

PRELIMINARY PHASE I RESULTS AND RECOMMENDATIONS REPORT FOR DRYWELL AND MISCELLANEOUS SITES REMOVAL PROJECT

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ACRONYMS AND ABBREVIATIONS

AFBCA Air Force Base Conversion Agency

AFCEE Air Force Center for Environmental Excellence

AOI-90 Area of Interest 90

BEHP bis(2)ethylhexyl phthalate below ground surface

Bldg. 211 Building 211

CFR Code of Federal Regulations

DRY-100 Drywell Site 100 DRY-842 Drywell Site 842 DRY-846 Drywell Site 846

EPA United States Environmental Protection Agency

MeCl₂ methylene chloride

NYSDEC New York State Department of Environmental Conservation

OHM Remediation Services Corp.
PAH polynuclear aromatic hydrocarbons

PCB polychlorinated biphenyls
PCB Pad the Perimeter Road PCB Pad

PCI-7 Panamerican Consultants Inc. Site 7

ppb parts per billion ppm parts per million

RCRA Resource Conservation and Recovery Act

SB site background

SVOC semi-volatile organic compounds

TAGM 4046 Technical and Administrative Guidance Memorandum 4046

TAL Target Analyte List TCE trichloroethene

TCL Target Compound List

TOGS 1.1.1 Technical and Operational Guidance Series 1.1.1

TOX total organic halides

TPH total petroleum hydrocarbons

ug micrograms

ug/100 cm² micrograms per 100 square centimeters

VOC volatile organic compounds

PHASE I REPORT 1.0 INTRODUCTION

1.0 INTRODUCTION

This Preliminary Results and Recommendations Report has been prepared by OHM Remediation Services Corp. (OHM) for the Air force Center for Environmental Excellence (AFCEE) and the Air Force Base Conversion Agency (AFBCA) under AFCEE Contract No. F41624-94-D-8106, Delivery Order 0007. It contains analytical results summaries of sampling results from the following sites:

- Area of Interest 90 (AOI-90),
- Building 211 (Bldg. 211),
- Drywell Site 100 (DRY-100),
- Drywell Site 842 (DRY-842),
- Drywell Site 846 (DRY-846),
- the Perimeter Road PCB Pad (PCB Pad),
- Panamerican Consultants Inc. Site 7 (PCI-7), and
- the Lanz Borrow Pit.

This sampling event occurred from 05-09 June 2000, and represents Phase I of the project. Removal actions and building decontamination will be performed as part of Phase II which is scheduled to commence on 10 July. The analytical results presented in this report have not yet been validated; however, validated results will be provided in the Final Report. The purpose of this report is to allow the Air Force to review the Phase I data in order to determine if additional removal or investigative activities are warranted during the Phase II.

All sampling was conducted in accordance with the Closure Work Plan Addendum for the Drywell and Miscellaneous Sites Removal at the Former Griffiss Air Force Base, Rome, New York dated May, 2000. Site locations are shown on Figure 1. Map symbols and abbreviations used on the individual site sampling figures are explained on Figure 2. A sampling matrix organized by site is presented as Table 1.0.1. Analytical parameters (and methodology) requested for each sample collected are shown on Table 1.0.2. Analytical results discussions are included in Section 2.0. Tables referenced in Section 2.0 provide a comparison of analytical results to screening criteria presented in Section 1.1.

1.1 SCREENING CRITERIA

Groundwater results were compared against the Ambient Water Quality Standards and Guidance Values presented in New York State Department of Environmental Conservation (NYSDEC), Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1) published in October, 1993.

Soil results were compared against standards presented in NYSDEC Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum (TAGM) HWR-94-4046, Revised TAGM - Determination of Soil Cleanup Objectives and Cleanup Levels, January 1994 (TAGM-4046). Site background (SB) levels for metals in soils were obtained from soil screening criteria presented in the Draft Report for Expanded Site Investigation and Confirmatory Sampling of Areas of Interest and Drywell/Wastewater-Related

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PHASE I REPORT 1.0 INTRODUCTION

Systems at the former Griffiss Air Force Base, Rome, New York by Ecology and Environment, July, 1998. The draft Ecology and Environment Report references the Draft RI Report (Law, 1995) as the source of the background levels.

Wipe sampling results for polychlorinated biphenyls (PCBs) were compared against the United States Environmental Protection Agency (EPA) indoor residential cleanup level of 10 micrograms per 100 square centimeters (ug/100 cm²) presented in 40 CFR 761.125(b)(1).

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2.0 SAMPLING AND ANALYTICAL RESULTS

This section contains a description of the sampling at each site. Analytical results are presented and recommendations are included on a site-by-site basis. Tables referenced in this section provide a comparison between detected compounds and applicable soil screening criteria and groundwater standards.

2.1 AREA OF INTEREST 90

AOI-90 is located in northeastern section of the Base (Figure 1). It contains the Industrial Soils Pad and two underground concrete vaults designated the Northwest Vault and the Southeast Vault (Figure 3). Previous sampling results showed elevated levels of lead in soil (sample ISPSS-12) north of the Northwest Vault (1,700 parts per million (ppm)) and in sediments in the Southeast Vault (2,500 ppm). The Southeast Vault also contained high concentrations of polynuclear aromatic hydrocarbons (PAHs).

2.1.1 Surface Soil Sampling and Analytical Results

OHM collected surface soil samples AI90SS01 to -21 from 0 to 6 inches below ground surface (bgs) for lead analysis. The 21 samples were collected on a 10 x 10 foot grid established around previous soil sampling point ISPSS-12.

Reported lead concentrations ranged from 3.9 ppm in one sample to 48 ppm in two samples. Table 2.1.1 provides a summary of lead results in comparison to site background values and the EPA screening value for lead in soil in a residential setting (EPA OSWER #9355.4-12, July 1994). Three reported concentrations exceed the SB level of 36 ppm; however, none exceed the EPA screening value of 400 ppm.

2.1.2 <u>Waste Characterization Sampling and Analytical Results</u>

Northwest Vault Samples

In accordance with guidance obtained from the EPA and NYSDEC, the AFBCA instructed OHM to collect three samples at different depths from fill that had been placed in the Northwest Vault. Samples AI90SD1A, -B and -C were collected from depths of 0-0.5 feet, 2.0-2.5 ft, and 4.0-4.5 feet below the top of the fill, respectively. The Northwest Vault samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile compounds (SVOCs), PCBs, pesticides, herbicides, total petroleum hydrocarbons (TPH), and RCRA metals to characterize the fill material. Sampling locations are shown on Figure 4.

A summary of positive detections for the vault samples is provided in Table 2.1.2. No VOCs, SVOCs, PCBs or herbicides were detected in soil from the Northwest Vault. Pesticides 4,4-DDE and 4,4-DDT were detected in sample AI90SD1B at trace concentrations well below the respective TAGM 4046 criteria. Arsenic was detected in all three samples at concentrations ranging from 2.1 to 2.5 ppm, barium was reported at a concentration of 10 ppm in each sample,

chromium was detected in two samples at 5 ppm and in one sample at 6 ppm, and lead was detected at concentrations from 2.6 to 3.3 ppm.

Southwest Vault Sample

Sediment sample AI90SD2A was collected from the bottom of the Southeast Vault. This sample was analyzed for TCL VOCs, TCL SVOCs, PCBs), pesticides, herbicides, TPH, RCRA metals, and RCRA characteristics for disposal characterization.

A summary of positive detections for the Southeast Vault sample is provided in Table 2.1.2. No VOCs, PCBs, pesticides, or herbicides were detected in the sediment sample from the Southeast Vault. The SVOCs benzo(b)fluoranthene (430 parts per billion (ppb)), benzo(k)fluoranthene (410 ppb), fluoranthene (980 ppb), phenanthrene (810 ppb) and pyrene (940 ppb) were detected at concentrations below their respective TAGM 4046 criteria. Benzo(a)anthracene (480 ppb), benzo(a)pyrene (420 ppb), and chrysene (460 ppb) were detected at concentrations above TAGM 4046 criteria. Lead was detected at a concentration of 360 ppm, which is well above background, but is less than the EPA screening criteria of 400 ppm.

2.1.3 Recommendations

Based on the results of the sampling conducted at AOI-90, OHM recommends:

- No further action in the area of former sample ISPSS-12, where lead was previously detected at a concentration of 1700 ppm;
- Leave the fill in place in the Northwest Vault and import clean fill to complete backfill of the vault; and,
- Remove and dispose of the sediment in the Southeast Vault, and backfill the vault with imported clean fill.

2.2 BUILDING 211

Bldg. 211 is located near the intersection of Hangar Road and March Street and is used as a drinking water chlorination facility (Figure 1). A 20-inch water main runs beneath the building in a pipe vault partially filled with what appears to be groundwater.

2.2.1 <u>Waste Characterization Sampling and Analytical Results</u>

Grab water sample B211WA01 was collected for analysis of TCL VOCs and RCRA metals from the water main pipe vault for waste disposal characterization (Figure 5). No odors, sheens or discoloration were noted during sampling.

Mercury was detected in sample B211WA01 at a concentration of 0.0008 ppm, which is well below the TOGS 1.1.1 groundwater standard of 0.002 ppm. The VOC chloroform was detected at a concentration of 1.2 ppb, below the TOGS 1.1.1 standard of 7 ppb.

2.2.2 Recommendations

Based on the sample results, IT will seek approval from the City of Rome to discharge the water from the water main pipe vault to the sanitary sewer during Phase II activities.

2.3 DRYWELL SITE 100

DRY-100 is located in the Bldg. 100 Generator Room and is in the central portion of the Base (Figure 1). PCBs have been detected in sediment from DRY-100, along with metals and SVOCs in excess of NYSDEC criteria.

. 2.3.1 Wipe Sampling and Analytical Results

Wipe samples B100WP01 to -04 were collected from the floor of the Bldg. 100 Generator Room for PCB analysis (Figure 6). The wipe samples were collected from 25 by 25 centimeter squares, or from an area of 625 cm². PCBs were detected at concentrations ranging from 3.68 to 22.4 ug/100 cm² as shown in Table 2.3.1. Exceedances of the 10 ug/100 cm² EPA action level were noted at sample points D100WP01 and D100WP03.

2.3.2 Groundwater Sampling and Analytical Results

Groundwater samples D100GW01 and -02 were collected downgradient from DRY-100 for analysis of TCL VOCs, TCL SVOCs, total and dissolved PCBs, and total and dissolved Target Analyte List (TAL) metals. Groundwater was a depth of 12.6 feet bgs. A slight sheen and faint fuel oil odor were noted during sampling.

A summary of positive detections for the two groundwater samples is provided in Table 2.3.2. Trace levels of VOCs, chloroform, methylene chloride (MeCl₂) and trichloroethene (TCE), and the SVOC, bis(2)ethylhexyl phthalate (BEHP), were detected at concentrations well below their respective TOGS 1.1.1 groundwater standards. Calcium and iron were the only metals detected above TOGS 1.1.1 standards. PCBs were not detected in any of the samples (filtered or unfiltered).

2.3.3 Recommendations

Based on the results of the sampling conducted at DRY-100, OHM recommends:

- Decontaminating the floor of the Building 100 generator room, followed by confirmation wipe sampling; and,
- No further action with respect to groundwater monitoring at site DRY-100.

2.4 DRYWELL SITE 842

Bldg. 842 is a former emergency electric power generation plant located in the northeastern portion of the Base in the former Weapons Storage Area (Figure 1). DRY-842 is located approximately 60 feet north of Bldg. 842 (Figure 7). Several metals have been detected in the drywell sediment at concentrations above NYSDEC criteria. TPH was also detected at a concentration of 1,500 ppm in the sediment.

2.4.1 Groundwater Sampling

Groundwater sample D842GW01 was collected downgradient from DRY-842 for analysis of TCL VOCs, TCL SVOCs, total PCBs, and total and dissolved TAL metals. Groundwater was at a depth of 9.9 feet bgs. No odors or sheens were noted during sampling.

A summary of positive detections for the groundwater sample is provided in Table 2.4.1. The VOCs, acetone and MeCl₂, and the SVOC, BEHP, were detected at concentrations below TOGS 1.1.1 groundwater standards. Calcium and iron were the only metals detected above TOGS 1.1.1 standards. PCBs were not detected in the sample.

2.4.2 <u>Sediment Sampling and Analytical Results</u>

Sediment sample D842SD01 was collected from 0-6 inches below the base of DRY-842 for analysis of TCL VOCs, TCL SVOCs, PCBs, pesticides, herbicides, TPH, RCRA metals, and RCRA characteristics.

A summary of detected compounds is presented as Table 2.4.2. No VOCs, SVOCs, PCBs, pesticides or herbicides were detected. Arsenic was detected at 66 ppm in excess of its TAGM 4046 value of 7.5 ppm and SB level of 4.9 ppm. Mercury was detected at a concentration equal to its TAGM 4046 value and SB of 0.1 ppm.

2.4.3 Recommendations

Based on the results of the samples collected at DRY-842 OHM recommends:

- No further action with regard to the groundwater in the vicinity of DRY-842, and
- Remove and dispose of the top six inches of sediment soil in the bottom of DRY-842 and collection of a confirmation soil sample for VOCs, SVOCs, PCBs and metals.

2.5 DRYWELL SITE 846

Bldg. 846 is a former surveillance inspection shop located in the northeastern portion of the Base in the former Weapons Storage Area (Figure 1). DRY-846 is located approximately 75 feet northeast of Bldg. 846 (Figure 8).). Benzo(a)pyrene, PCBs, and several metals have been detected in the drywell sediment at concentrations above NYSDEC criteria.

2.5.1 Groundwater Sampling

Groundwater sample D846GW01 was collected downgradient from DRY-846 for analysis of TCL VOCs, TCL SVOCs, total PCBs, and total and dissolved TAL metals. Groundwater was at a depth of 8.4 feet bgs. No odors or sheens were noted during sampling.

A summary of positive detections for the groundwater sample is provided in Table 2.5.1. The VOCs, acetone and MeCl₂, and the SVOC, BEHP, were detected at concentrations below TOGS 1.1.1 standards. Calcium and iron were the only metals detected above TOGS 1.1.1 standards. PCBs were not detected in the sample.

2.5.2 Sludge Sampling and Analytical Results

Sludge sample D846SL01 was collected from 0-6 inches below the base of DRY-846 for analysis of TCL VOCs, TCL SVOCs, PCBs, pesticides, herbicides, TPH, RCRA metals, and RCRA characteristics.

A summary of positive detections is provided in Table 2.5.2. No VOCs, PCBs or herbicides were detected. The SVOC BEHP was reported at a concentration below its TAGM 4046 value. The pesticides 4,4'-DDD and 4.4'-DDT were reported at concentrations of 0.13 and 0.082 ppm, respectively. Barium was detected at a concentration of 210 ppm in excess of its SB level of 71 ppm, but below its TAGM 4046 value of 300 ppm. Barium (210 ppm), cadmium (13 ppm), chromium (150 ppm), mercury (0.49 ppm), and lead (240 ppm) were all detected in excess of their respective SB levels and TAGM 4046 criteria. TPH was reported at 460 ppm.

2.5.3 Recommendations

Based on the results of the samples collected at DRY-846 OHM recommends:

- No further action with regard to the groundwater in the vicinity of DRY-846, and
- Remove and dispose of the top six inches of sediment soil in the bottom of DRY-846 and collection of a confirmation soil sample for VOCs, SVOCs, PCBs, and metals.

2.6 PERIMETER ROAD PCB PAD

The PCB Pad is located in the eastern portion of the Base and is accessed through Gate 14 (Figure 1). It was used as a storage area for transformers, light poles and miscellaneous electrical supplies. The area contains Equipment Storage Building 762 and the pad is constructed of concrete that is now cracked and in disrepair.

2.6.1 Surface Soil Sampling and Analytical Results

Surface soil samples PCB1SS01 to -08 were collected from 0-6 inches bgs along the perimeter of the PCB Pad for analysis of TCL VOCs, TCL SVOCs, PCBs, pesticides and TAL metals (Figure 9).

A summary of positive detections for the perimeter surface samples is provided in Table 2.6.1. Five VOCs, six SVOCs and four pesticides were detected at concentrations well below their respective TAGM 4046 criteria. No PCBs were detected. Arsenic was detected once at 4.9 ppm, equal to its SB level, but below its TAGM 4046 value of 7.5 ppm. Beryllium was detected in all eight samples (8/8) in excess of the TAGM 4046 value of 0.16 ppm, but below its SB level of 0.73 ppm. Chromium (7/8), copper (1/8), iron (8/8), nickel (5/8) were all detected in excess of their respective TAGM 4046 criteria, but below their respective SB levels. Selenium (8/8) was detected at concentrations exceeding its SB level of 0.346 ppm, but below its TAGM 4046 value of 2 ppm. Zinc (8/8) was detected five samples at concentrations above its TAGM 4046 value of 20 ppm, but below the SB level of 120 ppm. Three zinc detections (170 - 190 ppm) were above both the TAGM 4046 and SB level.

2.6.2 <u>Subsurface Soil Sampling and Analytical Results</u>

Geoprobe soil boring locations PCB1SB1 through -6 were each sampled from 0-1 foot and 1-2 feet bgs for analysis of TCL VOCs, TCL SVOCs, PCBs, pesticides and TAL metals (Figure 9).

A summary of positive detections for the soil boring samples is provided in Table 2.6.2. Eleven VOCs and three SVOCs were detected at concentrations well below their respective TAGM 4046 criteria. No PCBs or pesticides were detected. Arsenic was detected in two of 12 samples (2/12) at concentrations above its SB level of 4.9 ppm, but below its TAGM 4046 value of 7.5 ppm. Beryllium (12/12), chromium (3/12), iron (12/12), nickel (3/12), and zinc (12/12) were all detected at concentrations above their respective TAGM 4046 criteria, but below their respective SB levels. Selenium (8/12) was detected in excess of its SB level of 0.346 ppm, but below its TAGM 4046 value of 2 ppm.

2.6.3 Recommendations

Based on the results of the soil samples collected at the Perimeter Road PCB Pad, OHM recommends no further action at this site.

2.7 PANAMERICAN CONSULTANTS INC. SITE 7

PCI-7 is located on the eastern edge of the base (Figure 1). It is a wooded area that contained abandoned drums. Two of the drums found contained what appeared to be used motor oil.

2.7.1 Soil Sampling and Analytical Results

Soil samples were collected using Geoprobe soil samplers. Samples PCI7SB1A (0-2 feet bgs), -1B (17-19 feet bgs), and PCI7SB2A (0-2 feet bgs) were collected from the area that contained the large drum cluster. Samples PCI7SB3A (0-2 feet bgs), -3B (17-19 feet bgs), and PCI7SB4A (0-2 feet bgs) were collected from the area containing the small drum cluster. Sample PCI7SS5A (0-1 foot bgs) was collected from beneath a single drum found following the initial

site inspection (see Section 2.7.3). All soil samples were analyzed for TCL VOCs, TCL SVOCs, PCBs, and TAL metals. Sampling locations are shown on Figure 10.

A summary of positive detections for the subsurface soil samples is provided in Table 2.7.1. Three VOCs and 14 SVOCs were detected at concentrations well below their respective TAGM 4046 criteria. No PCBs were detected. Arsenic (3/7) and selenium (4/7) were detected at concentrations above their respective SB levels, but below their respective TAGM 4046 criteria. Beryllium (7/7), chromium (6/7), copper (2/7), iron (7/7), nickel (4/7) and zinc (6/7) were all detected in excess of their respective TAGM 4046 criteria, but below their respective SB levels. One zinc detection of 160 ppm was in excess of it TAGM 4046 value of 20 ppm and SB level of 120 ppm. Lead was detected in sample PCI7SB2A at a concentration of 380 ppm, which is less than the EPA screening criteria of 400 ppm, but above the SB level of 36 ppm. Potassium was detected in two samples at concentrations of 2,100 and 2,000 ppm, in excess of its SB level of 1993 ppm. Cadmium was detected in one sample at 1.3 ppm, in excess of its TAGM 4046 value of 1 ppm and SB level of 1.1 ppm.

2.7.2 Groundwater Sampling and Analytical Results

Groundwater sample PCI7GW01 was collected from boring location SB1 for analysis of TCL VOCs, TCL SVOCs, total PCBs and TAL metals. The top of groundwater was encountered at 17.5 feet bgs. No sheens or odors were noted during sampling.

A summary of positive detections for the groundwater samples is provided in Table 2.7.2. Methylene chloride was detected at a concentration of 0.1 ppm, well below the TOGS 1.1.1 groundwater standard of 5 ppm. No SVOCs or PCBs were detected. The only metal in excess of its TOGS 1.1.1 standard was iron at a concentration of 1.1 ppm.

2.7.3 Drum Sampling and Analytical Results

Two of the drums recovered from PCI-7 contained what appeared to be used oil. One was discovered under some brush after the initial survey, during the soil and groundwater investigation. This drum, like the other, was in good condition with no sign of leaking. Upon discovery of this additional drum, a thorough visual survey of the area was conducted to verify that no other drums were present. No other drums were found. Waste characterization samples PCI-7-DM1 and -DM2 were collected for analysis of PCBs, flash point and total organic halides (TOX). No PCBs were detected in the oil samples and neither sample was determined to be flammable based on the flash test. TOX was detected at concentrations of 265 ppm and 595 ppm.

2.7.4 Recommendations

Based on the results of the samples collected at PCI Site 7 OHM recommends:

- No further action with respect to both the soil and groundwater in the vicinity of PCI-7, and
- Dispose of the oil off site as used motor oil.

2.8 THE LANZ PIT

The Lanz Borrow Pit is located adjacent to the Base on Rickmeyer Road. It is being considered as the borrow source for clean fill required during Phase II.

2.8.1 Soil Sampling and Analytical Results

One soil sample was collected for analysis of TCL VOCs, TCL SVOCs, PCBs, pesticides, and RCRA metals to verify that the material is acceptable for use as backfill at the site.

A summary of positive detections for the borrow sample is provided in Table 2.8.1. No . VOCs, SVOCs, PCBs or pesticides were detected. Arsenic (1.5 ppm), barium (10 ppm), chromium (5 ppm) and lead (1.5 ppm) were all detected below their respective TAGM 4046 criteria and SB levels. These analytical results indicate that this borrow material is acceptable for use at the site.

TABLE 1.0.1 - SAMPLING MATRIX

		REMARKS	Assess sediment in northwest vault	Assess sediment in northwest vault	Assess sediment in northwest vault	Assess sediment in southeast vault	Assess lead in soil around location ISPSS-12	QA/QC - matrix spike for surface soil	QA/QC - matrix spike duplicate for surface soil	Assess lead in soil around location ISPSS-12	QA/QC - field duplicate for surface soil	Water sample from Bldg. 211 vault	Groundwater sample downgradient of DRY-100																			
END	DEPTH	(ft bgs)	0.5	2.5	4.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	9.0	6.0	9.0	9.0	9.0	9.0	0.5	9.0	9.0	0.5	16.0
START	DEPTH	(ft bgs)	0.0	2.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6
	SAMPLE	METHOD	HA	НА	НА	HA	DS	. SO	DS	DS	DS	DS	ΓA	SP																		
	SAMPLE	TYPE	9	Э	9	၅	ტ	9	ဗ				တ	9	ტ	ტ	ဟ	Ŋ	ဟ	Ŋ	Ŋ	ဟ	Ŋ	G	ŋ		ပ	ტ	ŋ	ഗ	9	9
	SAMPLE	MATRIX	SD	SD	SD	SD	SO	SO	OS	SO	SO	WA	GW																			
	SAMPLE	DATE	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/90/90
	SAMPLE	NUMBER	AI90SD1A	AI90SD1B	Al90SD1C	AI90SD2A	Al90SS01	Al90SS02	AI90SS03	Al90SS04	A190SS05	A190SS06	A190SS07	AI90SS08	Al90SS09	AI90SS10	Al90SS11	Al90SS12	AI90SS13	AI90SS14	AI90SS15	AI90SS16	Al90SS17	AI90SS18	AI90SS19	A190SS20	AI90SS20MS	Al90SS20SD	Al90SS21	AI90SSFD	B211WA01	D100GW01
	SAMPLE	SITE	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90	Bldg. 211	DRY-100

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TABLE 1.0.1 - SAMPLING MATRIX

) REMARKS	Groundwater sample downgradient of DRY-100	QA/QC - blank wipe sample	Wipe sample from generator room floor	QA/QC - groundwater equipment rinsate	Groundwater sample downgradient of DRY-842	QA/QC - groundwater matrix spike	QA/QC - groundwater matrix spike duplicate	QA/QC - groundwater field duplicate	Sediment sample form bottom of DRY-842	Groundwater sample downgradient of DRY-846	Sludge sample from bottom of DRY-846	Borrow source characterization sample	Soil sample from beneath PCB pad	Soil sample from perimeter of PCB Pad	QA/QC - surface soil field duplicate	QA/QC - surface soil matrix spike														
END	DEPTH	(ft bgs)	16.0	1	0.0	0.0	0.0	0.0	1	19.9	19.9	19.9	19.9	7.7	12.5	8.2	1.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0	1.0	1.0
START	DEPTH	(ft bgs)	12.6	:	0.0	0.0	0.0	0.0	:	6.6	6.6	9.9	9.6	7.2	8.4	7.7	0.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.5	0.5	0.5
	SAMPLE	METHOD	SP	ST	WP	WP	WP	WP		WL	WL	ML ML	ML ML	HA	ŽΙ	HA	SO	MC	SO	DS	DS											
	SAMPLE	TYPE	G	9	9	Э	Э	Э	Э	9	Э	9	9	ဗ	ტ	Э	ტ	Э	Э	9	Э	9	9	G	9	9	ტ	9	9	9	Э	g
	SAMPLE	MATRIX	GW	WP	WP	WP	WP	WP	ΓM	GW	GW	GW	GW	SO	GW	SL	SO	SO	SO	SO	SO	SO	OS	SO	SO	OS	SO	SO	SO	SO	SO	SO
	SAMPLE	DATE	00/90/90	00/80/90	00/80/90	00/80/90	00/80/90	00/80/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/60/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90
	SAMPLE	NUMBER	D100GW02	D100WB01	D100WP01	D100WP02	D100WP03	D100WP04	D842ER01	D842GW01	D842GW01MS	D842GW01SD	D842GW01FD	D842SD01	D846GW01	D846SL01	LPITSS01	PCB1SB1A	PCB1SB1B	PCB1SB2A	PCB1SB2B	PCB1SB3A	PCB1SB3B	PCB1SB4A	PCB1SB4B	PCB1SB5A	PCB1SB5B	PCB1SB6A	PCB1SB6B	PCB1SS01	PCB1SS01FD	PCB1SS01MS
	SAMPLE	SITE	DRY-100	DRY-100	DRY-100	DRY-100	DRY-100	DRY-100	DRY-842	DRY-842	DRY-842	DRY-842	DRY-842	DRY-842	DRY-846	DRY-846	Lanz Pit	PCB Pad	PCB Pad	PCB Pad												

TABLE 1.0.1 - SAMPLING MATRIX

REMARKS	QA/QC - surface soil matrix spike duplicate	Soil sample from perimeter of PCB Pad	Drum sample for waste characterization	Drum sample for waste characterization	QA/QC - Geoprobe soil equipment rinsate	Groundwater sample from beneath drum cluster	Subsurface soil sample	Subsurface soil sample	Subsurface soil sample	QA/QC - Geoprobe soil field duplicate	QA/QC - Geoprobe soil matrix spike	QA/QC - Geoprobe soil matrix spike duplicate	Subsurface soil sample	Subsurface soil sample	Subsurface soil sample	Subsurface soil sample	QA/QC - trip blank	QA/QC - trip blank	QA/QC - trip blank	Geoprobe screen point groundwater sampler	laboratory supplied sample	temporary PVC well point	Geoproble macro-core soil sampler							
END DEPTH (ft bgs)		1.0	1.2	1.0	6.0	0.5		1.0				21.0	2.0	19.0	2.0	2.0	2.0		2.0	19.0	2.0	1.0	<u></u>		-	SP = G	S	TW = te	MC = O	
START DEPTH (ft bgs)	0.5	0.5	0.7	0.5	0.4	0.0	0.0	0.5	ì	;	1	17.5	0.0	17.0	0.0	0.0	0.0	0.0	0.0	17.0	0.0	0.0		-		ladle	soil	water	sludge	
SAMPLE	SO	DS	SO	SO	SO	DS	DS	DS	DT	DT	SS	WP	MC	MC	MC	MC	MC	MC	MC	MC	HA	TR	ST	ST	ST	= Y	= OS	= WW	SF=	
SAMPLE	9	9	9	9	9	၅	ტ	ဟ ့	Э	Э	ტ	၅	9		ტ	9			G	9	9	9	Э	9	9	a)		vater	dooss	
SAMPLE	SO	SO	SO	SO	OS ·	SO	SO	SO	OIL	OIL	ΜN	GW	SO	SO	SO	SO	SO	SO	SO	SO	SO	OS	ΓM	MΠ	MΠ	grab sample	hand auger	laboratory water	disposable scoop	oil
SAMPLE	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	05/23/00	00/50/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/20/90	00/80/90	00/80/90	00/90/90	00/20/90	00/80/90	= 9	= HA	= M =	DS=	= TIO
SAMPLE	PCB1SS01SD	PCB1SS02	PCB1SS03	PCB1SS04	PCB1SS05	PCB1SS06	PCB1SS07	PCB1SS08	PCI-7-DM1	PCI-7-DM2	PCI7ER01	PCI7GW01	PCI7SB1A	PCI7SB1B	PCI7SB2A	PCI7SB2AFD	PCI7SB2AMS	PCI7SB2ASD	PCI7SB3A	PCI7SB3B	PCI7SB4A	PCI7SS5A	TB060600	TB060700	TB060800		sediment	groundwater	trowel	wipe sample
SAMPLE	PCB Pad	PCB Pad	PCB Pad	PCB Pad	PCB Pad	PCB Pad	PCB Pad	PCB Pad	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7	QA/QC	QA/QC	QA/QC	NOTES:	SD=	=M9	TR=	WP =

TABLE 1.0.2 - ANALYTICAL MATRIX

	_		_									_								_	_									_			_	_			
TOX (9020B)																																					
FLASH POINT (1010)																																					
RCRA				×																																	
LEAD (6010B)					×	×	×	×	×	×	×	×	×	×	X	×	×	X	X	×	X	×	×	×	×	×	×	×									
RCRA METALS (6010B/7000)	×	×	×	×																									×								
DISS TAL METALS (6010B/7000)																														×	X						×
TOTAL TAL METALS (6010B/7000)																														×	×						×
TPH (8015M)				×																																	
HERB (8151A)	×	×	X	×																																	
PEST (8081A)	×	×	×	×																																	
DISS. PCBs (8082)																														×	×						
TOTAL PCBs (8082)	×	×	×	×																										×	×	X	×	×	×	×	×
TCL SVOCs (8270C)	×	×	×	×																										×	×						×
TCL VOCs (8260B)	×	×	×	×																									×	×	×						×
SAMPLE	AI90SD1A	AI90SD1B	AI90SD1C	AI90SD2A	AI90SS01	AI90SS02	A190SS03	AI90SS04	A190SS05	A190SS06	Al90SS07	A190SS08	Al90SS09	Al90SS10	Al90SS11	Al90SS12	AI90SS13	AI90SS14	Al90SS15	Al90SS16	Af90SS17	Al90SS18	A190SS19	A190SS20	AI90SS20MS	AI90SS20SD	AI90SS21	AI90SSFD	B211WA01	D100GW01	D100GW02	D100WB01	D100WP01	D100WP02	D100WP03	D100WP04	D842ER01
SITE	AOI-90		AOI-90	AOI-90	AOI-90	AOI-90		AOI-90	4OI-90	AOI-90	AOI-90	AOI-90	AOI-90	AOI-90		AOI-90	Bldg. 211	DRY-100	DRY-100	DRY-100	DRY-100	DRY-100	DRY-100	Г	DRY-842												

TABLE 1.0.2 - ANALYTICAL MATRIX

		r					_				_		_	_				_				_															_
TOX (9020B)																															×	×					
FLASH POINT (1010)																															×	×					
RCRA				×		×																															
LEAD (6010B)																																					
DISS TAL RCRA METALS METALS (6010B/7000) (6010B/7000)				×		×	×																														1
DISS TAL METALS (6010B/7000)	×	×	×		×																												×	×			
TOTAL TAL METALS (6010B/7000)	×	×	×		×			×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×			×	×	×	×	×
TPH (8015M)	-			×		×										-																					
HERB (8151A)	-			×		×																															
PEST (8081A)				×		X	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×			×				
DISS. PCBs (8082)																																					
TOTAL PCBs (8082)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
TCL SVOCs (8270C)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	X	×	×	×	×	×	×	×	×	×	×	×	×			×	×	×	×	×
TCL VOCs (8260B)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×			×	×	×	×	×
SAMPLE	D842GW01	D842GW01MS	D842GW01SD	D842SD01	D846GW01	D846SL01	LPITSS01	PCB1SB1A	PCB1SB1B	PCB1SB2A	PCB1SB2B	PCB1SB3A	PCB1SB3B	PCB1SB4A	PCB1SB4B	PCB1SB5A	PCB1SB5B	PCB1SB6A	PCB1SB6B	PCB1SS01	PCB1SS01FD	PCB1SS01MS	PCB1SS01SD	PCB1SS02	PCB1SS03	PCB1SS04	PCB1SS05	PCB1SS06	PCB1SS07	PCB1SS08	PCI-7-DM1	PCI-7-DM2	PCI7ER01	PCI7GW01	PCI7SB1A	PCI7SB1B	PCI7SB2A
SITE	_	DRY-842 [DRY-842 [DRY-842 [DRY-846 [Lanz Pit	PCB Pad		PCB Pad		PCB Pad	PCB Pad	PCB Pad	PCB Pad		PCB Pad	PCB Pad		PCB Pad				PCB Pad		PCB Pad	PCI-7	PCI-7		PCI-7	PCI-7	PCI-7	PCI-7				

TABLE 1.0.2 - ANALYTICAL MATRIX

		<u>~</u>	Γ	_				Г				
		(9020B)										
FLASH	POINT											
	RCRA	CHAR										
	LEAD	(6010B)										
RCRA	METALS	(6010B/7000)										
DISS TAL	METALS	(6010B/7000)										
TOTAL TAL DISS TAL	METALS	(8081A) (8151A) (8015M) (6010B/7000) (6010B/7000) (6010B/7000) (6010B) CHAR	×	×	×	×	×	×	×			
	TPH	(8015M)										
	PEST HERB	(8151A)										
	PEST	(8081A)										
DISS	PCBs	(8082)										
TOTAL	PCBs	(8082)	×	×	×	×	×	×	×			
	SVOCs	(8270C)	×	×	×	×	×	×	×			
TCL	VOCs	(8260B)	×	X	×	×	×	×	×	×	×	×
	SAMPLE	NUMBER	PCI7SB2AFD	PCI7SB2AMS	PCI7SB2ASD	PCI7SB3A	PCI7SB3B	PCI7SB4A	PCI7SS5A	TB060600	TB060700	TB060800
		SITE	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7	PCI-7			

TCL VOCs = Target Compound List volatile organic compounds by EPA Method SW-846 8260B TCL SVOCs = Target Compound List semivolatile organic compounds by EPA Method SW-846 8270C

PCBs = Polychlorinated biphenyls by EPA Method SW-846 8082

PEST = Pesticides by EPA Method SW-846 8081A

HERB = Herbicides by EPA Method SW-846 8151A TAL Metals = Target Analyte List metals by EPA Method SW-846 6010B/7000

RCRA Metals = Resource Conservation and Recovery Act Metals by EPA Method 6010B/7000

RCRA Char = RCRA characteristics - corrossivity (Method 9045C), ignitability (Method 1030), reactivity (Method SW-846 Chap. 7 sec. 7.3.3.2 & 7.3.4.2)

TOX = Total organic halides by Method SW-846 9020B

DISS = dissolved

Table 2.1.1 - AOI-90 Surface Soil Sampling Results

		Sample =>	A190SS01	A190SS02	A190SS03	A190SS04	A190SS05	A190SS06	A190SS07
		Matrix =>	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		>= Depth	0 - 0.5 ft	0-0.5 ft	0-0.5 ft	0 - 0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
Metals (mg/kg)	EPA Level *	Background					三世		
Lead	400	36	8.6 J	16	48	4.1 J	14	21	13

		Sample =>	A190SS08	A190SS09	A190SS10	A190SS11	A190SS12	A190SS13	A190SS14
		Matrix =>	Soil	Soil	Soil	Soil	Soil	Soil	Soil
-		Depth =>	0 - 0.5 ft	1950-0	0 - 0.5 ft	0-0.5 ft	1) S'O - 0	0-0.5 ft	0-0.5 ft
Metals (mg/kg)	EPA Level *	Background		County Sec.					
Lead	400	36	3.9 J	16	16	15	12	21	39

		Sample =>	A190SS15	A190SS16	A190SS17	A190SS18	A190SS19	A190SS20	Al90SS21
		Matrix =>	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		<= udeq	0-0.5 ft	1) S'0 - 0	0-0.5 ft				
Metals (mg/kg)	EPA Level *	Background							
Lead	400	98	22	23	25	48	6.2 J	21	6.6 J

mg/kg = milligrams per kilogram
Backgound - Base-specific background value (Draft RI Law, 1995)

* EPA screening criterion for lead in soil (EPA OSWER #9355.4-12, July 1994)

Table 2.1.2 - AOI-90 Vault Sampling Results Summary of Positive Detections

	Sample =>	AI90SD1A	AI90SD1B	AI90SD1C	AI90SD2A
	Matrix =>	Sediment	Sediment	Sediment	Sediment
	Depth =>	0 - 0.5 ft	2 - 2.5 ft	4 - 4.5 ft	0 - 0.5 ft
VOCs (ug/kg)	TAGM 4046			7.4	
None detected	n/a				
SVOCs (ug/kg)	TAGM 4046				
Benzo(a)anthracene	224				480
Benzo(a)pyrene	61				420
Benzo(b)fluoranthene	1100				430
Benzo(k)fluoranthene	1100				410
Chrysene	400				460
Fluoranthene	50000				980
Pheanthrene	50000				810
Pyrene	50000				940
RCRA Metals (mg/kg)	TAGM 4046 (SB)	1,1			
Arsenic	7.5 (4.9)	2.5	2.1	2.2	1.1
Barium	300 (71)	10	10	10	
Chromium	10 (22.6)	6	5	5	4
Lead *	4,00 (36)	3.3	3.2	2.6	360
PCBs (mg/kg)	TAGM 4046	10.53	216	SERVICE.	
None detected	1		-		
TPH (mg/kg)	TAGM 4046	•		i di produce	
Diesel	n/a	n/a	n/a	n/a	95
Pesticides (mg/kg)	TAGM 4046				
4,4-DDE	4.4		0.0065		
4,4-DDT	2.5		0.034		0.0038 J
y-Chlordane	14.0				.0019 J
Herbicides (ug/kg)	TAGM 4046	140000000000000000000000000000000000000	Contract the second	TO POST OF	CONTROL CA
None detected	n/a				

ug/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

(SB) Site Background - Base-specific background values (Draft RI Law, 1995)

TAGM 4046 = New York State Soil Screening Criteria

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^{*} EPA screening criterion for lead in soil (EPA OSWER #9355.4-12, July 1994)

Table 2.3.1 - DRY-100 Floor Wipe Sampling Results

	Sample =>	D100WP01	D100WP02	D100WP03	D100WP04
	Matrix =>	Wipe	Wipe	Wipe	Wipe
	Depth =>	0 ft	0 ft	0 ft	0 ft
	EPA Action	1.72		T	
PCBs (ug/100 cm ²)	Level *	F-9-585			
PCB-1260	10	22.4	3.68	12.8	4.32

Table 2.3.2 - DRY-100 Groundwater Sampling Results Summary of Positive Detections

	Sample =>	D100GW01	D100GW01	D100GW02	D100GW02
	Matrix =>	Water	Water	Water	Water
	Remarks =>	Unfiltered	Filtered	Unfiltered	Filtered
VOCo (ug/L)	TOGS 1.1.1	Offilitered	Filtered	Offilitered	riilered
VOCs (ug/L)		0.44	,		
Chloroform	7	0.14 J	n/a	0.3 J	n/a
Methylene chloride	5		n/a	0.12 J	n/a
Trichloroethene	5	0.21 J	n/a	0.18 J	n/a
SVOCs (ug/L)	TOGS 1.1.1	40.00			
Bis(2)ethylhexyl phthalate	224	1.4 J	n/a	1.1 J	n/a
TAL Metals (mg/L)	TOGS 1.1.1	14 July 197,	green green		
Aluminum	n/a	0.37		1	
Barium	1	0.024	0.021	0.016	0.012
Berrylium	0.003	0.00035 J			
Calcium	0.01	29	29	37	36
Chromium	0.05	0.0012 J	0.0013 J	0.0034 J	
Copper	0.2	0.0065 J		0.0022 J	
Iron	0.3	0.7	0.011 J	1.5	0.0069 J
Potassium	n/a	1.2	0.97	1.4	1.1
Magnesium	35	4.7	4.6	5.2	4.9
Manganese	0.3	0.2	0.19	0.08	0.017
Sodium	20	5.1	5	4.2	4.3
Nickel	n/a	0.0023 J	O.0019 J	0.0028 J	
Vanadium	n/a	0.0012 J		0.0022 J	
Zinc	0.3	0.0058 J	0.0048 J	0.0099 J	0.0033 J
PCBs (ug/L)	TOGS 1.1.1			-11	
None detected	0.1		-		

ug/100 cm2 = micrograms per 100 square centimeters

* USEPA Cleanup Level for indoor residential surfaces (40 CFR 761.125 (b)(1))

ug/L - micrograms per liter

mg/L = milligrams per liter

TOGS 1.1.1 = New York State Class GA Groundwater Standards

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Table 2.4.1 - DRY-842 Groundwater Sampling Results Summary of Positive Detections

	Sample =>	D842GW01	D842GW01
	Matrix =>	Water	Water
	Remarks =>	Unfiltered	Filtered
VOCs (ug/L)	TOGS 1.1.1	7.3	
Acetone	09	1.6 J	n/a
Methylene chloride	9	0.44	n/a
SVOCs (ug/L)	TOGS 1.1.1		
Bis(2)ethylhexyl phthalate	224	4.4 J	n/a
TAL Metals (mg/L)	TOGS 1.1.1		
Aluminum	n/a	1.4	
Barium	l	0.015	0.0065
Beryllium	0.003	0.00011 J	
Calcium	0.01	38	98
Chromium	0.05	0.003 J	0.0016 J
Copper	0.2	0.0027 J	
Iron	6.0	2.2	0.0051 J
Mercury	0.002	0.00012 J	
Potassium	n/a	1.7	86.0
Magnesium	32	5.3	4.7
Manganese	6.0	0.17	0.0049
Sodium	20	2.3	2.3
Nickel	n/a	0.002 J	
Vanadium	n/a	0.0027 J	
Zinc	0.3	0.0076 J	0.0033 J
PCBs (ug/L)	TOGS 1.1.1		A STANDARD STANDARDS
None detected	0.1		-

ug/L - micrograms per liter

mg/L = milligrams per liter TOGS 1.1.1 = New York State Class GA Groundwater Standards

Table 2.4.2 - DRY-842 Sediment Sampling Results Summary of Positive Detections

	Sample =>	D842SD01
	Matrix =>	Sediment
	Depth =>	0 - 0.5 ft
VOCs (ug/kg)	TAGM 4046	
None detected	n/a	
SVOCs (ug/kg)	TAGM 4046	
None detected	n/a	!
RCRA Metals (mg/kg)	TAGM (SB)	
Arsenic	7.5 (4.9)	99
Bạrium	300 (71)	40
Chromium	10 (22.6)	13
Mercury	0.1 (0.1)	0.1
Lead *	400 (36)	14
PCBs (mg/kg)	TAGM 4046	
None detected	l	
TPH (mg/kg)	TAGM 4046	
Diesel	n/a	240
Pesticides (mg/kg)	TAGM 4046	
None detected	n/a	
Herbicides (ug/kg)	TAGM 4046	
None detected	n/a	

Notes:

ug/kg = micrograms per kilogram

mg/kg = milligram per kilogram

(SB) Site Background - Base-specific background values (Draft RI Law, 1995)

TAGM 4046 = New York State Soil Screening Criteria
* EPA screening criterion for lead in soil (EPA OSWER #9355.4-12, July 1994)

Table 2.5.1 - DRY-846 Groundwater Sampling Results Summary of Positive Detections

	Sample =>	D846GW01 D846GW01	D846GW01
	Matrix =>	Water	Water
	Remarks =>	Unfiltered	Filtered
VOCs (ug/L)	TOGS 1.1.1	1.00	
Acetone	90	0.14 J	n/a
Methylene chloride	5	0.1 J	n/a
SVOCs (ug/L)	TOGS 1.1.1	18	
Bis(2)ethylhexyl phthalate	224	5.4 J	n/a
TAL Metals (mg/L)	TOGS 1.1.1	1000	
Aluminum	n/a	0.28	
Barium	1	0.0076	9900'0
Calcium	0.01	09	09
Copper	0.2	0.0015 J	
Iron	0.3	0.37	C 6500.0
Potassium	n/a	1.5	1.4
Magnesium	35	1.4	1.3
Manganese	0.3	0.027	0.0056
Sodium	20	1	1
Vanadium	n/a	0.0008	*
Zinc	6.0	0.0045 J	0.0027 J
PCBs (ug/L)	T0GS 1.1.1	- (EM)	"这一"是数据的
None detected	0.1		

ug/L - micrograms per liter

mg/L = milligrams per liter TOGS 1.1.1 = New York State Class GA Groundwater Standards

Table 2.5.2 - DRY-846 Sludge Sampling Results Summary of Positive Detections

	Sample =>	D846SL01
	Matrix =>	Sludge
	>= Depth =>	0 - 0.5 ft
VOCs (ug/kg)	TAGM 4046	
None detected	n/a	
SVOCs (ug/kg)	TAGM 4046	
Bis(2)ethylhexyl phthalate	20000	18000
RCRA Metals (mg/kg)	TAGM 4046 (SB)	
Barium	300 (71)	210
Cadmium	1 (1.1)	13
Chromium	10 (22.6)	150
Mercury	0.1 (0.1)	0.49
Lead	200 (36)	240
PCBs (mg/kg)	TAGM 4046	
None detected	n/a	-
TPH (mg/kg)	TAGM 4046	
Diesel	n/a	460
Pesticides (mg/kg)	TAGM 4046	
4,4-DDD	2.9	0.13
4,4-DDT	2.1	0.082
Herbicides (ug/kg)	TAGM 4046	4-14
None detected	n/a	

ug/kg = micrograms per kilogram

mg/kg = milligram per kilogram

(SB) Site Background - Base-specific background values (Draft RI Law, 1995)

TAGM 4046 = New York State Soil Screening Criteria
* EPA screening criterion for lead in soil (EPA OSWER #9355.4-12, July 1994)

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Table 2.6.1 - The PCB Pad Surface Soil Sampling Results **Summary of Postive Detections**

	Sample =>	PCB1SS01	PCB1SS02		PCB1SS04	PCB1SS05	PCB1SS06	PCB1SS07	PCB1SS08
	Matrix =>	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
	Depth =>	0.5 - 1 ft	0.5 - 1 ft	0.7 - 1.2 ft	0.5 - 1 ft	0.4 - 0.9 ft	0 - 0.5 ft	0 - 0.5 ft	0.5 - 1 ft
VOCs (mg/kg)	TAGM 4046			100			1.00		
Acetone	0.2		0.0029 J	0.0022 J	0.004 J	0.0031 J	0.0023 J	0.0026 J	0.004 J
Methylene chloride	0.1	0.00059 J		0.00071 J	0.00093 J		0.00064 J		0.00089 J
Tetrachloroethene	1,4			0.0017 J	0.0018 J				
Toluene	1.5			0.00096 J					
Trichloroethene	0.7			0.00068 J					
SVOCs (mg/kg)	TAGM 4046						3.55		100 B
Benzo(b)fluoranthene	1.1		0.044 J	**-	0.044 J				
Bis(2)ethylhexyl phthalate	50			0.058 J	0.038 J			0.04 J	
Fluoranthene	50	0.055 J	0.077 J	0.038 J	0.038 J				
Phenanthrene	50	0.056 J	0.084 J						
Phenol	0.03							0.056 J	
Pyrene	50	0.049 J	0.066 J	0.037 J	0.041 J				
TAL Metals (mg/kg)	TAGM 4046 (SB)								1.0
Aluminum	(18306)	11000	11000	8800	9100	9300	7900	9300	9700
Arsenic	7.5 (4.9)	4.3 J	4.3 J	4.3 J	4.4 J	4.4 J	4.2 J	4.6 J	4.9 J
Barium	300 (71)	26	31	38	28	47	31	35	32
Beryllium	0.16 (0.73)	0.5 J	0.45 J	0.42 J	0.43 J	0.49 J	0.42 J	0.46 J	0.51 J
Calcium	(23821)	850	1200	30000	3800	720	1100	1000	3400
Cadmium	1 (1.1)			0.34 J	0.04 J	0.2 J	0.24 J	0.17 J	
Chromium	10 (22.6)	11 J	11 J	11 J	9.9 J	10 J	17 J	27	10 J
Cobalt	30 (19)	5.3 J	5.1 J	4.4 J	4.7 J	4.7 J	4.3 J	5 J	5.5 J
Copper	25 (43)	19	17	21	20	21	22	23	25
Iron	2000 (43750)	18000	18000	16000	17000	18000	17000	18000	20000
Magnesium	(7175)	3300	2700	3100	2600	2900	2600	2700	3200
Manganese	(2106)	400	370	460	500	290	290	390	780
Mercury	0.1 (0.1)		0.043 J		0.028 J				
Potassium	(1993)	1600	1100	1300	1300	1500	1200	1300	1300
Sodium	(259)	52	59	88	60	53	49	66	61
Nickel	13 (46)	14	13	12	12	13	11	13	14
Lead	400 (36)	5 J	6.9 J	16	8.3 J	7.8 J	12	12	6.7 J
Selenium	2 (0.346)	0.8 J	0.9 J	0.7 J	0.7 J	0.8 J	0.6 J	0.7 J	0.7 J
Vanadium	150 (36)	16	16	15	15	17	15	16	16
Zinc	20 (120)	42	61	170	180	190	61	50	97
PCBs (mg/kg)	TAGM 4046	rojasijas ("Jas	1000	44.00	and the	Gill Clystal in Fig.	12 Sept. 15 (2)	New York	Charles Marine
None detected	1								
Pesticides (mg/kg)	TAGM 4046	a parte is the		reality and the	and the first of the first	441.J. (47)	(A A Police A A		
4,4'-DDD	2.9				L e800.0				
4,4'-DDE	2.1		0.0015 J				***		
4,4'-DDT	2.1		0.0031 J		0.0012 J				
gamma-Chlordane	0.54			0.0013					

ug/kg = micrograms per kilogram

July 17, 2000 917549\P1Rpt

mg/kg = milligram per kilogram

(SB) Site Background - Base-specific background values (Draft RI Law, 1995)

TAGM 4046 = New York State Soil Screening Criteria

* EPA screening criterion for lead in soil (EPA OSWER #9355.4-12, July 1994)

Table 2.6.2 - The PCB Pad Soil Boring Sampling Results Summary of Positive Detections

	Sample =>	PCB1SB1A PCB1SB1B	PCB1SB1B	PCB1SB2A	PCB1SB2B	PCB1SB2A PCB1SB2B PCB1SB3A PCB1SB3B PCB1SB4A PCB1SB4B PCB1SB5A PCB1SB5B PCB1SB6A PCB1SB6B	PCB1SB3B	PCB1SB4A	PCB1SB4B	PCB1SB5A	PCB1SB5B	PCB1SB6A	PCB1SB6B
	Matrix =>	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
	Depth =>	1) I U	1 - 2 ft	0 - 1 ft	1 - 2 ft	0 - 1 ft	1-2ft	0 - 1 ft	1-2ft	0-1ft	1-2ft	0-1#	1-2ft
VOCs (mg/kg)	TAGM 4046			Proprieta	The second second second				SPACE SAME				
2-Butanone	0.3	0.0016 J						0.00087 J	0.0021 J	-	1	0.0019 J	
2-Hexanone	n/a		-			:		-	0.0024 J	-	1	1	
4-Methyl-2-pentanone	1					***	-	-	0.0019 J	-	1		1
Acetone	0.2	0.013	0.0042 J	0.0021 J	0.002 J	0.0035 J	0.0029 J	L 6900.0	0.0058 J	0.0078 J	0.0051 J	0.014	0.0037 J
Chlorobenzene	1.7		1	-	1	1	1	1	0.0008		1	1	1
Ethylbenzene	5.5	**	1	1	-	1	1	1	0.00084 J		1		
Methytene chloride	0.1		0.00078 J	1		1	1	0.00057 J	1		;		1
Styrene	n/a		1	1	1	1	1	-	0.0013 J	-	T	1	Π
Tetrachloroethene	1.4	-	1	1	-	0.0011 J	-	i	0.00059 J		0.00086 J		1
Toluene	1.5	0.00058 J	0.00078 J	0.0011 J	1	0.001	0.00072 J	0.00094 J	0.00058 J	0.00074 J	-	0.00069 J	0.0014 J
Xylenes (total)	1.2					1	1	i	0.0021 J	-	1	0.0016 J	
SVOCs (mg/kg)	TAGM 4046				H140004-19								*****
Bis(2)ethylhexyl phthalate	20	-	1	1	-	:	0.054 J	1	-	-	Ī	1	1
Fluoranthene	92		0.061 J		-	!	1	1	:	+	ī	1	
Pyrene	20	:	0.056 J	i	1	1	1	I		-	1	1	-
TAL Metals (mg/kg)	TAGM 4046 (SB)												
Aluminum	(18306)	0068	0089	8800	8700	8600	8100	8300	11000	0006	9700	8500	7900
Arsenic	7.5 (4.9)	4.1 J	2.6 J	4.2 J	L 4	U 4.4	3.6 J	4.1 J	5	4.4 J	5.5 J	3.8 J	3.7 J
Barium	300 (71)	24	17	24	25	27	24	24	29	25	26	22	22
Beryllium	0.16 (0.73)	0.46 J	0.26 J	0.46 J	0.46 J	0.47 J	0.47 J	0.45 J	0.55 J	0.46 J	0.49 J	0.43	0.41
Calcium	(23821)	940	1900	260	1400	4600	1000	510	240	1700	260	009	570
Cadmium	1 (1.1)			1		-		-		0.14 J	1	ł	1
Chromium	10 (22.6)	10 J	6.7 J	9.4 J	9.6 J	9.2 J	f 6	9.1 J	12	9.5 J	10 J	8.8 J	8.4 J
Cobalt	30 (19)	5 J	3.4 J	5 J	5.1 J	4.9 J	4.5 J	4.9 J	7.4 J	4.8 J	5.3 J	4.5 J	4.4 J
Copper		20	11	20	19	19	18	19	20	20	19	17	18
Iron	2000 (43750)	18000	11000	18000	17000	17000	16000	17000	24000	18000	18000	16000	16000
Magnesium	(7175)	2700	1800	2700	2700	2700	2500	2600	3000	2800	2900	2600	2400
Manganese	(2106)	460	290	460	420	490	410	420	220	460	430	410	400
Mercury	0.1 (0.1)	-	0.03 J	:	;	1	1	T				0.029 J	-
Potassium	(1993)	1400	066	1500	1600	1700	1400	1500	1400	1500	1600	1300	1300
Sodium	(259)	53	44	99	, 65	81	77	63	61	23	53	25	56
Nickel	13 (46)	12	10	12	12	12	11	12	16	12	14	13	11
Lead	200 (36)	4.7 J	2.7 J	4 ∪	L 4	4.2 J	3.6 J	3.8 J	4.3 J	3.9 J	4 J	3.6 J	4.1 J
Selenium	2 (0.346)	0.3 J		0.3 J	0.3 J	0.4 J	0.4 J	0.4 J	0.7 J	0.7 J	0.8 J	0.6 J	0.6 J
Vanadium	150 (36)	14	10	15	14	4	14	13	18	15	15	13	13
Zinc	20 (120)	36	24	34	36	41	34	40	42	48	47	44	34
PCBs (mg/kg)	TAGM 4046		SAMPLE SAME										
None detected	1		***	-		-	-	-	+	-	-	1	1
Pesticides (mg/kg)	TAGM 4046	を とうない とうかい		CALL STANSON									
None detected	n/a	1	1	1	T	1	T	1	-	:	1	1	:

ug/kg = micrograms per kilogram
mg/kg = milligram per kilogram
(SB) Site Background - Base-specific background values (Draft RI Law, 1995)
TAGM 4046 = New York State Soil Screening Criteria
• EPA screening criterion for lead in soil (EPA OSWER #9355.4-12, July 1994)

Table 2.7.1 - PCI-7 Soil Sampling Results **Summary of Positive Detections**

	Sample =>	PCI7SB1A	PCI7SB1B	PCI7SB2A	PCI7SB3A	PCI7SB3B	PCI7SB4A	PCI7SS5A
	Matrix =>	Soil	Soil	Soil	Soil	Soil	Soil	Soil
_	Depth =>	0 - 2 ft	17 - 19 ft	0 - 2 ft	0 - 2 ft	17 - 19 ft	0 - 2 ft	0 - 1 ft
VOCs (mg/kg)	TAGM 4046			1000				
Acetone	0.2	0.0027 J	0.0047 J	0.0033 J	0.0046 J	0.0037 J	0.0033 J	0.0081 J
Methylene chloride	0.1		0.00072 J			0.00088 J		
Toluene	1.5		0.00067 J		0.00075 J	0.00065 J	0.00064 J	
SVOCs (mg/kg)	TAGM 4046				a di Contra			
Acenaphthylene	41				0.055 J			
Anthracene	50				0.079 J			
Benzo(a)anthracene	1.1			0.046 J	0.23 J			
Benzo(a)pyrene	50			0.048 J	0.048 J			
Benzo(a)fluoranthene	0.224							
Benzo(b)fluoranthene	1.1				· 0.19			
Benzo(ghi)perylene	50				0.057 J			
Benzo(k)fluoranthene	1.1				0.16 J			
Bis(2)ethylhexyl phthalate	50							0.57 J
Chrysene	0.4			0.069 J	0.21 J			
Fluoranthene	50	0.038 J		0.11 J	0.52 J			
Ideno(1,2,3cd)pyrene	3.2				0.07 J			
Phenanthrene	50			0.074 J	0.35 J			
Pyrene	50			0.11 J	0.19 J			0.23 J
TAL Metals (mg/kg)	TAGM 4046 (SB)							
Aluminum	(18306)	8700	9900	12000	11000	8900	13000	16000
Arsenic	7.5 (4.9)	2.8 J	5.5 J	5 J	3.5 J	4.8 J	4 J	5.4 J
Barium	300 (71)	22	28	47	28	25	31	55
Beryllium	0.16 (0.73)	0.39 J	0.56 J	0.45 J	0.36 J	0.46 J	0.43 J	0.56 J
Calcium	(23821)	220	1500	380	170	1300	210	610
Cadmium	1 (1.1)	0.28 J		1.3 J				0.06 J
Chromium	10 (22.6)	8.9 J	13 J	13 J	11 J	11 J	14 J	16 J
Cobalt	30 (19)	4.1 J	7.4 J	5.4 J	4.6 J	5.9 J	5.8 J	7.3 J
Copper	25 (43)	12	29	23	13	25	12	23
Iron	2000 (43750)	14000	24000	19000	17000	20000	18000	23000
Magnesium	(7175)	2100	3900	2500	1900	3400	2200	3100
Manganese	(2106)	320	650	590	540	540	580	1100
Mercury	0.1 (0.1)	0.049 J		0.08 J	0.051 J		0.037 J	0.053 J
Potassium	(1993)	1200	2100	1500	1100	2000	1200	1900
Sodium	(259)	42	70	43	42	67	48	54
Nickel	13 (46)	11	17	13	9.8	14	12	14
Lead	200 (36)	79	7.7 J	380	13	5.9 J	8.6 J	25
Selenium	2 (0.346)	0.2 J	0.4 J	0.6 J	0.8 J	0.2 J	0.5 J	
Thallium	(0.45)		0.12 J		0.11 J			1 J
Vanadium	150 (36)	13	18	20	20	16	23	27
Zinc	20 (120)	67	50	160	49	42	59	90
PCBs (mg/kg)	TAGM 4046		- 11 22			EK Kedin		
None detected	1							

ug/kg = micrograms per kilogram

mg/kg = milligram per kilogram
(SB) Site Background - Base-specific background values (Draft RI Law, 1995)
TAGM 4046 = New York State Soil Screening Criteria

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^{*} EPA screening criterion for lead in soil (EPA OSWER #9355.4-12, July 1994)

Table 2.7.2 - PCI-7 Groundwater Sampling Results Summary of Positive Detections

	Sample =>	PCI7GW01	PCI7GW01
	Matrix =>	Water	Water
	Remarks =>	Unfiltered	Filtered
VOCs (ug/kg)	TOGS 1.1.1	AND SHAPE	AND CO.
Methylene chloride	5	0.1 J	n/a
SVOCs (ug/kg)	TOGS 1.1.1	100	A Mark Life
None detected	n/a	_	n/a
TAL Metals (mg/kg)	TOGS 1.1.1	学期 45	+ YUA MARK
Aluminum	n/a	0.66	0.02 J
Barium	1	0.0057	0.0031 J
Calcium	n/a	12	13
Chromium	0.05	0.0038 J	
Copper	0.2	0.0017 J	
Iron	0.3	1.1	0.0094 J
Potassium	n/a	0.75	0.63
Magnesium	35	2.6	2.5
Manganese	0.3	0.041	0.0068
Nickel	n/a	0.0022 J	
Sodium	20	1.4	1.5
Vanadium	n/a	0.0015 J	
Zinc	0.3	0.007 J	0.0048 J
PCBs (ug/kg)	TOGS 1.1.1		Partie Co.
None detected	0.1		n/a

ug/L - micrograms per liter mg/L = milligrams per liter

TOGS 1.1.1 = New York State Class GA Groundwater Standards

Table 2.8.1 - Lanz Pit Soil Sampling Results Summary of Positive Detections

	Sample =>	D846SL01
	Matrix =>	Sludge
	Depth =>	0 - 0.5 ft
VOCs (ug/kg)	TAGM 4046	Year Capperies
None detected	n/a	
SVOCs (ug/kg)	TAGM 4046	e i weed to
None detected	n/a	
RCRA Metals (mg/kg)	TAGM 4046 (SB)	aptorios serios
Arsenic	7.5 (4.9)	1.5
Barium	300 (71)	10
Chromium	10 (22.6)	5
Lead *	400 (36)	1.5
PCBs (mg/kg)	TAGM 4046	# # # # # # # # # # # # # # # # # # #
None detected	1	
Pesticides (mg/kg)	TAGM 4046	
None detected	n/a	

Notes:

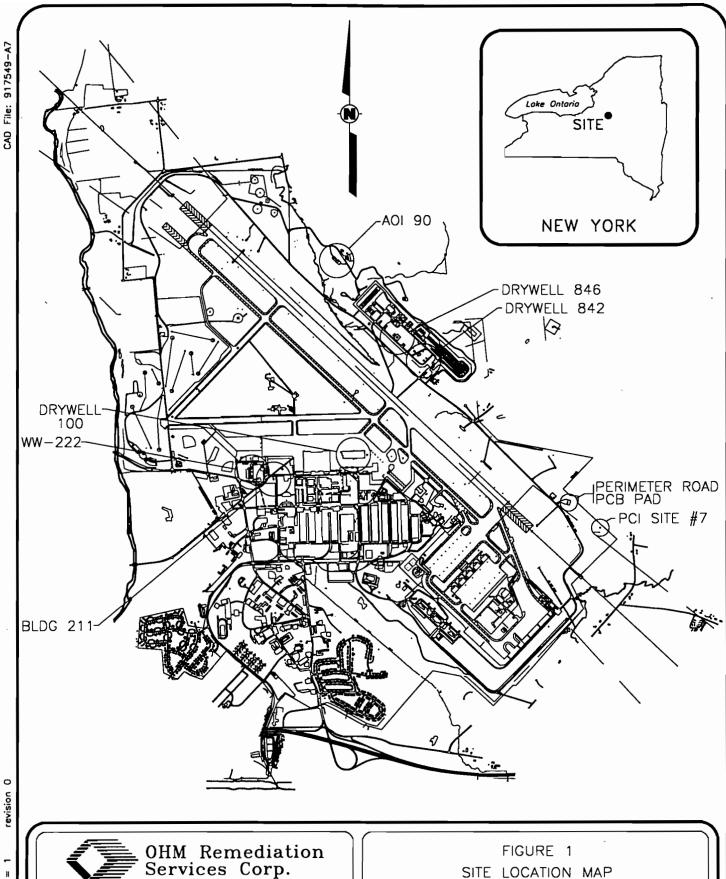
ug/kg = micrograms per kilogram

mg/kg = milligram per kilogram

(SB) Site Background - Base-specific background values (Draft RI Law, 1995)

TAGM 4046 = New York State Soil Screening Criteria

^{*} EPA screening criterion for lead in soil (EPA OSWER #9355.4-12, July 1994)





Scale:

Plot

OHM Project No. 917549

Drown By:	Checked By:	Approved By:
S. McGinn	M. Quinlan	M. Quinlan
Dote:	Scole:	Drowing No.
06/26/00	AS SHOWN	917549-A7

FORMER GRIFFISS AIR FORCE BASE ROME, NEW YORK

PREPARED FOR

AFCEE

SYMBOLS



Drywell location



Water sample



Groundwater sample from temporary well point



Utility pole



Geoprobe soil boring sample



Asphalt



Geoprobe soil boring and/or groundwater sample



Concrete



Surface soil sample



Grass



Wipe sample



Building



Hand auger sample

MEASURED DISTANCES

58, 13.3

Distance	along	indicated	baseline
·· Distance	from	indicated	baseline

SAMPLE NUMBER PREFIXES

Al90	Area of Interest 90
B211	Building 211
D100	Drywell 100
D842	Drywell 842
D846	Drywell 846
PCB1	Perimeter Road PCB Pad
PCI7	Panamerican Consultants Site 7

SAMPLE NUMBERS

SSnn	Surface soil sample	
WPnn	Wipe sample	
GWnn	Groundwater sample	
SDnn	Sediment sample	
WAnn	Water sample	
SLnn	SLnn Sludge sample	
SBnn	Soil boring sample	

DMn Drum sample



OHM Remediation Services Corp.

OHM Project No. 917549

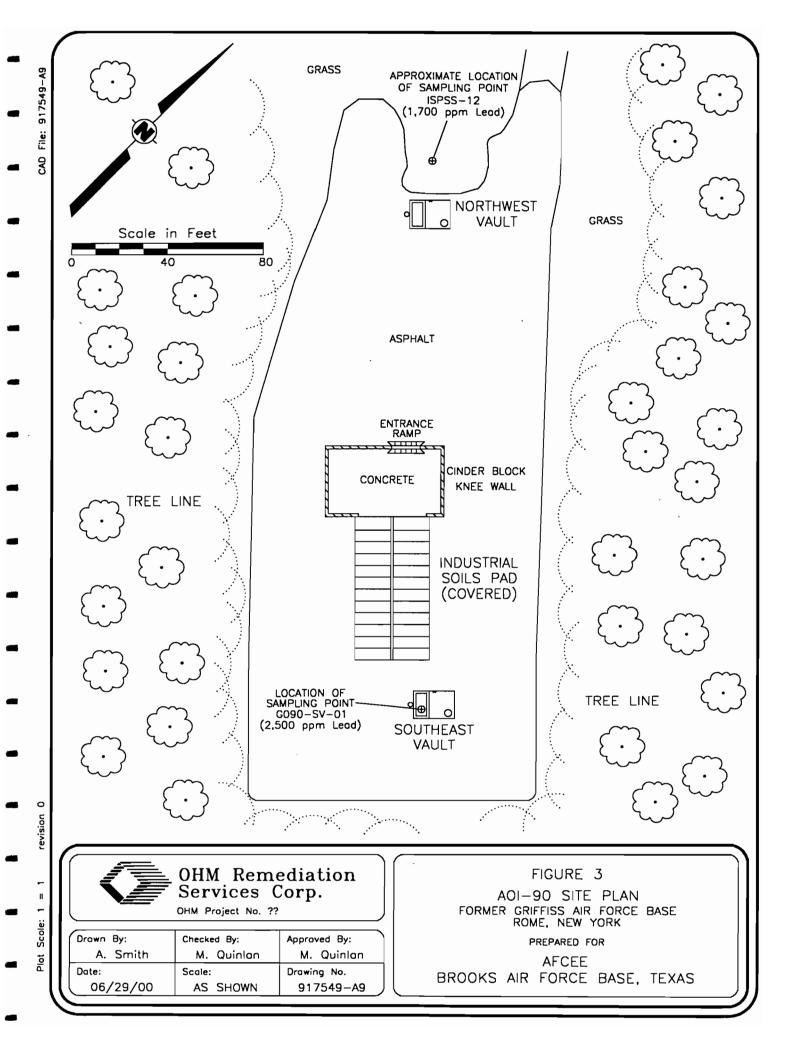
Drown By:	Checked By:	Approved By:
S. McGinn	M. Quinlan	M. Quinlan
Date:	Scale:	Drawing No.
06/23/00	AS SHOWN	917549-A0

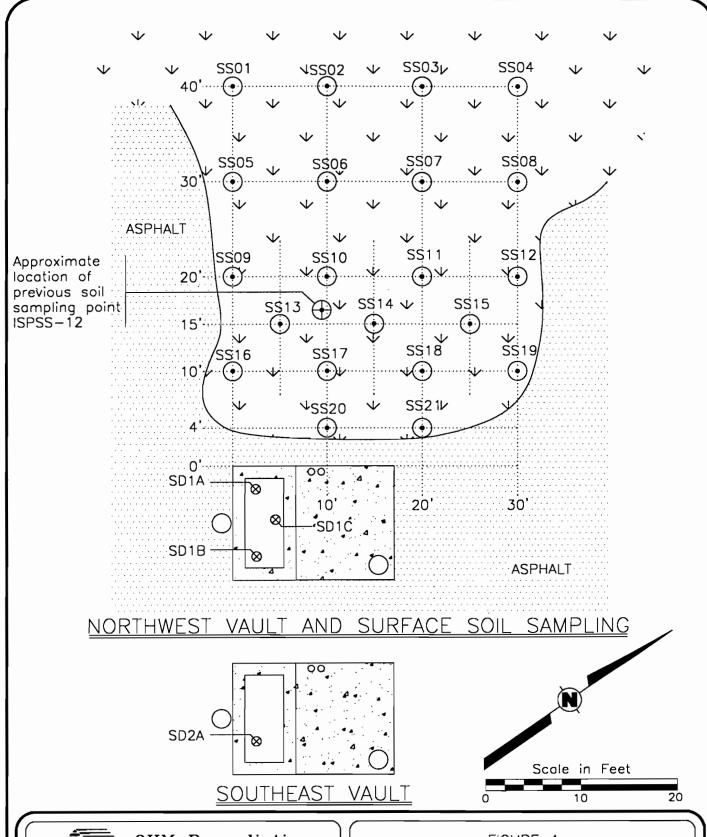
FIGURE 2

MAP SYMBOLS AND NOTATIONS FORMER GRIFFISS AIR FORCE BASE ROME, NEW YORK

PREPARED FOR

AFCEE







OHM Remediation Services Corp.

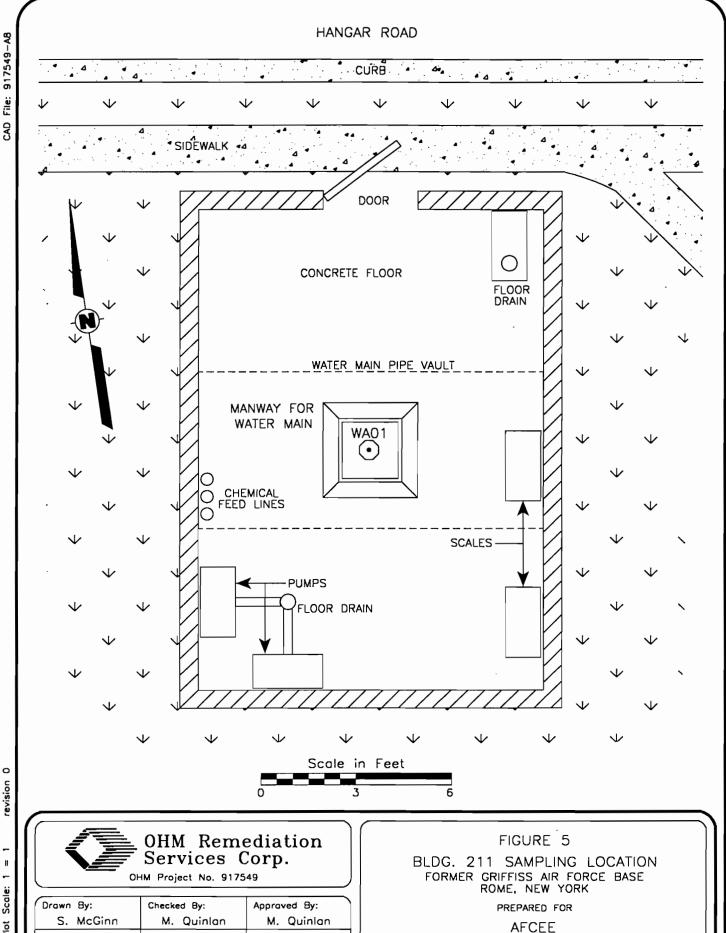
S. McGinn	M. Quinlan	M. Quinlan
06/23/00	AS SHOWN	917549-A6

FIGURE 4

AOI-90 SAMPLING LOCATIONS FORMER GRIFFISS AIR FORCE BASE ROME, NEW YORK

PREPARED FOR

AFCEE



Scale:

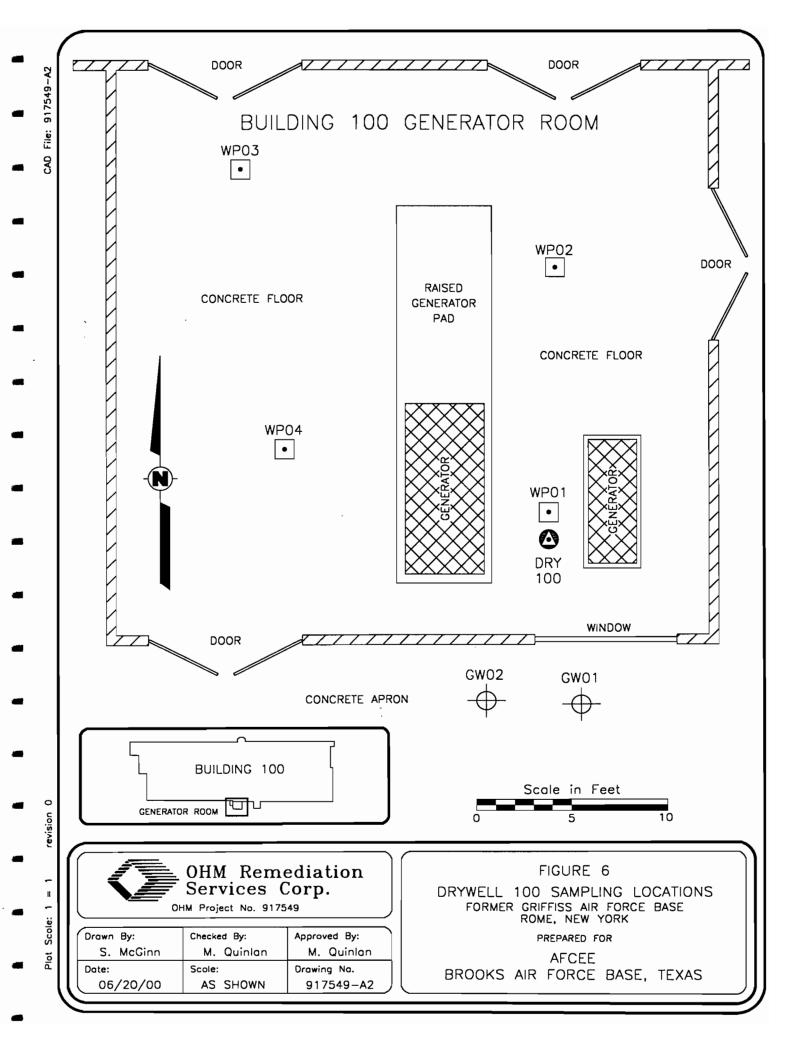
Scale:

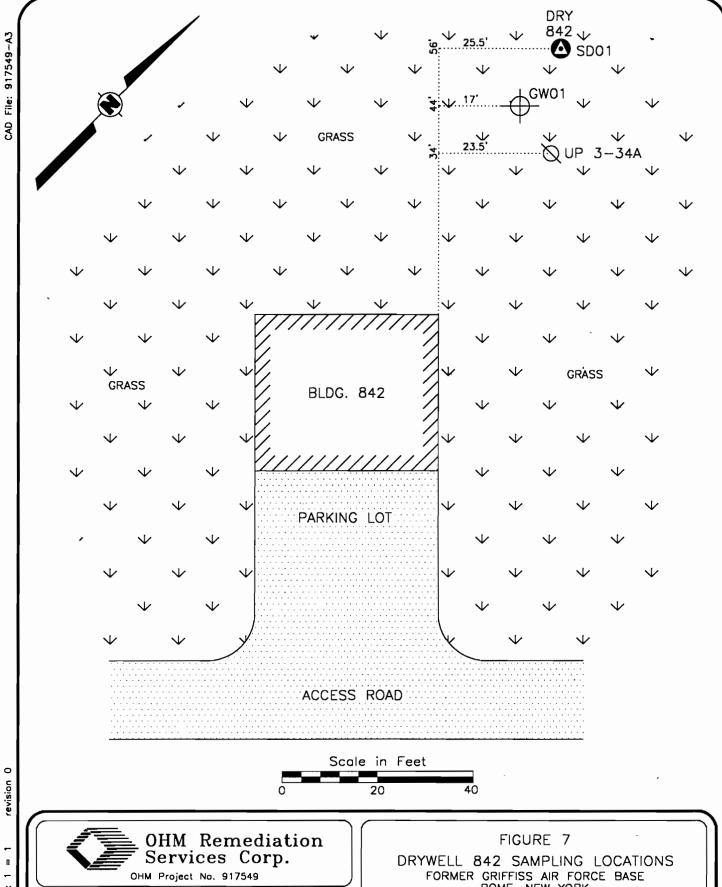
AS SHOWN

06/26/00

Drawing No.

917549-A8



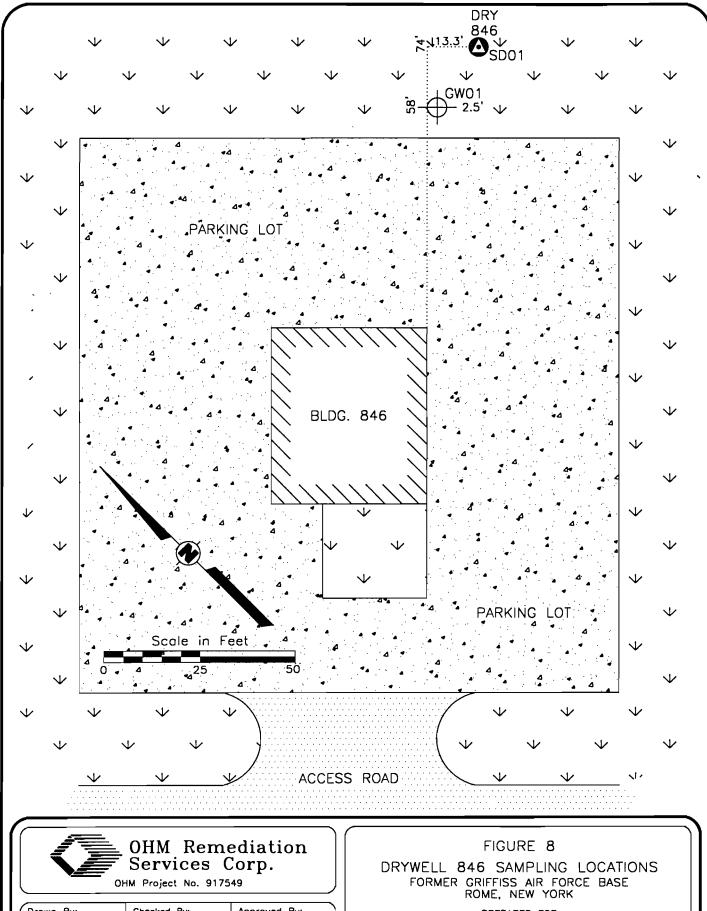


	Drown By:	Checked By:	Approved By:	
	S. McGinn	M. Quinlan	M. Quinlan	
Date: Scale:		Scale:	Drawing No.	
	06/22/00	AS SHOWN	917549-A3	

Plot

FORMER GRIFFISS AIR FORCE BASE ROME, NEW YORK

PREPARED FOR



vn By: Checked By:	
M. Quinalan	M. Quinlan
Scole:	Drowing No.
AS SHOWN	917549-A4
	M. Quinalan

File: 917549-A4

Scale:

Plot

PREPARED FOR

