Industrial Area
Sampling and Analysis Plan
Addendum #IA-03-17
IHSS Group 700-5

October 2003

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Approval received from the Colorado Department of Public Health and Environment
October 21, 2003
Approval letter is contained in the Administrative Record.

October 2003

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ACRONYMS

DOE	U.S. Department of Energy
dpm	disintegrations per minute
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
MDL	method detection limit
N/A	not applicable
OU	Operable Unit
PAC	Potential Area of Concern
PCB	polychlorinated biphenyl
PCOC	potential contaminant of concern
SAP	Sampling and Analysis Plan
UBC	Under Building Contamination
VOC	volatile organic compound

1.0 INTRODUCTION

This Industrial Area (IA) Sampling and Analysis Plan (SAP) (IASAP) Addendum #IA-03-17 includes Individual Hazardous Substance Site (IHSS) Group-specific information, sampling locations, and potential contaminants of concern (PCOCs) for the Building 770 Under Building Contamination (UBC) Site proposed for characterization during Fiscal Year (FY) 04. This IASAP Addendum is a supplement to the IASAP (DOE 2001) and includes data and proposed sampling locations for IHSS Group 700-5 and the associated UBC 770 Site. The location of IHSS Group 700-5 is shown on Figure 1.

2.0 EXISTING UBC, IHSS, AND PAC INFORMATION

Existing concentrations and activities greater than background means plus two standard deviations, or method detection limits (MDLs), are presented on Figure 2. Existing information and data for this UBC Site are available in Appendix C of the IASAP (DOE 2001), the IA Data Summary Report (DOE 2000), the Historical Release Reports (HRRs) for the Rocky Flats Plant (DOE 1992-2002), and the Operable Unit (OU) 8 Data Summary Report (DOE 1995). PCOCs for this IHSS Group include radionuclides, metals, polychlorinated biphenyls (PCBs), and volatile organic compounds (VOCs).

Building 770 is a metal prefabricated modular building constructed in 1965 on a concrete foundation. The building is currently used to store tools, materials, and supplies for Building 771 decommissioning operations. Historically, Building 770 was used for equipment storage and also as a facility for equipment assembly prior to equipment installation inside other site buildings (DOE 1992). Building 770 was also used to store radioactive waste.

In August 1972, a punctured scrap box stored inside Building 770 contaminated approximately 3,600 square feet within the building and 500 square feet outside the building. Levels of radioactivity were measured up to 200,000 disintegrations per minute (dpm) (DOE 1992-2002). In September 1972, a 55-gallon drum containing spent ion exchange residue leaked onto the concrete floor inside Building 770 (DOE 1992-2002).

Drums with residue (for processing in Building 771) and cargo containers were stored on the surface area located west of Building 770 from 1969 to 1974 when storage operations were moved to Building 776 (DOE 1992). Several contamination releases occurred on the ground surface located west of Building 770 between 1965 and 1971 (DOE 1992-2002 [PAC 700-150.1], DOE 1992).

No characterization of soil beneath the Building 770 foundation slab has been conducted.

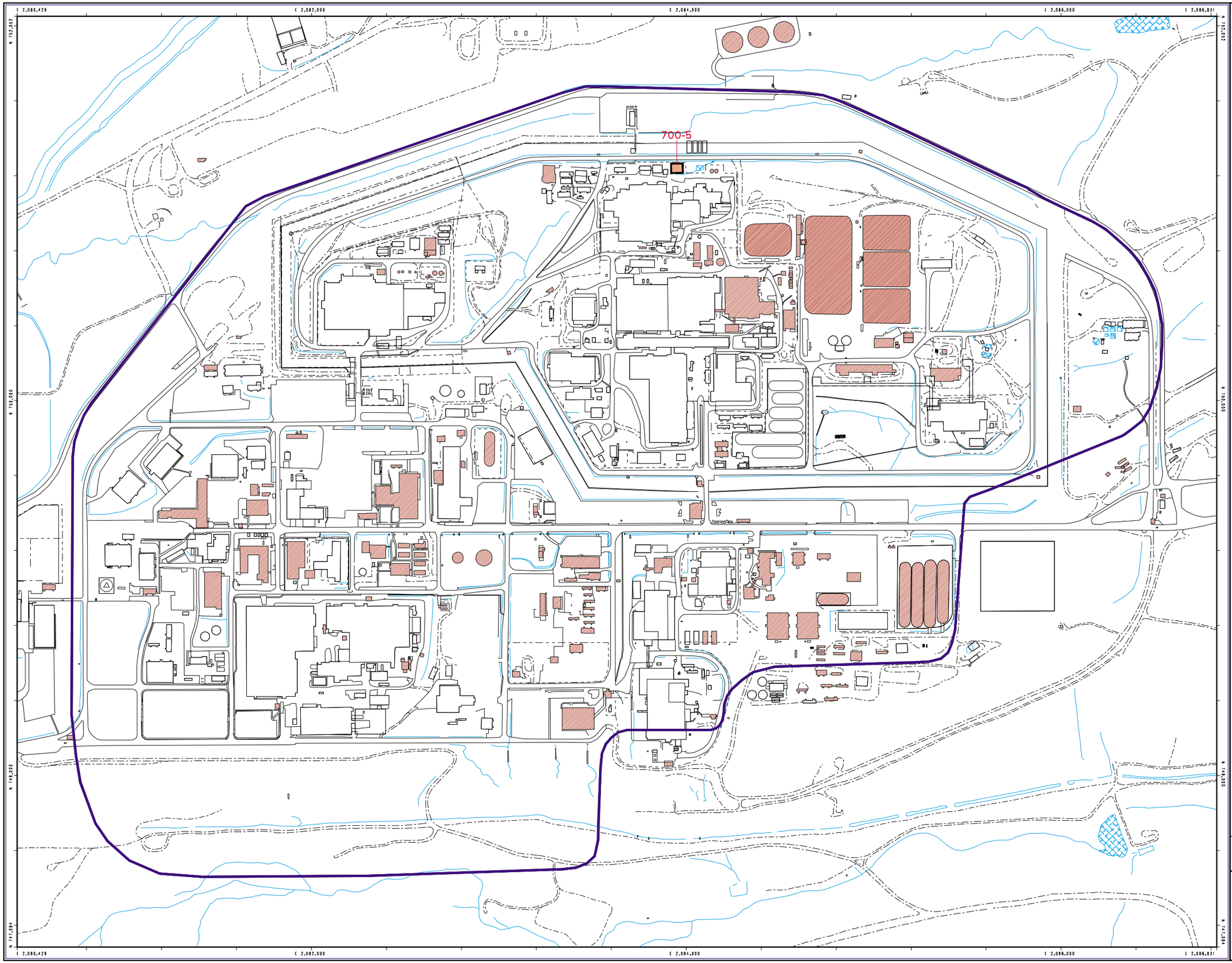


Figure 1
IHSS Group 700-5

EXPLANATION

IHSS Groupings

700-5

Standard Map Features

- Buildings and other structures
- Demolished buildings and Other Structures
- Lakes and ponds
- Streams, ditches, or other drainage features
- Fences and other barriers
- Paved roads
- Dirt roads
- Solar Evaporation Ponds (SEPs)
- 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

N

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

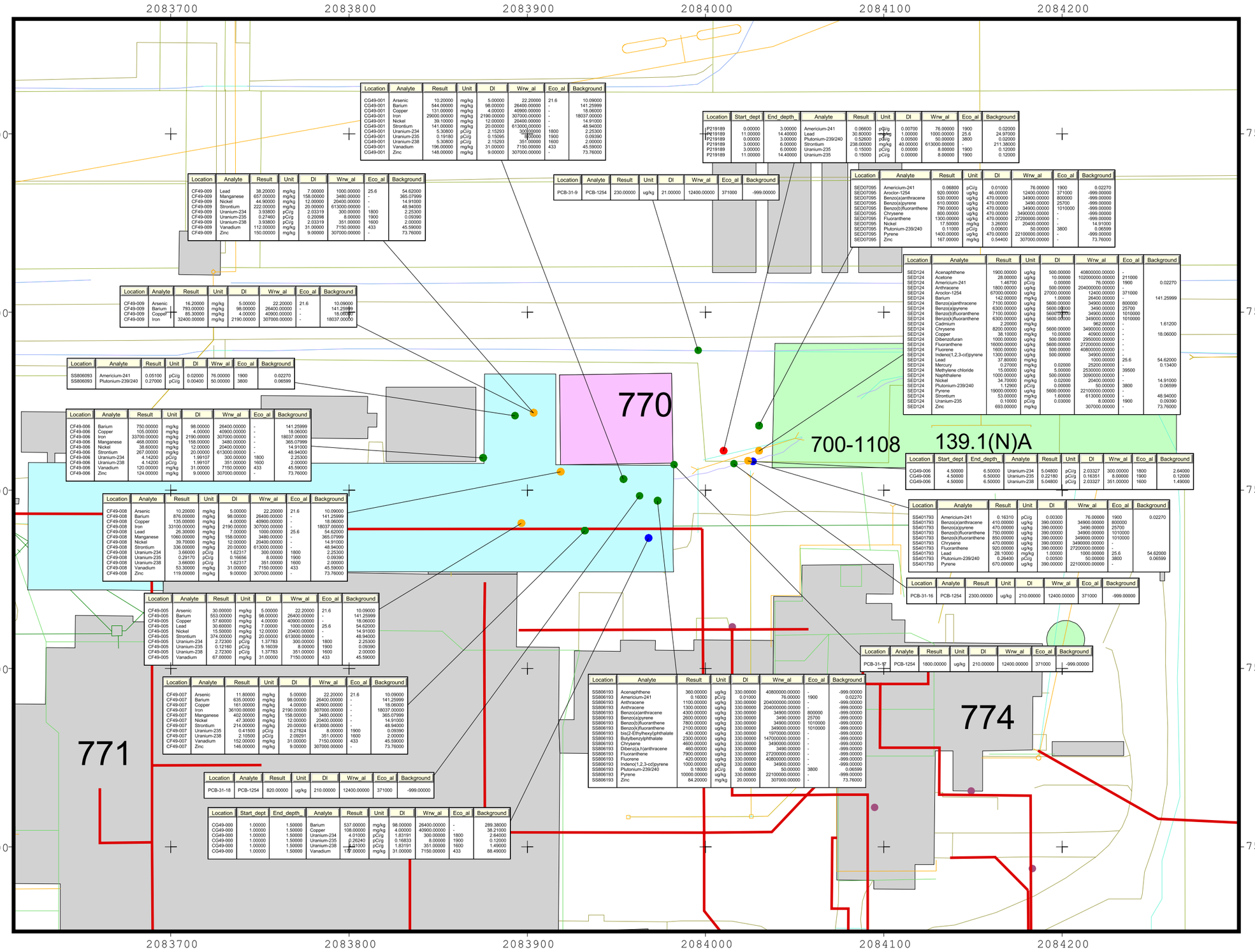
Prepared by: CH2MHILL Communications Group

Prepared for: KAISER•HILL COMPANY

September 11, 2003

NT_Svr w:/projects/fy2003/03-0564/ihss_group_700-5.aml

Figure 2
IHSS Group 700-5
Existing Soil Sample Data Above Background Means Plus 2 Standard Deviations or Detection Limits



Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
CG49-001	Arsenic	10.20000	mg/kg	5.00000	22.20000	21.6	10.09000
CG49-001	Barium	544.00000	mg/kg	98.00000	26400.00000	-	141.25999
CG49-001	Copper	131.00000	mg/kg	4.00000	40900.00000	-	18.06000
CG49-001	Iron	29000.00000	mg/kg	2190.00000	307000.00000	-	18037.00000
CG49-001	Nickel	39.10000	mg/kg	12.00000	20400.00000	-	14.91000
CG49-001	Strontium	141.00000	mg/kg	20.00000	613000.00000	-	48.94000
CG49-001	Uranium-234	5.30800	pCi/g	2.15293	300.00000	1800	2.25300
CG49-001	Uranium-235	0.19180	pCi/g	0.15095	8.00000	1900	0.09390
CG49-001	Uranium-238	5.30800	pCi/g	2.15293	351.00000	1600	2.00000
CG49-001	Vanadium	196.00000	mg/kg	31.00000	7150.00000	433	45.59000
CG49-001	Zinc	148.00000	mg/kg	9.00000	307000.00000	-	73.76000

Location	Start_dept	End_depth	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
IP219189	0.00000	3.00000	Americium-241	0.06600	pCi/g	0.00700	76.00000	1900	0.02200
IP219189	11.00000	14.40000	Lead	30.80000	mg/kg	1.00000	1000.00000	25.6	24.97000
IP219189	0.00000	3.00000	Plutonium-239/240	0.52900	pCi/g	0.00500	50.00000	3800	0.02200
P219189	3.00000	6.00000	Strontium	238.00000	mg/kg	40.00000	613000.00000	-	211.38000
P219189	3.00000	6.00000	Uranium-235	0.15000	pCi/g	0.00000	8.00000	1900	0.12000
P219189	11.00000	14.40000	Uranium-235	0.15000	pCi/g	0.00000	8.00000	1900	0.12000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
CF49-009	Lead	38.20000	mg/kg	7.00000	1000.00000	25.6	54.62000
CF49-009	Manganese	657.00000	mg/kg	158.00000	3480.00000	-	365.07999
CF49-009	Nickel	44.90000	mg/kg	12.00000	20400.00000	-	14.91000
CF49-009	Strontium	222.00000	mg/kg	20.00000	613000.00000	-	48.94000
CF49-009	Uranium-234	3.93800	pCi/g	2.03319	300.00000	1800	2.25300
CF49-009	Uranium-235	0.27460	pCi/g	0.20098	8.00000	1900	0.09390
CF49-009	Uranium-238	3.93800	pCi/g	2.03319	351.00000	1600	2.00000
CF49-009	Vanadium	112.00000	mg/kg	31.00000	7150.00000	433	45.59000
CF49-009	Zinc	150.00000	mg/kg	9.00000	307000.00000	-	73.76000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
PCB-31-9	PCB-1254	230.00000	ug/kg	21.00000	12400.00000	371000	-999.00000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
SED07095	Americium-241	0.06800	pCi/g	0.01000	76.00000	1900	0.02270
SED07095	Aroclor-1254	920.00000	ug/kg	46.00000	12400.00000	371000	-999.00000
SED07095	Benzo(a)anthracene	530.00000	ug/kg	470.00000	34900.00000	800000	-999.00000
SED07095	Benzo(a)pyrene	610.00000	ug/kg	470.00000	3490.00000	25700	-999.00000
SED07095	Benzo(b)fluoranthene	790.00000	ug/kg	470.00000	34900.00000	1010000	-999.00000
SED07095	Chrysene	800.00000	ug/kg	470.00000	3490000.00000	-	-999.00000
SED07095	Fluoranthene	1300.00000	ug/kg	470.00000	27200000.00000	-	-999.00000
SED07095	Nickel	17.50000	mg/kg	3.26000	20400.00000	-	14.91000
SED07095	Plutonium-239/240	0.11000	pCi/g	0.00600	50.00000	3800	0.06599
SED07095	Pyrene	1400.00000	ug/kg	470.00000	22100000.00000	-	-999.00000
SED07095	Zinc	167.00000	mg/kg	0.54400	307000.00000	-	73.76000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
CF49-009	Arsenic	16.20000	mg/kg	5.00000	22.20000	21.6	10.09000
CF49-009	Barium	793.00000	mg/kg	98.00000	26400.00000	-	141.25999
CF49-009	Copper	85.30000	mg/kg	4.00000	40900.00000	-	18.06000
CF49-009	Iron	32400.00000	mg/kg	2190.00000	307000.00000	-	18037.00000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
SED124	Acenaphthene	1900.00000	ug/kg	500.00000	40800000.00000	-	
SED124	Acetone	28.00000	ug/kg	10.00000	102000000.00000	211000	
SED124	Americium-241	1.46700	pCi/g	0.00000	76.00000	1900	0.02270
SED124	Anthracene	1800.00000	ug/kg	500.00000	204000000.00000	-	
SED124	Aroclor-1254	67000.00000	ug/kg	27000.00000	12400.00000	371000	
SED124	Barium	142.00000	mg/kg	1.00000	26400.00000	-	141.25999
SED124	Benzo(a)anthracene	7100.00000	ug/kg	5600.00000	34900.00000	800000	
SED124	Benzo(a)pyrene	6300.00000	ug/kg	5600.00000	3490.00000	25700	
SED124	Benzo(b)fluoranthene	7100.00000	ug/kg	5600.00000	34900.00000	1010000	
SED124	Benzo(k)fluoranthene	6300.00000	ug/kg	5600.00000	349000.00000	1010000	
SED124	Cadmium	2.20000	mg/kg	-	962.00000	-	1.61200
SED124	Chrysene	8200.00000	ug/kg	5600.00000	3490000.00000	-	
SED124	Copper	38.10000	mg/kg	10.00000	40900.00000	-	18.06000
SED124	Dibenzofuran	1000.00000	ug/kg	500.00000	2950000.00000	-	
SED124	Fluoranthene	16000.00000	ug/kg	5600.00000	27200000.00000	-	
SED124	Fluorene	1600.00000	ug/kg	500.00000	40800000.00000	-	
SED124	Indeno(1,2,3-cd)pyrene	1300.00000	ug/kg	500.00000	34900.00000	-	
SED124	Lead	37.80000	mg/kg	-	1000.00000	25.6	54.62000
SED124	Mercury	0.27000	mg/kg	0.02000	25200.00000	-	0.13400
SED124	Methylene chloride	15.00000	ug/kg	5.00000	2530000.00000	39500	
SED124	Naphthalene	1000.00000	ug/kg	500.00000	3090000.00000	-	
SED124	Nickel	34.70000	mg/kg	0.02000	20400.00000	-	14.91000
SED124	Plutonium-239/240	1.12900	pCi/g	0.00000	50.00000	3800	0.06599
SED124	Pyrene	19000.00000	ug/kg	5600.00000	22100000.00000	-	
SED124	Strontium	53.00000	mg/kg	1.60000	613000.00000	-	48.94000
SED124	Uranium-235	0.10000	pCi/g	0.03000	8.00000	1900	0.09390
SED124	Zinc	693.00000	mg/kg		307000.00000	-	73.76000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
SS806093	Americium-241	0.05100	pCi/g	0.02000	76.00000	1900	0.02270
SS806093	Plutonium-239/240	0.27000	pCi/g	0.00400	50.00000	3800	0.06599

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
CF49-006	Barium	750.00000	mg/kg	98.00000	26400.00000	-	141.25999
CF49-006	Copper	105.00000	mg/kg	4.00000	40900.00000	-	18.06000
CF49-006	Iron	33700.00000	mg/kg	2190.00000	307000.00000	-	18037.00000
CF49-006	Manganese	468.00000	mg/kg	158.00000	3480.00000	-	365.07999
CF49-006	Nickel	38.60000	mg/kg	12.00000	20400.00000	-	14.91000
CF49-006	Strontium	267.00000	mg/kg	20.00000	613000.00000	-	48.94000
CF49-006	Uranium-234	4.14200	pCi/g	1.99107	300.00000	1800	2.25300
CF49-006	Uranium-238	4.14200	pCi/g	1.99107	351.00000	1600	2.00000
CF49-006	Vanadium	120.00000	mg/kg	31.00000	7150.00000	433	45.59000
CF49-006	Zinc	124.00000	mg/kg	9.00000	307000.00000	-	73.76000

Location	Start_dept	End_depth	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
CG49-006	4.50000	6.50000	Uranium-234	5.04800	pCi/g	2.03327	300.00000	1800	2.64000
CG49-006	4.50000	6.50000	Uranium-235	0.22180	pCi/g	0.16351	8.00000	1900	0.12000
CG49-006	4.50000	6.50000	Uranium-238	5.04800	pCi/g	2.03327	351.00000	1600	1.49000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
CF49-008	Arsenic	10.20000	mg/kg	5.00000	22.20000	21.6	10.09000
CF49-008	Barium	876.00000	mg/kg	98.00000	26400.00000	-	141.25999
CF49-008	Copper	135.00000	mg/kg	4.00000	40900.00000	-	18.06000
CF49-008	Iron	33100.00000	mg/kg	2190.00000	307000.00000	-	18037.00000
CF49-008	Lead	26.30000	mg/kg	7.00000	1000.00000	25.6	54.62000
CF49-008	Manganese	1060.00000	mg/kg	158.00000	3480.00000	-	365.07999
CF49-008	Nickel	39.70000	mg/kg	12.00000	20400.00000	-	14.91000
CF49-008	Strontium	336.00000	mg/kg	20.00000	613000.00000	-	48.94000
CF49-008	Uranium-234	3.66000	pCi/g	1.62317	300.00000	1800	2.25300
CF49-008	Uranium-235	0.29170	pCi/g	0.16656	8.00000	1900	0.09390
CF49-008	Uranium-238	3.66000	pCi/g	1.62317	351.00000	1600	2.00000
CF49-008	Vanadium	53.30000	mg/kg	31.00000	7150.00000	433	45.59000
CF49-008	Zinc	119.00000	mg/kg	9.00000	307000.00000	-	73.76000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
SS401793	Americium-241	0.16310	pCi/g	0.00300	76.00000	1900	0.02270
SS401793	Benzo(a)anthracene	410.00000	ug/kg	390.00000	34900.00000	800000	
SS401793	Benzo(a)pyrene	470.00000	ug/kg	390.00000	3490.00000	25700	
SS401793	Benzo(b)fluoranthene	750.00000	ug/kg	390.00000	34900.00000	1010000	
SS401793	Benzo(k)fluoranthene	850.00000	ug/kg	390.00000	349000.00000	1010000	
SS401793	Chrysene	470.00000	ug/kg	390.00000	3490000.00000	-	
SS401793	Fluoranthene	520.00000	ug/kg	390.00000	27200000.00000	-	
SS401793	Lead	28.10000	mg/kg	1.00000	1000.00000	25.6	54.62000
SS401793	Plutonium-239/240	0.26400	pCi/g	0.00500	50.00000	3800	0.06599
SS401793	Pyrene	670.00000	ug/kg	390.00000	22100000.00000	-	

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
PCB-31-16	PCB-1254	2300.00000	ug/kg	210.00000	12400.00000	371000	-999.00000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
CF49-005	Arsenic	30.00000	mg/kg	5.00000	22.20000	21.6	10.09000
CF49-005	Barium	553.00000	mg/kg	98.00000	26400.00000	-	141.25999
CF49-005	Copper	57.60000	mg/kg	4.00000	40900.00000	-	18.06000
CF49-005	Lead	30.60000	mg/kg	7.00000	1000.00000	25.6	54.62000
CF49-005	Nickel	15.50000	mg/kg	12.00000	20400.00000	-	14.91000
CF49-005	Strontium	374.00000	mg/kg	20.00000	613000.00000	-	48.94000
CF49-005	Uranium-234	2.72300	pCi/g	1.37783	300.00000	1800	2.25300
CF49-005	Uranium-235	0.12160	pCi/g	9.16039	8.00000	1900	0.09390
CF49-005	Uranium-238	2.72300	pCi/g	1.37783	351.00000	1600	2.00000
CF49-005	Vanadium	67.00000	mg/kg	31.00000	7150.00000	433	45.59000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
CF49-007	Arsenic	11.80000	mg/kg	5.00000	22.20000	21.6	10.09000
CF49-007	Barium	635.00000	mg/kg	98.00000	26400.00000	-	141.25999
CF49-007	Copper	161.00000	mg/kg	4.00000	40900.00000	-	18.06000
CF49-007	Iron	36100.00000	mg/kg	2190.00000	307000.00000	-	18037.00000
CF49-007	Manganese	402.00000	mg/kg	158.00000	3480.00000	-	365.07999
CF49-007	Nickel	47.30000	mg/kg	12.00000	20400.00000	-	14.91000
CF49-007	Strontium	214.00000	mg/kg	20.00000	613000.00000	-	48.94000
CF49-007	Uranium-235	0.41500	pCi/g	0.27824	8.00000	1900	0.09390
CF49-007	Uranium-238	2.10500	pCi/g	2.09291	351.00000	1600	2.00000
CF49-007	Vanadium	152.00000	mg/kg	31.00000	7150.00000	433	45.59000
CF49-007	Zinc	146.00000	mg/kg	9.00000	307000.00000	-	73.76000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
PCB-31-18	PCB-1254	820.00000	ug/kg	210.00000	12400.00000	371000	-999.00000

Location	Start_dept	End_depth	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
CG49-000	1.00000	1.50000	Barium	537.00000	mg/kg	98.00000	26400.00000	-	289.38000
CG49-000	1.00000	1.50000	Copper	108.00000	mg/kg	4.00000	40900.00000	-	38.21000
CG49-000	1.00000	1.50000	Uranium-234	4.01000	pCi/g	1.83191	300.00000	1800	2.64000
CG49-000	1.00000	1.50000	Uranium-235	0.26240	pCi/g	0.16833	8.00000	1900	0.12000
CG49-000	1.00000	1.50000	Uranium-238	4.01000	pCi/g	1.83191	351.00000	1600	1.49000
CG49-000	1.00000	1.50000	Vanadium	177.00000	mg/kg	31.00000	7150.00000	433	88.49000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
PCB-31-17	PCB-1254	1800.00000	ug/kg	210.00000	12400.00000	371000	-999.00000

Location	Analyte	Result	Unit	Dl	Wrw_al	Eco_al	Background
SS806193	Acenaphthene	360.00000	ug/kg	330.00000	40800000.00000	-	-999.00000
SS806193	Americium-241	0.16000	pCi/g	0.01000	76.00000	1900	0.02270
SS806193	Anthracene	1100.00000	ug/kg	330.00000	204000000.00000	-	-999.00000
SS806193	Anthracene	1300.00000	ug/kg	330.00000	204000000.00000	-	-999.00000
SS806193	Benzo(a)anthracene	4300.00000	ug/kg	330.00000	34900.00000	800000	-999.00000
SS806193	Benzo(a)pyrene	2600.00000	ug/kg	330.00000	3490.00000	25700	-999.00000
SS806193	Benzo(b)fluoranthene	7800.00000	ug/kg	330.00000	34900.00000	1010000	-999.00000
SS806193	Benzo(k)fluoranthene	2100.00000	ug/kg	330.00000	349000.00000	1010000	-999.00000
SS806193	bis(2-Ethylhexyl)phthalate	430.00000	ug/kg	330.00000	1970000.00000	-	-999.00000
SS806193	Butylbenzylphthalate	2300.00000	ug/kg	330.00000	147000000.00000	-	-999.00000
SS806193	Chrysene	4600.00000	ug/kg	330.00000	3490000.00000	-	-999.00000
SS806193	Dibenz(a,h)anthracene	460.00000	ug/kg	330.00000	3490.00000	-	-999.00000
SS806193	Fluoranthene	7900.00000	ug/kg	330.00000	27200000.00000	-	-999.00000
SS806193	Fluorene	420.00000	ug/kg	330.00000	40800000.00000	-	-999.00000
SS806193	Indeno(1,2,3-cd)pyrene	1000.00000	ug/kg	330.00000	34900.00000	-	-999.00000
SS806193	Plutonium-239/240	0.18000	pCi/g	0.00800	50.00000	3800	0.06599
SS806193	Pyrene	10000.00000	ug/kg	330.00000	22100000.00000	-	-999.00000
SS806193	Zinc	84.20000	mg/kg	20.00000	307000.00000	-	73.76000

KEY

- Surface Soil Location with an Action Level Exceedance
- Surface Soil Location with No Exceedances
- Subsurface Soil Location with an Action Level Exceedance
- Subsurface Soil Location with No Exceedances
- UBC 770
- IHSS
- PAC
- Building
- OPWL
- Foundation Drain
- Storm Sewer
- Sanitary Sewer
- Stream
- Fence
- Paved Road

N W E S

20 0 20 40 60 80 Feet

Scale = 1:650

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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

Prepared by: RADMS Remedial Action Decision Management System

Prepared for: KAISER•HILL COMPANY

File: w:\projects\2003\700-5.apr Date:08/20/03

3.0 SAMPLING

The proposed sampling and analysis specifications for the UBC 770 Site are summarized in Table 1 and listed, by sampling location, in Table 2. The proposed sampling locations are shown on Figure 3.

Two types of sampling strategies are used to determine sampling locations: statistical, and biased. Statistical grids have computer-generated random start points and orientations. The standard statistical grid size (i.e., the length between grid points) is 36 feet; however, the grid size for UBC sites is 72 feet. The IASAP 72-foot grid for UBC sites was not used to determine sampling locations at UBC 770 because of the relatively small dimension of the 770 slab (60 feet long by 50 feet wide). A 36-foot grid size was used instead.

In addition to the three proposed statistical sampling locations, nine biased sampling locations are proposed (i.e., one under the 770 slab near the northeastern corner, one at the roof drain outfall located at the southeastern corner of the slab, one north of the slab, two along the eastern edge of the slab, and four along the drainage to Bowman's Pond located east of the slab). The biased sampling location under the slab was added to provide additional coverage under the slab. The samples from the eastern portion of the UBC and the samples east of the slab (west of PAC 700-1108) will be analyzed for PCBs to further investigate the PCBs previously detected (refer to Figure 2). Additional biased samples will be collected around floor drains, and process and foundation drains, if such drains are encountered during slab removal activities. Note: no foundation drains, sumps or process waste lines are known to be located beneath the 770 slab.

After characterization starts, the number and type of samples may change based on field conditions and/or sampling results. Changes to sampling specifications will be considered in consultation with the regulatory agencies.

Table 1
Sampling and Analysis Summary

Category	Total
Number of Sampling Locations	12
Number of Samples	20
Number of Radionuclide Analyses	20
Number of Metal Analyses	20
Number of VOC Analyses	12
Number of PCB Analyses	18

4.0 REFERENCES

DOE, 1992, Phase I RFI/RI Work Plan Operable Unit 8 700 Area, Rocky Flats Environmental Technology Site, Golden, Colorado, December.

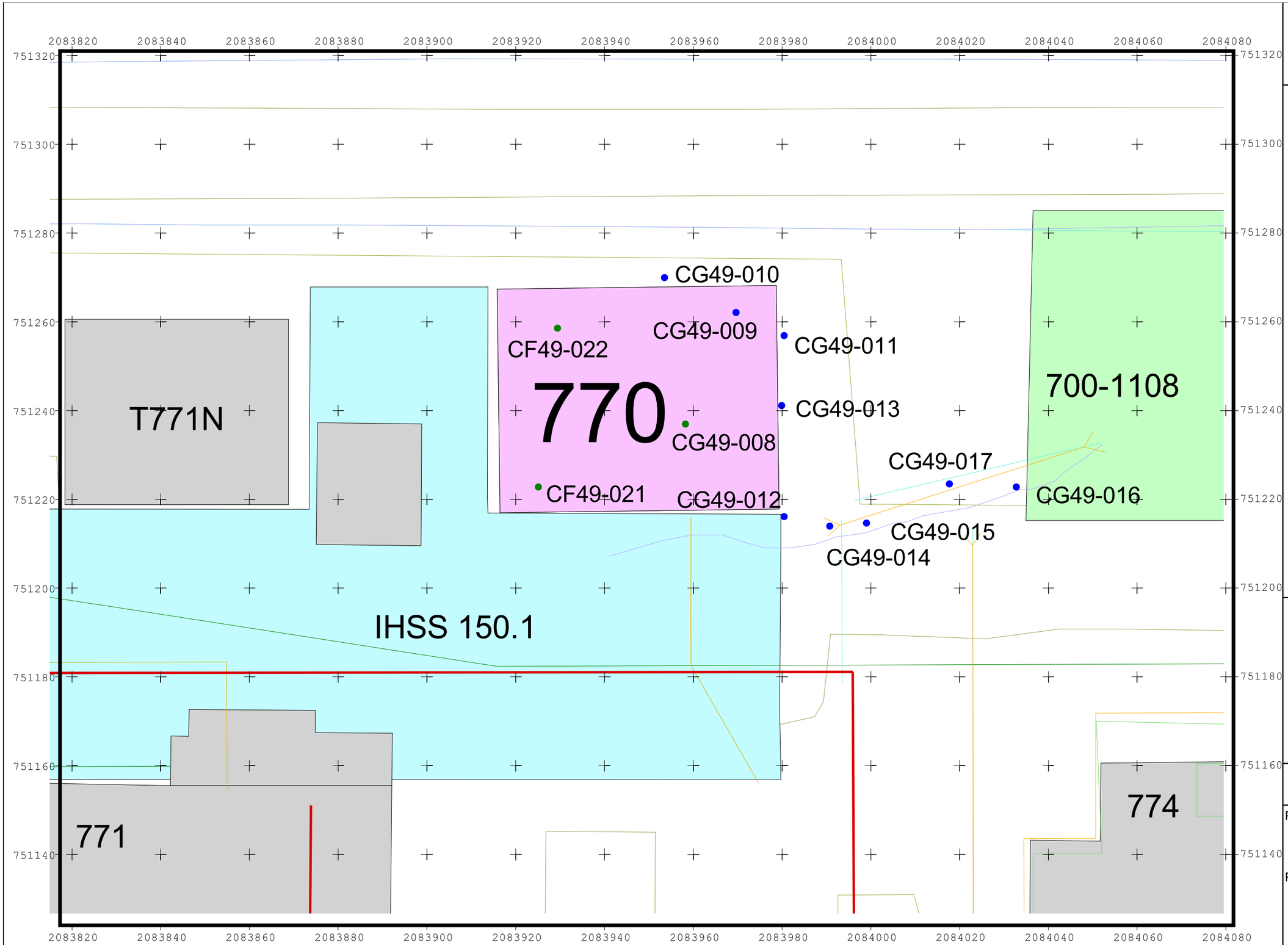
DOE, 1992-2002, Historical Release Reports for the Rocky Flats Plant, Golden, Colorado.

DOE, 1995, Operable Unit 8 Data Summary Report, Rocky Mountain Remediation Services, Rocky Flats Environmental Technology Site, 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 3
FY2004 Sampling Locations for IA Group 700-5 (UBC 770)



KEY

- Statistical Sampling Location
- Biased Sampling Location
- UBC 770
- IHSS
- PAC
- Building
- Original Process Waste Line
- Foundation Drain
- Storm Sewer
- Sanitary Sewer
- Streams
- Surface Water Route
- Fence
- Paved Road

N
W E
S

10 0 10 20 30 Feet

Scale = 1:250

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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

Prepared by: RADMS

Prepared for: KAISER•HILL COMPANY

File: w:\projects\700-5.apr Date:08/20/03

Table 2
Sampling Specifications for IHSS Group 700-5

IHSS Group	IHSS/PAC/ UBC Site	Location	Easting	Northing	Media	Depth Interval	Analyte	On-Site Laboratory Method	Off-Site Laboratory Method
700-5	UBC 770	CF49-021	2083927.384	751220.084	Surface Soil	0 - 0.5'	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							VOCs	8260	8260
		CF49-022	2083931.668	751255.828	Surface Soil	0 - 0.5'	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							VOCs	8260	8260
		CG49-008	2083960.481	751234.246	Surface Soil	0 - 0.5'	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							VOCs	8260	8260
							PCBs	N/A	8082
		CG49-009	2083971.873	751259.396	Surface Soil	0 - 0.5'	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							VOCs	8260	8260
							PCBs	N/A	8082
		CG49-010	2083955.814	751267.208	Surface Soil	0 - 0.5'	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							PCBs	N/A	8082
					Subsurface Soil	0.5 – 2.5	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							VOCs	8260	8260
							PCBs	N/A	8082
		CG49-011	2083982.724	751254.188	Surface Soil	0 - 0.5'	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							PCBs	N/A	8082
					Subsurface Soil	0.5 – 2.5	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							VOCs	8260	8260

IHSS Group	IHSS/PAC/ UBC Site	Location	Easting	Northing	Media	Depth Interval	Analyte	On-Site Laboratory Method	Off-Site Laboratory Method
							PCBs	N/A	8082
		CG49-012	2083982.724	751213.389	Surface Soil	0 - 0.5'	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							PCBs	N/A	8082
					Subsurface Soil	0.5 – 2.5	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							VOCs	8260	8260
							PCBs	N/A	8082
		CG49-013	2083982.152	751238.381	Surface Soil	0 - 0.5'	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							PCBs	N/A	8082
					Subsurface Soil	0.5 – 2.5	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							VOCs	8260	8260
							PCBs	N/A	8082
		CG49-014	2083992.996	751211.269	Surface Soil	0 - 0.5'	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							PCBs	N/A	8082
					Subsurface Soil	0.5 – 2.5	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							VOCs	8260	8260
							PCBs	N/A	8082
		CG49-015	2084001.299	751211.947	Surface Soil	0 - 0.5'	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							PCBs	N/A	8082
					Subsurface Soil	0.5 – 2.5	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							VOCs	8260	8260
							PCBs	N/A	8082

IHSS Group	IHSS/PAC/ UBC Site	Location	Easting	Northing	Media	Depth Interval	Analyte	On-Site Laboratory Method	Off-Site Laboratory Method
		CG49-016	2084035.020	751220.081	Surface Soil	0 - 0.5'	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							PCBs	N/A	8082
							SVOCs	N/A	8270
					Subsurface Soil	0.5 – 2.5	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							VOCs	8260	8260
							PCBs	N/A	8082
							SVOCs	N/A	8270
		CG49-017	2084019.939	751220.758	Surface Soil	0 - 0.5'	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							PCBs	N/A	8082
							SVOCs	N/A	8270
					Subsurface Soil	0.5 – 2.5	Radionuclides	HPGe	Alpha Spec
							Metals	6200	6010
							VOCs	8260	8260
							PCBs	N/A	8082
							SVOCs	N/A	8270