

NOTICE

All drawings located at the end of the document.

**Industrial Area
Sampling and Analysis Plan
Fiscal Year 2002
Addendum #IA-02-03**



March 2002

LOUISIANA DEPARTMENT OF REVENUE
RECORDS CENTER

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**Industrial Area
Sampling and Analysis Plan
Fiscal Year 2002
Addendum #IA-02-03**

Approval received from the Colorado Department of Public Health
March 26, 2002

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ACRONYMS

Am	americium
As	arsenic
Ba	barium
Co	cobalt
Cr	chromium
Cu	copper
Fe	iron
FY	Fiscal Year
Hg	mercury
HPGe	high-purity germanium
HRR	Historical Release Report
IA	Industrial Area
IASAP	Industrial Area Sampling and Analysis Plan
IHSS	Individual Hazardous Substance Site
Li	lithium
Mg	magnesium
mg/kg	milligrams per kilograms
Mn	manganese
Ni	nickel
NO ₂	nitrite
NO ₃	nitrate
OPWL	Original Process Waste Lines
PAC	Potential Area of Concern
Pb	lead
pCi/g	picocuries per gram
PCOC	potential contaminant of concern
Pu	plutonium
SAP	Sampling and Analysis Plan
Sr	strontium
SVOC	semivolatile organic compound
U	uranium
UBC	Under Building Contamination
µg/kg	micrograms per kilogram
V	vanadium
VOC	volatile organic compound
Zn	zinc

1.0 INTRODUCTION

This Industrial Area (IA) Sampling and Analysis Plan (SAP) (IASAP) (DOE 2001a) Addendum #IA-02-03 includes Individual Hazardous Substance Sites (IHSS) Group-specific information, sampling locations, and potential contaminants of concern (PCOCs) for IHSSs, Potential Areas of Concern (PACs), and Under Building Contamination (UBC) sites proposed for characterization during Fiscal Year (FY)02. This IASAP Addendum is a supplement to the IASAP (DOE 2001a). The location of the IHSS Groups and IHSSs, PACs, and UBC sites proposed for FY02 are shown on Figure 1.

This IASAP Addendum includes data and proposed sampling locations for the IHSS Groups and associated IHSSs, PACs, and UBC Sites listed in Table 1.

Table 1
Addenda #IA-02-03 IHSS Groups

IHSS Group	IHSS/PAC/UBC Site
800-4	UBC 886 – Critical Mass Laboratory
	800-164.2 – Radioactive Site #2 800 Area Building 886 Spill
	000-121 – Original Process Waste Lines (OPWL) 250-Gallon Sump (Building 828)
	000-121 – OPWL Two 250-Gallon Steel Tanks (Building 828)
	000-121 – OPWL 500-Gallon Steel Tanks (Building 828)
	000-121 – OPWL

2.0 EXISTING CHARACTERIZATION INFORMATION

Existing data for the IHSSs, PACs, and UBC Sites are available in Appendix C to the IASAP (DOE 2001a). Existing concentrations and activities above the background mean plus two standard deviations or method detection limits are shown on maps in Section 4.0, where available. Table 2 presents the potential contaminants of concern (PCOCs).

3.0 SAMPLING

The proposed sampling specifications (number and type of samples) for each IHSS, PAC, and UBC site are listed in Table 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 specifications will be considered in consultation with the regulatory agencies.

Three types of sampling strategies are used to determine sampling locations: statistical, geostatistical, and biased. Statistical grids have computer-generated random start points and orientations. Additionally, the grids have been extended outside the IHSS, PAC, or UBC site to provide additional sampling locations if needed. Biased samples are based on existing data and geostatistical analysis was used where possible.

Where a new sampling location overlaps or is adjacent to an existing sampling location, the existing sampling location data will be used during evaluation.

4.0 MAPS

Maps in this section are organized by IHSS Group and IHSS. All existing sampling locations and existing data, where available, are presented, followed by the proposed new sampling locations.

5.0 REFERENCES

DOE, 1992 – 2001, Historical Release Report for the Rocky Flats Plant, Golden, Colorado

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

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

DOE, 2001b, Final Data Summary Report for the Characterization of UBC's 123 and 886, Rocky Flats Environmental Technology Site, Golden, Colorado, August

**Table 2
Potential Contaminants of Concern**

IA Group	HSS/PAC/UBC Site	VOCs	Metals	Data Source	Sampling Location Method
800-4	UBC 886 – Critical Mass Laboratory	Radionuclides (Am-241, Pu-239/240, U-234, U-235, U-238) Metals (Cu, Hg, Mg, Sr, Zn) VOCs	Surface and Subsurface Soil Subsurface Soil	Data Summary Report for the Characterization of UBC's 123 and 886 (DOE 2001b) Historical Release Report (HRR) (DOE 1992 - 2001) IA Data Summary Report (DOE 2000)	Statistical Grid
	800-164 2 – Radioactive Site #2 800 Area Building 886 Spill	Radionuclides (Am-241, Pu-239/240, U-235) Metals (As, Ba, Co Cu, Fe, Hg, Li, Mg, Mn, Ni, Sr, Zn) SVOCs (bis, 2-ethylhexyl-phthalate, fluoranthene pyrene) VOCs (1,2-dichloroethene, methylene chloride, Bis(2-ethylhexyl)phthalate trichloroethene)	Subsurface Soil Surface and Subsurface Soil Subsurface Soil	IA Data Summary Report Data Summary Report for the Characterization of UBC's 123 and 886 (DOE 2001b)	Statistical Grid
	000-121 – OPWL 250-Gallon Sump	Radionuclides	Subsurface Soil	HRR	Biased locations below and near sump
	000-121 – OPWL Two 250-Gallon Steel Tanks	Radionuclides (Am-241, Pu-239/240, U and Ra-226) Metals (Ba, Co, Fe, Mn) Nitrite (NO ₂), Nitrate (NO ₃)	Subsurface Soil	HRR IA Data Summary Report	Biased locations below and near tank
	000-121 – OPWL 500-Gallon Steel Tanks	Radionuclides (Am-241, Pu-239/240, U and Ra-226) Metals (Ba, Co, Fe, Mn) NO ₂ , NO ₃	Subsurface Soil	HRR IA Data Summary Report	Biased location near tank

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Am	americium		
As	arsenic	NO ₃	nitrate
Ba	barium	NO ₂	nitrite
Co	cobalt	Pb	lead
Cr	chromium	PCOC	potential contaminant of concern
Cu	copper	Pu	plutonium
Fe	iron	Sr	strontium
Hg	mercury	SVOC	semi-volatile organic compound
Li	lithium	U	uranium
Mg	magnesium	V	vanadium
Mn	manganese	VOC	volatile organic compound
Ni	nickel	Zn	zinc

Table 3
Sampling Specifications

IHSS Group	IHSS/PAC/UBC Site	Location Code	Eastings	Northing	Media	Depth Interval	Analyte	OnSite Method	OffSite Laboratory Method
800-4	UBC 886 - Critical Mass Laboratory	CI39-A002	2084399 81	749181 76	Surface Soil	0'- 5'	Radionuclides	High-Purity Germanium (HPGe)	Alpha Spec
		CI39-A002	2084399 81	749181 76	Surface Soil	0'- 5'	Metals	6200	6010
		CI39-B002	2084399 81	749181 76	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		CI39-B002	2084399 81	749181 76	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		CI39-B002	2084399 81	749181 76	Subsurface Soil	5'-2 5'	Metals	6200	6010
		CI38-A002	2084382 00	749150 08	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		CI38-A002	2084382 00	749150 08	Surface Soil	0'- 5'	Metals	6200	6010
		CI38-B002	2084382 00	749150 08	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		CI38-B002	2084382 00	749150 08	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		CI38-B002	2084382 00	749150 08	Subsurface Soil	5'-2 5'	Metals	6200	6010
		CI38-A005	2084400 00	749118 90	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		CI38-A005	2084400 00	749118 90	Surface Soil	0'- 5'	Metals	6200	6010
		CI38-B005	2084400 00	749118 90	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		CI38-B005	2084400 00	749118 90	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		CI38-B005	2084400 00	749118 90	Subsurface Soil	5'-2 5'	Metals	6200	6010
		CI38-A006	2084418 00	749150 08	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		CI38-A006	2084418 00	749150 08	Surface Soil	0'- 5'	Metals	6200	6010
		CI38-B006	2084418 00	749150 08	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		CI38-B006	2084418 00	749150 08	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		CI38-B006	2084418 00	749150 08	Subsurface Soil	5'-2 5'	Metals	6200	6010
CI39-A003	2084436 00	749181 26	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec		
CI39-A003	2084436 00	749181 26	Surface Soil	0'- 5'	Metals	6200	6010		
CI39-B003	2084436 00	749181 26	Subsurface Soil	5'-2 5'	VOCs	8260	8260		
CI39-B003	2084436 00	749181 26	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec		
CI39-B003	2084436 00	749181 26	Subsurface Soil	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
		C138-A008	2084400 00	749056 55	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C138-A008	2084400 00	749056 55	Surface Soil	0'- 5'	Metals	6200	6010
		C138-B008	2084400 00	749056 55	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		C138-B008	2084400 00	749056 55	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		C138-B008	2084400 00	749056 55	Subsurface Soil	5'-2 5'	Metals	6200	6010
		C138-A009	2084418 00	749087 73	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C138-A009	2084418 00	749087 73	Surface Soil	0'- 5'	Metals	6200	6010
		C138-B009	2084418 00	749087 73	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		C138-B009	2084418 00	749087 73	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		C138-B009	2084418 00	749087 73	Subsurface Soil	5'-2 5'	Metals	6200	6010
		C138-A010	2084436 00	749118 90	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C138-A010	2084436 00	749118 90	Surface Soil	0'- 5'	Metals	6200	6010
		C138-B010	2084436 00	749118 90	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		C138-B010	2084436 00	749118 90	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		C138-B010	2084436 00	749118 90	Subsurface Soil	5'-2 5'	Metals	6200	6010
		C139-A004	2084472 00	749181 26	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C139-A004	2084472 00	749181 26	Surface Soil	0'- 5'	Metals	6200	6010
		C139-B004	2084472 00	749181 26	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		C139-B004	2084472 00	749181 26	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		C139-B004	2084472 00	749181 26	Subsurface Soil	5'-2 5'	Metals	6200	6010
		C138-A012	2084418 00	749025 37	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C138-A012	2084418 00	749025 37	Surface Soil	0'- 5'	Metals	6200	6010
		C138-B012	2084418 00	749025 37	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		C138-B012	2084418 00	749025 37	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		C138-B012	2084418 00	749025 37	Subsurface Soil	5'-2 5'	Metals	6200	6010
		C138-A013	2084436 00	749056 55	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C138-A013	2084436 00	749056 55	Surface Soil	0'- 5'	Metals	6200	6010
		C138-B013	2084436 00	749056 55	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		C138-B013	2084436 00	749056 55	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		C138-B013	2084436 00	749056 55	Subsurface Soil	5'-2 5'	Metals	6200	6010
		C138-A016	2084490 00	749150 08	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec

IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	OnSite Method	OffSite Laboratory Method
		C138-A016	2084490 00	749150 08	Surface Soil	0'- 5'	Metals	6200	6010
		C138-B016	2084490 00	749150 08	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		C138-B016	2084490 00	749150 08	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		C138-B016	2084490 00	749150 08	Subsurface Soil	5'-2 5'	Metals	6200	6010
		C139-A005	2084508 00	749181 26	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C139-A005	2084508 00	749181 26	Surface Soil	0'- 5'	Metals	6200	6010
		C139-B005	2084508 00	749181 26	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		C139-B005	2084508 00	749181 26	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		C139-B005	2084508 00	749181 26	Subsurface Soil	5'-2 5'	Metals	6200	6010
		C138-A020	2084508 00	749118 90	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C138-A020	2084508 00	749118 90	Surface Soil	0'- 5'	Metals	6200	6010
		C138-B020	2084508 00	749118 90	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		C138-B020	2084508 00	749118 90	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		C138-B020	2084508 00	749118 90	Subsurface Soil	5'-2 5'	Metals	6200	6010
	Room 101	C138-A034	2084411 63	749049 31	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C138-A035	2084412 66	749049 31	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C138-A036	2084420 71	749032 54	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C138-A037	2084422 38	749041 43	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C138-A038	2084432 66	749036 70	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
	800-164 2 - Radioactive Site #2 800 Area Building 886 Spill								
		C139-A001	2084364 00	749181 26	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C139-A001	2084364 00	749181 26	Surface Soil	0'- 5'	Metals	6200	6010
		C139-B001	2084364 00	749181 26	Subsurface Soil	5'-2 5'	VOCs	8260	8260
		C139-B001	2084364 00	749181 26	Subsurface Soil	5'-2 5'	SVOCs	N/A	8270
		C139-B001	2084364 00	749181 26	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		C139-B001	2084364 00	749181 26	Subsurface Soil	5'-2 5'	Metals	6200	6010
		C138-A001	2084364 00	749118 90	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		C138-A001	2084364 00	749118 90	Surface Soil	0'- 5'	Metals	6200	6010
		C138-B001	2084364 00	749118 90	Subsurface Soil	5'-2 5'	VOCs	8260	8260

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IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	OnSite Method	OffSite Laboratory Method
		C138-B001	2084364 00	749118 90	Subsurface Soil	5'-2.5'	SVOCs	N/A	8270
		C138-B001	2084364 00	749118 90	Subsurface Soil	5'-2.5'	Radionuclides	HPGe	Alpha Spec
		C138-B001	2084364 00	749118 90	Subsurface Soil	5'-2.5'	Metals	6200	6010
		C138-A003	2084364 00	749056 55	Surface Soil	0'-5'	Radionuclides	HPGe	Alpha Spec
		C138-A003	2084364 00	749056 55	Surface Soil	0'-5'	Metals	6200	6010
		C138-B003	2084364 00	749056 55	Subsurface Soil	5'-2.5'	VOCs	8260	8260
		C138-B003	2084364 00	749056 55	Subsurface Soil	5'-2.5'	Radionuclides	HPGe	Alpha Spec
		C138-B003	2084364 00	749056 55	Subsurface Soil	5'-2.5'	Metals	6200	6010
		C138-A004	2084382 00	749087 73	Surface Soil	0'-5'	Radionuclides	HPGe	Alpha Spec
		C138-A004	2084382 00	749087 73	Surface Soil	0'-5'	Metals	6200	6010
		C138-B004	2084382 00	749087 73	Subsurface Soil	5'-2.5'	VOCs	8260	8260
		C138-B004	2084382 00	749087 73	Subsurface Soil	5'-2.5'	Radionuclides	HPGe	Alpha Spec
		C138-B004	2084382 00	749087 73	Subsurface Soil	5'-2.5'	Metals	6200	6010
		C138-A007	2084382 00	749025 37	Surface Soil	0'-5'	Radionuclides	HPGe	Alpha Spec
		C138-A007	2084382 00	749025 37	Surface Soil	0'-5'	Metals	6200	6010
		C138-B007	2084382 00	749025 37	Subsurface Soil	5'-2.5'	VOCs	8260	8260
		C138-B007	2084382 00	749025 37	Subsurface Soil	5'-2.5'	Radionuclides	HPGe	Alpha Spec
		C138-B007	2084382 00	749025 37	Subsurface Soil	5'-2.5'	Metals	6200	6010
		C138-A011	2084454 00	749150 08	Surface Soil	0'-5'	Radionuclides	HPGe	Alpha Spec
		C138-A011	2084454 00	749150 08	Surface Soil	0'-5'	Metals	6200	6010
		C138-B011	2084454 00	749150 08	Subsurface Soil	5'-2.5'	VOCs	8260	8260
		C138-B011	2084454 00	749150 08	Subsurface Soil	5'-2.5'	Radionuclides	HPGe	Alpha Spec
		C138-B011	2084454 00	749150 08	Subsurface Soil	5'-2.5'	Metals	6200	6010
		C138-A014	2084454 00	749087 73	Surface Soil	0'-5'	Radionuclides	HPGe	Alpha Spec
		C138-A014	2084454 00	749087 73	Surface Soil	0'-5'	Metals	6200	6010
		C138-B014	2084454 00	749087 73	Subsurface Soil	5'-2.5'	VOCs	8260	8260
		C138-B014	2084454 00	749087 73	Subsurface Soil	5'-2.5'	Radionuclides	HPGe	Alpha Spec
		C138-B014	2084454 00	749087 73	Subsurface Soil	5'-2.5'	Metals	6200	6010
		C138-A015	2084472 00	749118 90	Surface Soil	0'-5'	Radionuclides	HPGe	Alpha Spec
		C138-A015	2084472 00	749118 90	Surface Soil	0'-5'	Metals	6200	6010
		C138-B015	2084472 00	749118 90	Subsurface Soil	5'-2.5'	VOCs	8260	8260

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IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	OnSite Method	OffSite Laboratory Method
		CI38-B015	2084472 00	749118 90	Subsurface Soil	5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CI38-B015	2084472 00	749118 90	Subsurface Soil	5'-2.5'	Metals	6200	6010
		CI38-A017	2084454 00	749025 37	Surface Soil	0'-5'	Radionuclides	HPGe	Alpha Spec
		CI38-A017	2084454 00	749025 37	Surface Soil	0'-5'	Metals	6200	6010
		CI38-B017	2084454 00	749025 37	Subsurface Soil	5'-2.5'	VOCs	8260	8260
		CI38-B017	2084454 00	749025 37	Subsurface Soil	5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CI38-B017	2084454 00	749025 37	Subsurface Soil	5'-2.5'	Metals	6200	6010
		CI38-A018	2084472 00	749056 55	Surface Soil	0'-5'	Radionuclides	HPGe	Alpha Spec
		CI38-A018	2084472 00	749056 55	Surface Soil	0'-5'	Metals	6200	6010
		CI38-B018	2084472 00	749056 55	Subsurface Soil	5'-2.5'	VOCs	8260	8260
		CI38-B018	2084472 00	749056 55	Subsurface Soil	5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CI38-B018	2084472 00	749056 55	Subsurface Soil	5'-2.5'	Metals	6200	6010
		CI38-A019	2084490 00	749087 73	Surface Soil	0'-5'	Radionuclides	HPGe	Alpha Spec
		CI38-A019	2084490 00	749087 73	Surface Soil	0'-5'	Metals	6200	6010
		CI38-B019	2084490 00	749087 73	Subsurface Soil	5'-2.5'	VOCs	8260	8260
		CI38-B019	2084490 00	749087 73	Subsurface Soil	5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CI38-B019	2084490 00	749087 73	Subsurface Soil	5'-2.5'	Metals	6200	6010
		CI38-A021	2084490 00	749025 37	Surface Soil	0'-5'	Radionuclides	HPGe	Alpha Spec
		CI38-A021	2084490 00	749025 37	Surface Soil	0'-5'	Metals	6200	6010
		CI38-B021	2084490 00	749025 37	Subsurface Soil	5'-2.5'	VOCs	8260	8260
		CI38-B021	2084490 00	749025 37	Subsurface Soil	5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CI38-B021	2084490 00	749025 37	Subsurface Soil	5'-2.5'	Metals	6200	6010
		CI38-A022	2084508 00	749056 55	Surface Soil	0'-5'	Radionuclides	HPGe	Alpha Spec
		CI38-A022	2084508 00	749056 55	Surface Soil	0'-5'	Metals	6200	6010
		CI38-B022	2084508 00	749056 55	Subsurface Soil	5'-2.5'	VOCs	8260	8260
		CI38-B022	2084508 00	749056 55	Subsurface Soil	5'-2.5'	Radionuclides	HPGe	Alpha Spec
		CI38-B022	2084508 00	749056 55	Subsurface Soil	5'-2.5'	Metals	6200	6010
		CI38-F024	2084379 86	749106 67	Subsurface Soil	8.5'-10.5'	Radionuclides	HPGe	Alpha Spec
		CI38-F024	2084379 86	749106 67	Subsurface Soil	8.5'-10.5'	VOCs	8260	8260
		CI38-F024	2084379 86	749106 67	Subsurface Soil	8.5'-10.5'	SVOCs	N/A	8270
		CI38-F024	2084379 86	749106 67	Subsurface Soil	8.5'-10.5'	Metals	6200	6010

OPWL

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IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	OnSite Method	OffSite Laboratory Method
	Foundation Drain	CI38-F025	2084362 06	749063 79	Subsurface Soil	8 5'-10 5'	Radionuclides	HPGe	Alpha Spec
		CI38-F025	2084362 06	749063 79	Subsurface Soil	8 5'-10 5'	VOCs	8260	8260
		CI38-F025	2084362 06	749063 79	Subsurface Soil	8 5'-10 5'	SVOCs	N/A	8270
		CI38-F025	2084362 06	749063 79	Subsurface Soil	8 5'-10 5'	Metals	6200	6010
		CI38-F026	2084385 57	749062 59	Subsurface Soil	8 5'-10 5'	Radionuclides	HPGe	Alpha Spec
		CI38-F026	2084385 57	749062 59	Subsurface Soil	8 5'-10 5'	VOCs	8260	8260
		CI38-F026	2084385 57	749062 59	Subsurface Soil	8 5'-10 5'	SVOCs	N/A	8270
		CI38-F026	2084385 57	749062 59	Subsurface Soil	8 5'-10 5'	Metals	6200	6010
		CI38-F028	2084381 50	749041 33	Subsurface Soil	8 5'-10 5'	Radionuclides	HPGe	Alpha Spec
		CI38-F028	2084381 50	749041 33	Subsurface Soil	8 5'-10 5'	VOCs	8260	8260
		CI38-F028	2084381 50	749041 33	Subsurface Soil	8 5'-10 5'	SVOCs	N/A	8270
		CI38-F028	2084381 50	749041 33	Subsurface Soil	8 5'-10 5'	Metals	6200	6010
		CI38-F029	2084406 83	749040 29	Subsurface Soil	8 5'-10 5'	Radionuclides	HPGe	Alpha Spec
		CI38-F029	2084406 83	749040 29	Subsurface Soil	8 5'-10 5'	VOCs	8260	8260
		CI38-F029	2084406 83	749040 29	Subsurface Soil	8 5'-10 5'	SVOCs	N/A	8270
		CI38-F029	2084406 83	749040 29	Subsurface Soil	8 5'-10 5'	Metals	6200	6010
		CI38-F030	2084360 16	749106 15	Subsurface Soil	8 5'-10 5'	Radionuclides	HPGe	Alpha Spec
		CI38-F030	2084360 16	749106 15	Subsurface Soil	8 5'-10 5'	VOCs	8260	8260
		CI38-F030	2084360 16	749106 15	Subsurface Soil	8 5'-10 5'	SVOCs	N/A	8270
		CI38-F030	2084360 16	749106 15	Subsurface Soil	8 5'-10 5'	Metals	6200	6010
		CI38-F033	2084378 90	749053 17	Subsurface Soil	8 5'-10 5'	Radionuclides	HPGe	Alpha Spec
		CI38-F033	2084378 90	749053 17	Subsurface Soil	8 5'-10 5'	VOCs	8260	8260
		CI38-F033	2084378 90	749053 17	Subsurface Soil	8 5'-10 5'	SVOCs	N/A	8270
	CI38-F033	2084378 90	749053 17	Subsurface Soil	8 5'-10 5'	Metals	6200	6010	
	CI38-F027	2084381 50	749041 35	Subsurface Soil	8 5'-10 5'	Radionuclides	HPGe	Alpha Spec	
	CI38-F027	2084381 50	749041 35	Subsurface Soil	8 5'-10 5'	VOCs	8260	8260	
	CI38-F027	2084381 50	749041 35	Subsurface Soil	8 5'-10 5'	SVOCs	N/A	8270	
	CI38-F027	2084381 50	749041 35	Subsurface Soil	8 5'-10 5'	Metals	6200	6010	

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IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	OnSite Method	OffSite Laboratory Method	
	000-121- OPWL 250-Gallon Sump, OPWL Two 250-Gallon Steel Tanks, and one 500-Gallon Steel Tank	CI38-A023	2084359 12	749044 96	Surface Soil	0'- 5'	Metals	6200	6010	
		CI38-A023	2084359 12	749044 96	Surface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec	
		CI38-A023	2084359 12	749044 96	Surface Soil	0'- 5'	Nitrate/Nitrite	9056		
		CI38-B023	2084359 12	749044 96	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec	
		CI38-B023	2084359 12	749044 96	Subsurface Soil	5'-2 5'	Nitrate/Nitrite			
		CI38-B023	2084359 12	749044 96	Subsurface Soil	5'-2 5'	Metals	6200	6010	
		CI38-C023	2084359 12	749044 96	Subsurface Soil	2 5'-4 5'	Radionuclides	HPGe	Alpha Spec	
		CI38-C023	2084359 12	749044 96	Subsurface Soil	2 5'-4 5'	Nitrate/Nitrite			
		CI38-C023	2084359 12	749044 96	Subsurface Soil	2 5'-4 5'	Metals	6200	6010	
		CI38-D023	2084359 12	749044 96	Subsurface Soil	4 5'-6 5'	Radionuclides	HPGe	Alpha Spec	
		CI38-D023	2084359 12	749044 96	Subsurface Soil	4 5'-6 5'	Nitrate/Nitrite			
		CI38-D023	2084359 12	749044 96	Subsurface Soil	4 5'-6 5'	Metals	6200	6010	
		CI38-E023	2084359 12	749044 96	Subsurface Soil	6 5'-8 5'	Radionuclides	HPGe	Alpha Spec	
		CI38-E023	2084359 12	749044 96	Subsurface Soil	6 5'-8 5'	Nitrate/Nitrite			
		CI38-E023	2084359 12	749044 96	Subsurface Soil	6 5'-8 5'	Metals	6200	6010	
		CI38-F023	2084359 12	749044 96	Subsurface Soil	8 5'-10 5'	Radionuclides	HPGe	Alpha Spec	
		CI38-F023	2084359 12	749044 96	Subsurface Soil	8 5'-10 5'	Nitrate/Nitrite			
		CI38-F023	2084359 12	749044 96	Subsurface Soil	8 5'-10 5'	Metals	6200	6010	
		CI38-A031	2084358 76	749053 52	Subsurface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec	
		CI38-A031	2084358 76	749053 52	Subsurface Soil	0'- 5'	Nitrate/Nitrite			
CI38-A031	2084358 76	749053 52	Subsurface Soil	0'- 5'	Metals	6200	6010			
CI38-B031	2084358 76	749053 52	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec			
CI38-B031	2084358 76	749053 52	Subsurface Soil	5'-2 5'	Nitrate/Nitrite					
CI38-B031	2084358 76	749053 52	Subsurface Soil	5'-2 5'	Metals	6200	6010			
CI38-C031	2084358 76	749053 52	Subsurface Soil	2 5'-4 5'	Radionuclides	HPGe	Alpha Spec			
CI38-C031	2084358 76	749053 52	Subsurface Soil	2 5'-4 5'	Nitrate/Nitrite					
CI38-C031	2084358 76	749053 52	Subsurface Soil	2 5'-4 5'	Metals	6200	6010			

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IHSS Group	IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval	Analyte	OnSite Method	OffSite Laboratory Method
		CI38-D031	2084358 76	749053 52	Subsurface Soil	4 5'-6 5'	Radionuclides	HPGe	Alpha Spec
		CI38-D031	2084358 76	749053 52	Subsurface Soil	4 5'-6 5'	Nitrate/Nitrite		
		CI38-D031	2084358 76	749053 52	Subsurface Soil	4 5'-6 5'	Metals	6200	6010
		CI38-E031	2084358 76	749053 52	Subsurface Soil	6 5'-8 5'	Radionuclides	HPGe	Alpha Spec
		CI38-E031	2084358 76	749053 52	Subsurface Soil	6 5'-8 5'	Nitrate/Nitrite		
		CI38-E031	2084358 76	749053 52	Subsurface Soil	6 5'-8 5'	Metals	6200	6010
		CI38-F031	2084358 76	749053 52	Subsurface Soil	8 5'-10 5'	Radionuclides	HPGe	Alpha Spec
		CI38-F031	2084358 76	749053 52	Subsurface Soil	8 5'-10 5'	Nitrate/Nitrite		
		CI38-F031	2084358 76	749053 52	Subsurface Soil	8 5'-10 5'	Metals	6200	6010
		CI38-A032	2084354 52	749049 72	Subsurface Soil	0'- 5'	Radionuclides	HPGe	Alpha Spec
		CI38-A032	2084354 52	749049 72	Subsurface Soil	0'- 5'	Nitrate/Nitrite		
		CI38-A032	2084354 52	749049 72	Subsurface Soil	0'- 5'	Metals	6200	6010
		CI38-B032	2084354 52	749049 72	Subsurface Soil	5'-2 5'	Radionuclides	HPGe	Alpha Spec
		CI38-B032	2084354 52	749049 72	Subsurface Soil	5'-2 5'	Nitrate/Nitrite		
		CI38-B032	2084354 52	749049 72	Subsurface Soil	5'-2 5'	Metals	6200	6010
		CI38-C032	2084354 52	749049 72	Subsurface Soil	2 5'-4 5'	Radionuclides	HPGe	Alpha Spec
		CI38-C032	2084354 52	749049 72	Subsurface Soil	2 5'-4 5'	Nitrate/Nitrite		
		CI38-C032	2084354 52	749049 72	Subsurface Soil	2 5'-4 5'	Metals	6200	6010
		CI38-D032	2084354 52	749049 72	Subsurface Soil	4 5'-6 5'	Radionuclides	HPGe	Alpha Spec
		CI38-D032	2084354 52	749049 72	Subsurface Soil	4 5'-6 5'	Nitrate/Nitrite		
		CI38-D032	2084354 52	749049 72	Subsurface Soil	4 5'-6 5'	Metals	6200	6010
		CI38-E032	2084354 52	749049 72	Subsurface Soil	6 5'-8 5'	Radionuclides	HPGe	Alpha Spec
		CI38-E032	2084354 52	749049 72	Subsurface Soil	6 5'-8 5'	Nitrate/Nitrite		
		CI38-E032	2084354 52	749049 72	Subsurface Soil	6 5'-8 5'	Metals	6200	6010
		CI38-F032	2084354 52	749049 72	Subsurface Soil	8 5'-10 5'	Radionuclides	HPGe	Alpha Spec
		CI38-F032	2084354 52	749049 72	Subsurface Soil	8 5'-10 5'	Nitrate/Nitrite		
		CI38-F032	2084354 52	749049 72	Subsurface Soil	8 5'-10 5'	Metals	6200	6010

IHSS Group 800-4 Maps

Location of Existing Sample Results Above Detection Limits or Background Levels
Collected at UBC 886 (IHSS Group 800-4) in April 2001

Location of Existing Sample Results Above Detection Limits or Background Levels for
IHSS Group 800-4 (UBC 886, 000-121, and 800-164 2)

FY2002 Sampling Locations for IHSS Group 800-4

35 mm

DRAWING

J-H H 000933 (pg 27)

Location of Existing Sample Results Above Detection Limits or Background Levels at 800-4 (800-164.2 and UBC 886)

- KEY**
- FY 2002 IHSS location
 - FY 2002 PAC location
 - FY 2002 UBC location
 - Building/structure
 - Paved area
 - Dirt road
 - Stream, ditch, or other drainage feature
 - Original process waste line

- Existing soil sampling locations
- Both subsurface and surface soil
- Subsurface soil
- Surface soil

Scale = 1:300

30 0 30 60 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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

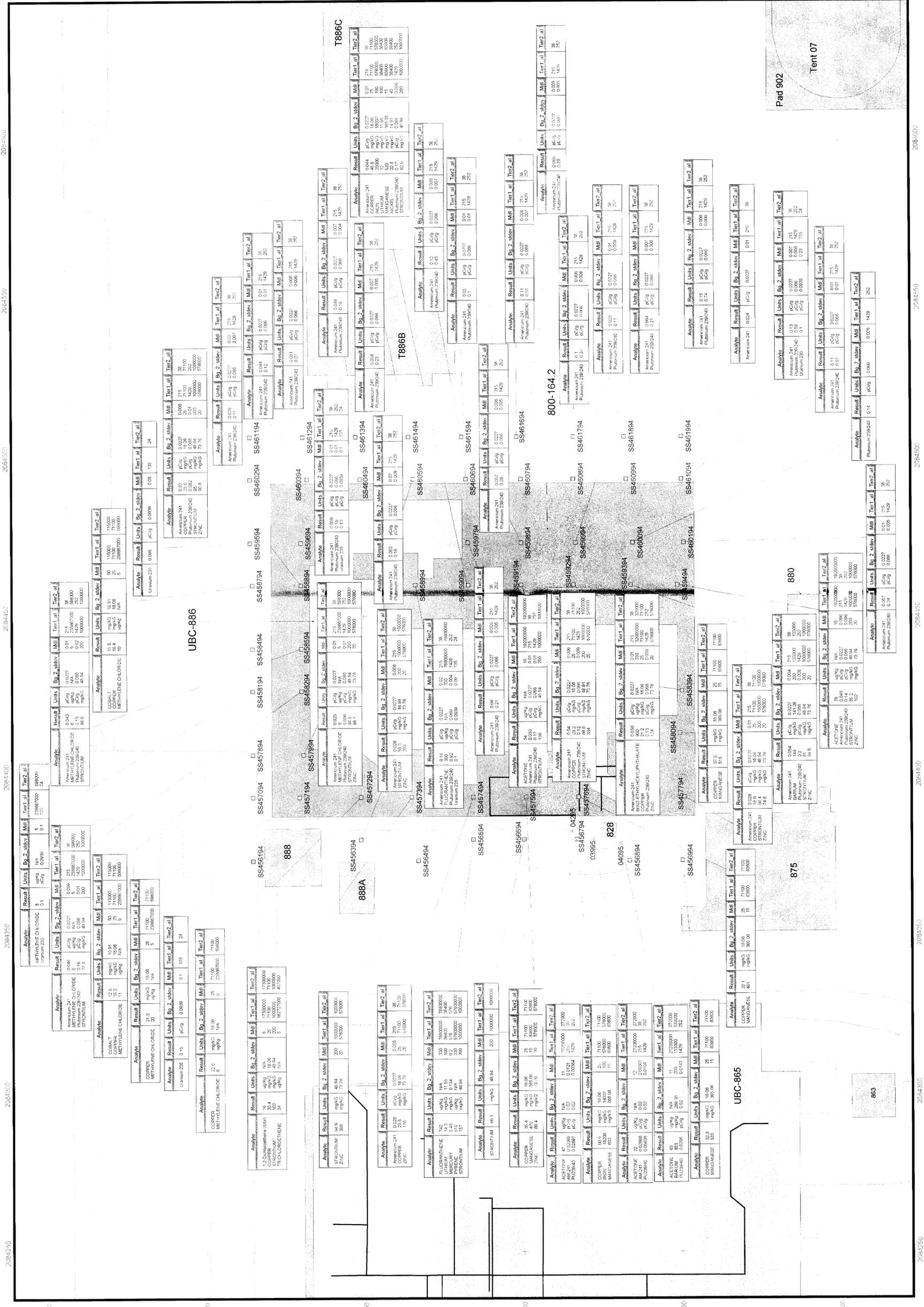
Prepared by:



Prepared for:



postings-02.apr 3 December 2001



Location of Existing Sample Results Above Detection Limits or Background Levels Collected in April 2001 at 800-4 (800-164.2 and UBC 886)

KEY

-  FY 2002 IHSS location
-  FY 2002 PAC location
-  FY 2002 UBC location
-  Building/structure
-  Paved area
-  Dirt road

Stream, ditch, or other drainage feature

Original process waste line

Existing soil sampling locations

Both subsurface and surface soil

Subsurface soil

Surface soil



Scale = 1:200



State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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

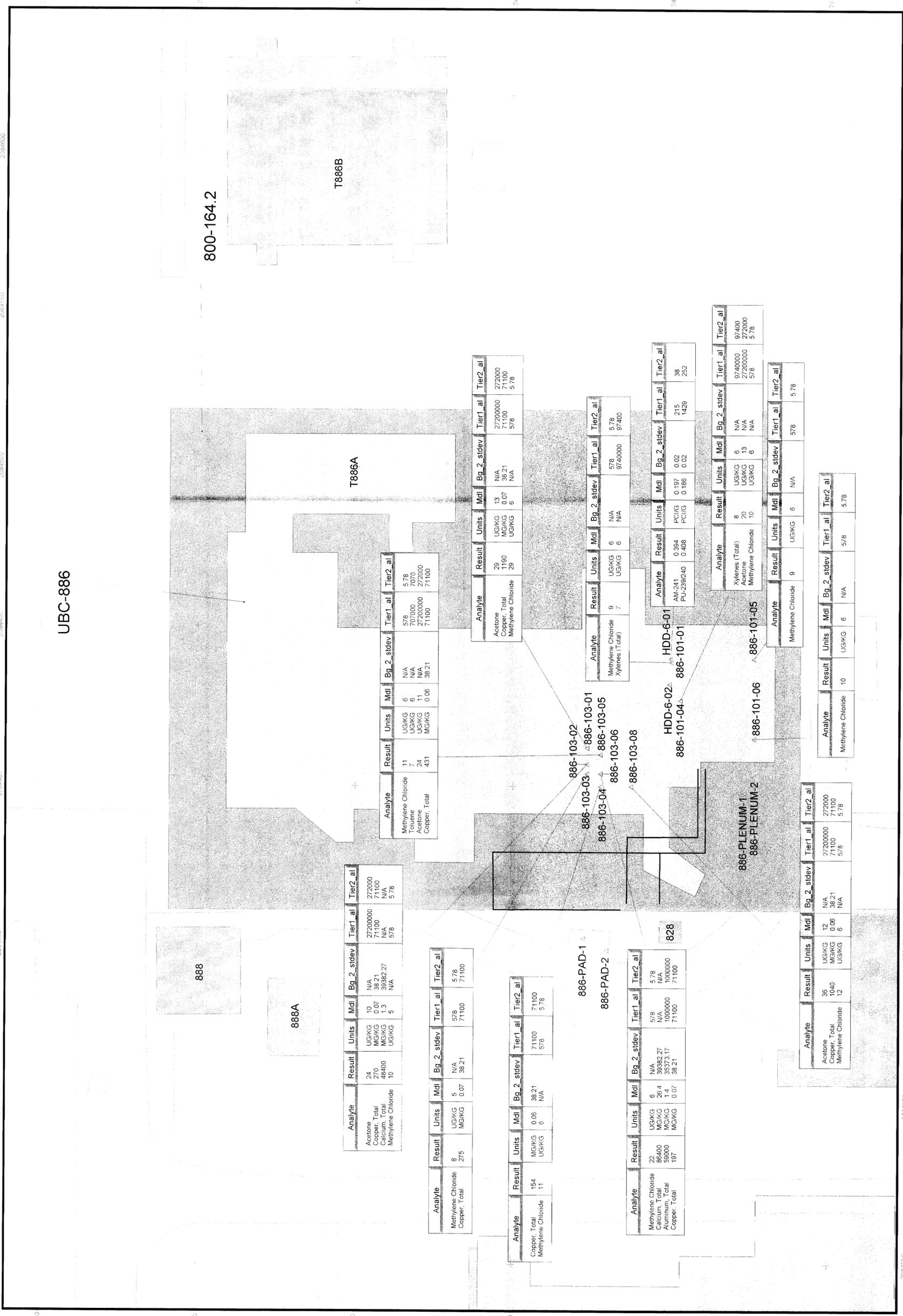
Prepared by:



Prepared for:



postings-02 apr 3 December 2001



UBC-886

800-164.2

T886B

T886A

888

888A

886-PAD-1

886-PAD-2

886-PLENUM-1
886-PLENUM-2

Analyte	Result	Units	Mdl	Bg. 2. stdev	Tier1. al	Tier2. al
Acetone	24	UG/KG	10	N/A	2720000	71100
Copper, Total	270	MG/KG	0.07	38.21	N/A	N/A
Calcium, Total	48400	MG/KG	1.3	39382.27	N/A	578
Methylene Chloride	10	UG/KG	5	N/A	71100	578

Analyte	Result	Units	Mdl	Bg. 2. stdev	Tier1. al	Tier2. al
Methylene Chloride	8	UG/KG	5	N/A	578	71100
Copper, Total	275	MG/KG	0.07	38.21	71100	71100

Analyte	Result	Units	Mdl	Bg. 2. stdev	Tier1. al	Tier2. al
Copper, Total	154	MG/KG	0.05	38.21	71100	71100
Methylene Chloride	11	UG/KG	6	N/A	578	578

Analyte	Result	Units	Mdl	Bg. 2. stdev	Tier1. al	Tier2. al
Methylene Chloride	22	UG/KG	6	N/A	578	578
Calcium, Total	84400	MG/KG	26.4	N/A	N/A	N/A
Aluminum, Total	59000	MG/KG	1.4	55373.17	10000000	71100
Copper, Total	197	MG/KG	0.07	38.21	71100	71100

Analyte	Result	Units	Mdl	Bg. 2. stdev	Tier1. al	Tier2. al
Methylene Chloride	11	UG/KG	6	N/A	578	578
Toluene	7	UG/KG	6	N/A	70700	70700
Acetone	24	UG/KG	11	N/A	2720000	71100
Copper, Total	431	MG/KG	0.06	38.21	71100	71100

Analyte	Result	Units	Mdl	Bg. 2. stdev	Tier1. al	Tier2. al
Acetone	29	UG/KG	13	N/A	2720000	272000
Copper, Total	1190	MG/KG	0.07	38.21	71100	71100
Methylene Chloride	29	UG/KG	6	N/A	578	578

Analyte	Result	Units	Mdl	Bg. 2. stdev	Tier1. al	Tier2. al
Methylene Chloride	9	UG/KG	6	N/A	578	578
Xylenes (Total)	7	UG/KG	6	N/A	9740000	97400

Analyte	Result	Units	Mdl	Bg. 2. stdev	Tier1. al	Tier2. al
AM-241	0.384	PCI/G	0.197	0.02	215	38
PU-239/240	0.408	PCI/G	0.186	0.02	1429	252

Analyte	Result	Units	Mdl	Bg. 2. stdev	Tier1. al	Tier2. al
Xylenes (Total)	8	UG/KG	6	N/A	9740000	97400
Methylene Chloride	10	UG/KG	6	N/A	2720000	578

Analyte	Result	Units	Mdl	Bg. 2. stdev	Tier1. al	Tier2. al
Methylene Chloride	9	UG/KG	6	N/A	578	578

Analyte	Result	Units	Mdl	Bg. 2. stdev	Tier1. al	Tier2. al
Methylene Chloride	10	UG/KG	6	N/A	578	578

Analyte	Result	Units	Mdl	Bg. 2. stdev	Tier1. al	Tier2. al
Acetone	36	UG/KG	12	N/A	2720000	272000
Copper, Total	1040	MG/KG	0.06	38.21	71100	71100
Methylene Chloride	12	UG/KG	6	N/A	578	578

2084500

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**FY 2002 Sampling Locations
for IA Group 800-4
(800-164.2 and UBC 886)**

KEY

- Foundation Drain
- FY 2002 biased sampling location
- FY 2002 statistical sampling location
- Random start 36-ft triangular grid line
- FY 2002 IHSS location
- FY 2002 PAC location
- FY 2002 UBC location
- Building/structure
- Paved area
- Dirt road
- Stream, ditch, or other drainage feature
- OPWL location (estimated)
- OPWL tank location (estimated)
- Existing soil sampling locations (50-ft buffer)
- Both subsurface and surface soil
- △ Subsurface soil
- Surface soil



State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

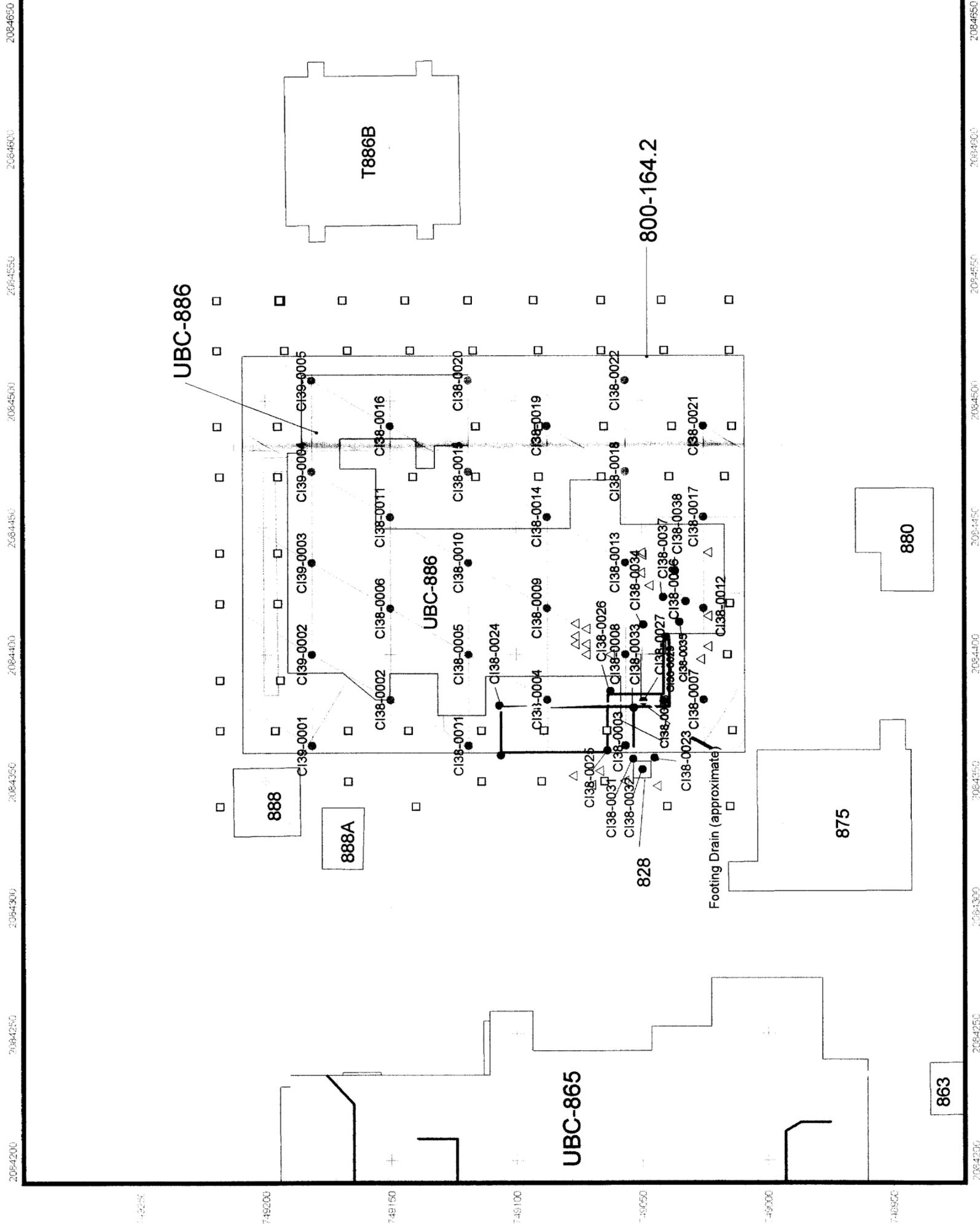
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Prepared by:

Prepared for:



800-4characterization.apr March 2002



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