

# **NOTICE**

**All drawings located at the end of the document.**

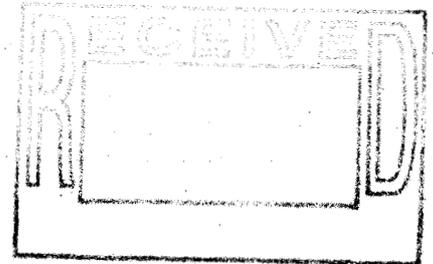
**Draft Data Summary Report  
For IHSS Group 500-1**

**IHSS 300-186,  
IHSS 500-117.1 and IHSS 500-197**

Approval received from the Colorado Department of Public Health and Environment

( ).

Approval letter contained in the Administrative Record.



**September 2004**

ADMIN RECORD

IA-A-002322

1/91

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**ENCLOSURE**

Complete Data Set Compact Disc – Accelerated Action Data

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## ACRONYMS

AAESE	Accelerated Action Ecological Screening Evaluation
AL	action level
CAS	Chemical Abstracts Service
CD	compact disc
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	contaminant of concern
CRA	Comprehensive Risk Assessment
DOE	U.S. Department of Energy
DQA	Data Quality Assessment
DQO	data quality objective
EPA	U.S. Environmental Protection Agency
ft	foot
FY	Fiscal Year
HPGe	high-purity germanium
HRR	Historical Release Report
IA	Industrial Area
IASAP	Industrial Area Sampling and Analysis Plan
IHSS	Individual Hazardous Substance Site
K-H	Kaiser-Hill Company, L.L.C.
LCS	laboratory control sample
□g/kg	micrograms per kilogram (may be found as ug/kg)
□g/L	micrograms per liter (may be found as ug/L)
mg/kg	milligrams per kilogram
MDL	method detection limit
MS	matrix spike
MSD	matrix spike duplicate
NA	not applicable
NFAA	No Further Accelerated Action
PARCCS	precision, accuracy, representativeness, completeness, comparability, and sensitivity
pCi/g	picocuries per gram
PCB	polychlorinated biphenyl
POC	Point of Compliance
POE	Point of Evaluation
QC	quality control
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS or Site	Rocky Flats Environmental Technology Site
RL	reporting limit
RPD	relative percent difference
SAP	Sampling and Analysis Plan
SD	standard deviation
SOR	sum of ratios

SSRS	Subsurface Soil Risk Screen
SWD	Soil Water Database
VOC	volatile organic compound
V&V	verification and validation
WRW	wildlife refuge worker

## **1.0 INTRODUCTION**

This Data Summary Report summarizes accelerated action characterization activities conducted at Individual Hazardous Substance Site (IHSS) Group 500-1 at the Rocky Flats Environmental Technology Site (RFETS or Site) in Golden, Colorado. IHSS Group 500-1 is shown on Figure 1 and includes the following IHSSs:

- IHSS 300-186 – Valve Vaults 11, 12 and 13;
- IHSS 500-117.1 – North Chemical Storage Site; and
- IHSS 500-197 – Scrap Metal Storage Site.

Characterization activities were planned and executed in accordance with the Industrial Area (IA) Sampling and Analysis Plan (SAP) (IASAP) (DOE 2001) and IASAP Addendum #IA-04-03 (DOE 2003a). The IASAP Addendum was approved by the Colorado Department of Public Health and Environment (CDPHE) on November 14, 2003 (CDPHE 2003). Ecological effects will be evaluated in the Accelerated Action Ecological Screening Evaluation (AAESE) and the ecological risk assessment portion of the Sitewide Comprehensive Risk Assessment (CRA).

Approval of this Data Summary Report constitutes regulatory agency concurrence that IHSS Group 500-1 is a No Further Accelerated Action (NFAA) Site. This information and NFAA determination will be documented in the Fiscal Year (FY) 2004 (04) Historical Release Report (HRR).

## **2.0 SITE CHARACTERIZATION**

IHSS Group 500-1 characterization information consists of historical knowledge, previously collected analytical data, and accelerated action analytical data. Historical information for the IHSS Group was derived from previous studies (DOE 1992-2003, 2000, 2001, 2003a and 2003b). The historical information and data are discussed in Sections 2.1.

Accelerated action analytical data for IHSS Group 500-1 are summarized in Section 2.2. A compact disc (CD) is enclosed that contains the accelerated action data, as well as quality control (QC) data, for this project. The CD contains a standardized data set in which analyte names, Chemical Abstracts Service (CAS) numbers, and units are standardized, and derived analytes are provided. The data set was retrieved from the Soil Water Database (SWD) on September 02, 2004

## **2.1 Historical Information and Data**

### **2.1.1 Valve Vaults 11, 12, and 13 – IHSS 300-186**

Valve Vaults 11, 12 and 13 are located inline along the process waste line south of Building 374 and west of Building 552. Double contained process waste lines connect the valve vaults that are equipped with leak-detection sensors. However, several incidents have occurred in one or more of the valve vaults resulting in the release of process waste to the environment.

### **2.1.2 North Site Chemical Storage Site – IHSS 500-117.1**

An area northeast of Building 551 was used as a general warehouse storage yard prior to September 1959 until the early 1970s. In September 1959, routine monitoring of the aluminum scrap pile near Building 551 showed an occasional build-up of radioactivity. In May 1963, uranium chips and turnings were discovered in the aluminum scrap pile. In 1964, forty drums of aluminum scrap metal contaminated with uranium chips and turnings were discovered in the storage yard. Surface soil samples collected during the Operable Unit 13 Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation indicated that plutonium-239/240, copper, mercury, lead, selenium, silver and zinc were present above background levels. Various volatile organic compounds (VOCs) were also detected in soil gas samples.

### **2.1.3 Scrap Metal Storage Site IHSS 500-197**

In the late 1950s and/or early 1960s, scrap metal, mostly from the original plant construction program, were buried in trenches west of Building 559. Some of the scrap metal could have been radioactively contaminated. In addition, there is a slight possibility that transformers containing polychlorinated biphenyls (PCBs) were disposed of at this site. In 1981, excavation for the construction of the Perimeter Security Zone unearthed the scrap metal burial sites. Site personnel remediated the site by excavating the trenches and removing all of the buried material.

### **2.1.4 Historical Data**

Soil sampling within IHSS Group 500-1 was conducted as part of the Operable Unit 13 investigation during 1993. Results greater than the background means plus two standard deviations (SDs) (for radionuclides and metals) or method detection limits (MDLs) (for organic compounds) are presented on Figure 2. All contaminant concentrations were less than the wildlife refuge worker (WRW) action levels (ALs). However, sampling was limited to the areas located outside the Protected Area security fence. No samples were collected in the northwestern portion of IHSS 300-186 and most of the northeastern portions of IHSSs 500-117.1 and 500-197 (Figure 2).

## **2.2 Accelerated Action Characterization Data**

Accelerated action analytical data for IHSS were collected in accordance with IASAP Addendum #IA-04-03 (DOE 2003a). Sampling specifications, including media and analytes, are presented in Table 1. Deviations from the IASAP Addendum are also

**Table 1**  
**IHSS Group 500-1 Accelerated Action Characterization Specifications and Sampling Deviations**

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
BY43-000	2082512.209	749997.970	2082512.216	749998.061	Subsurface Soil	2.5 - 4.5 4.5 - 6.5	Radionuclides Metals	Statistical location; no significant change in location.
BY43-001	2082510.989	750033.949	2082510.913	750033.809	Subsurface Soil	2.5-4.5 4.5-6.5	Radionuclides Metals	Statistical location; no significant change in location.
BY43-002	2082509.769	750069.928	2082509.814	750069.924	Subsurface Soil	2.5-4.5 4.5-6.5	Radionuclides Metals	Statistical location; no significant change in location.
BY43-003	2082508.550	750105.908	2082508.568	750105.947	Subsurface Soil	2.5 - 4.5 4.5 - 6.5	Radionuclides Metals	Statistical location; no significant change in location.
BY43-004	2082507.330	750141.887	2082507.293	750141.851	Surface Soil Subsurface Soil	0.0 - 0.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval)	Statistical location; no significant change in location.
BY44-000	2082506.110	750177.866	2082506.137	750177.852	Surface Soil Subsurface Soil	0.0 - 0.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval)	Statistical location; no significant change in location.
BY44-001	2082536.659	750196.913	2082539.829	750196.943	Surface Soil Subsurface Soil	0.0 - 0.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval)	Statistical location; moved 3 ft east to be within 1 ft of NPWL.
BY44-002	2082504.890	750213.846	2082504.924	750213.809	Surface Soil Subsurface Soil	0.0 - 0.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval)	Statistical location; no significant change in location.
BZ43-000	2082550.257	750001.545	2082555.204	750003.701	Subsurface Soil	14.5 - 16.5	Radionuclides Metals	Biased location targeted at NPWL and valve vault; moved 6 ft northeast to be within 1 ft of NPWL and valve vault.

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Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
BZ43-001	2082553.796	749988.175	2082552.194	749984.487	Subsurface Soil	14.5 - 16.5	Radionuclides Metals	Biased location targeted at NPWL and valve vault; moved 4 ft SW to be within 1 ft of NPWL and valve vault.
BZ43-002	2082541.999	749990.927	2082542.177	749984.512	Subsurface Soil	14.5 - 16.5	Radionuclides Metals	Biased location targeted at NPWL and valve vault; moved 6 ft south to be within 1 ft of NPWL.
BZ43-003	2082661.149	749992.500	2082658.815	749998.611	Subsurface Soil	12.5 - 14.5	Radionuclides Metals Nitrate/Nitrite	Biased location targeted at NPWL and valve vault; moved 6.5 ft northwest to avoid concrete apron of valve vault.
BZ43-004	2082674.518	749988.961	2082674.206	749980.463	Subsurface Soil	12.5 - 14.5	Radionuclides Metals Nitrate/Nitrite	Biased location targeted at NPWL and valve vault; moved 8.5 ft south to be within 1 ft of NPWL.
BZ43-005	2082604.916	749991.714	2082612.920	749991.706	Subsurface Soil	6.5 - 8.5 8.5 - 10.5 10.5 - 11.0	Radionuclides Metals	Biased location targeted at NPWL; moved 8.0 ft east to be within 1 ft of NPWL; 10.5-11.0 interval shortened because of expanding clay.
BZ43-006	2082577.390	749991.714	2082577.613	749996.299	Subsurface Soil	6.5 - 8.5 8.5 - 10.5 10.5 - 12.5	Radionuclides Metals	Biased location targeted at NPWL; moved 4.6 ft north to be within 1 ft of NPWL.
BZ43-007	2082542.758	750017.016	2082551.858	750016.615	Subsurface Soil	2.5 - 4.5 4.5 - 6.5	Radionuclides Metals	Statistical location moved 9.1 ft east to be within 1 ft of NPWL.
BZ43-008	2082541.538	750052.995	2082543.591	750052.834	Subsurface Soil	2.5 - 4.5 4.5 - 6.5	Radionuclides Metals	Statistical location; moved 2 ft east to be within 1 ft of NPWL.
BZ43-009	2082540.318	750088.975	2082543.206	750089.068	Subsurface Soil	2.5 - 4.5 4.5 - 6.5	Radionuclides Metals	Statistical location; moved 3 ft east to be within 1 ft of NPWL.
BZ43-010	2082539.099	750124.954	2082537.064	750124.546	Subsurface Soil	3.0 - 4.5 5.5 - 6.5	Radionuclides Metals	Statistical location; moved 2.1 ft west to be within 1 ft of NPWL; partial recovery from both intervals.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
BZ43-011	2082537.879	750160.933	2082541.063	750160.767	Surface Soil Subsurface Soil	0.0 - 0.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval)	Statistical location adjacent to NPWL; moved 3 ft east to be within 1 ft of NPWL.
CA42-034	2082922.799	749947.929	2082922.753	749947.930	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CA42-035	2082890.493	749932.046	2082890.475	749932.003	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CA43-000	2082934.788	750127.530	2082934.838	750127.559	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CA43-001	2082932.390	750091.610	2082932.357	750091.640	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CA43-002	2082929.992	750055.690	2082929.985	750055.658	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CA43-003	2082927.595	750019.769	2082927.650	750019.747	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CA43-004	2082925.197	749983.849	2082922.564	749986.475	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 2.6 ft north and 2.6 ft west to be within 1 ft of NPWL.
CA43-005	2082904.879	750147.566	2082904.882	750147.556	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CA43-006	2082902.481	750111.646	2082902.451	750111.648	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CA43-007	2082900.083	750075.726	2082900.128	750075.754	Surface Soil Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location. "A" interval (0.0-0.5 ft) not sampled because no slab was present and surface soil was exposed to air.

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Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CA43-008	2082897.686	750039.806	2082897.703	750039.822	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CA43-009	2082895.288	750003.886	2082866.583	750011.535	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved twice to 29.7 ft northwest of proposed location to avoid transformer pad and then active water line.
CA43-010	2082892.891	749967.966	2082892.857	749967.970	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CA43-011	2082872.572	750131.682	2082872.598	750128.083	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 3.6 ft south to avoid ditch (geoprobe could not access).
CA43-016	2082751.233	749991.954	2082750.904	749987.000	Subsurface Soil	6.5 - 8.5 8.5 - 10.5 10.5 - 12.5	Radionuclides Metals	Biased location moved 5 ft south to be adjacent to NPWL and avoid electrical utility.
CA43-017	2082858.010	749990.165	2082858.148	749994.256	Subsurface Soil	7.0 - 8.5 8.5 - 10.5 10.5 - 12.5	Radionuclides Metals	Biased location moved 4.1 ft north to be adjacent to NPWL and avoid electrical utility; partial recovery from the 7.0 - 8.5 ft interval.
CA44-000	2082913.783	750167.261	2082913.767	750167.336	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CA44-001	2082936.157	750225.462	2082936.170	750225.487	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CA44-002	2082908.169	750202.821	2082908.194	750202.833	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.

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Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CA44-003	2082880.180	750180.179	2082880.147	750180.128	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CA44-004	2082930.543	750261.022	2082930.550	750281.039	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; moved 20.0 ft north to avoid ditch and utilities.
CA44-005	2082902.555	750238.380	2082902.640	750238.338	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CA44-006	2082874.566	750215.739	2082874.590	750215.726	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CB42-014	2083134.559	749843.594	2083134.537	749843.629	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB42-015	2083132.162	749807.674	2083132.192	749807.654	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB42-016	2083109.446	749935.471	2083109.451	749935.407	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB42-017	2083079.537	749955.507	2083079.584	749955.507	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB42-018	2083077.139	749919.587	2083077.097	749919.596	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB42-019	2083047.230	749939.624	2083047.230	749939.594	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CB42-020	2083017.321	749959.660	2083010.731	749958.098	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 6.8 ft west to avoid overhead lines.
CB42-021	2083014.924	749923.740	2083014.918	749923.755	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB42-022	2082985.015	749943.776	2082984.972	749943.762	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB42-023	2082952.708	749927.893	2082952.705	749927.874	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-000	2083101.733	749990.095	2083102.468	749977.418	Subsurface Soil	12.5 - 14.5	Radionuclides Metals	Biased location moved 12.7 ft south to be adjacent to valve vault and avoid power line; original location was in a shack.
CB43-001	2083113.661	749993.016	2083116.535	749982.101	Subsurface Soil	12.5 - 14.5	Radionuclides Metals	Biased location moved 11.3 ft southeast to be adjacent to valve vault and avoid power line.
CB43-002	2083116.638	750043.231	2083116.625	750043.213	Subsurface Soil	0.5 - 2.5 2.5 - 3.0 4.5 - 5.0	VOCs	Statistical location; no significant change in location; partial recovery from two intervals.
CB43-003	2083114.241	750007.311	2083114.201	750007.328	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 5.0	VOCs	Statistical location; no significant change in location; partial recovery from last interval.
CB43-004	2083111.843	749971.391	2083111.824	749971.457	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-005	2083089.127	750099.188	2083089.567	750095.308	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 3.9 ft south to avoid abandoned nitrogen line.
CB43-006	2083086.730	750063.267	2083086.772	750063.287	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-007	2083084.332	750027.347	2083084.315	750027.317	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CB43-008	2083081.934	749991.427	2083081.648	749999.464	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 8.0 ft north to avoid power line.
CB43-009	2083061.616	750155.144	2083061.573	750155.150	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-010	2083059.218	750119.224	2083062.250	750119.127	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 3.0 ft east to avoid rock/boulder.
CB43-011	2083056.821	750083.304	2083056.714	750083.178	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-012	2083054.423	750047.384	2083054.422	750047.391	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-013	2083052.025	750011.464	2083051.995	750011.428	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-014	2083049.628	749975.544	2083050.717	749968.442	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 7.2 ft south to avoid power line.
CB43-015	2083029.309	750139.260	2083029.309	750139.260	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-016	2083026.912	750103.340	2083026.208	750112.464	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 9.2 ft north to avoid overhead power lines.
CB43-017	2083024.514	750067.420	2083032.275	750064.057	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 8.5 ft southeast to avoid steam lines.
CB43-018	2083022.117	750031.500	2083032.510	750031.206	Subsurface Soil	0.5 - 1.5 2.5 - 4.5 4.5 - 5.8	VOCs	Statistical location moved 10.4 ft east to avoid overhead power lines; partial recovery at two intervals.
CB43-019	2083019.719	749995.580	2083034.524	750001.842	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 16.1 ft northeast to avoid steam lines and overhead power lines.

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Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CB43-020	2082997.003	750123.377	2082996.987	750123.378	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-021	2082994.605	750087.457	2082994.597	750087.485	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-022	2082992.208	750051.537	2082992.183	750051.525	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-023	2082989.810	750015.617	2082989.849	750015.526	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-024	2082987.412	749979.697	2082987.888	749968.219	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 11.5 ft south to avoid abandoned nitrogen line.
CB43-025	2082967.094	750143.413	2082967.107	750143.397	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-026	2082964.696	750107.493	2082964.659	750107.454	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-027	2082962.299	750071.573	2082962.289	750071.502	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-028	2082959.901	750035.653	2082959.949	750035.637	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-029	2082957.504	749999.733	2082957.557	749999.691	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-030	2082955.106	749963.813	2082955.072	749963.784	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CB43-031	2083115.398	750089.754	2083115.456	750089.762	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CB43-032	2083109.784	750125.313	2083109.822	750125.338	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CB43-033	2083104.170	750160.873	2083104.199	750160.874	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CB43-034	2083076.181	750138.231	2083076.210	750138.217	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs Dioxins/Furans	Statistical location; no significant change in location.
CB43-035	2082947.385	750154.343	2082947.324	750154.382	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CB44-000	2083132.158	750183.514	2083132.113	750183.501	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CB44-001	2083126.544	750219.074	2083126.580	750219.072	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CB44-002	2083098.556	750196.432	2083098.495	750196.414	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CB44-003	2083070.567	750173.791	2083070.589	750173.827	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.

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Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CB44-004	2083120.930	750254.633	2083118.546	750252.700	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location moved 3.1 ft southwest to avoid concrete/steel fence posts.
CB44-005	2083092.942	750231.992	2083094.572	750236.556	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location moved 4.8 ft northeast to avoid underground electrical line.
CB44-006	2083064.953	750209.350	2083064.953	750209.350	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location. Inadvertently collected intervals A, B, and C not proposed in SAP.
CB44-007	2083036.965	750186.709	2083036.953	750186.794	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CB44-008	2083008.976	750164.067						Statistical location that could not be sampled. Relocated 4 times, and each time red concrete was encountered. A further relocation would have put the location too close to another location.
CB44-009	2083087.328	750267.551	2083087.287	750267.475	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CB44-010	2083059.339	750244.910	2083061.354	750247.215	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location moved 3.1 ft northeast to avoid underground electrical lines.

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Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CB44-011	2083031.351	750222.268	2083031.351	750222.268	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location. Inadvertently collected intervals A, B, and C not proposed in SAP.
CB44-012	2083003.362	750199.627	2083003.362	750199.627	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CB44-013	2082975.374	750176.985	2082975.365	750176.966	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CB44-014	2083025.737	750257.828	2083025.725	750257.739	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CB44-015	2082997.748	750235.186	2082997.778	750235.165	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CB44-016	2082969.760	750212.544	2082969.738	750212.590	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CB44-017	2082941.771	750189.903	2082941.776	750189.844	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs Dioxins/Furans	Statistical location; no significant change in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CB44-018	2082964.146	750248.104	2082963.421	750239.136	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location moved 9.0 ft south to avoid underground electrical line.
CC42-000	2083256.592	749799.369	2083256.557	749799.361	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CC42-001	2083229.081	749855.325	2083235.216	749857.601	Subsurface Soil	0.5 - 1.5 4.0 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 6.5 ft east to avoid fence; partial recoveries from 2 intervals.
CC42-002	2083226.683	749819.405	2083224.669	749819.384	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 2 ft west to avoid fence.
CC42-003	2083201.570	749911.282	2083201.608	749911.319	Subsurface Soil	0.5 - 2.0 2.5 - 4.5 4.5 - 6.0	VOCs	Statistical location; no significant change in location; partial recovery from 2 intervals.
CC42-004	2083199.172	749875.361	2083199.105	749875.303	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CC42-005	2083196.775	749839.441	2083196.710	749839.488	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CC42-006	2083194.377	749803.521	2083194.370	749803.523	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CC42-007	2083171.661	749931.318	2083171.673	749931.321	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CC42-008	2083169.263	749895.398	2083169.248	749895.406	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CC42-009	2083166.866	749859.478	2083166.834	749859.464	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CC42-010	2083164.468	749823.558	2083164.486	749823.554	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CC42-011	2083141.752	749951.354	2083141.757	749951.382	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CC42-012	2083139.354	749915.434	2083139.399	749915.404	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CC42-013	2083136.957	749879.514	2083136.948	749879.470	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location; no significant change in location.
CC42-014	2083317.094	749811.806	2083317.072	749811.784	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs Dioxins/Furans	Statistical location; no significant change in location.
CC42-015	2083311.480	749847.366	2083311.430	749847.427	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC42-016	2083283.491	749824.724	2083283.476	749824.728	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC42-017	2083305.866	749882.925	2083305.867	749882.951	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC42-018	2083277.877	749860.284	2083277.896	749860.264	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC42-019	2083249.889	749837.642	2083249.916	749837.683	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CC42-020	2083300.252	749918.485	2083300.235	749918.447	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC42-021	2083272.263	749895.843	2083272.231	749895.889	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC42-022	2083244.275	749873.202	2083244.313	749873.129	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC42-023	2083294.638	749954.045	2083294.640	749954.014	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CC42-024	2083266.649	749931.403	2083266.635	749931.448	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs Dioxins/Furans	Statistical location; no significant change in location.
CC42-025	2083238.661	749908.761	2083235.585	749916.861	Subsurface Soil	4.5 - 6.0	Radionuclides Metals VOCs PCBs	Statistical location moved 8.7 ft northwest to avoid sewer line; interval shortened because of sampling refusal.
CC42-026	2083233.047	749944.321	2083232.999	749944.353	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC42-027	2083205.058	749921.679	2083205.062	749921.697	Subsurface Soil	4.5 - 6.0	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location; interval shortened because of sampling refusal.

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Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CC42-028	2083199.444	749957.239	2083199.443	749957.310	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC43-002	2083144.150	749987.275	2083145.824	749979.134	Subsurface Soil	0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	VOCs	Statistical location moved 8.3 ft south to avoid process waste line.
CC43-003	2083317.012	750012.246	2083312.964	750019.387	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; moved 7 ft north and 4 ft west to avoid underground electrical lines.
CC43-004	2083289.024	749989.604	2083295.733	749993.004	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location moved 7.5 ft northeast to avoid manhole.
CC43-005	2083261.035	749966.963	2083261.094	749966.933	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC43-006	2083283.410	750025.164	2083283.381	750025.165	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CC43-007	2083255.422	750002.522	2083257.191	750000.085	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location moved 3.0 ft southeast to avoid underground line.
CC43-008	2083227.433	749979.881	2083217.175	749996.579	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location moved 19.6 ft northwest to avoid underground utilities.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CC43-009	2083277.796	750060.723	2083277.805	750060.728	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location. Samples were not analyzed for dioxins/furans; samples from CC44-005 were analyzed for dioxins/furans instead.
CC43-010	2083249.808	750038.082	2083249.819	750038.105	Surface Soil Subsurface Soil	0.0 - 0.5 1.0 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location; partial recovery from 2nd interval.
CC43-011	2083221.819	750015.440	2083221.813	750015.420	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC43-012	2083193.831	749992.798	2083194.522	750000.989	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location moved 8.2 ft north to avoid underground (electrical?) line.
CC43-013	2083272.182	750096.283	2083272.177	750096.278	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CC43-014	2083244.194	750073.641	2083244.188	750073.641	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CC43-015	2083216.205	750051.000	2083216.240	750051.017	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC43-016	2083188.217	750028.358	2083188.227	750028.351	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CC43-017	2083160.228	750005.716	2083160.322	750005.732	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC43-018	2083238.580	750109.201	2083238.538	750109.206	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CC43-019	2083210.591	750086.559	2083201.488	750091.449	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs Dioxins/Furans	Statistical location moved 10.3 ft northwest to avoid abandoned nitrogen line.
CC43-020	2083182.603	750063.918	2083182.570	750063.940	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC43-021	2083154.614	750041.276	2083154.589	750041.327	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC43-022	2083232.966	750144.760	2083232.917	750144.754	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CC43-023	2083204.977	750122.119	2083194.863	750114.518	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location moved 12.7 ft southwest to avoid electrical and abandoned nitrogen lines.
CC43-024	2083176.989	750099.477	2083177.027	750099.411	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CC43-025	2083149.000	750076.836	2083148.499	750086.565	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location moved 9.7 ft north to avoid abandoned nitrogen line.
CC43-026	2083199.363	750157.678	2083203.368	750156.121	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location moved 4.3 ft southeast to avoid abandoned electrical and nitrogen lines.
CC43-027	2083171.375	750135.037	2083171.440	750134.917	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC43-028	2083143.386	750112.395	2083143.356	750112.404	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs Dioxins/Furans	Statistical location; no significant change in location.
CC43-029	2083137.772	750147.955	2083137.752	750147.956	Subsurface Soil	4.5 - 6.5	Radionuclides Metals VOCs PCBs	Statistical location; no significant change in location.
CC44-004	2083227.352	750180.320	2083227.157	750180.384	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; no significant change in location.
CC44-005	2083193.749	750193.238	2083193.675	750193.296	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs Dioxins/Furans	Statistical location; no significant change in location. Samples were analyzed for dioxins/furans instead of samples from CC43-009.
CC44-006	2083165.761	750170.596	2083164.612	750171.782	Subsurface Soil	4.5 - 5.5	Radionuclides Metals VOCs PCBs	Statistical location moved 1.7 ft northwest to avoid underground electric line; interval shortened because of sampling refusal.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analyte	Comment
CC44-007	2083188.135	750228.798	2083190.122	750228.767	Surface Soil Subsurface Soil	0.0 - 0.5 1.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; moved 2 ft east to avoid road; partial recovery from the second interval.
CC44-008	2083160.147	750206.156	2083166.092	750201.680	Surface Soil Subsurface Soil	0.0 - 0.5 0.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location moved 7.4 ft southeast to avoid electrical and abandoned nitrogen lines.
CC44-009	2083182.521	750264.357	2083186.495	750264.328	Surface Soil Subsurface Soil	0.0 - 0.5 1.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; moved 4 ft east to avoid road; partial recovery from the second interval shortened.
CC44-010	2083154.533	750241.716	2083169.121	750242.473	Surface Soil Subsurface Soil	0.0 - 0.5 1.5 - 2.5 2.5 - 4.5 4.5 - 6.5	Radionuclides Metals VOCs (except A interval) PCBs	Statistical location; moved 15 ft east to avoid overhead power lines; partial recovery from the second interval shortened.

presented and explained in Table 1. Table 2 presents a summary of accelerated action sampling and analyses. Sampling locations and analytical results greater than background means plus 2 SDs or reporting limits (RLs) are shown on Figures 3 through 7 and listed in Table 3. Plutonium-239/240 and uranium-234 activities based on high-purity germanium (HPGe) results (derived from americium-241 and uranium-238 gamma spectroscopy results, respectively) are shown in Table 3 in italics. WRW AL exceedances are shown in bold in Table 3 and in red on Figures 3 through 7. As shown, all contaminant concentrations are less than the WRW ALs, except for one subsurface arsenic concentration. The elevated concentration (at Sampling Location CC44-006) was 25.9 milligrams per kilogram (mg/kg), and the WRW AL is 22.2 mg/kg. Summary statistics for the project analytical results are presented by analyte in Tables 4 and 5 for surface and subsurface soil, respectively.

**Table 2  
IHSS Group 500-1 Accelerated Action Sampling and Analysis Summary**

Category	Planned Total*	Actual Total
Number of Sampling Locations	172	171
Number of Samples	458	454
Number of Radionuclide Analyses	247	243
Number of Metal Analyses	247	243
Number of VOC Analyses	379	376
Number of Nitrate/Nitrite Analyses	2	2
Number of PCB Analyses	197	193
Number of Dioxins/Furans Analyses	17	13

\* Revised from IASAP Addendum #IA-04-03 based on recount.

Results on the presence of dioxin and furan congeners in soil are not presented in this Data Summary Report but are included on the enclosed CD. PCB (Aroclor) concentrations in soil within IHSS Group 500-1 are below WRW ALs. A recent evaluation of Aroclor concentrations in soil demonstrates that WRW ALs for Aroclors (mixtures of PCB congeners) are protective of human health and that analysis for dioxin and furan congeners is not required to characterize transformer sites at RFETS (DOE 2004). Also, dioxin and furan congeners do not have RFCA ALs.

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(Ref: 04-RF-00952; KLW-016-04)

**Draft Data Summary Report for  
IHSS Group 500-1  
IHSS 300-186, IHSS 500-117.1 and  
IHSS 500-197**

**September 2004**

**Figure 3:**

**IHSS Group 500-1 Accelerated Action  
Sampling Locations and Results,  
Surface Soil**

**File: W:\projects\2003\500-1\500-1\_characterization.apr**

**August 23, 2004**

**CERCLA Administrative Record Document, IA-A-002322**

**U.S. DEPARTEMENT OF ENERGY  
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE**

**GOLDEN, COLORADO**

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**Draft Data Summary Report for  
IHSS Group 500-1  
IHSS 300-186, IHSS 500-117.1 and  
IHSS 500-197**

**September 2004**

**Figure ~~3~~: 4**

**IHSS Group 500-1 Accelerated Action  
Sampling Locations and Results,  
Surface Soil Northeast Quadrant**

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**Figure 3:5**

**IHSS Group 500-1 Accelerated Action  
Sampling Locations and Results,  
Surface Soil Northwest Quadrant**

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IHSS 500-197**

**September 2004**

**Figure 6:**

**IHSS Group 500-1 Accelerated Action  
Sampling Locations and Results,  
Surface Soil Southwest Quadrant**

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**Draft Data Summary Report for  
IHSS Group 500-1  
IHSS 300-186, IHSS 500-117.1 and  
IHSS 500-197**

**September 2004**

**Figure 7:**

**IHSS Group 500-1 Accelerated Action  
Sampling Locations and Results,  
Surface Soil Southeast Quadrant**

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**Table 3**  
**IHSS Group 500-1 Accelerated Action Characterization Data Greater Than**  
**Background Means Plus Two Standard Deviations or Reporting Limits**

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
BY43-001	2082510.913	750033.809	4.5	6.5	Uranium-238	1.594	NA	1.490	351.0	pCi/g
BY43-002	2082509.814	750069.924	2.5	4.5	Uranium-234	5.051	NA	2.640	300.0	pCi/g
BY43-002	2082509.814	750069.924	2.5	4.5	Uranium-235	0.223	NA	0.120	8.0	pCi/g
BY43-002	2082509.814	750069.924	2.5	4.5	Uranium-238	5.051	NA	1.490	351.0	pCi/g
BY43-002	2082509.814	750069.924	4.5	6.5	Uranium-234	4.047	NA	2.640	300.0	pCi/g
BY43-002	2082509.814	750069.924	4.5	6.5	Uranium-235	0.242	NA	0.120	8.0	pCi/g
BY43-002	2082509.814	750069.924	4.5	6.5	Uranium-238	4.047	NA	1.490	351.0	pCi/g
BY43-003	2082508.568	750105.947	2.5	4.5	Arsenic	15.000	NA	13.140	22.2	mg/kg
BY43-003	2082508.568	750105.947	2.5	4.5	Uranium-235	0.218	NA	0.120	8.0	pCi/g
BY43-003	2082508.568	750105.947	2.5	4.5	Vanadium	90.000	NA	88.490	7150.0	mg/kg
BY43-003	2082508.568	750105.947	4.5	6.5	Uranium-238	2.180	NA	1.490	351.0	pCi/g
BY43-004	2082507.293	750141.851	0.0	0.5	Aluminum	23000.000	NA	16902.000	228000.0	mg/kg
BY43-004	2082507.293	750141.851	0.0	0.5	Beryllium	1.100	NA	0.966	921.0	mg/kg
BY43-004	2082507.293	750141.851	0.0	0.5	Chromium	22.000	NA	16.990	268.0	mg/kg
BY43-004	2082507.293	750141.851	0.0	0.5	Iron	21000.000	NA	18037.000	307000.0	mg/kg
BY43-004	2082507.293	750141.851	0.0	0.5	Lithium	13.000	NA	11.550	20400.0	mg/kg
BY43-004	2082507.293	750141.851	0.0	0.5	Nickel	17.000	NA	14.910	20400.0	mg/kg
BY43-004	2082507.293	750141.851	0.0	0.5	Uranium-234	4.626	NA	2.253	300.0	pCi/g
BY43-004	2082507.293	750141.851	0.0	0.5	Uranium-235	0.263	NA	0.094	8.0	pCi/g
BY43-004	2082507.293	750141.851	0.0	0.5	Uranium-238	4.626	NA	2.000	351.0	pCi/g
BY43-004	2082507.293	750141.851	0.0	0.5	Vanadium	53.000	NA	45.590	7150.0	mg/kg
BY43-004	2082507.293	750141.851	0.0	0.5	Zinc	89.000	NA	73.760	307000.0	mg/kg
BY43-004	2082507.293	750141.851	2.5	4.5	Barium	320.000	NA	289.380	26400.0	mg/kg
BY43-004	2082507.293	750141.851	2.5	4.5	Uranium-234	4.947	NA	2.640	300.0	pCi/g

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Draft Data Summary Report for IHSS Group 500-1

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
BY43-004	2082507.293	750141.851	2.5	4.5	Uranium-235	0.271	NA	0.120	8.0	pCi/g
BY43-004	2082507.293	750141.851	2.5	4.5	Uranium-238	4.947	NA	1.490	351.0	pCi/g
BY44-000	2082506.137	750177.852	0.0	0.5	Americium-241	0.070	NA	0.023	76.0	pCi/g
BY44-000	2082506.137	750177.852	4.5	6.5	Methylene chloride	1.200	0.940	NA	2530000.0	µg/kg
BY44-000	2082506.137	750177.852	4.5	6.5	Uranium-238	1.910	NA	1.490	351.0	pCi/g
BY44-001	2082536.660	750196.891	0.0	0.5	Copper	24.000	NA	18.060	40900.0	mg/kg
BY44-001	2082536.660	750196.891	0.0	0.5	Manganese	460.000	NA	365.080	3480.0	mg/kg
BY44-001	2082536.660	750196.891	0.0	0.5	Uranium-234	2.587	NA	2.253	300.0	pCi/g
BY44-001	2082536.660	750196.891	0.0	0.5	Uranium-235	0.227	NA	0.094	8.0	pCi/g
BY44-001	2082536.660	750196.891	0.0	0.5	Uranium-238	2.587	NA	2.000	351.0	pCi/g
BY44-001	2082536.660	750196.891	2.5	4.5	Uranium-235	0.197	NA	0.120	8.0	pCi/g
BY44-001	2082536.660	750196.891	4.5	6.5	Uranium-235	0.154	NA	0.120	8.0	pCi/g
BY44-001	2082536.660	750196.891	4.5	6.5	Uranium-238	1.929	NA	1.490	351.0	pCi/g
BY44-002	2082504.924	750213.809	0.0	0.5	Antimony	0.480	NA	0.470	409.0	mg/kg
BY44-002	2082504.924	750213.809	0.0	0.5	Uranium-235	0.153	NA	0.094	8.0	pCi/g
BY44-002	2082504.924	750213.809	0.0	0.5	Uranium-238	2.154	NA	2.000	351.0	pCi/g
BY44-002	2082504.924	750213.809	2.5	4.5	Uranium-234	4.810	NA	2.640	300.0	pCi/g
BY44-002	2082504.924	750213.809	2.5	4.5	Uranium-238	4.810	NA	1.490	351.0	pCi/g
BY44-002	2082504.924	750213.809	4.5	6.5	Uranium-234	5.301	NA	2.640	300.0	pCi/g
BY44-002	2082504.924	750213.809	4.5	6.5	Uranium-235	0.245	NA	0.120	8.0	pCi/g
BY44-002	2082504.924	750213.809	4.5	6.5	Uranium-238	5.301	NA	1.490	351.0	pCi/g
BZ43-000	2082550.217	750001.536	14.5	16.5	Uranium-234	5.553	NA	2.640	300.0	pCi/g
BZ43-000	2082550.217	750001.536	14.5	16.5	Uranium-235	0.361	NA	0.120	8.0	pCi/g
BZ43-000	2082550.217	750001.536	14.5	16.5	Uranium-238	5.553	NA	1.490	351.0	pCi/g
BZ43-001	2082552.194	749984.487	14.5	16.5	Uranium-234	5.132	NA	2.640	300.0	pCi/g
BZ43-001	2082552.194	749984.487	14.5	16.5	Uranium-235	0.244	NA	0.120	8.0	pCi/g
BZ43-001	2082552.194	749984.487	14.5	16.5	Uranium-238	5.132	NA	1.490	351.0	pCi/g

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## Draft Data Summary Report for IHSS Group 500-1

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
BZ43-002	2082541.969	749990.910	14.5	16.5	Uranium-234	5.616	NA	2.640	300.0	pCi/g
BZ43-002	2082541.969	749990.910	14.5	16.5	Uranium-235	0.307	NA	0.120	8.0	pCi/g
BZ43-002	2082541.969	749990.910	14.5	16.5	Uranium-238	5.616	NA	1.490	351.0	pCi/g
BZ43-003	2082658.815	749998.611	12.5	14.5	Uranium, Total	9.900	NA	3.040	2750.0	mg/kg
BZ43-003	2082658.815	749998.611	12.5	14.5	Uranium-238	2.950	NA	1.490	351.0	pCi/g
BZ43-004	2082674.206	749980.463	12.5	14.5	Uranium-234	4.093	NA	2.640	300.0	pCi/g
BZ43-004	2082674.206	749980.463	12.5	14.5	Uranium-235	0.229	NA	0.120	8.0	pCi/g
BZ43-004	2082674.206	749980.463	12.5	14.5	Uranium-238	4.093	NA	1.490	351.0	pCi/g
BZ43-005	2082612.920	749991.706	6.5	8.5	Uranium-234	3.076	NA	2.640	300.0	pCi/g
BZ43-005	2082612.920	749991.706	6.5	8.5	Uranium-235	0.170	NA	0.120	8.0	pCi/g
BZ43-005	2082612.920	749991.706	6.5	8.5	Uranium-238	3.076	NA	1.490	351.0	pCi/g
BZ43-005	2082612.920	749991.706	8.5	10.5	Uranium-234	3.914	NA	2.640	300.0	pCi/g
BZ43-005	2082612.920	749991.706	8.5	10.5	Uranium-235	0.190	NA	0.120	8.0	pCi/g
BZ43-005	2082612.920	749991.706	8.5	10.5	Uranium-238	3.914	NA	1.490	351.0	pCi/g
BZ43-005	2082612.920	749991.706	10.5	11.0	Uranium-234	4.672	NA	2.640	300.0	pCi/g
BZ43-005	2082612.920	749991.706	10.5	11.0	Uranium-235	0.283	NA	0.120	8.0	pCi/g
BZ43-005	2082612.920	749991.706	10.5	11.0	Uranium-238	4.672	NA	1.490	351.0	pCi/g
BZ43-006	2082577.613	749996.299	6.5	8.5	Uranium-234	4.604	NA	2.640	300.0	pCi/g
BZ43-006	2082577.613	749996.299	6.5	8.5	Uranium-235	0.212	NA	0.120	8.0	pCi/g
BZ43-006	2082577.613	749996.299	6.5	8.5	Uranium-238	4.604	NA	1.490	351.0	pCi/g
BZ43-006	2082577.613	749996.299	8.5	10.5	Uranium-234	5.199	NA	2.640	300.0	pCi/g
BZ43-006	2082577.613	749996.299	8.5	10.5	Uranium-238	5.199	NA	1.490	351.0	pCi/g
BZ43-006	2082577.613	749996.299	10.5	12.5	Uranium-234	4.462	NA	2.640	300.0	pCi/g
BZ43-006	2082577.613	749996.299	10.5	12.5	Uranium-235	0.201	NA	0.120	8.0	pCi/g
BZ43-006	2082577.613	749996.299	10.5	12.5	Uranium-238	4.462	NA	1.490	351.0	pCi/g
BZ43-007	2082551.858	750016.615	2.5	4.5	Arsenic	13.300	NA	13.140	22.2	mg/kg
BZ43-007	2082551.858	750016.615	2.5	4.5	Barium	1300.000	NA	289.380	26400.0	mg/kg

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## Draft Data Summary Report for IHSS Group 500-1

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
BZ43-007	2082551.858	750016.615	2.5	4.5	Uranium-235	0.127	NA	0.120	8.0	pCi/g
BZ43-007	2082551.858	750016.615	4.5	6.5	Barium	1110.000	NA	289.380	26400.0	mg/kg
BZ43-008	2082541.505	750052.996	2.5	4.5	Uranium-235	0.145	NA	0.120	8.0	pCi/g
BZ43-008	2082541.505	750052.996	4.5	6.5	Uranium-238	1.990	NA	1.490	351.0	pCi/g
BZ43-009	2082540.305	750088.999	2.5	4.5	Uranium-234	4.872	NA	2.640	300.0	pCi/g
BZ43-009	2082540.305	750088.999	2.5	4.5	Uranium-235	0.190	NA	0.120	8.0	pCi/g
BZ43-009	2082540.305	750088.999	2.5	4.5	Uranium-238	4.872	NA	1.490	351.0	pCi/g
BZ43-009	2082540.305	750088.999	4.5	6.5	Uranium-234	3.456	NA	2.640	300.0	pCi/g
BZ43-009	2082540.305	750088.999	4.5	6.5	Uranium-235	0.248	NA	0.120	8.0	pCi/g
BZ43-009	2082540.305	750088.999	4.5	6.5	Uranium-238	3.456	NA	1.490	351.0	pCi/g
BZ43-010	2082537.064	750124.546	3.0	4.5	Uranium-235	0.217	NA	0.120	8.0	pCi/g
BZ43-010	2082537.064	750124.546	3.0	4.5	Uranium-238	1.638	NA	1.490	351.0	pCi/g
BZ43-011	2082537.821	750160.914	2.5	4.5	Acetone	6.500	5.200	NA	102000000.0	µg/kg
CA43-000	2082934.838	750127.559	0.5	2.5	Acetone	6.600	4.800	NA	102000000.0	µg/kg
CA43-009	2082866.583	750011.535	0.5	2.5	Toluene	26.300	5.050	NA	313000000.0	µg/kg
CA43-016	2082750.904	749987.000	6.5	8.5	Barium	769.000	NA	289.380	26400.0	mg/kg
CA43-016	2082750.904	749987.000	8.5	10.5	Barium	1000.000	NA	289.380	26400.0	mg/kg
CA43-016	2082750.904	749987.000	8.5	10.5	Uranium-235	0.135	NA	0.120	8.0	pCi/g
CA43-016	2082750.904	749987.000	8.5	10.5	Vanadium	89.600	NA	88.490	7150.0	mg/kg
CA43-016	2082750.904	749987.000	10.5	12.5	Barium	1110.000	NA	289.380	26400.0	mg/kg
CA43-016	2082750.904	749987.000	10.5	12.5	Iron	41200.000	NA	41046.520	307000.0	mg/kg
CA43-016	2082750.904	749987.000	10.5	12.5	Strontium	216.000	NA	211.380	613000.0	mg/kg
CA43-016	2082750.904	749987.000	10.5	12.5	Uranium-238	1.723	NA	1.490	351.0	pCi/g
CA43-016	2082750.904	749987.000	10.5	12.5	Vanadium	98.500	NA	88.490	7150.0	mg/kg
CA43-017	2082858.148	749994.256	7.0	8.5	Barium	945.000	NA	289.380	26400.0	mg/kg
CA43-017	2082858.148	749994.256	7.0	8.5	Uranium-234	2.826	NA	2.640	300.0	pCi/g
CA43-017	2082858.148	749994.256	7.0	8.5	Uranium-235	0.192	NA	0.120	8.0	pCi/g

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## Draft Data Summary Report for IHSS Group 500-1

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CA43-017	2082858.148	749994.256	7.0	8.5	Uranium-238	2.826	NA	1.490	351.0	pCi/g
CA43-017	2082858.148	749994.256	8.5	10.5	Barium	1210.000	NA	289.380	26400.0	mg/kg
CA43-017	2082858.148	749994.256	8.5	10.5	Uranium-234	3.097	NA	2.640	300.0	pCi/g
CA43-017	2082858.148	749994.256	8.5	10.5	Uranium-238	3.097	NA	1.490	351.0	pCi/g
CA43-017	2082858.148	749994.256	10.5	12.5	Barium	863.000	NA	289.380	26400.0	mg/kg
CA43-017	2082858.148	749994.256	10.5	12.5	Iron	41100.000	NA	41046.520	307000.0	mg/kg
CA43-017	2082858.148	749994.256	10.5	12.5	Uranium-235	0.145	NA	0.120	8.0	pCi/g
CA43-017	2082858.148	749994.256	10.5	12.5	Vanadium	89.300	NA	88.490	7150.0	mg/kg
CA44-000	2082913.767	750167.336	0.5	2.5	Acetone	16.000	4.800	NA	102000000.0	µg/kg
CA44-000	2082913.767	750167.336	2.5	4.5	Naphthalene	1.200	0.910	NA	30900000.0	µg/kg
CA44-001	2082936.170	750225.487	4.5	6.5	Uranium-234	3.004	NA	2.640	300.0	pCi/g
CA44-001	2082936.170	750225.487	4.5	6.5	Uranium-235	0.211	NA	0.120	8.0	pCi/g
CA44-001	2082936.170	750225.487	4.5	6.5	Uranium-238	3.004	NA	1.490	351.0	pCi/g
CA44-002	2082908.194	750202.833	0.0	0.5	Copper	32.000	NA	18.060	40900.0	mg/kg
CA44-002	2082908.194	750202.833	0.0	0.5	Iron	22000.000	NA	18037.000	307000.0	mg/kg
CA44-002	2082908.194	750202.833	0.0	0.5	Manganese	380.000	NA	365.080	3480.0	mg/kg
CA44-002	2082908.194	750202.833	0.0	0.5	Strontium	78.000	NA	48.940	613000.0	mg/kg
CA44-002	2082908.194	750202.833	0.0	0.5	Vanadium	47.000	NA	45.590	7150.0	mg/kg
CA44-002	2082908.194	750202.833	0.5	2.5	Copper	44.000	NA	38.210	40900.0	mg/kg
CA44-002	2082908.194	750202.833	0.5	2.5	Plutonium-239/240	0.106	NA	0.020	50.0	pCi/g
CA44-003	2082880.147	750180.128	0.0	0.5	Uranium-234	4.022	NA	2.253	300.0	pCi/g
CA44-003	2082880.147	750180.128	0.0	0.5	Uranium-235	0.195	NA	0.094	8.0	pCi/g
CA44-003	2082880.147	750180.128	0.0	0.5	Uranium-238	4.022	NA	2.000	351.0	pCi/g
CA44-003	2082880.147	750180.128	0.5	2.5	Uranium-234	3.940	NA	2.640	300.0	pCi/g
CA44-003	2082880.147	750180.128	0.5	2.5	Uranium-235	0.180	NA	0.120	8.0	pCi/g
CA44-003	2082880.147	750180.128	0.5	2.5	Uranium-238	3.940	NA	1.490	351.0	pCi/g
CA44-003	2082880.147	750180.128	4.5	6.5	Uranium-234	4.850	NA	2.640	300.0	pCi/g

## Draft Data Summary Report for IHSS Group 500-1

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CA44-003	2082880.147	750180.128	4.5	6.5	Uranium-235	0.320	NA	0.120	8.0	pCi/g
CA44-003	2082880.147	750180.128	4.5	6.5	Uranium-238	4.850	NA	1.490	351.0	pCi/g
CA44-004	2082930.550	750281.039	0.0	0.5	Aroclor-1260	46.000	6.600	NA	12400.0	µg/kg
CA44-004	2082930.550	750281.039	0.0	0.5	Arsenic	21.000	NA	10.090	22.2	mg/kg
CA44-004	2082930.550	750281.039	0.0	0.5	Barium	1150.000	NA	141.260	26400.0	mg/kg
CA44-004	2082930.550	750281.039	0.0	0.5	Chromium	33.300	NA	16.990	268.0	mg/kg
CA44-004	2082930.550	750281.039	0.0	0.5	Iron	40400.000	NA	18037.000	307000.0	mg/kg
CA44-004	2082930.550	750281.039	0.0	0.5	Nickel	50.600	NA	14.910	20400.0	mg/kg
CA44-004	2082930.550	750281.039	0.0	0.5	Strontium	267.000	NA	48.940	613000.0	mg/kg
CA44-004	2082930.550	750281.039	0.0	0.5	Tin	11.500	NA	2.900	613000.0	mg/kg
CA44-004	2082930.550	750281.039	0.0	0.5	Uranium-235	0.209	NA	0.094	8.0	pCi/g
CA44-004	2082930.550	750281.039	0.0	0.5	Vanadium	107.000	NA	45.590	7150.0	mg/kg
CA44-004	2082930.550	750281.039	0.0	0.5	Zinc	187.000	NA	73.760	307000.0	mg/kg
CA44-004	2082930.550	750281.039	0.5	2.5	Barium	1060.000	NA	289.380	26400.0	mg/kg
CA44-004	2082930.550	750281.039	0.5	2.5	Uranium-235	0.155	NA	0.120	8.0	pCi/g
CA44-004	2082930.550	750281.039	2.5	4.5	Barium	871.000	NA	289.380	26400.0	mg/kg
CA44-004	2082930.550	750281.039	2.5	4.5	Uranium-235	0.211	NA	0.120	8.0	pCi/g
CA44-004	2082930.550	750281.039	2.5	4.5	Uranium-238	2.361	NA	1.490	351.0	pCi/g
CA44-004	2082930.550	750281.039	4.5	6.5	Acetone	133.000	112.000	NA	102000000.0	µg/kg
CA44-004	2082930.550	750281.039	4.5	6.5	Arsenic	14.400	NA	13.140	22.2	mg/kg
CA44-004	2082930.550	750281.039	4.5	6.5	Barium	1070.000	NA	289.380	26400.0	mg/kg
CA44-004	2082930.550	750281.039	4.5	6.5	Strontium	219.000	NA	211.380	613000.0	mg/kg
CA44-004	2082930.550	750281.039	4.5	6.5	Uranium-234	5.386	NA	2.640	300.0	pCi/g
CA44-004	2082930.550	750281.039	4.5	6.5	Uranium-235	0.325	NA	0.120	8.0	pCi/g
CA44-004	2082930.550	750281.039	4.5	6.5	Uranium-238	5.386	NA	1.490	351.0	pCi/g
CA44-004	2082930.550	750281.039	4.5	6.5	Vanadium	105.000	NA	88.490	7150.0	mg/kg
CA44-004	2082930.550	750281.039	4.5	6.5	Xylene	24.400	11.200	NA	2040000.0	µg/kg

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Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CA44-005	2082902.640	750238.338	0.0	0.5	Uranium-234	4.449	NA	2.253	300.0	pCi/g
CA44-005	2082902.640	750238.338	0.0	0.5	Uranium-235	0.218	NA	0.094	8.0	pCi/g
CA44-005	2082902.640	750238.338	0.0	0.5	Uranium-238	4.449	NA	2.000	351.0	pCi/g
CA44-005	2082902.640	750238.338	0.5	2.5	Aroclor-1254	160.000	4.800	NA	12400.0	µg/kg
CA44-005	2082902.640	750238.338	4.5	6.5	Uranium-238	1.677	NA	1.490	351.0	pCi/g
CA44-006	2082874.590	750215.726	0.0	0.5	Uranium-235	0.138	NA	0.094	8.0	pCi/g
CA44-006	2082874.590	750215.726	0.5	2.5	Uranium-234	5.942	NA	2.640	300.0	pCi/g
CA44-006	2082874.590	750215.726	0.5	2.5	Uranium-235	0.216	NA	0.120	8.0	pCi/g
CA44-006	2082874.590	750215.726	0.5	2.5	Uranium-238	5.942	NA	1.490	351.0	pCi/g
CA44-006	2082874.590	750215.726	2.5	4.5	Uranium-234	4.344	NA	2.640	300.0	pCi/g
CA44-006	2082874.590	750215.726	2.5	4.5	Uranium-235	0.260	NA	0.120	8.0	pCi/g
CA44-006	2082874.590	750215.726	2.5	4.5	Uranium-238	4.344	NA	1.490	351.0	pCi/g
CB42-015	2083132.192	749807.654	0.0	0.5	Methylene chloride	1.400	0.880	NA	2530000.0	µg/kg
CB42-015	2083132.192	749807.654	0.0	0.5	Naphthalene	1.200	0.950	NA	3090000.0	µg/kg
CB42-015	2083132.192	749807.654	0.0	0.5	Tetrachloroethene	3.500	1.100	NA	615000.0	µg/kg
CB42-015	2083132.192	749807.654	0.5	2.5	2-Butanone	13.000	5.000	NA	192000000.0	µg/kg
CB42-015	2083132.192	749807.654	0.5	2.5	Acetone	40.000	4.900	NA	102000000.0	µg/kg
CB42-015	2083132.192	749807.654	0.5	2.5	Methylene chloride	1.600	0.850	NA	2530000.0	µg/kg
CB42-015	2083132.192	749807.654	0.5	2.5	Naphthalene	3.900	0.910	NA	3090000.0	µg/kg
CB42-015	2083132.192	749807.654	0.5	2.5	Tetrachloroethene	5.300	1.000	NA	615000.0	µg/kg
CB42-015	2083132.192	749807.654	2.5	4.5	2-Butanone	29.000	5.900	NA	192000000.0	µg/kg
CB42-015	2083132.192	749807.654	2.5	4.5	Acetone	140.000	5.700	NA	102000000.0	µg/kg
CB42-015	2083132.192	749807.654	2.5	4.5	Methylene chloride	2.100	1.000	NA	2530000.0	µg/kg
CB42-015	2083132.192	749807.654	2.5	4.5	Naphthalene	1.300	1.100	NA	3090000.0	µg/kg
CB42-015	2083132.192	749807.654	2.5	4.5	Tetrachloroethene	1.700	1.200	NA	615000.0	µg/kg
CB42-015	2083132.192	749807.654	4.5	6.5	Acetone	20.000	5.100	NA	102000000.0	µg/kg
CB42-015	2083132.192	749807.654	4.5	6.5	Methylene chloride	1.700	0.880	NA	2530000.0	µg/kg

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Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CB42-021	2083014.918	749923.755	0.5	2.5	Tetrachloroethene	2.500	1.100	NA	615000.0	µg/kg
CB42-021	2083014.918	749923.755	2.5	4.5	Tetrachloroethene	1.700	1.100	NA	615000.0	µg/kg
CB43-000	2083102.468	749977.418	12.5	14.5	Barium	847.000	NA	289.380	26400.0	mg/kg
CB43-000	2083102.468	749977.418	12.5	14.5	Strontium	217.000	NA	211.380	613000.0	mg/kg
CB43-001	2083116.535	749982.101	12.5	14.5	Barium	1200.000	NA	289.380	26400.0	mg/kg
CB43-001	2083116.535	749982.101	12.5	14.5	Vanadium	96.200	NA	88.490	7150.0	mg/kg
CB43-006	2083086.772	750063.287	0.5	2.5	Tetrachloroethene	6.110	5.030	NA	615000.0	µg/kg
CB43-010	2083062.250	750119.127	0.5	2.5	Methylene chloride	2.300	0.850	NA	2530000.0	µg/kg
CB43-010	2083062.250	750119.127	0.5	2.5	Naphthalene	1.400	0.910	NA	3090000.0	µg/kg
CB43-010	2083062.250	750119.127	0.5	2.5	Tetrachloroethene	1.900	1.100	NA	615000.0	µg/kg
CB43-010	2083062.250	750119.127	4.5	6.5	Methylene chloride	3.300	0.850	NA	2530000.0	µg/kg
CB43-010	2083062.250	750119.127	4.5	6.5	Methylene chloride	2.800	0.830	NA	2530000.0	µg/kg
CB43-012	2083054.422	750047.391	0.5	2.5	Tetrachloroethene	1.200	1.000	NA	615000.0	µg/kg
CB43-020	2082996.987	750123.378	0.5	2.5	Toluene	9.710	5.190	NA	31300000.0	µg/kg
CB43-028	2082959.949	750035.637	0.5	2.5	Acetone	11.000	5.300	NA	102000000.0	µg/kg
CB43-028	2082959.949	750035.637	0.5	2.5	Tetrachloroethene	1.700	1.100	NA	615000.0	µg/kg
CB43-028	2082959.949	750035.637	2.5	4.5	Acetone	9.900	4.900	NA	102000000.0	µg/kg
CB43-028	2082959.949	750035.637	2.5	4.5	Tetrachloroethene	1.900	1.100	NA	615000.0	µg/kg
CB43-031	2083115.456	750089.762	4.5	6.5	Uranium-235	0.162	NA	0.120	8.0	pCi/g
CB43-032	2083109.822	750125.338	4.5	6.5	Uranium-234	3.531	NA	2.640	300.0	pCi/g
CB43-032	2083109.822	750125.338	4.5	6.5	Uranium-235	0.159	NA	0.120	8.0	pCi/g
CB43-032	2083109.822	750125.338	4.5	6.5	Uranium-238	3.531	NA	1.490	351.0	pCi/g
CB43-033	2083104.199	750160.874	4.5	6.5	Uranium-235	0.133	NA	0.120	8.0	pCi/g
CB43-034	2083076.210	750138.217	0.0	0.5	Aluminum	20000.000	NA	16902.000	228000.0	mg/kg
CB43-034	2083076.210	750138.217	0.0	0.5	Aroclor-1254	1700.000	46.000	NA	12400.0	µg/kg
CB43-034	2083076.210	750138.217	0.0	0.5	Beryllium	1.700	NA	0.966	921.0	mg/kg
CB43-034	2083076.210	750138.217	0.0	0.5	Cadmium	36.000	NA	1.612	962.0	mg/kg

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Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRWAL	Unit
CB43-034	2083076.210	750138.217	0.0	0.5	Chromium	31.000	NA	16.990	268.0	mg/kg
CB43-034	2083076.210	750138.217	0.0	0.5	Copper	87.000	NA	18.060	40900.0	mg/kg
CB43-034	2083076.210	750138.217	0.0	0.5	Iron	22000.000	NA	18037.000	307000.0	mg/kg
CB43-034	2083076.210	750138.217	0.0	0.5	Nickel	26.000	NA	14.910	20400.0	mg/kg
CB43-034	2083076.210	750138.217	0.0	0.5	Zinc	290.000	NA	73.760	307000.0	mg/kg
CB43-034	2083076.210	750138.217	0.5	2.5	Aroclor-1254	280.000	4.500	NA	12400.0	µg/kg
CB43-034	2083076.210	750138.217	0.5	2.5	Cadmium	2.700	NA	1.700	962.0	mg/kg
CB43-034	2083076.210	750138.217	0.5	2.5	Methylene chloride	1.300	0.840	NA	2530000.0	µg/kg
CB43-035	2082947.324	750154.382	0.0	0.5	Aluminum	27000.000	NA	16902.000	228000.0	mg/kg
CB43-035	2082947.324	750154.382	0.0	0.5	Aroclor-1260	19.000	6.400	NA	12400.0	µg/kg
CB43-035	2082947.324	750154.382	0.0	0.5	Beryllium	1.600	NA	0.966	921.0	mg/kg
CB43-035	2082947.324	750154.382	0.0	0.5	Chromium	21.000	NA	16.990	268.0	mg/kg
CB43-035	2082947.324	750154.382	0.0	0.5	Copper	26.000	NA	18.060	40900.0	mg/kg
CB43-035	2082947.324	750154.382	0.0	0.5	Iron	20000.000	NA	18037.000	307000.0	mg/kg
CB43-035	2082947.324	750154.382	0.0	0.5	Lithium	14.000	NA	11.550	20400.0	mg/kg
CB43-035	2082947.324	750154.382	0.0	0.5	Nickel	19.000	NA	14.910	20400.0	mg/kg
CB43-035	2082947.324	750154.382	0.0	0.5	Plutonium-239/240	0.211	NA	0.066	50.0	pCi/g
CB43-035	2082947.324	750154.382	0.0	0.5	Vanadium	48.000	NA	45.590	7150.0	mg/kg
CB43-035	2082947.324	750154.382	0.0	0.5	Zinc	140.000	NA	73.760	307000.0	mg/kg
CB43-035	2082947.324	750154.382	0.5	2.5	Acetone	11.000	4.900	NA	102000000.0	µg/kg
CB43-035	2082947.324	750154.382	2.5	4.5	1,2,4-Trichlorobenzene	0.840	0.740	NA	9230000.0	µg/kg
CB43-035	2082947.324	750154.382	2.5	4.5	Naphthalene	1.300	0.900	NA	3090000.0	µg/kg
CB44-000	2083132.113	750183.501	4.5	6.5	Aroclor-1254	770.000	25.000	NA	12400.0	µg/kg
CB44-000	2083132.113	750183.501	4.5	6.5	Uranium-234	4.045	NA	2.640	300.0	pCi/g
CB44-000	2083132.113	750183.501	4.5	6.5	Uranium-235	0.255	NA	0.120	8.0	pCi/g
CB44-000	2083132.113	750183.501	4.5	6.5	Uranium-238	4.045	NA	1.490	351.0	pCi/g
CB44-002	2083098.495	750196.414	4.5	6.5	Aroclor-1254	200.000	4.400	NA	12400.0	µg/kg

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Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CB44-002	2083098.495	750196.414	4.5	6.5	Trichloroethene	8.460	5.460	NA	19600.0	µg/kg
CB44-003	2083070.589	750173.827	4.5	6.5	Aroclor-1254	74.000	4.400	NA	12400.0	µg/kg
CB44-004	2083118.546	750252.700	0.0	0.5	Antimony	0.770	NA	0.470	409.0	mg/kg
CB44-004	2083118.546	750252.700	0.0	0.5	Uranium-235	0.207	NA	0.094	8.0	pCi/g
CB44-004	2083118.546	750252.700	0.0	0.5	Uranium-238	2.156	NA	2.000	351.0	pCi/g
CB44-004	2083118.546	750252.700	0.5	2.5	Styrene	19.300	4.890	NA	123000000.0	µg/kg
CB44-004	2083118.546	750252.700	0.5	2.5	Uranium-238	1.582	NA	1.490	351.0	pCi/g
CB44-004	2083118.546	750252.700	2.5	4.5	Styrene	25.700	5.130	NA	123000000.0	µg/kg
CB44-004	2083118.546	750252.700	2.5	4.5	Uranium-235	0.165	NA	0.120	8.0	pCi/g
CB44-004	2083118.546	750252.700	2.5	4.5	Uranium-238	1.905	NA	1.490	351.0	pCi/g
CB44-004	2083118.546	750252.700	4.5	6.5	Uranium-234	3.493	NA	2.640	300.0	pCi/g
CB44-004	2083118.546	750252.700	4.5	6.5	Uranium-235	0.164	NA	0.120	8.0	pCi/g
CB44-004	2083118.546	750252.700	4.5	6.5	Uranium-238	3.493	NA	1.490	351.0	pCi/g
CB44-005	2083094.572	750236.556	4.5	6.5	Aroclor-1254	22.000	4.400	NA	12400.0	µg/kg
CB44-006	2083064.953	750209.350	2.5	4.5	Uranium-235	0.133	NA	0.120	8.0	pCi/g
CB44-007	2083036.953	750186.794	0.0	0.5	Aluminum	28000.000	NA	16902.000	228000.0	mg/kg
CB44-007	2083036.953	750186.794	0.0	0.5	Arsenic	13.000	NA	10.090	22.2	mg/kg
CB44-007	2083036.953	750186.794	0.0	0.5	Beryllium	1.200	NA	0.966	921.0	mg/kg
CB44-007	2083036.953	750186.794	0.0	0.5	Chromium	28.000	NA	16.990	268.0	mg/kg
CB44-007	2083036.953	750186.794	0.0	0.5	Iron	23000.000	NA	18037.000	307000.0	mg/kg
CB44-007	2083036.953	750186.794	0.0	0.5	Lithium	12.000	NA	11.550	20400.0	mg/kg
CB44-007	2083036.953	750186.794	0.0	0.5	Nickel	25.000	NA	14.910	20400.0	mg/kg
CB44-007	2083036.953	750186.794	0.0	0.5	Uranium-234	4.604	NA	2.253	300.0	pCi/g
CB44-007	2083036.953	750186.794	0.0	0.5	Uranium-235	0.247	NA	0.094	8.0	pCi/g
CB44-007	2083036.953	750186.794	0.0	0.5	Uranium-238	4.604	NA	2.000	351.0	pCi/g
CB44-007	2083036.953	750186.794	0.0	0.5	Vanadium	62.000	NA	45.590	7150.0	mg/kg
CB44-007	2083036.953	750186.794	0.5	2.5	Aluminum	42000.000	NA	35373.170	228000.0	mg/kg

## Draft Data Summary Report for IHSS Group 500-1

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW.AL	Unit
CB44-007	2083036.953	750186.794	0.5	2.5	Uranium-235	0.146	NA	0.120	8.0	pCi/g
CB44-007	2083036.953	750186.794	0.5	2.5	Uranium-238	1.686	NA	1.490	351.0	pCi/g
CB44-007	2083036.953	750186.794	2.5	4.5	Uranium-234	3.442	NA	2.640	300.0	pCi/g
CB44-007	2083036.953	750186.794	2.5	4.5	Uranium-235	0.155	NA	0.120	8.0	pCi/g
CB44-007	2083036.953	750186.794	2.5	4.5	Uranium-238	3.442	NA	1.490	351.0	pCi/g
CB44-007	2083036.953	750186.794	4.5	6.5	Uranium-234	2.698	NA	2.640	300.0	pCi/g
CB44-007	2083036.953	750186.794	4.5	6.5	Uranium-235	0.243	NA	0.120	8.0	pCi/g
CB44-007	2083036.953	750186.794	4.5	6.5	Uranium-238	2.698	NA	1.490	351.0	pCi/g
CB44-009	2083087.287	750267.475	0.0	0.5	Aluminum	17000.000	NA	16902.000	228000.0	mg/kg
CB44-009	2083087.287	750267.475	0.0	0.5	Antimony	0.570	NA	0.470	409.0	mg/kg
CB44-009	2083087.287	750267.475	0.0	0.5	Chromium	17.000	NA	16.990	268.0	mg/kg
CB44-009	2083087.287	750267.475	0.0	0.5	Nickel	15.000	NA	14.910	20400.0	mg/kg
CB44-009	2083087.287	750267.475	0.0	0.5	Uranium-234	4.048	NA	2.253	300.0	pCi/g
CB44-009	2083087.287	750267.475	0.0	0.5	Uranium-235	0.279	NA	0.094	8.0	pCi/g
CB44-009	2083087.287	750267.475	0.0	0.5	Uranium-238	4.048	NA	2.000	351.0	pCi/g
CB44-009	2083087.287	750267.475	0.5	2.5	Uranium-234	3.319	NA	2.640	300.0	pCi/g
CB44-009	2083087.287	750267.475	0.5	2.5	Uranium-235	0.219	NA	0.120	8.0	pCi/g
CB44-009	2083087.287	750267.475	0.5	2.5	Uranium-238	3.319	NA	1.490	351.0	pCi/g
CB44-009	2083087.287	750267.475	2.5	4.5	Uranium-234	5.065	NA	2.640	300.0	pCi/g
CB44-009	2083087.287	750267.475	2.5	4.5	Uranium-235	0.221	NA	0.120	8.0	pCi/g
CB44-009	2083087.287	750267.475	2.5	4.5	Uranium-238	5.065	NA	1.490	351.0	pCi/g
CB44-009	2083087.287	750267.475	4.5	6.5	Lead	27.000	NA	24.970	1000.0	mg/kg
CB44-009	2083087.287	750267.475	4.5	6.5	Manganese	940.000	NA	901.620	3480.0	mg/kg
CB44-009	2083087.287	750267.475	4.5	6.5	Uranium-234	2.836	NA	2.640	300.0	pCi/g
CB44-009	2083087.287	750267.475	4.5	6.5	Uranium-235	0.284	NA	0.120	8.0	pCi/g
CB44-009	2083087.287	750267.475	4.5	6.5	Uranium-238	2.836	NA	1.490	351.0	pCi/g
CB44-010	2083061.354	750247.215	0.0	0.5	Aluminum	18000.000	NA	16902.000	228000.0	mg/kg

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Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CB44-010	2083061.354	750247.215	0.0	0.5	Chromium	21.000	NA	16.990	268.0	mg/kg
CB44-010	2083061.354	750247.215	0.0	0.5	Nickel	17.000	NA	14.910	20400.0	mg/kg
CB44-010	2083061.354	750247.215	0.0	0.5	Uranium-235	0.170	NA	0.094	8.0	pCi/g
CB44-010	2083061.354	750247.215	0.5	2.5	Naphthalene	7.200	6.110	NA	3090000.0	µg/kg
CB44-010	2083061.354	750247.215	0.5	2.5	Uranium-235	0.131	NA	0.120	8.0	pCi/g
CB44-010	2083061.354	750247.215	0.5	2.5	Xylene	22.700	12.200	NA	2040000.0	µg/kg
CB44-010	2083061.354	750247.215	2.5	4.5	Uranium-238	1.596	NA	1.490	351.0	pCi/g
CB44-010	2083061.354	750247.215	4.5	6.5	Uranium-235	0.126	NA	0.120	8.0	pCi/g
CB44-011	2083031.351	750222.268	0.0	0.5	Uranium-234	4.123	NA	2.253	300.0	pCi/g
CB44-011	2083031.351	750222.268	0.0	0.5	Uranium-235	0.276	NA	0.094	8.0	pCi/g
CB44-011	2083031.351	750222.268	0.0	0.5	Uranium-238	4.123	NA	2.000	351.0	pCi/g
CB44-011	2083031.351	750222.268	0.5	2.5	Uranium-234	3.414	NA	2.640	300.0	pCi/g
CB44-011	2083031.351	750222.268	0.5	2.5	Uranium-235	0.180	NA	0.120	8.0	pCi/g
CB44-011	2083031.351	750222.268	0.5	2.5	Uranium-238	3.414	NA	1.490	351.0	pCi/g
CB44-011	2083031.351	750222.268	2.5	4.5	Uranium-234	3.118	NA	2.640	300.0	pCi/g
CB44-011	2083031.351	750222.268	2.5	4.5	Uranium-235	0.139	NA	0.120	8.0	pCi/g
CB44-011	2083031.351	750222.268	2.5	4.5	Uranium-238	3.118	NA	1.490	351.0	pCi/g
CB44-011	2083031.351	750222.268	4.5	6.5	Uranium-234	5.273	NA	2.640	300.0	pCi/g
CB44-011	2083031.351	750222.268	4.5	6.5	Uranium-238	5.273	NA	1.490	351.0	pCi/g
CB44-012	2083003.362	750199.627	0.0	0.5	Uranium-234	3.890	NA	2.253	300.0	pCi/g
CB44-012	2083003.362	750199.627	0.0	0.5	Uranium-235	0.141	NA	0.094	8.0	pCi/g
CB44-012	2083003.362	750199.627	0.0	0.5	Uranium-238	3.890	NA	2.000	351.0	pCi/g
CB44-012	2083003.362	750199.627	0.5	2.5	Uranium-234	3.525	NA	2.640	300.0	pCi/g
CB44-012	2083003.362	750199.627	0.5	2.5	Uranium-235	0.223	NA	0.120	8.0	pCi/g
CB44-012	2083003.362	750199.627	0.5	2.5	Uranium-238	3.525	NA	1.490	351.0	pCi/g
CB44-012	2083003.362	750199.627	2.5	4.5	Uranium-235	0.138	NA	0.120	8.0	pCi/g
CB44-012	2083003.362	750199.627	2.5	4.5	Uranium-238	1.614	NA	1.490	351.0	pCi/g

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Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CB44-013	2082975.365	750176.966	0.0	0.5	Aroclor-1254	73.000	4.500	NA	12400.0	µg/kg
CB44-013	2082975.365	750176.966	0.0	0.5	Copper	28.000	NA	18.060	40900.0	mg/kg
CB44-013	2082975.365	750176.966	0.5	2.5	Aroclor-1254	90.000	4.600	NA	12400.0	µg/kg
CB44-013	2082975.365	750176.966	0.5	2.5	Plutonium-239/240	0.074	NA	0.020	50.0	pCi/g
CB44-014	2083025.725	750257.739	0.0	0.5	Aluminum	19000.000	NA	16902.000	228000.0	mg/kg
CB44-014	2083025.725	750257.739	0.0	0.5	Beryllium	1.200	NA	0.966	921.0	mg/kg
CB44-014	2083025.725	750257.739	0.0	0.5	Cobalt	13.000	NA	10.910	1550.0	mg/kg
CB44-014	2083025.725	750257.739	0.0	0.5	Lithium	13.000	NA	11.550	20400.0	mg/kg
CB44-014	2083025.725	750257.739	0.0	0.5	Nickel	18.000	NA	14.910	20400.0	mg/kg
CB44-014	2083025.725	750257.739	0.0	0.5	Uranium-235	0.106	NA	0.094	8.0	pCi/g
CB44-014	2083025.725	750257.739	0.5	2.5	Uranium-238	2.423	NA	1.490	351.0	pCi/g
CB44-014	2083025.725	750257.739	2.5	4.5	Uranium-235	0.169	NA	0.120	8.0	pCi/g
CB44-014	2083025.725	750257.739	4.5	6.5	Uranium-235	0.137	NA	0.120	8.0	pCi/g
CB44-015	2082997.778	750235.165	0.0	0.5	Aroclor-1260	77.000	6.600	NA	12400.0	µg/kg
CB44-015	2082997.778	750235.165	0.0	0.5	Nickel	15.000	NA	14.910	20400.0	mg/kg
CB44-015	2082997.778	750235.165	0.0	0.5	Uranium-234	3.846	NA	2.253	300.0	pCi/g
CB44-015	2082997.778	750235.165	0.0	0.5	Uranium-235	0.203	NA	0.094	8.0	pCi/g
CB44-015	2082997.778	750235.165	0.0	0.5	Uranium-238	3.846	NA	2.000	351.0	pCi/g
CB44-015	2082997.778	750235.165	0.5	2.5	Uranium-234	3.696	NA	2.640	300.0	pCi/g
CB44-015	2082997.778	750235.165	0.5	2.5	Uranium-235	0.206	NA	0.120	8.0	pCi/g
CB44-015	2082997.778	750235.165	0.5	2.5	Uranium-238	3.696	NA	1.490	351.0	pCi/g
CB44-015	2082997.778	750235.165	2.5	4.5	Uranium-238	1.676	NA	1.490	351.0	pCi/g
CB44-015	2082997.778	750235.165	4.5	6.5	Uranium-238	1.923	NA	1.490	351.0	pCi/g
CB44-016	2082969.738	750212.590	0.0	0.5	Antimony	1.100	NA	0.470	409.0	mg/kg
CB44-016	2082969.738	750212.590	0.5	2.5	Aroclor-1260	51.000	6.300	NA	12400.0	µg/kg
CB44-016	2082969.738	750212.590	0.5	2.5	Tetrachloroethene	3.600	1.100	NA	615000.0	µg/kg
CB44-016	2082969.738	750212.590	2.5	4.5	Aroclor-1260	7.100	6.900	NA	12400.0	µg/kg

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## Draft Data Summary Report for IHSS Group 500-1

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CB44-016	2082969.738	750212.590	4.5	6.5	Carbon Tetrachloride	3.000	1.500	NA	81500.0	µg/kg
CB44-017	2082941.776	750189.844	0.0	0.5	Aluminum	18000.000	NA	16902.000	228000.0	mg/kg
CB44-017	2082941.776	750189.844	0.0	0.5	Copper	22.000	NA	18.060	40900.0	mg/kg
CB44-017	2082941.776	750189.844	0.0	0.5	Lithium	12.000	NA	11.550	20400.0	mg/kg
CB44-017	2082941.776	750189.844	0.5	2.5	Acetone	22.000	4.800	NA	102000000.0	µg/kg
CB44-017	2082941.776	750189.844	0.5	2.5	Toluene	0.900	0.820	NA	31300000.0	µg/kg
CB44-017	2082941.776	750189.844	2.5	4.5	Acetone	9.700	5.500	NA	102000000.0	µg/kg
CB44-017	2082941.776	750189.844	4.5	6.5	Barium	300.000	NA	289.380	26400.0	mg/kg
CB44-018	2082963.421	750239.136	0.0	0.5	Antimony	0.990	NA	0.470	409.0	mg/kg
CB44-018	2082963.421	750239.136	0.0	0.5	Uranium-235	0.156	NA	0.094	8.0	pCi/g
CB44-018	2082963.421	750239.136	0.5	2.5	Uranium-234	3.674	NA	2.640	300.0	pCi/g
CB44-018	2082963.421	750239.136	0.5	2.5	Uranium-238	3.674	NA	1.490	351.0	pCi/g
CB44-018	2082963.421	750239.136	2.5	4.5	Uranium-235	0.222	NA	0.120	8.0	pCi/g
CB44-018	2082963.421	750239.136	2.5	4.5	Uranium-238	1.582	NA	1.490	351.0	pCi/g
CB44-018	2082963.421	750239.136	4.5	6.5	Uranium-235	0.168	NA	0.120	8.0	pCi/g
CC42-000	2083256.557	749799.361	4.5	6.5	Acetone	30.000	5.200	NA	102000000.0	µg/kg
CC42-014	2083317.072	749811.784	4.5	6.5	Uranium-234	2.991	NA	2.640	300.0	pCi/g
CC42-014	2083317.072	749811.784	4.5	6.5	Uranium-235	0.148	NA	0.120	8.0	pCi/g
CC42-014	2083317.072	749811.784	4.5	6.5	Uranium-238	2.991	NA	1.490	351.0	pCi/g
CC42-016	2083283.476	749824.728	4.5	6.5	Uranium-234	3.547	NA	2.640	300.0	pCi/g
CC42-016	2083283.476	749824.728	4.5	6.5	Uranium-235	0.208	NA	0.120	8.0	pCi/g
CC42-016	2083283.476	749824.728	4.5	6.5	Uranium-238	3.547	NA	1.490	351.0	pCi/g
CC42-019	2083249.916	749837.683	4.5	6.5	Uranium-235	0.136	NA	0.120	8.0	pCi/g
CC42-020	2083300.235	749918.447	4.5	6.5	Uranium-234	3.240	NA	2.640	300.0	pCi/g
CC42-020	2083300.235	749918.447	4.5	6.5	Uranium-238	3.240	NA	1.490	351.0	pCi/g
CC42-022	2083244.313	749873.129	4.5	6.5	Lead	25.000	NA	24.970	1000.0	mg/kg
CC42-023	2083294.640	749954.014	0.0	0.5	Aluminum	18000.000	NA	16902.000	228000.0	mg/kg

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## Draft Data Summary Report for IHSS Group 500-1

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CC42-023	2083294.640	749954.014	0.0	0.5	Beryllium	1.100	NA	0.966	921.0	mg/kg
CC42-023	2083294.640	749954.014	0.0	0.5	Zinc	1300.000	NA	73.760	307000.0	mg/kg
CC42-023	2083294.640	749954.014	0.5	2.5	Zinc	1800.000	NA	139.100	307000.0	mg/kg
CC42-023	2083294.640	749954.014	2.5	4.5	Manganese	1200.000	NA	901.620	3480.0	mg/kg
CC42-024	2083266.635	749931.448	4.5	6.5	Uranium-234	3.681	NA	2.640	300.0	pCi/g
CC42-024	2083266.635	749931.448	4.5	6.5	Uranium-238	3.681	NA	1.490	351.0	pCi/g
CC42-025	2083235.585	749916.861	4.5	6.0	Uranium-235	0.142	NA	0.120	8.0	pCi/g
CC42-026	2083232.999	749944.353	4.5	6.5	Uranium-234	3.568	NA	2.640	300.0	pCi/g
CC42-026	2083232.999	749944.353	4.5	6.5	Uranium-235	0.337	NA	0.120	8.0	pCi/g
CC42-026	2083232.999	749944.353	4.5	6.5	Uranium-238	3.568	NA	1.490	351.0	pCi/g
CC42-027	2083205.062	749921.697	4.5	6.0	Uranium-235	0.181	NA	0.120	8.0	pCi/g
CC42-027	2083205.062	749921.697	4.5	6.0	Uranium-238	1.823	NA	1.490	351.0	pCi/g
CC42-028	2083199.443	749957.310	4.5	6.5	Uranium-238	1.557	NA	1.490	351.0	pCi/g
CC43-003	2083316.977	750012.230	0.5	2.5	Arsenic	20.000	NA	13.140	22.2	mg/kg
CC43-003	2083316.977	750012.230	2.5	4.5	Americium-241	0.087	NA	0.020	76.0	pCi/g
CC43-004	2083295.733	749993.004	0.5	2.5	Acetone	15.000	5.000	NA	102000000.0	µg/kg
CC43-004	2083295.733	749993.004	2.5	4.5	1,2,4-Trichlorobenzene	0.760	0.740	NA	9230000.0	µg/kg
CC43-004	2083295.733	749993.004	2.5	4.5	Naphthalene	2.400	0.890	NA	3090000.0	µg/kg
CC43-004	2083295.733	749993.004	2.5	4.5	Tetrachloroethene	1.700	1.000	NA	615000.0	µg/kg
CC43-004	2083295.733	749993.004	2.5	4.5	Toluene	1.200	0.810	NA	31300000.0	µg/kg
CC43-004	2083295.733	749993.004	4.5	6.5	Naphthalene	1.000	0.890	NA	3090000.0	µg/kg
CC43-005	2083261.094	749966.933	4.5	6.5	Uranium-235	0.168	NA	0.120	8.0	pCi/g
CC43-006	2083283.381	750025.165	0.0	0.5	Aluminum	24000.000	NA	16902.000	228000.0	mg/kg
CC43-006	2083283.381	750025.165	0.0	0.5	Antimony	0.530	NA	0.470	409.0	mg/kg
CC43-006	2083283.381	750025.165	0.0	0.5	Beryllium	1.300	NA	0.966	921.0	mg/kg
CC43-006	2083283.381	750025.165	0.0	0.5	Chromium	20.000	NA	16.990	268.0	mg/kg
CC43-006	2083283.381	750025.165	0.0	0.5	Copper	27.000	NA	18.060	40900.0	mg/kg

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CC43-006	2083283.381	750025.165	0.0	0.5	Iron	26000.000	NA	18037.000	307000.0	mg/kg
CC43-006	2083283.381	750025.165	0.0	0.5	Lithium	13.000	NA	11.550	20400.0	mg/kg
CC43-006	2083283.381	750025.165	0.0	0.5	Nickel	19.000	NA	14.910	20400.0	mg/kg
CC43-006	2083283.381	750025.165	0.0	0.5	Vanadium	61.000	NA	45.590	7150.0	mg/kg
CC43-006	2083283.381	750025.165	0.5	2.5	2-Butanone	9.200	4.800	NA	192000000.0	µg/kg
CC43-006	2083283.381	750025.165	0.5	2.5	Acetone	81.000	4.700	NA	102000000.0	µg/kg
CC43-006	2083283.381	750025.165	0.5	2.5	Tetrachloroethene	1.100	1.000	NA	615000.0	µg/kg
CC43-007	2083257.191	750000.085	4.5	6.5	Uranium-234	5.981	NA	2.640	300.0	pCi/g
CC43-007	2083257.191	750000.085	4.5	6.5	Uranium-238	5.981	NA	1.490	351.0	pCi/g
CC43-008	2083217.175	749996.579	4.5	6.5	Uranium-235	0.140	NA	0.120	8.0	pCi/g
CC43-009	2083277.805	750060.728	0.0	0.5	Uranium-234	3.071	NA	2.253	300.0	pCi/g
CC43-009	2083277.805	750060.728	0.0	0.5	Uranium-235	0.109	NA	0.094	8.0	pCi/g
CC43-009	2083277.805	750060.728	0.0	0.5	Uranium-238	3.071	NA	2.000	351.0	pCi/g
CC43-009	2083277.805	750060.728	0.0	0.5	Zinc	93.000	NA	73.760	307000.0	mg/kg
CC43-009	2083277.805	750060.728	2.5	4.5	Copper	42.000	NA	38.210	40900.0	mg/kg
CC43-009	2083277.805	750060.728	2.5	4.5	Uranium-235	0.134	NA	0.120	8.0	pCi/g
CC43-010	2083249.819	750038.105	1.0	2.5	Xylene	14.500	10.500	NA	2040000.0	µg/kg
CC43-010	2083249.819	750038.105	2.5	4.5	Uranium-238	2.313	NA	1.490	351.0	pCi/g
CC43-010	2083249.819	750038.105	4.5	6.5	Uranium-234	3.463	NA	2.640	300.0	pCi/g
CC43-010	2083249.819	750038.105	4.5	6.5	Uranium-235	0.189	NA	0.120	8.0	pCi/g
CC43-010	2083249.819	750038.105	4.5	6.5	Uranium-238	3.463	NA	1.490	351.0	pCi/g
CC43-011	2083221.813	750015.420	4.5	6.5	Uranium-238	2.632	NA	1.490	351.0	pCi/g
CC43-012	2083194.522	750000.989	4.5	6.5	Uranium-235	0.134	NA	0.120	8.0	pCi/g
CC43-013	2083272.177	750096.278	0.5	2.5	Uranium-234	4.304	NA	2.640	300.0	pCi/g
CC43-013	2083272.177	750096.278	0.5	2.5	Uranium-235	0.192	NA	0.120	8.0	pCi/g
CC43-013	2083272.177	750096.278	0.5	2.5	Uranium-238	4.304	NA	1.490	351.0	pCi/g
CC43-013	2083272.177	750096.278	2.5	4.5	Uranium-234	3.770	NA	2.640	300.0	pCi/g

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Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CC43-013	2083272.177	750096.278	2.5	4.5	Uranium-235	0.180	NA	0.120	8.0	pCi/g
CC43-013	2083272.177	750096.278	2.5	4.5	Uranium-238	3.770	NA	1.490	351.0	pCi/g
CC43-013	2083272.177	750096.278	4.5	6.5	Uranium-234	4.061	NA	2.640	300.0	pCi/g
CC43-013	2083272.177	750096.278	4.5	6.5	Uranium-235	0.205	NA	0.120	8.0	pCi/g
CC43-013	2083272.177	750096.278	4.5	6.5	Uranium-238	4.061	NA	1.490	351.0	pCi/g
CC43-014	2083244.188	750073.641	0.0	0.5	Cobalt	13.000	NA	10.910	1550.0	mg/kg
CC43-014	2083244.188	750073.641	0.0	0.5	Copper	50.000	NA	18.060	40900.0	mg/kg
CC43-014	2083244.188	750073.641	0.0	0.5	Iron	24000.000	NA	18037.000	307000.0	mg/kg
CC43-014	2083244.188	750073.641	0.0	0.5	Manganese	450.000	NA	365.080	3480.0	mg/kg
CC43-014	2083244.188	750073.641	0.0	0.5	Strontium	67.000	NA	48.940	613000.0	mg/kg
CC43-014	2083244.188	750073.641	0.0	0.5	Uranium-234	4.360	NA	2.253	300.0	pCi/g
CC43-014	2083244.188	750073.641	0.0	0.5	Uranium-235	0.229	NA	0.094	8.0	pCi/g
CC43-014	2083244.188	750073.641	0.0	0.5	Uranium-238	4.360	NA	2.000	351.0	pCi/g
CC43-014	2083244.188	750073.641	0.0	0.5	Vanadium	68.000	NA	45.590	7150.0	mg/kg
CC43-014	2083244.188	750073.641	0.5	2.5	Arcochlor-1254	96.000	4.700	NA	12400.0	µg/kg
CC43-014	2083244.188	750073.641	0.5	2.5	Arcochlor-1260	44.000	6.500	NA	12400.0	µg/kg
CC43-014	2083244.188	750073.641	0.5	2.5	Uranium-234	4.879	NA	2.640	300.0	pCi/g
CC43-014	2083244.188	750073.641	0.5	2.5	Uranium-235	0.223	NA	0.120	8.0	pCi/g
CC43-014	2083244.188	750073.641	0.5	2.5	Uranium-238	4.879	NA	1.490	351.0	pCi/g
CC43-014	2083244.188	750073.641	2.5	4.5	Copper	98.000	NA	38.210	40900.0	mg/kg
CC43-014	2083244.188	750073.641	2.5	4.5	Uranium-234	3.230	NA	2.640	300.0	pCi/g
CC43-014	2083244.188	750073.641	2.5	4.5	Uranium-238	3.230	NA	1.490	351.0	pCi/g
CC43-014	2083244.188	750073.641	4.5	6.5	Barium	300.000	NA	289.380	26400.0	mg/kg
CC43-014	2083244.188	750073.641	4.5	6.5	Manganese	2200.000	NA	901.620	3480.0	mg/kg
CC43-014	2083244.188	750073.641	4.5	6.5	Uranium-235	0.126	NA	0.120	8.0	pCi/g
CC43-015	2083216.240	750051.017	4.5	6.5	Uranium-235	0.164	NA	0.120	8.0	pCi/g
CC43-015	2083216.240	750051.017	4.5	6.5	Uranium-238	1.855	NA	1.490	351.0	pCi/g

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Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CC43-016	2083188.227	750028.351	4.5	6.5	Aroclor-1016	8.900	2.100	NA	46400.0	µg/kg
CC43-016	2083188.227	750028.351	4.5	6.5	Uranium-238	1.766	NA	1.490	351.0	pCi/g
CC43-017	2083160.322	750005.732	4.5	6.5	Naphthalene	0.970	0.890	NA	3090000.0	µg/kg
CC43-017	2083160.322	750005.732	4.5	6.5	Plutonium-239/240	0.446	NA	0.020	50.0	pCi/g
CC43-018	2083238.538	750109.206	0.0	0.5	Cobalt	14.000	NA	10.910	1550.0	mg/kg
CC43-018	2083238.538	750109.206	0.0	0.5	Copper	57.000	NA	18.060	40900.0	mg/kg
CC43-018	2083238.538	750109.206	0.0	0.5	Iron	26000.000	NA	18037.000	307000.0	mg/kg
CC43-018	2083238.538	750109.206	0.0	0.5	Manganese	470.000	NA	365.080	3480.0	mg/kg
CC43-018	2083238.538	750109.206	0.0	0.5	Strontium	78.000	NA	48.940	613000.0	mg/kg
CC43-018	2083238.538	750109.206	0.0	0.5	Uranium-234	2.280	NA	2.253	300.0	pCi/g
CC43-018	2083238.538	750109.206	0.0	0.5	Uranium-238	2.280	NA	2.000	351.0	pCi/g
CC43-018	2083238.538	750109.206	0.0	0.5	Vanadium	73.000	NA	45.590	7150.0	mg/kg
CC43-018	2083238.538	750109.206	0.5	2.5	Aroclor-1260	14.000	6.500	NA	12400.0	µg/kg
CC43-018	2083238.538	750109.206	0.5	2.5	Copper	43.000	NA	38.210	40900.0	mg/kg
CC43-018	2083238.538	750109.206	2.5	4.5	Aroclor-1260	6.600	6.500	NA	12400.0	µg/kg
CC43-019	2083201.488	750091.449	4.5	6.5	Uranium-235	0.154	NA	0.120	8.0	pCi/g
CC43-020	2083182.570	750063.940	4.5	6.5	Uranium-235	0.195	NA	0.120	8.0	pCi/g
CC43-022	2083232.917	750144.754	0.0	0.5	Aluminum	19000.000	NA	16902.000	228000.0	mg/kg
CC43-022	2083232.917	750144.754	0.0	0.5	Chromium	21.000	NA	16.990	268.0	mg/kg
CC43-022	2083232.917	750144.754	0.0	0.5	Copper	19.000	NA	18.060	40900.0	mg/kg
CC43-022	2083232.917	750144.754	0.0	0.5	Lithium	12.000	NA	11.550	20400.0	mg/kg
CC43-022	2083232.917	750144.754	0.0	0.5	Nickel	16.000	NA	14.910	20400.0	mg/kg
CC43-022	2083232.917	750144.754	0.0	0.5	Uranium-234	3.739	NA	2.253	300.0	pCi/g
CC43-022	2083232.917	750144.754	0.0	0.5	Uranium-235	0.260	NA	0.094	8.0	pCi/g
CC43-022	2083232.917	750144.754	0.0	0.5	Uranium-238	3.739	NA	2.000	351.0	pCi/g
CC43-022	2083232.917	750144.754	0.0	0.5	Zinc	88.000	NA	73.760	307000.0	mg/kg
CC43-022	2083232.917	750144.754	0.5	2.5	Aroclor-1260	9.600	6.200	NA	12400.0	µg/kg

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## Draft Data Summary Report for IHSS Group 500-1

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CC43-022	2083232.917	750144.754	0.5	2.5	Uranium-234	4.404	NA	2.640	300.0	pCi/g
CC43-022	2083232.917	750144.754	0.5	2.5	Uranium-235	0.231	NA	0.120	8.0	pCi/g
CC43-022	2083232.917	750144.754	0.5	2.5	Uranium-238	4.404	NA	1.490	351.0	pCi/g
CC43-022	2083232.917	750144.754	2.5	4.5	Uranium-234	3.855	NA	2.640	300.0	pCi/g
CC43-022	2083232.917	750144.754	2.5	4.5	Uranium-235	0.214	NA	0.120	8.0	pCi/g
CC43-022	2083232.917	750144.754	2.5	4.5	Uranium-238	3.855	NA	1.490	351.0	pCi/g
CC43-022	2083232.917	750144.754	4.5	6.5	Uranium-234	4.836	NA	2.640	300.0	pCi/g
CC43-022	2083232.917	750144.754	4.5	6.5	Uranium-235	0.218	NA	0.120	8.0	pCi/g
CC43-022	2083232.917	750144.754	4.5	6.5	Uranium-238	4.836	NA	1.490	351.0	pCi/g
CC43-023	2083194.863	750114.518	0.0	0.5	Antimony	0.520	NA	0.470	409.0	mg/kg
CC43-023	2083194.863	750114.518	0.0	0.5	Aroclor-1254	210.000	4.700	NA	12400.0	µg/kg
CC43-023	2083194.863	750114.518	0.0	0.5	Aroclor-1260	83.000	6.500	NA	12400.0	µg/kg
CC43-023	2083194.863	750114.518	0.0	0.5	Copper	23.000	NA	18.060	40900.0	mg/kg
CC43-023	2083194.863	750114.518	0.5	2.5	Methylene chloride	3.300	0.820	NA	2530000.0	µg/kg
CC43-023	2083194.863	750114.518	2.5	4.5	Methylene chloride	2.300	0.850	NA	2530000.0	µg/kg
CC43-023	2083194.863	750114.518	4.5	6.5	Methylene chloride	1.600	0.870	NA	2530000.0	µg/kg
CC43-024	2083177.027	750099.411	4.5	6.5	Aroclor-1254	50.000	4.800	NA	12400.0	µg/kg
CC43-026	2083203.368	750156.121	0.5	2.5	Acetone	26.000	5.400	NA	102000000.0	µg/kg
CC43-026	2083203.368	750156.121	0.5	2.5	Plutonium-239/240	0.164	NA	0.020	50.0	pCi/g
CC43-026	2083203.368	750156.121	0.5	2.5	Tetrachloroethene	3.100	1.200	NA	615000.0	µg/kg
CC43-026	2083203.368	750156.121	2.5	4.5	2-Butanone	7.700	5.700	NA	192000000.0	µg/kg
CC43-026	2083203.368	750156.121	2.5	4.5	Acetone	59.000	5.600	NA	102000000.0	µg/kg
CC43-026	2083203.368	750156.121	2.5	4.5	Plutonium-239/240	0.132	NA	0.020	50.0	pCi/g
CC43-026	2083203.368	750156.121	4.5	6.5	Acetone	6.000	4.700	NA	102000000.0	µg/kg
CC43-026	2083203.368	750156.121	4.5	6.5	Plutonium-239/240	0.113	NA	0.020	50.0	pCi/g
CC43-027	2083171.440	750134.917	4.5	6.5	Aroclor-1254	2300.000	48.000	NA	12400.0	µg/kg
CC43-027	2083171.440	750134.917	4.5	6.5	Copper	66.000	NA	38.210	40900.0	mg/kg

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Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CC43-027	2083171.440	750134.917	4.5	6.5	Uranium-234	3.487	NA	2.640	300.0	pCi/g
CC43-027	2083171.440	750134.917	4.5	6.5	Uranium-235	0.145	NA	0.120	8.0	pCi/g
CC43-027	2083171.440	750134.917	4.5	6.5	Uranium-238	3.487	NA	1.490	351.0	pCi/g
CC43-028	2083143.356	750112.404	4.5	6.5	Uranium-234	3.420	NA	2.640	300.0	pCi/g
CC43-028	2083143.356	750112.404	4.5	6.5	Uranium-235	0.236	NA	0.120	8.0	pCi/g
CC43-028	2083143.356	750112.404	4.5	6.5	Uranium-238	3.420	NA	1.490	351.0	pCi/g
CC43-029	2083137.752	750147.956	4.5	6.5	Uranium-235	0.146	NA	0.120	8.0	pCi/g
CC44-004	2083227.157	750180.384	0.0	0.5	Aluminum	17000.000	NA	16902.000	228000.0	mg/kg
CC44-004	2083227.157	750180.384	0.0	0.5	Americium-241	0.070	NA	0.023	76.0	pCi/g
CC44-004	2083227.157	750180.384	0.0	0.5	Arroclor-1260	69.000	6.300	NA	12400.0	µg/kg
CC44-004	2083227.157	750180.384	0.0	0.5	Beryllium	1.100	NA	0.966	921.0	mg/kg
CC44-004	2083227.157	750180.384	0.5	2.5	Acetone	12.000	4.900	NA	102000000.0	µg/kg
CC44-004	2083227.157	750180.384	2.5	4.5	Acetone	5.600	4.800	NA	102000000.0	µg/kg
CC44-004	2083227.157	750180.384	2.5	4.5	Naphthalene	1.100	0.890	NA	3090000.0	µg/kg
CC44-004	2083227.157	750180.384	4.5	6.5	Americium-241	0.059	NA	0.020	76.0	pCi/g
CC44-004	2083227.157	750180.384	4.5	6.5	Methylene chloride	2.100	0.970	NA	2530000.0	µg/kg
CC44-005	2083193.675	750193.296	0.0	0.5	Aluminum	18000.000	NA	16902.000	228000.0	mg/kg
CC44-005	2083193.675	750193.296	0.0	0.5	Chromium	20.000	NA	16.990	268.0	mg/kg
CC44-005	2083193.675	750193.296	0.0	0.5	Copper	27.000	NA	18.060	40900.0	mg/kg
CC44-005	2083193.675	750193.296	0.0	0.5	Iron	19000.000	NA	18037.000	307000.0	mg/kg
CC44-005	2083193.675	750193.296	0.0	0.5	Nickel	16.000	NA	14.910	20400.0	mg/kg
CC44-005	2083193.675	750193.296	0.0	0.5	Vanadium	57.000	NA	45.590	7150.0	mg/kg
CC44-005	2083193.675	750193.296	0.5	2.5	Acetone	26.000	4.800	NA	102000000.0	µg/kg
CC44-005	2083193.675	750193.296	0.5	2.5	Methylene chloride	1.800	0.840	NA	2530000.0	µg/kg
CC44-005	2083193.675	750193.296	0.5	2.5	Naphthalene	2.500	0.900	NA	3090000.0	µg/kg
CC44-005	2083193.675	750193.296	0.5	2.5	Tetrachloroethene	3.200	1.000	NA	615000.0	µg/kg
CC44-005	2083193.675	750193.296	2.5	4.5	Acetone	12.000	5.000	NA	102000000.0	µg/kg

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## Draft Data Summary Report for IHSS Group 500-1

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CC44-005	2083193.675	750193.296	2.5	4.5	Tetrachloroethene	3.100	1.100	NA	615000.0	µg/kg
CC44-005	2083193.675	750193.296	4.5	6.5	Acetone	6.200	5.200	NA	102000000.0	µg/kg
CC44-005	2083193.675	750193.296	4.5	6.5	Chromium	79.000	NA	68.270	268.0	mg/kg
CC44-006	2083164.612	750171.782	4.5	5.5	Aroclor-1254	9300.000	130.000	NA	12400.0	µg/kg
<b>CC44-006</b>	<b>2083164.612</b>	<b>750171.782</b>	<b>4.5</b>	<b>5.5</b>	<b>Arsenic</b>	<b>25.900</b>	<b>NA</b>	<b>13.140</b>	<b>22.2</b>	<b>mg/kg</b>
CC44-006	2083164.612	750171.782	4.5	5.5	Barium	1140.000	NA	289.380	26400.0	mg/kg
CC44-006	2083164.612	750171.782	4.5	5.5	Cadmium	9.550	NA	1.700	962.0	mg/kg
CC44-006	2083164.612	750171.782	4.5	5.5	Chromium	104.000	NA	68.270	268.0	mg/kg
CC44-006	2083164.612	750171.782	4.5	5.5	Copper	275.000	NA	38.210	40900.0	mg/kg
CC44-006	2083164.612	750171.782	4.5	5.5	Iron	61500.000	NA	41046.520	307000.0	mg/kg
CC44-006	2083164.612	750171.782	4.5	5.5	Mercury	4.420	NA	1.520	25200.0	mg/kg
CC44-006	2083164.612	750171.782	4.5	5.5	Nickel	92.600	NA	62.210	20400.0	mg/kg
CC44-006	2083164.612	750171.782	4.5	5.5	Uranium-234	4.915	NA	2.640	300.0	pCi/g
CC44-006	2083164.612	750171.782	4.5	5.5	Uranium-235	0.147	NA	0.120	8.0	pCi/g
CC44-006	2083164.612	750171.782	4.5	5.5	Uranium-238	4.915	NA	1.490	351.0	pCi/g
CC44-006	2083164.612	750171.782	4.5	5.5	Vanadium	114.000	NA	88.490	7150.0	mg/kg
CC44-006	2083164.612	750171.782	4.5	5.5	Zinc	503.000	NA	139.100	307000.0	mg/kg
CC44-007	2083188.091	750228.791	0.0	0.5	Aroclor-1260	13.000	6.300	NA	12400.0	µg/kg
CC44-007	2083188.091	750228.791	0.0	0.5	Chromium	17.000	NA	16.990	268.0	mg/kg
CC44-007	2083188.091	750228.791	0.0	0.5	Cobalt	13.000	NA	10.910	1550.0	mg/kg
CC44-007	2083188.091	750228.791	0.0	0.5	Copper	54.000	NA	18.060	40900.0	mg/kg
CC44-007	2083188.091	750228.791	0.0	0.5	Iron	25000.000	NA	18037.000	307000.0	mg/kg
CC44-007	2083188.091	750228.791	0.0	0.5	Manganese	450.000	NA	365.080	3480.0	mg/kg
CC44-007	2083188.091	750228.791	0.0	0.5	Strontium	67.000	NA	48.940	613000.0	mg/kg
CC44-007	2083188.091	750228.791	0.0	0.5	Uranium-234	3.764	NA	2.253	300.0	pCi/g
CC44-007	2083188.091	750228.791	0.0	0.5	Uranium-235	0.187	NA	0.094	8.0	pCi/g
CC44-007	2083188.091	750228.791	0.0	0.5	Uranium-238	3.764	NA	2.000	351.0	pCi/g

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## Draft Data Summary Report for IHSS Group 500-1

Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CC44-007	2083188.091	750228.791	0.0	0.5	Vanadium	73.000	NA	45.590	7150.0	mg/kg
CC44-007	2083188.091	750228.791	1.5	2.5	Uranium-234	3.893	NA	2.640	300.0	pCi/g
CC44-007	2083188.091	750228.791	1.5	2.5	Uranium-235	0.180	NA	0.120	8.0	pCi/g
CC44-007	2083188.091	750228.791	1.5	2.5	Uranium-238	3.893	NA	1.490	351.0	pCi/g
CC44-007	2083188.091	750228.791	2.5	4.5	Uranium-235	0.148	NA	0.120	8.0	pCi/g
CC44-008	2083166.092	750201.680	0.0	0.5	Aroclor-1260	86.000	6.700	NA	12400.0	µg/kg
CC44-008	2083166.092	750201.680	0.0	0.5	Barium	1090.000	NA	141.260	26400.0	mg/kg
CC44-008	2083166.092	750201.680	0.0	0.5	Chromium	38.200	NA	16.990	268.0	mg/kg
CC44-008	2083166.092	750201.680	0.0	0.5	Copper	56.800	NA	18.060	40900.0	mg/kg
CC44-008	2083166.092	750201.680	0.0	0.5	Iron	41300.000	NA	18037.000	307000.0	mg/kg
CC44-008	2083166.092	750201.680	0.0	0.5	Mercury	2.420	NA	0.134	25200.0	mg/kg
CC44-008	2083166.092	750201.680	0.0	0.5	Nickel	59.500	NA	14.910	20400.0	mg/kg
CC44-008	2083166.092	750201.680	0.0	0.5	Strontium	189.000	NA	48.940	613000.0	mg/kg
CC44-008	2083166.092	750201.680	0.0	0.5	Uranium-235	0.142	NA	0.094	8.0	pCi/g
CC44-008	2083166.092	750201.680	0.0	0.5	Vanadium	116.000	NA	45.590	7150.0	mg/kg
CC44-008	2083166.092	750201.680	0.0	0.5	Zinc	145.000	NA	73.760	307000.0	mg/kg
CC44-008	2083166.092	750201.680	0.5	2.5	Copper	38.500	NA	38.210	40900.0	mg/kg
CC44-008	2083166.092	750201.680	0.5	2.5	Strontium	231.000	NA	211.380	613000.0	mg/kg
CC44-008	2083166.092	750201.680	0.5	2.5	Tetrachloroethene	28.200	6.170	NA	615000.0	µg/kg
CC44-008	2083166.092	750201.680	0.5	2.5	Uranium-235	0.173	NA	0.120	8.0	pCi/g
CC44-008	2083166.092	750201.680	2.5	4.5	Copper	51.200	NA	38.210	40900.0	mg/kg
CC44-008	2083166.092	750201.680	2.5	4.5	Mercury	1.560	NA	1.520	25200.0	mg/kg
CC44-008	2083166.092	750201.680	2.5	4.5	Strontium	276.000	NA	211.380	613000.0	mg/kg
CC44-008	2083166.092	750201.680	2.5	4.5	Tetrachloroethene	107.000	9.780	NA	615000.0	µg/kg
CC44-008	2083166.092	750201.680	2.5	4.5	Uranium-234	2.744	NA	2.640	300.0	pCi/g
CC44-008	2083166.092	750201.680	2.5	4.5	Uranium-235	0.290	NA	0.120	8.0	pCi/g
CC44-008	2083166.092	750201.680	2.5	4.5	Uranium-238	2.744	NA	1.490	351.0	pCi/g

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Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CC44-008	2083166.092	750201.680	4.5	6.5	Barium	1050.000	NA	289.380	26400.0	mg/kg
CC44-008	2083166.092	750201.680	4.5	6.5	Copper	69.100	NA	38.210	40900.0	mg/kg
CC44-008	2083166.092	750201.680	4.5	6.5	Mercury	1.880	NA	1.520	25200.0	mg/kg
CC44-008	2083166.092	750201.680	4.5	6.5	Strontium	325.000	NA	211.380	613000.0	mg/kg
CC44-008	2083166.092	750201.680	4.5	6.5	Uranium-235	0.143	NA	0.120	8.0	pCi/g
CC44-009	2083182.507	750264.364	0.0	0.5	Aroclor-1260	8.800	6.400	NA	12400.0	µg/kg
CC44-009	2083182.507	750264.364	0.0	0.5	Copper	19.000	NA	18.060	40900.0	mg/kg
CC44-009	2083182.507	750264.364	0.0	0.5	Uranium-235	0.133	NA	0.094	8.0	pCi/g
CC44-009	2083182.507	750264.364	1.5	2.5	Uranium-238	1.576	NA	1.490	351.0	pCi/g
CC44-009	2083182.507	750264.364	2.5	4.5	Uranium-238	1.581	NA	1.490	351.0	pCi/g
CC44-009	2083182.507	750264.364	4.5	6.5	Uranium-234	4.443	NA	2.640	300.0	pCi/g
CC44-009	2083182.507	750264.364	4.5	6.5	Uranium-235	0.223	NA	0.120	8.0	pCi/g
CC44-009	2083182.507	750264.364	4.5	6.5	Uranium-238	4.443	NA	1.490	351.0	pCi/g
CC44-010	2083154.567	750241.717	0.0	0.5	Aroclor-1260	7.300	6.100	NA	12400.0	µg/kg
CC44-010	2083154.567	750241.717	0.0	0.5	Copper	33.000	NA	18.060	40900.0	mg/kg
CC44-010	2083154.567	750241.717	0.0	0.5	Uranium-234	3.382	NA	2.253	300.0	pCi/g
CC44-010	2083154.567	750241.717	0.0	0.5	Uranium-235	0.195	NA	0.094	8.0	pCi/g
CC44-010	2083154.567	750241.717	0.0	0.5	Uranium-238	3.382	NA	2.000	351.0	pCi/g
CC44-010	2083154.567	750241.717	0.0	0.5	Vanadium	48.000	NA	45.590	7150.0	mg/kg
CC44-010	2083154.567	750241.717	1.5	2.5	Aroclor-1260	27.000	6.700	NA	12400.0	µg/kg
CC44-010	2083154.567	750241.717	1.5	2.5	Uranium-234	4.613	NA	2.640	300.0	pCi/g
CC44-010	2083154.567	750241.717	1.5	2.5	Uranium-235	0.248	NA	0.120	8.0	pCi/g
CC44-010	2083154.567	750241.717	1.5	2.5	Uranium-238	4.613	NA	1.490	351.0	pCi/g
CC44-010	2083154.567	750241.717	3.5	4.5	Uranium-234	3.505	NA	2.640	300.0	pCi/g
CC44-010	2083154.567	750241.717	3.5	4.5	Uranium-235	0.220	NA	0.120	8.0	pCi/g
CC44-010	2083154.567	750241.717	3.5	4.5	Uranium-238	3.505	NA	1.490	351.0	pCi/g
CC44-010	2083154.567	750241.717	5.5	6.5	Aroclor-1260	8.600	6.200	NA	12400.0	µg/kg

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Location	Actual Easting	Actual Northing	Start Depth (ft)	End Depth (ft)	Analyte	Result	RL	Background Mean + 2 Standard Deviations	WRW AL	Unit
CC44-010	2083154.567	750241.717	5.5	6.5	Uranium-235	0.153	NA	0.120	8.0	pCi/g

µg/kg = micrograms per kilogram (usually appears as ug/kg)  
 mg/kg = milligrams per kilogram  
 pCi/g = picocuries per gram  
 NA = not applicable  
**Italic font denotes WRW AL exceedance.**  
*Italic font denotes result derived by calculation based on another analysis.*

**Table 4**  
**IHSS Group 500-1 Surface Soil Summary Statistics**

Analyte	Number Samples Analyzed	Detection Frequency	Average Concentration	Maximum Concentration	Background Mean + 2 Standard Deviations	WRW AL	Unit
Aluminum	40	32.50%	20461.538	28000.000	16902.000	228000	mg/kg
Americium-241	43	4.65%	0.070	0.070	0.023	76	pCi/g
Antimony	42	16.67%	0.709	1.100	0.470	409	mg/kg
Aroclor-1254	37	8.11%	661.000	1700.000	-	12400	µg/kg
Aroclor-1260	37	24.32%	45.456	86.000	-	12400	µg/kg
Arsenic	42	4.76%	17.000	21.000	10.090	22.2	mg/kg
Barium	42	4.76%	1120.000	1150.000	141.260	26400	mg/kg
Beryllium	40	20.00%	1.288	1.700	0.966	921	mg/kg
Cadmium	42	2.38%	36.000	36.000	1.612	962	mg/kg
Chromium	42	28.57%	24.125	38.200	16.990	268	mg/kg
Cobalt	42	9.52%	13.250	14.000	10.910	1550	mg/kg
Copper	42	38.10%	36.550	87.000	18.060	40900	mg/kg
Iron	42	28.57%	25808.333	41300.000	18037.000	307000	mg/kg
Lithium	40	17.50%	12.714	14.000	11.550	20400	mg/kg
Manganese	42	11.90%	442.000	470.000	365.080	3480	mg/kg
Mercury	42	2.38%	2.420	2.420	0.134	25200	mg/kg
Methylene chloride	6	16.67%	1.400	1.400	-	2530000	µg/kg
Naphthalene	6	16.67%	1.200	1.200	-	3090000	µg/kg
Nickel	42	30.95%	24.085	59.500	14.910	20400	mg/kg
Plutonium-239/240	44	2.27%	0.211	0.211	0.066	50	pCi/g
Strontium	42	14.29%	124.333	267.000	48.940	613000	mg/kg
Tetrachloroethene	6	16.67%	3.500	3.500	-	615000	µg/kg
Tin	42	2.38%	11.500	11.500	2.900	613000	mg/kg
Uranium-234	44	34.09%	3.786	4.626	2.253	300	pCi/g
Uranium-235	44	52.27%	0.193	0.279	0.094	8	pCi/g
Uranium-238	44	38.64%	3.594	4.626	2.000	351	pCi/g
Vanadium	42	28.57%	67.750	116.000	45.590	7150	mg/kg
Zinc	42	19.05%	291.500	1300.000	73.760	307000	mg/kg

**Table 5**  
**IHSS Group 500-1 Subsurface Soil Summary Statistics**

Analyte	Number Samples Analyzed	Detection Frequency	Mean Concentration	Maximum Concentration	Background Mean + 2 Standard Deviations	WRW AL	Unit
1,2,4-Trichlorobenzene	374	0.53%	0.800	0.840	NA	9230000	µg/kg
2-Butanone	374	1.07%	14.725	29.000	NA	192000000	µg/kg
Acetone	374	6.15%	30.630	140.000	NA	102000000	µg/kg
Aluminum	183	0.55%	42000.000	42000.000	35373.170	228000	mg/kg
Americium-241	204	0.98%	0.073	0.087	0.020	76	pCi/g
Aroclor-1016	155	0.65%	8.900	8.900	NA	46400	µg/kg
Aroclor-1254	155	7.10%	1212.909	9300.000	NA	12400	µg/kg
Aroclor-1260	155	5.16%	20.988	51.000	NA	12400	µg/kg
Arsenic	200	2.50%	17.720	25.900	13.140	22.2	mg/kg
Barium	200	9.00%	914.722	1300.000	289.380	26400	mg/kg
Cadmium	200	1.00%	6.125	9.550	1.700	962	mg/kg
Carbon Tetrachloride	374	0.27%	3.000	3.000	NA	81500	µg/kg
Chromium	200	1.00%	91.500	104.000	68.270	268	mg/kg
Copper	200	4.50%	80.756	275.000	38.210	40900	mg/kg
Iron	200	1.50%	47933.333	61500.000	41046.520	307000	mg/kg
Lead	200	1.00%	26.000	27.000	24.970	1000	mg/kg
Manganese	200	1.50%	1446.667	2200.000	901.620	3480	mg/kg
Mercury	198	1.52%	2.620	4.420	1.520	25200	mg/kg
Methylene chloride	374	3.48%	2.108	3.300	NA	2530000	µg/kg
Naphthalene	374	2.94%	2.206	7.200	NA	3090000	µg/kg
Nickel	200	0.50%	92.600	92.600	62.210	20400	mg/kg
Plutonium-239/240	204	2.94%	0.172	0.446	0.020	50	pCi/g
Strontium	200	3.00%	247.333	325.000	211.380	613000	mg/kg
Styrene	374	0.53%	22.500	25.700	NA	123000000	µg/kg
Tetrachloroethene	374	4.55%	10.295	107.000	NA	615000	µg/kg
Toluene	374	1.07%	9.528	26.300	NA	31300000	µg/kg
Trichloroethene	374	0.27%	8.460	8.460	NA	19600	µg/kg
Uranium, Total	161	0.62%	9.900	9.900	3.040	2750	mg/kg

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Analyte	Number Samples Analyzed	Detection Frequency	Mean Concentration	Maximum Concentration	Background Mean + 2 Standard Deviations	WRW AL	Unit
Uranium-234	204	30.39%	4.099	5.981	2.640	300	pCi/g
Uranium-235	204	44.61%	0.195	0.361	0.120	8	pCi/g
Uranium-238	204	43.63%	3.429	5.981	1.490	351	pCi/g
Vanadium	200	3.50%	97.514	114.000	88.490	7150	mg/kg
Xylene	374	0.80%	20.533	24.400	NA	2040000	µg/kg
Zinc	200	1.00%	1151.500	1800.000	139.100	307000	mg/kg

### 2.3 Sum of Ratios

RFCA sums of ratios (SORs) were calculated for the IHSS Group 500-1 sampling locations based on the accelerated action analytical data for the contaminants of concern (COCs). Radionuclide SOR calculations included americium-241, plutonium-239/240, uranium-234, uranium-235, and uranium-238 when analyses were greater than background means plus 2 SDs. Plutonium-239/240 activities were derived from americium-241 activities (that is, plutonium-239/240 activity = americium-241 gamma spectroscopy activity x 5.7) where HPGe detection was used for analysis. Table 6 presents the radionuclide SORs. All SORs for radionuclides in surface (0-3 feet) soil were less than 1.

**Table 6**  
**RFCA Radionuclide Soil SORs**

Location	Start Depth (ft)	End Depth (ft)	SOR
BY43-004	0.0	0.5	0.061
BY44-000	0.0	0.5	0.001
BY44-001	0.0	0.5	0.044
BY44-002	0.0	0.5	0.025
CA44-003	0.0	0.5	0.049
CA44-004	0.0	0.5	0.026
CA44-005	0.0	0.5	0.055
CA44-006	0.0	0.5	0.017
CB43-035	0.0	0.5	0.002
CB44-004	0.0	0.5	0.032
CB44-007	0.0	0.5	0.059
CB44-009	0.0	0.5	0.060
CB44-010	0.0	0.5	0.021
CB44-011	0.0	0.5	0.060
CB44-012	0.0	0.5	0.042
CB44-014	0.0	0.5	0.013
CB44-015	0.0	0.5	0.049
CB44-018	0.0	0.5	0.020
CC43-009	0.0	0.5	0.033
CC43-014	0.0	0.5	0.056
CC43-018	0.0	0.5	0.014
CC43-022	0.0	0.5	0.056
CC44-004	0.0	0.5	0.001
CC44-007	0.0	0.5	0.047
CC44-008	0.0	0.5	0.018
CC44-009	0.0	0.5	0.017
CC44-010	0.0	0.5	0.045
CA44-002	0.5	2.5	0.001
CA44-003	0.5	2.5	0.047

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Location	Start Depth (ft)	End Depth (ft)	SOR
CA44-004	0.5	2.5	0.019
CA44-006	0.5	2.5	0.064
CB44-004	0.5	2.5	0.005
CB44-007	0.5	2.5	0.023
CB44-009	0.5	2.5	0.048
CB44-010	0.5	2.5	0.016
CB44-011	0.5	2.5	0.044
CB44-012	0.5	2.5	0.050
CB44-013	0.5	2.5	0.001
CB44-014	0.5	2.5	0.007
CB44-015	0.5	2.5	0.049
CB44-018	0.5	2.5	0.023
CC43-013	0.5	2.5	0.051
CC43-014	0.5	2.5	0.058
CC43-022	0.5	2.5	0.056
CC43-026	0.5	2.5	0.001
CC44-008	0.5	2.5	0.022
CC44-007	1.5	2.5	0.047
CC44-009	1.5	2.5	0.004
CC44-010	1.5	2.5	0.060

Surface soil SORs for non-radionuclide COCs are shown in Table 7. Non-radionuclide SORs were calculated for all locations with analytical results greater than 10 percent of the WRW ALs. Aluminum, arsenic, iron, manganese, and polyaromatic hydrocarbons were not included in the non-radionuclide SORs. All non-radionuclide SORs for surface soil were less than 1.

**Table 7**  
**RFCA Non-Radionuclide Surface Soil SORs**

Location Code	SOR
CA44-004	0.124
CB43-034	0.253
CB44-007	0.104
CC44-008	0.143

### 3.0 RCRA UNIT CLOSURE

Valve Vaults 11, 12, and 13 are part of the New Process Waste Line (NPWL) system which is a RCRA Unit. These valve vaults and NPWL are being closed under RCRA Closure Decision Documents

### 4.0 SUBSURFACE SOIL RISK SCREEN

The Subsurface Soil Risk Screen (SSRS) follows the steps identified on Figure 3 in Attachment 5 of RFCA (DOE et al. 2003):

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**Screen 1** – Are the COC concentrations below RFCA Table 3 ALs for the WRW?

No. As shown in Table 3 of this document, COC concentrations are below the WRW ALs except for one subsurface arsenic concentration. The elevated concentration (at Sampling Location CC44-006) was 25.9 mg/kg, and the WRW AL is 22.2 mg/kg.

**Screen 2** – Is there a potential for subsurface soil to become surface soil (landslides and erosion areas identified on Figure 1 of the proposed RFCA Modification)?

No. IHSS Group 500-1 is not located in an area susceptible to landslides or high erosion based on RFCA Modification Attachment 5, Figure 1 (DOE et al. 2003).

**Screen 3** – Does subsurface soil contamination for radionuclides exceed criteria defined in RFCA Modification Section 5.3 and Attachment 14?

No. As shown in Table 3 of this document, radionuclide concentrations are below soil WRW ALs.

**Screen 4** - Is there an environmental pathway and sufficient quantity of COCs that would cause an exceedance of surface water standards?

No. Contaminant migration via erosion and groundwater are two possible pathways whereby surface water could become contaminated from IHSS Group 500-1. As stated in Screen 2 above, IHSS Group 500-1 is not located in an area likely to be eroded.

Run-off from IHSS Group 500-1 flows to both North Walnut Creek and South Walnut Creek, via RFCA Surface Water Points of Evaluation (POEs) SW093 and GS010, respectively (DOE 2003c). Both POEs receive runoff from a large part of the IA. Monitoring results indicate that plutonium-239/240 and americium-241 loadings at SW093 have increased recently, apparently related to increased erosion occurring within the upstream project areas (personal communication, Robert Nininger to Gerard Kelly, July 17, 2004). The increased total suspended solids in the surface water have resulted in reportable concentrations of actinides at SW093 (June 15, 2004, presentation to RFCA Coordinators, updated with available data on June 29, 2004). Elevated activities of plutonium-239/240 and americium-241 also have been detected at GS-10. Evaluations of potential sources of contamination detected in surface water sampled at SW093 and GS-10 have been conducted and will continue under the ER and Integrated Monitoring Programs. However, because actinide activities in the surface soil within IHSS Group 500-1 are very low, it is unlikely that the IHSS Group is a significant source of surface water contamination.

Two groundwater monitoring wells are located within IHSS Group 500-1: P114589 and P114789 (Figure 2). These are not POE or Point of Compliance (POC) wells. Data in the RFETS SWD indicate that all contaminant concentrations in both wells were below the RFCA Tier I groundwater ALs. Contaminant concentrations in Well P114589 were also below Tier II groundwater ALs. Well P114789 had tetrachloroethene concentrations greater than the Tier II AL in samples collected in November 1993, August 1994, November 1994, January 1995, and June 2003.

The groundwater contamination at the IHSS Group 500-1 area is considered part of the IA Plume. The Site plume location map (DOE 2003d) indicates that the VOC plume underlies this IHSS Group. This plume is much larger than the IHSS Group and probably is attributable to multiple sources within the IA, including perhaps IHSS Group 500-1. Further groundwater evaluation will be conducted as part of the groundwater Interim Measure/Interim Remedial Action (IM/IRA).

Residual COC concentrations in the subsurface at IHSS Group 500-1 are present in concentrations greater than background means plus two standard deviations or reporting limits and, in one case, greater than WRW ALs. While these concentrations could impact surface water, the lack of a viable pathway makes this unlikely for the following reasons:

- IHSS Group 500-1 is not in an area susceptible to erosion in accordance with RFCA Attachment 5, Figure 1.
- Transuranics and metals are relatively immobile in groundwater and there are no groundwater plumes as a result of these contaminants.
- Results for organics in soil were generally very low.
- Potential groundwater to surface water transport is evaluated in the groundwater IM/IRA.

## **5.0 NO FURTHER ACCELERATED ACTION SUMMARY**

Based on analytical results and the SSRS, action is not required, and an NFAA determination is justified for IHSS Group 500-1 because of the following:

- Contaminant concentrations were below WRW ALs, with the exception of one subsurface arsenic concentration. The elevated concentration was 25.9 mg/kg, and the WRW AL is 22.2 mg/kg.
- Migration of contaminants to surface water through erosion is unlikely because IHSS Group 500-1 is not in an area prone to landslides or erosion.
- Migration of contaminants in groundwater will not likely impact surface water because of the low levels of soil contamination encountered in IHSS Group 500-1. The groundwater is considered part of the IA Plume, which will be further evaluated in the groundwater IM/IRA decision document.

Approval of this Data Summary Report constitutes regulatory agency concurrence that this IHSS Group is an NFAA Site. This information and the NFAA determination will be documented in the FY04 HRR. Ecological factors will be evaluated in the AAESE process and the CRA.

## **6.0 DATA QUALITY ASSESSMENT**

All project data quality objectives (DQOs) were achieved based on the following:

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- Regulatory agency-approved sampling program design (IASAP Addendum #IA-03-17 [DOE 2003a]), modified, because of field conditions, in accordance with the IASAP (DOE 2001);
- Collection of samples in accordance with the sampling design or concurrence by regulatory agencies with modifications to the sampling plan; and
- Results of the Data Quality Assessment (DQA), as described in the following sections.

### **6.1 Data Quality Assessment Process**

The DQA process ensures that the type, quantity, and quality of environmental data used in decision making are defensible, and is based on the following guidance and requirements:

- EPA, 1994a, Guidance for the Data Quality Objective Process, QA/G-4;
- EPA, 1998, Guidance for the Data Quality Assessment Process, Practical Methods for Data Analysis, QA/G-9; and
- U.S. Department of Energy (DOE), 1999, Quality Assurance, Order 414.1A.

Verification and validation (V&V) of data are the primary components of the DQA. The final data are compared with original project DQOs and evaluated with respect to project decisions; uncertainty within the decisions; and quality criteria required for the data, specifically precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS). Validation criteria are consistent with the following RFETS-specific documents and industry guidelines:

- EPA, 1994b, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 540/R-94/012;
- EPA, 1994c, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 540/R-94/013;
- Kaiser-Hill Company, L.L.C. (K-H) V&V Guidelines:
  - General Guidelines for Data Verification and Validation, DA-GR01-v2, 2002a
  - V&V Guidelines for Isotopic Determinations by Alpha Spectrometry, DA-RC01-v2, 2002b
  - V&V Guidelines for Volatile Organics, DA-SS01-v3, 2002c
  - V&V Guidelines for Semivolatile Organics, DA-SS02-v3, 2002d
  - V&V Guidelines for Metals, DA-SS05-v3, 2002e; and

- Lockheed-Martin, 1997, Evaluation of Radiochemical Data Usability, ES/ER/MS-5.

This report will be submitted to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Administrative Record for permanent storage 30 days after being provided to CDPHE and/or EPA.

## **6.2 Verification and Validation of Results**

Verification ensures that data produced and used by the project are documented and traceable in accordance with quality requirements. Validation consists of a technical review of all data that directly support the project decisions so that any limitations of the data relative to project goals are delineated and the associated data are qualified accordingly. The V&V process defines the criteria that constitute data quality, namely PARCCS parameters. Data traceability and archival are also addressed. V&V criteria include the following:

- Chain-of-custody;
- Preservation and hold times;
- Instrument calibrations;
- Preparation blanks;
- Interference check samples (metals);
- Matrix spikes/matrix spike duplicates (MS/MSDs);
- Laboratory control samples (LCSs);
- Field duplicate measurements;
- Chemical yield (radiochemistry);
- Required quantitation limits/minimum detectable activities (sensitivity of chemical and radiochemical measurements, respectively); and
- Sample analysis and preparation methods.

Evaluation of V&V criteria ensures that PARCCS parameters are satisfactory (that is, within tolerances acceptable to the project). Satisfactory V&V of laboratory quality controls are captured through application of validation “flags” or qualifiers to individual records.

Raw, hard-copy data (for example, individual analytical data packages) are currently filed by report identification number and maintained by K-H Analytical Services Division; older hard copies may reside in the Federal Center in Lakewood, Colorado. Electronic data are stored in the RFETS Soil Water Database.

Both real and QC IHSS Group 500-1 data are included on the enclosed CD in Microsoft Access 2000 format.

### 6.2.1 Accuracy

The following measures of accuracy were evaluated:

- LCSs;
- Surrogates;
- Field blanks; and
- Sample MSs.

Results are compared to method requirements and project goals. The results of these comparisons are summarized for RFCA COCs where the results could impact project decisions. Particular attention is paid to those values near ALs when QC results could indicate unacceptable levels of uncertainty for decision-making purposes.

#### *Laboratory Control Sample Evaluation*

The frequency of LCS measurements is presented in Table 8. As indicated in Table 8 LCS analyses were run for offsite alpha spectrometry, SW-846 6010 (metals), SW-846 8082 (PCBs), SW-846 8260 (VOCs), and SW9056 or E300.0 (nitrate/nitrite). The onsite laboratories are not required to provide data for LCS analyses.

**Table 8  
LCS Summary**

Test Method	Lab Batch	Laboratory Control Standards
Alpha Spectrometry	4103423	Yes
Alpha Spectrometry	4103431	Yes
Alpha Spectrometry	4103439	Yes
Alpha Spectrometry	4110202	Yes
Alpha Spectrometry	4110205	Yes
Alpha Spectrometry	4110208	Yes
Alpha Spectrometry	4111247	Yes
Alpha Spectrometry	4111253	Yes
Alpha Spectrometry	4111262	Yes
Alpha Spectrometry	4111351	Yes
Alpha Spectrometry	4111357	Yes
Alpha Spectrometry	4111361	Yes
Alpha Spectrometry	4112518	Yes
Alpha Spectrometry	4112520	Yes
Alpha Spectrometry	4112521	Yes
Alpha Spectrometry	4121231	Yes
Alpha Spectrometry	4121241	Yes

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Test Method	Lab Batch	Laboratory Control Standards
Alpha Spectrometry	4121245	Yes
Alpha Spectrometry	4132110	Yes
Alpha Spectrometry	4132114	Yes
Alpha Spectrometry	4132116	Yes
Alpha Spectrometry	4135104	Yes
Alpha Spectrometry	4135107	Yes
Alpha Spectrometry	4135110	Yes
Alpha Spectrometry	4139234	Yes
Alpha Spectrometry	4139239	Yes
Alpha Spectrometry	4139242	Yes
Alpha Spectrometry	4140177	Yes
Alpha Spectrometry	4140180	Yes
Alpha Spectrometry	4140182	Yes
Alpha Spectrometry	4140363	Yes
Alpha Spectrometry	4140366	Yes
Alpha Spectrometry	4140368	Yes
Alpha Spectrometry	4141496	Yes
Alpha Spectrometry	4145214	Yes
Alpha Spectrometry	4145219	Yes
Alpha Spectrometry	4145222	Yes
Alpha Spectrometry	4145236	Yes
Alpha Spectrometry	4145242	Yes
Alpha Spectrometry	4149318	Yes
Alpha Spectrometry	4149322	Yes
Alpha Spectrometry	4149326	Yes
Alpha Spectrometry	4156483	Yes
Alpha Spectrometry	4156492	Yes
Alpha Spectrometry	4156496	Yes
Alpha Spectrometry	4160453	Yes
Alpha Spectrometry	4160456	Yes
Alpha Spectrometry	4160458	Yes
Alpha Spectrometry	4167250	Yes
Alpha Spectrometry	4167252	Yes
Alpha Spectrometry	4167258	Yes
Alpha Spectrometry	4211368	Yes
Alpha Spectrometry	4211370	Yes
Alpha Spectrometry	4211371	Yes
Alpha Spectrometry	4219331	Yes
Alpha Spectrometry	4219344	Yes
Alpha Spectrometry	4219356	Yes
SW-846 6010	3324287	Yes
SW-846 6010	3324288	Yes
SW-846 6010	3324564	Yes
SW-846 6010	3324567	Yes

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Test Method	Lab Batch	Laboratory Control Standards
SW-846 6010	3329237	Yes
SW-846 6010	3329252	Yes
SW-846 6010	4086575	Yes
SW-846 6010	4089399	Yes
SW-846 6010	4089634	Yes
SW-846 6010	4090257	Yes
SW-846 6010	4091617	Yes
SW-846 6010	4092267	Yes
SW-846 6010	4097592	Yes
SW-846 6010	4098229	Yes
SW-846 6010	4099578	Yes
SW-846 6010	4100237	Yes
SW-846 6010	4100462	Yes
SW-846 6010	4103225	Yes
SW-846 6010	4104163	Yes
SW-846 6010	4104248	Yes
SW-846 6010	4104498	Yes
SW-846 6010	4105261	Yes
SW-846 6010	4105563	Yes
SW-846 6010	4107218	Yes
SW-846 6010	4113416	Yes
SW-846 6010	4113438	Yes
SW-846 6010	4114444	Yes
SW-846 6010	4114449	Yes
SW-846 6010	4118156	Yes
SW-846 6010	4119276	Yes
SW-846 6010	4119291	Yes
SW-846 6010	4119306	Yes
SW-846 6010	4119307	Yes
SW-846 6010	4119309	Yes
SW-846 6010	4119316	Yes
SW-846 6010	4120557	Yes
SW-846 6010	4121379	Yes
SW-846 6010	4126508	Yes
SW-846 6010	4127489	Yes
SW-846 6010	4127627	Yes
SW-846 6010	4128339	Yes
SW-846 6010	4132388	Yes
SW-846 6010	4132651	Yes
SW-846 6010	4133128	Yes
SW-846 6010	4133129	Yes
SW-846 6010	4133519	Yes
SW-846 6010	4134414	Yes
SW-846 6010	4134558	Yes

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Test Method	Lab Batch	Laboratory Control Standards
SW-846 6010	4135460	Yes
SW-846 6010	4138165	Yes
SW-846 6010	4139260	Yes
SW-846 6010	4139435	Yes
SW-846 6010	4146578	Yes
SW-846 6010	4148181	Yes
SW-846 6010	4153599	Yes
SW-846 6010	4154547	Yes
SW-846 6010	4155256	Yes
SW-846 6010	4155259	Yes
SW-846 6010	4169554	Yes
SW-846 6010	4170201	Yes
SW-846 6010	4174238	Yes
SW-846 6010	4174241	Yes
SW-846 6010	4174299	Yes
SW-846 6010	4174302	Yes
SW-846 6010	4210685	Yes
SW-846 6010	4210686	Yes
SW-846 6010	4213081	Yes
SW-846 6010	4215253	Yes
SW-846 6010	4217180	Yes
SW-846 6010	4217533	Yes
SW-846 6010	4220111	Yes
SW-846 6010	4220116	Yes
SW-846 8082	3316173	Yes
SW-846 8082	3316349	Yes
SW-846 8082	3325284	Yes
SW-846 8082	3329159	Yes
SW-846 8082	4087188	Yes
SW-846 8082	4089641	Yes
SW-846 8082	4091577	Yes
SW-846 8082	4097617	Yes
SW-846 8082	4100223	Yes
SW-846 8082	4100428	Yes
SW-846 8082	4103697	Yes
SW-846 8082	4104494	Yes
SW-846 8082	4105525	Yes
SW-846 8082	4107424	Yes
SW-846 8082	4114590	Yes
SW-846 8082	4114653	Yes
SW-846 8082	4125534	Yes
SW-846 8082	4127611	Yes
SW-846 8082	4131666	Yes
SW-846 8082	4132649	Yes

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Test Method	Lab Batch	Laboratory Control Standards
SW-846 8082	4133500	Yes
SW-846 8082	4134521	Yes
SW-846 8082	4135461	Yes
SW-846 8082	4146593	Yes
SW-846 8082	4153605	Yes
SW-846 8082	4155346	Yes
SW-846 8082	4173465	Yes
SW-846 8260	4090409	Yes
SW-846 8260	4103407	Yes
SW-846 8260	4106271	Yes
SW-846 8260	4110363	Yes
SW-846 8260	4116262	Yes
SW-846 8260	4126369	Yes
SW-846 8260	4131363	Yes
SW-846 8260	4133423	Yes
SW-846 8260	4134417	Yes
SW-846 8260	4135427	Yes
SW-846 8260	4138208	Yes
SW-846 8260	4140566	Yes
SW-846 8260	4141445	Yes
SW-846 8260	4143045	Yes
SW-846 8260	4147187	Yes
SW-846 8260	4148260	Yes
SW-846 8260	4155145	Yes
SW-846 8260	4156380	Yes
SW-846 8260	4210697	Yes
SW-846 8260	MS1 VOA 040324A	Yes
SW-846 8260	MS1 VOA 040325B	Yes
SW-846 8260	MS1 VOA 040405A	Yes
SW-846 8260	MS1 VOA 040407A	Yes
SW-846 8260	MS1 VOA 040412A	Yes
SW-846 8260	MS1 VOA 040415A	Yes
SW-846 8260	MS1 VOA 040510A	Yes
SW-846 8260	MS1 VOA 040512A	Yes
SW-846 8260	MS1 VOA 040513A	Yes
SW-846 8260	MS1 VOA 040517A	Yes
SW-846 8260	MS1 VOA 040518A	Yes
SW-846 8260	MS1 VOA 040519A	Yes
SW-846 8260	MS1 VOA 040608A	Yes
SW-846 8260	MS1 VOA 040616A	Yes
SW-846 8260	MS2 VOA 031104A	Yes
SW-846 8260	MS2 VOA 031119A	Yes
SW-846 8260	MS2 VOA 031119B	Yes
SW-846 8260	MS2 VOA 031120A	Yes

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Test Method	Lab Batch	Laboratory Control Standards
SW-846 8260	MS2 VOA 040324A	Yes
SW-846 8260	MS2 VOA 040413A	Yes
SW-846 8260	MS2 VOA 040415A	Yes
SW-846 8260	MS2 VOA 040504A	Yes
SW-846 8260	MS2 VOA 040505B	Yes
SW-846 8260	MS2 VOA 040506A	Yes
SW-846 8260	MS2 VOA 040507A	Yes
SW-846 8260	MS2 VOA 040510B	Yes
SW-846 8260	MS2 VOA 040511A	Yes
SW-846 8260	MS2 VOA 040512A	Yes
SW-846 8260	MS2 VOA 040513A	Yes
SW-846 8260	MS2 VOA 040518A	Yes
SW-846 8260	MS2 VOA 040519A	Yes
SW-846 8260	MS2 VOA 040520A	Yes
SW-846 8260	MS2 VOA 040524A	Yes
SW-846 8260	MS2 VOA 040608A	Yes
SW-846 8260	MS2 VOA 040722A	Yes
SW-846 8260	MS3 VOA 031031A	Yes
SW-846 8260	MS3 VOA 031104A	Yes
SW-846 8260	MS3 VOA 040323A	Yes
SW-846 8260	MS3 VOA 040401A	Yes
SW-846 8260	MS3 VOA 040406A	Yes
SW-846 8260	MS3 VOA 040408A	Yes
SW-846 8260	MS3 VOA 040419A	Yes
SW-846 8260	MS3 VOA 040429A	Yes
SW-846 8260	MS3 VOA 040507A	Yes
SW-846 8260	MS3 VOA 040510A	Yes
SW-846 8260	MS3 VOA 040510B	Yes
SW-846 8260	MS3 VOA 040511A	Yes
SW-846 8260	MS3 VOA 040518A	Yes
SW-846 8260	MS3 VOA 040518B	Yes
SW-846 8260	MS3 VOA 040519A	Yes
SW-846 8260	MS3 VOA 040520A	Yes
SW-846 8260	MS3 VOA 040520B	Yes
SW-846 8260	MS3 VOA 040524A	Yes
SW-846 8260	MS3 VOA 040525B	Yes
SW-846 8260	MS3 VOA 040526B	Yes
SW9056 OR E300.0 PREP E300.0	4219389	Yes
SW9056 OR E300.0 PREP E300.0	4219390	Yes

Minimum and maximum LCS results are tabulated by chemical for the entire project in Table 9. LCS results that were outside of tolerances were reviewed to determine whether a potential bias might be indicated. LCS recoveries are not indicative of matrix effects

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because they are not prepared using Site samples. LCS results do indicate whether the laboratory may be introducing a bias in the results. Recoveries reported above the upper limit may indicate the actual sample results are less than reported. Because this is environmentally conservative, no further action is needed.

**Table 9**  
**LCS Evaluation Summary**

Test Method	CAS	Analyte	Minimum Result	Maximum Result	Unit
SW-846 6010	7429-90-5	Aluminum	84	107	%REC
SW-846 6010	7440-36-0	Antimony	86	100	%REC
SW-846 6010	7440-38-2	Arsenic	85	102	%REC
SW-846 6010	7440-39-3	Barium	93	106	%REC
SW-846 6010	7440-41-7	Beryllium	94	107	%REC
SW-846 6010	7440-43-9	Cadmium	83	106	%REC
SW-846 6010	7440-47-3	Chromium	86	104	%REC
SW-846 6010	7440-48-4	Cobalt	85	105	%REC
SW-846 6010	7440-50-8	Copper	86	105	%REC
SW-846 6010	7439-89-6	Iron	93	111	%REC
SW-846 6010	7439-92-1	Lead	87	105	%REC
SW-846 6010	7439-93-2	Lithium	87	107	%REC
SW-846 6010	7439-96-5	Manganese	89	104	%REC
SW-846 6010	7439-97-6	Mercury	94	108	%REC
SW-846 6010	7439-98-7	Molybdenum	86	106	%REC
SW-846 6010	7440-02-0	Nickel	87	105	%REC
SW-846 6010	7782-49-2	Selenium	85	105	%REC
SW-846 6010	7440-22-4	Silver	89	104	%REC
SW-846 6010	7440-24-6	Strontium	91	105	%REC
SW-846 6010	7440-31-5	Tin	84	107	%REC
SW-846 6010	11-09-6	Uranium, Total	90	107	%REC
SW-846 6010	7440-62-2	Vanadium	88	103	%REC
SW-846 6010	7440-66-6	Zinc	86	109	%REC
SW-846 8082	11096-82-5	Aroclor-1260	72	116	%REC
SW-846 8082	12674-11-2	Aroclor-1016	64	110	%REC
SW-846 8260	71-55-6	1,1,1-Trichloroethane	75	133.4	%REC
SW-846 8260	79-34-5	1,1,2,2-Tetrachloroethane	78.39	125.9	%REC
SW-846 8260	79-00-5	1,1,2-Trichloroethane	81.1	114.9	%REC
SW-846 8260	75-34-3	1,1-Dichloroethane	79.71	122.1	%REC
SW-846 8260	75-35-4	1,1-Dichloroethene	86	134.7	%REC
SW-846 8260	120-82-1	1,2,4-Trichlorobenzene	80.45	132	%REC
SW-846 8260	95-50-1	1,2-Dichlorobenzene	80.58	119.7	%REC
SW-846 8260	107-06-2	1,2-Dichloroethane	78	131.6	%REC
SW-846 8260	78-87-5	1,2-Dichloropropane	80.55	129.4	%REC
SW-846 8260	106-46-7	1,4-Dichlorobenzene	79.71	118.8	%REC
SW-846 8260	78-93-3	2-Butanone	42.88	113.3	%REC
SW-846 8260	108-10-1	4-Methyl-2-pentanone	67.04	117.4	%REC

Test Method	CAS	Analyte	Minimum Result	Maximum Result	Unit
SW-846 8260	67-64-1	Acetone	28.54	129.3	%REC
SW-846 8260	71-43-2	Benzene	88.84	131.4	%REC
SW-846 8260	75-27-4	Bromodichloromethane	81	133	%REC
SW-846 8260	75-25-2	Bromoform	75.24	105	%REC
SW-846 8260	74-83-9	Bromomethane	63.85	171.1	%REC
SW-846 8260	75-15-0	Carbon Disulfide	57	170.8	%REC
SW-846 8260	56-23-5	Carbon Tetrachloride	72	136.4	%REC
SW-846 8260	108-90-7	Chlorobenzene	84.47	115.4	%REC
SW-846 8260	75-00-3	Chloroethane	72	207.6	%REC
SW-846 8260	67-66-3	Chloroform	83	129.7	%REC
SW-846 8260	74-87-3	Chloromethane	65	342.9	%REC
SW-846 8260	10061-01-5	cis-1,3-Dichloropropene	86.96	138.4	%REC
SW-846 8260	124-48-1	Dibromochloromethane	81	111.6	%REC
SW-846 8260	100-41-4	Ethylbenzene	84.72	118.7	%REC
SW-846 8260	87-68-3	Hexachlorobutadiene	73	138.4	%REC
SW-846 8260	75-09-2	Methylene chloride	72.53	151.9	%REC
SW-846 8260	91-20-3	Naphthalene	79	124.7	%REC
SW-846 8260	100-42-5	Styrene	84.23	117.2	%REC
SW-846 8260	127-18-4	Tetrachloroethene	82.81	118	%REC
SW-846 8260	108-88-3	Toluene	85.19	134.6	%REC
SW-846 8260	10061-02-6	trans-1,3-Dichloropropene	84	121.7	%REC
SW-846 8260	79-01-6	Trichloroethene	81.02	140.2	%REC
SW-846 8260	75-01-4	Vinyl chloride	72	224.4	%REC
SW-846 8260	1330-20-7	Xylene	84.27	118.2	%REC
SW9056 OR E300.0 PREP E300.0	14797-55-8	Nitrate	93	93	%REC
SW9056 OR E300.0 PREP E300.0	14797-65-0	Nitrite	95	96	%REC

Analytes with unacceptable low recoveries were evaluated in the following manner. If the maximum sample result divided by the lowest LCS recovery for that analyte is less than the WRW AL, no further action is taken because any indicated bias is not great enough to correct a false low result to one above the AL. Using this evaluation method except for one arsenic result from offsite SW846 6010 analyses, all metal, PCB, VOC, and nitrate/nitrite LCS recoveries for IHSS Group 500-1 passed the criterion, and therefore, did not impact project decisions.

One arsenic result of 20 mg/kg (SW846 6010, CC43-003, 0.5-2.5 ft) when compared to the arsenic minimum percent recovery of 85% shown in Table 9 failed the criterion. However, further evaluation of arsenic LCS recoveries indicates the 20 mg/kg result was associated with an LCS recovery of 97% for the laboratory batch which would pass the evaluation above. Additionally, all results associated with minimum LCS recoveries of 85% and 86% are less than 10 mg/kg which would also pass the evaluation above. This evaluation indicates that the SW-846 6010 minimum arsenic LCS percent recovery did

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not affect project decisions. And furthermore, decisions to remediate are not only based on to the AL comparison but also on the results of the SSRS.

Any qualifications of individual results because of LCS performance exceeding upper or lower tolerance limits are also captured in the V&V flags, described in Section 6.2.3.

### ***Surrogate Evaluation***

The frequency of surrogate measurements, relative to each laboratory batch, is given in Table 10. Surrogate frequency was adequate based on at least one set per sample. The minimum and maximum surrogate results are also tabulated, by chemical, for the entire project. Surrogates are added to every VOC sample, and, therefore, surrogate recoveries only impact individual samples. Unacceptable surrogate recoveries can indicate potential matrix effects. Surrogate recoveries reported above 100 percent may indicate the actual sample results are less than reported. Because this is environmentally conservative, no further action is needed. Therefore, only the lowest recoveries were evaluated. If the maximum sample result divided by the lowest surrogate recovery is less than the WRW AL for that analyte, no further action is taken because any indicated bias is not great enough to correct a false low sample result to one above the AL. All VOC analytes passed this criterion. Therefore, surrogate recoveries did not impact project decisions with respect to IHSS Group 500-1.

**Table 10**  
**Surrogate Recovery Summary**

<b>Volatile Organic Compounds</b>					
<b>Surrogate Frequency</b>	<b>CAS No.</b>	<b>Analyte</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Unit</b>
380	460-00-4	4-Bromofluorobenzene	78.82	165.4	%REC
380	17060-07-0	Deuterated 1,2-dichloroethane	76	130.4	%REC
380	2037-26-5	Deuterated Toluene	84.53	124.9	%REC

### ***Field Blank Evaluation***

Results of the field blank analyses are provided in Table 11. Detectable (non-"U" laboratory qualified) amounts of contaminants within the blanks, which could indicate possible cross-contamination of samples, are evaluated if the same contaminant is detected in the associated real samples. Evaluation consists of multiplying the field blank results by 10 (for laboratory contaminants) or by 5 (for non-laboratory contaminants) and comparing them to the WRW ALs. In this case to be conservative the factor used is 10 in all cases. When the corrected field blank result is less than the WRW AL the associated real results are considered acceptable. In the IHSS Group 500-1 data none of the field blank results multiplied by 10 exceeded their WRW ALs. Therefore, blank contamination did not adversely impact project decisions.

**Table 11  
Field Blank Summary**

Sample QC Code	Laboratory	CAS	Analyte	Detected Result	Unit
EB	URS	75-27-4	Bromodichloromethane	0.7	µg/L
EB	URS	108-88-3	Toluene	2.6	µg/L
EB	URS	15117-96-1	Uranium-235	0.234	pCi/g
EB	URS	7440-61-1	Uranium-238	4.22	pCi/g
FB	ESTLDEN	7429-90-5	Aluminum	120	mg/kg
FB	ESTLDEN	7440-39-3	Barium	0.77	mg/kg
FB	ESTLDEN	7440-47-3	Chromium	0.42	mg/kg
FB	ESTLDEN	7440-50-8	Copper	0.33	mg/kg
FB	ESTLDEN	7439-89-6	Iron	90	mg/kg
FB	ESTLDEN	7439-92-1	Lead	0.34	mg/kg
FB	ESTLDEN	7439-96-5	Manganese	2.4	mg/kg
FB	ESTLDEN	7440-02-0	Nickel	0.25	mg/kg
FB	ESTLDEN	7440-24-6	Strontium	1.2	mg/kg
FB	ESTLDEN	7440-31-5	Tin	1	mg/kg
FB	URS	75-27-4	Bromodichloromethane	1.4	µg/L
FB	URS	67-66-3	Chloroform	1.7	µg/L
FB	URS	108-88-3	Toluene	2.2	µg/L
FB	URS	15117-96-1	Uranium-235	0.206	pCi/g
FB	URS	7440-61-1	Uranium-238	3.39	pCi/g
RNS	URS	75-27-4	Bromodichloromethane	0.7	µg/L
RNS	URS	108-88-3	Toluene	2.6	µg/L
RNS	URS	15117-96-1	Uranium-235	0.234	pCi/g
RNS	URS	7440-61-1	Uranium-238	4.22	pCi/g
TB	URS	67-64-1	Acetone	28	µg/L
TB	URS	75-27-4	Bromodichloromethane	1.6	µg/L
TB	URS	67-66-3	Chloroform	2	µg/L
TB	URS	108-88-3	Toluene	3.6	µg/L

Field blank (EB = equipment, field = FB, rinse = RNS, trip = TB) for results greater than detection limits (i.e. not "U" qualified)

µg/L = micrograms per liter (may be found as ug/L)

### **Sample Matrix Spike Evaluation**

Table 12 provides a summary of the minimum and maximum MS results by chemical for the project. According to the EPA data validation guidelines (1994b), if organic MS recoveries are low, then the LCS recovery should be checked. If the recovery is acceptable, no action is taken. LCS recoveries for organic analyses with potentially low unacceptable MS recoveries were reviewed. For this project, these checks indicate no decisions were impacted for organic analytes (VOCs and PCBs) with low MS recoveries (refer to previous section).

For inorganics with MS recoveries greater than zero, the maximum sample results were divided by the lowest percent recovery for each analyte. If the resulting number was less than the AL, decisions were not impacted. For this project, one arsenic result fails the criterion. Nitrate/nitrite analyses passed the criterion.

**Table 12  
Sample MS Evaluation Summary**

Test Method	CAS No.	Analyte	Minimum Result	Maximum Result	Unit	Number of MS Samples	Number of Lab Batches
SW-846 6010	7429-90-5	Aluminum	0	6130	%REC	19	19
SW-846 6010	7440-36-0	Antimony	33	83	%REC	19	19
SW-846 6010	7440-38-2	Arsenic	82	99	%REC	19	19
SW-846 6010	7440-39-3	Barium	89	107	%REC	19	19
SW-846 6010	7440-41-7	Beryllium	86	103	%REC	19	19
SW-846 6010	7440-43-9	Cadmium	36	104	%REC	19	19
SW-846 6010	7440-47-3	Chromium	70	138	%REC	19	19
SW-846 6010	7440-48-4	Cobalt	85	103	%REC	19	19
SW-846 6010	7440-50-8	Copper	69	1310	%REC	19	19
SW-846 6010	7439-89-6	Iron	0	5400	%REC	19	19
SW-846 6010	7439-92-1	Lead	72	107	%REC	19	19
SW-846 6010	7439-93-2	Lithium	81	106	%REC	19	19
SW-846 6010	7439-96-5	Manganese	0	319	%REC	19	19
SW-846 6010	7439-97-6	Mercury	10	124	%REC	15	15
SW-846 6010	7439-98-7	Molybdenum	82	102	%REC	19	19
SW-846 6010	7440-02-0	Nickel	85	107	%REC	19	19
SW-846 6010	7782-49-2	Selenium	83	103	%REC	19	19
SW-846 6010	7440-22-4	Silver	74	104	%REC	19	19
SW-846 6010	7440-24-6	Strontium	67	138	%REC	19	19
SW-846 6010	7440-31-5	Tin	77	103	%REC	19	19
SW-846 6010	11-09-6	Uranium, Total	89	99	%REC	16	16
SW-846 6010	7440-62-2	Vanadium	55	131	%REC	19	19
SW-846 6010	7440-66-6	Zinc	0	121	%REC	19	19
SW-846 8082	12674-11-2	Aroclor-1016	74	220	%REC	22	22
SW-846 8082	11096-82-5	Aroclor-1260	65	232	%REC	22	22
SW-846 8260	71-55-6	1,1,1-Trichloroethane	69.49	109.3	%REC	45	43
SW-846 8260	79-34-5	1,1,2,2-Tetrachloroethane	74.92	129.1	%REC	45	43
SW-846 8260	79-00-5	1,1,2-Trichloroethane	80	120.8	%REC	45	43
SW-846 8260	75-34-3	1,1-Dichloroethane	78	115	%REC	45	43
SW-846 8260	75-35-4	1,1-Dichloroethene	66.26	116	%REC	45	43
SW-846 8260	120-82-1	1,2,4-Trichlorobenzene	51.9	108.7	%REC	45	43
SW-846 8260	95-50-1	1,2-Dichlorobenzene	73	114.2	%REC	45	43
SW-846 8260	107-06-2	1,2-Dichloroethane	71	116.8	%REC	45	43
SW-846 8260	78-87-5	1,2-Dichloropropane	73.55	115	%REC	45	43
SW-846 8260	106-46-7	1,4-Dichlorobenzene	76	113.6	%REC	45	43
SW-846 8260	78-93-3	2-Butanone	66	188.7	%REC	45	43

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Test Method	CAS No.	Analyte	Minimum Result	Maximum Result	Unit	Number of MS Samples	Number of Lab Batches
SW-846 8260	108-10-1	4-Methyl-2-pentanone	76.64	125.6	%REC	45	43
SW-846 8260	67-64-1	Acetone	47.48	267.7	%REC	45	43
SW-846 8260	71-43-2	Benzene	72.08	120	%REC	45	43
SW-846 8260	75-27-4	Bromodichloromethane	71.52	110.3	%REC	45	43
SW-846 8260	75-25-2	Bromoform	79	118.6	%REC	45	43
SW-846 8260	74-83-9	Bromomethane	58.97	132.3	%REC	45	43
SW-846 8260	75-15-0	Carbon Disulfide	50.3	103.2	%REC	45	43
SW-846 8260	56-23-5	Carbon Tetrachloride	66	111	%REC	45	43
SW-846 8260	108-90-7	Chlorobenzene	82	115	%REC	45	43
SW-846 8260	75-00-3	Chloroethane	47.24	107	%REC	45	43
SW-846 8260	67-66-3	Chloroform	71	110	%REC	45	43
SW-846 8260	74-87-3	Chloromethane	24.05	122.2	%REC	45	43
SW-846 8260	10061-01-5	cis-1,3-Dichloropropene	68.63	115	%REC	45	43
SW-846 8260	124-48-1	Dibromochloromethane	69.01	114	%REC	45	43
SW-846 8260	100-41-4	Ethylbenzene	81.04	116	%REC	45	43
SW-846 8260	87-68-3	Hexachlorobutadiene	39.31	111.6	%REC	45	43
SW-846 8260	75-09-2	Methylene chloride	61.69	121	%REC	45	43
SW-846 8260	91-20-3	Naphthalene	61.28	113.1	%REC	45	43
SW-846 8260	100-42-5	Styrene	76.84	113	%REC	45	43
SW-846 8260	127-18-4	Tetrachloroethene	67.48	124	%REC	45	43
SW-846 8260	108-88-3	Toluene	68.9	122	%REC	45	43
SW-846 8260	10061-02-6	trans-1,3-Dichloropropene	66.64	115	%REC	45	43
SW-846 8260	79-01-6	Trichloroethene	70.36	111	%REC	45	43
SW-846 8260	75-01-4	Vinyl chloride	38.24	119	%REC	45	43
SW-846 8260	1330-20-7	Xylene	79.33	107	%REC	43	41
SW9056 OR E300.0 PREP E300.0	14797-55-8	Nitrate	90	90	%REC	1	1
SW9056 OR E300.0 PREP E300.0	14797-65-0	Nitrite	90	90	%REC	1	1

The arsenic analytical result of 20 mg/kg (SW846 6010, CC43-003, 0.5-2.5 ft) was further evaluated with respect to its individual MS recovery of 91 percent. This evaluation indicates that this result passes the criterion applied above. Therefore, arsenic MS recoveries did not impact project decisions. Furthermore, the decision whether or not to remediate included the results of the SSRS as well as the AL comparison.

Aluminum, iron, manganese, and zinc have 0 percent as minimum MS recoveries. The WRW AL for these metals are more than three times greater than the maximum sample result indicating that project decisions were not impacted by the 0 percent minimum MS recoveries. Furthermore, low MS recoveries did not affect project decisions because the decision whether or not to remediate includes the results of the SSRS as well as the AL comparison.

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### 6.2.2 Precision

Precision is measured by evaluating both MSDs and field duplicates, as described in the following sections.

#### *Matrix Spike Duplicate Evaluation*

Laboratory precision is measured through the use of MSDs which are summarized in Table 13. Analytes with the highest relative percent differences (RPDs) (greater than 35 percent) were reviewed by comparing the highest sample result to the WRW AL. For analytes with RPDs greater than 35 percent, if the highest sample results were sufficiently below the ALs, no further action was needed.

**Table 13  
Sample MSD Evaluation**

Test Method	CAS No.	Analyte	Maximum RPD (%)
SW-846 6010	7429-90-5	Aluminum	101.78
SW-846 6010	7440-36-0	Antimony	46.67
SW-846 6010	7440-38-2	Arsenic	5.52
SW-846 6010	7440-39-3	Barium	47.21
SW-846 6010	7440-41-7	Beryllium	14.29
SW-846 6010	7440-43-9	Cadmium	5.59
SW-846 6010	7440-47-3	Chromium	59.03
SW-846 6010	7440-48-4	Cobalt	7.65
SW-846 6010	7440-50-8	Copper	172.95
SW-846 6010	7439-89-6	Iron	128.16
SW-846 6010	7439-92-1	Lead	15.08
SW-846 6010	7439-93-2	Lithium	5.35
SW-846 6010	7439-96-5	Manganese	109.14
SW-846 6010	7439-97-6	Mercury	152.38
SW-846 6010	7439-98-7	Molybdenum	6.19
SW-846 6010	7440-02-0	Nickel	12.15
SW-846 6010	7782-49-2	Selenium	4.71
SW-846 6010	7440-22-4	Silver	6.54
SW-846 6010	7440-24-6	Strontium	15.17
SW-846 6010	7440-31-5	Tin	8.48
SW-846 6010	11-09-6	Uranium, Total	5.41
SW-846 6010	7440-62-2	Vanadium	52.35
SW-846 6010	7440-66-6	Zinc	35.71
SW-846 8082	12674-11-2	Aroclor-1016	40.38
SW-846 8082	11096-82-5	Aroclor-1260	64.79
SW-846 8260	71-55-6	1,1,1-Trichloroethane	25.26
SW-846 8260	79-34-5	1,1,2,2-Tetrachloroethane	19.28
SW-846 8260	79-00-5	1,1,2-Trichloroethane	17.60
SW-846 8260	75-34-3	1,1-Dichloroethane	22.48

Test Method	CAS No.	Analyte	Maximum RPD (%)
SW-846 8260	75-35-4	1,1-Dichloroethene	37.59
SW-846 8260	120-82-1	1,2,4-Trichlorobenzene	35.06
SW-846 8260	95-50-1	1,2-Dichlorobenzene	21.38
SW-846 8260	107-06-2	1,2-Dichloroethane	25.23
SW-846 8260	78-87-5	1,2-Dichloropropane	14.80
SW-846 8260	106-46-7	1,4-Dichlorobenzene	24.71
SW-846 8260	78-93-3	2-Butanone	34.80
SW-846 8260	108-10-1	4-Methyl-2-pentanone	24.07
SW-846 8260	67-64-1	Acetone	43.36
SW-846 8260	71-43-2	Benzene	17.49
SW-846 8260	75-27-4	Bromodichloromethane	16.28
SW-846 8260	75-25-2	Bromoform	43.22
SW-846 8260	74-83-9	Bromomethane	30.78
SW-846 8260	75-15-0	Carbon Disulfide	26.21
SW-846 8260	56-23-5	Carbon Tetrachloride	26.00
SW-846 8260	108-90-7	Chlorobenzene	18.83
SW-846 8260	75-00-3	Chloroethane	39.11
SW-846 8260	67-66-3	Chloroform	18.68
SW-846 8260	74-87-3	Chloromethane	42.09
SW-846 8260	10061-01-5	cis-1,3-Dichloropropene	27.37
SW-846 8260	124-48-1	Dibromochloromethane	26.83
SW-846 8260	100-41-4	Ethylbenzene	18.98
SW-846 8260	87-68-3	Hexachlorobutadiene	44.44
SW-846 8260	75-09-2	Methylene chloride	39.70
SW-846 8260	91-20-3	Naphthalene	23.68
SW-846 8260	100-42-5	Styrene	16.17
SW-846 8260	127-18-4	Tetrachloroethene	20.03
SW-846 8260	108-88-3	Toluene	20.85
SW-846 8260	10061-02-6	trans-1,3-Dichloropropene	25.90
SW-846 8260	79-01-6	Trichloroethene	26.01
SW-846 8260	75-01-4	Vinyl chloride	45.30
SW-846 8260	1330-20-7	Xylene	19.59
SW9056 OR E300.0 PREP E300.0	14797-55-8	Nitrate	0.00
SW9056 OR E300.0 PREP E300.0	14797-65-0	Nitrite	0.00

For method SW-846 6010 (metals) aluminum, antimony, barium, chromium, copper, iron, manganese, mercury, vanadium, and zinc had MSD-RPDs greater than 35 percent. Evaluation indicates that antimony, barium, copper, mercury, vanadium, and zinc ratios of maximum result to WRW AL are greater than 30. Therefore, the MSD-RPDs for these metals did not impact project decisions. Aluminum, iron, and manganese are not COCs and their MSD-RPDs did not affect project decisions. Results for chromium did not impact project decisions.

For method SW-846 8082 (PCBs) both aroclor-1016 and aroclor-1260 had MSD-RPDs greater than 35 percent. The ratio of maximum result to WRW AL for aroclor-1016 was greater than 30 percent and therefore its MSD-RPD did not impact project decisions. The ratio for Aroclor-1260 was 12.7. However, the results for aroclor-1260 were within the range of values found at the Site, below WRW ALs, and did not impact project decisions.

For method SW-846 8260 (VOCs) 1,1-dichloroethene, 1,2,4-trichlorobenzene, acetone, bromoform, chloromethane, hexachlorobutadiene, methylene chloride, and vinyl chloride had MSD-RPDs greater than 35 percent. The ratios of maximum result to WRW AL for all of these VOCs were greater than 2500, and therefore, MSD-RPDs for these analytes did not impact project decisions.

### Field Duplicate Evaluation

Field duplicate results reflect sampling precision, or overall repeatability of the sampling process. The frequency of field duplicate collection should exceed 1 field duplicate per 20 real samples, or 5 percent. Table 14 indicates that sampling frequencies were adequate with respect to all analytical methods.

**Table 14**  
**Field Duplicate Sample Frequency Summary**

Test Method	Number of Real Samples	Number of Duplicate Samples	% Duplicate Samples
Alpha Spectrometry	73	32	43.84%
Gamma Spectrometry	245	42	17.14%
SW-846 6010	223	42	18.83%
SW-846 6200	35	8	22.86%
SW-846 8082	192	38	19.79%
SW-846 8260	380	39	10.26%
SW-846 8290	20	12	60.00%
SW9056 OR E300.0 PREP E300.0	1	1	100.00%

Duplicate sample RPDs indicate how much variation exists in the field duplicate analyses; duplicate sample RPDs are provided in Table 15. The EPA data validation guidelines state that "there are no required review criteria for field duplicate analyses comparability" (EPA 1994b). For the DQA, the highest maximum RPDs (greater than 35 percent) are normally reviewed. In the case of IHSS Group 500-1, VOC and nitrate/nitrite RPDs were acceptable. A high proportion of alpha spectrometry, SW-846 6010 (metal), SW-846 8082 (PCB), and SW-846 6200 (metal) RPD results were greater than 35 percent.

Analytes with the highest maximum RPDs are further evaluated by comparing the maximum result with the WRW AL. If the maximum sample concentration is sufficiently below the AL (less than 10 percent), no further action is required. In general the ratios between the maximum result and the WRW AL ratios for alpha spectrometry,

metals (both SW-846 6010 and 6200 methods), and PCBs were high indicating duplicate RPDs did not affect project decisions. In the case of some metals such as aluminum, iron, and manganese their duplicate RPDs did not affect project decisions because the metals are not COCs. Project decisions based on arsenic, chromium, and aroclor-1254 were evaluated throughout the SSRS. Duplicate RPD values did not affect project decisions for IHSS Group 500-1.

**Table 15**  
**RPD Evaluation Summary**

Lab Code	Test Method	Analyte	Maximum RPD (%)
ESTLDEN	ALPHA SPEC	Uranium-234	37.52
ESTLDEN	ALPHA SPEC	Uranium-238	28.49
ESTLDEN	SW-846 6010	Aluminum	107.69
ESTLDEN	SW-846 6010	Arsenic	71.70
ESTLDEN	SW-846 6010	Barium	132.41
ESTLDEN	SW-846 6010	Beryllium	81.41
ESTLDEN	SW-846 6010	Cadmium	102.70
ESTLDEN	SW-846 6010	Chromium	130.51
ESTLDEN	SW-846 6010	Cobalt	128.21
ESTLDEN	SW-846 6010	Copper	103.32
ESTLDEN	SW-846 6010	Iron	88.89
ESTLDEN	SW-846 6010	Lead	91.80
ESTLDEN	SW-846 6010	Lithium	109.91
ESTLDEN	SW-846 6010	Manganese	116.67
ESTLDEN	SW-846 6010	Mercury	60.67
ESTLDEN	SW-846 6010	Molybdenum	172.55
ESTLDEN	SW-846 6010	Nickel	113.13
ESTLDEN	SW-846 6010	Strontium	93.10
ESTLDEN	SW-846 6010	Uranium, Total	25.00
ESTLDEN	SW-846 6010	Vanadium	119.05
ESTLDEN	SW-846 6010	Zinc	102.52
ESTLDEN	SW-846 8082	Aroclor-1016	10.81
ESTLDEN	SW-846 8082	Aroclor-1221	10.81
ESTLDEN	SW-846 8082	Aroclor-1232	10.81
ESTLDEN	SW-846 8082	Aroclor-1242	10.81
ESTLDEN	SW-846 8082	Aroclor-1254	125.58
ESTLDEN	SW-846 8082	Aroclor-1260	15.63
ESTLDEN	SW-846 8260	1,1,1-Trichloroethane	18.18
ESTLDEN	SW-846 8260	1,1-Dichloroethane	18.18
ESTLDEN	SW-846 8260	1,2,4-Trichlorobenzene	18.18
ESTLDEN	SW-846 8260	1,2-Dichloroethane	18.18
ESTLDEN	SW-846 8260	4-Methyl-2-pentanone	16.67
ESTLDEN	SW-846 8260	Benzene	18.18
ESTLDEN	SW-846 8260	Bromodichloromethane	18.18
ESTLDEN	SW-846 8260	Bromoform	18.18

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ESTLDEN	SW-846 8260	Carbon Disulfide	18.18
ESTLDEN	SW-846 8260	Chlorobenzene	18.18
ESTLDEN	SW-846 8260	Chloroform	18.18
ESTLDEN	SW-846 8260	cis-1,3-Dichloropropene	18.18
ESTLDEN	SW-846 8260	Dibromochloromethane	18.18
ESTLDEN	SW-846 8260	Methylene chloride	10.71
ESTLDEN	SW-846 8260	Naphthalene	18.18
ESTLDEN	SW-846 8260	Styrene	18.18
ESTLDEN	SW-846 8260	Tetrachloroethene	18.18
ESTLDEN	SW-846 8260	Toluene	18.18
ESTLDEN	SW-846 8260	trans-1,3-Dichloropropene	18.18
ESTLDEN	SW-846 8260	Trichloroethene	18.18
ESTLDEN	SW9056 OR E300.0 PREP E300.0	Nitrate	0.00
ESTLDEN	SW9056 OR E300.0 PREP E300.0	Nitrite	0.00
URS	SW-846 6200	Barium	24.31
URS	SW-846 6200	Cobalt	38.81
URS	SW-846 6200	Copper	1.97
URS	SW-846 6200	Iron	98.21
URS	SW-846 6200	Manganese	53.49
URS	SW-846 6200	Nickel	107.27
URS	SW-846 6200	Strontium	39.16

### 6.2.3 Completeness

Based on original program DQOs, a minimum of 25 percent of ER Program analytical (and radiological) results must be formally verified and validated. Of that percentage, no more than 10 percent of the results may be rejected, which ensures that analytical laboratory practices are consistent with quality requirements. Table 16 presents the number and percentage of validated records (codes without "1"), the number and percentage of verified records (codes with "1"), and the percentage of rejected records (only 1 for the IHSS Group 500-1 project) for each analyte group. Because the frequency of validation is within project quality requirements and in compliance with the RFETS program validation goal of 25 percent of all analytical records (except for nitrate/nitrite) and only 1 record was rejected, the results indicate that these data are adequate.

**Table 16  
V&V Summary**

Validation Qualifier Code	Total of CAS Number	Alpha Spectrometry	Gamma Spectroscopy	SW-846 6010	SW-846 6200	SW-846 8082	SW-846 8260	SW9056 or E300.0 Prep E300.0
No V&V	90	0	18	0	0	0	72	0
J	436	2	0	354	60	1	19	0
J1	754	0	0	722	0	0	32	0
JB	8	0	0	0	0	0	8	0
JB1	12	0	0	0	0	0	12	0
R1	1	1	0	0	0	0	0	0
UJ	358	2	0	71	62	0	223	0
UJ1	708	1	0	243	0	21	443	0
V	7623	146	228	1061	541	461	5186	0
V1	14749	213	492	2653	0	861	10528	2
<b>Total</b>	<b>24739</b>	<b>365</b>	<b>738</b>	<b>5104</b>	<b>663</b>	<b>1344</b>	<b>16523</b>	<b>2</b>
Validated	8425	150	228	1486	663	462	5436	0
% Validated	34.06%	41.10%	30.89%	29.11%	100.00%	34.38%	32.90%	0.00%
Verified	16224	215	492	3618	0	882	11015	2
% Verified	65.58%	58.90%	66.67%	70.89%	0.00%	65.63%	66.66%	100.00%
Rejected	1	1	0	0	0	0	0	0
% Rejected	0.00%	0.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

KEY: Validations: J = Estimated, JB = Estimated with possible laboratory contamination, R = Rejected, UJ = Estimated detection limit, V = Validated  
 Verifications: J1 = Estimated, JB1 = Estimated with possible laboratory contamination, R1 = Rejected, UJ1 = Estimated detection limit, V1 = Validated

### 6.2.4 Sensitivity

RLs, in units of micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ) for organics,  $\text{mg}/\text{kg}$  for metals, and picocuries per gram ( $\text{pCi}/\text{g}$ ) for radionuclides, were compared with RFCA ALs. Adequate sensitivities of analytical methods were attained for all COCs that affect project decisions. "Adequate" sensitivity is defined as an RL less than an analyte's associated AL, typically less than one-half the AL.

### 6.3 Summary of Data Quality

Surrogate recoveries and field blank analyses are acceptable. LCS, MS, MSD, RPD, surrogate and field blank analyses indicate that results did not impact project decisions.

The frequency of field duplicates is adequate. Only 1 record was rejected. Compliance with the project quality requirements and RFETS validation goal of 25 percent of all analytical records indicates these data are adequate.

Data collected and used for IHSS Group 500-1 are adequate for decision making.

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## **7.0 PROJECT CONCLUSIONS**

Results of the accelerated action justify an NFAA determination for IHSS Group 500-1. This justification is based on the following:

- Accelerated action sampling results were less than the WRW ALs, with the exception of one subsurface arsenic concentration. The elevated concentration was 25.9 mg/kg, and the WRW AL is 22.2 mg/kg
- No further accelerated action is required based on the SSRS.

## **8.0 REFERENCES**

CDPHE, 2003, Approval of the Final Industrial Area Sampling and Analysis Plan FY04 Addendum #IA-04-03, IHSS Groups 500-1 and 500-5, November 2003, Denver, Colorado, November 14.

CDPHE, 2004. Correspondence to J. Legare, DOE RFO; from S. Gunderson; CDPHE, RE: No Further Accelerated Action Justification PCB Potential Areas of Concern (April 15, 2004), May 6.

DOE, 1992-2003, Historical Release Reports for the Rocky Flats Plant, Golden, Colorado.

DOE, 1999, Quality Assurance, Order 414.1A.

DOE, 2000, Industrial Area Data Summary Report, Rocky Flats Environmental Technology Site, Golden, Colorado, September.

DOE, 2001, Industrial Area Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

DOE, 2003a, Final Industrial Area Sampling and Analysis Plan FY04 Addendum #IA-04-03, Rocky Flats Environmental Technology Site, Golden, Colorado, November.

DOE, 2003b, Closure Description Document for the Partial Closure of Unit 374.3 – the 700 and 800 Area Process Waste Transfer System, Rocky Flats Environmental Technology Site, Golden, Colorado, January.

DOE, 2003c, Automated Surface-Water Monitoring Report, Water Year 2001, Rocky Flats Environmental Technology Site, Golden, Colorado, May.

DOE, 2003d, Integrated Monitoring Plan, FY 2004, Background Document, Rocky Flats Environmental Technology Site, Golden, Colorado, March.

DOE, 2004, Dioxin-Like Compounds in Transformer Oil: An Evaluation of their Potential Impact on Soil Cleanup Strategies at RFETS, April 15.

DOE, CDPHE, and EPA, 2003, Modifications to the Rocky Flats Cleanup Agreement Attachment, U.S. Department of Energy, Colorado Department of Public Health and Environment, and U.S. Environmental Protection Agency, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

EPA, 1994a, Guidance for the Data Quality Objective Process, QA/G-4.

EPA, 1994b, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 540/R-94/012.

EPA, 1994c, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 540/R-94/013.

EPA, 1998, Guidance for the Data Quality Assessment Process, Practical Methods for Data Analysis, QA/G-9.

K-H, 2002a, General Guidelines for Data Verification and Validation, DA-GR01-v2, October.

K-H, 2002b, V&V Guidelines for Isotopic Determinations by Alpha Spectrometry, DA-RC01-v2, October.

K-H, 2002c, V&V Guidelines for Volatile Organics, DA-SS01-v3, October.

K-H, 2002d, V&V Guidelines for Semivolatile Organics, DA-SS02-v3, October.

K-H, 2002e, V&V Guidelines for Metals, DA-SS05-v3, October.

Lockheed-Martin, 1997, Evaluation of Radiochemical Data Usability, ES/ER/MS-5.

**APPENDIX A**  
**CORRESPONDENCE**

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# ER REGULATORY CONTACT RECORD

**Date/Time:** April 1, 2004/11:15

**Site Contact(s):** Gerry Kelly  
**Phone:** 303 966-4979

**Regulatory Contact:** David Kruchek  
**Phone:** 303 692-3328

**Agency:** CDPHE

**Purpose of Contact:** Sampling Changes at IHSS Group 500-1, Locations CC42-021 and CC43-009

## Discussion

The purpose of this ER Contact Record is to confirm approval of two sampling changes from the Industrial Area Sampling and Analysis Plan (IASAP) Addendum for IHSS Group 500-1, #IA-04-03:

- Table 4 of the IASAP Addendum shows that four sample intervals will be collected at Location CC42-021. However, the text says that sampling locations between the locations of the former Protected Area fences will only be sampled at the D interval (4.5 – 6.5 ft) because the top 4 – 5 ft consist of clean fill. Therefore, only the D interval will be sampled at Location CC42-021, as is being done at all of the other locations between the fences.
- Table 4 shows that the sampling intervals at Sampling Location CC43-009 will be analyzed for dioxin/furan to ensure that 10% of the samples analyzed for PCBs will be analyzed for dioxin/furan. However, CC43-009 was sampled, and samples for dioxin/furan were not taken. Therefore, samples for dioxin/furan will be taken from an adjacent location, CC44-005, that includes PCB analysis.

**Contact Record Prepared By:** Gerry Kelly

## Required Distribution:

M. Aguilar, USEPA  
S. Bell, DOE-RFFO  
J. Berardini, K-H  
B. Birk, DOE-RFFO  
L. Brooks, K-H ESS  
L. Butler, K-H RISS  
G. Carnival, K-H RISS  
N. Castaneda, DOE-RFFO  
C. Deck, K-H Legal  
S. Gunderson, CDPHE  
M. Keating, K-H RISS  
G. Kleeman, USEPA  
D. Kruchek, CDPHE  
D. Mayo, K-H RISS

R. McCallister, DOE-RFFO  
J. Mead, K-H ESS  
S. Nesta, K-H RISS  
L. Norland, K-H RISS  
K. North, K-H ESS  
E. Pottorff, CDPHE  
A. Primrose, K-H RISS  
R. Schassburger, DOE-RFFO  
S. Serreze, K-H RISS  
D. Shelton, K-H ESS  
C. Spreng, CDPHE  
S. Surovchak, DOE-RFFO  
K. Wiemelt, K-H RISS  
C. Zahm, K-H Legal

## Additional Distribution:

Gerry Kelly, KH Team  
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**ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE  
ENVIRONMENTAL RESTORATION  
REGULATORY CONTACT RECORD**

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**Date/Time:** October 21, 2003

**Site Contact(s):** Susan Serreze  
**Phone:** 303-966-2677

**Regulatory Contact:** Harlen Ainscough  
**Phone:** 303-692-3337

**Agency:** CDPHE

---

**Purpose of Contact:** IHSS Group 500-1

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**Discussion**

A telephone discussion was conducted on October 21, 2003 between Harlen Ainscough of CDPHE and Susan Serreze in RISS to discuss early sampling in IHSS Group 500-1. The Draft IASAP Addendum #IA-04-03 for IHSS Group 500-1 and 500-5 is currently under review by CDPHE. RFETS staff would like to coordinate ER sampling with steam stanchion removal in IHSS Group 500-1. ER sampling at the proposed locations in the Draft IASAP Addendum #IA-04-03 in coordination with stanchion removal was approved by Harlen Ainscough of CDPHE.

**Distribution:**

H. Ainscough, CDPHE  
S. Gunderson, CDPHE  
D. Kruchek, CDPHE  
E. Pottorff, CDPHE  
C. Spreng, CDPHE  
G. Kleeman, USEPA  
N. Castenada, RFFO  
R. McCallister, RFFO

L. Brooks, K-H ESS  
M. Broussard, K-H RISS  
L. Butler, K-H RISS  
R. Davis, K-H RISS  
C. Deck, K-H Legal  
D. Mayo, K-H RISS  
J. Mead, K-H ESS  
S. Nesta, K-H RISS  
L. Norland, K-H RISS  
K. North, K-H ESS  
A. Primrose, K-H RISS  
D. Shelton, K-H  
J. Walström, K-H  
K. Wiemelt, K-H RISS

W. Chromecc, K-H Team  
K. Griggs, K-H Team  
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B. Koehler, K-H Team  
S. Luker, K-H Team  
G. Pudlick, K-H Team  
D. Reeder, K-H Team  
M. Ruthven, K-H Team  
S. Serreze, K-H Team  
E. Woodland, K-H Team  
Administrative Record

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**ENCLOSURE**

Complete Data Set Compact Disc

Accelerated Action Data

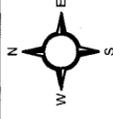
DISK NOT INCLUDED

9/9/91

**Figure 1**  
**IHSS Group 500-1**  
**Location**

**KEY**

-  IHSS Group 500-1
-  Demolished building
-  Standing building
-  Paved road



200 0 200 400 600 800 Feet

Scale = 1:8,000

State Plane Coordinate Projection  
Colorado Central Zone  
Datum: NAD 27

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

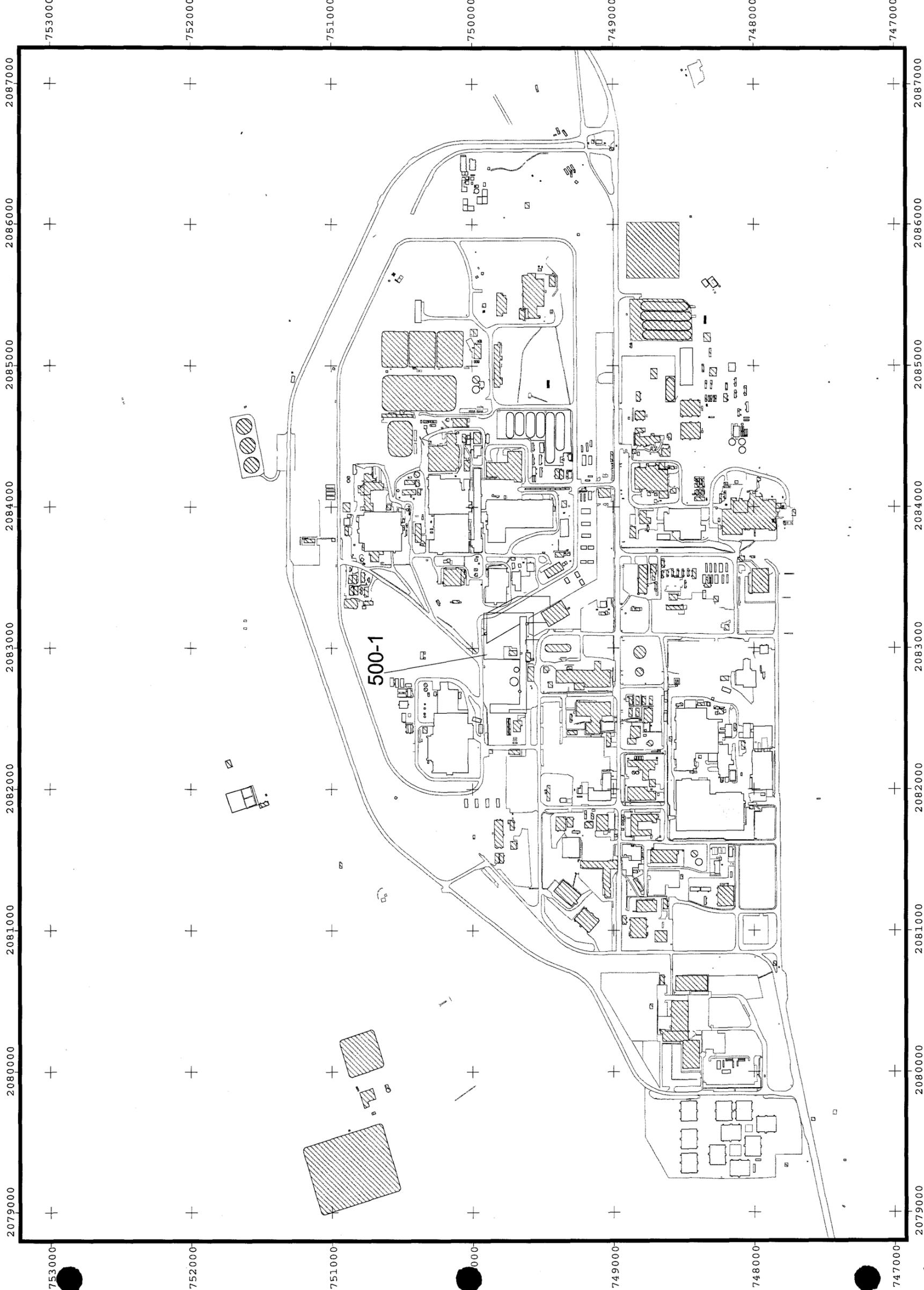
Prepared by:

**RADMS**

Prepared for:



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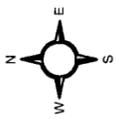


**Figure 2**  
**IHSS Group 500-1**  
**Historical Sampling Locations**  
**and Results**

**KEY**

- Concentrations less than WRW ALs and greater than background means or method detection limits
- Concentrations less than background means or method detection limits

- Valve vault
- ∩ NPWL
- ∩ Storm drain
- ∩ Sewer line
- ∩ Paved road
- ∩ Streams
- ∩ Fence
- ▨ Demolished building
- Standing building
- IHSS
- PAC



Scale = 1:2,500

State Plane Coordinate Projection  
 Colorado Central Zone  
 Datum: NAD 27

U.S. Department of Energy  
 Rocky Flats Environmental Technology Site

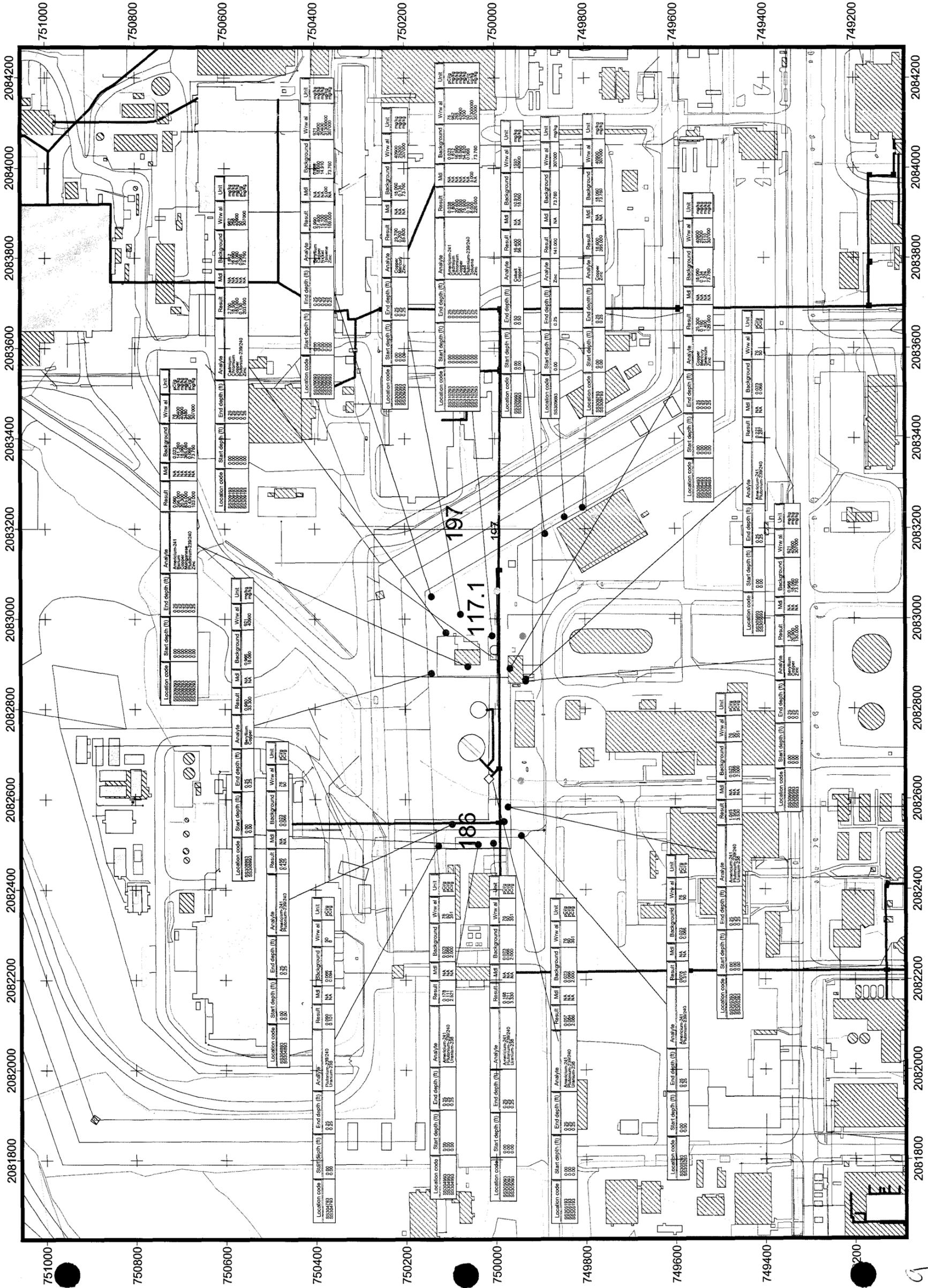
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Prepared for:



File: w:\projects\2003\500-1\characterization.apr  
 Date: 08/27/03



**Figure 7**  
**IHSS Group 500-1**  
**Accelerated Action Sampling**  
**Locations and Results,**  
**Subsurface Soil,**  
**Southeast Quadrant**

**KEY**

- WRW ALS exceedance
- Less than WRW ALS and greater than background or reporting limits
- Less than background or reporting limits
- NPWL
- Valve vault
- Storm drain
- Sewer
- Paved road
- Stream/drainage
- Fence
- Demolished building
- Standing building
- IHSS
- DRAFT



Scale = 1:2,000



State Plane Coordinate Projection  
 Colorado Central Zone  
 Datum: NAD 27

U.S. Department of Energy  
 Rocky Flats Environmental Technology Site

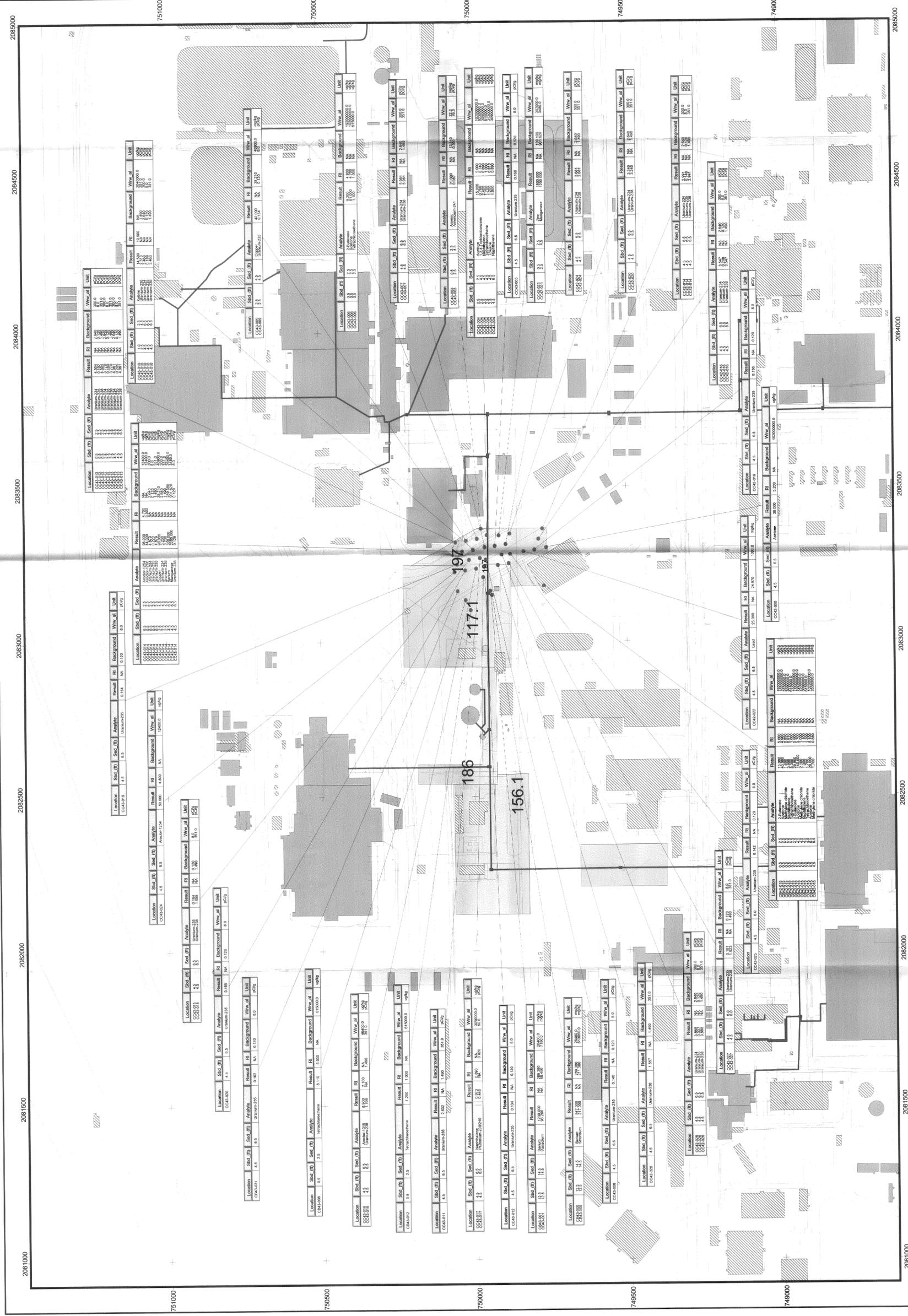


Prepared by:

Prepared for:

Date: 09/23/04

File: w:\projects\2003\500-1\500-1\_characterization.apr



**Figure 6**  
**IHSS Group 500-1**  
**Accelerated Action Sampling**  
**Locations and Results,**  
**Subsurface Soil,**  
**Southwest Quadrant**

**KEY**

- WRW ALs exceedance
- Less than WRW ALs and greater than background or reporting limits
- Less than background or reporting limits
- NPWL
- Valve vault
- Storm drain
- Sewer
- Paved road
- Stream/drainage
- Fence
- Demolished building
- Standing building
- IHSS
- DRAFT



Scale = 1:2,000

100 0 100 200 300 Feet

State Plane Coordinate Projection  
 Colorado Central Zone  
 Datum: NAD 27

U.S. Department of Energy  
 Rocky Flats Environmental Technology Site

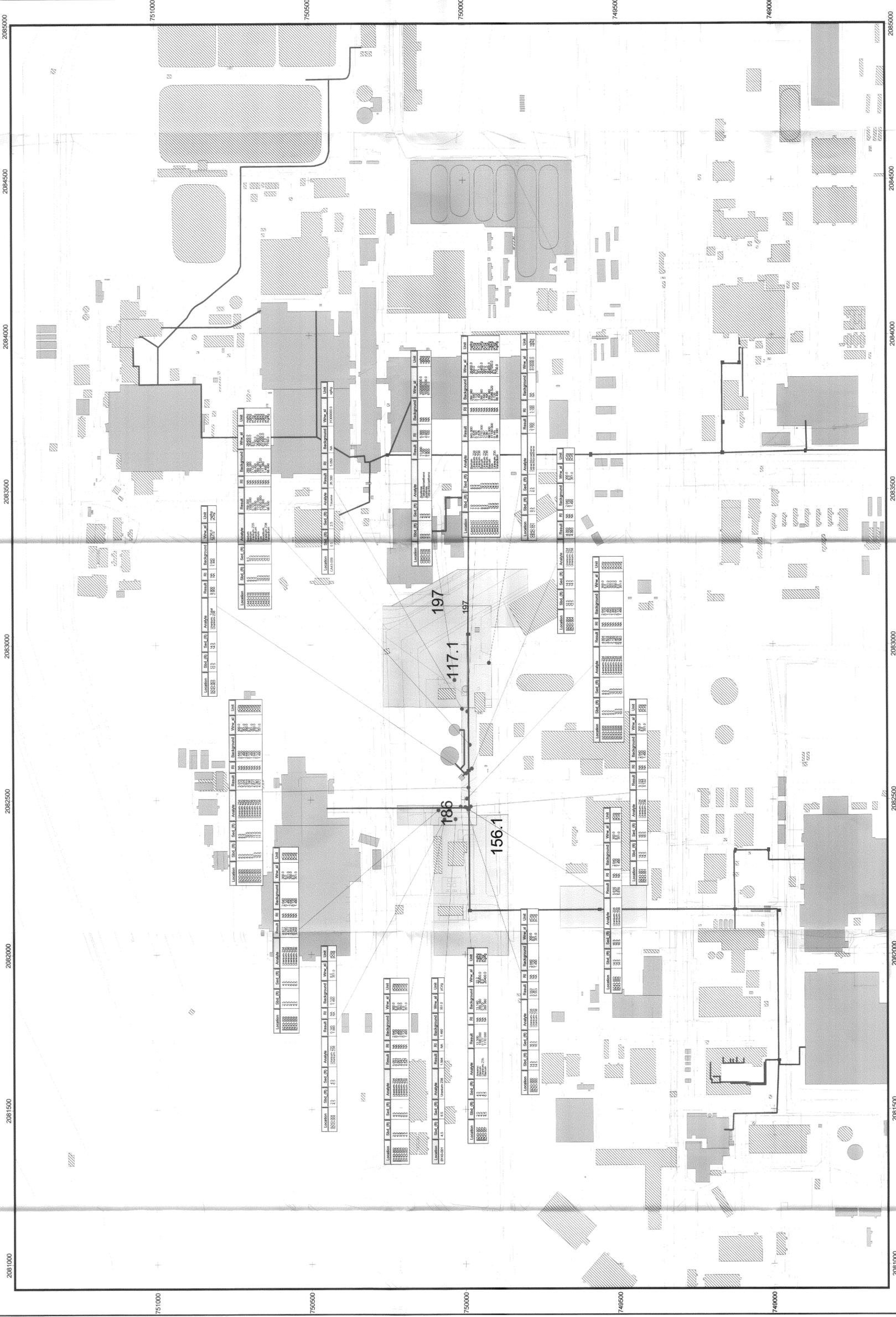
Prepared by:



Prepared for:



File: w:\projects\2003\500-1\500-1\_characterization.apr  
 Date: 08/23/04





**Figure 4**  
**IHSS Group 500-1**  
**Accelerated Action Sampling**  
**Locations and Results,**  
**Subsurface Soil,**  
**Northeast Quadrant**

**KEY**

- WRW ALs exceedance
- Less than WRW ALs and greater than background or reporting limits
- Less than background or reporting limits
- NPWL
- Valve vault
- Storm drain
- Sewer
- Paved road
- Stream/drainage
- Fence
- Demolished building
- Standing building
- IHSS
- DRAFT

N

Scale = 1:2,000

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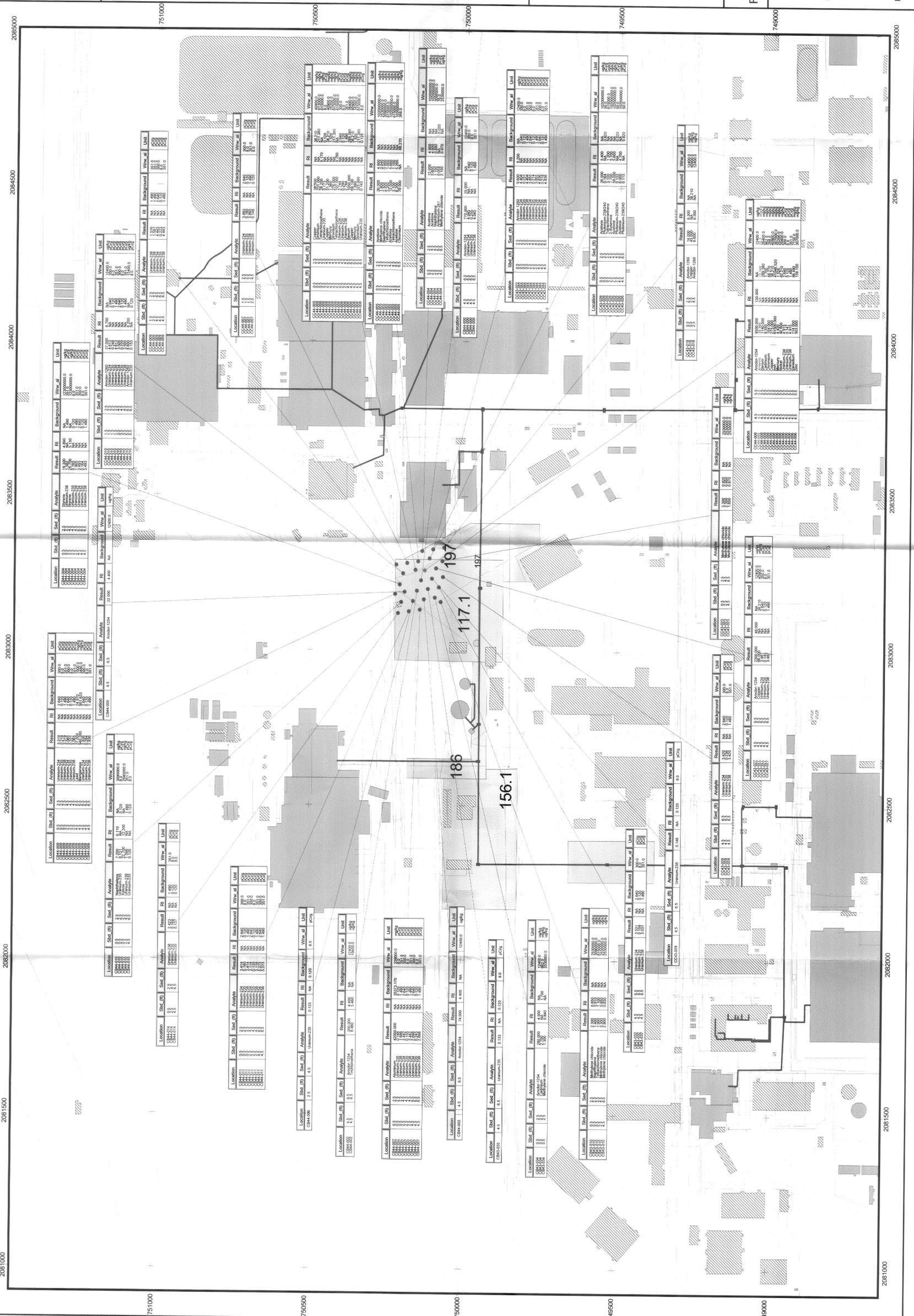
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 Datum: NAD 27

U.S. Department of Energy  
 Rocky Flats Environmental Technology Site

Prepared by: **RADMS**

Prepared for: **KAISER HILL COMPANY**

File: W:\projects\2003\500-1\500-1\_characterization.apr Date: 08/23/04



**Figure 3**  
**IHSS Group 500-1**  
**Accelerated Action Sampling**  
**Locations and Results,**  
**Surface Soil**

**KEY**

WRW ALS exceedance  
 Less than WRW ALS and greater  
 than background or reporting limits  
 Less than background or  
 reporting limits

Npwl

Valve vault

Storm drain

Sewer

Paved road

Stream/drainage

Fence

Demolished building

Standing building

IHSS

DRAFT



Scale = 1:2,000



State Plane Coordinate Projection  
 Colorado Central Zone  
 Datum: NAD 27

Prepared by:  
 U.S. Department of Energy  
 Rocky Flats Environmental Technology Site

Prepared for:



Date: 08/23/04

File: w:\projects\2003\500-1\500-1\_characterization.apr

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