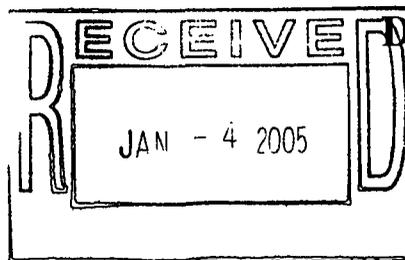


**Data Summary Report
for IHSS Group 700-8**

**IHSS 700-214, 750 Pad
Pondcrete/Saltcrete Storage**

Approval received from the Colorado Department of Public Health and Environment
December 17, 2004.

Approval letter contained in the Administrative Record.



December 2004

ADMIN RECORD

IA-A-002490

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ENCLOSURE

Complete Data Set Compact Disc – Accelerated Action Data

ACRONYMS

AAESE	Accelerated Action Ecological Screening Evaluation
AL	action level
AR	Administrative Record
ASD	Analytical Services Division
bgs	Below ground surface
CAS	Chemical Abstracts Service
CD	compact disc
CDD	Closure Description Document
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
ER	Environmental Restoration
ft	foot
ft ²	square foot
ft ³	cubic foot
FY	Fiscal Year
HDPE	high-density polyethylene
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.
lb	pound
LCS	laboratory control sample
LLMW	low-level waste
LLW	low-level mixed waste
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
MDL	method detection limit
mg/kg	milligrams per kilogram
MS	matrix spike
MSD	matrix spike duplicate
NFAA	No Further Accelerated Action
NPWL	New Process Waste Lines
OPWL	Original Process Waste Lines
PAH	polyaromatic hydrocarbon
PARCCS	precision, accuracy, representativeness, completeness, comparability, and sensitivity
PCB	polychlorinated biphenyl

pCi/g	picocuries per gram
pCi/L	Picocuries per liter
pCi/m ³	picocuries per cubic meter
QC	quality control
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RIN	report identification number
RFETS or Site	Rocky Flats Environmental Technology Site
RL	reporting limit
RPD	relative percent difference
SAP	Sampling and Analysis Plan
SEP	Solar Evaporation Pond
SOR	sum of ratios
SSRS	Subsurface Soil Risk Screen
SVOC	semivolatile organic compound
SWD	Soil Water Database
V&V	verification and validation
VOC	volatile organic compound
WRW	wildlife refuge worker

1.0 INTRODUCTION

This Data Summary Report summarizes accelerated action characterization activities conducted at Individual Hazardous Substance Site (IHSS) Group 700-8 at the Rocky Flats Environmental Technology Site (RFETS or Site) in Golden, Colorado. The general location of IHSS Group 700-8 is shown on Figure 1. IHSS Group 700-8 is composed entirely of IHSS 700-214, 750 Pad Pondcrete/Saltcrete Storage. This IHSS is currently a Resource Conservation and Recovery Act (RCRA) permitted container storage unit where low-level mixed wastes are stored prior to disposal off site. Figure 2 is a detailed layout map of the 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-04-12 (DOE 2004a). The IASAP Addendum was approved by the Colorado Department of Public Health and Environment (CDPHE) on March 19, 2004 (CDPHE 2004). 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 700-8 is a No Further Accelerated Action (NFAA) Site. This information and NFAA determination will be documented in the Fiscal Year (FY) 2005 (05) Historical Release Report (HRR).

2.0 SITE CHARACTERIZATION

IHSS Group 700-8 characterization information consists of historical knowledge, previously collected analytical data, and accelerated action analytical data. Historical information for IHSS Group 700-8 was derived from previous studies (DOE 1992-2003, 2000, 2001, 2003). Historical information and data are presented in Section 2.1.

Accelerated action analytical data for IHSS Group 700-8 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 November 11, 2004.

2.1 Historical Information and Data

The 750 Pad was constructed in 1969 and was initially used as a parking lot for Building 750. According to the IASAP (DOE 2001), the 750 Pad is constructed of a 6-inch-thick aggregate layer overlain by a 2-inch-thick asphaltic concrete layer. The pad is located approximately at grade, and slopes 2 percent to the east. Of the original 220,000 square feet (ft²), 104,000 ft² are or have been used for waste storage.

Figure 1
IHSS Group 700-8
Accelerated Action Characterization
General Location

Key

-  IHSS
-  Standing building
-  Demolished building
-  Pond
-  Stream or ditch
-  Paved area
-  Dirt road



Scale = 1:8000

500 0 500 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:



12.15.04

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IHSS Group 700-8

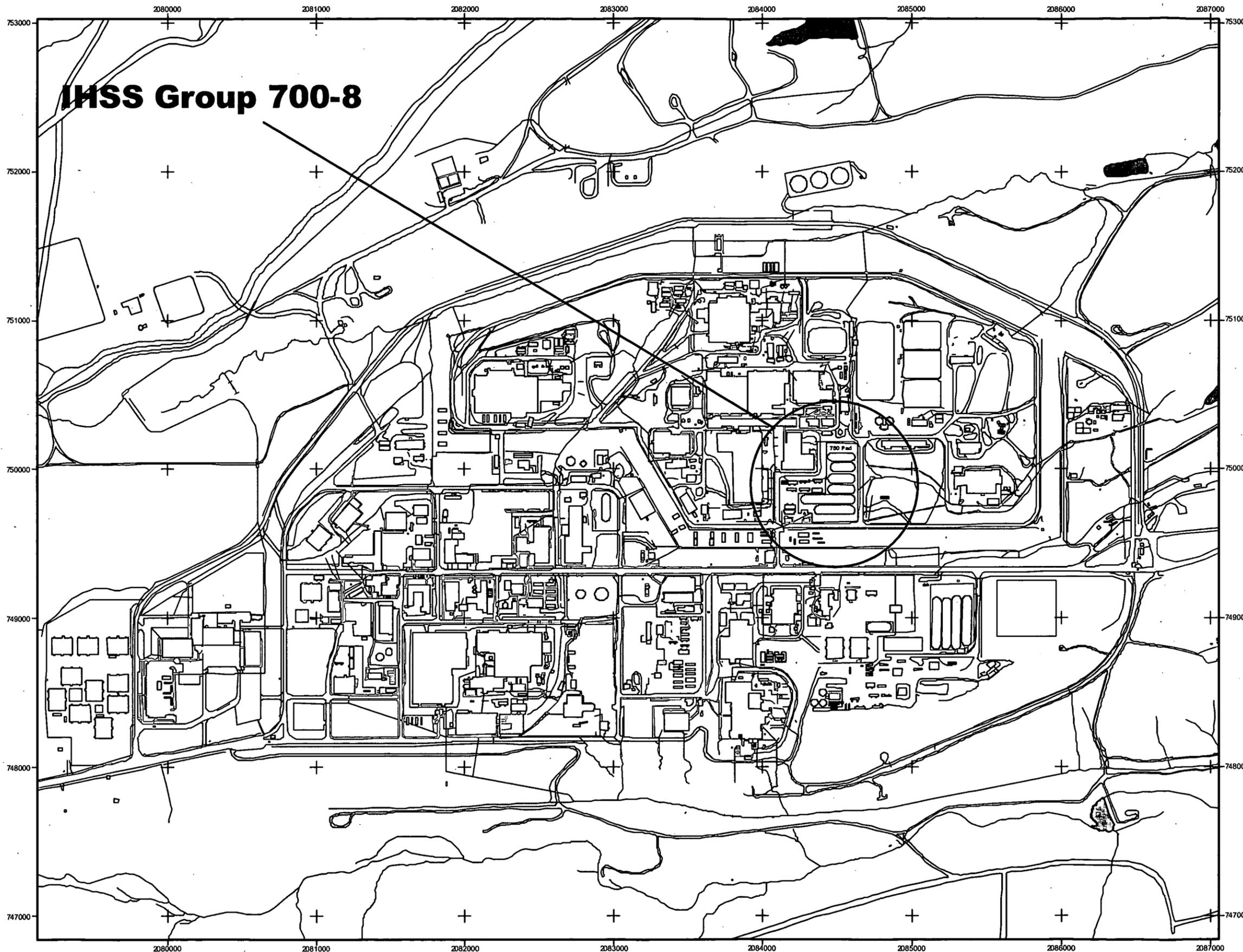
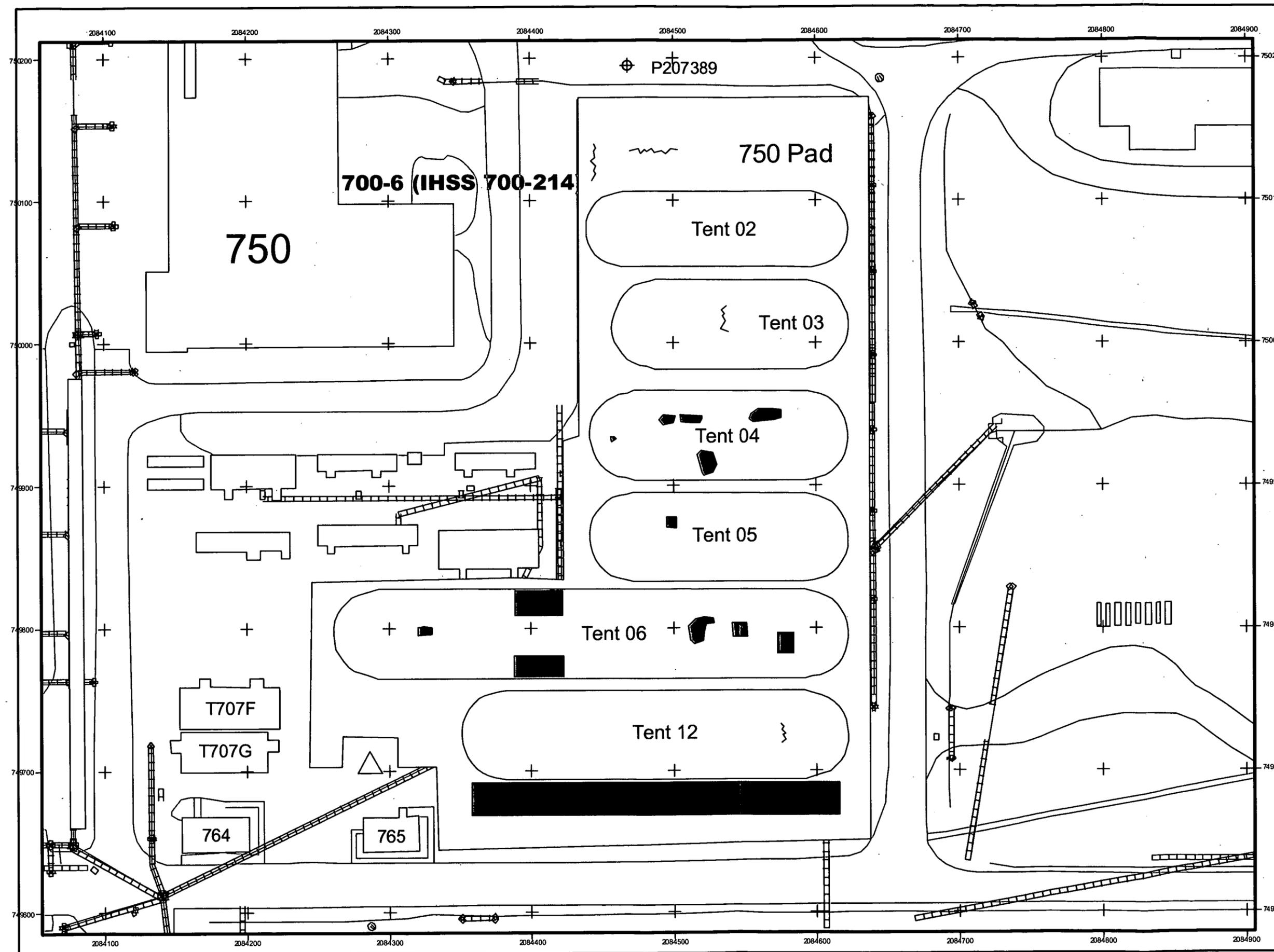
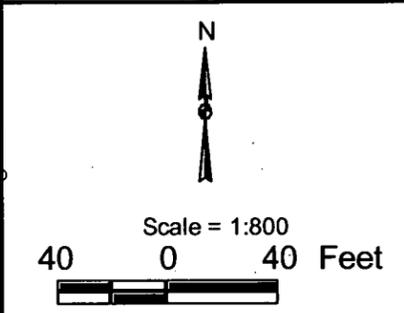


Figure 2
IHSS Group 700-8
Accelerated Action Characterization
Detailed Layout



- KEY**
- Monitoring well
 - IHSS Group 700-8
 - Standing building
 - Demolished building
 - Spill area
 - Patched asphalt
 - Low-level waste storage area
 - Stream or ditch
 - Paved area
 - Dirt road
 - Storm Sewer



State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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

Prepared By:

Prepared For:

12.15.04
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Waste storage began on November 18, 1986. In 1986, prior to start of waste storage, 142,000 ft² of the 750 Pad was covered with Petromat and 3 inches of asphalt, and 8-inch-high asphalt berms were constructed along the east and portions of the northern and southern sides of the pad (DOE 2001).

Runoff from the 750 Pad is collected in seven stormwater inlets between 10th Street and the 750 Pad. The stormwater inlets are directly piped to a culvert that drains to South Walnut Creek. All runoff water storage behind the 8-inch berm occurs in the immediate vicinity of the storm water inlets. Calculated storage potential behind the berm is approximately 500 cubic feet (ft³). Any precipitation event that exceeds approximately 0.03 inch will result in runoff flowing over the berms (DOE 2001).

Pondcrete and saltcrete were stored within the bermed area of the 750 Pad. Pondcrete was a low-level mixed waste composed of sludge or sediment from the Solar Evaporation Ponds (SEP) mixed with Portland cement. Saltcrete was a low-level mixed waste composed of process waste from Building 374 mixed with Portland cement. The material was placed in polyethylene-lined, 3/4-inch plywood boxes measuring 4 feet (ft) by 2.5 ft by 7 ft, and stacked three high on the pad. Metal boxes measuring 4 ft by 4 ft by 7 ft were also used (DOE 2001).

The maximum waste storage inventory of the 750 Pad was 12,168 boxes of waste, accounting for approximately 183,000 ft³ of waste (9,000 tons, assuming a density of 100 pounds/ft³). The inventory, as of September 30, 1989, consisted of 8,881 wooden boxes of pondcrete, 157 metal boxes of pondcrete, and 855 wooden boxes of saltcrete (DOE 2001).

Production of pondcrete ceased on May 23, 1988, in response to spills on the 904 Pad. During a detailed inspection of waste stored on the 750 Pad, approximately 5 percent (440) of pondcrete boxes were identified as being of poor quality (that is, containing unhardened pondcrete). Severely deformed boxes of waste were transferred to metal boxes or to Building 788 and stored for reprocessing.

Between November 1, 1988, and July 25, 1989, a total of 64 saltcrete boxes were identified as leaking during routine inspections. Approximately 113 pounds (lbs) of saltcrete leaked or spilled on to the 750 Pad. The spill locations were cleaned by vacuuming until radiation levels measured below detection limits on the instruments being used for the cleanup. The quantity of saltcrete that was retrieved is unknown.

From November 18, 1986, to September 1, 1989, two spills of pondcrete occurred. The spills, totaling approximately 0.5 ft³, were released to the asphalt pad. Both spills consisted of unhardened SEP sludge and cement. Following each incident, the entire contents of the failed container and spilled pondcrete were transferred to metal boxes. The spill locations were then cleaned using water and brooms to scrub the 750 Pad surface. The brooms were used to remove pondcrete from the crevices in the asphalt. Water was collected using wet vacuums. Cleaning continued until radiation levels measured below detection limits on the instruments being used for the cleanup.

During a site visit in May 1990, wet and severely deformed cardboard boxes were observed being transported into storage tents. Torn boxes with exposed plastic inner liners were also observed (DOE 2001).

Portable air monitors were moved to the 750 Pad shortly after the spill incidents. Based on these air monitors, no releases exceeded the Site Screening Guide for plutonium (0.01 picocurie per cubic meter [pCi/m³]). No soil monitoring was conducted at the 750 Pad to determine whether precipitation had transported contaminants to the soil (DOE 2001).

According to the 1992 HRR (DOE 1992-2003), portable buildings were constructed to prevent precipitation from coming in contact with the waste. Pondcrete was being stored at the 750 Pad as late as 2001 (DOE 2001).

Beginning in the mid-1990's, SEP sludge was stored in tanks. Units 750.2A, B and C were comprised of 82 10,000-gallon tanks. Each tank was double-walled and constructed of high-density polyethylene (HDPE). Seventy-nine tanks were used to store sludge that was generated from the Solar Pond remediation project. The remaining three tanks were never used, but they served as overflow protection. Twenty-seven of the tanks contained sludge generated from A and B ponds and the remaining fifty-two tanks were filled with waste generated from C Pond and the clarifier. The sludge was characterized with EPA hazardous waste codes F001, F002, F005, F006, F007 and F009. In addition, once the solar pond sludge was removed from tank 25.077, the tank was then reused to process sludge from Building 374. The additional EPA hazardous waste codes for this tank were P030, P098, P099, P106, U003, U103, and U108.

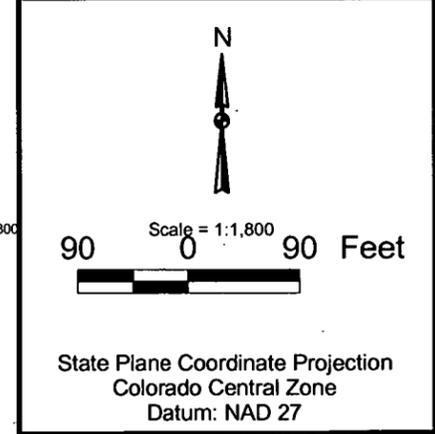
The closure method employed for these tanks were documented in PRO-1505-750Pad-PSTANK-DECON, Pond Sludge Tank Decontamination for 750Pad Project. Tank decontamination methodology consisted of removing the waste, high pressure wash, size reduction, cleaning/decontamination and verification of "clean debris surface" as defined in Part 268, Table 1, Note3. The tanks pieces and ancillary equipment was either packaged as sanitary waste, low-level waste (LLW) or low-level mixed waste (LLMW). In general, tank pieces with no visible pond sludge material/debris or had no contact with the sludge were managed as sanitary waste. Tank pieces with visible pond sludge material/debris that were verified clean after being rinsed and wiped down with a decon solution were managed as LLW. And tank pieces with visible pond sludge were managed as LLMW. All waste has been packaged and shipped offsite for future disposal. The last tank was removed by closure by December 18, 2003.

Contaminant concentrations in soil collected from 15 sampling locations at IHSS Group 700-8 were less than the Rocky Flats Cleanup Agreement (RFCA) wildlife refuge worker (WRW) action levels (ALs). Plutonium-239/240 and americium-241 activities, and cyanide, nitrite, and metal concentrations in soil, were greater than method detection limits (MDLs) or background at several locations. Volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs) were also detected at several locations. Historical soil and sediment data greater than MDLs or background levels (background referring to mean concentration plus two standard deviations) are shown on Figure 3.

Figure 3
IHSS Group 700-8
Historical Soil and Sediment Data
Greater than MDLs or Background*

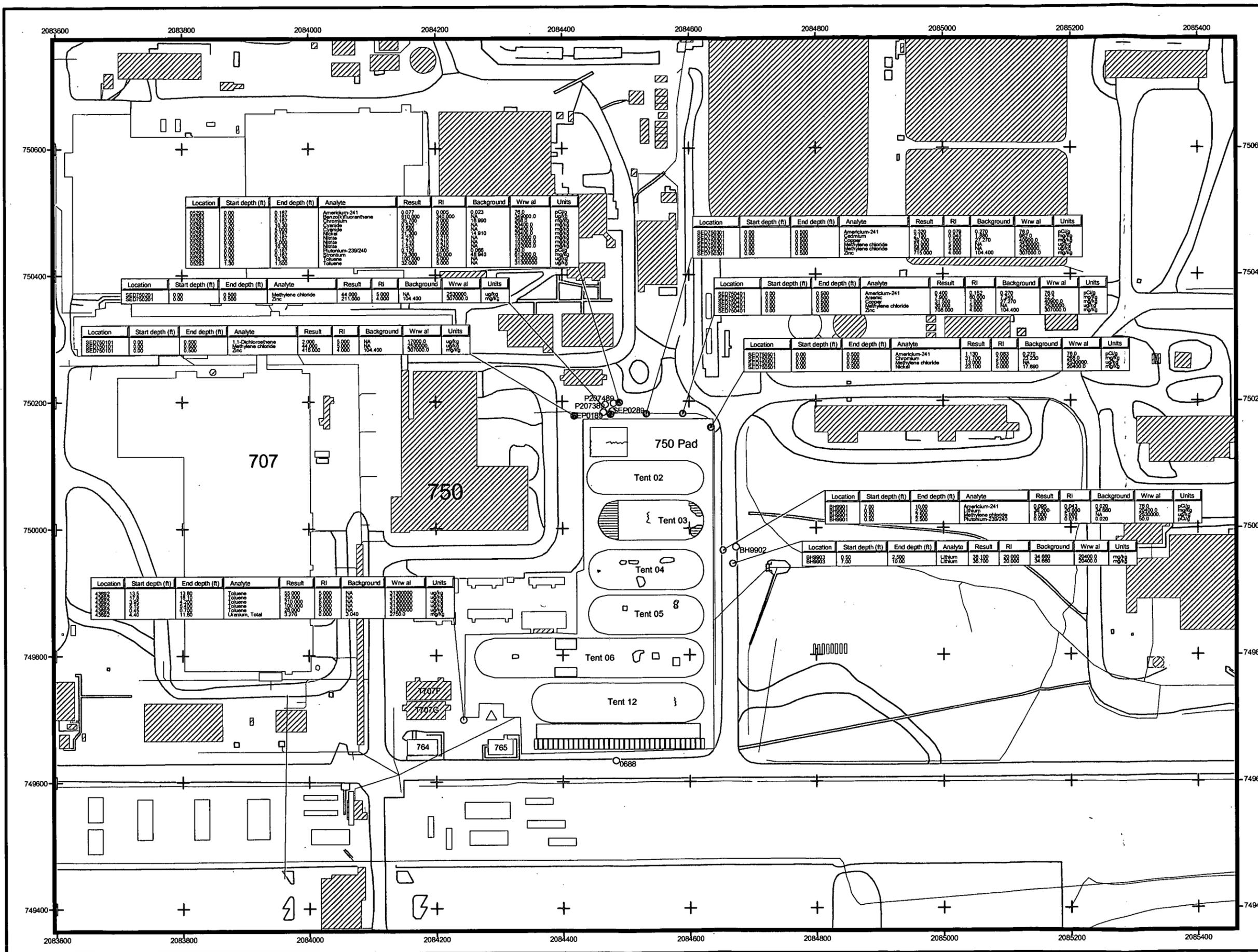
KEY

- Location with concentrations greater than reporting limits or background levels
 - Location with concentrations less than method detection limits or background
 - IHSS Group 700-8
 - ▭ Standing building
 - ▨ Demolished building
 - ▧ Spill area
 - ▩ Patched asphalt
 - Low-level waste storage area
 - ~ Stream or ditch
 - ~ Paved area
 - ~ Dirt road
- RI = reporting limit
* Background = background mean plus two standard deviations
Wrww al = wildlife refuge worker action level



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

Prepared By: **RADMS**
Prepared For: **KAISER HILL COMPANY**



Analysis of surface water samples collected in the area of IHSS 700-214 indicates the presence of gross alpha, gross beta, nitrate, cyanide, and cadmium. Analysis of groundwater samples collected from upgradient well P207389 indicates detections of metals and other inorganics including calcium, magnesium, manganese, and sulfate. Radionuclides detected include americium-241, tritium, uranium-233, uranium-235, and uranium-236 (DOE 2001). No downgradient analytical data are available.

2.2 Accelerated Action Characterization Data

Accelerated action characterization soil sampling was conducted from August 31, 2004 through September 28, 2004, in accordance with IASAP Addendum #IA-04-12 (DOE 2004a). Table 1 presents a summary of accelerated action sampling and analyses.

Surface and subsurface soil samples were collected from 55 locations (statistical and biased). Statistical sampling locations were selected using a 22-meter sampling grid, and biased sampling locations targeted known spill areas, paved areas where the asphalt was cracked or failing, and paved areas that had been patched or repaired. Sediment samples were collected from the seven storm drain inlets located along the eastern perimeter of the 750 Pad.

Table 1
IHSS Group 700-8 Accelerated Action Sampling and Analysis Summary

Category	Planned Total	Actual Total
Number of Sampling Locations	62	62
Number of Samples	117	117
Number of Radionuclide Analyses	117	117
Number of Metal Analyses	117	117
Number of PCB Analyses	117	117
Number of SVOC Analyses	117	117
Number of VOC Analyses	55	55

Sediment samples were collected from 0 to 0.3 ft below ground surface (bgs) in the storm drains. Soil samples were collected from under the asphalt pad (surface samples from 0 to 0.5 ft bgs and subsurface samples from 0.5 to 2.5 ft bgs). A total of 117 soil samples (55 surface, 55 subsurface, and 7 sediment) were analyzed for radionuclides, metals (including beryllium and lithium), polychlorinated biphenyls (PCBs), and semivolatile organic compounds (SVOCs). In addition, the 55 subsurface soil samples were analyzed for VOCs.

IASAP Addendum #IA-04-12 (DOE 2004a) sampling specifications, and deviations with explanations, are presented Table 2. Complete surface and subsurface sample intervals were collected at all planned sampling locations, and all planned analyses were conducted. Some planned sampling locations were moved (see explanations in Table 2).

Table 2
IHSS Group 700-8 Accelerated Action Characterization
Sampling Specifications and Deviations

Location	Planned Northing	Planned Easting	Actual Northing	Actual Easting	Media	Sample Interval (ft bgs)	Analytes	Deviations
CH41-000	749740.434	2084278.498	749740.499	2084278.440	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location to increase spatial coverage; collected under 0.5 ft of asphalt; no significant differences.
CH42-000	749831.568	2084260.667	749831.530	2084260.650	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.25 ft of asphalt; no significant differences.
CH42-001	749773.857	2084303.718	749773.860	2084303.720	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.5 ft of asphalt; no significant differences.
CH42-002	749795.413	2084318.930	749799.938	2084322.915	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at asphalt patch; collected under 0.4 ft of asphalt; relocated 4.5 ft north, 3.9 ft east to fall on asphalt patch.
CI41-000	749733.001	2084489.780	749733.010	2084489.725	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.6 ft of asphalt; no significant differences.
CI41-001	749675.290	2084532.831	749675.298	2084532.846	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.6 ft of asphalt; no significant differences.
CI41-002	749724.573	2084418.274	749724.567	2084418.266	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.5 ft of asphalt; no significant differences.

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Data Summary Report for IHSS Group 700-8

Location	Planned Northing	Planned Easting	Actual Northing	Actual Easting	Media	Sample Interval (ft bgs)	Analytes	Deviations
CI41-003	749666.862	2084461.326	749674.862	2084461.386	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.8 ft of asphalt; moved 8 ft north because original location was under storage boxes on the south side of the pad.
CI41-004	749716.146	2084346.769	749713.584	2084359.523	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.5 ft of asphalt; relocated 3 ft south and 14 ft east because it was supposed to be inside of tent and the planned coordinates located it outside of the tent.
CI41-005	749658.434	2084389.821	749658.365	2084409.838	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.5 ft of asphalt; relocated 20 ft east because original location fell under area of large storage boxes.
CI41-006	749680.160	2084391.770	749683.153	2084391.765	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location in repaved area south of Tent 12; collected under 0.4 ft of asphalt; relocated 3 ft north to fall on repaved area.
CI42-000	749922.991	2084503.636	749921.008	2084519.882	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at asphalt patch; collected under 0.5 ft of asphalt; relocated 2 ft south, 16.2 ft east to fall on patch.
CI42-001	749914.563	2084432.131	749914.872	2084428.130	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.4 ft of asphalt; relocated 4 ft west to achieve required clearance of utilities.
CI42-002	749856.852	2084475.182	749856.798	2084475.179	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.3 ft of asphalt; no significant differences.

Data Summary Report for IHSS Group 700-8

Location	Planned Northing	Planned Easting	Actual Northing	Actual Easting	Media	Sample Interval (ft. bgs)	Analytes	Deviations
CI42-003	749799.140	2084518.233	749799.139	2084518.180	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location and biased near asphalt patch; collected under 0.3 ft of asphalt; no significant differences.
CI42-004	749790.713	2084446.728	749790.717	2084446.742	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.5 ft of asphalt; no significant differences.
CI42-005	749782.285	2084375.223	749782.290	2084375.220	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.5 ft of asphalt; no significant differences.
CI42-006	749818.464	2084404.678	749818.460	2084404.680	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at asphalt patch; collected under 0.75 ft of asphalt; no significant differences.
CI42-007	749772.362	2084404.678	749772.360	2084404.680	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at asphalt patch; collected under 1.0 ft of asphalt; no significant differences.
CI42-008	749884.849	2084498.725	749873.583	2084501.830	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at asphalt patch; collected under 0.4 ft of asphalt; relocated 11.3 ft south, 3.1 ft east to fall on patch.
CI42-009	749954.001	2084495.037	749947.390	2084507.602	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at asphalt patch; collected under 0.3 ft of asphalt; relocated 6.6 ft south, 12.6 ft east to fall on patch.
CI42-010	749954.001	2084475.674	749948.606	2084494.189	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at asphalt patch; collected under 0.3 ft of asphalt; relocated 5.4 ft south, 18.5 ft east to fall on patch.

Data Summary Report for IHSS Group 700-8

Location	Planned Northing	Planned Easting	Actual Northing	Actual Easting	Media	Sample Interval (ft bgs)	Analytes	Deviations
CI42-011	749932.795	2084457.234	749932.801	2084457.273	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at depression in asphalt; collected under 0.4 ft of asphalt; no significant differences.
CI43-000	750112.980	2084517.493	750112.920	2084517.533	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.4 ft of asphalt; no significant differences.
CI43-001	750104.552	2084445.988	750104.485	2084445.987	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.4 ft of asphalt; no significant differences.
CI43-002	750046.841	2084489.039	750046.840	2084489.040	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location and biased sampling location at former spill area; collected under 0.4 ft of asphalt; no significant differences.
CI43-003	749989.130	2084532.090	749989.130	2084532.090	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.3 ft of asphalt; no significant differences.
CI43-004	749980.702	2084460.585	749980.678	2084460.553	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.3 ft of asphalt; no significant differences.
CI43-005	750013.011	2084461.844	750013.010	2084461.840	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at former spill area; collected under 0.3 ft of asphalt; no significant differences.
CI43-006	749991.804	2084481.206	749991.800	2084481.210	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at former spill area; collected under 0.3 ft of asphalt; no significant differences.

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Location	Planned Northing	Planned Easting	Actual Northing	Actual Easting	Media	Sample Interval (ft. bgs)	Analytes	Deviations
CI43-007	750128.264	2084449.857	750128.451	2084443.542	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at crack in asphalt; collected under 0.3 ft of asphalt; relocated 6 ft west to fall on crack.
CI43-008	750140.250	2084480.284	750135.493	2084474.308	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at crack in asphalt; collected under 0.3 ft of asphalt; relocated 4.7 ft south and 6 ft west to fall on crack.
CI43-009	750076.003	2084480.492	750076.004	2084480.537	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location to increase spatial coverage; collected under 0.4 ft of asphalt; no significant differences.
CI44-000	750170.691	2084474.441	750174.208	2084474.527	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; relocated 3.5 ft north because planned location fell on top of a concrete curb; hand-augered in grass.
CJ41-000	749749.857	2084632.790	749749.880	2084632.743	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.6 ft of asphalt; no significant differences.
CJ41-001	749741.429	2084561.285	749741.428	2084561.276	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.3 ft of asphalt; no significant differences.
CJ41-002	749683.718	2084604.336	749683.686	2084604.355	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.8 ft of asphalt; no significant differences.
CJ41-003	749725.339	2084571.565	749726.166	2084577.863	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at crack in asphalt; collected under 0.4 ft of asphalt; relocated 0.8 ft north, 6.3 ft east to fall on crack.

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Data Summary Report for IHSS Group 700-8

Location	Planned Northing	Planned Easting	Actual Northing	Actual Easting	Media	Sample Interval (ft bgs)	Analytes	Deviations
CJ41-004	749743.805	2084639.701	749752.091	2084640.132	Sediment	0 - 0.3	Radionuclides, Metals, PCBs, SVOCs	Biased sampling location at storm drain; relocated 8.2 ft north to fall on storm drain.
CJ42-000	749931.418	2084575.141	749931.438	2084575.140	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.6 ft of asphalt; no significant differences.
CJ42-001	749873.707	2084618.192	749875.579	2084611.955	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.3 ft of asphalt; relocated 1.8 ft north, 6.2 ft west to achieve safe Geoprobe clearance of Tent 05.
CJ42-002	749865.279	2084546.687	749880.284	2084546.689	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.3 ft of asphalt; relocated 15 ft north because original location fell on Tent 05 permicon.
CJ42-003	749807.568	2084589.738	749793.948	2084580.517	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at asphalt patch; collected under 0.3 ft of asphalt; relocated 13.6 ft south, 9.2 ft west to fall on patch
CJ42-004	749799.101	2084558.656	749799.015	2084548.176	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at asphalt patch; collected under 0.3 ft of asphalt; relocated 10.5 ft west to fall on patch.
CJ42-005	749955.845	2084580.785	749950.795	2084573.451	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at asphalt patch; collected under 0.4 ft of asphalt; relocated 5 ft south and 7.3 ft west to fall on patch.
CJ42-006	749938.530	2084639.287	749931.960	2084639.648	Sediment	0 - 0.3	Radionuclides, Metals, PCBs, SVOCs	Biased sampling location at storm drain; relocated 6.5 ft south to fall on storm drain.

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Location	Planned Northing	Planned Easting	Actual Northing	Actual Easting	Media	Sample Interval (ft bgs)	Analytes	Deviations
CJ42-007	749855.254	2084640.944	749871.408	2084640.010	Sediment	0 - 0.3	Radionuclides, Metals, PCBs, SVOCs	Biased sampling location at storm drain; relocated 16 ft north to fall on storm drain.
CJ42-008	749819.624	2084638.873	749810.575	2084641.687	Sediment	0 - 0.3	Radionuclides, Metals, PCBs, SVOCs	Biased sampling location at storm drain; relocated 9 ft south and 2.8 ft east to fall on storm drain.
CJ42-009	749879.260	2084577.796	749879.271	2084577.746	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at former spill area; collected under 0.3 ft of asphalt; no significant differences.
CJ43-001	750121.408	2084588.998	750121.382	2084588.940	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.4 ft of asphalt; no significant differences.
CJ43-002	750063.697	2084632.049	750063.679	2084632.034	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.3 ft of asphalt; no significant differences.
CJ43-003	750055.269	2084560.544	750055.250	2084560.548	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Statistical sampling location; collected under 0.3 ft of asphalt; no significant differences.
CJ43-004	749997.558	2084603.595	749997.553	2084603.615	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at former spill area; collected under 0.5 ft of asphalt; no significant differences.
CJ43-005	750018.543	2084538.372	750014.720	2084535.533	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at crack in asphalt; collected under 0.4 ft of asphalt; relocated 3.8 ft south and 2.8 ft west to fall on crack.

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Location	Planned Northing	Planned Easting	Actual Northing	Actual Easting	Media	Sample Interval (ft bgs)	Analytes	Deviations
CJ43-006	750034.218	2084605.680	750034.229	2084605.705	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at former spill; collected under 0.3 ft of asphalt; no significant differences.
CJ43-007	750023.153	2084614.900	750023.150	2084614.897	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at former spill; collected under 0.4 ft of asphalt; no significant differences.
CJ43-008	749999.181	2084615.822	750000.170	2084614.470	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location at former spill; collected under 0.5 ft of asphalt; relocated 1.5 ft northwest of tent to safely sample with the Geoprobe.
CJ43-009	750110.054	2084639.287	750112.572	2084638.937	Sediment	0 - 0.3	Radionuclides, Metals, PCBs, SVOCs	Biased sampling location at storm drain; relocated 1.5 ft east to fall on storm drain.
CJ43-010	750049.979	2084639.287	750052.185	2084639.655	Sediment	0 - 0.3	Radionuclides, Metals, PCBs, SVOCs	Biased sampling location at storm drain; relocated 2 ft east to fall on storm drain.
CJ43-011	749990.733	2084639.287	749992.057	2084639.733	Sediment	0 - 0.3	Radionuclides, Metals, PCBs, SVOCs	Biased sampling location at storm drain; relocated 1.5 ft east to fall on storm drain.
CJ43-012	750093.500	2084578.649	750093.498	2084578.646	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location to increase spatial coverage; collected under 3 ft of asphalt; no significant differences.
CJ44-016	750162.526	2084619.210	750156.212	2084617.740	Surface Soil Subsurface Soil	0 - 0.5 0.5 - 2.5	Radionuclides, Metals, PCBs, SVOCs, VOCs; surface soil not analyzed for VOCs	Biased sampling location to increase spatial coverage; collected under 0.5 ft of asphalt; relocated 6.5 ft south because of transformer.

Sampling locations and analytical results greater than reporting limits (RLs) or background are listed in Table 3 and shown on Figures 4, 5, and 6. 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. As shown, no contaminant concentrations were greater than the WRW ALs. Summary statistics for the project's analytical results are presented by analyte in Tables 4 and 5, respectively.

2.3 SORs

RFCA sums of ratios (SORs) were calculated for the IHSS Group 700-8 sampling locations based on the accelerated action analytical data for the contaminants of concern (COCs). SORs are not calculated for sediment sampling locations. Radionuclide SOR calculations included americium-241, plutonium-239/240, uranium-234, uranium-235, and uranium-238 when results were greater than background. 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 in soil from 0 to 2.5 ft bgs. All radionuclide SORs were less than 1.

Surface soil SORs for nonradionuclide COCs are shown in Table 7. Nonradionuclide SORs were calculated for all locations with analytical results greater than 10 percent of the WRW ALs. Aluminum, arsenic, iron, manganese, and PAHs were not included in the nonradionuclide SOR calculations. All nonradionuclide SORs for surface soil were less than 1.

3.0 RCRA UNIT CLOSURE

RCRA-permitted container storage unit MS001, Subunit 750.1 will be closed in accordance with Part X of RFETS RCRA Permit # CO-04-06-23-01. Closure of the storage unit is subject to the Closure Plan as described in Part X, and the subsequent Closure Description Document (CDD) that identifies the portions or sections of the Closure Plan that are applicable to the specific permitted unit closure requirements. A CDD entitled Closure Description Document for RCRA-Permitted Container Storage Unit MS001, Subunit 750.1 will be submitted to CDPHE. The CDD will describe the closure method(s) that will be used to complete final closure of this RCRA container storage unit. Closure activities will be documented in a closure summary report.

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Table 3
IHSS Group 700-8 Accelerated Action Characterization
Sediment and Soil Data Greater Than RL or Background^a

Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
Sediment										
CJ41-004	2084640.132	749752.091	0	0.3	Benzo(b)fluoranthene	56.000	34.000	----	34900	ug/kg
CJ41-004	2084640.132	749752.091	0	0.3	bis(2-Ethylhexyl)phthalate	2700.000	86.000	----	1970000	ug/kg
CJ41-004	2084640.132	749752.091	0	0.3	Chromium	49.000	----	23.230	268	mg/kg
CJ41-004	2084640.132	749752.091	0	0.3	Chrysene	68.000	33.000	----	3490000	ug/kg
CJ41-004	2084640.132	749752.091	0	0.3	Di-n-octylphthalate	3300.000	64.000	----	14700000	ug/kg
CJ41-004	2084640.132	749752.091	0	0.3	Fluoranthene	47.000	27.000	----	27200000	ug/kg
CJ41-004	2084640.132	749752.091	0	0.3	Lead	170.000	----	95.600	1000	mg/kg
CJ41-004	2084640.132	749752.091	0	0.3	Uranium-234	4.541	----	3.980	300	pCi/g
CJ41-004	2084640.132	749752.091	0	0.3	Uranium-238	4.541	----	3.460	351	pCi/g
CJ42-006	2084639.648	749931.960	0	0.3	Anthracene	67.000	28.000	----	204000000	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Aroclor-1254	33.000	7.900	----	12400	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Benzo(a)anthracene	300.000	29.000	----	34900	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Benzo(a)pyrene	370.000	47.000	----	3490	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Benzo(b)fluoranthene	350.000	34.000	----	34900	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Benzo(k)fluoranthene	340.000	37.000	----	349000	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	bis(2-Ethylhexyl)phthalate	1700.000	84.000	----	1970000	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Butylbenzylphthalate	100.000	77.000	----	147000000	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Chrysene	410.000	32.000	----	3490000	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Dibenz(a,h)anthracene	71.000	29.000	----	3490	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Dimethylphthalate	140.000	47.000	----	1000000000	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Di-n-octylphthalate	1500.000	62.000	----	14700000	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Fluoranthene	1000.000	26.000	----	27200000	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Indeno(1,2,3-cd)pyrene	220.000	26.000	----	34900	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Pentachlorophenol	570.000	130.000	----	162000	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Pyrene	680.000	160.000	----	22100000	ug/kg
CJ42-006	2084639.648	749931.960	0	0.3	Uranium-235	0.182	----	0.150	8	pCi/g
CJ42-006	2084639.648	749931.960	0	0.3	Zinc	220.000	----	104.400	307000	mg/kg
CJ42-007	2084640.010	749871.408	0	0.3	Benzo(a)anthracene	63.000	28.000	----	34900	ug/kg

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Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CJ42-007	2084640.010	749871.408	0	0.3	Benzo(a)pyrene	79.000	46.000	----	3490	ug/kg
CJ42-007	2084640.010	749871.408	0	0.3	Benzo(b)fluoranthene	75.000	33.000	----	34900	ug/kg
CJ42-007	2084640.010	749871.408	0	0.3	Benzo(k)fluoranthene	66.000	37.000	----	349000	ug/kg
CJ42-007	2084640.010	749871.408	0	0.3	bis(2-Ethylhexyl)phthalate	1400.000	83.000	----	1970000	ug/kg
CJ42-007	2084640.010	749871.408	0	0.3	Chrysene	94.000	32.000	----	3490000	ug/kg
CJ42-007	2084640.010	749871.408	0	0.3	Dimethylphthalate	75.000	46.000	----	100000000	ug/kg
CJ42-007	2084640.010	749871.408	0	0.3	Di-n-octylphthalate	1400.000	61.000	----	14700000	ug/kg
CJ42-007	2084640.010	749871.408	0	0.3	Fluoranthene	190.000	26.000	----	27200000	ug/kg
CJ42-007	2084640.010	749871.408	0	0.3	Indeno(1,2,3-cd)pyrene	48.000	26.000	----	34900	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	Americium-241	0.777	----	0.270	76	pCi/g
CJ42-008	2084641.687	749810.575	0	0.3	Anthracene	57.000	29.000	----	204000000	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	Benzo(a)anthracene	120.000	30.000	----	34900	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	Benzo(a)pyrene	120.000	49.000	----	3490	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	Benzo(b)fluoranthene	140.000	35.000	----	34900	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	Benzo(k)fluoranthene	110.000	39.000	----	349000	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	bis(2-Ethylhexyl)phthalate	8800.000	180.000	----	1970000	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	Butylbenzylphthalate	220.000	80.000	----	147000000	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	Chromium	24.000	----	23.230	268	mg/kg
CJ42-008	2084641.687	749810.575	0	0.3	Chrysene	190.000	34.000	----	3490000	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	Di-n-octylphthalate	9800.000	130.000	----	14700000	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	Fluoranthene	380.000	28.000	----	27200000	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	Indeno(1,2,3-cd)pyrene	72.000	28.000	----	34900	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	Plutonium-239/240	4.429	----	1.350	50	pCi/g
CJ42-008	2084641.687	749810.575	0	0.3	Pyrene	260.000	160.000	----	22100000	ug/kg
CJ42-008	2084641.687	749810.575	0	0.3	Zinc	330.000	----	104.400	307000	mg/kg
CJ43-009	2084638.937	750112.572	0	0.3	Anthracene	50.000	28.000	----	204000000	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Benzo(a)anthracene	150.000	30.000	----	34900	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Benzo(a)pyrene	190.000	48.000	----	3490	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Benzo(b)fluoranthene	180.000	35.000	----	34900	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Benzo(k)fluoranthene	180.000	38.000	----	349000	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	bis(2-Ethylhexyl)phthalate	2700.000	86.000	----	1970000	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Butylbenzylphthalate	210.000	79.000	----	147000000	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Chrysene	210.000	33.000	----	3490000	ug/kg

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Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CJ43-009	2084638.937	750112.572	0	0.3	Copper	33.000	----	27.270	40900	mg/kg
CJ43-009	2084638.937	750112.572	0	0.3	Dibenz(a,h)anthracene	44.000	30.000	----	3490	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Dimethylphthalate	490.000	48.000	----	1000000000	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Di-n-octylphthalate	3000.000	64.000	----	14700000	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Fluoranthene	510.000	27.000	----	27200000	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Indeno(1,2,3-cd)pyrene	100.000	27.000	----	34900	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Pentachlorophenol	420.000	140.000	----	162000	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Pyrene	350.000	160.000	----	22100000	ug/kg
CJ43-009	2084638.937	750112.572	0	0.3	Uranium-235	0.169	----	0.150	8	pCi/g
CJ43-010	2084639.655	750052.185	0	0.3	Anthracene	78.000	26.000	----	204000000	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	Benzo(a)anthracene	240.000	27.000	----	34900	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	Benzo(a)pyrene	260.000	45.000	----	3490	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	Benzo(b)fluoranthene	250.000	32.000	----	34900	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	Benzo(k)fluoranthene	230.000	35.000	----	349000	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	bis(2-Ethylhexyl)phthalate	810.000	80.000	----	1970000	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	Butylbenzylphthalate	74.000	73.000	----	147000000	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	Chrysene	310.000	31.000	----	3490000	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	Dibenz(a,h)anthracene	55.000	27.000	----	3490	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	Di-n-octylphthalate	790.000	59.000	----	14700000	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	Fluoranthene	850.000	25.000	----	27200000	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	Indeno(1,2,3-cd)pyrene	130.000	25.000	----	34900	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	Pyrene	530.000	150.000	----	22100000	ug/kg
CJ43-010	2084639.655	750052.185	0	0.3	Uranium-235	0.176	----	0.150	8	pCi/g
CJ43-010	2084639.655	750052.185	0	0.3	Zinc	170.000	----	104.400	307000	mg/kg
CJ43-011	2084639.733	749992.057	0	0.3	Benzo(a)anthracene	89.000	31.000	----	34900	ug/kg
CJ43-011	2084639.733	749992.057	0	0.3	Benzo(a)pyrene	110.000	50.000	----	3490	ug/kg
CJ43-011	2084639.733	749992.057	0	0.3	Benzo(b)fluoranthene	120.000	36.000	----	34900	ug/kg
CJ43-011	2084639.733	749992.057	0	0.3	Benzo(k)fluoranthene	110.000	40.000	----	349000	ug/kg
CJ43-011	2084639.733	749992.057	0	0.3	Benzoic Acid	1400.000	360.000	----	1000000000	ug/kg
CJ43-011	2084639.733	749992.057	0	0.3	bis(2-Ethylhexyl)phthalate	3400.000	90.000	----	1970000	ug/kg
CJ43-011	2084639.733	749992.057	0	0.3	Chrysene	160.000	35.000	----	3490000	ug/kg
CJ43-011	2084639.733	749992.057	0	0.3	Dimethylphthalate	140.000	50.000	----	1000000000	ug/kg
CJ43-011	2084639.733	749992.057	0	0.3	Di-n-octylphthalate	3600.000	67.000	----	14700000	ug/kg

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Data Summary Report for IHSS Group 700-8

Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CJ43-011	2084639.733	749992.057	0	0.3	Fluoranthene	260.000	28.000	----	27200000	ug/kg
CJ43-011	2084639.733	749992.057	0	0.3	Indeno(1,2,3-cd)pyrene	87.000	28.000	----	34900	ug/kg
CJ43-011	2084639.733	749992.057	0	0.3	Pyrene	220.000	170.000	----	22100000	ug/kg
<i>CJ43-011</i>	<i>2084639.733</i>	<i>749992.057</i>	<i>0</i>	<i>0.3</i>	<i>Uranium-234</i>	<i>4.571</i>	<i>----</i>	<i>3.980</i>	<i>300</i>	<i>pCi/g</i>
CJ43-011	2084639.733	749992.057	0	0.3	Uranium-235	0.241	----	0.150	8	pCi/g
CJ43-011	2084639.733	749992.057	0	0.3	Uranium-238	4.571	----	3.460	351	pCi/g
CJ43-011	2084639.733	749992.057	0	0.3	Zinc	120.000	----	104.400	307000	mg/kg
Surface and Subsurface Soil										
CH41-000	2084278.440	749740.499	0.5	2.5	2-Butanone	13.000	5.600	----	19200000	ug/kg
CH41-000	2084278.440	749740.499	0.5	2.5	Acetone	82.000	5.500	----	102000000	ug/kg
CH41-000	2084278.440	749740.499	0.5	2.5	Methylene chloride	1.900	0.950	----	2530000	ug/kg
CH41-000	2084278.440	749740.499	0.5	2.5	Plutonium-239/240	0.051	----	0.020	50	pCi/g
<i>CH42-000</i>	<i>2084260.650</i>	<i>749831.530</i>	<i>0</i>	<i>0.5</i>	<i>Uranium-234</i>	<i>4.084</i>	<i>----</i>	<i>2.253</i>	<i>300</i>	<i>pCi/g</i>
CH42-000	2084260.650	749831.530	0	0.5	Uranium-235	0.183	----	0.094	8	pCi/g
CH42-000	2084260.650	749831.530	0	0.5	Uranium-238	4.084	----	2.000	351	pCi/g
CH42-000	2084260.650	749831.530	0.5	2.5	2-Methylnaphthalene	37.000	34.000	----	20400000	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Acenaphthene	270.000	33.000	----	40800000	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Anthracene	370.000	26.000	----	204000000	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Benzo(a)anthracene	770.000	27.000	----	34900	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Benzo(a)pyrene	680.000	43.000	----	3490	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Benzo(b)fluoranthene	500.000	31.000	----	34900	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Benzo(k)fluoranthene	610.000	34.000	----	349000	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Chrysene	850.000	30.000	----	3490000	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Dibenz(a,h)anthracene	130.000	27.000	----	3490	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Dibenzofuran	110.000	39.000	----	2950000	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Fluoranthene	2300.000	24.000	----	27200000	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Fluorene	240.000	37.000	----	40800000	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Indeno(1,2,3-cd)pyrene	370.000	24.000	----	34900	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Naphthalene	77.000	34.000	----	3090000	ug/kg
CH42-000	2084260.650	749831.530	0.5	2.5	Pyrene	2000.000	140.000	----	22100000	ug/kg
<i>CH42-000</i>	<i>2084260.650</i>	<i>749831.530</i>	<i>0.5</i>	<i>2.5</i>	<i>Uranium-234</i>	<i>3.132</i>	<i>----</i>	<i>2.640</i>	<i>300</i>	<i>pCi/g</i>
CH42-000	2084260.650	749831.530	0.5	2.5	Uranium-235	0.205	----	0.120	8	pCi/g
CH42-000	2084260.650	749831.530	0.5	2.5	Uranium-238	3.132	----	1.490	351	pCi/g

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Data Summary Report for IHSS Group 700-8

Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CH42-001	2084303.720	749773.860	0	0.5	Uranium-235	0.333	----	0.094	8	pCi/g
CH42-001	2084303.720	749773.860	0.5	2.5	2-Butanone	15.000	5.300	----	192000000	ug/kg
CH42-001	2084303.720	749773.860	0.5	2.5	Acetone	70.000	5.200	----	102000000	ug/kg
CH42-001	2084303.720	749773.860	0.5	2.5	Copper	160.000	----	38.210	40900	mg/kg
CH42-001	2084303.720	749773.860	0.5	2.5	Methylene chloride	1.300	0.900	----	2530000	ug/kg
CH42-001	2084303.720	749773.860	0.5	2.5	Naphthalene	3.700	0.970	----	3090000	ug/kg
CH42-002	2084322.915	749799.938	0	0.5	Aroclor-1260	6.700	6.400	----	12400	ug/kg
CH42-002	2084322.915	749799.938	0	0.5	Uranium-234	3.191	----	2.253	300	pCi/g
CH42-002	2084322.915	749799.938	0	0.5	Uranium-235	0.192	----	0.094	8	pCi/g
CH42-002	2084322.915	749799.938	0	0.5	Uranium-238	3.191	----	2.000	351	pCi/g
CH42-002	2084322.915	749799.938	0.5	2.5	Anthracene	56.000	27.000	----	204000000	ug/kg
CH42-002	2084322.915	749799.938	0.5	2.5	Aroclor-1260	40.000	6.900	----	12400	ug/kg
CH42-002	2084322.915	749799.938	0.5	2.5	Benzo(a)anthracene	99.000	28.000	----	34900	ug/kg
CH42-002	2084322.915	749799.938	0.5	2.5	Benzo(a)pyrene	98.000	45.000	----	3490	ug/kg
CH42-002	2084322.915	749799.938	0.5	2.5	Benzo(b)fluoranthene	62.000	33.000	----	34900	ug/kg
CH42-002	2084322.915	749799.938	0.5	2.5	Benzo(k)fluoranthene	72.000	36.000	----	349000	ug/kg
CH42-002	2084322.915	749799.938	0.5	2.5	Chrysene	100.000	31.000	----	3490000	ug/kg
CH42-002	2084322.915	749799.938	0.5	2.5	Fluoranthene	250.000	26.000	----	27200000	ug/kg
CH42-002	2084322.915	749799.938	0.5	2.5	Indeno(1,2,3-cd)pyrene	59.000	26.000	----	34900	ug/kg
CH42-002	2084322.915	749799.938	0.5	2.5	Pyrene	260.000	150.000	----	22100000	ug/kg
CI41-000	2084489.725	749733.010	0	0.5	Antimony	0.720	----	0.470	409	mg/kg
CI41-000	2084489.725	749733.010	0	0.5	Benzo(a)anthracene	450.000	28.000	----	34900	ug/kg
CI41-000	2084489.725	749733.010	0	0.5	Chrysene	54.000	31.000	----	3490000	ug/kg
CI41-000	2084489.725	749733.010	0	0.5	Uranium-234	4.449	----	2.253	300	pCi/g
CI41-000	2084489.725	749733.010	0	0.5	Uranium-235	0.192	----	0.094	8	pCi/g
CI41-000	2084489.725	749733.010	0	0.5	Uranium-238	4.449	----	2.000	351	pCi/g
CI41-000	2084489.725	749733.010	0.5	2.5	Uranium-234	4.001	----	2.640	300	pCi/g
CI41-000	2084489.725	749733.010	0.5	2.5	Uranium-235	0.250	----	0.120	8	pCi/g
CI41-000	2084489.725	749733.010	0.5	2.5	Uranium-238	4.001	----	1.490	351	pCi/g
CI41-001	2084532.846	749675.298	0	0.5	Aluminum	24000.000	----	16902.000	228000	mg/kg
CI41-001	2084532.846	749675.298	0	0.5	Beryllium	1.100	----	0.966	921	mg/kg
CI41-001	2084532.846	749675.298	0	0.5	Chromium	18.000	----	16.990	268	mg/kg
CI41-001	2084532.846	749675.298	0.5	2.5	Uranium-235	0.145	----	0.120	8	pCi/g

Data Summary Report for IHSS Group 700-8

Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CI41-002	2084418.266	749724.567	0	0.5	Aluminum	19000.000	----	16902.000	228000	mg/kg
CI41-002	2084418.266	749724.567	0	0.5	Antimony	0.490	----	0.470	409	mg/kg
CI41-002	2084418.266	749724.567	0	0.5	Barium	1500.000	----	141.260	26400	mg/kg
CI41-002	2084418.266	749724.567	0	0.5	Beryllium	0.990	----	0.966	921	mg/kg
CI41-002	2084418.266	749724.567	0	0.5	Lithium	13.000	----	11.550	20400	mg/kg
CI41-002	2084418.266	749724.567	0	0.5	Uranium-234	3.659	----	2.253	300	pCi/g
CI41-002	2084418.266	749724.567	0	0.5	Uranium-235	0.151	----	0.094	8	pCi/g
CI41-002	2084418.266	749724.567	0	0.5	Uranium-238	3.659	----	2.000	351	pCi/g
CI41-002	2084418.266	749724.567	0.5	2.5	Uranium-234	4.161	----	2.640	300	pCi/g
CI41-002	2084418.266	749724.567	0.5	2.5	Uranium-235	0.249	----	0.120	8	pCi/g
CI41-002	2084418.266	749724.567	0.5	2.5	Uranium-238	4.161	----	1.490	351	pCi/g
CI41-003	2084461.386	749674.862	0.5	2.5	2-Butanone	7.600	5.600	----	192000000	ug/kg
CI41-003	2084461.386	749674.862	0.5	2.5	Acetone	58.000	5.500	----	102000000	ug/kg
CI41-003	2084461.386	749674.862	0.5	2.5	Bis(2-Ethylhexyl)phthalate	120.000	83.000	----	1970000	ug/kg
CI41-003	2084461.386	749674.862	0.5	2.5	Methylene chloride	2.200	0.950	----	2530000	ug/kg
CI41-003	2084461.386	749674.862	0.5	2.5	Toluene	21.000	0.930	----	31300000	ug/kg
CI41-004	2084359.523	749713.584	0	0.5	Uranium-235	0.239	----	0.094	8	pCi/g
CI41-004	2084359.523	749713.584	0.5	2.5	Uranium-235	0.133	----	0.120	8	pCi/g
CI41-005	2084409.838	749658.365	0	0.5	Bis(2-Ethylhexyl)phthalate	110.000	74.000	----	1970000	ug/kg
CI41-005	2084409.838	749658.365	0	0.5	Uranium-234	3.434	----	2.253	300	pCi/g
CI41-005	2084409.838	749658.365	0	0.5	Uranium-235	0.167	----	0.094	8	pCi/g
CI41-005	2084409.838	749658.365	0	0.5	Uranium-238	3.434	----	2.000	351	pCi/g
CI41-005	2084409.838	749658.365	0.5	2.5	Acenaphthene	46.000	34.000	----	40800000	ug/kg
CI41-005	2084409.838	749658.365	0.5	2.5	Anthracene	97.000	26.000	----	204000000	ug/kg
CI41-005	2084409.838	749658.365	0.5	2.5	Benzo(a)anthracene	150.000	27.000	----	34900	ug/kg
CI41-005	2084409.838	749658.365	0.5	2.5	Benzo(a)pyrene	120.000	44.000	----	3490	ug/kg
CI41-005	2084409.838	749658.365	0.5	2.5	Benzo(b)fluoranthene	88.000	31.000	----	34900	ug/kg
CI41-005	2084409.838	749658.365	0.5	2.5	Benzo(k)fluoranthene	110.000	35.000	----	349000	ug/kg
CI41-005	2084409.838	749658.365	0.5	2.5	Bis(2-Ethylhexyl)phthalate	120.000	79.000	----	1970000	ug/kg
CI41-005	2084409.838	749658.365	0.5	2.5	Chrysene	140.000	30.000	----	3490000	ug/kg
CI41-005	2084409.838	749658.365	0.5	2.5	Fluoranthene	370.000	25.000	----	27200000	ug/kg
CI41-005	2084409.838	749658.365	0.5	2.5	Fluorene	43.000	37.000	----	40800000	ug/kg
CI41-005	2084409.838	749658.365	0.5	2.5	Indeno(1,2,3-cd)pyrene	55.000	25.000	----	34900	ug/kg

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Data Summary Report for IHSS Group 700-8

Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CI41-005	2084409.838	749658.365	0.5	2.5	Pyrene	330.000	150.000	----	22100000	ug/kg
CI41-005	2084409.838	749658.365	0.5	2.5	Uranium-234	4.642	----	2.640	300	pCi/g
CI41-005	2084409.838	749658.365	0.5	2.5	Uranium-238	4.642	----	1.490	351	pCi/g
CI41-006	2084391.765	749683.153	0	0.5	Uranium-234	3.861	----	2.253	300	pCi/g
CI41-006	2084391.765	749683.153	0	0.5	Uranium-235	0.226	----	0.094	8	pCi/g
CI41-006	2084391.765	749683.153	0	0.5	Uranium-238	3.861	----	2.000	351	pCi/g
CI41-006	2084391.765	749683.153	0.5	2.5	Bis(2-Ethylhexyl)phthalate	150.000	80.000	----	1970000	ug/kg
CI41-006	2084391.765	749683.153	0.5	2.5	Uranium-234	3.661	----	2.640	300	pCi/g
CI41-006	2084391.765	749683.153	0.5	2.5	Uranium-235	0.206	----	0.120	8	pCi/g
CI41-006	2084391.765	749683.153	0.5	2.5	Uranium-238	3.661	----	1.490	351	pCi/g
CI42-000	2084519.882	749921.008	0	0.5	Uranium-235	0.133	----	0.094	8	pCi/g
CI42-000	2084519.882	749921.008	0.5	2.5	Uranium-235	0.172	----	0.120	8	pCi/g
CI42-001	2084428.130	749914.872	0	0.5	Aroclor-1260	16.000	1.600	----	12400	ug/kg
CI42-001	2084428.130	749914.872	0	0.5	Fluoranthene	49.000	25.000	----	27200000	ug/kg
CI42-001	2084428.130	749914.872	0.5	2.5	Acetone	11.000	5.300	----	102000000	ug/kg
CI42-001	2084428.130	749914.872	0.5	2.5	Methylene chloride	3.600	0.920	----	2530000	ug/kg
CI42-002	2084475.179	749856.798	0	0.5	Uranium-234	5.157	----	2.253	300	pCi/g
CI42-002	2084475.179	749856.798	0	0.5	Uranium-235	0.422	----	0.094	8	pCi/g
CI42-002	2084475.179	749856.798	0	0.5	Uranium-238	5.157	----	2.000	351	pCi/g
CI42-002	2084475.179	749856.798	0.5	2.5	Uranium-234	5.548	----	2.640	300	pCi/g
CI42-002	2084475.179	749856.798	0.5	2.5	Uranium-235	0.226	----	0.120	8	pCi/g
CI42-002	2084475.179	749856.798	0.5	2.5	Uranium-238	5.548	----	1.490	351	pCi/g
CI42-003	2084518.180	749799.139	0	0.5	Uranium-235	0.145	----	0.094	8	pCi/g
CI42-003	2084518.180	749799.139	0	0.5	Uranium-238	2.131	----	2.000	351	pCi/g
CI42-003	2084518.180	749799.139	0.5	2.5	Uranium-234	3.000	----	2.640	300	pCi/g
CI42-003	2084518.180	749799.139	0.5	2.5	Uranium-235	0.259	----	0.120	8	pCi/g
CI42-003	2084518.180	749799.139	0.5	2.5	Uranium-238	3.000	----	1.490	351	pCi/g
CI42-004	2084446.742	749790.717	0	0.5	Benzo(b)fluoranthene	66.000	30.000	----	34900	ug/kg
CI42-004	2084446.742	749790.717	0	0.5	Benzo(k)fluoranthene	55.000	33.000	----	349000	ug/kg
CI42-004	2084446.742	749790.717	0	0.5	Chrysene	53.000	29.000	----	3490000	ug/kg
CI42-004	2084446.742	749790.717	0	0.5	Fluoranthene	76.000	24.000	----	27200000	ug/kg
CI42-004	2084446.742	749790.717	0.5	2.5	Uranium-238	1.623	----	1.490	351	pCi/g
CI42-005	2084375.220	749782.290	0	0.5	Uranium-234	3.818	----	2.253	300	pCi/g

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Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CI42-005	2084375.220	749782.290	0	0.5	Uranium-235	0.220	----	0.094	8	pCi/g
CI42-005	2084375.220	749782.290	0	0.5	Uranium-238	3.818	----	2.000	351	pCi/g
CI42-005	2084375.220	749782.290	0.5	2.5	Uranium-234	3.664	----	2.640	300	pCi/g
CI42-005	2084375.220	749782.290	0.5	2.5	Uranium-235	0.206	----	0.120	8	pCi/g
CI42-005	2084375.220	749782.290	0.5	2.5	Uranium-238	3.664	----	1.490	351	pCi/g
CI42-006	2084404.680	749818.460	0.5	2.5	Uranium-238	1.498	----	1.490	351	pCi/g
CI42-007	2084404.680	749772.360	0	0.5	Antimony	0.520	----	0.470	409	mg/kg
CI42-007	2084404.680	749772.360	0	0.5	Manganese	480.000	----	365.080	3480	mg/kg
CI42-007	2084404.680	749772.360	0	0.5	Uranium-234	3.971	----	2.253	300	pCi/g
CI42-007	2084404.680	749772.360	0	0.5	Uranium-235	0.295	----	0.094	8	pCi/g
CI42-007	2084404.680	749772.360	0	0.5	Uranium-238	3.971	----	2.000	351	pCi/g
CI42-007	2084404.680	749772.360	0.5	2.5	Uranium-235	0.152	----	0.120	8	pCi/g
CI42-007	2084404.680	749772.360	0.5	2.5	Uranium-238	1.686	----	1.490	351	pCi/g
CI42-007	2084404.680	749772.360	0.5	2.5	Xylene	16.800	11.100	----	2040000	ug/kg
CI42-008	2084501.830	749873.583	0	0.5	Antimony	0.480	----	0.470	409	mg/kg
CI42-008	2084501.830	749873.583	0	0.5	Uranium-234	3.974	----	2.253	300	pCi/g
CI42-008	2084501.830	749873.583	0	0.5	Uranium-235	0.267	----	0.094	8	pCi/g
CI42-008	2084501.830	749873.583	0	0.5	Uranium-238	3.974	----	2.000	351	pCi/g
CI42-008	2084501.830	749873.583	0.5	2.5	Acenaphthene	38.000	32.000	----	40800000	ug/kg
CI42-008	2084501.830	749873.583	0.5	2.5	Anthracene	220.000	24.000	----	204000000	ug/kg
CI42-008	2084501.830	749873.583	0.5	2.5	Benzo(a)anthracene	480.000	26.000	----	34900	ug/kg
CI42-008	2084501.830	749873.583	0.5	2.5	Benzo(b)fluoranthene	79.000	30.000	----	34900	ug/kg
CI42-008	2084501.830	749873.583	0.5	2.5	Benzo(k)fluoranthene	500.000	33.000	----	349000	ug/kg
CI42-008	2084501.830	749873.583	0.5	2.5	Chrysene	110.000	29.000	----	3490000	ug/kg
CI42-008	2084501.830	749873.583	0.5	2.5	Fluoranthene	360.000	23.000	----	27200000	ug/kg
CI42-008	2084501.830	749873.583	0.5	2.5	Pyrene	210.000	140.000	----	22100000	ug/kg
CI42-008	2084501.830	749873.583	0.5	2.5	Uranium-234	4.128	----	2.640	300	pCi/g
CI42-008	2084501.830	749873.583	0.5	2.5	Uranium-238	4.128	----	1.490	351	pCi/g
CI42-009	2084507.602	749947.390	0	0.5	Barium	610.000	----	141.260	26400	mg/kg
CI42-009	2084507.602	749947.390	0	0.5	Beryllium	1.100	----	0.966	921	mg/kg
CI42-009	2084507.602	749947.390	0	0.5	Strontium	76.000	----	48.940	613000	mg/kg
CI42-009	2084507.602	749947.390	0.5	2.5	Uranium-234	3.415	----	2.640	300	pCi/g
CI42-009	2084507.602	749947.390	0.5	2.5	Uranium-235	0.256	----	0.120	8	pCi/g

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Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CI42-009	2084507.602	749947.390	0.5	2.5	Uranium-238	3.415	----	1.490	351	pCi/g
CI42-010	2084494.189	749948.606	0	0.5	Pentachlorophenol	470.000	120.000	----	162000	ug/kg
CI42-010	2084494.189	749948.606	0	0.5	Uranium-235	0.139	----	0.094	8	pCi/g
CI42-010	2084494.189	749948.606	0.5	2.5	Uranium-234	5.003	----	2.640	300	pCi/g
CI42-010	2084494.189	749948.606	0.5	2.5	Uranium-235	0.301	----	0.120	8	pCi/g
CI42-010	2084494.189	749948.606	0.5	2.5	Uranium-238	5.003	----	1.490	351	pCi/g
CI42-011	2084457.273	749932.801	0	0.5	Chrysene	46.000	31.000	----	3490000	ug/kg
CI42-011	2084457.273	749932.801	0	0.5	Fluoranthene	110.000	26.000	----	27200000	ug/kg
CI42-011	2084457.273	749932.801	0	0.5	Fluorene	46.000	38.000	----	40800000	ug/kg
CI42-011	2084457.273	749932.801	0	0.5	Uranium-235	0.187	----	0.094	8	pCi/g
CI42-011	2084457.273	749932.801	0.5	2.5	Benzo(a)anthracene	50.000	26.000	----	34900	ug/kg
CI42-011	2084457.273	749932.801	0.5	2.5	Benzo(a)pyrene	49.000	43.000	----	3490	ug/kg
CI42-011	2084457.273	749932.801	0.5	2.5	Benzo(b)fluoranthene	38.000	31.000	----	34900	ug/kg
CI42-011	2084457.273	749932.801	0.5	2.5	Benzo(k)fluoranthene	43.000	34.000	----	349000	ug/kg
CI42-011	2084457.273	749932.801	0.5	2.5	Chrysene	60.000	29.000	----	3490000	ug/kg
CI42-011	2084457.273	749932.801	0.5	2.5	Fluoranthene	130.000	24.000	----	27200000	ug/kg
CI42-011	2084457.273	749932.801	0.5	2.5	Uranium-235	0.157	----	0.120	8	pCi/g
CI43-000	2084517.533	750112.920	0	0.5	Uranium-235	0.141	----	0.094	8	pCi/g
CI43-000	2084517.533	750112.920	0.5	2.5	Uranium-235	0.126	----	0.120	8	pCi/g
CI43-001	2084445.987	750104.485	0	0.5	Benzo(k)fluoranthene	36.000	33.000	----	349000	ug/kg
CI43-001	2084445.987	750104.485	0	0.5	Chrysene	41.000	29.000	----	3490000	ug/kg
CI43-001	2084445.987	750104.485	0	0.5	Fluoranthene	72.000	23.000	----	27200000	ug/kg
CI43-001	2084445.987	750104.485	0	0.5	Uranium-235	0.117	----	0.094	8	pCi/g
CI43-001	2084445.987	750104.485	0.5	2.5	Uranium-234	4.362	----	2.640	300	pCi/g
CI43-001	2084445.987	750104.485	0.5	2.5	Uranium-235	0.244	----	0.120	8	pCi/g
CI43-001	2084445.987	750104.485	0.5	2.5	Uranium-238	4.362	----	1.490	351	pCi/g
CI43-002	2084489.040	750046.840	0	0.5	Uranium-234	4.741	----	2.253	300	pCi/g
CI43-002	2084489.040	750046.840	0	0.5	Uranium-235	0.220	----	0.094	8	pCi/g
CI43-002	2084489.040	750046.840	0	0.5	Uranium-238	4.741	----	2.000	351	pCi/g
CI43-002	2084489.040	750046.840	0.5	2.5	Uranium-234	4.802	----	2.640	300	pCi/g
CI43-002	2084489.040	750046.840	0.5	2.5	Uranium-235	0.275	----	0.120	8	pCi/g
CI43-002	2084489.040	750046.840	0.5	2.5	Uranium-238	4.802	----	1.490	351	pCi/g
CI43-003	2084532.090	749989.130	0	0.5	Benzo(a)anthracene	38.000	26.000	----	34900	ug/kg

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Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CI43-003	2084532.090	749989.130	0	0.5	Benzo(a)pyrene	46.000	42.000	----	3490	ug/kg
CI43-003	2084532.090	749989.130	0	0.5	Benzo(b)fluoranthene	51.000	30.000	----	34900	ug/kg
CI43-003	2084532.090	749989.130	0	0.5	Benzo(k)fluoranthene	46.000	33.000	----	349000	ug/kg
CI43-003	2084532.090	749989.130	0	0.5	Bis(2-Ethylhexyl)phthalate	120.000	75.000	----	1970000	ug/kg
CI43-003	2084532.090	749989.130	0	0.5	Chrysene	59.000	29.000	----	3490000	ug/kg
CI43-003	2084532.090	749989.130	0	0.5	Fluoranthene	120.000	24.000	----	27200000	ug/kg
CI43-003	2084532.090	749989.130	0.5	2.5	Uranium-235	0.214	----	0.120	8	pCi/g
CI43-003	2084532.090	749989.130	0.5	2.5	Uranium-238	1.963	----	1.490	351	pCi/g
CI43-004	2084460.553	749980.678	0.5	2.5	Acetone	36.000	5.300	----	102000000	ug/kg
CI43-004	2084460.553	749980.678	0.5	2.5	Methylene chloride	3.800	0.920	----	2530000	ug/kg
CI43-005	2084461.840	750013.010	0.5	2.5	Acetone	21.000	5.700	----	102000000	ug/kg
CI43-005	2084461.840	750013.010	0.5	2.5	Bis(2-Ethylhexyl)phthalate	140.000	86.000	----	1970000	ug/kg
CI43-005	2084461.840	750013.010	0.5	2.5	Methylene chloride	3.000	0.990	----	2530000	ug/kg
CI43-006	2084481.210	749991.800	0	0.5	Fluoranthene	41.000	23.000	----	27200000	ug/kg
CI43-006	2084481.210	749991.800	0	0.5	Uranium-235	0.143	----	0.094	8	pCi/g
CI43-006	2084481.210	749991.800	0.5	2.5	Uranium-238	2.171	----	1.490	351	pCi/g
CI43-007	2084443.542	750128.451	0	0.5	Benzo(a)anthracene	44.000	25.000	----	34900	ug/kg
CI43-007	2084443.542	750128.451	0	0.5	Benzo(a)pyrene	74.000	41.000	----	3490	ug/kg
CI43-007	2084443.542	750128.451	0	0.5	Benzo(b)fluoranthene	88.000	30.000	----	34900	ug/kg
CI43-007	2084443.542	750128.451	0	0.5	Benzo(k)fluoranthene	66.000	33.000	----	349000	ug/kg
CI43-007	2084443.542	750128.451	0	0.5	Chrysene	77.000	29.000	----	3490000	ug/kg
CI43-007	2084443.542	750128.451	0	0.5	Fluoranthene	130.000	23.000	----	27200000	ug/kg
CI43-007	2084443.542	750128.451	0	0.5	Indeno(1,2,3-cd)pyrene	55.000	23.000	----	34900	ug/kg
CI43-008	2084474.308	750135.493	0.5	2.5	2-Butanone	5.900	5.300	----	192000000	ug/kg
CI43-008	2084474.308	750135.493	0.5	2.5	Acetone	36.000	5.100	----	102000000	ug/kg
CI43-008	2084474.308	750135.493	0.5	2.5	Methylene chloride	2.100	0.900	----	2530000	ug/kg
CI43-009	2084480.537	750076.004	0	0.5	Benzo(a)anthracene	41.000	26.000	----	34900	ug/kg
CI43-009	2084480.537	750076.004	0	0.5	Benzo(a)pyrene	44.000	42.000	----	3490	ug/kg
CI43-009	2084480.537	750076.004	0	0.5	Benzo(b)fluoranthene	59.000	30.000	----	34900	ug/kg
CI43-009	2084480.537	750076.004	0	0.5	Benzo(k)fluoranthene	37.000	34.000	----	349000	ug/kg
CI43-009	2084480.537	750076.004	0	0.5	Chrysene	57.000	29.000	----	3490000	ug/kg
CI43-009	2084480.537	750076.004	0	0.5	Fluoranthene	150.000	24.000	----	27200000	ug/kg
CI43-009	2084480.537	750076.004	0	0.5	Uranium-235	0.159	----	0.094	8	pCi/g

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Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CI43-009	2084480.537	750076.004	0.5	2.5	Uranium-235	0.184	----	0.120	8	pCi/g
CI44-000	2084474.527	750174.208	0	0.5	Acenaphthene	67.000	31.000	----	40800000	ug/kg
CI44-000	2084474.527	750174.208	0	0.5	Anthracene	220.000	24.000	----	204000000	ug/kg
CI44-000	2084474.527	750174.208	0	0.5	Benzo(a)anthracene	1500.000	25.000	----	34900	ug/kg
CI44-000	2084474.527	750174.208	0	0.5	Benzo(a)pyrene	1900.000	40.000	----	3490	ug/kg
CI44-000	2084474.527	750174.208	0	0.5	Benzo(b)fluoranthene	2100.000	29.000	----	34900	ug/kg
CI44-000	2084474.527	750174.208	0	0.5	Benzo(k)fluoranthene	1800.000	32.000	----	349000	ug/kg
CI44-000	2084474.527	750174.208	0	0.5	Chrysene	2000.000	28.000	----	3490000	ug/kg
CI44-000	2084474.527	750174.208	0	0.5	Dibenz(a,h)anthracene	400.000	25.000	----	3490	ug/kg
CI44-000	2084474.527	750174.208	0	0.5	Fluoranthene	5100.000	23.000	----	27200000	ug/kg
CI44-000	2084474.527	750174.208	0	0.5	Fluorene	58.000	34.000	----	40800000	ug/kg
CI44-000	2084474.527	750174.208	0	0.5	Indeno(1,2,3-cd)pyrene	1200.000	23.000	----	34900	ug/kg
CI44-000	2084474.527	750174.208	0	0.5	Pyrene	3500.000	130.000	----	22100000	ug/kg
CI44-000	2084474.527	750174.208	0	0.5	Uranium-235	0.167	----	0.094	8	pCi/g
CI44-000	2084474.527	750174.208	0.5	2.5	Anthracene	36.000	24.000	----	204000000	ug/kg
CI44-000	2084474.527	750174.208	0.5	2.5	Benzo(a)anthracene	280.000	25.000	----	34900	ug/kg
CI44-000	2084474.527	750174.208	0.5	2.5	Benzo(a)pyrene	370.000	40.000	----	3490	ug/kg
CI44-000	2084474.527	750174.208	0.5	2.5	Benzo(b)fluoranthene	400.000	29.000	----	34900	ug/kg
CI44-000	2084474.527	750174.208	0.5	2.5	Benzo(k)fluoranthene	400.000	32.000	----	349000	ug/kg
CI44-000	2084474.527	750174.208	0.5	2.5	Chrysene	410.000	28.000	----	3490000	ug/kg
CI44-000	2084474.527	750174.208	0.5	2.5	Dibenz(a,h)anthracene	70.000	25.000	----	3490	ug/kg
CI44-000	2084474.527	750174.208	0.5	2.5	Fluoranthene	980.000	23.000	----	27200000	ug/kg
CI44-000	2084474.527	750174.208	0.5	2.5	Indeno(1,2,3-cd)pyrene	250.000	23.000	----	34900	ug/kg
CI44-000	2084474.527	750174.208	0.5	2.5	Pyrene	670.000	130.000	----	22100000	ug/kg
CI44-000	2084474.527	750174.208	0.5	2.5	Uranium-238	2.190	----	1.490	351	pCi/g
CJ41-000	2084632.743	749749.880	0.5	2.5	1,2,4-Trichlorobenzene	0.900	0.760	----	9230000	ug/kg
CJ41-000	2084632.743	749749.880	0.5	2.5	Methylene chloride	2.000	0.860	----	2530000	ug/kg
CJ41-000	2084632.743	749749.880	0.5	2.5	Naphthalene	1.300	0.920	----	3090000	ug/kg
CJ41-001	2084561.276	749741.428	0	0.5	Uranium-234	3.266	----	2.253	300	pCi/g
CJ41-001	2084561.276	749741.428	0	0.5	Uranium-235	0.262	----	0.094	8	pCi/g
CJ41-001	2084561.276	749741.428	0	0.5	Uranium-238	3.266	----	2.000	351	pCi/g
CJ41-001	2084561.276	749741.428	0.5	2.5	Uranium-234	5.526	----	2.640	300	pCi/g
CJ41-001	2084561.276	749741.428	0.5	2.5	Uranium-235	0.362	----	0.120	8	pCi/g

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Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CJ41-001	2084561.276	749741.428	0.5	2.5	Uranium-238	5.526	----	1.490	351	pCi/g
CJ41-002	2084604.355	749683.686	0	0.5	Uranium-234	3.740	----	2.253	300	pCi/g
CJ41-002	2084604.355	749683.686	0	0.5	Uranium-238	3.740	----	2.000	351	pCi/g
CJ41-002	2084604.355	749683.686	0.5	2.5	Uranium-234	3.667	----	2.640	300	pCi/g
CJ41-002	2084604.355	749683.686	0.5	2.5	Uranium-235	0.177	----	0.120	8	pCi/g
CJ41-002	2084604.355	749683.686	0.5	2.5	Uranium-238	3.667	----	1.490	351	pCi/g
CJ41-003	2084577.863	749726.166	0	0.5	Uranium-234	4.753	----	2.253	300	pCi/g
CJ41-003	2084577.863	749726.166	0	0.5	Uranium-235	0.185	----	0.094	8	pCi/g
CJ41-003	2084577.863	749726.166	0	0.5	Uranium-238	4.753	----	2.000	351	pCi/g
CJ41-003	2084577.863	749726.166	0.5	2.5	Uranium-234	3.836	----	2.640	300	pCi/g
CJ41-003	2084577.863	749726.166	0.5	2.5	Uranium-235	0.367	----	0.120	8	pCi/g
CJ41-003	2084577.863	749726.166	0.5	2.5	Uranium-238	3.836	----	1.490	351	pCi/g
CJ42-000	2084575.140	749931.438	0	0.5	Benzo(a)anthracene	46.000	30.000	----	34900	ug/kg
CJ42-000	2084575.140	749931.438	0	0.5	Benzo(a)pyrene	60.000	49.000	----	3490	ug/kg
CJ42-000	2084575.140	749931.438	0	0.5	Benzo(b)fluoranthene	59.000	35.000	----	34900	ug/kg
CJ42-000	2084575.140	749931.438	0	0.5	Benzo(k)fluoranthene	53.000	39.000	----	349000	ug/kg
CJ42-000	2084575.140	749931.438	0	0.5	Chrysene	62.000	34.000	----	3490000	ug/kg
CJ42-000	2084575.140	749931.438	0	0.5	Fluoranthene	120.000	28.000	----	27200000	ug/kg
CJ42-000	2084575.140	749931.438	0.5	2.5	Uranium-235	0.127	----	0.120	8	pCi/g
CJ42-001	2084611.955	749875.579	0	0.5	Chromium	19.000	----	16.990	268	mg/kg
CJ42-001	2084611.955	749875.579	0.5	2.5	Toluene	14.300	5.570	----	31300000	ug/kg
CJ42-002	2084546.689	749880.284	0	0.5	Uranium-234	4.249	----	2.253	300	pCi/g
CJ42-002	2084546.689	749880.284	0	0.5	Uranium-235	0.213	----	0.094	8	pCi/g
CJ42-002	2084546.689	749880.284	0	0.5	Uranium-238	4.249	----	2.000	351	pCi/g
CJ42-002	2084546.689	749880.284	0.5	2.5	Uranium-234	4.464	----	2.640	300	pCi/g
CJ42-002	2084546.689	749880.284	0.5	2.5	Uranium-235	0.235	----	0.120	8	pCi/g
CJ42-002	2084546.689	749880.284	0.5	2.5	Uranium-238	4.464	----	1.490	351	pCi/g
CJ42-003	2084580.517	749793.948	0	0.5	Uranium-234	4.521	----	2.253	300	pCi/g
CJ42-003	2084580.517	749793.948	0	0.5	Uranium-235	0.195	----	0.094	8	pCi/g
CJ42-003	2084580.517	749793.948	0	0.5	Uranium-238	4.521	----	2.000	351	pCi/g
CJ42-003	2084580.517	749793.948	0.5	2.5	Uranium-235	0.135	----	0.120	8	pCi/g
CJ42-004	2084548.176	749799.015	0.5	2.5	Uranium-235	0.149	----	0.120	8	pCi/g
CJ42-005	2084573.451	749950.795	0.5	2.5	Benzo(a)anthracene	46.000	28.000	----	34900	ug/kg

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Data Summary Report for IHSS Group 700-8

Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CJ42-005	2084573.451	749950.795	0.5	2.5	Benzo(a)pyrene	52.000	45.000	----	3490	ug/kg
CJ42-005	2084573.451	749950.795	0.5	2.5	Benzo(k)fluoranthene	39.000	36.000	----	349000	ug/kg
CJ42-005	2084573.451	749950.795	0.5	2.5	Chrysene	50.000	31.000	----	3490000	ug/kg
CJ42-005	2084573.451	749950.795	0.5	2.5	Fluoranthene	130.000	25.000	----	27200000	ug/kg
CJ42-009	2084577.746	749879.271	0	0.5	Aluminum	19000.000	----	16902.000	228000	mg/kg
CJ42-009	2084577.746	749879.271	0	0.5	Chromium	17.000	----	16.990	268	mg/kg
CJ42-009	2084577.746	749879.271	0	0.5	Lithium	13.000	----	11.550	20400	mg/kg
CJ42-009	2084577.746	749879.271	0	0.5	Uranium-234	4.153	----	2.253	300	pCi/g
CJ42-009	2084577.746	749879.271	0	0.5	Uranium-235	0.269	----	0.094	8	pCi/g
CJ42-009	2084577.746	749879.271	0	0.5	Uranium-238	4.153	----	2.000	351	pCi/g
CJ42-009	2084577.746	749879.271	0.5	2.5	Aroclor-1254	38.000	4.700	----	12400	ug/kg
CJ42-009	2084577.746	749879.271	0.5	2.5	Uranium-234	4.523	----	2.640	300	pCi/g
CJ42-009	2084577.746	749879.271	0.5	2.5	Uranium-235	0.311	----	0.120	8	pCi/g
CJ42-009	2084577.746	749879.271	0.5	2.5	Uranium-238	4.523	----	1.490	351	pCi/g
CJ43-001	2084588.940	750121.382	0	0.5	Benzo(a)pyrene	90.000	44.000	----	3490	ug/kg
CJ43-001	2084588.940	750121.382	0	0.5	Benzo(b)fluoranthene	72.000	31.000	----	34900	ug/kg
CJ43-001	2084588.940	750121.382	0	0.5	Benzo(k)fluoranthene	72.000	35.000	----	349000	ug/kg
CJ43-001	2084588.940	750121.382	0	0.5	Chromium	32.000	----	16.990	268	mg/kg
CJ43-001	2084588.940	750121.382	0	0.5	Chrysene	43.000	30.000	----	3490000	ug/kg
CJ43-001	2084588.940	750121.382	0	0.5	Fluoranthene	72.000	25.000	----	27200000	ug/kg
CJ43-001	2084588.940	750121.382	0	0.5	Indeno(1,2,3-cd)pyrene	81.000	25.000	----	34900	ug/kg
CJ43-001	2084588.940	750121.382	0	0.5	Manganese	680.000	----	365.080	3480	mg/kg
CJ43-001	2084588.940	750121.382	0	0.5	Nickel	25.000	----	14.910	20400	mg/kg
CJ43-001	2084588.940	750121.382	0	0.5	Uranium-234	4.555	----	2.253	300	pCi/g
CJ43-001	2084588.940	750121.382	0	0.5	Uranium-238	4.555	----	2.000	351	pCi/g
CJ43-001	2084588.940	750121.382	0.5	2.5	Uranium-234	5.869	----	2.640	300	pCi/g
CJ43-001	2084588.940	750121.382	0.5	2.5	Uranium-235	0.398	----	0.120	8	pCi/g
CJ43-001	2084588.940	750121.382	0.5	2.5	Uranium-238	5.869	----	1.490	351	pCi/g
CJ43-002	2084632.034	750063.679	0	0.5	Antimony	0.600	----	0.470	409	mg/kg
CJ43-002	2084632.034	750063.679	0	0.5	Uranium-235	0.228	----	0.094	8	pCi/g
CJ43-003	2084560.548	750055.250	0	0.5	Benzo(a)pyrene	44.000	42.000	----	3490	ug/kg
CJ43-003	2084560.548	750055.250	0	0.5	Benzo(b)fluoranthene	40.000	30.000	----	34900	ug/kg
CJ43-003	2084560.548	750055.250	0	0.5	Benzo(k)fluoranthene	43.000	33.000	----	349000	ug/kg

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Data Summary Report for IHSS Group 700-8

Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CJ43-003	2084560.548	750055.250	0	0.5	Bis(2-Ethylhexyl)phthalate	130.000	76.000	----	1970000	ug/kg
CJ43-003	2084560.548	750055.250	0	0.5	Chrysene	48.000	29.000	----	3490000	ug/kg
CJ43-003	2084560.548	750055.250	0	0.5	Fluoranthene	130.000	24.000	----	27200000	ug/kg
CJ43-003	2084560.548	750055.250	0	0.5	Uranium-235	0.192	----	0.094	8	pCi/g
<i>CJ43-003</i>	<i>2084560.548</i>	<i>750055.250</i>	<i>0.5</i>	<i>2.5</i>	<i>Uranium-234</i>	<i>5.973</i>	<i>----</i>	<i>2.640</i>	<i>300</i>	<i>pCi/g</i>
CJ43-003	2084560.548	750055.250	0.5	2.5	Uranium-235	0.257	----	0.120	8	pCi/g
CJ43-003	2084560.548	750055.250	0.5	2.5	Uranium-238	5.973	----	1.490	351	pCi/g
CJ43-004	2084603.615	749997.553	0	0.5	Benzo(a)anthracene	56.000	27.000	----	34900	ug/kg
CJ43-004	2084603.615	749997.553	0	0.5	Benzo(a)pyrene	64.000	44.000	----	3490	ug/kg
CJ43-004	2084603.615	749997.553	0	0.5	Benzo(b)fluoranthene	64.000	32.000	----	34900	ug/kg
CJ43-004	2084603.615	749997.553	0	0.5	Benzo(k)fluoranthene	70.000	35.000	----	349000	ug/kg
CJ43-004	2084603.615	749997.553	0	0.5	Chrysene	76.000	31.000	----	3490000	ug/kg
CJ43-004	2084603.615	749997.553	0	0.5	Fluoranthene	140.000	25.000	----	27200000	ug/kg
CJ43-004	2084603.615	749997.553	0	0.5	Indeno(1,2,3-cd)pyrene	44.000	25.000	----	34900	ug/kg
<i>CJ43-004</i>	<i>2084603.615</i>	<i>749997.553</i>	<i>0</i>	<i>0.5</i>	<i>Uranium-234</i>	<i>3.661</i>	<i>----</i>	<i>2.253</i>	<i>300</i>	<i>pCi/g</i>
CJ43-004	2084603.615	749997.553	0	0.5	Uranium-235	0.229	----	0.094	8	pCi/g
CJ43-004	2084603.615	749997.553	0	0.5	Uranium-238	3.661	----	2.000	351	pCi/g
CJ43-004	2084603.615	749997.553	0.5	2.5	Fluoranthene	58.000	26.000	----	27200000	ug/kg
<i>CJ43-004</i>	<i>2084603.615</i>	<i>749997.553</i>	<i>0.5</i>	<i>2.5</i>	<i>Uranium-234</i>	<i>3.863</i>	<i>----</i>	<i>2.640</i>	<i>300</i>	<i>pCi/g</i>
CJ43-004	2084603.615	749997.553	0.5	2.5	Uranium-238	3.863	----	1.490	351	pCi/g
CJ43-005	2084535.533	750014.720	0	0.5	Benzo(a)anthracene	73.000	27.000	----	34900	ug/kg
CJ43-005	2084535.533	750014.720	0	0.5	Benzo(a)pyrene	110.000	44.000	----	3490	ug/kg
CJ43-005	2084535.533	750014.720	0	0.5	Benzo(b)fluoranthene	130.000	32.000	----	34900	ug/kg
CJ43-005	2084535.533	750014.720	0	0.5	Benzo(k)fluoranthene	120.000	35.000	----	349000	ug/kg
CJ43-005	2084535.533	750014.720	0	0.5	Chromium	17.000	----	16.990	268	mg/kg
CJ43-005	2084535.533	750014.720	0	0.5	Chrysene	130.000	31.000	----	3490000	ug/kg
CJ43-005	2084535.533	750014.720	0	0.5	Fluoranthene	250.000	25.000	----	27200000	ug/kg
CJ43-005	2084535.533	750014.720	0	0.5	Indeno(1,2,3-cd)pyrene	87.000	25.000	----	34900	ug/kg
CJ43-005	2084535.533	750014.720	0	0.5	Pyrene	200.000	150.000	----	22100000	ug/kg
<i>CJ43-005</i>	<i>2084535.533</i>	<i>750014.720</i>	<i>0</i>	<i>0.5</i>	<i>Uranium-234</i>	<i>4.391</i>	<i>----</i>	<i>2.253</i>	<i>300</i>	<i>pCi/g</i>
CJ43-005	2084535.533	750014.720	0	0.5	Uranium-235	0.202	----	0.094	8	pCi/g
CJ43-005	2084535.533	750014.720	0	0.5	Uranium-238	4.391	----	2.000	351	pCi/g
<i>CJ43-005</i>	<i>2084535.533</i>	<i>750014.720</i>	<i>0.5</i>	<i>2.5</i>	<i>Uranium-234</i>	<i>3.346</i>	<i>----</i>	<i>2.640</i>	<i>300</i>	<i>pCi/g</i>

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Data Summary Report for IHSS Group 700-8

Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CJ43-005	2084535.533	750014.720	0.5	2.5	Uranium-235	0.230	----	0.120	8	pCi/g
CJ43-005	2084535.533	750014.720	0.5	2.5	Uranium-238	3.346	----	1.490	351	pCi/g
CJ43-006	2084605.705	750034.229	0	0.5	Benzo(a)anthracene	120.000	28.000	----	34900	ug/kg
CJ43-006	2084605.705	750034.229	0	0.5	Benzo(a)pyrene	160.000	45.000	----	3490	ug/kg
CJ43-006	2084605.705	750034.229	0	0.5	Benzo(b)fluoranthene	170.000	32.000	----	34900	ug/kg
CJ43-006	2084605.705	750034.229	0	0.5	Benzo(k)fluoranthene	160.000	36.000	----	349000	ug/kg
CJ43-006	2084605.705	750034.229	0	0.5	Bis(2-Ethylhexyl)phthalate	96.000	81.000	----	1970000	ug/kg
CJ43-006	2084605.705	750034.229	0	0.5	Chrysene	180.000	31.000	----	3490000	ug/kg
CJ43-006	2084605.705	750034.229	0	0.5	Fluoranthene	300.000	25.000	----	27200000	ug/kg
CJ43-006	2084605.705	750034.229	0	0.5	Indeno(1,2,3-cd)pyrene	120.000	25.000	----	34900	ug/kg
CJ43-006	2084605.705	750034.229	0	0.5	Pyrene	260.000	150.000	----	22100000	ug/kg
CJ43-006	2084605.705	750034.229	0	0.5	Uranium-234	3.747	----	2.253	300	pCi/g
CJ43-006	2084605.705	750034.229	0	0.5	Uranium-235	0.130	----	0.094	8	pCi/g
CJ43-006	2084605.705	750034.229	0	0.5	Uranium-238	3.747	----	2.000	351	pCi/g
CJ43-006	2084605.705	750034.229	0.5	2.5	Fluoranthene	67.000	26.000	----	27200000	ug/kg
CJ43-006	2084605.705	750034.229	0.5	2.5	Uranium-234	4.218	----	2.640	300	pCi/g
CJ43-006	2084605.705	750034.229	0.5	2.5	Uranium-235	0.158	----	0.120	8	pCi/g
CJ43-006	2084605.705	750034.229	0.5	2.5	Uranium-238	4.218	----	1.490	351	pCi/g
CJ43-007	2084614.897	750023.150	0	0.5	Uranium-234	3.199	----	2.253	300	pCi/g
CJ43-007	2084614.897	750023.150	0	0.5	Uranium-235	0.196	----	0.094	8	pCi/g
CJ43-007	2084614.897	750023.150	0	0.5	Uranium-238	3.199	----	2.000	351	pCi/g
CJ43-007	2084614.897	750023.150	0.5	2.5	Uranium-234	3.422	----	2.640	300	pCi/g
CJ43-007	2084614.897	750023.150	0.5	2.5	Uranium-235	0.231	----	0.120	8	pCi/g
CJ43-007	2084614.897	750023.150	0.5	2.5	Uranium-238	3.422	----	1.490	351	pCi/g
CJ43-008	2084614.470	750000.170	0	0.5	2-Methylnaphthalene	50.000	35.000	----	20400000	ug/kg
CJ43-008	2084614.470	750000.170	0	0.5	Benzo(b)fluoranthene	43.000	32.000	----	34900	ug/kg
CJ43-008	2084614.470	750000.170	0	0.5	Chrysene	61.000	30.000	----	3490000	ug/kg
CJ43-008	2084614.470	750000.170	0	0.5	Fluoranthene	140.000	25.000	----	27200000	ug/kg
CJ43-008	2084614.470	750000.170	0	0.5	Uranium-234	4.583	----	2.253	300	pCi/g
CJ43-008	2084614.470	750000.170	0	0.5	Uranium-235	0.207	----	0.094	8	pCi/g
CJ43-008	2084614.470	750000.170	0	0.5	Uranium-238	4.583	----	2.000	351	pCi/g
CJ43-008	2084614.470	750000.170	0.5	2.5	Uranium-234	3.688	----	2.640	300	pCi/g
CJ43-008	2084614.470	750000.170	0.5	2.5	Uranium-235	0.194	----	0.120	8	pCi/g

Data Summary Report for IHSS Group 700-8

Sampling Location	Easting	Northing	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	RLs	Background	WRW AL	Unit
CJ43-008	2084614.470	750000.170	0.5	2.5	Uranium-238	3.688	----	1.490	351	pCi/g
CJ43-012	2084578.646	750093.498	0	0.5	Uranium-235	0.176	----	0.094	8	pCi/g
CJ43-012	2084578.646	750093.498	0.5	2.5	Uranium-238	1.608	----	1.490	351	pCi/g
CJ44-016	2084617.740	750156.212	0	0.5	Benzo(a)anthracene	220.000	25.000	----	34900	ug/kg
CJ44-016	2084617.740	750156.212	0	0.5	Benzo(a)pyrene	310.000	41.000	----	3490	ug/kg
CJ44-016	2084617.740	750156.212	0	0.5	Benzo(b)fluoranthene	270.000	29.000	----	34900	ug/kg
CJ44-016	2084617.740	750156.212	0	0.5	Benzo(k)fluoranthene	280.000	33.000	----	349000	ug/kg
CJ44-016	2084617.740	750156.212	0	0.5	Chrysene	290.000	28.000	----	3490000	ug/kg
CJ44-016	2084617.740	750156.212	0	0.5	Fluoranthene	540.000	23.000	----	27200000	ug/kg
CJ44-016	2084617.740	750156.212	0	0.5	Indeno(1,2,3-cd)pyrene	190.000	23.000	----	34900	ug/kg
CJ44-016	2084617.740	750156.212	0	0.5	Pyrene	450.000	140.000	----	22100000	ug/kg
<i>CJ44-016</i>	<i>2084617.740</i>	<i>750156.212</i>	<i>0</i>	<i>0.5</i>	<i>Uranium-234</i>	<i>3.957</i>	----	<i>2.253</i>	<i>300</i>	<i>pCi/g</i>
CJ44-016	2084617.740	750156.212	0	0.5	Uranium-235	0.400	----	0.094	8	pCi/g
CJ44-016	2084617.740	750156.212	0	0.5	Uranium-238	3.957	----	2.000	351	pCi/g
CJ44-016	2084617.740	750156.212	0.5	2.5	Strontium	290.000	----	211.380	613000	mg/kg
<i>CJ44-016</i>	<i>2084617.740</i>	<i>750156.212</i>	<i>0.5</i>	<i>2.5</i>	<i>Uranium-234</i>	<i>5.575</i>	----	<i>2.640</i>	<i>300</i>	<i>pCi/g</i>
CJ44-016	2084617.740	750156.212	0.5	2.5	Uranium-235	0.335	----	0.120	8	pCi/g
CJ44-016	2084617.740	750156.212	0.5	2.5	Uranium-238	5.575	----	1.490	351	pCi/g

*Background refers to mean concentration plus two standard deviations.

Italic font denotes result derived by calculation based on another analysis.

Figure 4
IHSS Group 700-8
Accelerated Action Characterization
Sediment Data Greater than
RLs or Background*

KEY

- Location with concentrations greater than reporting limits or background levels
- IHSS Group 700-8
- Standing building
- Demolished building
- Spill area
- Patched asphalt
- Low-level waste storage area
- Stream or ditch
- Paved road
- Dirt road

RI = reporting limit
* Background = background mean plus two standard deviations
Wrwa l = wildlife refuge worker action level

N

Scale = 1:1,200

40 0 40 80 Feet

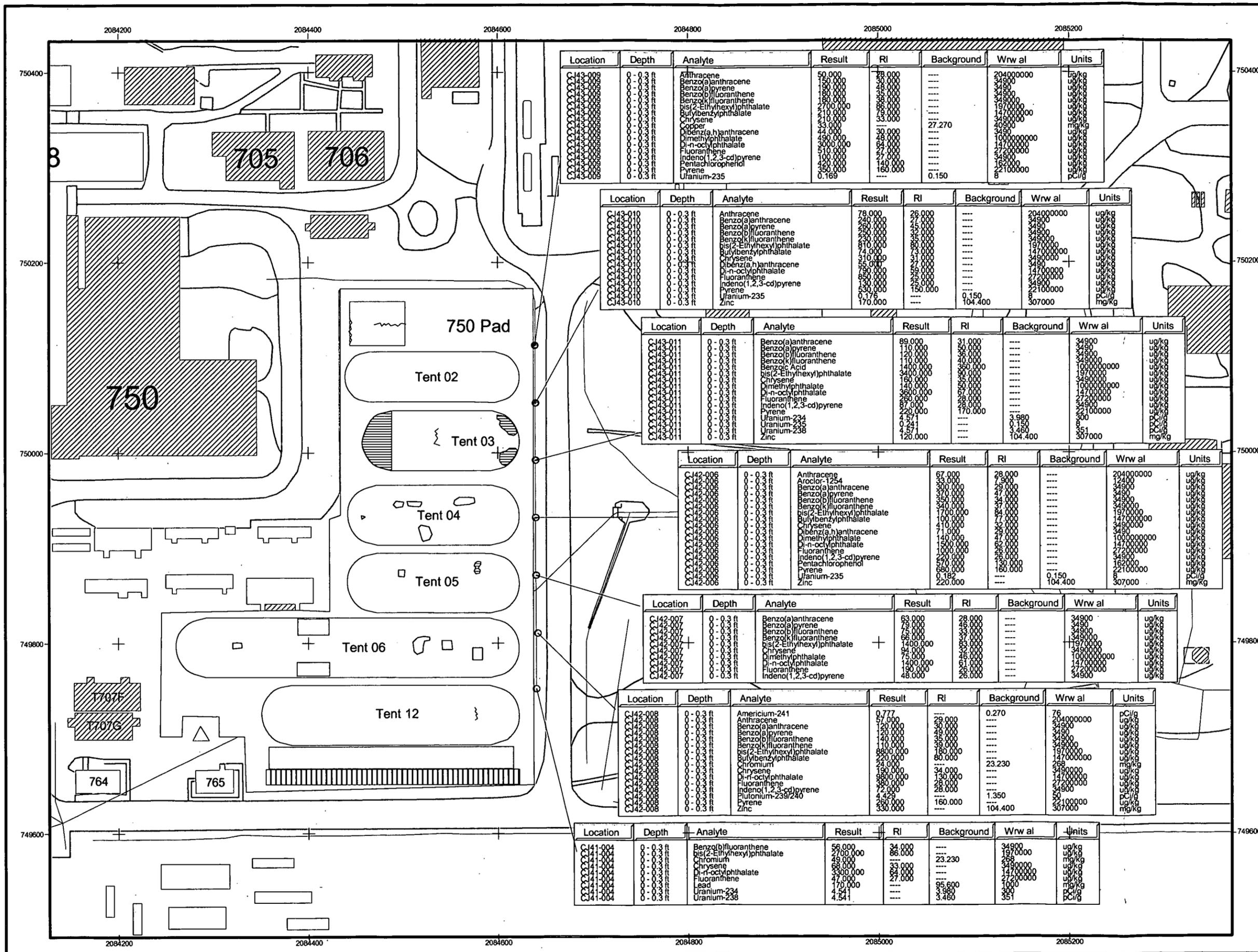
State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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

Prepared By:

Prepared For:

12.15.04
File:W:\Projects\FY2004\700-8\Characterization\700-8_final_ds.apr



THIS TARGET SHEET REPRESENTS AN
OVER-SIZED MAP / PLATE FOR THIS DOCUMENT:
(Ref: 04-RF-01310; KLW-063-04)

**Data Summary Report
for IHSS Group 700-8
IHSS 700-214, 750 Pad
Pondcrete/Saltcrete Storage**

December 2004

Figure 5:

**IHSS Group 700-8 Accelerated Action
Characterization Surface Soil Data
Greater than RLs or Background**

File: W:\Projects\Fy2004\700-8\Characterization\700-8_final_ds.apr

December 15, 2004

CERCLA Administrative Record Document, IA-A-002490

U.S. DEPARTMENT OF ENERGY
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

GOLDEN, COLORADO

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THIS TARGET SHEET REPRESENTS AN
OVER-SIZED MAP / PLATE FOR THIS DOCUMENT:
(Ref: 04-RF-01310; KLV-063-04)

**Data Summary Report
for IHSS Group 700-8
IHSS 700-214, 750 Pad
Pondcrete/Saltcrete Storage**

December 2004

Figure 6:

**IHSS Group 700-8 Accelerated Action
Characterization Subsurface Soil
Data Greater than RLs or Background**

File: W:\Projects\Fy2004\700-8\Characterization\700-8_final_ds.apr

December 15, 2004

CERCLA Administrative Record Document, IA-A-002490

U.S. DEPARTMENT OF ENERGY
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

GOLDEN, COLORADO

Table 4
IHSS Group 700-8 Sediment and Surface Soil Summary Statistics

Analyte	Number of Samples Analyzed	Detection Frequency	Average Concentration	Maximum Concentration	Background	WRW AL	Unit
Sediment							
Americium-241	7	14.29%	0.777	0.777	0.270	76	pCi/g
Anthracene	7	57.14%	63.000	78.000	-	204000000	ug/kg
Aroclor-1254	7	14.29%	33.000	33.000	-	12400	ug/kg
Benzo(a)anthracene	7	85.71%	160.333	300.000	-	34900	ug/kg
Benzo(a)pyrene	7	85.71%	188.167	370.000	-	3490	ug/kg
Benzo(b)fluoranthene	7	100.00%	167.286	350.000	-	34900	ug/kg
Benzo(k)fluoranthene	7	85.71%	172.667	340.000	-	349000	ug/kg
Benzoic Acid	7	14.29%	1400.000	1400.000	-	1000000000	ug/kg
bis(2-Ethylhexyl)phthalate	7	100.00%	3072.857	8800.000	-	1970000	ug/kg
Butylbenzylphthalate	7	57.14%	151.000	220.000	-	147000000	ug/kg
Chromium	7	28.57%	36.500	49.000	23.230	268	mg/kg
Chrysene	7	100.00%	206.000	410.000	-	3490000	ug/kg
Copper	7	14.29%	33.000	33.000	27.270	40900	mg/kg
Di-n-octylphthalate	7	100.00%	3341.429	9800.000	-	14700000	ug/kg
Dibenz(a,h)anthracene	7	42.86%	56.667	71.000	-	3490	ug/kg
Dimethylphthalate	7	57.14%	211.250	490.000	-	1000000000	ug/kg
Fluoranthene	7	100.00%	462.429	1000.000	-	27200000	ug/kg
Indeno(1,2,3-cd)pyrene	7	85.71%	109.500	220.000	-	34900	ug/kg
Lead	7	14.29%	170.000	170.000	95.600	1000	mg/kg
Pentachlorophenol	7	28.57%	495.000	570.000	-	162000	ug/kg
Plutonium-239/240	7	14.29%	4.429	4.429	1.350	50	pCi/g
Pyrene	7	71.43%	408.000	680.000	-	22100000	ug/kg
Uranium-234	7	28.57%	4.556	4.571	3.980	300	pCi/g
Uranium-235	7	57.14%	0.192	0.241	0.150	8	pCi/g
Uranium-238	7	28.57%	4.556	4.571	3.460	351	pCi/g
Zinc	7	57.14%	210.000	330.000	104.400	307000	mg/kg
Americium-241	7	14.29%	0.777	0.777	0.270	76	pCi/g
Surface Soil							
2-Methylnaphthalene	55	1.82%	50.000	50.000	----	20400000	ug/kg
Acenaphthene	55	1.82%	67.000	67.000	----	40800000	ug/kg
Aluminum	55	5.45%	20666.667	24000.000	16902.000	228000	mg/kg
Anthracene	55	1.82%	220.000	220.000	----	204000000	ug/kg
Antimony	55	9.09%	0.562	0.720	0.470	409	mg/kg
Aroclor-1260	55	3.64%	11.350	16.000	----	12400	ug/kg
Barium	55	3.64%	1055.000	1500.000	141.260	26400	mg/kg
Benzo(a)anthracene	55	18.18%	258.800	1500.000	----	34900	ug/kg
Benzo(a)pyrene	55	20.00%	263.818	1900.000	----	3490	ug/kg
Benzo(b)fluoranthene	55	23.64%	247.077	2100.000	----	34900	ug/kg

Benzo(k)fluoranthene	55	23.64%	218.308	1800.000	----	349000	ug/kg
Beryllium	55	5.45%	1.063	1.100	0.966	921	mg/kg
Bis(2-Ethylhexyl)phthalate	55	7.27%	114.000	130.000	----	1970000	ug/kg
Chromium	55	9.09%	20.600	32.000	16.990	268	mg/kg
Chrysene	55	29.09%	204.813	2000.000	----	3490000	ug/kg
Dibenz(a,h)anthracene	55	1.82%	400.000	400.000	----	3490	ug/kg
Fluoranthene	55	30.91%	443.529	5100.000	----	27200000	ug/kg
Fluorene	55	3.64%	52.000	58.000	----	40800000	ug/kg
Indeno(1,2,3-cd)pyrene	55	12.73%	253.857	1200.000	----	34900	ug/kg
Lithium	55	3.64%	13.000	13.000	11.550	20400	mg/kg
Manganese	55	3.64%	580.000	680.000	365.080	3480	mg/kg
Nickel	55	1.82%	25.000	25.000	14.910	20400	mg/kg
Pentachlorophenol	55	1.82%	470.000	470.000	----	162000	ug/kg
Pyrene	55	7.27%	1102.500	3500.000	----	22100000	ug/kg
Strontium	55	1.82%	76.000	76.000	48.940	613000	mg/kg
Uranium-234	55	43.64%	4.046	5.157	2.253	300	pCi/g
Uranium-235	55	65.45%	0.209	0.422	0.094	8	pCi/g
Uranium-238	55	45.45%	3.970	5.157	2.000	351	pCi/g

Table 5
IHSS Group 700-8 Subsurface Soil Summary Statistics

Analyte	Number of Samples Analyzed	Detection Frequency	Mean Concentration	Maximum Concentration	Background	WRW AL	Unit
1,2,4-Trichlorobenzene	55	1.82%	0.900	0.900	----	9230000	ug/kg
2-Butanone	55	7.27%	10.375	15.000	----	192000000	ug/kg
2-Methylnaphthalene	55	1.82%	37.000	37.000	----	20400000	ug/kg
Acenaphthene	55	5.45%	118.000	270.000	----	40800000	ug/kg
Acetone	55	12.73%	44.857	82.000	----	102000000	ug/kg
Anthracene	55	9.09%	155.800	370.000	----	204000000	ug/kg
Aroclor-1254	55	1.82%	38.000	38.000	----	12400	ug/kg
Aroclor-1260	55	1.82%	40.000	40.000	----	12400	ug/kg
Benzo(a)anthracene	55	12.73%	267.857	770.000	----	34900	ug/kg
Benzo(a)pyrene	55	10.91%	228.167	680.000	----	3490	ug/kg
Benzo(b)fluoranthene	55	10.91%	194.500	500.000	----	34900	ug/kg
Benzo(k)fluoranthene	55	12.73%	253.429	610.000	----	349000	ug/kg
Bis(2-Ethylhexyl)phthalate	55	7.27%	132.500	150.000	----	1970000	ug/kg
Chrysene	55	12.73%	245.714	850.000	----	3490000	ug/kg
Copper	55	1.82%	160.000	160.000	38.210	40900	mg/kg
Dibenz(a,h)anthracene	55	3.64%	100.000	130.000	----	3490	ug/kg
Dibenzofuran	55	1.82%	110.000	110.000	----	2950000	ug/kg
Fluoranthene	55	16.36%	516.111	2300.000	----	27200000	ug/kg
Fluorene	55	3.64%	141.500	240.000	----	40800000	ug/kg
Indeno(1,2,3-cd)pyrene	55	7.27%	183.500	370.000	----	34900	ug/kg
Methylene chloride	55	14.55%	2.488	3.800	----	2530000	ug/kg

Analyte	Number of Samples Analyzed	Detection Frequency	Mean Concentration	Maximum Concentration	Background	WRW AL	Unit
Naphthalene	55	5.45%	27.333	77.000	----	3090000	ug/kg
Plutonium-239/240	55	1.82%	0.051	0.051	0.020	50	pCi/g
Pyrene	55	9.09%	694.000	2000.000	----	22100000	ug/kg
Strontium	55	1.82%	290.000	290.000	211.380	613000	mg/kg
Toluene	55	3.64%	17.650	21.000	----	31300000	ug/kg
Uranium-234	55	47.27%	4.288	5.973	2.640	300	pCi/g
Uranium-235	55	61.82%	0.224	0.398	0.120	8	pCi/g
Uranium-238	55	60.00%	3.764	5.973	1.490	351	pCi/g
Xylene	55	1.82%	16.800	16.800	----	2040000	ug/kg

Table 6
RFCA Radionuclide Soil SORs

Location	Starting Depth (ft)	Ending Depth (ft)	SOR
CH41-000	0.5	2.5	0.000
CH42-000	0	0.5	0.048
CH42-000	0.5	2.5	0.045
CH42-001	0	0.5	0.042
CH42-002	0	0.5	0.044
CI41-000	0	0.5	0.051
CI41-000	0.5	2.5	0.056
CI41-001	0.5	2.5	0.018
CI41-002	0	0.5	0.041
CI41-002	0.5	2.5	0.057
CI41-004	0	0.5	0.030
CI41-004	0.5	2.5	0.017
CI41-005	0	0.5	0.042
CI41-005	0.5	2.5	0.029
CI41-006	0	0.5	0.052
CI41-006	0.5	2.5	0.048
CI42-000	0	0.5	0.017
CI42-000	0.5	2.5	0.022
CI42-002	0	0.5	0.085
CI42-002	0.5	2.5	0.063
CI42-003	0	0.5	0.024
CI42-003	0.5	2.5	0.051
CI42-004	0.5	2.5	0.005
CI42-005	0	0.5	0.051
CI42-005	0.5	2.5	0.048
CI42-006	0.5	2.5	0.004
CI42-007	0	0.5	0.061
CI42-007	0.5	2.5	0.024

Location	Starting Depth (ft)	Ending Depth (ft)	SOR
CI42-008	0	0.5	0.058
CI42-008	0.5	2.5	0.026
CI42-009	0.5	2.5	0.053
CI42-010	0	0.5	0.017
CI42-010	0.5	2.5	0.069
CI42-011	0	0.5	0.023
CI42-011	0.5	2.5	0.020
CI43-000	0	0.5	0.018
CI43-000	0.5	2.5	0.016
CI43-001	0	0.5	0.015
CI43-001	0.5	2.5	0.057
CI43-002	0	0.5	0.057
CI43-002	0.5	2.5	0.064
CI43-003	0.5	2.5	0.032
CI43-006	0	0.5	0.018
CI43-006	0.5	2.5	0.006
CI43-009	0	0.5	0.020
CI43-009	0.5	2.5	0.023
CI44-000	0	0.5	0.021
CI44-000	0.5	2.5	0.006
CJ41-001	0	0.5	0.053
CJ41-001	0.5	2.5	0.079
CJ41-002	0	0.5	0.023
CJ41-002	0.5	2.5	0.045
CJ41-003	0	0.5	0.053
CJ41-003	0.5	2.5	0.070
CJ42-000	0.5	2.5	0.016
CJ42-002	0	0.5	0.053
CJ42-002	0.5	2.5	0.057
CJ42-003	0	0.5	0.052
CJ42-003	0.5	2.5	0.017
CJ42-004	0.5	2.5	0.019
CJ42-009	0	0.5	0.059
CJ42-009	0.5	2.5	0.067
CJ43-001	0	0.5	0.028
CJ43-001	0.5	2.5	0.086
CJ43-002	0	0.5	0.029
CJ43-003	0	0.5	0.024
CJ43-003	0.5	2.5	0.069
CJ43-004	0	0.5	0.051
CJ43-004	0.5	2.5	0.024
CJ43-005	0	0.5	0.052
CJ43-005	0.5	2.5	0.049
CJ43-006	0	0.5	0.039

Location	Starting Depth (ft)	Ending Depth (ft)	SOR
CJ43-006	0.5	2.5	0.046
CJ43-007	0	0.5	0.044
CJ43-007	0.5	2.5	0.050
CJ43-008	0	0.5	0.054
CJ43-008	0.5	2.5	0.047
CJ43-012	0	0.5	0.022
CJ43-012	0.5	2.5	0.005
CJ44-016	0	0.5	0.074
CJ44-016	0.5	2.5	0.076

Table 7
RFCA Nonradionuclide Surface Soil SORs

Location	Starting Depth (ft)	Ending Depth (ft)	SOR
CJ43-001	0	0.5	0.119

4.0 SSRS

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

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

Yes. As shown in Table 3 of this document, all COC concentrations in subsurface soil were below WRW ALs.

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

Not applicable.

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

Not applicable.

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

No. Even though residual COC concentrations in the subsurface exceed background, it is unlikely they are present in quantities sufficient to impact surface water if an environmental pathway were complete. If there were a sufficient quantity of COCs in subsurface soil, they could impact surface water via two environmental pathways: erosion and groundwater migration. Based on RFCA Attachment 5, Figure 1 (DOE et al. 2003), IHSS Group 700-8 is not located in an area susceptible to landslides or erosion; therefore, contamination of surface water via erosion is very unlikely. This area's erosion potential may increase in the future once a portion of the functional channel (FC-4) is constructed east

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of the 750 Pad. Actinides were recently detected at concentrations greater than 0.15 pCi/L in surface water collected from GS40, the surface water gaging station located just east of the 750 Pad. However, the actinides in surface water collected from GS40, can not be attributed in part or completely to the 750 Pad, because GS40 also receives runoff and footing drain flows from the central 700 area. In addition, data collected from the ditch east of the 750 Pad indicated that ditch sediments had not been affected by radionuclides. The groundwater pathway could be completed. Based on data collected from the closest groundwater monitoring well (P207389) (see Figure 2), groundwater in the area of the 750 Pad has not been impacted (DOE 2004b) indicating the pathway has not been completed.

5.0 NFAA

An NFAA determination is justified for IHSS Group 700-8 based on the following:

- Residual contaminant concentrations do not exceed WRW ALs.
- Results of the SSRS indicate no accelerated action is necessary.

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 FY05 HRR. Ecological factors will be evaluated in the AAESE process and the CRA.

6.0 DQA

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

- Regulatory agency-approved sampling program design (IASAP Addendum #IA-04-12 [DOE 2004a]), 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 DQA 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:

- U.S. Environmental Protection Agency (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 (AR) for permanent storage 30 days after being provided to CDPHE and/or EPA.

6.2 V&V 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 (RIN) and maintained by K-H Analytical Services Division (ASD); older hard copies may reside in the Federal Center in Lakewood, Colorado. Electronic data are stored in the RFETS SWD.

Both real and QC IHSS Group 700-8 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.

LCS Evaluation

LCS analyses are conducted to determine whether a laboratory may be introducing bias into their analytical results. Bias from sample matrix effects is not a factor because LCS analyses are not conducted on samples collected from the Site. LCS recoveries above the upper limit indicate analyte concentrations may actually be less than reported. Because this is environmentally conservative, the

bias is acceptable, and no further action is needed. LCS recoveries below the minimum indicate analyte concentrations may actually be more than reported.

The frequency of LCS measurements, relative to each laboratory batch, is presented in Table 8. As indicated, LCS analyses were run for off-site alpha spectrometry, SW-846 6010 (metals), SW-846 8082 (PCBs), SW-846 8260 (VOCs), and SW-846 8270 (SVOCs). LCS analyses were not run for gamma spectroscopy because the onsite laboratory employed the In-Situ Counting System (ISOCs), which uses an internal standard approach instead of LCS.

Minimum and maximum LCS results were tabulated by analyte for the entire project and are presented in Table 9. The lowest LCS recovery for each analyte detected at a concentration exceeding the RL or background was evaluated for bias by dividing the maximum sample result by the lowest LCS recovery for that analyte. Except for one analyte, the resulting values were less than 1 percent of their respective WRW ALs. The one exception, benzo(a)pyrene, was detected at 89 percent of the WRW AL.

Table 8
LCS Summary

Test Method	Laboratory Batch	LCS Run?
Alpha Spectrometry	364888	Yes
Alpha Spectrometry	364891	Yes
Alpha Spectrometry	364894	Yes
Alpha Spectrometry	366415	Yes
Alpha Spectrometry	366423	Yes
Alpha Spectrometry	366425	Yes
Alpha Spectrometry	4266452	Yes
Alpha Spectrometry	4266453	Yes
Alpha Spectrometry	4266454	Yes
Alpha Spectrometry	4266613	Yes
Alpha Spectrometry	4266614	Yes
Alpha Spectrometry	4266617	Yes
Alpha Spectrometry	4272575	Yes
Alpha Spectrometry	4272582	Yes
Alpha Spectrometry	4272584	Yes
SW-846 6010	4246574	Yes
SW-846 6010	4251245	Yes
SW-846 6010	4251587	Yes
SW-846 6010	4252580	Yes
SW-846 6010	4253194	Yes
SW-846 6010	4253200	Yes
SW-846 6010	4253594	Yes
SW-846 6010	4257377	Yes
SW-846 6010	4258134	Yes
SW-846 6010	4258565	Yes
SW-846 6010	4258566	Yes

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Test Method	Laboratory Batch	LCS Run?
SW-846 6010	4260513	Yes
SW-846 6010	4264483	Yes
SW-846 6010	4264486	Yes
SW-846 6010	4265541	Yes
SW-846 6010	4265542	Yes
SW-846 6010	4267650	Yes
SW-846 6010	4267651	Yes
SW-846 6010	4271541	Yes
SW-846 6010	4271543	Yes
SW-846 6010	4271546	Yes
SW-846 6010	4271549	Yes
SW-846 6010	4272568	Yes
SW-846 6010	4274504	Yes
SW-846 6010	4278579	Yes
SW-846 8082	4246556	Yes
SW-846 8082	4251550	Yes
SW-846 8082	4252481	Yes
SW-846 8082	4253604	Yes
SW-846 8082	4257592	Yes
SW-846 8082	4258457	Yes
SW-846 8082	4260554	Yes
SW-846 8082	4264616	Yes
SW-846 8082	4265443	Yes
SW-846 8082	4266569	Yes
SW-846 8082	4267577	Yes
SW-846 8082	4271498	Yes
SW-846 8082	4274411	Yes
SW-846 8260	4253452	Yes
SW-846 8260	4259372	Yes
SW-846 8260	4267274	Yes
SW-846 8260	MS1 VOA 040831A	Yes
SW-846 8260	MS1 VOA 040902A	Yes
SW-846 8260	MS1 VOA 040907A	Yes
SW-846 8260	MS1 VOA 040908A	Yes
SW-846 8260	MS1 VOA 040909A	Yes
SW-846 8260	MS1 VOA 040920A	Yes
SW-846 8260	MS1 VOA 040921A	Yes
SW-846 8260	MS1 VOA 040922A	Yes
SW-846 8260	MS3 VOA 040909A	Yes
SW-846 8260	MS3 VOA 040914A	Yes
SW-846 8260	MS3 VOA 040915A	Yes
SW-846 8260	MS3 VOA 040916A	Yes
SW-846 8260	MS3 VOA 040920B	Yes
SW-846 8270	4246557	Yes

Test Method	Laboratory Batch	LCS Run?
SW-846 8270	4251551	Yes
SW-846 8270	4252534	Yes
SW-846 8270	4253605	Yes
SW-846 8270	4257591	Yes
SW-846 8270	4258519	Yes
SW-846 8270	4260382	Yes
SW-846 8270	4260555	Yes
SW-846 8270	4264617	Yes
SW-846 8270	4266517	Yes
SW-846 8270	4267598	Yes
SW-846 8270	4272409	Yes
SW-846 8270	4274374	Yes
SW-846 8270	4278418	Yes

Table 9
LCS Evaluation Summary

Test Method	CAS No.	Analyte	Minimum Result	Maximum Result	Unit
SW-846 8260	71-55-6	1,1,1-Trichloroethane	79	124	%REC
SW-846 8260	79-34-5	1,1,2,2-Tetrachloroethane	93.6	116	%REC
SW-846 8260	79-00-5	1,1,2-Trichloroethane	93.7	108	%REC
SW-846 8260	75-34-3	1,1-Dichloroethane	83.5	107	%REC
SW-846 8260	75-35-4	1,1-Dichloroethene	76	110	%REC
SW-846 8270	120-82-1	1,2,4-Trichlorobenzene	65	84	%REC
SW-846 8260	120-82-1	1,2,4-Trichlorobenzene	94	117	%REC
SW-846 8260	95-50-1	1,2-Dichlorobenzene	89	103	%REC
SW-846 8260	107-06-2	1,2-Dichloroethane	78	135	%REC
SW-846 8260	78-87-5	1,2-Dichloropropane	86.8	106	%REC
SW-846 8260	106-46-7	1,4-Dichlorobenzene	89	104	%REC
SW-846 8270	95-95-4	2,4,5-Trichlorophenol	67	91	%REC
SW-846 8270	88-06-2	2,4,6-Trichlorophenol	66	83	%REC
SW-846 8270	120-83-2	2,4-Dichlorophenol	67	87	%REC
SW-846 8270	105-67-9	2,4-Dimethylphenol	66	89	%REC
SW-846 8270	51-28-5	2,4-Dinitrophenol	59	81	%REC
SW-846 8270	121-14-2	2,4-Dinitrotoluene	69	89	%REC
SW-846 8270	606-20-2	2,6-Dinitrotoluene	67	85	%REC
SW-846 8260	78-93-3	2-Butanone	90.5	114	%REC
SW-846 8270	91-58-7	2-Chloronaphthalene	62	82	%REC
SW-846 8270	95-57-8	2-Chlorophenol	59	78	%REC
SW-846 8270	91-57-6	2-Methylnaphthalene	68	88	%REC
SW-846 8270	95-48-7	2-Methylphenol	58	79	%REC
SW-846 8270	88-74-4	2-Nitroaniline	61	85	%REC
SW-846 8270	91-94-1	3,3'-Dichlorobenzidine	38	67	%REC
SW-846 8270	534-52-1	4,6-Dinitro-2-methylphenol	60	80	%REC

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Test Method	CAS No.	Analyte	Minimum Result	Maximum Result	Unit
SW-846 8270	106-47-8	4-Chloroaniline	39	73	%REC
SW-846 8260	108-10-1	4-Methyl-2-pentanone	88.3	115	%REC
SW-846 8270	106-44-5	4-Methylphenol	59	85	%REC
SW-846 8270	100-02-7	4-Nitrophenol	64	97	%REC
SW-846 8270	83-32-9	Acenaphthene	61	83	%REC
SW-846 8260	67-64-1	Acetone	82.5	111	%REC
SW-846 6010	7429-90-5	Aluminum	86	99	%REC
SW-846 8270	120-12-7	Anthracene	64	82	%REC
SW-846 6010	7440-36-0	Antimony	82	93	%REC
SW-846 8082	12674-11-2	Aroclor-1016	81	109	%REC
SW-846 8082	11096-82-5	Aroclor-1260	72	99	%REC
SW-846 6010	7440-38-2	Arsenic	84	93	%REC
SW-846 6010	7440-39-3	Barium	93	103	%REC
SW-846 8260	71-43-2	Benzene	90	108	%REC
SW-846 8270	56-55-3	Benzo(a)anthracene	61	80	%REC
SW-846 8270	50-32-8	Benzo(a)pyrene	61	82	%REC
SW-846 8270	205-99-2	Benzo(b)fluoranthene	62	96	%REC
SW-846 8270	207-08-9	Benzo(k)fluoranthene	58	79	%REC
SW-846 8270	65-85-0	Benzoic acid	23	74	%REC
SW-846 8270	100-51-6	Benzyl alcohol	59	83	%REC
SW-846 6010	7440-41-7	Beryllium	89	105	%REC
SW-846 8270	111-44-4	Bis(2-Chloroethyl)ether	49	71	%REC
SW-846 8270	39638-32-9	Bis(2-Chloroisopropyl)ether	43	73	%REC
SW-846 8270	117-81-7	Bis(2-Ethylhexyl)phthalate	64	84	%REC
SW-846 8260	75-27-4	Bromodichloromethane	80.1	117	%REC
SW-846 8260	75-25-2	Bromoform	88.8	105	%REC
SW-846 8260	74-83-9	Bromomethane	64	181	%REC
SW-846 8270	85-68-7	Butylbenzylphthalate	59	87	%REC
SW-846 6010	7440-43-9	Cadmium	87	97	%REC
SW-846 8260	75-15-0	Carbon disulfide	68	130	%REC
SW-846 8260	56-23-5	Carbon tetrachloride	79	119	%REC
SW-846 8260	108-90-7	Chlorobenzene	89	101	%REC
SW-846 8260	75-00-3	Chloroethane	69	114	%REC
SW-846 8260	67-66-3	Chloroform	83.6	115	%REC
SW-846 8260	74-87-3	Chloromethane	65.8	119	%REC
SW-846 6010	7440-47-3	Chromium	89	100	%REC
SW-846 8270	218-01-9	Chrysene	59	84	%REC
SW-846 8260	10061-01-5	cis-1,3-Dichloropropene	87.9	108	%REC
SW-846 6010	7440-48-4	Cobalt	86	96	%REC
SW-846 6010	7440-50-8	Copper	89	100	%REC
SW-846 8270	84-74-2	Di-n-butylphthalate	67	91	%REC
SW-846 8270	117-84-0	Di-n-octylphthalate	60	85	%REC
SW-846 8270	53-70-3	Dibenz(a,h)anthracene	62	87	%REC
SW-846 8270	132-64-9	Dibenzofuran	66	88	%REC

Test Method	CAS No.	Analyte	Minimum Result	Maximum Result	Unit
SW-846 8260	124-48-1	Dibromochloromethane	97	109	%REC
SW-846 8270	84-66-2	Diethylphthalate	64	84	%REC
SW-846 8270	131-11-3	Dimethylphthalate	65	89	%REC
SW-846 8260	100-41-4	Ethylbenzene	85	111	%REC
SW-846 8270	206-44-0	Fluoranthene	66	84	%REC
SW-846 8270	86-73-7	Fluorene	64	85	%REC
SW-846 8270	118-74-1	Hexachlorobenzene	65	95	%REC
SW-846 8260	87-68-3	Hexachlorobutadiene	73	120	%REC
SW-846 8270	87-68-3	Hexachlorobutadiene	65	87	%REC
SW-846 8270	77-47-4	Hexachlorocyclopentadiene	34	65	%REC
SW-846 8270	67-72-1	Hexachloroethane	58	78	%REC
SW-846 8270	193-39-5	Indeno(1,2,3-cd)pyrene	63	86	%REC
SW-846 6010	7439-89-6	Iron	92	104	%REC
SW-846 8270	78-59-1	Isophorone	58	82	%REC
SW-846 6010	7439-92-1	Lead	87	98	%REC
SW-846 6010	7439-93-2	Lithium	84	100	%REC
SW-846 6010	7439-96-5	Manganese	89	100	%REC
SW-846 6010	7439-97-6	Mercury	94	108	%REC
SW-846 8260	75-09-2	Methylene chloride	92	106	%REC
SW-846 6010	7439-98-7	Molybdenum	87	98	%REC
SW-846 8270	86-30-6	n-Nitrosodiphenylamine	70	95	%REC
SW-846 8270	621-64-7	n-Nitrosodipropylamine	55	80	%REC
SW-846 8270	91-20-3	Naphthalene	63	81	%REC
SW-846 8260	91-20-3	Naphthalene	91	118	%REC
SW-846 6010	7440-02-0	Nickel	88	98	%REC
SW-846 8270	98-95-3	Nitrobenzene	53	79	%REC
SW-846 8270	87-86-5	Pentachlorophenol	54	71	%REC
SW-846 8270	108-95-2	Phenol	55	79	%REC
SW-846 8270	129-00-0	Pyrene	54	79	%REC
SW-846 6010	7782-49-2	Selenium	82	96	%REC
SW-846 6010	7440-22-4	Silver	86	100	%REC
SW-846 6010	7440-24-6	Strontium	90	101	%REC
SW-846 8260	100-42-5	Styrene	93	104	%REC
SW-846 8260	127-18-4	Tetrachloroethene	80	107	%REC
SW-846 6010	7440-31-5	Tin	81	91	%REC
SW-846 8260	108-88-3	Toluene	92	110	%REC
SW-846 8260	10061-02-6	trans-1,3-Dichloropropene	93.7	121	%REC
SW-846 8260	79-01-6	Trichloroethene	88	104	%REC
SW-846 6010	11-09-6	Uranium, Total	91	101	%REC
SW-846 6010	7440-62-2	Vanadium	89	100	%REC
SW-846 8260	75-01-4	Vinyl chloride	62	136	%REC
SW-846 8260	1330-20-7	Xylene	87	111	%REC
SW-846 6010	7440-66-6	Zinc	86	97	%REC

Based on the evaluation of minimum and maximum LCS recoveries, any bias introduced by the laboratory was not significant enough to affect IHSS Group 700-8 project decisions. 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

Surrogates are added to every SVOC and VOC sample and, therefore, surrogate recoveries only impact individual samples. Surrogate recoveries are evaluated to determine whether sample matrix effects may be introducing bias into analytical results. Surrogate recoveries greater than 100 percent indicate analyte concentrations may actually be less than reported. Because this is environmentally conservative, no further action is needed. Surrogate recoveries below the minimum indicate analyte concentrations may actually be more than reported.

The frequency of surrogate measurements for SVOCs and VOCs relative to each laboratory batch, and surrogate recoveries are presented in Table 10.

**Table 10
Surrogate Recovery Summary**

Number of Samples	CAS No.	Analyte	Minimum Result	Maximum Result	Unit
SVOCs					
105	321-60-8	2-Fluorobiphenyl	42	78	%REC
105	367-12-4	2-Fluorophenol	42	81	%REC
105	4165-60-0	Deuterated nitrobenzene	41	75	%REC
105	1718-51-0	p-Terphenyl-d14	50	85	%REC
VOCs					
52	460-00-4	4-Bromofluorobenzene	83.48	128.8	%REC
52	17060-07-0	Deuterated 1,2-dichloroethane	81	130.9	%REC
52	2037-26-5	Deuterated toluene	94	107.9	%REC

Minimum surrogate recoveries were evaluated by dividing the maximum concentration by the lowest surrogate recovery for that analyte (essentially correcting the bias). All results were less than WRW ALs.

Based on the evaluation of minimum and maximum surrogate recoveries, any bias introduced by sample matrix effects was not significant enough to affect IHSS Group 700-8 project decisions.

Field Blank Evaluation

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 consisted of multiplying field blank concentrations by 10 (for laboratory contaminants) or 5 (for nonlaboratory contaminants) and comparing them to the WRW ALs. To be conservative, the factor used was 10 in all cases. In all cases the corrected field blank

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concentrations were less than WRW ALs; therefore, blank contamination did not adversely impact IHSS Group 700-8 project decisions. Field blank results are provided in Table 11.

Table 11
Field Blank Summary

Analyte	CAS No.	Sample QC Code	Result	Unit	Laboratory
Carbon tetrachloride	56-23-5	RNS	2.800	ug/L	URS
Carbon tetrachloride	56-23-5	TB	37.300	ug/L	URS
Chloroform	67-66-3	TB	5.610	ug/L	URS
Toluene	108-88-3	TB	1.700	ug/L	URS
Uranium-235	15117-96-1	FB	0.191	pCi/g	URS
Uranium-235	15117-96-1	RNS	0.135	pCi/g	URS
Uranium-238	7440-61-1	FB	2.530	pCi/g	URS
Uranium-238	7440-61-1	RNS	2.410	pCi/g	URS

Field blank QC codes (equipment = EB, field = FB, rinse = RNS, trip = TB)

Sample MS Evaluation

Table 12 provides a summary of the minimum and maximum MS results by analyte for the IHSS Group 700-8 project. According to the EPA data validation guidelines (1994b), if organic MS recoveries are low, the data reviewer may use the MS and MSD results in conjunction with other QC criteria. In this case, LCS recoveries were checked. All LCS recoveries for this project were evaluated earlier in this section and determined to have no impact on the IHSS Group 700-8 project.

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 8260	71-55-6	1,1,1-Trichloroethane	68	124	%REC	11	11
SW-846 8260	79-34-5	1,1,2,2-Tetrachloroethane	86.4	107	%REC	11	11
SW-846 8260	79-00-5	1,1,2-Trichloroethane	83.3	106	%REC	11	11
SW-846 8260	75-34-3	1,1-Dichloroethane	81	119	%REC	11	11
SW-846 8260	75-35-4	1,1-Dichloroethene	65	101	%REC	11	11
SW-846 8260	120-82-1	1,2,4-Trichlorobenzene	48	93.2	%REC	11	11
SW-846 8270	120-82-1	1,2,4-Trichlorobenzene	61	75	%REC	6	6
SW-846 8260	95-50-1	1,2-Dichlorobenzene	62	99.1	%REC	11	11
SW-846 8260	107-06-2	1,2-Dichloroethane	82	127	%REC	11	11
SW-846 8260	78-87-5	1,2-Dichloropropane	85	113	%REC	11	11
SW-846 8260	106-46-7	1,4-Dichlorobenzene	63	101	%REC	11	11
SW-846 8270	95-95-4	2,4,5-Trichlorophenol	66	86	%REC	6	6
SW-846 8270	88-06-2	2,4,6-Trichlorophenol	65	77	%REC	6	6
SW-846 8270	120-83-2	2,4-Dichlorophenol	61	79	%REC	6	6
SW-846 8270	105-67-9	2,4-Dimethylphenol	62	79	%REC	6	6

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Test Method	CAS No.	Analyte	Minimum Result	Maximum Result	Unit	Number of MS Samples	Number of Lab Batches
SW-846 8270	51-28-5	2,4-Dinitrophenol	46	75	%REC	6	6
SW-846 8270	121-14-2	2,4-Dinitrotoluene	63	83	%REC	6	6
SW-846 8270	606-20-2	2,6-Dinitrotoluene	61	81	%REC	6	6
SW-846 8260	78-93-3	2-Butanone	78.2	414	%REC	11	11
SW-846 8270	91-58-7	2-Chloronaphthalene	59	81	%REC	6	6
SW-846 8270	95-57-8	2-Chlorophenol	60	72	%REC	6	6
SW-846 8270	91-57-6	2-Methylnaphthalene	60	77	%REC	6	6
SW-846 8270	95-48-7	2-Methylphenol	58	77	%REC	6	6
SW-846 8270	88-74-4	2-Nitroaniline	60	82	%REC	6	6
SW-846 8270	91-94-1	3,3'-Dichlorobenzidine	50	78	%REC	6	6
SW-846 8270	534-52-1	4,6-Dinitro-2-methylphenol	48	70	%REC	6	6
SW-846 8270	106-47-8	4-Chloroaniline	35	65	%REC	6	6
SW-846 8260	108-10-1	4-Methyl-2-pentanone	86	187	%REC	11	11
SW-846 8270	106-44-5	4-Methylphenol	60	80	%REC	6	6
SW-846 8270	100-02-7	4-Nitrophenol	63	90	%REC	6	6
SW-846 8270	83-32-9	Acenaphthene	58	80	%REC	6	6
SW-846 8260	67-64-1	Acetone	60	540	%REC	11	11
SW-846 6010	7429-90-5	Aluminum	644	8620	%REC	8	8
SW-846 8270	120-12-7	Anthracene	59	79	%REC	6	6
SW-846 6010	7440-36-0	Antimony	42	76	%REC	8	8
SW-846 8082	12674-11-2	Aroclor-1016	84	100	%REC	8	8
SW-846 8082	11096-82-5	Aroclor-1260	68	87	%REC	8	8
SW-846 6010	7440-38-2	Arsenic	87	100	%REC	8	8
SW-846 6010	7440-39-3	Barium	97	113	%REC	8	8
SW-846 8260	71-43-2	Benzene	85	108	%REC	11	11
SW-846 8270	56-55-3	Benzo(a)anthracene	55	79	%REC	6	6
SW-846 8270	50-32-8	Benzo(a)pyrene	57	76	%REC	6	6
SW-846 8270	205-99-2	Benzo(b)fluoranthene	56	80	%REC	6	6
SW-846 8270	207-08-9	Benzo(k)fluoranthene	58	72	%REC	6	6
SW-846 8270	65-85-0	Benzoic acid	37	63	%REC	6	6
SW-846 8270	100-51-6	Benzyl alcohol	59	75	%REC	6	6
SW-846 6010	7440-41-7	Beryllium	90	106	%REC	8	8
SW-846 8270	111-44-4	Bis(2-Chloroethyl)ether	52	72	%REC	6	6
SW-846 8270	39638-32-9	Bis(2-Chloroisopropyl)ether	53	69	%REC	6	6
SW-846 8270	117-81-7	Bis(2-Ethylhexyl)phthalate	59	86	%REC	6	6
SW-846 8260	75-27-4	Bromodichloromethane	78	120	%REC	11	11
SW-846 8260	75-25-2	Bromoform	76.6	106	%REC	11	11
SW-846 8260	74-83-9	Bromomethane	55	111	%REC	11	11
SW-846 8270	85-68-7	Butylbenzylphthalate	55	96	%REC	6	6
SW-846 6010	7440-43-9	Cadmium	87	94	%REC	8	8
SW-846 8260	75-15-0	Carbon disulfide	24.6	87.4	%REC	11	11
SW-846 8260	56-23-5	Carbon tetrachloride	67	121	%REC	11	11
SW-846 8260	108-90-7	Chlorobenzene	75	102	%REC	11	11

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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	75-00-3	Chloroethane	55	100	%REC	11	11
SW-846 8260	67-66-3	Chloroform	83	118	%REC	11	11
SW-846 8260	74-87-3	Chloromethane	62	116	%REC	11	11
SW-846 6010	7440-47-3	Chromium	0	140	%REC	8	8
SW-846 8270	218-01-9	Chrysene	55	76	%REC	6	6
SW-846 8260	10061-01-5	cis-1,3-Dichloropropene	80	108	%REC	11	11
SW-846 6010	7440-48-4	Cobalt	90	97	%REC	8	8
SW-846 6010	7440-50-8	Copper	91	135	%REC	8	8
SW-846 8270	84-74-2	Di-n-butylphthalate	63	80	%REC	6	6
SW-846 8270	117-84-0	Di-n-octylphthalate	59	86	%REC	6	6
SW-846 8270	53-70-3	Dibenz(a,h)anthracene	51	80	%REC	6	6
SW-846 8270	132-64-9	Dibenzofuran	61	85	%REC	6	6
SW-846 8260	124-48-1	Dibromochloromethane	84.4	101	%REC	11	11
SW-846 8270	84-66-2	Diethylphthalate	59	83	%REC	6	6
SW-846 8270	131-11-3	Dimethylphthalate	60	86	%REC	6	6
SW-846 8260	100-41-4	Ethylbenzene	76	109	%REC	11	11
SW-846 8270	206-44-0	Fluoranthene	58	82	%REC	6	6
SW-846 8270	86-73-7	Fluorene	59	81	%REC	6	6
SW-846 8270	118-74-1	Hexachlorobenzene	58	95	%REC	6	6
SW-846 8260	87-68-3	Hexachlorobutadiene	33	86.8	%REC	11	11
SW-846 8270	87-68-3	Hexachlorobutadiene	61	76	%REC	6	6
SW-846 8270	77-47-4	Hexachlorocyclopentadiene	35	46	%REC	6	6
SW-846 8270	67-72-1	Hexachloroethane	60	69	%REC	6	6
SW-846 8270	193-39-5	Indeno(1,2,3-cd)pyrene	50	83	%REC	6	6
SW-846 6010	7439-89-6	Iron	0	4390	%REC	8	8
SW-846 8270	78-59-1	Isophorone	59	74	%REC	6	6
SW-846 6010	7439-92-1	Lead	0	98	%REC	8	8
SW-846 6010	7439-93-2	Lithium	92	112	%REC	8	8
SW-846 6010	7439-96-5	Manganese	112	220	%REC	8	8
SW-846 6010	7439-97-6	Mercury	81	106	%REC	5	5
SW-846 8260	75-09-2	Methylene chloride	80	107	%REC	11	11
SW-846 6010	7439-98-7	Molybdenum	88	95	%REC	8	8
SW-846 8270	86-30-6	n-Nitrosodiphenylamine	63	91	%REC	6	6
SW-846 8270	621-64-7	n-Nitrosodipropylamine	57	74	%REC	6	6
SW-846 8260	91-20-3	Naphthalene	54	92	%REC	11	11
SW-846 8270	91-20-3	Naphthalene	58	73	%REC	6	6
SW-846 6010	7440-02-0	Nickel	91	108	%REC	8	8
SW-846 8270	98-95-3	Nitrobenzene	58	71	%REC	6	6
SW-846 8270	87-86-5	Pentachlorophenol	57	68	%REC	6	6
SW-846 8270	108-95-2	Phenol	57	74	%REC	6	6
SW-846 8270	129-00-0	Pyrene	52	82	%REC	6	6
SW-846 6010	7782-49-2	Selenium	85	94	%REC	8	8
SW-846 6010	7440-22-4	Silver	90	97	%REC	8	8

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Test Method	CAS No.	Analyte	Minimum Result	Maximum Result	Unit	Number of MS Samples	Number of Lab Batches
SW-846 6010	7440-24-6	Strontium	94	105	%REC	8	8
SW-846 8260	100-42-5	Styrene	75	99.5	%REC	11	11
SW-846 8260	127-18-4	Tetrachloroethene	71	101	%REC	11	11
SW-846 6010	7440-31-5	Tin	83	89	%REC	8	8
SW-846 8260	108-88-3	Toluene	88	110	%REC	11	11
SW-846 8260	10061-02-6	trans-1,3-Dichloropropene	83.8	102	%REC	11	11
SW-846 8260	79-01-6	Trichloroethene	73	106	%REC	11	11
SW-846 6010	11-09-6	Uranium, Total	90	98	%REC	8	8
SW-846 6010	7440-62-2	Vanadium	92	129	%REC	8	8
SW-846 8260	75-01-4	Vinyl chloride	55	108	%REC	11	11
SW-846 8260	1330-20-7	Xylene	73	110	%REC	11	11
SW-846 6010	7440-66-6	Zinc	92	124	%REC	8	8

For each inorganic with an MS recovery greater than zero, the maximum sample result was divided by the lowest percent recovery. The resulting values were less than the WRW ALs. Therefore, IHSS Group 700-8 project decisions were not impacted.

Chromium, iron, and lead had 0 percent as minimum MS recoveries. The WRW ALs for these metals are more than three times greater than the maximum sample results indicating that IHSS Group 700-8 project decisions were not impacted by the 0 percent minimum MS recoveries.

6.2.2 Precision

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

Sample MSD Evaluation

Laboratory precision is measured through the use of MSDs, as 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 WRW ALs, no further action was needed.

Table 13
Sample MSD Evaluation

Test Method	CAS No.	Analyte	Maximum RPD (%)
SW-846 8260	71-55-6	1,1,1-Trichloroethane	8.921
SW-846 8260	79-34-5	1,1,2,2-Tetrachloroethane	16.735
SW-846 8260	79-00-5	1,1,2-Trichloroethane	14.031
SW-846 8260	75-34-3	1,1-Dichloroethane	9.412
SW-846 8260	75-35-4	1,1-Dichloroethene	10.219
SW-846 8260	120-82-1	1,2,4-Trichlorobenzene	15.113
SW-846 8270	120-82-1	1,2,4-Trichlorobenzene	40.000
SW-846 8260	95-50-1	1,2-Dichlorobenzene	15.061
SW-846 8260	107-06-2	1,2-Dichloroethane	8.917

Test Method	CAS No.	Analyte	Maximum RPD (%)
SW-846 8260	78-87-5	1,2-Dichloropropane	11.111
SW-846 8260	106-46-7	1,4-Dichlorobenzene	16.827
SW-846 8270	95-95-4	2,4,5-Trichlorophenol	37.241
SW-846 8270	88-06-2	2,4,6-Trichlorophenol	33.333
SW-846 8270	120-83-2	2,4-Dichlorophenol	37.594
SW-846 8270	105-67-9	2,4-Dimethylphenol	35.821
SW-846 8270	51-28-5	2,4-Dinitrophenol	32.911
SW-846 8270	121-14-2	2,4-Dinitrotoluene	33.333
SW-846 8270	606-20-2	2,6-Dinitrotoluene	33.094
SW-846 8260	78-93-3	2-Butanone	15.951
SW-846 8270	91-58-7	2-Chloronaphthalene	36.496
SW-846 8270	95-57-8	2-Chlorophenol	42.017
SW-846 8270	91-57-6	2-Methylnaphthalene	36.923
SW-846 8270	95-48-7	2-Methylphenol	36.923
SW-846 8270	88-74-4	2-Nitroaniline	32.624
SW-846 8270	91-94-1	3,3'-Dichlorobenzidine	24.793
SW-846 8270	534-52-1	4,6-Dinitro-2-methylphenol	35.294
SW-846 8270	106-47-8	4-Chloroaniline	40.964
SW-846 8260	108-10-1	4-Methyl-2-pentanone	17.436
SW-846 8270	106-44-5	4-Methylphenol	35.294
SW-846 8270	100-02-7	4-Nitrophenol	22.222
SW-846 8270	83-32-9	Acenaphthene	35.294
SW-846 8260	67-64-1	Acetone	16.386
SW-846 6010	7429-90-5	Aluminum	143.059
SW-846 8270	120-12-7	Anthracene	29.921
SW-846 6010	7440-36-0	Antimony	17.857
SW-846 8082	12674-11-2	Aroclor-1016	16.915
SW-846 8082	11096-82-5	Aroclor-1260	12.414
SW-846 6010	7440-38-2	Arsenic	12.766
SW-846 6010	7440-39-3	Barium	9.259
SW-846 8260	71-43-2	Benzene	9.877
SW-846 8270	56-55-3	Benzo(a)anthracene	27.692
SW-846 8270	50-32-8	Benzo(a)pyrene	27.273
SW-846 8270	205-99-2	Benzo(b)fluoranthene	23.776
SW-846 8270	207-08-9	Benzo(k)fluoranthene	32.258
SW-846 8270	65-85-0	Benzoic acid	25.243
SW-846 8270	100-51-6	Benzyl alcohol	34.711
SW-846 6010	7440-41-7	Beryllium	7.254
SW-846 8270	111-44-4	Bis(2-Chloroethyl)ether	48.421
SW-846 8270	39638-32-9	Bis(2-Chloroisopropyl)ether	36.000
SW-846 8270	117-81-7	Bis(2-Ethylhexyl)phthalate	25.000
SW-846 8260	75-27-4	Bromodichloromethane	8.440
SW-846 8260	75-25-2	Bromoform	10.387
SW-846 8260	74-83-9	Bromomethane	17.155

Test Method	CAS No.	Analyte	Maximum RPD (%)
SW-846 8270	85-68-7	Butylbenzylphthalate	24.658
SW-846 6010	7440-43-9	Cadmium	6.742
SW-846 8260	75-15-0	Carbon disulfide	14.173
SW-846 8260	56-23-5	Carbon tetrachloride	10.667
SW-846 8260	108-90-7	Chlorobenzene	10.893
SW-846 8260	75-00-3	Chloroethane	10.169
SW-846 8260	67-66-3	Chloroform	9.799
SW-846 8260	74-87-3	Chloromethane	10.687
SW-846 6010	7440-47-3	Chromium	22.222
SW-846 8270	218-01-9	Chrysene	32.061
SW-846 8260	10061-01-5	cis-1,3-Dichloropropene	9.091
SW-846 6010	7440-48-4	Cobalt	7.650
SW-846 6010	7440-50-8	Copper	35.808
SW-846 8270	84-74-2	Di-n-butylphthalate	31.579
SW-846 8270	117-84-0	Di-n-octylphthalate	29.060
SW-846 8270	53-70-3	Dibenz(a,h)anthracene	38.806
SW-846 8270	132-64-9	Dibenzofuran	34.483
SW-846 8260	124-48-1	Dibromochloromethane	11.724
SW-846 8270	84-66-2	Diethylphthalate	35.461
SW-846 8270	131-11-3	Dimethylphthalate	37.241
SW-846 8260	100-41-4	Ethylbenzene	11.814
SW-846 8270	206-44-0	Fluoranthene	25.243
SW-846 8270	86-73-7	Fluorene	38.235
SW-846 8270	118-74-1	Hexachlorobenzene	42.038
SW-846 8270	87-68-3	Hexachlorobutadiene	42.857
SW-846 8260	87-68-3	Hexachlorobutadiene	18.788
SW-846 8270	77-47-4	Hexachlorocyclopentadiene	26.316
SW-846 8270	67-72-1	Hexachloroethane	42.424
SW-846 8270	193-39-5	Indeno(1,2,3-cd)pyrene	42.336
SW-846 6010	7439-89-6	Iron	197.137
SW-846 6010	7439-89-6	Iron	197.137
SW-846 8270	78-59-1	Isophorone	32.479
SW-846 6010	7439-92-1	Lead	6.742
SW-846 6010	7439-93-2	Lithium	7.407
SW-846 6010	7439-96-5	Manganese	94.314
SW-846 6010	7439-97-6	Mercury	13.793
SW-846 8260	75-09-2	Methylene chloride	12.865
SW-846 6010	7439-98-7	Molybdenum	6.593
SW-846 8270	86-30-6	n-Nitrosodiphenylamine	37.908
SW-846 8270	621-64-7	n-Nitrosodipropylamine	33.898
SW-846 8270	91-20-3	Naphthalene	37.931
SW-846 8260	91-20-3	Naphthalene	20.080
SW-846 6010	7440-02-0	Nickel	7.692
SW-846 8270	98-95-3	Nitrobenzene	35.714

Test Method	CAS No.	Analyte	Maximum RPD (%)
SW-846 8270	87-86-5	Pentachlorophenol	31.193
SW-846 8270	108-95-2	Phenol	36.800
SW-846 8270	129-00-0	Pyrene	26.950
SW-846 6010	7782-49-2	Selenium	4.598
SW-846 6010	7440-22-4	Silver	6.897
SW-846 6010	7440-24-6	Strontium	8.955
SW-846 8260	100-42-5	Styrene	11.167
SW-846 8260	127-18-4	Tetrachloroethene	11.940
SW-846 6010	7440-31-5	Tin	5.848
SW-846 8260	108-88-3	Toluene	11.620
SW-846 8260	10061-02-6	trans-1,3-Dichloropropene	9.851
SW-846 8260	79-01-6	Trichloroethene	12.821
SW-846 6010	11-09-6	Uranium, Total	6.316
SW-846 6010	7440-62-2	Vanadium	18.667
SW-846 8260	75-01-4	Vinyl chloride	13.559
SW-846 8260	1330-20-7	Xylene	13.277
SW-846 6010	7440-66-6	Zinc	15.094

All of the analytes detected above RLs or background, with MSD RPDs greater than 35 percent, were less than 12 percent of their WRW ALs. Therefore, the MSD RPDs for these analytes did not impact IHSS Group 700-8 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	Percentage of Duplicate Samples
Alpha Spectrometry	16	8	50.00%
Gamma Spectrometry	117	8	6.84%
SW-846 6010	117	8	6.84%
SW-846 8082	117	8	6.84%
SW-846 8260	56	4	7.14%
SW-846 8270	117	8	6.84%

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

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700-8, SW-846 8082, SW-846 8260, and SW-846 8270 RPDs were acceptable, except for acetone which was not a COC at the site. Alpha spectrometry and SW-846 6010 RPD results were greater than 35 percent.

Table 15
RPD Evaluation Summary

Lab Code	Test Method	Analyte	Maximum Result RPD
ESTLDEN	SW-846 8260	1,1,1-Trichloroethane	1.905
ESTLDEN	SW-846 8260	1,1-Dichloroethane	1.905
ESTLDEN	SW-846 8260	1,2,4-Trichlorobenzene	7.018
ESTLDEN	SW-846 8270	1,2,4-Trichlorobenzene	8.000
ESTLDEN	SW-846 8260	1,2-Dichloroethane	1.770
ESTLDEN	SW-846 8270	2,4,5-Trichlorophenol	8.000
ESTLDEN	SW-846 8270	2,4,6-Trichlorophenol	8.000
ESTLDEN	SW-846 8270	2,4-Dichlorophenol	8.000
ESTLDEN	SW-846 8270	2,4-Dimethylphenol	8.000
ESTLDEN	SW-846 8270	2,4-Dinitrophenol	8.000
ESTLDEN	SW-846 8270	2-Chloronaphthalene	8.000
ESTLDEN	SW-846 8270	2-Chlorophenol	8.000
ESTLDEN	SW-846 8270	2-Methylnaphthalene	8.000
ESTLDEN	SW-846 8270	2-Methylphenol	8.000
ESTLDEN	SW-846 8270	2-Nitroaniline	8.000
ESTLDEN	SW-846 8270	3,3'-Dichlorobenzidine	6.897
ESTLDEN	SW-846 8270	4,6-Dinitro-2-methylphenol	8.000
ESTLDEN	SW-846 8270	4-Chloroaniline	6.897
ESTLDEN	SW-846 8260	4-Methyl-2-pentanone	8.696
ESTLDEN	SW-846 8270	4-Methylphenol	8.000
ESTLDEN	SW-846 8270	4-Nitrophenol	8.000
ESTLDEN	SW-846 8270	Acenaphthene	8.000
ESTLDEN	SW-846 8260	Acetone	87.719
ESTLDEN	SW-846 6010	Aluminum	54.902
ESTLDEN	SW-846 8270	Anthracene	8.000
ESTLDEN	SW-846 6010	Antimony	42.105
ESTLDEN	SW-846 8082	Aroclor-1016	8.000
ESTLDEN	SW-846 8082	Aroclor-1221	8.000
ESTLDEN	SW-846 8082	Aroclor-1232	8.000
ESTLDEN	SW-846 8082	Aroclor-1242	8.000
ESTLDEN	SW-846 8082	Aroclor-1248	5.556
ESTLDEN	SW-846 8082	Aroclor-1254	8.000
ESTLDEN	SW-846 8082	Aroclor-1260	8.000
ESTLDEN	SW-846 6010	Arsenic	17.143
ESTLDEN	SW-846 6010	Barium	30.769
ESTLDEN	SW-846 8260	Benzene	7.018
ESTLDEN	SW-846 8270	Benzo(a)anthracene	8.000
ESTLDEN	SW-846 8270	Benzo(a)pyrene	8.000

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Lab Code	Test Method	Analyte	Maximum Result RPD
ESTLDEN	SW-846 8270	Benzo(b)fluoranthene	8.000
ESTLDEN	SW-846 8270	Benzo(k)fluoranthene	8.000
ESTLDEN	SW-846 8270	Benzoic acid	8.000
ESTLDEN	SW-846 8270	Benzyl alcohol	6.897
ESTLDEN	SW-846 6010	Beryllium	35.294
ESTLDEN	SW-846 8270	bis(2-Chloroethyl)ether	8.000
ESTLDEN	SW-846 8270	bis(2-Chloroisopropyl)ether	8.000
ESTLDEN	SW-846 8270	bis(2-Ethylhexyl)phthalate	8.000
ESTLDEN	SW-846 8260	Bromodichloromethane	7.018
ESTLDEN	SW-846 8260	Bromoform	7.018
ESTLDEN	SW-846 8270	Butylbenzylphthalate	8.000
ESTLDEN	SW-846 8260	Carbon disulfide	7.018
ESTLDEN	SW-846 8260	Chlorobenzene	7.018
ESTLDEN	SW-846 8260	Chloroform	7.018
ESTLDEN	SW-846 6010	Chromium	66.667
ESTLDEN	SW-846 8270	Chrysene	8.000
ESTLDEN	SW-846 8260	cis-1,3-Dichloropropene	7.018
ESTLDEN	SW-846 6010	Cobalt	46.512
ESTLDEN	SW-846 6010	Copper	167.816
ESTLDEN	SW-846 8270	Di-n-butylphthalate	8.000
ESTLDEN	SW-846 8270	Di-n-octylphthalate	8.000
ESTLDEN	SW-846 8270	Dibenz(a,h)anthracene	8.000
ESTLDEN	SW-846 8270	Dibenzofuran	8.000
ESTLDEN	SW-846 8260	Dibromochloromethane	7.018
ESTLDEN	SW-846 8270	Diethylphthalate	8.000
ESTLDEN	SW-846 8270	Dimethylphthalate	8.000
ESTLDEN	SW-846 8270	Fluoranthene	8.000
ESTLDEN	SW-846 8270	Fluorene	8.000
ESTLDEN	SW-846 8270	Hexachlorobenzene	8.000
ESTLDEN	SW-846 8270	Hexachlorobutadiene	8.000
ESTLDEN	SW-846 8270	Hexachlorocyclopentadiene	8.000
ESTLDEN	SW-846 8270	Hexachloroethane	8.000
ESTLDEN	SW-846 8270	Indeno(1,2,3-cd)pyrene	8.000
ESTLDEN	SW-846 6010	Iron	84.790
ESTLDEN	SW-846 8270	Isophorone	8.000
ESTLDEN	SW-846 6010	Lead	40.000
ESTLDEN	SW-846 6010	Lithium	17.241
ESTLDEN	SW-846 6010	Manganese	101.639
ESTLDEN	SW-846 6010	Mercury	43.902
ESTLDEN	SW-846 8270	n-Nitrosodiphenylamine	8.000
ESTLDEN	SW-846 8270	n-Nitrosodipropylamine	8.000
ESTLDEN	SW-846 8260	Naphthalene	7.018
ESTLDEN	SW-846 8270	Naphthalene	8.000
ESTLDEN	SW-846 6010	Nickel	30.769

Lab Code	Test Method	Analyte	Maximum Result RPD
ESTLDEN	SW-846 8270	Nitrobenzene	8.000
ESTLDEN	SW-846 8270	Pentachlorophenol	8.000
ESTLDEN	SW-846 8270	Phenol	8.000
ESTLDEN	SW-846 8270	Pyrene	8.000
ESTLDEN	SW-846 6010	Strontium	52.632
ESTLDEN	SW-846 8260	Styrene	7.018
ESTLDEN	SW-846 8260	Tetrachloroethene	1.770
ESTLDEN	SW-846 8260	Toluene	7.018
ESTLDEN	SW-846 8260	trans-1,3-Dichloropropene	1.770
ESTLDEN	SW-846 8260	Trichloroethene	7.018
GEL	ALPHA SPEC	Uranium-234	27.851
GEL	ALPHA SPEC	Uranium-238	63.641
ESTLDEN	SW-846 6010	Vanadium	26.667
ESTLDEN	SW-846 6010	Zinc	48.649

Each of the analytes detected above reporting limits or background, with maximum duplicate RPDs greater than 35 percent, were further evaluated by comparing the maximum sample result to the WRW AL. Maximum sample results for all of the analytes, except aluminum, chromium, and manganese, were less than 10 percent of their WRW ALs. Maximum sample results for aluminum, chromium, and manganese were less than 20 percent of their WRW ALs. Because the maximum sample results were well below WRW ALs, duplicate RPDs did not affect project decisions for IHSS Group 700-8.

6.2.3 Completeness

Based on original program DQOs, a minimum of 25 percent of Environmental Restoration (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") and the number and percentage of verified records (codes with "1"). 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, the data are adequate for making IHSS Group 700-8 decisions.

Table 16
V&V Summary

Validation Qualifier Code	Total CAS Numbers	No. of Alpha Spectrometry Records	No. of Gamma Spectroscopy Records	No. of SW-846 6010 Records	No. of SW-846 8082 Records	No. of SW-846 8260 Records	No. of SW-846 8270 Records
J	70	0	0	68	0	1	1
J1	400	0	0	393	2	5	0
JB	2	0	0	0	0	2	0
JB1	11	0	0	0	0	11	0
UJ	92	0	0	20	0	16	56
UJ1	196	0	0	112	27	49	8

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V	1988	20	60	372	140	413	983
V1	9570	60	291	1726	650	1807	5036
Total	12329	80	351	2691	819	2304	6084
Validated	2152	20	60	460	140	432	1040
% Validated	17.45%	25.00%	17.09%	17.09%	17.09%	18.75%	17.09%
Verified	10177	60	291	2231	679	1872	5044
% Verified	82.55%	75.00%	82.91%	82.91%	82.91%	81.25%	82.91%

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, milligrams per kilogram (mg/kg) for metals, and picocuries per gram (pCi/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 WRW AL, typically less than one-half the WRW AL.

6.3 Summary of Data Quality

LCS, surrogate, field blank, MS, MSD, and field duplicate evaluations indicated bias introduced by laboratory and field processes was not large enough to impact IHSS Group 700-8 project decisions.

Data comply with the project quality requirements and RFETS validation goal of 25 percent of all analytical records.

Based on the DQOs and DQA, IHSS Group 700-8 data are adequate for decision making.

7.0 PROJECT CONCLUSIONS

Results of the accelerated action justify an NFAA determination for IHSS Group 700-8. This justification is based on the following:

- The accelerated action activities conducted at IHSS Group 700-8 were planned and conducted in accordance with the IASAP (DOE 2001).
- Accelerated action characterization activities were conducted in accordance with the requirements set forth in IASAP Addendum #IA-04-12 (DOE 2004a), which was approved by CDPHE in a letter dated March 19, 2004 (CDPHE 2004).
- Residual contaminant concentrations do not exceed WRW ALs.
- Based on the SSRS, no additional accelerated action is required.

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8.0 REFERENCES

CDPHE, 2004, Approval of the Final Industrial Area Sampling and Analysis Plan FY04 Addendum #IA-04-12, IHSS Group 700-8, Denver, Colorado, March 19.

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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.

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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.

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ENCLOSURE

Complete Data Set Compact Disc

Accelerated Action Data



6/61
6/7

CERCLA Administrative Record Database

Activity	Level	Doc. No	Doc Date	Est Pages	Routine	Status	Print
IA	A	D02490	12/01/2004	E 67	YES, ROUTINE	PRELIM	

Title: Final DSR for IHSS Group 700-8

Internal Code: Ref: 04-RF-01310; KLW-063-04 Rev No: Tag: L

Document Type	DATA SUMMARY	Creates Date	01/06/2005
Date Received	01/04/2005	By User	N902699
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Receipt Type	<input type="checkbox"/>	Under Review	<input type="checkbox"/>
Prelim History	<input type="checkbox"/>	Public History	<input type="checkbox"/>
		Core A/R Document?	<input type="checkbox"/>

Title/Subject: Acronym

(Final) Data Summary Report for IHSS Group 700-8 IHSS 700-214, 750 Pad Pondcrete/Saltcrete Storage, December 2004. Approval of this DSR constitutes regulatory agency concurrence that this IHSS Group is a No Further Accelerated Action (NFAA) Site.

Comments: Acronym

See December 17, 2004 approval under AR IA-A-002496. 1 CD attached to document.

Figure 6
IHSS Group 700-8
Accelerated Action Characterization
Subsurface Soil Data Greater than
RLs or Background*

KEY

- Location with concentrations greater than reporting limits or background levels
- Location with concentrations less than reporting limits or background levels
- [Hatched Box] IHSS
- [Solid Box] Standing building
- [Dotted Box] Demolished building
- [Diagonal Lines] Spill area
- [Cross-hatch] Patched asphalt
- [Vertical Lines] Low-level waste storage area
- [Wavy Line] Stream or ditch
- [Double Line] Paved road
- [Single Line] Dirt road

RI = reporting limit
 * Background = background mean plus two standard deviations
 Wwr al = wildlife refuge worker action level

N

Scale = 1:1,300

100 0 100 Feet

State Plane Coordinate Projection
 Colorado Central Zone
 Datum: NAD 27

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

Prepared by:



KAISER HILL COMPANY

Prepared for:

12.15.04

File: W:\Projects\Fy2004\700-8\Characterization\700-8_final_ds.apr

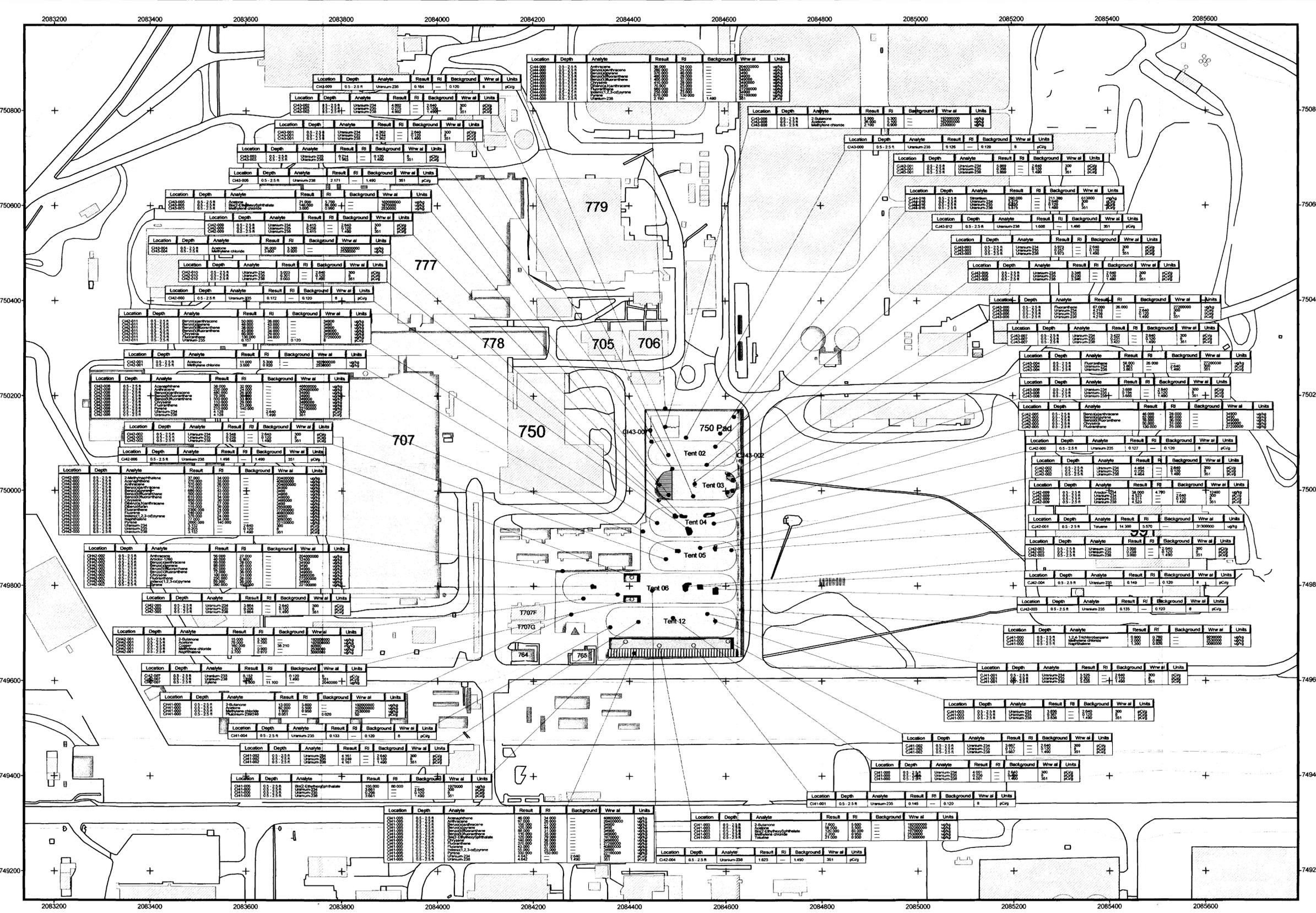


Figure 5
 IHSS Group 700-8
 Accelerated Action Characterization
 Surface Soil Data Greater than
 RLs or Background*

KEY

- Location with concentrations greater than reporting limits or background levels
 - Location with concentrations less than reporting limits or background levels
 - IHSS
 - ▭ Standing building
 - ▭ Demolished building
 - ▭ Spill area
 - ▭ Patched asphalt
 - ▭ Low-level waste storage area
 - ~ Stream or ditch
 - ~ Paved road
 - ~ Dirt road
- RI = reporting limit
 * Background = background mean plus two standard deviations
 Ww al = wildlife refuge worker action level



Scale = 1:1,200
 100 0 100 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:



12.15.04

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