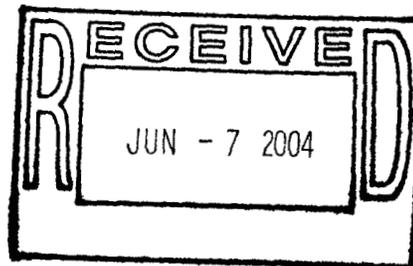




**Industrial Area
Sampling and Analysis Plan
FY04 Addendum #IA-04-15
IHSS Group 700-1**



June 2004

ADMIN RECORD

IA-A-002156

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Approval received from the Colorado Department of Public Health and Environment

May 28, 2004

Approval letter contained in the Administrative Record

June 2004

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ACRONYMS

AL	action level
DOE	U S Department of Energy
ft	foot
HRR	Historical Release Report
IA	Industrial Area
IASAP	Industrial Area Sampling and Analysis Plan
IHSS	Individual Hazardous Substance Site
MDL	method detection limit
µg/kg	microgram per kilogram
mg/kg	milligram per kilogram
NA	not applicable
PAC	Potential Area of Concern
pCi/g	picocurie per gram
PCOC	potential contaminant of concern
RFCA	Rocky Flats Cleanup Agreement
RL	reporting limit
SAP	Sampling and Analysis Plan
SBD	sample beginning depth
SED	sample ending depth
SVOC	semivolatile organic compound
UBC	Under Building Contamination
VOC	volatile organic compound
WRW	wildlife refuge worker

1.0 INTRODUCTION

This Industrial Area (IA) Sampling and Analysis Plan (SAP) (IASAP) (DOE 2001) Addendum #IA-04-15 includes Individual Hazardous Substance Site (IHSS) Group-specific information, sampling locations, and potential contaminants of concern (PCOCs) for the Potential Area of Concern (PAC) proposed for characterization. This IASAP Addendum is a supplement to the IASAP (DOE 2001) and includes data and proposed sampling locations for IHSS Group 700-1, which consists of PAC 700-1115 – Identification of Diesel Fuel in Subsurface Soil. The location of IHSS Group 700-1 is shown on Figure 1. The PCOCs for PAC 700-1115 are listed in Table 1.

Table 1
PCOCs at IHSS Group 700-1

IHSS Group	IHSS/PAC/UBC Site	PCOCs	Media	Data Source	Sampling Location Method
700-1	PAC 700-1115 – Identification of Diesel Fuel in Subsurface Soil	VOCs	Subsurface soil	HRR Annual Update (DOE 1997) Process knowledge (IASAP [DOE 2001])	Biased

2.0 IHSS GROUP 700-1

2.1 Existing Characterization Information

Existing concentrations and activities greater than background means plus two standard deviations, or method detection limits (MDLs) for existing data and reporting limits (RLs) for data collected as part of previous investigations, are presented on Figures 2 and 3. These figures illustrate sampling results for surface and subsurface soil, respectively, within a 100-foot (ft) buffer surrounding IHSS Group 700-1. No data were available within a 50-ft buffer of this PAC, therefore, the search buffer was expanded to 100 ft.

The predominant analyte groups detected at concentrations greater than background means plus two standard deviations or MDLs/RLs, but significantly less than the Rocky Flats Cleanup Agreement (RFCA) wildlife refuge worker (WRW) action levels (ALs), are metals, radionuclides, and semivolatile organic compounds (SVOCs)

PAC 700-1115 was identified as a subsurface diesel fuel spill of unknown origin Diesel fuel was observed in the soil from a 2-ft deep trench dug near the northeastern corner of Building 708 on May 31, 1997 (DOE 1997) Therefore, the PCOCs identified for this PAC are volatile organic compounds (VOCs) Existing information and data for this PAC are available in Appendix C of the IASAP (DOE 2001), the Historical Release Reports (HRRs) (DOE 1992-2003), and the IA Data Summary Report (DOE 2000)

2.2 Proposed Sampling and Analysis

The proposed sampling and analysis specifications (number and types of samples) for IHSS Group 700-1 are summarized in Tables 2 and 3 Proposed new sampling locations are the starting point for IHSS Group characterization After characterization starts, the number and type of samples may change based on sampling results Changes to sampling and analysis specifications will be considered in consultation with the regulatory agencies

Table 2
IHSS Group 700-1 Sampling and Analysis Summary

Category	Total
Number of Sampling Locations	6
Total Number of Samples	12
Number of VOC Analyses	12

Three types of sampling strategies are used to determine sampling locations statistical, geostatistical, and biased Based on historical data (DOE 1997), biased sampling locations were chosen for characterization of this PAC As summarized in Section 2 1, PAC 700-1115 was identified as a subsurface diesel fuel spill of unknown origin Additionally, a storm drain is located within the PAC boundary Therefore, five biased sampling locations will be placed along the length of the storm sewer line, targeting the fill material used in the placement of the lines as a potential conduit for the contamination at the outer perimeter of the PAC boundary One biased sample will be placed near the center of the PAC for characterization of the central area Proposed sampling locations are illustrated on Figure 4 A portion of PAC 700-1115 is covered with a concrete pad Samples will be collected within native soil beneath any concrete present, where applicable Samples collected along the storm drain lines will consist of fill material and native soil beneath the fill material

Table 3
Sampling and Analysis Specifications for IHSS Group 700-1

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	Off-Site Laboratory Method
700-1	PAC 700-1115 - Identification of Diesel Fuel in Subsurface Soil	CF41-000B	2083865 447	749727 183	Subsurface soil	0 5-2 5'	VOCs	8260
		CF41-000C	2083865 447	749727 183	Subsurface soil	2 5-4 5'	VOCs	8260
		CF41-001B	2083913 434	749726 955	Subsurface soil	0 5-2 5'	VOCs	8260
		CF41-001C	2083913 434	749726 955	Subsurface soil	2 5-4 5'	VOCs	8260
		CF41-002B	2083887 221	749708 193	Subsurface soil	0 5-2 5'	VOCs	8260
		CF41-002C	2083887 221	749708 193	Subsurface soil	2 5-4 5'	VOCs	8260
		CF41-003B	2083914 233	749690 621	Subsurface soil	0 5-2 5'	VOCs	8260
		CF41-003C	2083914 233	749690 621	Subsurface soil	2 5-4 5'	VOCs	8260
		CF41-004B	2083887 236	749689 354	Subsurface soil	0 5-2 5'	VOCs	8260
		CF41-004C	2083887 236	749689 354	Subsurface soil	2 5-4 5'	VOCs	8260
		CF41-005B	2083887 041	749668 227	Subsurface soil	0 5-2 5'	VOCs	8260
		CF41-005C	2083887 041	749668 227	Subsurface soil	2 5-4 5'	VOCs	8260

3.0 REFERENCES

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

DOE, 1997, Annual Update to the Historical Release Reports for the Rocky Flats Plant, Golden, Colorado, September

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

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

Figure 1
IHSS Group 700 1
Location Map

KEY

-  PAC
-  Dirt Road
-  Paved Road
-  Stream
-  Lake
-  Fence
-  Structure
-  Demolished
-  Standing



Scale 1:7,000
 300 0 300 600 Feet

State Plane Coordinate Projection
 Colorado Central Zone
 Datum NAD 27

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

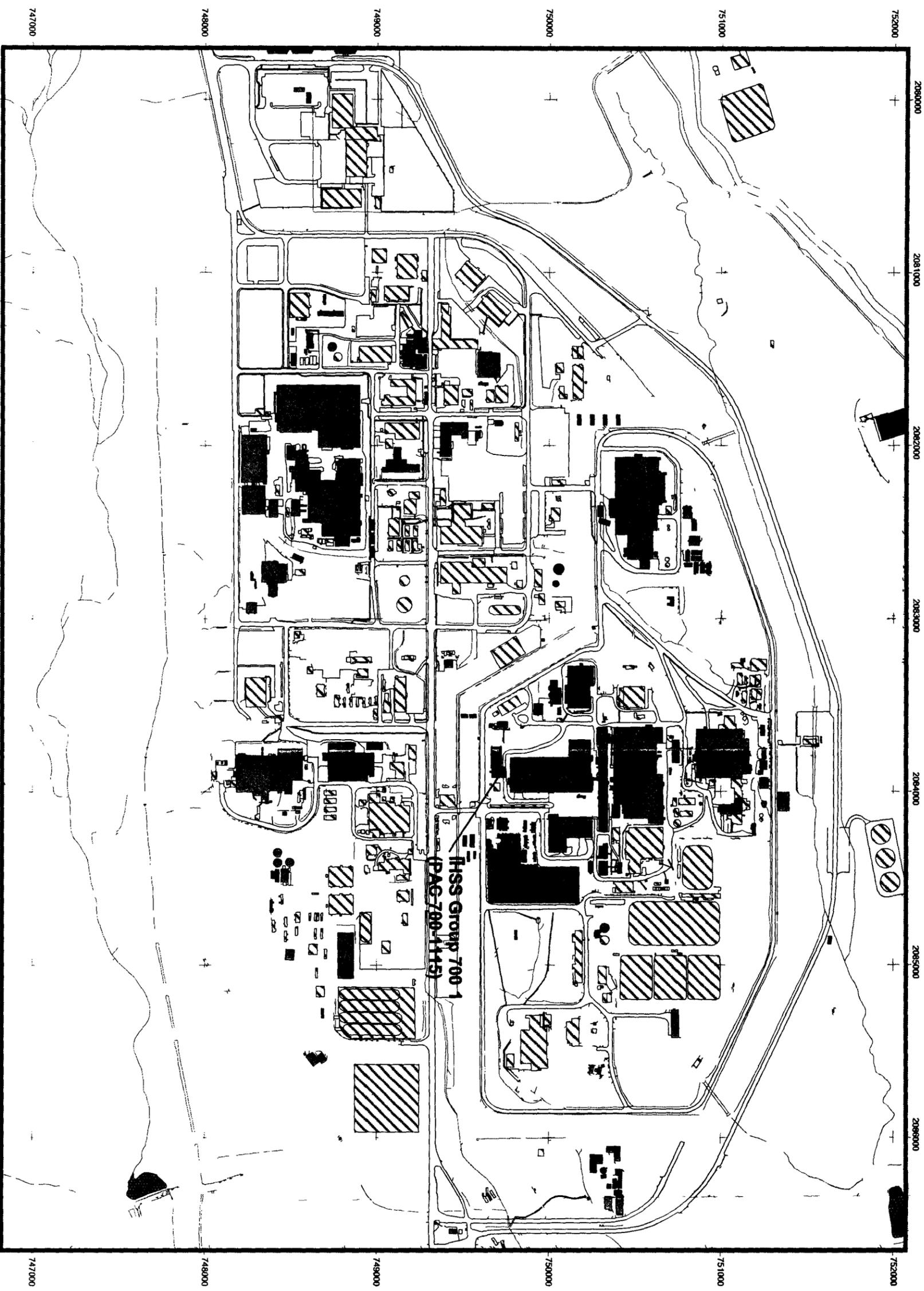
Prepared by  Date April 2004

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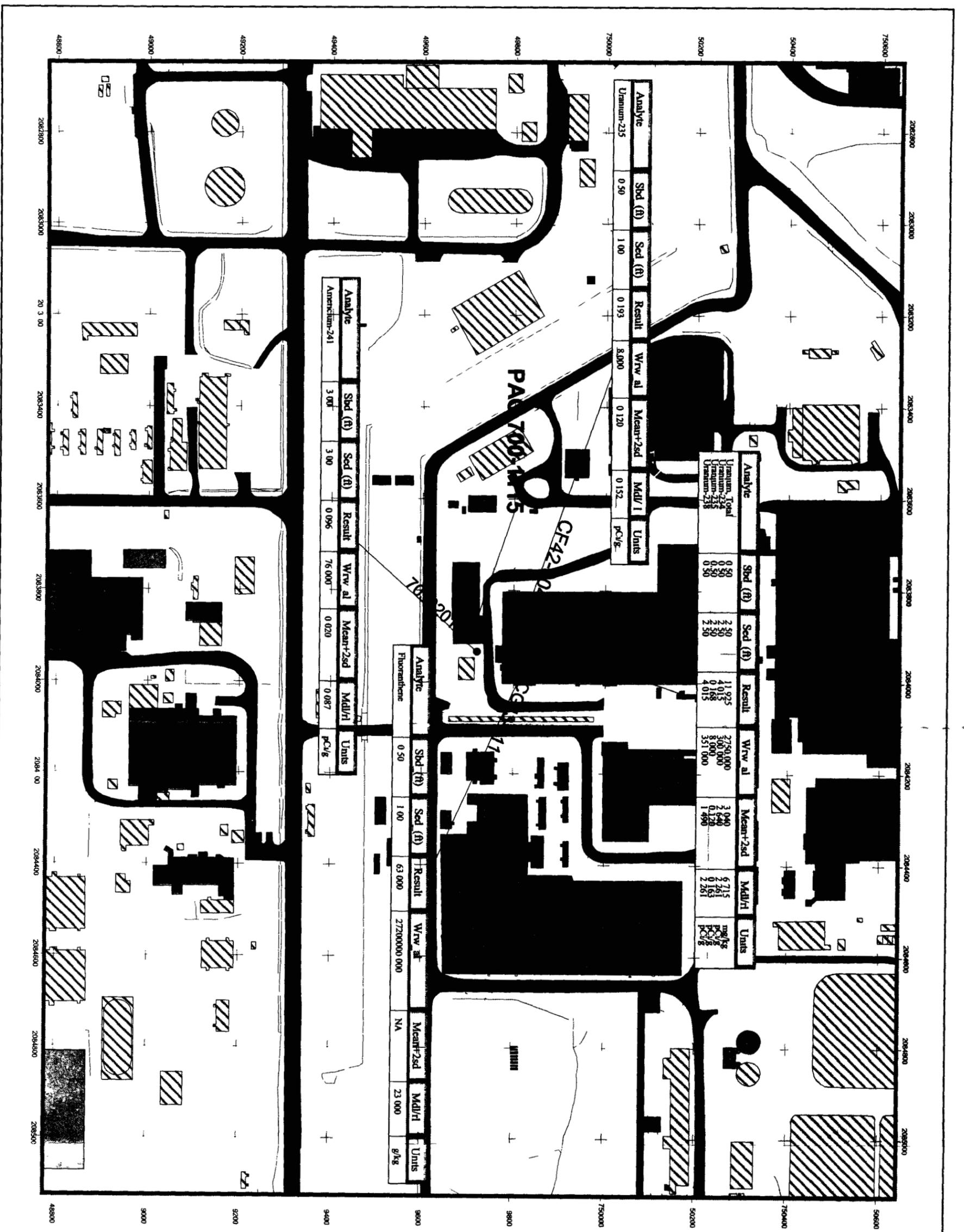


Figure 3
HSS Group 700-1
 Existing Subsurface Soil Sample
 Results Greater Than Background
 Means Plus Two Standard Deviations
 or MDLs/RLs

KEY

- Sampling Location**
- Exceeds WRW Action Level
 - Exceeds Background or MDL/RL
 - Below Background
- Dirt Road**
- Stream**
- PAC**
- UBC**
- Structure**
- ▨ Demolished
 - ▨ Standing
- Paved Road**
- Asphalt**



Scale 1:2,500
 100 0 100 200 Feet

State Plane Coordinate Projection
 Colorado Central Zone
 Datum NAD 27

U S Department of Energy
 Rocky Flats Environmental Technology Site

Prepared by [Redacted] Date April 2004

Prepared for [Redacted]

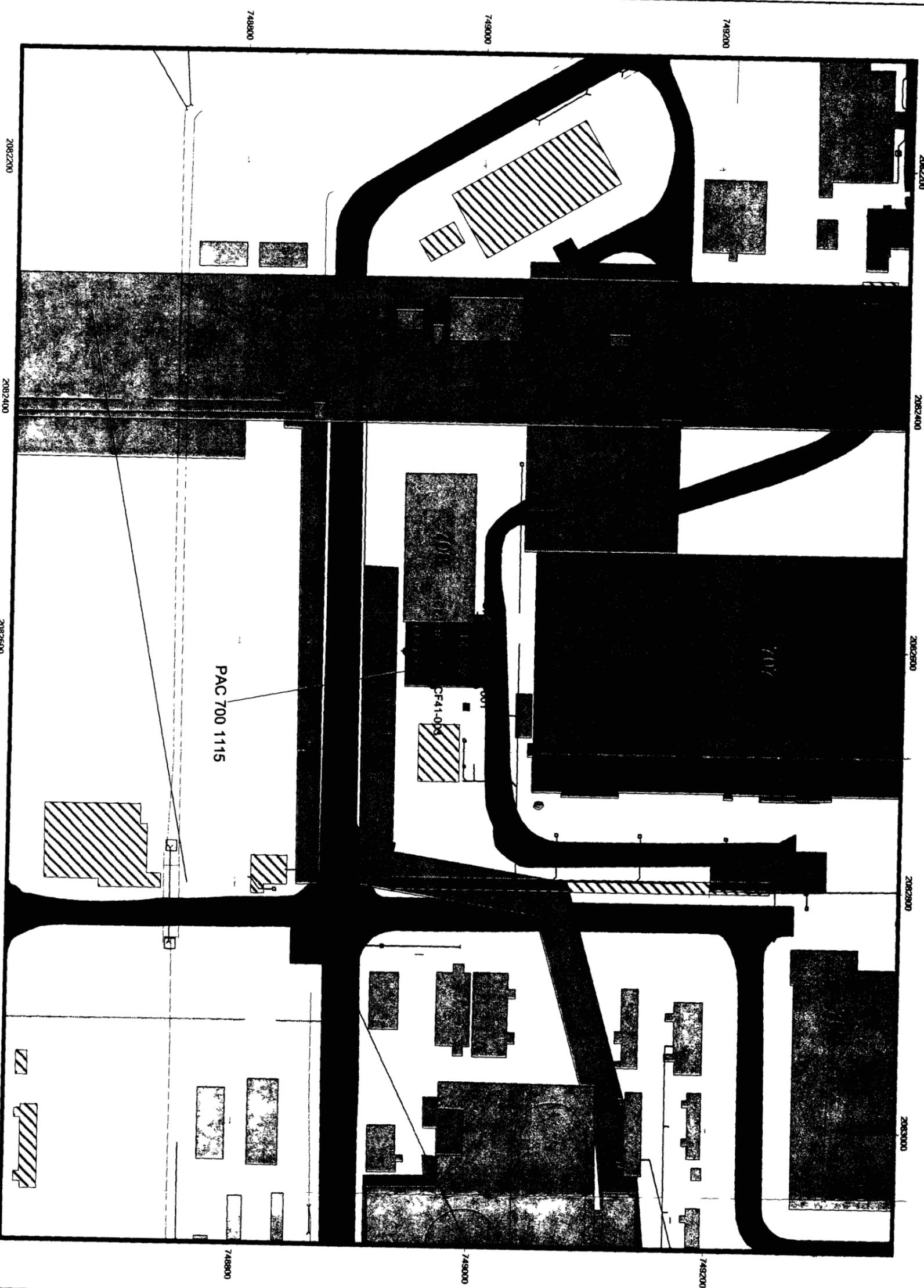


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Figure 4
IHSS Group 700 1
Proposed Sampling Locations

KEY

- Sampling Location
- Proposed Biased Location
- Existing Sampling Location
- Dirt Road
- Stream
- Storm Drain
- PAC
- Structure
- ▨ Demolished
- ▨ Standing
- Paved Road
- Asphalt



Scale 1:1000
 75 0 75 Feet

State Plane Coordinate Projection
 Colorado Central Zone
 Datum: NAD 27

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

Prepared by [Redacted] Date April 2004

Prepared for [Redacted]



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