NOTICE

All drawings located at the end of the document.

REF: 02-RF-02037; JLB-051-02

Industrial Area
Sampling and Analysis Plan
Fiscal Year 2002
Addendum #IA-02-08
UBC 776 and UBC 777

September 2002

ADMIN RECORD

Industrial Area
Sampling and Analysis Plan
Fiscal Year 2002
Addendum #IA-02-08
UBC 776 and UBC 777

Approval received from the Colorado Department of Public Health
September 10, 2002
Approval letter contained in the Administrative Record

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ACRONYMS

D&D	decontamination and decommissioning
FY	Fiscal Year
HPGe	high-purity germanium
HRR	Historical Release Report
IA	Industrial Area
IASAP	Industrial Area Sampling and Analysis Plan
IHSS	Individual Hazardous Substance Site
PCOC	potential contaminant of concern
SAP	Sampling and Analysis Plan
UBC	Under Building Contamination
VOC	volatile organic compound

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1.0 INTRODUCTION

This Industrial Area (IA) Sampling and Analysis Plan (SAP) (IASAP) (DOE 2001) Addendum #IA-02-08 includes sampling locations and potential contaminants of concern (PCOCs) for Under Building Contamination (UBC) Sites proposed for characterization during Fiscal Year (FY) 02. This IASAP Addendum is a supplement to the IASAP (DOE 2001). The UBC Sites are listed in Table 1, and their locations are shown on Figure 1.

Biased sampling is proposed in support of decommissioning and decontamination (D&D) activities. Additional notification will be submitted for further characterization to be completed at a future date.

Table 1
Addendum #IA-02-08 UBCs

IHSS Group	IHSS/PAC/UBC Site
700-3	UBC 776 – Original Plutonium Foundry
	UBC 777 – General Plutonium Research and Development

2.0 EXISTING CHARACTERIZATION INFORMATION

There is limited characterization information on the two UBC Sites. PCOCs were derived from historical knowledge of processes and spills/releases, including the 1969 fire and leaks from solvent tanks. Table 2 presents the PCOCs.

3.0 SAMPLING

The proposed sampling specifications (number and type of samples) for each UBC Site are listed in Table 3. Proposed new sampling locations are the starting point for UBC characterization. Objectives of this first phase are to determine the presence and level of contamination at six specific locations for building D&D purposes. Results will be used to plan building demolition, including health and safety controls. After characterization starts, the number and type of samples may change based on sampling results. Changes to sampling specifications will be considered in consultation with the regulatory agencies. In addition, a second characterization phase will be designed and implemented based on results from the first phase and when there is more complete access to the building. Objectives of the second phase will include determining the nature and extent of contamination. Results from this phase will be used to plan site remediation.

Three types of sampling strategies are used to determine sampling locations: statistical, geostatistical, and biased. For this first phase, only biased sampling will be used. Biased locations are based on historical and process knowledge, including known release/spill sites and features of the building slab (e.g., construction joints and floor cracks where fire water may have migrated to the soil beneath the building). Locations are intended to identify the most probable areas of contamination. Statistical and geostatistical methods were not used at these UBC Sites. Proposed sampling locations are shown in Figure 2.

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Samples will be collected from two depth intervals at six locations using Site procedures. Samples will be collected from 0 to 0.5 feet and 0.5 to 2.5 feet.

4.0 REFERENCES

DOE, 1992 - 2001, Historical Release Reports for the Rocky Flats Plant, Golden, Colorado.

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

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Table 2
Potential Contaminants of Concern

IHSS Group	IHSS/PAC/UBC Site	PCOCs	Media	Data Source	Sampling Location Method
700-3	UBC 776 – Original Plutonium Foundry	Radionuclides Metals VOCs	Surface and Subsurface Soil	HRR (DOE 1992 - 2001) Process knowledge (IASAP [DOE 2001])	Biased locations
	UBC 777 – General Plutonium Research and Development	Radionuclides Metals VOCs	Surface and Subsurface Soil	HRR (DOE 1992 - 2001) Process knowledge (IASAP [DOE 2001])	Biased locations

HRR Historical Release Report
VOC volatile organic compound

Table 3
Sampling Specifications

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	Onsite Method	Offsite Laboratory Method
700-3	UBC 776 – Original Plutonium Foundry and UBC 777 – General Plutonium R&D Biased locations based on process and historical information, including known release/spill sites and features of the building slab (e.g., construction joints and floor cracks where fire water may have migrated to the soil beneath the building).								
	Sample near tunnel in basement	CE46-A000	2083675.523	750570.668	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CE46-A000	2083675.523	750570.668	Surface Soil	0-0.5'	Metals	6200	6010
		CE46-A000	2083675.523	750570.668	Surface Soil	0-0.5'	VOCs	8260	8260
		CE46-B000	2083675.523	750570.668	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CE46-B000	2083675.523	750570.668	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CE46-B000	2083675.523	750570.668	Subsurface Soil	0.5'-2.5'	VOCs	8260	8260
	Sample through joint in slab	CF45-A000	2083787.340	750488.432	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CF45-A000	2083787.340	750488.432	Surface Soil	0-0.5'	Metals	6200	6010
		CF45-A000	2083787.340	750488.432	Surface Soil	0-0.5'	VOCs	8260	8260
		CF45-B000	2083787.340	750488.432	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CF45-B000	2083787.340	750488.432	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CF45-B000	2083787.340	750488.432	Subsurface Soil	0.5'-2.5'	VOCs	8260	8260
	Sample where 1st floor slab meets vertical wall for stairwell	CF45-A001	2083886.142	750528.663	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CF45-A001	2083886.142	750528.663	Surface Soil	0-0.5'	Metals	6200	6010
		CF45-A001	2083886.142	750528.663	Surface Soil	0-0.5'	VOCs	8260	8260
		CF45-B001	2083886.142	750528.663	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CF45-B001	2083886.142	750528.663	Subsurface Soil	0.5'-2.5'	Metals	6200	6010

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	Onsite Method	Offsite Laboratory Method
		CF45-B001	2083886.142	750528.663	Subsurface Soil	0.5'-2.5'	VOCs	8260	8260
	Sample under basement at Room 127	CF45-A002	2083892.058	750547.003	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CF45-A002	2083892.058	750547.003	Surface Soil	0-0.5'	Metals	6200	6010
		CF45-A002	2083892.058	750547.003	Surface Soil	0-0.5'	VOCs	8260	8260
		CF45-B002	2083892.058	750547.003	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CF45-B002	2083892.058	750547.003	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CF45-B002	2083892.058	750547.003	Subsurface Soil	0.5'-2.5'	VOCs	8260	8260
	Samples where Tanks 1 and 2 leaked	CG45-A000	2084012.158	750559.427	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CG45-A000	2084012.158	750559.427	Surface Soil	0-0.5'	Metals	6200	6010
		CG45-A000	2084012.158	750559.427	Surface Soil	0-0.5'	VOCs	8260	8260
		CG45-B000	2084012.158	750559.427	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CG45-B000	2084012.158	750559.427	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CG45-B000	2084012.158	750559.427	Subsurface Soil	0.5'-2.5'	VOCs	8260	8260
	Sample where Tanks 1103, 1104 and 1105 leaked	CG45-A001	2083956.545	750379.573	Surface Soil	0-0.5'	Radionuclides	HPGe	Alpha Spec
		CG45-A001	2083956.545	750379.573	Surface Soil	0-0.5'	Metals	6200	6010
		CG45-A001	2083956.545	750379.573	Surface Soil	0-0.5'	VOCs	8260	8260
		CG45-B001	2083956.545	750379.573	Subsurface Soil	0.5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CG45-B001	2083956.545	750379.573	Subsurface Soil	0.5'-2.5'	Metals	6200	6010
		CG45-B001	2083956.545	750379.573	Subsurface Soil	0.5'-2.5'	VOCs	8260	8260

HPGe high-purity germanium

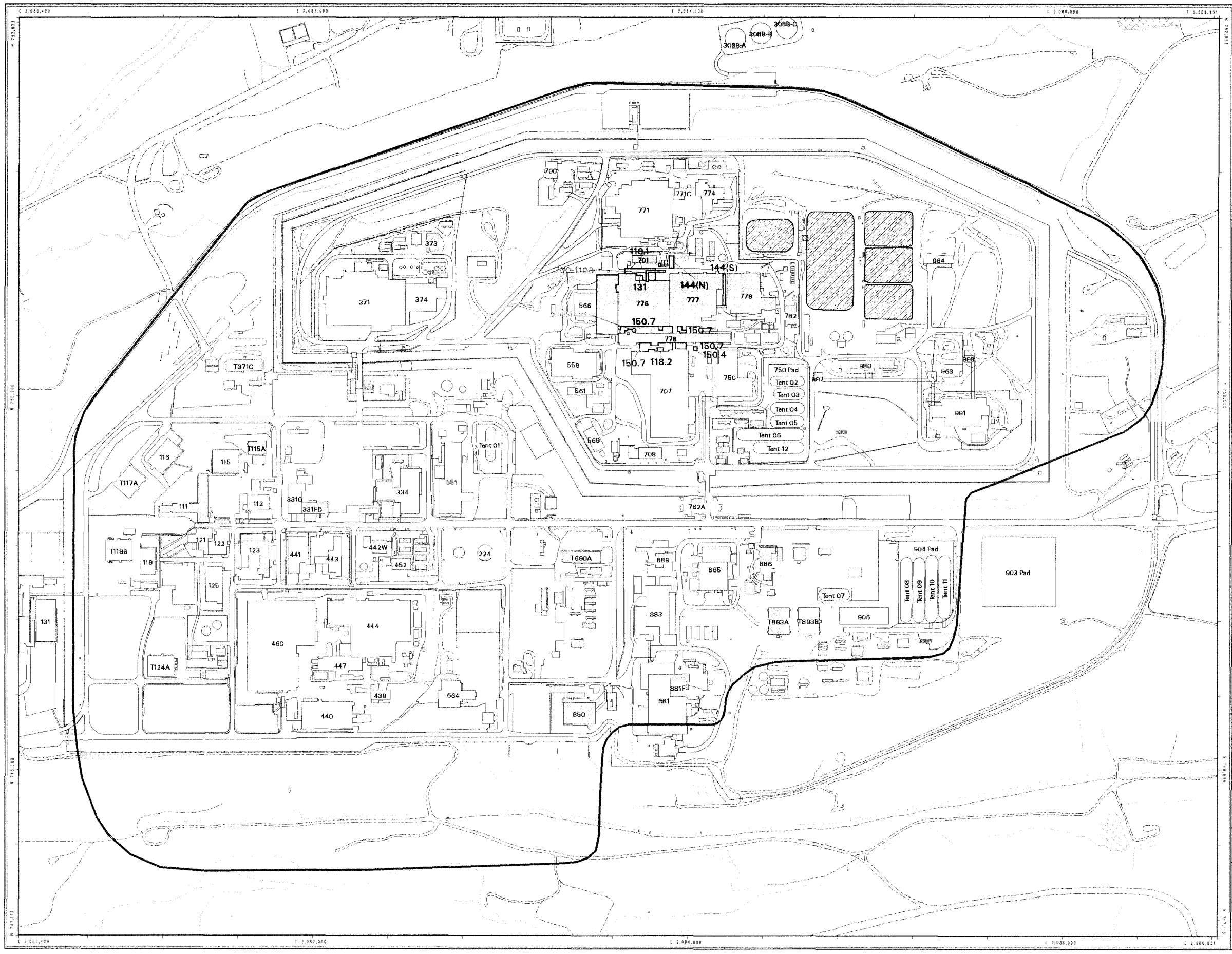

Figure 1
IA Groups Location Map

EXPLANATION

IHSS Groupings

700-3

Standard Map Features

- Buildings and other structures
- Demolished buildings
- Solar Evaporation Ponds (SEPs)
- Lakes and ponds
- Streams, ditches, or other drainage features
- Fences and other barriers
- Paved roads
- Dirt roads
- Industrial Area Operable Unit Boundary

DATA SOURCE BASE FEATURES:
PACs
Historical Release Report (HRR)
2nd Annual Update
Sept. 30, 1997
Individual Hazardous Substance Sites (IHSS)
DOE, 1992, HRR Report and Subsequent Updates.
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G RSL, Las Vegas.
Digitized from the orthophotographs. 1/95

Scale = 1 : 6330
1 inch represents approximately 528 feet

150 0 300 600ft

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

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

GIS Dept. 303-966-7707

Prepared by:
DynCorp
THE ART OF TECHNOLOGY

Prepared for:
KAISER•HILL COMPANY

August 09, 2002

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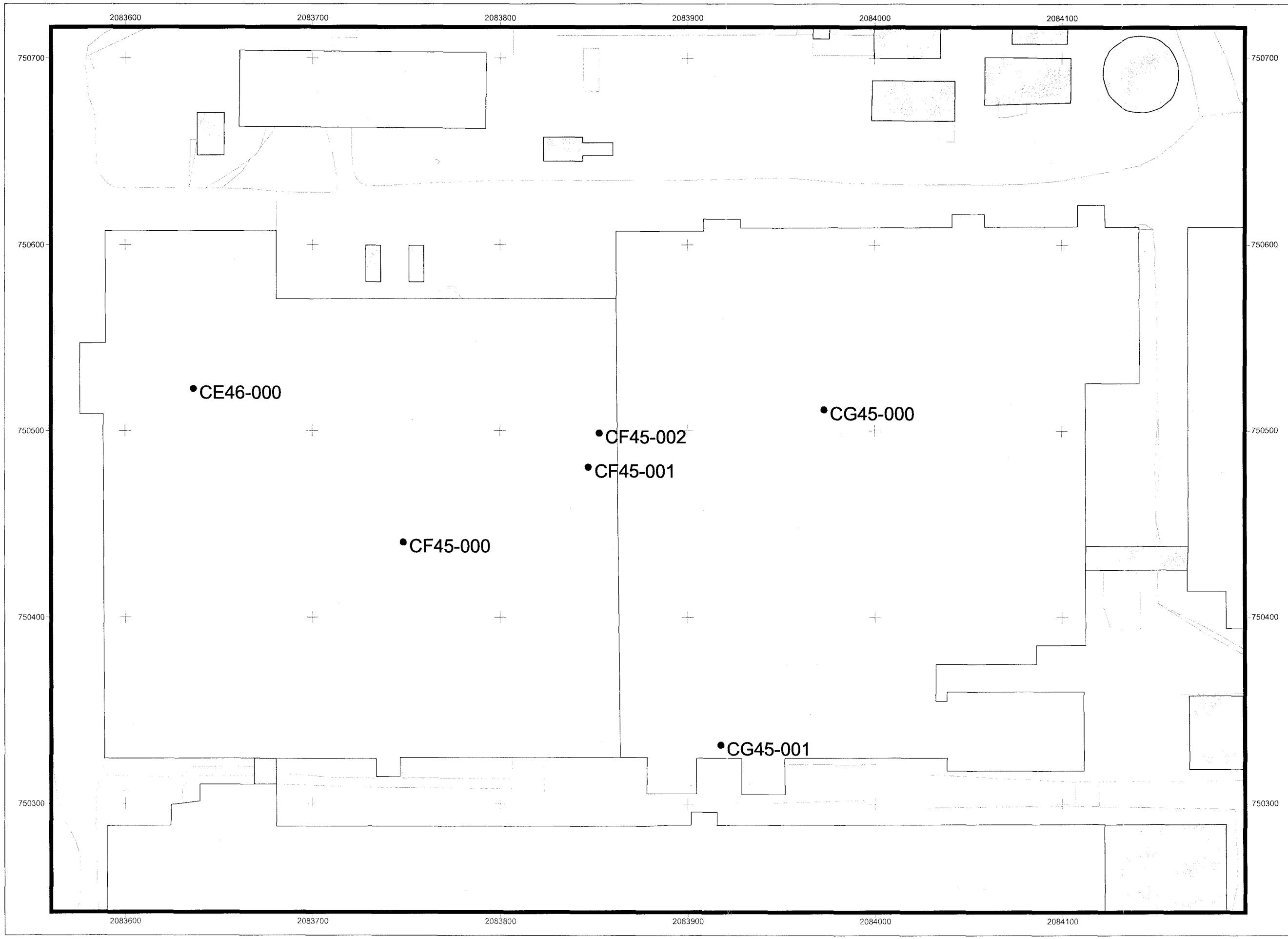

Figure 2
Proposed Sampling Locations
UBC 776 and UBC 777

KEY

- UBC
- IHSS
- Paved Area
- Dirt Road
- Fence
- Stream, ditch, or other drainage
- Sampling Locations

N

Scale = 1:600

10 0 10 20 30 40 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

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

Prepared by:

RADMS

Prepared for:

KAISER•HILL COMPANY

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August 2002