/kg	U	U	
W-04S216	SOFT SLUDGE	ORGANICS	AROCLOR-1221			<120	ug/kg	U	U	
W-04S216	SOFT SLUDGE	ORGANICS	AROCLOR-1232			<120	ug/kg	U	U	
W-04S216	SOFT SLUDGE	ORGANICS	AROCLOR-1242			<120	ug/kg	U	U	
W-04S216	SOFT SLUDGE	ORGANICS	AROCLOR-1248	12.00			ug/kg	J		
W-04S216	SOFT SLUDGE	ORGANICS	AROCLOR-1254	33.00			ug/kg	J		
W-04S216	SOFT SLUDGE	ORGANICS	AROCLOR-1260	43.00			ug/kg	J		
W-04S216	SOFT SLUDGE	SAP Add 1 Rev1	GROSS WATER	63.5			% MOISTURE			
W-04S216	SOFT SLUDGE	SW846 6010A	AG			<1.16	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 6010A	AL	2.55E+03	1.59E+01		ug/g			
W-04S216	SOFT SLUDGE	SW846 6010A	B			<2.78	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 6010A	BA	5.66E+00	9.28E-02		ug/g			
W-04S216	SOFT SLUDGE	SW846 6010A	BE			<.209	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 6010A	CA	6.83E+02	4.55E+00		ug/g			
W-04S216	SOFT SLUDGE	SW846 6010A	CD			<1.39	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 6010A	CO			<1.62	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 6010A	CR	3.16E+02	3.06E+00		ug/g		J	8
W-04S216	SOFT SLUDGE	SW846 6010A	CU	7.08E+00	4.64E-01		ug/g			
W-04S216	SOFT SLUDGE	SW846 6010A	FE	1.02E+03	8.03E+00		ug/g			
W-04S216	SOFT SLUDGE	SW846 6010A	K	2.99E+02	5.43E+00		ug/g			
W-04S216	SOFT SLUDGE	SW846 6010A	MG	4.78E+01	4.36E+00		ug/g			
W-04S216	SOFT SLUDGE	SW846 6010A	MN	2.49E+01	1.39E-01		ug/g			
W-04S216	SOFT SLUDGE	SW846 6010A	NA	3.02E+04	3.84E+02		ug/g			
W-04S216	SOFT SLUDGE	SW846 6010A	NI	5.92E+00	2.74E+00		ug/g			
W-04S216	SOFT SLUDGE	SW846 6010A	SB			<30.2	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 6010A	SI	2.77E+02	4.36E+00		ug/g		J	8

TANK W-4

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-04S216	SOFT SLUDGE	SW846 6010A	SR	3.39E+00	9.28E-02		ug/g			
W-04S216	SOFT SLUDGE	SW846 6010A	TH			<371	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 6010A	U	2.11E+05	2.50E+02		ug/g			
W-04S216	SOFT SLUDGE	SW846 6010A	V			<4.64	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 6010A	ZN	9.88E+00	9.74E-01		ug/g			
W-04S216	SOFT SLUDGE	SW846 7000A	AS			<1.16	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 7000A	SE			<1.16	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 7471	HG	5.75E+00	9.27E-01		ug/g			
W-04S216	SOFT SLUDGE	SW846 9045A	PH	10.60			Std Units			
W-04S216	SOFT SLUDGE	SW846 9056	BR			<53	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 9056	CL			<53	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 9056	F			<53	ug/g		U	
W-04S216	SOFT SLUDGE	SW846 9056	NO3	1370	30		ug/g		J	Q
W-04S216	SOFT SLUDGE	SW846 9056	PO4	3070	79		ug/g			
W-04S216	SOFT SLUDGE	SW846 9056	SO4	1910	76		ug/g		J	Q
W-04S216	SOFT SLUDGE	SW846 9060	TC	1900	400		ug/g			
W-04S216	SOFT SLUDGE	SW846 9060	TIC	1700	300		ug/g			
W-04S216	SOFT SLUDGE	SW846 9060	TOC	200	100		ug/g			

TANK W-5

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-05L218	LIQUID	2 21807	TOT-RAD-SR	3.8	0.2		Bq/ml			
W-05L218	LIQUID	2 31621	PU(TOTAL)	8.0E-02	7.9E-02		Bq/ml		J	D
W-05L218	LIQUID	AC-MM-2 21996	CO-60	9.2	1.6		Bq/ml			
W-05L218	LIQUID	AC-MM-2 21996	CS-137	1.1E3	0.1E3		Bq/ml			
W-05L218	LIQUID	AC-MM-2 21996	EU-152			<16	Bq/ml		U	
W-05L218	LIQUID	AC-MM-2 21996	EU-154			<8	Bq/ml		U	
W-05L218	LIQUID	AC-MM-2 21996	EU-155			<14	Bq/ml		U	
W-05L218	LIQUID	AC-MM-9 002301	G-ALPHA	2.6	0.6		Bq/ml			
W-05L218	LIQUID	BETA SCINT	G-BETA	1.4E3	0.1E3		Bq/ml			
W-05L218	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	11.38			mg/ml			
W-05L218	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	1.23			mg/ml			
W-05L218	LIQUID	GFAA	AS	3.60E-02	3.00E-02		ug/ml			
W-05L218	LIQUID	GFAA	SE			<.025	ug/ml		U	
W-05L218	LIQUID	MASS SPEC	U-233 BY MS	0.0062	0.0001		ATOM %			
W-05L218	LIQUID	MASS SPEC	U-234 BY MS	0.0052	0.0001		ATOM %			
W-05L218	LIQUID	MASS SPEC	U-235 BY MS	0.674	0.006		ATOM %			
W-05L218	LIQUID	MASS SPEC	U-236 BY MS	0.0019	0.0001		ATOM %			
W-05L218	LIQUID	MASS SPEC	U-238 BY MS	99.31	0.01		ATOM %			
W-05L218	LIQUID	MHS-LIQUID	HG	2.63E-02	2.50E-03		ug/ml			
W-05L218	LIQUID	MM 1 003105	CO3			<.1	Mol/l			
W-05L218	LIQUID	MM 1 003105	HCO3			<.1	Mol/l			
W-05L218	LIQUID	MM 1 003105	OH			<.1	Mol/l			
W-05L218	LIQUID	MM 1 1011	DENSITY	1.013	0.001		g/ml			
W-05L218	LIQUID	NAA	G-FISSILE(TOT)	0.60	0.06		ug/ml			
W-05L218	LIQUID	SW846 6010A	AG			<.00625	ug/ml		R	8
W-05L218	LIQUID	SW846 6010A	AL			<.025	ug/ml		U	
W-05L218	LIQUID	SW846 6010A	B	5.31E-02	3.50E-03		ug/ml			
W-05L218	LIQUID	SW846 6010A	BA	1.70E-02	7.50E-04		ug/ml			
W-05L218	LIQUID	SW846 6010A	BE			<.00113	ug/ml		U	
W-05L218	LIQUID	SW846 6010A	CA	6.84E+00	2.38E-01		ug/ml			
W-05L218	LIQUID	SW846 6010A	CD			<.0075	ug/ml		U	
W-05L218	LIQUID	SW846 6010A	CO	3.41E-02	1.50E-02		ug/ml			
W-05L218	LIQUID	SW846 6010A	CR	6.21E-01	9.00E-03		ug/ml			
W-05L218	LIQUID	SW846 6010A	CU	1.00E-01	6.00E-03		ug/ml			
W-05L218	LIQUID	SW846 6010A	FE	3.49E-02	4.00E-03		ug/ml			
W-05L218	LIQUID	SW846 6010A	K	7.63E+01	2.88E+00		ug/ml			
W-05L218	LIQUID	SW846 6010A	MG	1.98E+00	9.48E-02		ug/ml			
W-05L218	LIQUID	SW846 6010A	MN	8.38E-03	5.00E-04		ug/ml			
W-05L218	LIQUID	SW846 6010A	NA	4.25E+03	8.13E+01		ug/ml			
W-05L218	LIQUID	SW846 6010A	NI	1.05E-01	6.50E-03		ug/ml			
W-05L218	LIQUID	SW846 6010A	PB			<.425	ug/ml		U	
W-05L218	LIQUID	SW846 6010A	SB			<.163	ug/ml		UJ	8
W-05L218	LIQUID	SW846 6010A	SR	8.38E-03	5.00E-04		ug/ml			
W-05L218	LIQUID	SW846 6010A	TH	9.70E-02	7.53E-02		ug/ml			
W-05L218	LIQUID	SW846 6010A	TL			<.15	ug/ml		U	
W-05L218	LIQUID	SW846 6010A	U	8.19E+01	1.55E00		ug/ml			
W-05L218	LIQUID	SW846 6010A	V			<.025	ug/ml		U	
W-05L218	LIQUID	SW846 6010A	ZN	5.34E-02	1.08E-02		ug/ml			
W-05L218	LIQUID	SW846 9040	PH	9.84			Std Units			
W-05L218	LIQUID	SW846 9056	BR			<10	ug/ml		U	
W-05L218	LIQUID	SW846 9056	CL	83	0		ug/ml			
W-05L218	LIQUID	SW846 9056	F	458	3		ug/ml			
W-05L218	LIQUID	SW846 9056	NO3	916	13		ug/ml			
W-05L218	LIQUID	SW846 9056	PO4	2270	46		ug/ml			
W-05L218	LIQUID	SW846 9056	SO4	252	9		ug/ml			
W-05L218	LIQUID	SW846 9060	TC	1083	8		ug/ml			
W-05L218	LIQUID	SW846 9060	TIC	1006	14		ug/ml			
W-05L218	LIQUID	SW846 9060	TOC	77	10		ug/ml			
W-05S230	SOFT SLUDGE	1 003115	G-ALPHA CM-244	34.8			%			
W-05S230	SOFT SLUDGE	1 003115	G-ALPHA PU-238, AM-24	28.4			%			
W-05S230	SOFT SLUDGE	1 003115	G-ALPHA PU-239/240	36.8			%			
W-05S230	SOFT SLUDGE	1 003115	TOT PU-238	14.2			%			
W-05S230	SOFT SLUDGE	1 003115	TOT PU-239/240	85.8			%			
W-05S230	SOFT SLUDGE	2 21807	TOT-RAD-SR	79000	3000		Bq/g			
W-05S230	SOFT SLUDGE	9 002301	G-ALPHA	1.9E3	0.1E3		Bq/g			
W-05S230	SOFT SLUDGE	9 002302	G-BETA	2.0E5	0.1E5		Bq/g			
W-05S230	SOFT SLUDGE	AC-MM-2 21996	CO-60	230	30		Bq/g			
W-05S230	SOFT SLUDGE	AC-MM-2 21996	CS-137	24000	1000		Bq/g			
W-05S230	SOFT SLUDGE	AC-MM-2 21996	EU-152			<340	Bq/g		U	
W-05S230	SOFT SLUDGE	AC-MM-2 21996	EU-154			<300	Bq/g		U	
W-05S230	SOFT SLUDGE	AC-MM-2 21996	EU-155			<350	Bq/g		U	
W-05S230	SOFT SLUDGE	AC-MM-2 31621	PU(TOTAL)	580	240		Bq/g			
W-05S230	SOFT SLUDGE	GFAA	AS			<3.69	ug/g		U	
W-05S230	SOFT SLUDGE	GFAA	SE			<3.69	ug/g		U	
W-05S230	SOFT SLUDGE	ICP	AG			<.923	ug/g		R	8
W-05S230	SOFT SLUDGE	ICP	AL	21200	362		ug/g			
W-05S230	SOFT SLUDGE	ICP	B	104	2.55		ug/g			
W-05S230	SOFT SLUDGE	ICP	BA	60.9	2.99		ug/g			
W-05S230	SOFT SLUDGE	ICP	BE	.665	.0369		ug/g			
W-05S230	SOFT SLUDGE	ICP	CA	11300	344		ug/g			
W-05S230	SOFT SLUDGE	ICP	CD	5.37	1.92		ug/g			
W-05S230	SOFT SLUDGE	ICP	CO			<1.29	ug/g		U	
W-05S230	SOFT SLUDGE	ICP	CR	1220	54.6		ug/g			
W-05S230	SOFT SLUDGE	ICP	CU	30.7	1.77		ug/g			
W-05S230	SOFT SLUDGE	ICP	FE	19200	490		ug/g			
W-05S230	SOFT SLUDGE	ICP	K	310	3.71		ug/g			

TANK W-5

SAMPLE_I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-05S230	SOFT SLUDGE	ICP	MG	284	10.2		ug/g			
W-05S230	SOFT SLUDGE	ICP	MN	276	13		ug/g			
W-05S230	SOFT SLUDGE	ICP	NA	21100	530		ug/g			
W-05S230	SOFT SLUDGE	ICP	NI	129	7.64		ug/g			
W-05S230	SOFT SLUDGE	ICP	PB	333	60.2		ug/g			
W-05S230	SOFT SLUDGE	ICP	SB			<24	ug/g		UJ	8,9
W-05S230	SOFT SLUDGE	ICP	SR	33.9	.369		ug/g			
W-05S230	SOFT SLUDGE	ICP	TH	94.6	61		ug/g			
W-05S230	SOFT SLUDGE	ICP	TL			<22.2	ug/g		UJ	8
W-05S230	SOFT SLUDGE	ICP	U	927	64.5		ug/g			
W-05S230	SOFT SLUDGE	ICP	V			<3.69	ug/g		U	
W-05S230	SOFT SLUDGE	ICP	ZN	35.2	1.14		ug/g			
W-05S230	SOFT SLUDGE	MASS SPEC	PU-238 BY MS	0.15	0.04		ATOM %			
W-05S230	SOFT SLUDGE	MASS SPEC	PU-239 BY MS	95.81	0.04		ATOM %			
W-05S230	SOFT SLUDGE	MASS SPEC	PU-240 BY MS	3.69	0.01		ATOM %			
W-05S230	SOFT SLUDGE	MASS SPEC	PU-241 BY MS	0.11	0.01		ATOM %			
W-05S230	SOFT SLUDGE	MASS SPEC	PU-242 BY MS	0.23	0.01		ATOM %			
W-05S230	SOFT SLUDGE	MASS SPEC	PU-244 BY MS			<.01	ATOM %		U	
W-05S230	SOFT SLUDGE	MASS SPEC	U-233 BY MS	0.0091	0.0006		ATOM %			
W-05S230	SOFT SLUDGE	MASS SPEC	U-234 BY MS	0.0042	0.0002		ATOM %			
W-05S230	SOFT SLUDGE	MASS SPEC	U-235 BY MS	.54	.01		ATOM %			
W-05S230	SOFT SLUDGE	MASS SPEC	U-236 BY MS	0.0045	0.0001		ATOM %			
W-05S230	SOFT SLUDGE	MASS SPEC	U-238 BY MS	99.44	0.004		ATOM %			
W-05S230	SOFT SLUDGE	MHS-SLUDGE	HG	107	7.38		ug/g		J	8
W-05S230	SOFT SLUDGE	NAA	G-FISSILE(TOT)	4.75	0.48		ug/g			
W-05S230	SOFT SLUDGE	ORGANICS	AROCLOR-1016			<1200	ug/kg	U	U	
W-05S230	SOFT SLUDGE	ORGANICS	AROCLOR-1221			<1200	ug/kg	U	U	
W-05S230	SOFT SLUDGE	ORGANICS	AROCLOR-1232			<1200	ug/kg	U	U	
W-05S230	SOFT SLUDGE	ORGANICS	AROCLOR-1242			<1200	ug/kg	U	U	
W-05S230	SOFT SLUDGE	ORGANICS	AROCLOR-1248			<1200	ug/kg	U	U	
W-05S230	SOFT SLUDGE	ORGANICS	AROCLOR-1254	145.00			ug/kg	J		
W-05S230	SOFT SLUDGE	ORGANICS	AROCLOR-1260	60.00			ug/kg	J		
W-05S230	SOFT SLUDGE	SAP Add 1 Rev1	GROSS WATER	72.0			% MOISTURE			
W-05S230	SOFT SLUDGE	SW846 9056	BR			<48	ug/g		U	
W-05S230	SOFT SLUDGE	SW846 9056	CL			<48	ug/g		U	
W-05S230	SOFT SLUDGE	SW846 9056	F	1958	38		ug/g			
W-05S230	SOFT SLUDGE	SW846 9056	NO3	422	24		ug/g			
W-05S230	SOFT SLUDGE	SW846 9056	PO4	2678	323		ug/g			
W-05S230	SOFT SLUDGE	SW846 9056	SO4	250	19		ug/g			
W-05S230	SOFT SLUDGE	SW846 9060	TC	2500	400		ug/g			
W-05S230	SOFT SLUDGE	SW846 9060	TIC	1800	300		ug/g			
W-05S230	SOFT SLUDGE	SW846 9060	TOC	700	100		ug/g			

TANK W-6

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-06L219	LIQUID	2 21807	TOT-RAD-SR	3.8E3	0.1E3		Bq/ml			
W-06L219	LIQUID	2 31621	PU(TOTAL)	3.9E-02	5.0E-02		Bq/ml		UJ	D,E
W-06L219	LIQUID	AC-MM-2 21996	CO-60			<6	Bq/ml		U	
W-06L219	LIQUID	AC-MM-2 21996	CS-137	1.0E3	0.1E3		Bq/ml			
W-06L219	LIQUID	AC-MM-2 21996	EU-152			<26	Bq/ml		U	
W-06L219	LIQUID	AC-MM-2 21996	EU-154			<13	Bq/ml		U	
W-06L219	LIQUID	AC-MM-2 21996	EU-155			<19	Bq/ml		U	
W-06L219	LIQUID	AC-MM-9 002301	G-ALPHA	0.8	0.4		Bq/ml			
W-06L219	LIQUID	BETA SCINT	G-BETA	8.9E3	0.1E3		Bq/ml			
W-06L219	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	1.26			mg/ml			
W-06L219	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	0.03			mg/ml			
W-06L219	LIQUID	GFAA	AS			<.025	ug/ml		U	
W-06L219	LIQUID	GFAA	SE			<.025	ug/ml		U	
W-06L219	LIQUID	MASS SPEC	U-233 BY MS	0.009	0.001		ATOM %			
W-06L219	LIQUID	MASS SPEC	U-234 BY MS	0.005	0.002		ATOM %			
W-06L219	LIQUID	MASS SPEC	U-235 BY MS	0.70	0.02		ATOM %			
W-06L219	LIQUID	MASS SPEC	U-236 BY MS	0.002	0.002		ATOM %		UJ	E
W-06L219	LIQUID	MASS SPEC	U-238 BY MS	99.28	0.013		ATOM %			
W-06L219	LIQUID	MHS-LIQUID	HG	3.13E-03	1.25E-03		ug/ml		U	7
W-06L219	LIQUID	MM 1 003105	CO3			<.1	Mol/l			
W-06L219	LIQUID	MM 1 003105	HCO3			<.1	Mol/l			
W-06L219	LIQUID	MM 1 003105	OH			<.1	Mol/l			
W-06L219	LIQUID	MM 1 1011	DENSITY	1.007	0.002		g/ml			
W-06L219	LIQUID	NAA	G-FISSILE(TOT)	1.6E-2	0.2E-2		ug/ml			
W-06L219	LIQUID	SW846 6010A	AG			<.00625	ug/ml		R	8
W-06L219	LIQUID	SW846 6010A	AL	4.89E-02	1.65E-02		ug/ml			
W-06L219	LIQUID	SW846 6010A	B	2.81E-02	2.00E-03		ug/ml			
W-06L219	LIQUID	SW846 6010A	BA	5.00E-03	5.00E-04		ug/ml			
W-06L219	LIQUID	SW846 6010A	BE			<.00113	ug/ml		U	
W-06L219	LIQUID	SW846 6010A	CA	1.98E+01	5.83E-01		ug/ml		J	5B
W-06L219	LIQUID	SW846 6010A	CD			<.0075	ug/ml		U	
W-06L219	LIQUID	SW846 6010A	CO			<.00875	ug/ml		U	
W-06L219	LIQUID	SW846 6010A	CR	7.03E-02	4.50E-03		ug/ml			
W-06L219	LIQUID	SW846 6010A	CU	2.88E-03	2.75E-03		ug/ml			
W-06L219	LIQUID	SW846 6010A	FE	5.00E-02	1.75E-03		ug/ml		J	5B
W-06L219	LIQUID	SW846 6010A	K	2.23E+01	9.93E-01		ug/ml			
W-06L219	LIQUID	SW846 6010A	MG	2.06E+00	6.60E-02		ug/ml			
W-06L219	LIQUID	SW846 6010A	MN			<.00113	ug/ml		U	
W-06L219	LIQUID	SW846 6010A	NA	3.61E+02	9.88E+00		ug/ml			
W-06L219	LIQUID	SW846 6010A	NI			<.0113	ug/ml		U	
W-06L219	LIQUID	SW846 6010A	PB			<.425	ug/ml		U	
W-06L219	LIQUID	SW846 6010A	SB			<.163	ug/ml		UJ	8
W-06L219	LIQUID	SW846 6010A	SR	5.84E-02	1.00E-03		ug/ml			
W-06L219	LIQUID	SW846 6010A	TH			<.05	ug/ml		U	
W-06L219	LIQUID	SW846 6010A	TL			<.15	ug/ml		U	
W-06L219	LIQUID	SW846 6010A	U	2.14E+00	2.05E-01		ug/ml			
W-06L219	LIQUID	SW846 6010A	V			<.025	ug/ml		U	
W-06L219	LIQUID	SW846 6010A	ZN			<.025	ug/ml		U	
W-06L219	LIQUID	SW846 9040	PH	8.35			Std Units			
W-06L219	LIQUID	SW846 9056	BR			<2.5	ug/ml		U	
W-06L219	LIQUID	SW846 9056	CL	20	0		ug/ml			
W-06L219	LIQUID	SW846 9056	F	49	5		ug/ml			
W-06L219	LIQUID	SW846 9056	NO3	703	21		ug/ml			
W-06L219	LIQUID	SW846 9056	PO4	15	1		ug/ml			
W-06L219	LIQUID	SW846 9056	SO4	51	1		ug/ml			
W-06L219	LIQUID	SW846 9060	TC	25	4		ug/ml			
W-06L219	LIQUID	SW846 9060	TIC	21	3		ug/ml			
W-06L219	LIQUID	SW846 9060	TOC	4	4		ug/ml		U	
W-06L220	LIQUID	2 21807	TOT-RAD-SR	1.5E2	0.1E2		Bq/ml			
W-06L220	LIQUID	2 31621	PU(TOTAL)	1.7E-02	4.3E-02		Bq/ml		UJ	D,E
W-06L220	LIQUID	AC-MM-2 21996	CO-60	8.3	1.6		Bq/ml			
W-06L220	LIQUID	AC-MM-2 21996	CS-137	6.2E3	0.1E3		Bq/ml			
W-06L220	LIQUID	AC-MM-2 21996	EU-152			<17	Bq/ml		U	
W-06L220	LIQUID	AC-MM-2 21996	EU-154			<10	Bq/ml		U	
W-06L220	LIQUID	AC-MM-2 21996	EU-155			<37	Bq/ml		U	
W-06L220	LIQUID	AC-MM-9 002301	G-ALPHA	0.7	0.4		Bq/ml			
W-06L220	LIQUID	BETA SCINT	G-BETA	7.6E3	0.1E3		Bq/ml			
W-06L220	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	16.74			mg/ml			
W-06L220	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	1.27			mg/ml			
W-06L220	LIQUID	GFAA	AS	3.20E-02	3.00E-03		ug/ml			
W-06L220	LIQUID	GFAA	SE			<.025	ug/ml		U	
W-06L220	LIQUID	MASS SPEC	U-233 BY MS	0.005	0.001		ATOM %			
W-06L220	LIQUID	MASS SPEC	U-234 BY MS	0.007	0.002		ATOM %			
W-06L220	LIQUID	MASS SPEC	U-235 BY MS	0.72	0.03		ATOM %			
W-06L220	LIQUID	MASS SPEC	U-236 BY MS	0.003	0.001		ATOM %			
W-06L220	LIQUID	MASS SPEC	U-238 BY MS	99.27	0.03		ATOM %			
W-06L220	LIQUID	MHS-LIQUID	HG	2.06E-02	0.00E+00		ug/ml			
W-06L220	LIQUID	MM 1 003105	CO3			<.1	Mol/l			
W-06L220	LIQUID	MM 1 003105	HCO3			<.1	Mol/l			
W-06L220	LIQUID	MM 1 003105	OH			<.1	Mol/l			
W-06L220	LIQUID	MM 1 1011	DENSITY	1.020	0.001		g/ml			
W-06L220	LIQUID	NAA	G-FISSILE(TOT)	0.94	0.09		ug/ml			
W-06L220	LIQUID	SW846 6010A	AG			<.00625	ug/ml		R	8
W-06L220	LIQUID	SW846 6010A	AL	5.04E+00	8.48E-02		ug/ml			
W-06L220	LIQUID	SW846 6010A	B	1.79E-01	8.75E-03		ug/ml			
W-06L220	LIQUID	SW846 6010A	BA			<.00125	ug/ml		U	

TANK W-6

SAMPLE_I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-06L220	LIQUID	SW846 6010A	BE			<.00113	ug/ml		U	
W-06L220	LIQUID	SW846 6010A	CA	3.87E+00	5.13E-02		ug/ml		J	5B
W-06L220	LIQUID	SW846 6010A	CD			<.0075	ug/ml		U	
W-06L220	LIQUID	SW846 6010A	CO			<.00875	ug/ml		U	
W-06L220	LIQUID	SW846 6010A	CR	5.06E+00	4.13E-02		ug/ml			
W-06L220	LIQUID	SW846 6010A	CU	3.11E-02	3.75E-03		ug/ml			
W-06L220	LIQUID	SW846 6010A	FE			<.00375	ug/ml		U	
W-06L220	LIQUID	SW846 6010A	K	1.51E+02	1.51E+00		ug/ml			
W-06L220	LIQUID	SW846 6010A	MG	6.11E-01	1.50E-02		ug/ml			
W-06L220	LIQUID	SW846 6010A	MN			<.00113	ug/ml		U	
W-06L220	LIQUID	SW846 6010A	NA	6.44E+03	5.46E+01		ug/ml			
W-06L220	LIQUID	SW846 6010A	NI	1.52E-01	5.50E-03		ug/ml		J	5B
W-06L220	LIQUID	SW846 6010A	PB			<.425	ug/ml		U	
W-06L220	LIQUID	SW846 6010A	SB			<.163	ug/ml		UJ	8
W-06L220	LIQUID	SW846 6010A	SR	7.13E-03	5.00E-04		ug/ml			
W-06L220	LIQUID	SW846 6010A	TH	9.04E-01	5.33E-02		ug/ml			
W-06L220	LIQUID	SW846 6010A	TL	5.54E-01	3.35E-01		ug/ml			
W-06L220	LIQUID	SW846 6010A	U	3.73E+01	4.15E-01		ug/ml			
W-06L220	LIQUID	SW846 6010A	V			<.025	ug/ml		U	
W-06L220	LIQUID	SW846 6010A	ZN			<.025	ug/ml		U	
W-06L220	LIQUID	SW846 9040	PH	10.82			Std Units			
W-06L220	LIQUID	SW846 9056	BR			<5	ug/ml		U	
W-06L220	LIQUID	SW846 9056	CL	151	3		ug/ml			
W-06L220	LIQUID	SW846 9056	F	808	4		ug/ml			
W-06L220	LIQUID	SW846 9056	NO3	6260	74		ug/ml			
W-06L220	LIQUID	SW846 9056	PO4	963	11		ug/ml			
W-06L220	LIQUID	SW846 9056	SO4	1610	20		ug/ml			
W-06L220	LIQUID	SW846 9060	TC	483	20		ug/ml			
W-06L220	LIQUID	SW846 9060	TIC	424	4		ug/ml			
W-06L220	LIQUID	SW846 9060	TOC	59	13		ug/ml			
W-06S221	SOFT SLUDGE	1 003115	G-ALPHA CM-244	62.4			%			
W-06S221	SOFT SLUDGE	1 003115	G-ALPHA PU-238/23	6.4			%			
W-06S221	SOFT SLUDGE	1 003115	G-ALPHA PU-239/24	31.0			%			
W-06S221	SOFT SLUDGE	1 003115	TOTPU PU-238	8.6			%			
W-06S221	SOFT SLUDGE	1 003115	TOTPU PU-239/240	91.4			%			
W-06S221	SOFT SLUDGE	2 21807	TOT-RAD-SR	1.9E5	0.1E5		Bq/g		J	T
W-06S221	SOFT SLUDGE	2 31621	PU(TOTAL)	2.7E3	0.1E3		Bq/g		J	D
W-06S221	SOFT SLUDGE	AC-MM-2 21996	CO-60	560	40		Bq/g			
W-06S221	SOFT SLUDGE	AC-MM-2 21996	CS-137	9.0E4	0.2E4		Bq/g			
W-06S221	SOFT SLUDGE	AC-MM-2 21996	EU-152			<370	Bq/g		U	
W-06S221	SOFT SLUDGE	AC-MM-2 21996	EU-154	460	90		Bq/g			
W-06S221	SOFT SLUDGE	AC-MM-2 21996	EU-155			<580	Bq/g		U	
W-06S221	SOFT SLUDGE	AC-MM-9 002301	G-ALPHA	1.1E4	0.1E4		Bq/g			
W-06S221	SOFT SLUDGE	BETA SCINT	G-BETA	1.1E6	0.1E6		Bq/g			
W-06S221	SOFT SLUDGE	ICP	PB	1.01E+03	1.35E+01		ug/g		J	8
W-06S221	SOFT SLUDGE	ICP	TL	3.61E+01	9.58E+00		ug/g			
W-06S221	SOFT SLUDGE	MASS SPEC	PU-238 BY MS	0.61	0.29		ATOM %			
W-06S221	SOFT SLUDGE	MASS SPEC	PU-239 BY MS	95.88	0.31		ATOM %			
W-06S221	SOFT SLUDGE	MASS SPEC	PU-240 BY MS	3.28	0.02		ATOM %			
W-06S221	SOFT SLUDGE	MASS SPEC	PU-241 BY MS	0.05	0.01		ATOM %			
W-06S221	SOFT SLUDGE	MASS SPEC	PU-242 BY MS	0.17	0.01		ATOM %			
W-06S221	SOFT SLUDGE	MASS SPEC	PU-244 BY MS	0.01	0.01		ATOM %			
W-06S221	SOFT SLUDGE	MASS SPEC	U-233 BY MS			<.0001	ATOM %		U	
W-06S221	SOFT SLUDGE	MASS SPEC	U-234 BY MS	0.007	0.001		ATOM %			
W-06S221	SOFT SLUDGE	MASS SPEC	U-235 BY MS	0.71	0.01		ATOM %			
W-06S221	SOFT SLUDGE	MASS SPEC	U-236 BY MS	0.002	0.001		ATOM %			
W-06S221	SOFT SLUDGE	MASS SPEC	U-238 BY MS	99.27	0.01		ATOM %			
W-06S221	SOFT SLUDGE	MM 1 1011	DENSITY	1.19			g/ml			
W-06S221	SOFT SLUDGE	NAA	G-FISSILE(TOT)	58.8	0.3		ug/g			
W-06S221	SOFT SLUDGE	ORGANICS	AROCOR-1016			<228	ug/kg	U	U	
W-06S221	SOFT SLUDGE	ORGANICS	AROCOR-1221			<228	ug/kg	U	U	
W-06S221	SOFT SLUDGE	ORGANICS	AROCOR-1232			<228	ug/kg	U	U	
W-06S221	SOFT SLUDGE	ORGANICS	AROCOR-1242			<228	ug/kg	U	U	
W-06S221	SOFT SLUDGE	ORGANICS	AROCOR-1248			<228	ug/kg	U	U	
W-06S221	SOFT SLUDGE	ORGANICS	AROCOR-1254	290.00			ug/kg	J		
W-06S221	SOFT SLUDGE	ORGANICS	AROCOR-1260	110.00			ug/kg	J		
W-06S221	SOFT SLUDGE	SAP Add 1 Rev1	GROSS WATER	65.6			% MOISTURE			
W-06S221	SOFT SLUDGE	SW846 6010A	AG	8.60E+00	2.12E-01		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	AL	1.09E+04	2.35E+02		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	B	6.36E+00	1.35E-01		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	BA	2.10E+02	4.43E-01		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	BE			<.0866	ug/g		U	
W-06S221	SOFT SLUDGE	SW846 6010A	CA	3.16E+04	8.06E+02		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	CD	4.95E+00	4.43E-01		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	CO	4.89E+00	1.21E+00		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	CR	1.39E+03	2.79E+01		ug/g		J	8
W-06S221	SOFT SLUDGE	SW846 6010A	CU	3.12E+01	4.23E-01		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	FE	1.47E+04	2.69E+02		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	K	5.95E+02	1.17E+01		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	MG	7.46E+02	3.50E+00		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	MN	1.51E+03	2.85E+01		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	NA	4.39E+04	1.40E+02		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	NI	1.02E+02	1.31E+00		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	SB			<12.5	ug/g		U	
W-06S221	SOFT SLUDGE	SW846 6010A	SI	3.36E+03	1.56E+02		ug/g		J	8
W-06S221	SOFT SLUDGE	SW846 6010A	SR	5.45E+01	9.62E-01		ug/g			

TANK W-6

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-06S221	SOFT SLUDGE	SW846 6010A	TH	6.79E+02	1.06E+02		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	U	8.86E+03	6.29E+01		ug/g			
W-06S221	SOFT SLUDGE	SW846 6010A	V			<1.92	ug/g		U	
W-06S221	SOFT SLUDGE	SW846 6010A	ZN	8.99E+01	3.16E+00		ug/g		J	17
W-06S221	SOFT SLUDGE	SW846 7000A	AS			<.481	ug/g		U	
W-06S221	SOFT SLUDGE	SW846 7000A	SE			<.481	ug/g		U	
W-06S221	SOFT SLUDGE	SW846 7471	HG	4.02E+01	8.66E+00		ug/g			
W-06S221	SOFT SLUDGE	SW846 9045A	PH	11.14			Std Units			
W-06S221	SOFT SLUDGE	SW846 9056	BR			<64	ug/g		U	
W-06S221	SOFT SLUDGE	SW846 9056	CL			<64	ug/g		U	
W-06S221	SOFT SLUDGE	SW846 9056	F	11900	239		ug/g			
W-06S221	SOFT SLUDGE	SW846 9056	NO3	12300	221		ug/g		J	Q
W-06S221	SOFT SLUDGE	SW846 9056	PO4	7900	241		ug/g			
W-06S221	SOFT SLUDGE	SW846 9056	SO4	9400	14		ug/g		J	Q
W-06S221	SOFT SLUDGE	SW846 9060	TC	5600	600		ug/g			
W-06S221	SOFT SLUDGE	SW846 9060	TIC	3300	200		ug/g			
W-06S221	SOFT SLUDGE	SW846 9060	TOC	2400	400		ug/g			

TANK W-7

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET LIMIT	UNITS	LAB QUAL	REV QUAL	QUAL CODE
W-07S228	SOFT SLUDGE	1 003115	G-ALPHA CM-244	60.8			%			
W-07S228	SOFT SLUDGE	1 003115	G-ALPHA PU-238,AM-24	28.7			%			
W-07S228	SOFT SLUDGE	1 003115	G-ALPHA PU-239/240	10.5			%			
W-07S228	SOFT SLUDGE	1 003115	TOTPU PU-238	67.2			%			
W-07S228	SOFT SLUDGE	1 003115	TOTPU PU-239/240	32.8			%			
W-07S228	SOFT SLUDGE	2 21807	TOT-RAD-SR	790000	20000		Bq/g			
W-07S228	SOFT SLUDGE	2 31621	PU(TOTAL)	2600	200		Bq/g			
W-07S228	SOFT SLUDGE	AC-MM-2 21996	CO-60	2700	100		Bq/g			
W-07S228	SOFT SLUDGE	AC-MM-2 21996	CS-137	1100000	100000		Bq/g			
W-07S228	SOFT SLUDGE	AC-MM-2 21996	EU-152			<830	Bq/g		U	
W-07S228	SOFT SLUDGE	AC-MM-2 21996	EU-154	1200	200		Bq/g			
W-07S228	SOFT SLUDGE	AC-MM-2 21996	EU-155			<1200	Bq/g		U	
W-07S228	SOFT SLUDGE	AC-MM-9 002301	G-ALPHA	20000	1000		Bq/g			
W-07S228	SOFT SLUDGE	BETA SCINT	G-BETA	3100000	1000		Bq/g			
W-07S228	SOFT SLUDGE	GFAA	AS			<.922	ug/g		U	
W-07S228	SOFT SLUDGE	GFAA	SE			<3.69	ug/g		U	
W-07S228	SOFT SLUDGE	ICP	AG			<.922	ug/g		R	8
W-07S228	SOFT SLUDGE	ICP	AL	5130	142		ug/g			
W-07S228	SOFT SLUDGE	ICP	B	30.1	1.11		ug/g			
W-07S228	SOFT SLUDGE	ICP	BA	231	14		ug/g			
W-07S228	SOFT SLUDGE	ICP	BE	2.19	.111		ug/g			
W-07S228	SOFT SLUDGE	ICP	CA	1300	10.4		ug/g			
W-07S228	SOFT SLUDGE	ICP	CD			<1.11	ug/g		U	
W-07S228	SOFT SLUDGE	ICP	CO			<1.29	ug/g		U	
W-07S228	SOFT SLUDGE	ICP	CR	264	14.9		ug/g			
W-07S228	SOFT SLUDGE	ICP	CU	98	6.82		ug/g			
W-07S228	SOFT SLUDGE	ICP	FE	4670	25.1		ug/g			
W-07S228	SOFT SLUDGE	ICP	K	8310	64.7		ug/g			
W-07S228	SOFT SLUDGE	ICP	MG	273	23.6		ug/g			
W-07S228	SOFT SLUDGE	ICP	MN	110	6.49		ug/g			
W-07S228	SOFT SLUDGE	ICP	NA	42900	436		ug/g			
W-07S228	SOFT SLUDGE	ICP	NI	43.5	3.83		ug/g			
W-07S228	SOFT SLUDGE	ICP	PB			<62.7	ug/g		U	
W-07S228	SOFT SLUDGE	ICP	SB			<24	ug/g		UJ	8.9
W-07S228	SOFT SLUDGE	ICP	SR	11.4	.147		ug/g			
W-07S228	SOFT SLUDGE	ICP	TH	3920	44.8		ug/g			
W-07S228	SOFT SLUDGE	ICP	TL			<22.1	ug/g		UJ	8
W-07S228	SOFT SLUDGE	ICP	U	73400	688		ug/g			
W-07S228	SOFT SLUDGE	ICP	V			<3.69	ug/g		U	
W-07S228	SOFT SLUDGE	ICP	ZN	31.1	3.91		ug/g			
W-07S228	SOFT SLUDGE	MASS SPEC	PU-238 BY MS	0.99	0.02		ATOM %			
W-07S228	SOFT SLUDGE	MASS SPEC	PU-239 BY MS	93.40	0.08		ATOM %			
W-07S228	SOFT SLUDGE	MASS SPEC	PU-240 BY MS	4.77	0.03		ATOM %			
W-07S228	SOFT SLUDGE	MASS SPEC	PU-241 BY MS	0.16	0.01		ATOM %			
W-07S228	SOFT SLUDGE	MASS SPEC	PU-242 BY MS	0.60	0.02		ATOM %			
W-07S228	SOFT SLUDGE	MASS SPEC	PU-244 BY MS	0.08	0.01		ATOM %			
W-07S228	SOFT SLUDGE	MASS SPEC	U-233 BY MS	0.0010	0.0001		ATOM %			
W-07S228	SOFT SLUDGE	MASS SPEC	U-234 BY MS	0.0056	0.0002		ATOM %			
W-07S228	SOFT SLUDGE	MASS SPEC	U-235 BY MS	0.725	.002		ATOM %			
W-07S228	SOFT SLUDGE	MASS SPEC	U-236 BY MS	0.0005	0.0001		ATOM %			
W-07S228	SOFT SLUDGE	MASS SPEC	U-238 BY MS	99.268	.006		ATOM %			
W-07S228	SOFT SLUDGE	MHS-SLUDGE	HG	137	11.1		ug/g		J	8
W-07S228	SOFT SLUDGE	MM 1 1011	DENSITY	1.21			g/ml			
W-07S228	SOFT SLUDGE	NAA	G-FISSILE(TOT)	506	51		ug/g			
W-07S228	SOFT SLUDGE	ORGANICS	AROCLOR-1016			<120	ug/kg	U	UJ	S
W-07S228	SOFT SLUDGE	ORGANICS	AROCLOR-1221			<120	ug/kg	U	UJ	S
W-07S228	SOFT SLUDGE	ORGANICS	AROCLOR-1232			<120	ug/kg	U	UJ	S
W-07S228	SOFT SLUDGE	ORGANICS	AROCLOR-1242			<120	ug/kg	U	UJ	S
W-07S228	SOFT SLUDGE	ORGANICS	AROCLOR-1248			<120	ug/kg	U	UJ	S
W-07S228	SOFT SLUDGE	ORGANICS	AROCLOR-1254	82			ug/kg	J	J	S
W-07S228	SOFT SLUDGE	ORGANICS	AROCLOR-1260			<240	ug/kg	U	UJ	S
W-07S228	SOFT SLUDGE	SAP Add 1 Rev1	GROSS WATER	70.4			% MOISTURE			
W-07S228	SOFT SLUDGE	SW846 9040	PH	10.27			Std Units			
W-07S228	SOFT SLUDGE	SW846 9056	BR	88	13		ug/g			
W-07S228	SOFT SLUDGE	SW846 9056	CL	2840			ug/g			
W-07S228	SOFT SLUDGE	SW846 9056	F	2320	14		ug/g			
W-07S228	SOFT SLUDGE	SW846 9056	NO3	38500	88		ug/g		J	Q
W-07S228	SOFT SLUDGE	SW846 9056	PO4	5320			ug/g			
W-07S228	SOFT SLUDGE	SW846 9056	SO4	8130	65		ug/g		J	Q
W-07S228	SOFT SLUDGE	SW846 9060	TC	6100	100		ug/g			
W-07S228	SOFT SLUDGE	SW846 9060	TIC	4700	400		ug/g			
W-07S228	SOFT SLUDGE	SW846 9060	TOC	1300	500		ug/g			
W-07S229	SOFT SLUDGE	1 003115	G-ALPHA CM-244	73.7			%			
W-07S229	SOFT SLUDGE	1 003115	G-ALPHA PU-238,AM-24	20.0			%			
W-07S229	SOFT SLUDGE	1 003115	G-ALPHA PU-239/240	6.3			%			
W-07S229	SOFT SLUDGE	1 003115	TOTPU PU-238	66.8			%			
W-07S229	SOFT SLUDGE	1 003115	TOTPU PU-239/240	33.2			%			
W-07S229	SOFT SLUDGE	2 21807	TOT-RAD-SR	870000	30000		Bq/g			
W-07S229	SOFT SLUDGE	2 31621	PU(TOTAL)	3300	100		Bq/g			
W-07S229	SOFT SLUDGE	AC-MM-2 21996	CO-60	3100	100		Bq/g			
W-07S229	SOFT SLUDGE	AC-MM-2 21996	CS-137	1400000	100000		Bq/g			
W-07S229	SOFT SLUDGE	AC-MM-2 21996	EU-152	1600	400		Bq/g			
W-07S229	SOFT SLUDGE	AC-MM-2 21996	EU-154	740	180		Bq/g			
W-07S229	SOFT SLUDGE	AC-MM-2 21996	EU-155			<1900	Bq/g		U	
W-07S229	SOFT SLUDGE	AC-MM-9 002301	G-ALPHA	22000	2000		Bq/g			
W-07S229	SOFT SLUDGE	BETA SCINT	G-BETA	3800000	100000		Bq/g			

TANK W-7

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-07S229	SOFT SLUDGE	GFAA	AS			<1.35	ug/g		U	
W-07S229	SOFT SLUDGE	GFAA	SE			<5.39	ug/g		U	
W-07S229	SOFT SLUDGE	ICP	AG			<1.35	ug/g		R	8
W-07S229	SOFT SLUDGE	ICP	AL	5970	272		ug/g			
W-07S229	SOFT SLUDGE	ICP	B	21.5	.756		ug/g			
W-07S229	SOFT SLUDGE	ICP	BA	79.9	6.7		ug/g			
W-07S229	SOFT SLUDGE	ICP	BE	2.32	.216		ug/g			
W-07S229	SOFT SLUDGE	ICP	CA	1440	9.73		ug/g			
W-07S229	SOFT SLUDGE	ICP	CD			<1.62	ug/g		U	
W-07S229	SOFT SLUDGE	ICP	CO			<1.89	ug/g		U	
W-07S229	SOFT SLUDGE	ICP	CR	337	30.2		ug/g			
W-07S229	SOFT SLUDGE	ICP	CU	100	6.97		ug/g			
W-07S229	SOFT SLUDGE	ICP	FE	6570	25.1		ug/g			
W-07S229	SOFT SLUDGE	ICP	K	8330	29.9		ug/g			
W-07S229	SOFT SLUDGE	ICP	MG	299	28.1		ug/g			
W-07S229	SOFT SLUDGE	ICP	MN	116	10.3		ug/g			
W-07S229	SOFT SLUDGE	ICP	NA	43200	126		ug/g			
W-07S229	SOFT SLUDGE	ICP	NI	54.7	6.64		ug/g			
W-07S229	SOFT SLUDGE	ICP	PB			<91.8	ug/g		U	
W-07S229	SOFT SLUDGE	ICP	SB			<35.1	ug/g		UJ	8.9
W-07S229	SOFT SLUDGE	ICP	SR	12.6	.486		ug/g			
W-07S229	SOFT SLUDGE	ICP	TH	4490	108		ug/g			
W-07S229	SOFT SLUDGE	ICP	TL			<32.4	ug/g		UJ	8
W-07S229	SOFT SLUDGE	ICP	U	86800	674		ug/g			
W-07S229	SOFT SLUDGE	ICP	V			<5.4	ug/g		U	
W-07S229	SOFT SLUDGE	ICP	ZN	33.4	5.02		ug/g			
W-07S229	SOFT SLUDGE	MASS SPEC	PU-238 BY MS	0.99	0.04		ATOM %			
W-07S229	SOFT SLUDGE	MASS SPEC	PU-239 BY MS	93.37	0.20		ATOM %			
W-07S229	SOFT SLUDGE	MASS SPEC	PU-240 BY MS	4.64	0.04		ATOM %			
W-07S229	SOFT SLUDGE	MASS SPEC	PU-241 BY MS	0.23	0.04		ATOM %			
W-07S229	SOFT SLUDGE	MASS SPEC	PU-242 BY MS	0.62	0.04		ATOM %			
W-07S229	SOFT SLUDGE	MASS SPEC	PU-244 BY MS	0.15	0.04		ATOM %			
W-07S229	SOFT SLUDGE	MASS SPEC	U-233 BY MS	0.0009	0.0003		ATOM %			
W-07S229	SOFT SLUDGE	MASS SPEC	U-234 BY MS	0.0056	0.0008		ATOM %			
W-07S229	SOFT SLUDGE	MASS SPEC	U-235 BY MS	0.727	0.013		ATOM %			
W-07S229	SOFT SLUDGE	MASS SPEC	U-236 BY MS	0.0005	0.0003		ATOM %			
W-07S229	SOFT SLUDGE	MASS SPEC	U-238 BY MS	99.27	.01		ATOM %			
W-07S229	SOFT SLUDGE	MHS-SLUDGE	HG	111	16.2		ug/g		J	8
W-07S229	SOFT SLUDGE	MM 1 1011	DENSITY	1.23			g/ml			
W-07S229	SOFT SLUDGE	NAA	G-FISSILE(TOT)	602	60		ug/g			
W-07S229	SOFT SLUDGE	ORGANICS	AROCLOR-1016			<112	ug/kg	U	UJ	S
W-07S229	SOFT SLUDGE	ORGANICS	AROCLOR-1221			<112	ug/kg	U	UJ	S
W-07S229	SOFT SLUDGE	ORGANICS	AROCLOR-1232			<112	ug/kg	U	UJ	S
W-07S229	SOFT SLUDGE	ORGANICS	AROCLOR-1242			<112	ug/kg	U	UJ	S
W-07S229	SOFT SLUDGE	ORGANICS	AROCLOR-1248			<112	ug/kg	U	UJ	S
W-07S229	SOFT SLUDGE	ORGANICS	AROCLOR-1254	111.00			ug/kg	J	J	S
W-07S229	SOFT SLUDGE	ORGANICS	AROCLOR-1260	14.00			ug/kg	J	J	S
W-07S229	SOFT SLUDGE	SAP Add 1 Rev1	GROSS WATER	67.9			% MOISTURE			
W-07S229	SOFT SLUDGE	SW846 9045A	PH	10.20			Std Units			
W-07S229	SOFT SLUDGE	SW846 9056	BR	111	2		ug/g			
W-07S229	SOFT SLUDGE	SW846 9056	CL	2530			ug/g			
W-07S229	SOFT SLUDGE	SW846 9056	F	1870	25		ug/g			
W-07S229	SOFT SLUDGE	SW846 9056	NO3	32600	580		ug/g		J	Q
W-07S229	SOFT SLUDGE	SW846 9056	PO4	4750	42		ug/g			
W-07S229	SOFT SLUDGE	SW846 9056	SO4	7700	66		ug/g		J	Q
W-07S229	SOFT SLUDGE	SW846 9060	TC	6000	300		ug/g			
W-07S229	SOFT SLUDGE	SW846 9060	TIC	4700	0		ug/g			
W-07S229	SOFT SLUDGE	SW846 9060	TOC	1300	300		ug/g			

TANK W-8

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-08L223	LIQUID	1 003115	G-ALPHA CM-244	14.9			%			
W-08L223	LIQUID	1 003115	G-ALPHA U-238+D	85.1			%			
W-08L223	LIQUID	2 21807	TOT-RAD-SR	4.9E2	0.3E2		Bq/ml			
W-08L223	LIQUID	2 31621	PU(TOTAL)	4.6	0.8		Bq/ml			
W-08L223	LIQUID	AC-MM-2 21996	CO-60	91	8		Bq/ml			
W-08L223	LIQUID	AC-MM-2 21996	CS-137	1.6E5	0.1E5		Bq/ml			
W-08L223	LIQUID	AC-MM-2 21996	EU-152			<33	Bq/ml		U	
W-08L223	LIQUID	AC-MM-2 21996	EU-154			<56	Bq/ml		U	
W-08L223	LIQUID	AC-MM-2 21996	EU-155			<270	Bq/ml		U	
W-08L223	LIQUID	AC-MM-9 002301	G-ALPHA	260	10		Bq/ml			
W-08L223	LIQUID	BETA SCINT	G-BETA	1.9E5	0.1E5		Bq/ml			
W-08L223	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	15.180			mg/ml			
W-08L223	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	1.190			mg/ml			
W-08L223	LIQUID	GFAA	AS			<0.025	ug/ml		U	
W-08L223	LIQUID	GFAA	SE			<0.025	ug/ml		U	
W-08L223	LIQUID	MASS SPEC	U-233 BY MS	0.044	0.006		ATOM %			
W-08L223	LIQUID	MASS SPEC	U-234 BY MS	0.006	0.001		ATOM %			
W-08L223	LIQUID	MASS SPEC	U-235 BY MS	0.71	0.03		ATOM %			
W-08L223	LIQUID	MASS SPEC	U-236 BY MS	0.003	0.001		ATOM %			
W-08L223	LIQUID	MASS SPEC	U-238 BY MS	99.24	0.02		ATOM %			
W-08L223	LIQUID	MHS-LIQUID	HG	3.28E-01	1.75E-01		ug/ml			
W-08L223	LIQUID	MM 1 003105	CO3			<1	Mol/l			
W-08L223	LIQUID	MM 1 003105	HCO3			<1	Mol/l			
W-08L223	LIQUID	MM 1 003105	OH			<1	Mol/l			
W-08L223	LIQUID	MM 1 1011	DENSITY	1.015			g/ml			
W-08L223	LIQUID	NAA	G-FISSILE(TOT)	5.51	0.60		ug/ml			
W-08L223	LIQUID	SW846 6010A	AG			<0.00625	ug/ml		R	8
W-08L223	LIQUID	SW846 6010A	AL			<0.025	ug/ml		U	
W-08L223	LIQUID	SW846 6010A	B	7.13E-01	1.73E-02		ug/ml			
W-08L223	LIQUID	SW846 6010A	BA	6.28E-02	2.00E-03		ug/ml			
W-08L223	LIQUID	SW846 6010A	BE			<0.00113	ug/ml		U	
W-08L223	LIQUID	SW846 6010A	CA	2.98E+01	9.60E-01		ug/ml			
W-08L223	LIQUID	SW846 6010A	CD			<0.0075	ug/ml		U	
W-08L223	LIQUID	SW846 6010A	CO	1.38E-01	2.40E-02		ug/ml			
W-08L223	LIQUID	SW846 6010A	CR	7.60E+00	1.73E-01		ug/ml			
W-08L223	LIQUID	SW846 6010A	CU	5.86E-01	9.25E-03		ug/ml			
W-08L223	LIQUID	SW846 6010A	FE	1.41E-01	1.50E-03		ug/ml			
W-08L223	LIQUID	SW846 6010A	K	6.27E+02	1.41E+01		ug/ml			
W-08L223	LIQUID	SW846 6010A	MG	5.39E+00	1.18E-01		ug/ml			
W-08L223	LIQUID	SW846 6010A	MN	7.66E-02	3.00E-03		ug/ml			
W-08L223	LIQUID	SW846 6010A	NA	4.37E+03	8.00E+01		ug/ml			
W-08L223	LIQUID	SW846 6010A	NI	2.70E-01	4.00E-03		ug/ml			
W-08L223	LIQUID	SW846 6010A	PB	4.72E-01	5.70E-01		ug/ml			
W-08L223	LIQUID	SW846 6010A	SB			<163	ug/ml		UJ	8
W-08L223	LIQUID	SW846 6010A	SR	8.60E-02	2.25E-03		ug/ml			
W-08L223	LIQUID	SW846 6010A	TH	8.09E-01	2.28E-01		ug/ml			
W-08L223	LIQUID	SW846 6010A	TL	1.02E+00	2.88E-01		ug/ml			
W-08L223	LIQUID	SW846 6010A	U	7.46E+02	1.43E+01		ug/ml			
W-08L223	LIQUID	SW846 6010A	V			<0.025	ug/ml		U	
W-08L223	LIQUID	SW846 6010A	ZN	3.49E-02	4.25E-03		ug/ml			
W-08L223	LIQUID	SW846 9040	PH	9.29			Std Units			
W-08L223	LIQUID	SW846 9056	BR			<10	ug/ml		UJ	L
W-08L223	LIQUID	SW846 9056	CL	322	7		ug/ml			
W-08L223	LIQUID	SW846 9056	F	61	0		ug/ml			
W-08L223	LIQUID	SW846 9056	NO3	2500	76		ug/ml			
W-08L223	LIQUID	SW846 9056	PO4	82	7		ug/ml			
W-08L223	LIQUID	SW846 9056	SO4	1770	51		ug/ml		J	L
W-08L223	LIQUID	SW846 9060	TC	600	40		ug/ml			
W-08L223	LIQUID	SW846 9060	TIC	493	61		ug/ml			
W-08L223	LIQUID	SW846 9060	TOC	107	22		ug/ml			
W-08S224	SOFT SLUDGE	1 003115	G-ALPHA CM-244	46.0			%			
W-08S224	SOFT SLUDGE	1 003115	G-ALPHA PU-238, AM-24	29.1			%			
W-08S224	SOFT SLUDGE	1 003115	G-ALPHA PU-239/240	24.9			%			
W-08S224	SOFT SLUDGE	1 003115	TOTPU PU-238	41.3			%			
W-08S224	SOFT SLUDGE	1 003115	TOTPU PU-239/240	58.7			%			
W-08S224	SOFT SLUDGE	2 21807	TOT-RAD-SR	2.9E6	0.1E6		Bq/g			
W-08S224	SOFT SLUDGE	2 31621	PU(TOTAL)	9.1E3	0.5E3		Bq/g			
W-08S224	SOFT SLUDGE	AC-MM-2 21996	CO-60	4.8E3	0.1E3		Bq/g			
W-08S224	SOFT SLUDGE	AC-MM-2 21996	CS-137	7.6E5	0.2E5		Bq/g			
W-08S224	SOFT SLUDGE	AC-MM-2 21996	EU-152	2.5E3	0.5E3		Bq/g			
W-08S224	SOFT SLUDGE	AC-MM-2 21996	EU-154	2.4E3	0.5E3		Bq/g			
W-08S224	SOFT SLUDGE	AC-MM-2 21996	EU-155			<1400	Bq/g		U	
W-08S224	SOFT SLUDGE	AC-MM-9 002301	G-ALPHA	4.7E4	0.3E4		Bq/g			
W-08S224	SOFT SLUDGE	BETA SCINT	G-BETA	7.5E6	0.1E6		Bq/g			
W-08S224	SOFT SLUDGE	GFAA	AS			<1.28	ug/g		U	
W-08S224	SOFT SLUDGE	GFAA	SE			<5.11	ug/g		U	
W-08S224	SOFT SLUDGE	ICP	AG			<1.28	ug/g		R	8
W-08S224	SOFT SLUDGE	ICP	AL	9.80E+03	2.63E+02		ug/g			
W-08S224	SOFT SLUDGE	ICP	B	3.45E+01	1.22E+00		ug/g			
W-08S224	SOFT SLUDGE	ICP	BA	5.20E+01	4.03E+00		ug/g			
W-08S224	SOFT SLUDGE	ICP	BE	8.67E+00	5.10E-01		ug/g			
W-08S224	SOFT SLUDGE	ICP	CA	9.14E+03	5.74E+01		ug/g			
W-08S224	SOFT SLUDGE	ICP	CD	4.69E+00	1.58E+00		ug/g			
W-08S224	SOFT SLUDGE	ICP	CO	2.45E+00	1.89E+00		ug/g			
W-08S224	SOFT SLUDGE	ICP	CR	3.14E+02	2.33E+01		ug/g			
W-08S224	SOFT SLUDGE	ICP	CU	6.26E+01	4.39E+00		ug/g			

TANK W-8

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
W-08S224	SOFT SLUDGE	ICP	FE	9.24E+03	6.00E+01		ug/g			
W-08S224	SOFT SLUDGE	ICP	K	1.42E+03	3.80E+01		ug/g			
W-08S224	SOFT SLUDGE	ICP	MG	5.52E+03	1.81E+02		ug/g			
W-08S224	SOFT SLUDGE	ICP	MN	1.63E+02	1.17E+01		ug/g			
W-08S224	SOFT SLUDGE	ICP	NA	5.07E+03	5.57E+01		ug/g			
W-08S224	SOFT SLUDGE	ICP	NI	1.33E+02	1.10E+01		ug/g			
W-08S224	SOFT SLUDGE	ICP	PB	1.44E+03	1.37E+02		ug/g			
W-08S224	SOFT SLUDGE	ICP	SB			<33.2	ug/g		UJ	8,9
W-08S224	SOFT SLUDGE	ICP	SR	5.54E+01	1.22E+00		ug/g			
W-08S224	SOFT SLUDGE	ICP	TH	1.64E+04	1.61E+02		ug/g			
W-08S224	SOFT SLUDGE	ICP	TL			<30.6	ug/g		UJ	8
W-08S224	SOFT SLUDGE	ICP	U	5.07E+03	1.29E+02		ug/g			
W-08S224	SOFT SLUDGE	ICP	V			<5.1	ug/g		U	
W-08S224	SOFT SLUDGE	ICP	ZN	1.00E+02	9.18E+00		ug/g			
W-08S224	SOFT SLUDGE	MASS SPEC	PU-238 BY MS	0.47	0.06		ATOM %			
W-08S224	SOFT SLUDGE	MASS SPEC	PU-239 BY MS	93.58	0.05		ATOM %			
W-08S224	SOFT SLUDGE	MASS SPEC	PU-240 BY MS	5.51	0.03		ATOM %			
W-08S224	SOFT SLUDGE	MASS SPEC	PU-241 BY MS	0.13	0.01		ATOM %			
W-08S224	SOFT SLUDGE	MASS SPEC	PU-242 BY MS	0.31	0.01		ATOM %			
W-08S224	SOFT SLUDGE	MASS SPEC	PU-244 BY MS			<.01	ATOM %		U	
W-08S224	SOFT SLUDGE	MASS SPEC	U-233 BY MS	0.043	0.002		ATOM %			
W-08S224	SOFT SLUDGE	MASS SPEC	U-234 BY MS	0.0054	0.0002		ATOM %			
W-08S224	SOFT SLUDGE	MASS SPEC	U-235 BY MS	0.667	0.014		ATOM %			
W-08S224	SOFT SLUDGE	MASS SPEC	U-236 BY MS	0.0027	0.0005		ATOM %			
W-08S224	SOFT SLUDGE	MASS SPEC	U-238 BY MS	99.28	0.01		ATOM %			
W-08S224	SOFT SLUDGE	MHS-SLUDGE	HG	4.16E+02	9.70E+01		ug/g		J	8
W-08S224	SOFT SLUDGE	MM 1 1011	DENSITY	1.24			g/ml			
W-08S224	SOFT SLUDGE	NAA	G-FISSILE(TOT)	36.7	3.7		ug/g			
W-08S224	SOFT SLUDGE	ORGANICS	AROCLOR-1016			<2400	ug/kg	U	UJ	H,S
W-08S224	SOFT SLUDGE	ORGANICS	AROCLOR-1221			<2400	ug/kg	U	UJ	H,S
W-08S224	SOFT SLUDGE	ORGANICS	AROCLOR-1232			<2400	ug/kg	U	UJ	H,S
W-08S224	SOFT SLUDGE	ORGANICS	AROCLOR-1242			<2400	ug/kg	U	UJ	H,S
W-08S224	SOFT SLUDGE	ORGANICS	AROCLOR-1248			<2400	ug/kg	U	UJ	H,S
W-08S224	SOFT SLUDGE	ORGANICS	AROCLOR-1254	120			ug/kg	J	J	H,S
W-08S224	SOFT SLUDGE	ORGANICS	AROCLOR-1260			<4800	ug/kg	U	UJ	H,S
W-08S224	SOFT SLUDGE	SAP Add 1 Rev1	GROSS WATER	78.6			% MOISTURE			
W-08S224	SOFT SLUDGE	SW846 9040	PH	9.12			Std Units			
W-08S224	SOFT SLUDGE	SW846 9056	BR			<113	ug/g		U	
W-08S224	SOFT SLUDGE	SW846 9056	CL			<113	ug/g		U	
W-08S224	SOFT SLUDGE	SW846 9056	F	518			ug/g			
W-08S224	SOFT SLUDGE	SW846 9056	NO3	2500	13		ug/g		J	Q
W-08S224	SOFT SLUDGE	SW846 9056	PO4			<1100	ug/g		U	
W-08S224	SOFT SLUDGE	SW846 9056	SO4	4300	38		ug/g		J	Q
W-08S224	SOFT SLUDGE	SW846 9060	TC	16400	4600		ug/g			
W-08S224	SOFT SLUDGE	SW846 9060	TIC	7900	2100		ug/g			
W-08S224	SOFT SLUDGE	SW846 9060	TOC	8400	2500		ug/g			

TANK W-9

SAMPLE_I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMI	UNITS	LAB_QUA	REV_QUAL	QUAL_CODE
W-09L222	LIQUID	1 003115	G-ALPHA CM-244	15.3			%			
W-09L222	LIQUID	1 003115	G-ALPHA U-238+D	84.7			%			
W-09L222	LIQUID	2 21807	TOT-RAD-SR	2.0E2	0.1E2		Bq/ml			
W-09L222	LIQUID	2 31621	PU(TOTAL)	1.2E-1	1.4E-1		Bq/ml		UJ	E
W-09L222	LIQUID	AC-MM-2 21996	CO-60	17	2		Bq/ml			
W-09L222	LIQUID	AC-MM-2 21996	CS-137	2.6E4	0.1E4		Bq/ml			
W-09L222	LIQUID	AC-MM-2 21996	EU-152			<250	Bq/ml		U	
W-09L222	LIQUID	AC-MM-2 21996	EU-154			<15	Bq/ml		U	
W-09L222	LIQUID	AC-MM-2 21996	EU-155			<77	Bq/ml		U	
W-09L222	LIQUID	AC-MM-9 002301	G-ALPHA	56	4		Bq/ml			
W-09L222	LIQUID	BETA SCINT	G-BETA	3.1E4	0.1E4		Bq/ml			
W-09L222	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	10.66			mg/ml			
W-09L222	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	0.69			mg/ml			
W-09L222	LIQUID	GFAA	AS			<.025	ug/ml		U	
W-09L222	LIQUID	GFAA	SE			<.025	ug/ml		U	
W-09L222	LIQUID	MASS SPEC	U-233 BY MS	0.0020	0.0002		ATOM %			
W-09L222	LIQUID	MASS SPEC	U-234 BY MS	0.0052	0.0004		ATOM %			
W-09L222	LIQUID	MASS SPEC	U-235 BY MS	0.69	0.04		ATOM %			
W-09L222	LIQUID	MASS SPEC	U-236 BY MS	0.001	0.001		ATOM %		UJ	E
W-09L222	LIQUID	MASS SPEC	U-238 BY MS	99.30	0.04		ATOM %			
W-09L222	LIQUID	MHS-LIQUID	HG	1.60E-01	5.00E-03		ug/ml			
W-09L222	LIQUID	MM 1 003105	CO3			<.1	Mol/l			
W-09L222	LIQUID	MM 1 003105	HCO3			<.1	Mol/l			
W-09L222	LIQUID	MM 1 003105	OH			<.1	Mol/l			
W-09L222	LIQUID	MM 1 1011	DENSITY	1.011			g/ml			
W-09L222	LIQUID	NAA	G-FISSILE(TOT)	9.96	0.9		ug/ml			
W-09L222	LIQUID	SW846 6010A	AG			<.00625	ug/ml		R	8
W-09L222	LIQUID	SW846 6010A	AL			<.025	ug/ml		U	
W-09L222	LIQUID	SW846 6010A	B	3.47E-01	5.00E-03		ug/ml			
W-09L222	LIQUID	SW846 6010A	BA	1.18E-01	2.75E-03		ug/ml			
W-09L222	LIQUID	SW846 6010A	BE			<.00113	ug/ml		U	
W-09L222	LIQUID	SW846 6010A	CA	2.21E+01	6.30E-01		ug/ml			
W-09L222	LIQUID	SW846 6010A	CD			<.0075	ug/ml		U	
W-09L222	LIQUID	SW846 6010A	CO	2.15E-01	1.73E-02		ug/ml			
W-09L222	LIQUID	SW846 6010A	CR	4.84E+00	9.85E-02		ug/ml			
W-09L222	LIQUID	SW846 6010A	CU	6.94E-01	2.05E-02		ug/ml			
W-09L222	LIQUID	SW846 6010A	FE	3.07E-01	1.03E-02		ug/ml			
W-09L222	LIQUID	SW846 6010A	K	8.96E+02	1.70E+01		ug/ml			
W-09L222	LIQUID	SW846 6010A	MG	3.97E+00	3.33E-01		ug/ml			
W-09L222	LIQUID	SW846 6010A	MN	1.61E-01	3.25E-03		ug/ml			
W-09L222	LIQUID	SW846 6010A	NA	2.64E+03	2.93E+01		ug/ml			
W-09L222	LIQUID	SW846 6010A	NI	2.89E-01	8.00E-03		ug/ml			
W-09L222	LIQUID	SW846 6010A	PB	1.03E+00	5.60E-01		ug/ml			
W-09L222	LIQUID	SW846 6010A	SB			<.163	ug/ml		UJ	8
W-09L222	LIQUID	SW846 6010A	SR	6.40E-02	3.25E-03		ug/ml			
W-09L222	LIQUID	SW846 6010A	TH	1.56E+00	1.20E-01		ug/ml			
W-09L222	LIQUID	SW846 6010A	TL	2.06E+00	1.23E-01		ug/ml			
W-09L222	LIQUID	SW846 6010A	U	1.52E+03	2.64E00		ug/ml			
W-09L222	LIQUID	SW846 6010A	V			<.025	ug/ml		U	
W-09L222	LIQUID	SW846 6010A	ZN	5.29E-02	7.25E-03		ug/ml			
W-09L222	LIQUID	SW846 9040	PH	9.92			Std Units			
W-09L222	LIQUID	SW846 9056	BR			<5	ug/ml		U	
W-09L222	LIQUID	SW846 9056	CL	133	2		ug/ml			
W-09L222	LIQUID	SW846 9056	F	55	1		ug/ml			
W-09L222	LIQUID	SW846 9056	NO3	868	21		ug/ml			
W-09L222	LIQUID	SW846 9056	PO4	1310	36		ug/ml			
W-09L222	LIQUID	SW846 9056	SO4	401	3		ug/ml			
W-09L222	LIQUID	SW846 9060	TC	687	23		ug/ml			
W-09L222	LIQUID	SW846 9060	TIC	598	66		ug/ml			
W-09L222	LIQUID	SW846 9060	TOC	89	78		ug/ml			
W-09S227	SOFT SLUDGE	1 003115	G-ALPHA CM-244	58.3			%			
W-09S227	SOFT SLUDGE	1 003115	G-ALPHA PU-238,AM-24	28.2			%			
W-09S227	SOFT SLUDGE	1 003115	G-ALPHA PU-239/240	13.5			%			
W-09S227	SOFT SLUDGE	1 003115	TOTPU PU-238	67.5			%			
W-09S227	SOFT SLUDGE	1 003115	TOTPU PU-239/240	32.5			%			
W-09S227	SOFT SLUDGE	2 21807	TOT-RAD-SR	1700000	100000		Bq/g			
W-09S227	SOFT SLUDGE	2 31621	PU(TOTAL)	25000	1000		Bq/g			
W-09S227	SOFT SLUDGE	AC-MM-2 21996	CO-60	7300	200		Bq/g			
W-09S227	SOFT SLUDGE	AC-MM-2 21996	CS-137	390000	1000		Bq/g			
W-09S227	SOFT SLUDGE	AC-MM-2 21996	EU-152	3400	500		Bq/g			
W-09S227	SOFT SLUDGE	AC-MM-2 21996	EU-154	5600	500		Bq/g			
W-09S227	SOFT SLUDGE	AC-MM-2 21996	EU-155			<960	Bq/g		U	
W-09S227	SOFT SLUDGE	AC-MM-9 002301	G-ALPHA	100000	10000		Bq/g			
W-09S227	SOFT SLUDGE	BETA SCINT	G-BETA	4700000	100000		Bq/g			
W-09S227	SOFT SLUDGE	BETA SCINT	G-BETA DUP	4.6E6	0.1E6		Bq/g			
W-09S227	SOFT SLUDGE	BETA SCINT	G-BETA SPIKE	2.1E2	0.1E2		Bq/g			
W-09S227	SOFT SLUDGE	BETA SCINT	G-BETA SPIKE DUP	2.1E2	0.1E2		Bq/g			
W-09S227	SOFT SLUDGE	GFAA	AS			<.975	ug/g		U	
W-09S227	SOFT SLUDGE	GFAA	SE			<3.9	ug/g		U	
W-09S227	SOFT SLUDGE	ICP	AG			<.975	ug/g		R	8
W-09S227	SOFT SLUDGE	ICP	AL	8850	281		ug/g			
W-09S227	SOFT SLUDGE	ICP	B	6.16	.546		ug/g			
W-09S227	SOFT SLUDGE	ICP	BA	89.6	6.01		ug/g			
W-09S227	SOFT SLUDGE	ICP	BE	4.91	.312		ug/g			
W-09S227	SOFT SLUDGE	ICP	CA	6010	29.3		ug/g			
W-09S227	SOFT SLUDGE	ICP	CD	3.49	1.37		ug/g			

TANK W-9

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMI	UNITS	LAB_QUA	REV_QUAL	QUAL_CODE
W-09S227	SOFT SLUDGE	ICP	CO	1.72	1.79		ug/g			
W-09S227	SOFT SLUDGE	ICP	CR	131	10.1		ug/g			
W-09S227	SOFT SLUDGE	ICP	CU	50.4	3.94		ug/g			
W-09S227	SOFT SLUDGE	ICP	FE	3410	10.3		ug/g			
W-09S227	SOFT SLUDGE	ICP	K	4010	54.3		ug/g			
W-09S227	SOFT SLUDGE	ICP	MG	613	44.5		ug/g			
W-09S227	SOFT SLUDGE	ICP	MN	143	10.1		ug/g			
W-09S227	SOFT SLUDGE	ICP	NA	7050	79		ug/g			
W-09S227	SOFT SLUDGE	ICP	NI	73.3	5.97		ug/g			
W-09S227	SOFT SLUDGE	ICP	PB	513	39.4		ug/g			
W-09S227	SOFT SLUDGE	ICP	SB			<25.4	ug/g		UJ	8,9
W-09S227	SOFT SLUDGE	ICP	SR	37.4	.78		ug/g			
W-09S227	SOFT SLUDGE	ICP	TH	6260	31		ug/g			
W-09S227	SOFT SLUDGE	ICP	TL			<23.4	ug/g		UJ	8
W-09S227	SOFT SLUDGE	ICP	U	31600	185		ug/g			
W-09S227	SOFT SLUDGE	ICP	V			<3.9	ug/g		U	
W-09S227	SOFT SLUDGE	ICP	ZN	67	7.8		ug/g			
W-09S227	SOFT SLUDGE	MASS SPEC	PU-238 BY MS	0.96	0.06		ATOM %			
W-09S227	SOFT SLUDGE	MASS SPEC	PU-239 BY MS	92.89	0.10		ATOM %			
W-09S227	SOFT SLUDGE	MASS SPEC	PU-240 BY MS	4.95	0.04		ATOM %			
W-09S227	SOFT SLUDGE	MASS SPEC	PU-241 BY MS	0.11	0.01		ATOM %			
W-09S227	SOFT SLUDGE	MASS SPEC	PU-242 BY MS	1.09	0.04		ATOM %			
W-09S227	SOFT SLUDGE	MASS SPEC	PU-244 BY MS			<.01	ATOM %		U	
W-09S227	SOFT SLUDGE	MASS SPEC	U-233 BY MS	0.006	0.001		ATOM %			
W-09S227	SOFT SLUDGE	MASS SPEC	U-234 BY MS	0.004	0.001		ATOM %			
W-09S227	SOFT SLUDGE	MASS SPEC	U-235 BY MS	.67	0.02		ATOM %			
W-09S227	SOFT SLUDGE	MASS SPEC	U-236 BY MS	0.002	0.001		ATOM %			
W-09S227	SOFT SLUDGE	MASS SPEC	U-238 BY MS	99.32	0.02		ATOM %			
W-09S227	SOFT SLUDGE	MHS-SLUDGE	HG	62.7	17.9		ug/g		J	8
W-09S227	SOFT SLUDGE	MM 1 1011	DENSITY	1.10			g/ml			
W-09S227	SOFT SLUDGE	NAA	G-FISSILE(TOT)	208	21		ug/g			
W-09S227	SOFT SLUDGE	ORGANICS	AROCLOR-1016			<5680	ug/kg	U	U	
W-09S227	SOFT SLUDGE	ORGANICS	AROCLOR-1221			<5680	ug/kg	U	U	
W-09S227	SOFT SLUDGE	ORGANICS	AROCLOR-1232			<5680	ug/kg	U	U	
W-09S227	SOFT SLUDGE	ORGANICS	AROCLOR-1242			<5680	ug/kg	U	U	
W-09S227	SOFT SLUDGE	ORGANICS	AROCLOR-1248			<5680	ug/kg	U	U	
W-09S227	SOFT SLUDGE	ORGANICS	AROCLOR-1254	88			ug/kg	J		
W-09S227	SOFT SLUDGE	ORGANICS	AROCLOR-1260			<11360	ug/kg	U	U	
W-09S227	SOFT SLUDGE	SAP Add 1 Rev1	GROSS WATER	82.8			% MOISTURE			
W-09S227	SOFT SLUDGE	SW846 9045A	PH	9.93			Std Units			
W-09S227	SOFT SLUDGE	SW846 9056	BR			<61	ug/g		U	
W-09S227	SOFT SLUDGE	SW846 9056	CL			<61	ug/g		U	
W-09S227	SOFT SLUDGE	SW846 9056	F	305	5		ug/g			
W-09S227	SOFT SLUDGE	SW846 9056	NO3	122	7		ug/g			
W-09S227	SOFT SLUDGE	SW846 9056	PO4	3660	159		ug/g			
W-09S227	SOFT SLUDGE	SW846 9056	SO4	622	21		ug/g			
W-09S227	SOFT SLUDGE	SW846 9060	TC	4800	800		ug/g			
W-09S227	SOFT SLUDGE	SW846 9060	TIC	1900	1600		ug/g			
W-09S227	SOFT SLUDGE	SW846 9060	TOC	2900	2400		ug/g			

TANK W-10

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET LIMIT	UNITS	LAB QUAL	REV QUAL	QUAL CODE
W-10L225	LIQUID	2 21807	TOT-RAD-SR	7.8E2	0.3E2		Bq/ml			
W-10L225	LIQUID	2 31621	PU(TOTAL)	4.2E-1	2.8E-1		Bq/ml			
W-10L225	LIQUID	AC-MM-2 21996	CO-60	12	2		Bq/ml			
W-10L225	LIQUID	AC-MM-2 21996	CS-137	7.4E4	0.1E4		Bq/ml			
W-10L225	LIQUID	AC-MM-2 21996	EU-152			<24	Bq/ml		U	
W-10L225	LIQUID	AC-MM-2 21996	EU-154			<20	Bq/ml		U	
W-10L225	LIQUID	AC-MM-2 21996	EU-155			<130	Bq/ml		U	
W-10L225	LIQUID	AC-MM-9 002301	G-ALPHA	77	4		Bq/ml			
W-10L225	LIQUID	BETA SCINT	G-BETA	8.9E4	0.1E4		Bq/ml			
W-10L225	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	10.990			mg/ml			
W-10L225	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	0.360			mg/ml			
W-10L225	LIQUID	GFAA	AS	7.25E-03	3.50E-03		ug/ml			
W-10L225	LIQUID	GFAA	SE			<.025	ug/ml		U	
W-10L225	LIQUID	MASS SPEC	U-233 BY MS	0.021	0.001		ATOM %			
W-10L225	LIQUID	MASS SPEC	U-234 BY MS	0.0052	0.0002		ATOM %			
W-10L225	LIQUID	MASS SPEC	U-235 BY MS	0.65	0.01		ATOM %			
W-10L225	LIQUID	MASS SPEC	U-236 BY MS	0.0036	0.0002		ATOM %			
W-10L225	LIQUID	MASS SPEC	U-238 BY MS	99.32	0.01		ATOM %			
W-10L225	LIQUID	MHS-LIQUID	HG	1.16E-01	2.00E-02		ug/ml			
W-10L225	LIQUID	MM 1 003105	CO3			<.1	Mol/l			
W-10L225	LIQUID	MM 1 003105	HCO3			<.1	Mol/l			
W-10L225	LIQUID	MM 1 003105	OH			<.1	Mol/l			
W-10L225	LIQUID	MM 1 1011	DENSITY	1.013			g/ml			
W-10L225	LIQUID	NAA	G-FISSILE(TOT)	0.533	0.05		ug/ml			
W-10L225	LIQUID	SW846 6010A	AG			<.00625	ug/ml		R	8
W-10L225	LIQUID	SW846 6010A	AL	9.68E-01	2.08E-02		ug/ml			
W-10L225	LIQUID	SW846 6010A	B	3.23E-01	6.75E-03		ug/ml			
W-10L225	LIQUID	SW846 6010A	BA	2.15E-02	7.50E-04		ug/ml			
W-10L225	LIQUID	SW846 6010A	BE			<.00113	ug/ml		U	
W-10L225	LIQUID	SW846 6010A	CA	1.68E+01	3.90E-01		ug/ml			
W-10L225	LIQUID	SW846 6010A	CD			<.0075	ug/ml		U	
W-10L225	LIQUID	SW846 6010A	CO	1.16E-02	1.08E-02		ug/ml			
W-10L225	LIQUID	SW846 6010A	CR	3.86E+00	7.03E-02		ug/ml			
W-10L225	LIQUID	SW846 6010A	CU	9.61E-02	2.75E-03		ug/ml			
W-10L225	LIQUID	SW846 6010A	FE	2.96E-02	5.75E-03		ug/ml			
W-10L225	LIQUID	SW846 6010A	K	8.19E+02	8.85E+00		ug/ml			
W-10L225	LIQUID	SW846 6010A	MG	2.81E+00	1.28E-01		ug/ml			
W-10L225	LIQUID	SW846 6010A	MN	7.38E-03	2.50E-04		ug/ml			
W-10L225	LIQUID	SW846 6010A	NA	2.80E+03	2.26E+01		ug/ml			
W-10L225	LIQUID	SW846 6010A	NI	6.09E-02	1.45E-02		ug/ml			
W-10L225	LIQUID	SW846 6010A	PB			<.425	ug/ml		U	
W-10L225	LIQUID	SW846 6010A	SB			<.163	ug/ml		UJ	8
W-10L225	LIQUID	SW846 6010A	SI			<.0163	ug/ml		U	
W-10L225	LIQUID	SW846 6010A	SR	5.14E-02	7.50E-04		ug/ml			
W-10L225	LIQUID	SW846 6010A	TH			<.05	ug/ml		U	
W-10L225	LIQUID	SW846 6010A	TL			<.15	ug/ml		U	
W-10L225	LIQUID	SW846 6010A	U	7.85E+01	4.55E-01		ug/ml			
W-10L225	LIQUID	SW846 6010A	V			<.025	ug/ml		U	
W-10L225	LIQUID	SW846 6010A	ZN	3.88E-01	1.75E-02		ug/ml			
W-10L225	LIQUID	SW846 9040	PH	9.85			Std Units			
W-10L225	LIQUID	SW846 9056	BR			<10	ug/ml		UJ	L
W-10L225	LIQUID	SW846 9056	CL	306	1		ug/ml			
W-10L225	LIQUID	SW846 9056	F	140	0		ug/ml			
W-10L225	LIQUID	SW846 9056	NO3	4140	23		ug/ml			
W-10L225	LIQUID	SW846 9056	PO4			<40	ug/ml		U	
W-10L225	LIQUID	SW846 9056	SO4	408	3		ug/ml		J	L
W-10L225	LIQUID	SW846 9060	TC	299	8		ug/ml			
W-10L225	LIQUID	SW846 9060	TIC	297	6		ug/ml			
W-10L225	LIQUID	SW846 9060	TOC	2	20		ug/ml		U	
W-10S226	SOFT SLUDGE	1 003115	G-ALPHA CM-244	62.4			%			
W-10S226	SOFT SLUDGE	1 003115	G-ALPHA PU-238, AM-24	28.4			%			
W-10S226	SOFT SLUDGE	1 003115	G-ALPHA PU-239/240	9.2			%			
W-10S226	SOFT SLUDGE	1 003115	TOTPU PU-238	65.7			%			
W-10S226	SOFT SLUDGE	1 003115	TOTPU PU-239/240	34.3			%			
W-10S226	SOFT SLUDGE	2 21807	TOT-RAD-SR	2.4E6	0.1E6		Bq/g			
W-10S226	SOFT SLUDGE	2 31621	PU(TOTAL)	1.6E4	0.1E4		Bq/g			
W-10S226	SOFT SLUDGE	AC-MM-2 21996	CO-60	7.2E3	0.3E3		Bq/g			
W-10S226	SOFT SLUDGE	AC-MM-2 21996	CS-137	1.7E6	0.1E6		Bq/g			
W-10S226	SOFT SLUDGE	AC-MM-2 21996	EU-152	3.4E3	0.7E3		Bq/g			
W-10S226	SOFT SLUDGE	AC-MM-2 21996	EU-154	4.6E3	0.7E3		Bq/g			
W-10S226	SOFT SLUDGE	AC-MM-2 21996	EU-155			<1800	Bq/g		U	
W-10S226	SOFT SLUDGE	AC-MM-9 002301	G-ALPHA	8.1E4	0.3E4		Bq/g			
W-10S226	SOFT SLUDGE	BETA SCINT	G-BETA	7.6E6	0.1E6		Bq/g			
W-10S226	SOFT SLUDGE	GFAA	AS			<1.25	ug/g		U	
W-10S226	SOFT SLUDGE	GFAA	SE			<4.98	ug/g		U	
W-10S226	SOFT SLUDGE	ICP	AG	2.09E+00	1.25E+00		ug/g		J	8
W-10S226	SOFT SLUDGE	ICP	AL	3.02E+04	5.53E+02		ug/g			
W-10S226	SOFT SLUDGE	ICP	B	9.41E+00	3.49E-01		ug/g			
W-10S226	SOFT SLUDGE	ICP	BA	7.53E+01	4.98E+00		ug/g			
W-10S226	SOFT SLUDGE	ICP	BE	1.04E+01	5.98E-01		ug/g			
W-10S226	SOFT SLUDGE	ICP	CA	5.96E+03	9.37E+01		ug/g			
W-10S226	SOFT SLUDGE	ICP	CD	4.68E+00	2.24E+00		ug/g			
W-10S226	SOFT SLUDGE	ICP	CO			<1.74	ug/g		U	
W-10S226	SOFT SLUDGE	ICP	CR	1.71E+02	1.25E+01		ug/g			
W-10S226	SOFT SLUDGE	ICP	CU	8.68E+01	5.43E+00		ug/g			
W-10S226	SOFT SLUDGE	ICP	FE	8.40E+03	1.50E+02		ug/g			

TANK W-10

SAMPLE I	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET. LIMIT	UNITS	LAB. QUAL	REV. QUAL	QUAL. CODE
W-10S226	SOFT SLUDGE	ICP	K	3.86E+03	2.17E+02		ug/g			
W-10S226	SOFT SLUDGE	ICP	MG	5.92E+02	5.33E+01		ug/g			
W-10S226	SOFT SLUDGE	ICP	MN	1.52E+02	1.08E+01		ug/g			
W-10S226	SOFT SLUDGE	ICP	NA	1.47E+04	1.66E+02		ug/g			
W-10S226	SOFT SLUDGE	ICP	NI	7.12E+01	3.74E+00		ug/g			
W-10S226	SOFT SLUDGE	ICP	PB	4.73E+02	5.58E+01		ug/g			
W-10S226	SOFT SLUDGE	ICP	SB			<32.4	ug/g		UJ	8.9
W-10S226	SOFT SLUDGE	ICP	SR	3.40E+01	7.97E-01		ug/g			
W-10S226	SOFT SLUDGE	ICP	TH	6.25E+03	4.35E+01		ug/g			
W-10S226	SOFT SLUDGE	ICP	TL			<29.9	ug/g		UJ	8
W-10S226	SOFT SLUDGE	ICP	U	2.05E+04	1.18E+02		ug/g			
W-10S226	SOFT SLUDGE	ICP	V			<4.98	ug/g		U	
W-10S226	SOFT SLUDGE	ICP	ZN	1.10E+02	9.01E+00		ug/g			
W-10S226	SOFT SLUDGE	MASS SPEC	PU-238 BY MS	0.85	0.02		ATOM %			
W-10S226	SOFT SLUDGE	MASS SPEC	PU-239 BY MS	91.71	0.03		ATOM %			
W-10S226	SOFT SLUDGE	MASS SPEC	PU-240 BY MS	6.32	0.03		ATOM %			
W-10S226	SOFT SLUDGE	MASS SPEC	PU-241 BY MS	0.14	0.01		ATOM %			
W-10S226	SOFT SLUDGE	MASS SPEC	PU-242 BY MS	0.98	0.01		ATOM %			
W-10S226	SOFT SLUDGE	MASS SPEC	PU-244 BY MS			<.01	ATOM %		U	
W-10S226	SOFT SLUDGE	MASS SPEC	U-233 BY MS	0.0102	0.0003		ATOM %			
W-10S226	SOFT SLUDGE	MASS SPEC	U-234 BY MS	0.0051	0.0001		ATOM %			
W-10S226	SOFT SLUDGE	MASS SPEC	U-235 BY MS	0.626	0.010		ATOM %			
W-10S226	SOFT SLUDGE	MASS SPEC	U-236 BY MS	0.0035	0.0001		ATOM %			
W-10S226	SOFT SLUDGE	MASS SPEC	U-238 BY MS	99.35	0.01		ATOM %			
W-10S226	SOFT SLUDGE	MHS-SLUDGE	HG	2.94E+02	1.19E+02		ug/g		J	8
W-10S226	SOFT SLUDGE	MM 1 1011	DENSITY	1.13			g/ml			
W-10S226	SOFT SLUDGE	NAA	G-FISSILE(TOT)	126	13		ug/g			
W-10S226	SOFT SLUDGE	ORGANICS	AROCLOR-1016			<8560	ug/kg	U	U	
W-10S226	SOFT SLUDGE	ORGANICS	AROCLOR-1221			<8560	ug/kg	U	U	
W-10S226	SOFT SLUDGE	ORGANICS	AROCLOR-1232			<8560	ug/kg	U	U	
W-10S226	SOFT SLUDGE	ORGANICS	AROCLOR-1242			<8560	ug/kg	U	U	
W-10S226	SOFT SLUDGE	ORGANICS	AROCLOR-1248			<8560	ug/kg	U	U	
W-10S226	SOFT SLUDGE	ORGANICS	AROCLOR-1254	28257.00			ug/kg			
W-10S226	SOFT SLUDGE	ORGANICS	AROCLOR-1260	6336.00			ug/kg	J		
W-10S226	SOFT SLUDGE	SAP Add 1 Rev1	GROSS WATER	72.8			% MOISTURE			
W-10S226	SOFT SLUDGE	SW846 9045A	PH	10.62			Std Units			
W-10S226	SOFT SLUDGE	SW846 9056	BR			<46	ug/g		U	
W-10S226	SOFT SLUDGE	SW846 9056	CL	546			ug/g			
W-10S226	SOFT SLUDGE	SW846 9056	F	437	4		ug/g			
W-10S226	SOFT SLUDGE	SW846 9056	NO3	6270	19		ug/g		J	Q
W-10S226	SOFT SLUDGE	SW846 9056	PO4			<455	ug/g		U	
W-10S226	SOFT SLUDGE	SW846 9056	SO4	2870	4		ug/g		J	Q
W-10S226	SOFT SLUDGE	SW846 9060	TC	10000	2400		ug/g			
W-10S226	SOFT SLUDGE	SW846 9060	TIC	5100	300		ug/g			
W-10S226	SOFT SLUDGE	SW846 9060	TOC	4900	2100		ug/g			

TANK W-11

SAMPLE_ID	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	REV_QUAL	QUAL_CODE
W-11L206	LIQUID	2 21807	TOT-RAD-SR	5.5	.1		Bq/ml		
W-11L206	LIQUID	2 31621	PU(TOTAL)	.0035	.005		Bq/ml	J	D
W-11L206	LIQUID	AC-MM-2 21996	CO-60			<.3	Bq/ml	U	
W-11L206	LIQUID	AC-MM-2 21996	CS-137	.56	.1		Bq/ml		
W-11L206	LIQUID	AC-MM-2 21996	EU-152			<2	Bq/ml	U	
W-11L206	LIQUID	AC-MM-2 21996	EU-154			<.9	Bq/ml	U	
W-11L206	LIQUID	AC-MM-2 21996	EU-155			<.5	Bq/ml	U	
W-11L206	LIQUID	AC-MM-9 002301	G-ALPHA	.068	.013		Bq/ml		
W-11L206	LIQUID	BETA SCINT	G-BETA	12	1		Bq/ml		
W-11L206	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	0.160			mg/ml		
W-11L206	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	0.880			mg/ml		
W-11L206	LIQUID	MASS SPEC	U-233 BY MS	.0006	.0002		ATOM %		
W-11L206	LIQUID	MASS SPEC	U-234 BY MS	.0055	.0008		ATOM %		
W-11L206	LIQUID	MASS SPEC	U-235 BY MS	.733	.0056		ATOM %		
W-11L206	LIQUID	MASS SPEC	U-236 BY MS	.0009	.0002		ATOM %		
W-11L206	LIQUID	MASS SPEC	U-238 BY MS	99.2599	.002		ATOM %		
W-11L206	LIQUID	MM 1 003105	CO3			<.1	Mol/l		
W-11L206	LIQUID	MM 1 003105	HCO3			<.1	Mol/l		
W-11L206	LIQUID	MM 1 003105	OH			<.1	Mol/l		
W-11L206	LIQUID	MM 1 1011	DENSITY	0.992	.002		g/ml		
W-11L206	LIQUID	NAA	G-FISSILE(TOT)	0.015	0.002		ug/ml		
W-11L206	LIQUID	SW846 6010A	AG			<.00625	ug/ml	UJ	8
W-11L206	LIQUID	SW846 6010A	AL			<.025	ug/ml	U	
W-11L206	LIQUID	SW846 6010A	B	.0203	.00225		ug/ml		
W-11L206	LIQUID	SW846 6010A	BA	.0236	.0005		ug/ml		
W-11L206	LIQUID	SW846 6010A	BE			<.00113	ug/ml	U	
W-11L206	LIQUID	SW846 6010A	CA	23.5	.223		ug/ml		
W-11L206	LIQUID	SW846 6010A	CD			<.0075	ug/ml	U	
W-11L206	LIQUID	SW846 6010A	CO			<.00875	ug/ml	U	
W-11L206	LIQUID	SW846 6010A	CR	.0139	.0045		ug/ml		
W-11L206	LIQUID	SW846 6010A	CU	.003	.00275		ug/ml		
W-11L206	LIQUID	SW846 6010A	FE	.0183	.0138		ug/ml		
W-11L206	LIQUID	SW846 6010A	K	7.63	.0458		ug/ml		
W-11L206	LIQUID	SW846 6010A	MG	3.8	.0363		ug/ml		
W-11L206	LIQUID	SW846 6010A	MN			<.00113	ug/ml	U	
W-11L206	LIQUID	SW846 6010A	NA	5.18	.008		ug/ml		
W-11L206	LIQUID	SW846 6010A	NI			<.0113	ug/ml	U	
W-11L206	LIQUID	SW846 6010A	PB			<.425	ug/ml	U	
W-11L206	LIQUID	SW846 6010A	SB			<.163	ug/ml	U	
W-11L206	LIQUID	SW846 6010A	SI	2.24	.042		ug/ml		
W-11L206	LIQUID	SW846 6010A	SR	.078	.00025		ug/ml		
W-11L206	LIQUID	SW846 6010A	TH	.101	.0625		ug/ml		
W-11L206	LIQUID	SW846 6010A	TL			<.15	ug/ml	UJ	5A,5B,8
W-11L206	LIQUID	SW846 6010A	U	1.92	.032		ug/ml		
W-11L206	LIQUID	SW846 6010A	V			<.025	ug/ml	U	
W-11L206	LIQUID	SW846 6010A	ZN			<.025	ug/ml	U	
W-11L206	LIQUID	SW846 7000A	AS			<.00625	ug/ml	U	
W-11L206	LIQUID	SW846 7000A	SE			<.00625	ug/ml	U	
W-11L206	LIQUID	SW846 7470	HG	.0025	.0025		ug/ml		
W-11L206	LIQUID	SW846 9040	PH	8.27			Std Units		
W-11L206	LIQUID	SW846 9056	BR			<.1	ug/ml	U	
W-11L206	LIQUID	SW846 9056	CL	3.1	.1		ug/ml		
W-11L206	LIQUID	SW846 9056	F	.4	.1		ug/ml		
W-11L206	LIQUID	SW846 9056	NO3	19.6	2.8		ug/ml		
W-11L206	LIQUID	SW846 9056	PO4			<.4	ug/ml	U	
W-11L206	LIQUID	SW846 9056	SO4	14	1.3		ug/ml		
W-11L206	LIQUID	SW846 9060	TC			<15	ug/ml	U	
W-11L206	LIQUID	SW846 9060	TIC			<15	ug/ml	U	
W-11L206	LIQUID	SW846 9060	TOC			<15	ug/ml	U	
W-11L207	LIQUID	2 21807	TOT-RAD-SR	6	.1		Bq/ml		
W-11L207	LIQUID	2 31621	PU(TOTAL)	.0028	.0045		Bq/ml	J	D
W-11L207	LIQUID	AC-MM-2 21996	CO-60			<.3	Bq/ml	U	
W-11L207	LIQUID	AC-MM-2 21996	CS-137	.19	.06		Bq/ml		
W-11L207	LIQUID	AC-MM-2 21996	EU-152			<2	Bq/ml	U	
W-11L207	LIQUID	AC-MM-2 21996	EU-154			<.6	Bq/ml	U	
W-11L207	LIQUID	AC-MM-2 21996	EU-155			<.4	Bq/ml	U	
W-11L207	LIQUID	AC-MM-9 002301	G-ALPHA	.07	.014		Bq/ml		

TANK W-11

SAMPLE_ID	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	REV_QUAL	QUAL_CODE
W-11L207	LIQUID	BETA SCINT	G-BETA	12	1		Bq/ml		
W-11L207	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	0.160			mg/ml		
W-11L207	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	0.825			mg/ml		
W-11L207	LIQUID	MASS SPEC	U-233 BY MS	.0013	.0003		ATOM %		
W-11L207	LIQUID	MASS SPEC	U-234 BY MS	.0062	.0004		ATOM %		
W-11L207	LIQUID	MASS SPEC	U-235 BY MS	.7423	.0078		ATOM %		
W-11L207	LIQUID	MASS SPEC	U-236 BY MS	.001	.0001		ATOM %		
W-11L207	LIQUID	MASS SPEC	U-238 BY MS	99.2492	.0074		ATOM %		
W-11L207	LIQUID	MM 1 003105	CO3			<.1	Mol/l		
W-11L207	LIQUID	MM 1 003105	HCO3			<.1	Mol/l		
W-11L207	LIQUID	MM 1 003105	OH			<.1	Mol/l		
W-11L207	LIQUID	MM 1 1011	DENSITY	0.996	.001		g/ml		
W-11L207	LIQUID	NAA	G-FISSILE(TOT)	0.010	0.001		ug/ml		
W-11L207	LIQUID	SW846 6010A	AG			<.00625	ug/ml	UJ	8
W-11L207	LIQUID	SW846 6010A	AL	.0259	.0108		ug/ml		
W-11L207	LIQUID	SW846 6010A	B			<.015	ug/ml	U	
W-11L207	LIQUID	SW846 6010A	BA	.0245	0		ug/ml		
W-11L207	LIQUID	SW846 6010A	BE			<.00113	ug/ml	U	
W-11L207	LIQUID	SW846 6010A	CA	23.8	.153		ug/ml		
W-11L207	LIQUID	SW846 6010A	CD			<.0075	ug/ml	U	
W-11L207	LIQUID	SW846 6010A	CO			<.00875	ug/ml	U	
W-11L207	LIQUID	SW846 6010A	CR	.0123	.0025		ug/ml		
W-11L207	LIQUID	SW846 6010A	CU			<.0025	ug/ml	U	
W-11L207	LIQUID	SW846 6010A	FE	.009	.0178		ug/ml		
W-11L207	LIQUID	SW846 6010A	K	7.7	.148		ug/ml		
W-11L207	LIQUID	SW846 6010A	MG	3.86	.0433		ug/ml		
W-11L207	LIQUID	SW846 6010A	MN			<.00113	ug/ml	U	
W-11L207	LIQUID	SW846 6010A	NA	5.51	.0655		ug/ml		
W-11L207	LIQUID	SW846 6010A	NI			<.0113	ug/ml	U	
W-11L207	LIQUID	SW846 6010A	PB			<.425	ug/ml	U	
W-11L207	LIQUID	SW846 6010A	SB			<.163	ug/ml	U	
W-11L207	LIQUID	SW846 6010A	SI	2.25	.063		ug/ml		
W-11L207	LIQUID	SW846 6010A	SR	.0795	.00025		ug/ml		
W-11L207	LIQUID	SW846 6010A	TH			<.05	ug/ml	U	
W-11L207	LIQUID	SW846 6010A	TL			<.15	ug/ml	UJ	5A,5B,8
W-11L207	LIQUID	SW846 6010A	U	1.38	.245		ug/ml		
W-11L207	LIQUID	SW846 6010A	V			<.025	ug/ml	U	
W-11L207	LIQUID	SW846 6010A	ZN			<.025	ug/ml	U	
W-11L207	LIQUID	SW846 7000A	AS			<.00625	ug/ml	U	
W-11L207	LIQUID	SW846 7000A	SE			<.00625	ug/ml	U	
W-11L207	LIQUID	SW846 7470	HG	.005	.005		ug/ml		
W-11L207	LIQUID	SW846 9040	PH	8.30			Std Units		
W-11L207	LIQUID	SW846 9056	BR			<.1	ug/ml	U	
W-11L207	LIQUID	SW846 9056	CL	2.9	.1		ug/ml		
W-11L207	LIQUID	SW846 9056	F	.3	.1		ug/ml		
W-11L207	LIQUID	SW846 9056	NO3	15.8	.1		ug/ml		
W-11L207	LIQUID	SW846 9056	PO4			<.4	ug/ml	U	
W-11L207	LIQUID	SW846 9056	SO4	12.4	.1		ug/ml		
W-11L207	LIQUID	SW846 9060	TC			<15	ug/ml	U	
W-11L207	LIQUID	SW846 9060	TIC			<15	ug/ml	U	
W-11L207	LIQUID	SW846 9060	TOC			<15	ug/ml	U	

TANK TH-4

SAMPLE_ID	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
TH-4H215	HARD SLUDGE	1 003115	G-ALPHA TH-232+D	74.5			%			
TH-4H215	HARD SLUDGE	1 003115	G-ALPHA U-234	16.2			%			
TH-4H215	HARD SLUDGE	1 003115	G-ALPHA U-238	9.4			%			
TH-4H215	HARD SLUDGE	1 003115	TOTPU PU-238	37.5			%			
TH-4H215	HARD SLUDGE	1 003115	TOTPU PU-239/240	62.5			%			
TH-4H215	HARD SLUDGE	2 21807	TOT-RAD-SR	2900	100		Bq/g			
TH-4H215	HARD SLUDGE	2 31621	PU(TOTAL)	54	12		Bq/g		J	D
TH-4H215	HARD SLUDGE	AC-MM-2 21996	AC-228	930	60		Bq/g			
TH-4H215	HARD SLUDGE	AC-MM-2 21996	BI-212	600	70		Bq/g			
TH-4H215	HARD SLUDGE	AC-MM-2 21996	CO-60			<23	Bq/g		U	
TH-4H215	HARD SLUDGE	AC-MM-2 21996	CS-137	640	20		Bq/g			
TH-4H215	HARD SLUDGE	AC-MM-2 21996	EU-152			<110	Bq/g		U	
TH-4H215	HARD SLUDGE	AC-MM-2 21996	EU-154			<60	Bq/g		U	
TH-4H215	HARD SLUDGE	AC-MM-2 21996	EU-155			<70	Bq/g		U	
TH-4H215	HARD SLUDGE	AC-MM-2 21996	PB-212	870	40		Bq/g			
TH-4H215	HARD SLUDGE	AC-MM-2 21996	U-235	60	7		Bq/g			
TH-4H215	HARD SLUDGE	AC-MM-2 21996	U-238	970	590		Bq/g			
TH-4H215	HARD SLUDGE	AC-MM-9 002301	G-ALPHA	7400	400		Bq/g			
TH-4H215	HARD SLUDGE		BETA SCINT	19000	1000		Bq/g			
TH-4H215	HARD SLUDGE	ICP	PB			<111	ug/g		U	
TH-4H215	HARD SLUDGE	ICP	TL	54.5	65.7		ug/g			
TH-4H215	HARD SLUDGE	MASS SPEC	U-233 BY MS			<.0001	ATOM %		U	
TH-4H215	HARD SLUDGE	MASS SPEC	U-234 BY MS	.005	.0006		ATOM %			
TH-4H215	HARD SLUDGE	MASS SPEC	U-235 BY MS	.7298	.0062		ATOM %			
TH-4H215	HARD SLUDGE	MASS SPEC	U-236 BY MS	.003	.0001		ATOM %			
TH-4H215	HARD SLUDGE	MASS SPEC	U-238 BY MS	99.2649	.0061		ATOM %			
TH-4H215	HARD SLUDGE	NAA	G-FISSILE(TOT)	482	48		ug/g			
TH-4H215	HARD SLUDGE	SAP Add 1 Rev1	GROSS WATER	34.5			% MOISTURE			
TH-4H215	HARD SLUDGE	SW846 6010A	AG			<1.63	ug/g		U	
TH-4H215	HARD SLUDGE	SW846 6010A	AL	1350	19		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	B			<3.9	ug/g		U	
TH-4H215	HARD SLUDGE	SW846 6010A	BA	14.5	.13		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	BE	.975	.065		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	CA	1550	8.97		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	CD			<1.95	ug/g		U	
TH-4H215	HARD SLUDGE	SW846 6010A	CO			<2.28	ug/g		U	
TH-4H215	HARD SLUDGE	SW846 6010A	CR	191	1.3		ug/g		J	8
TH-4H215	HARD SLUDGE	SW846 6010A	CU	22.7	.325		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	FE	3190	4.94		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	K	587	20.5		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	MG	557	13.1		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	MN	34.8	.13		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	NA	30800	858		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	NI	36.7	1.24		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	SB			<42.3	ug/g		UJ	8
TH-4H215	HARD SLUDGE	SW846 6010A	SI	198	33.2		ug/g		J	8
TH-4H215	HARD SLUDGE	SW846 6010A	SR	15.4	.26		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	TH	237000	4190		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	U	67400	1290		ug/g			
TH-4H215	HARD SLUDGE	SW846 6010A	V			<6.5	ug/g		U	
TH-4H215	HARD SLUDGE	SW846 6010A	ZN	55.1	2.41		ug/g			
TH-4H215	HARD SLUDGE	SW846 7000A	AS	4.19	.195		ug/g			
TH-4H215	HARD SLUDGE	SW846 7000A	SE			<1.63	ug/g		U	
TH-4H215	HARD SLUDGE	SW846 7471	HG	6.37	.39		ug/g			
TH-4L208	LIQUID	1 003115	G-ALPHA U-233/234	57.1			%			
TH-4L208	LIQUID	1 003115	G-ALPHA U-238	42.9			%			
TH-4L208	LIQUID	2 21807	TOT-RAD-SR	1.1	.1		Bq/ml			
TH-4L208	LIQUID	2 31621	PU(TOTAL)	.27	.03		Bq/ml		J	D
TH-4L208	LIQUID	AC-MM-2 21996	CO-60			<.5	Bq/ml		U	
TH-4L208	LIQUID	AC-MM-2 21996	CS-137	99	3		Bq/ml			
TH-4L208	LIQUID	AC-MM-2 21996	EU-152			<3	Bq/ml		U	
TH-4L208	LIQUID	AC-MM-2 21996	EU-154			<2	Bq/ml		U	
TH-4L208	LIQUID	AC-MM-2 21996	EU-155			<2	Bq/ml		U	
TH-4L208	LIQUID	AC-MM-9 002301	G-ALPHA	81	2		Bq/ml			
TH-4L208	LIQUID		BETA SCINT	320	10		Bq/ml			
TH-4L208	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	37.18			mg/ml			
TH-4L208	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	7.43			mg/ml			
TH-4L208	LIQUID	MASS SPEC	U-233 BY MS			<.0001	ATOM %		U	
TH-4L208	LIQUID	MASS SPEC	U-234 BY MS	.0056	.0001		ATOM %			
TH-4L208	LIQUID	MASS SPEC	U-235 BY MS	.718	.003		ATOM %			
TH-4L208	LIQUID	MASS SPEC	U-236 BY MS			<.0001	ATOM %		U	
TH-4L208	LIQUID	MASS SPEC	U-238 BY MS	99.276	.003		ATOM %			
TH-4L208	LIQUID	MM 1 003105	CO3			<.1	Mol/l			
TH-4L208	LIQUID	MM 1 003105	HCO3			<.1	Mol/l			
TH-4L208	LIQUID	MM 1 003105	OH			<.1	Mol/l			
TH-4L208	LIQUID	MM 1 1011	DENSITY	1.031	0.011		g/ml			
TH-4L208	LIQUID	NAA	G-FISSILE(TOT)	22.4	2		ug/ml			
TH-4L208	LIQUID	SW846 6010A	AG			<.0625	ug/ml		R	8
TH-4L208	LIQUID	SW846 6010A	AL	.485	.505		ug/ml			

TANK TH-4

SAMPLE_ID	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
TH-4L208	LIQUID	SW846 6010A	B	1.16	.03		ug/ml			
TH-4L208	LIQUID	SW846 6010A	BA	.05	.005		ug/ml			
TH-4L208	LIQUID	SW846 6010A	BE			<.0113	ug/ml		U	
TH-4L208	LIQUID	SW846 6010A	CA	249	11.7		ug/ml			
TH-4L208	LIQUID	SW846 6010A	CD			<.075	ug/ml		U	
TH-4L208	LIQUID	SW846 6010A	CO	.208	.0425		ug/ml			
TH-4L208	LIQUID	SW846 6010A	CR	1.07	.0425		ug/ml			
TH-4L208	LIQUID	SW846 6010A	CU	.0475	.015		ug/ml			
TH-4L208	LIQUID	SW846 6010A	FE	.535	.04		ug/ml		J	8
TH-4L208	LIQUID	SW846 6010A	K	192	12.3		ug/ml			
TH-4L208	LIQUID	SW846 6010A	MG	8.5	.42		ug/ml			
TH-4L208	LIQUID	SW846 6010A	MN	.4	.015		ug/ml			
TH-4L208	LIQUID	SW846 6010A	NA	10200	109		ug/ml			
TH-4L208	LIQUID	SW846 6010A	NI	.721	.065		ug/ml			
TH-4L208	LIQUID	SW846 6010A	SB			<1.63	ug/ml		U	
TH-4L208	LIQUID	SW846 6010A	SI	6.36	.333		ug/ml			
TH-4L208	LIQUID	SW846 6010A	SR	.383	.02		ug/ml			
TH-4L208	LIQUID	SW846 6010A	TH	55.8	1.96		ug/ml			
TH-4L208	LIQUID	SW846 6010A	U	3630	41		ug/ml			
TH-4L208	LIQUID	SW846 6010A	V			<.25	ug/ml		U	
TH-4L208	LIQUID	SW846 6010A	ZN			<.25	ug/ml		U	
TH-4L208	LIQUID	SW846 7000A	AS			<.625	ug/ml		U	
TH-4L208	LIQUID	SW846 7000A	PB			<.625	ug/ml		U	
TH-4L208	LIQUID	SW846 7000A	SE			<.625	ug/ml		U	
TH-4L208	LIQUID	SW846 7000A	TL			<.625	ug/ml		UJ	5A,5B,8
TH-4L208	LIQUID	SW846 7470	HG	.00438	.00125		ug/ml			
TH-4L208	LIQUID	SW846 9040	PH	7.56			Std Units			
TH-4L208	LIQUID	SW846 9056	BR			<3	ug/ml		U	
TH-4L208	LIQUID	SW846 9056	CL	75	.1		ug/ml			
TH-4L208	LIQUID	SW846 9056	F			<1	ug/ml		U	
TH-4L208	LIQUID	SW846 9056	NO3	18300	163		ug/ml			
TH-4L208	LIQUID	SW846 9056	PO4			<10	ug/ml		U	
TH-4L208	LIQUID	SW846 9056	SO4	6780	129		ug/ml			
TH-4L208	LIQUID	SW846 9060	TC	2195	170		ug/ml		J	
TH-4L208	LIQUID	SW846 9060	TIC	2082	8		ug/ml		J	
TH-4L208	LIQUID	SW846 9060	TOC	114	30		ug/ml		J	
TH-4L210	LIQUID	1 003115	G-ALPHA U-233/234	47.5			%			
TH-4L210	LIQUID	1 003115	G-ALPHA U-238	52.5			%			
TH-4L210	LIQUID	2 21807	TOT-RAD-SR	16	1		Bq/ml			
TH-4L210	LIQUID	2 31621	PU(TOTAL)	.6	.06		Bq/ml		J	D
TH-4L210	LIQUID	AC-MM-2 21996	CO-60			<.5	Bq/ml		U	
TH-4L210	LIQUID	AC-MM-2 21996	CS-137	170	10		Bq/ml			
TH-4L210	LIQUID	AC-MM-2 21996	EU-152			<2	Bq/ml		U	
TH-4L210	LIQUID	AC-MM-2 21996	EU-154			<2	Bq/ml		U	
TH-4L210	LIQUID	AC-MM-2 21996	EU-155			<3	Bq/ml		U	
TH-4L210	LIQUID	AC-MM-9 002301	G-ALPHA	260	10		Bq/ml			
TH-4L210	LIQUID	BETA SCINT	G-BETA	800	10		Bq/ml			
TH-4L210	LIQUID	EPA 600 160.1	TOT DIS SOLIDS	79.12			mg/ml			
TH-4L210	LIQUID	EPA 600 160.2	TOT SUSP SOLIDS	14.23			mg/ml			
TH-4L210	LIQUID	MASS SPEC	U-233 BY MS			<.0001	ATOM %		U	
TH-4L210	LIQUID	MASS SPEC	U-234 BY MS	.0053	.0002		ATOM %			
TH-4L210	LIQUID	MASS SPEC	U-235 BY MS	.727	.003		ATOM %			
TH-4L210	LIQUID	MASS SPEC	U-236 BY MS			<.0001	ATOM %		U	
TH-4L210	LIQUID	MASS SPEC	U-238 BY MS	99.268	.003		ATOM %			
TH-4L210	LIQUID	MM 1 003105	CO3			<.1	Mol/l			
TH-4L210	LIQUID	MM 1 003105	HCO3			<.1	Mol/l			
TH-4L210	LIQUID	MM 1 003105	OH			<.1	Mol/l			
TH-4L210	LIQUID	MM 1 1011	DENSITY	1.058	0.004		g/ml			
TH-4L210	LIQUID	NAA	G-FISSILE(TOT)	52.6	5.3		ug/ml			
TH-4L210	LIQUID	SW846 6010A	AG			<.0625	ug/ml		R	8
TH-4L210	LIQUID	SW846 6010A	AL	2.64	.193		ug/ml			
TH-4L210	LIQUID	SW846 6010A	B	.876	.113		ug/ml			
TH-4L210	LIQUID	SW846 6010A	BA	.0538	.005		ug/ml			
TH-4L210	LIQUID	SW846 6010A	BE			<.0113	ug/ml		U	
TH-4L210	LIQUID	SW846 6010A	CA	277	.968		ug/ml			
TH-4L210	LIQUID	SW846 6010A	CD			<.075	ug/ml		U	
TH-4L210	LIQUID	SW846 6010A	CO	.12	.0375		ug/ml			
TH-4L210	LIQUID	SW846 6010A	CR	3.08	.02		ug/ml			
TH-4L210	LIQUID	SW846 6010A	CU	.08	.02		ug/ml			
TH-4L210	LIQUID	SW846 6010A	FE	.498	.0625		ug/ml		J	8
TH-4L210	LIQUID	SW846 6010A	K	329	.69		ug/ml			
TH-4L210	LIQUID	SW846 6010A	MG	8.01	.21		ug/ml			
TH-4L210	LIQUID	SW846 6010A	MN	.395	.01		ug/ml			
TH-4L210	LIQUID	SW846 6010A	NA	18800	145		ug/ml			
TH-4L210	LIQUID	SW846 6010A	NI	.439	.148		ug/ml			
TH-4L210	LIQUID	SW846 6010A	SB			<1.63	ug/ml		U	
TH-4L210	LIQUID	SW846 6010A	SI	7.21	.818		ug/ml			
TH-4L210	LIQUID	SW846 6010A	SR	.366	.0025		ug/ml			
TH-4L210	LIQUID	SW846 6010A	TH	206	3.9		ug/ml			

TANK TH-4

SAMPLE_ID	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
TH-4L210	LIQUID	SW846 6010A	U	12100	62.5		ug/ml			
TH-4L210	LIQUID	SW846 6010A	V			<.25	ug/ml		U	
TH-4L210	LIQUID	SW846 6010A	ZN			<.25	ug/ml		U	
TH-4L210	LIQUID	SW846 7000A	AS			<.625	ug/ml		U	
TH-4L210	LIQUID	SW846 7000A	PB			<.625	ug/ml		U	
TH-4L210	LIQUID	SW846 7000A	SE			<.625	ug/ml		U	
TH-4L210	LIQUID	SW846 7000A	TL			<.625	ug/ml		UJ	5A,5B,8
TH-4L210	LIQUID	SW846 7470	HG	.00688	0		ug/ml			
TH-4L210	LIQUID	SW846 9040	PH	7.50			Std Units			
TH-4L210	LIQUID	SW846 9056	BR			<3	ug/ml		U	
TH-4L210	LIQUID	SW846 9056	CL	112	7		ug/ml			
TH-4L210	LIQUID	SW846 9056	F			<1	ug/ml		U	
TH-4L210	LIQUID	SW846 9056	NO3	24100	700		ug/ml			
TH-4L210	LIQUID	SW846 9056	PO4			<10	ug/ml		U	
TH-4L210	LIQUID	SW846 9056	SO4	10900	400		ug/ml			
TH-4L210	LIQUID	SW846 9060	TC	738	71		ug/ml		J	
TH-4L210	LIQUID	SW846 9060	TIC	623	7		ug/ml		J	
TH-4L210	LIQUID	SW846 9060	TOC	115	14		ug/ml		J	
TH-4S213	SOFT SLUDGE	1 003115	G-ALPHA TH-232+D	80.5			%			
TH-4S213	SOFT SLUDGE	1 003115	G-ALPHA U-234	15.4			%			
TH-4S213	SOFT SLUDGE	1 003115	G-ALPHA U-238	4.1			%			
TH-4S213	SOFT SLUDGE	2 21807	TOT-RAD-SR	1200	100		Bq/g			
TH-4S213	SOFT SLUDGE	2 31621	PU(TOTAL)	72	18		Bq/g		J	D
TH-4S213	SOFT SLUDGE	AC-MM-2 21996	AC-228	430	60		Bq/g			
TH-4S213	SOFT SLUDGE	AC-MM-2 21996	BI-212	440	80		Bq/g			
TH-4S213	SOFT SLUDGE	AC-MM-2 21996	CO-60			<31	Bq/g		U	
TH-4S213	SOFT SLUDGE	AC-MM-2 21996	CS-137	620	30		Bq/g			
TH-4S213	SOFT SLUDGE	AC-MM-2 21996	EU-152			<170	Bq/g		U	
TH-4S213	SOFT SLUDGE	AC-MM-2 21996	EU-154			<70	Bq/g		U	
TH-4S213	SOFT SLUDGE	AC-MM-2 21996	EU-155			<90	Bq/g		U	
TH-4S213	SOFT SLUDGE	AC-MM-2 21996	PB-212	460	40		Bq/g			
TH-4S213	SOFT SLUDGE	AC-MM-2 21996	U-238			<4000	Bq/g		U	
TH-4S213	SOFT SLUDGE	AC-MM-9 002301	G-ALPHA	3300	300		Bq/g			
TH-4S213	SOFT SLUDGE	BETA SCINT	G-BETA	7100	100		Bq/g			
TH-4S213	SOFT SLUDGE	MASS SPEC	U-233 BY MS			<.0001	ATOM %		U	
TH-4S213	SOFT SLUDGE	MASS SPEC	U-234 BY MS	.005	.001		ATOM %			
TH-4S213	SOFT SLUDGE	MASS SPEC	U-235 BY MS	.732	.002		ATOM %			
TH-4S213	SOFT SLUDGE	MASS SPEC	U-236 BY MS	.0002	.0001		ATOM %			
TH-4S213	SOFT SLUDGE	MASS SPEC	U-238 BY MS	99.262	.001		ATOM %			
TH-4S213	SOFT SLUDGE	MM 1 1011	DENSITY	1.30			g/ml			
TH-4S213	SOFT SLUDGE	NAA	G-FISSILE(TOT)	176	18		ug/g			
TH-4S213	SOFT SLUDGE	ORGANICS	AROCOR-1016			<240	ug/kg	U	U	
TH-4S213	SOFT SLUDGE	ORGANICS	AROCOR-1221			<240	ug/kg	U	U	
TH-4S213	SOFT SLUDGE	ORGANICS	AROCOR-1232			<240	ug/kg	U	U	
TH-4S213	SOFT SLUDGE	ORGANICS	AROCOR-1242			<240	ug/kg	U	U	
TH-4S213	SOFT SLUDGE	ORGANICS	AROCOR-1248			<240	ug/kg	U	U	
TH-4S213	SOFT SLUDGE	ORGANICS	AROCOR-1254			<480	ug/kg	U	U	
TH-4S213	SOFT SLUDGE	ORGANICS	AROCOR-1260	81.00			ug/kg	J		
TH-4S213	SOFT SLUDGE	SAP Add 1 Rev1	GROSS WATER	65.2			% MOISTURE			
TH-4S213	SOFT SLUDGE	SW846 6010A	AG			<1.24	ug/g		U	
TH-4S213	SOFT SLUDGE	SW846 6010A	AL	3910	31.7		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	B	4.97	.248		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	BA	8.91	.149		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	BE	1.83	.0495		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	CA	1620	8.91		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	CD			<1.49	ug/g		U	
TH-4S213	SOFT SLUDGE	SW846 6010A	CO			<1.73	ug/g		U	
TH-4S213	SOFT SLUDGE	SW846 6010A	CR	352	.446		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	CU	16.4	.198		ug/g		J	8
TH-4S213	SOFT SLUDGE	SW846 6010A	FE	3510	9.8		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	K	1020	46		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	MG	206	7.13		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	MN	27.1	.099		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	NA	29700	354		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	NI	52.8	1.73		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	PB			<84.2	ug/g		UJ	8
TH-4S213	SOFT SLUDGE	SW846 6010A	SB			<32.2	ug/g		U	
TH-4S213	SOFT SLUDGE	SW846 6010A	SI	282	14.3		ug/g		J	8
TH-4S213	SOFT SLUDGE	SW846 6010A	SR	10.1	.198		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	TH	115000	1350		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	TL			<29.7	ug/g		U	
TH-4S213	SOFT SLUDGE	SW846 6010A	U	24300	61.4		ug/g			
TH-4S213	SOFT SLUDGE	SW846 6010A	V			<4.95	ug/g		U	
TH-4S213	SOFT SLUDGE	SW846 6010A	ZN	18.8	1.34		ug/g		J	17
TH-4S213	SOFT SLUDGE	SW846 7000A	AS	4.16E+00	2.48E-01		ug/g			
TH-4S213	SOFT SLUDGE	SW846 7000A	SE			<1.24	ug/g		U	
TH-4S213	SOFT SLUDGE	SW846 7471	HG	8.56	2.77		ug/g			
TH-4S213	SOFT SLUDGE	SW846 9045A	PH	9.00			Std Units			
TH-4S213	SOFT SLUDGE	SW846 9056	BR			<30	ug/g		U	

TANK TH-4

SAMPLE ID	MATRIX	METHOD	ANALYTE	RESULT	ERROR	DET_LIMIT	UNITS	LAB_QUAL	REV_QUAL	QUAL_CODE
TH-4S213	SOFT SLUDGE	SW846 9056	CL			<29.5	ug/g		U	
TH-4S213	SOFT SLUDGE	SW846 9056	F	401	13		ug/g			
TH-4S213	SOFT SLUDGE	SW846 9056	NO3	19417	492		ug/g		J	Q
TH-4S213	SOFT SLUDGE	SW846 9056	PO4	251	23		ug/g			
TH-4S213	SOFT SLUDGE	SW846 9056	SO4	10700	317		ug/g		J	Q
TH-4S213	SOFT SLUDGE	SW846 9060	TC	19300	4600		ug/g			
TH-4S213	SOFT SLUDGE	SW846 9060	TIC	11100	2400		ug/g			
TH-4S213	SOFT SLUDGE	SW846 9060	TOC	8300	2200		ug/g			
TH-4S214	SOFT SLUDGE	1 003115	G-ALPHA TH-232+D	82.4			%			
TH-4S214	SOFT SLUDGE	1 003115	G-ALPHA U-234	12.6			%			
TH-4S214	SOFT SLUDGE	1 003115	G-ALPHA U-238	5.1			%			
TH-4S214	SOFT SLUDGE	1 003115	TOTPU PU-239/240	100			%		J	D
TH-4S214	SOFT SLUDGE	2 21807	TOT-RAD-SR	1300	100		Bq/g			
TH-4S214	SOFT SLUDGE	2 31621	PU(TOTAL)	65	14		Bq/g		J	D
TH-4S214	SOFT SLUDGE	AC-MM-2 21996	AC-228	420	40		Bq/g			
TH-4S214	SOFT SLUDGE	AC-MM-2 21996	BI-212	350	50		Bq/g			
TH-4S214	SOFT SLUDGE	AC-MM-2 21996	CO-60			<20	Bq/g		U	
TH-4S214	SOFT SLUDGE	AC-MM-2 21996	CS-137	660	20		Bq/g			
TH-4S214	SOFT SLUDGE	AC-MM-2 21996	EU-152			<90	Bq/g		U	
TH-4S214	SOFT SLUDGE	AC-MM-2 21996	EU-154			<50	Bq/g		U	
TH-4S214	SOFT SLUDGE	AC-MM-2 21996	EU-155			<60	Bq/g		U	
TH-4S214	SOFT SLUDGE	AC-MM-2 21996	PB-212	440	30		Bq/g			
TH-4S214	SOFT SLUDGE	AC-MM-2 21996	U-235	20	6		Bq/g			
TH-4S214	SOFT SLUDGE	AC-MM-2 21996	U-238			<3000	Bq/g		U	
TH-4S214	SOFT SLUDGE	AC-MM-9 002301	G-ALPHA	3300	200		Bq/g			
TH-4S214	SOFT SLUDGE	BETA SCINT	G-BETA	6600	100		Bq/g			
TH-4S214	SOFT SLUDGE	MASS SPEC	U-233 BY MS			<.0001	ATOM %		U	
TH-4S214	SOFT SLUDGE	MASS SPEC	U-234 BY MS	.005	.001		ATOM %			
TH-4S214	SOFT SLUDGE	MASS SPEC	U-235 BY MS	.727	.01		ATOM %			
TH-4S214	SOFT SLUDGE	MASS SPEC	U-236 BY MS	0.0015	0.0006		ATOM %		UJ	E
TH-4S214	SOFT SLUDGE	MASS SPEC	U-238 BY MS	99.267	.01		ATOM %			
TH-4S214	SOFT SLUDGE	MM 1 1011	DENSITY	1.37			g/ml			
TH-4S214	SOFT SLUDGE	NAA	G-FISSILE(TOT)	180	18		ug/g			
TH-4S214	SOFT SLUDGE	ORGANICS	AROCLOR-1016			<240	ug/kg	U	U	
TH-4S214	SOFT SLUDGE	ORGANICS	AROCLOR-1221			<240	ug/kg	U	U	
TH-4S214	SOFT SLUDGE	ORGANICS	AROCLOR-1232			<240	ug/kg	U	U	
TH-4S214	SOFT SLUDGE	ORGANICS	AROCLOR-1242			<240	ug/kg	U	U	
TH-4S214	SOFT SLUDGE	ORGANICS	AROCLOR-1248			<240	ug/kg	U	U	
TH-4S214	SOFT SLUDGE	ORGANICS	AROCLOR-1254			<480	ug/kg	U	U	
TH-4S214	SOFT SLUDGE	ORGANICS	AROCLOR-1260	51.00			ug/kg	J		
TH-4S214	SOFT SLUDGE	SAP Add 1 Rev1	GROSS WATER	65.1			% MOISTURE			
TH-4S214	SOFT SLUDGE	SW846 6010A	AG			<.703	ug/g		U	
TH-4S214	SOFT SLUDGE	SW846 6010A	AL	3650	46.9		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	B	2.98	.618		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	BA	9.72	.0843		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	BE	2.49	0		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	CA	1390	4.92		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	CD	1.84	2.08		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	CO			<.984	ug/g		U	
TH-4S214	SOFT SLUDGE	SW846 6010A	CR	300	1.69		ug/g		J	8
TH-4S214	SOFT SLUDGE	SW846 6010A	CU	15.8	.225		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	FE	3730	18.5		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	K	871	10.3		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	MG	193	6.86		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	MN	37.9	.0843		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	NA	27500	504		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	NI	40.7	1.49		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	PB			<47.8	ug/g		UJ	8
TH-4S214	SOFT SLUDGE	SW846 6010A	SB			<18.3	ug/g		U	
TH-4S214	SOFT SLUDGE	SW846 6010A	SI	188	7.14		ug/g		J	8
TH-4S214	SOFT SLUDGE	SW846 6010A	SR	9.09	.0843		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	TH	110000	2080		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	TL			<16.9	ug/g		U	
TH-4S214	SOFT SLUDGE	SW846 6010A	U	24700	347		ug/g			
TH-4S214	SOFT SLUDGE	SW846 6010A	V			<2.81	ug/g		U	
TH-4S214	SOFT SLUDGE	SW846 6010A	ZN	17.8	1.57		ug/g		J	17
TH-4S214	SOFT SLUDGE	SW846 7000A	AS	3.71	.0562		ug/g			
TH-4S214	SOFT SLUDGE	SW846 7000A	SE			<.703	ug/g		U	
TH-4S214	SOFT SLUDGE	SW846 7471	HG	7.36	.281		ug/g			
TH-4S214	SOFT SLUDGE	SW846 9045A	PH	8.99			Std Units			
TH-4S214	SOFT SLUDGE	SW846 9056	BR			<28	ug/g		U	
TH-4S214	SOFT SLUDGE	SW846 9056	CL			<28	ug/g		U	
TH-4S214	SOFT SLUDGE	SW846 9056	F	398	2		ug/g			
TH-4S214	SOFT SLUDGE	SW846 9056	NO3	19400	536		ug/g		J	Q
TH-4S214	SOFT SLUDGE	SW846 9056	PO4	184	16		ug/g			
TH-4S214	SOFT SLUDGE	SW846 9056	SO4	10700	290		ug/g		J	
TH-4S214	SOFT SLUDGE	SW846 9060	TC	13500	1800		ug/g			
TH-4S214	SOFT SLUDGE	SW846 9060	TIC	8400	1300		ug/g			
TH-4S214	SOFT SLUDGE	SW846 9060	TOC	5100	500		ug/g			

APPENDIX G

SUMMARY OF KEY PARAMETERS

Summary of Key Parameters

Sample No.	U-233 (Bq/mL or g)	Tot. Alpha Pu (Bq/mL or g)	Cm-244 (Bq/mL or g)	TRU SUM (Bq/g) (Bq/mL)	TRU/NonTRU	PCB (limit = 2 ppm)	RCRA	Criticality Ratio	
								Th/Pu	U-238/U-235
W-01L 201*	6.64E-02	2.50E-02	-	9.14E-02	NonTRU	-	-	-	53.9
W-02L 202*	5.02E-01	1.00E-02	-	5.12E-01	NonTRU	-	-	-	60.8
W-03L 203	4.05E+00	3.00E-02	-	4.08E+00	NonTRU	-	Cr	>2.5E5	139
W-03L 204	1.04E+01	3.70E-01	-	1.08E+01	NonTRU	-	Cr	>4.6E4	140
W-04L 205	1.08E+00	7.40E-02	-	1.15E+00	NonTRU	-	Cr	>1.2E6	140
W-11L 206	4.04E-03	4.00E-03	-	8.04E-03	NonTRU	-	-	>51000	135
W-11L 207	6.29E-03	3.00E-03	-	9.29E-03	NonTRU	-	-	-	134
TH-4L 208	ND	2.70E-01	0.00E+00	2.70E-01	NonTRU	-	-	>4.7E5	135
TH-4L 209	-	-	-	0.00E+00	-	-	-	-	-
TH-4L 210	ND	6.00E-01	-	6.00E-01	NonTRU	-	-	>7.6E5	137
TH-4L 211	-	-	-	0.00E+00	-	-	-	-	-
W-03S 212	6.73E+02	4.90E+03	1.80E+02	5.75E+03	TRU	-	Cr,Hg	-	137
TH-4S 213	ND	7.20E+01	0.00E+00	7.20E+01	NonTRU	-	Cr,Hg	>3.7E6	136
TH-4S 214	ND	6.50E+01	0.00E+00	6.50E+01	NonTRU	-	Cr,Hg	>3.9E6	137
TH-4H 215	ND	5.40E+01	0.00E+00	5.40E+01	NonTRU	-	Cr,Hg	>1.6E7	136
W-04S 216	ND	2.98E+02	2.34E+02	5.32E+02	NonTRU	-	Cr,Hg	-	138
W-04H 217	ND	2.10E+02	1.97E+02	4.07E+02	NonTRU	-	Cr	-	138
W-05L 218	1.78E+00	8.00E-02	-	1.86E+00	NonTRU	-	-	>2.8E3	148
W-06L 219	6.76E-02	3.90E-02	-	1.07E-01	NonTRU	-	-	-	142
W-06L 220	6.54E-01	1.70E-02	-	6.71E-01	NonTRU	-	Cr	>2.1E5	138
W-06S 221	ND	2.70E+03	6.86E+03	9.56E+03	TRU	-	Cr,Hg,Pb,Tl	>630	140
W-09L 222	1.07E+01	1.20E-01	8.57E+00	1.94E+01	NonTRU	-	Cr,Hg,Tl	>31000	144
W-08L 223	1.15E+02	4.60E+00	3.87E+01	1.58E+02	NonTRU	-	Cr,Hg,Tl	>410	140
W-08S 224	7.65E+02	9.10E+03	2.16E+04	3.15E+04	TRU	-	Cr,Hg,Pb	>7040	150
W-10L 225	5.78E+00	4.20E-01	-	6.20E+00	NonTRU	-	-	-	153
W-10S 226	7.33E+02	1.60E+04	5.05E+04	6.73E+04	TRU	AROCOLOR 1254, 1260	Cr,Hg,Pb	>2620	158
W-09S 227	6.65E+02	2.50E+04	5.83E+04	8.40E+04	TRU	-	Cr,Hg,Pb	>1770	148
W-07S 228	2.57E+02	2.60E+03	1.22E+04	1.50E+04	TRU	-	Cr,Hg	>10500	136
W-07S 229	2.74E+02	3.30E+03	1.62E+04	1.98E+04	TRU	-	Cr,Hg	>9410	136
W-05S 230	2.96E+01	5.80E+02	6.61E+02	1.27E+03	NonTRU	-	Cr,Hg,Pb	>435	184

- = not applicable

ND = not detected

* The U-233 values for W-01L201 and W-02L202 are results from the re-sampled tanks. The sample IDs for these are W-01L231 and W-02L232.

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