DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER

October 29, 2015

MEMORANDUM FOR: U.S. Environmental Protection Agency – Region 2
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New York State Department of Environmental Conservation
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FROM: AFCEC/CIBE – Plattsburgh
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SUBJECT: Addendum to the Final Site Clousure Report for Land Use Control/Institutional Control Site Area of Interest 72
October 2015
Former Griffiss Air Force Base (AFB) Rome, New York
Contract Number FA8903-10-D-8595 / Delivery Order 0014

Accompanying this letter please find the "Addendum to the Final Site Clousure Report for Land use Control/Institutional Control Site Area of Interest 72" in relation to work conducted at the Former Griffiss AFB in Rome, New York under the referenced Performance Based Remediation (PBR) contract. The site closure report, dated October 2014, was submitted November 5th, 2014

This report addendum has been prepared to present results from the August 2015 soil sampling event which was conducted based on a NYSDEC comment provided on June 10, 2015 for the Final Site Closure Report (November 2014). The response to this comment and description of the proposed sampling strategy was submitted to the NYSDEC and USEPA on July 13, 2015. NYSDEC approval of the proposed sampling strategy was provided on August 6, 2015 via email.

We would appreciate review comments by November 20, 2015 so that project schedules and performance milestones can be maintained in accordance with this PBR Contract.

Should you have any questions or concerns please contact me at 518-563-2871.

David S. Farnsworth
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ADDENDUM

FINAL SITE CLOSURE REPORT
LAND USE CONTROL/INSTITUTIONAL CONTROL SITE
AREA OF INTEREST 72

FORMER GRIFFISS AIR FORCE BASE SITE
ROME, NEW YORK

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Contract Number FA8903-10-D-8595/
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LIST OF ACRONYMS

AFB	Air Force Base
AFCEC	Air Force Civil Engineer Center
AOI	Area of Interest
bgs	Below ground surface
CQCR	Chemical Quality Control Report
cy	cubic yards
E&E	Ecology and Environment
FPM	FPM Remediations, Inc.
ft	Feet
LUC/IC	Land-Use Control/Institutional Control
µg/L	Micrograms per Liter
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
OHSWA	Oneida Herkimer Solid Waste Authority
PA/SI	Preliminary Assessment/Site Inspection
PCB	Polychlorinated biphenyl
PID	Photoionization detector
ppm	parts per million
ROD	Records of Decision
SCO	Site Cleanup Objective
SVOC	Semi-volatile organic compound
TCE	Trichloroethylene
TCLP	Toxicity Characteristic Leaching Procedure
UFP QAPP	Uniform Federal Policy Quality Assurance Project Plan
USEPA	United States Environmental Protection Agency
VOC	Volatile organic compound
XRF	X-Ray Fluorescence

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1.0 INTRODUCTION

This Final Site Closure Report Addendum has been prepared to present the August 2015 surface soil sampling results. This sampling event was conducted based on a New York State Department of Environmental Conservation (NYSDEC) comment provided on June 10, 2015 for the Final Site Closure Report for Land use Control/Institutional Control Site Area of Interest (AOI) 72 (CAPE/FPM, November 2014). The comment is as follows:

- *"The NYS 6 NYCRR Part 375 residential use numbers should be used for comparison. All sites must have the surface soil (i.e., 0-2") evaluated. Additional surface soil sampling (zero to two inches deep) is needed for each site."*

In accordance with the NYSDEC request for surface soil samples, four additional soil samples were collected from 0-2 inches below ground surface (bgs) on August 11, 2015. Three samples were analyzed for metals and one sample was analyzed for pesticides. Sample analysis results indicated that all metals and pesticides concentrations were below their respective residential use Soil Cleanup Objectives (SCOs) (Table 6).

All 2013, 2014, and 2015 soil sampling results meet the Title 6 - New York Codes, Rules, and Regulations (6-NYCRR) Part 375 Residential Use SCOs (NYSDEC, December 2006) at the AOI 72. Therefore, it is requested that the site be closed and that New York State and USEPA grant permission to remove the remaining non-residential use deed restriction at the site.

1.1 Site Background

A 1989 United States Environmental Protection Agency (USEPA) Site Analysis identified the area as a potential drum storage site in 1966. Based on the USEPA Site Analysis the site was identified as an AOI in a 1994 AOI Report (Law, June 1994). Review of historical aerial photographs verified the site was used as a storage area. An aerial photograph from May 1960 shows an open area stripped of vegetation with erosional channels. Aerial photographs from 1967 through 1973 show a storage area with rows of unknown material in the southern and central portion of the site. By 1974, the material had been removed. In photographs from 1975 through 1978, two small areas of storage materials and possible drums were observed. In 1982, the storage of material appeared sporadic (Ecology and Environment [E&E], September 1999).

A Preliminary Assessment/Site Inspection (PA/SI) was conducted for AOI 72 in 1999. During this investigation 30 soil samples were collected from 15 locations. Two samples, a surface (0 to 2 inches below ground surface (bgs)) and a near-surface (2 to 4 feet (ft) bgs) soil sample were collected at each location. Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and metals. Based on the sampling results and human health risk assessment conducted at the site, no further sampling was recommended (E&E, September 1999). This report is provided in Appendix A. Comparison with the Title 6 - New York Codes, Rules and Regulations (6-NYCRR) Part 375 Residential Use Soil Cleanup Objectives (SCOs) (NYSDEC, December 2006) showed pesticide and metals exceedances.

A Record of Decision (ROD) was not required because the site was part of the AOI group and was closed during the PA/SI investigation period. LUC/ICs for the site, provided in the Parcel F9 deed, include:

"The grantee covenants and agrees to the requirement for additional evaluation of the portion of the property within AOI 72 should the property use change from institutional/educational to residential."

The restricted area is illustrated in Figure 1 as identified in the Parcel F9 Deed (Appendix A). The site boundary is defined by the following coordinates and dimensions:

Point of beginning 1 (see Figure 1)
Easting: 1131249.95 ft
Northing: 1171641.18 ft

Segment	Direction	Length (feet)
Point 1 to 2	S 41-4-32 E	614.78
Point 2 to 3	N 90-0-0 E	342.44
Point 3 to 4	N 42-7-15 W	557.10
Point 4 to 1	N 37-11-6 E	359.78

2.0 2013 SITE CLOSURE INVESTIGATION

The 2013 site closure investigation included a soil and groundwater investigation to delineate/confirm the presence of residual soil contamination at the site. The soil investigation included soil sampling at seven locations within the AOI 72 boundary and x-ray fluorescence (XRF) screening at six of the seven locations (as illustrated in Figure 2). The groundwater investigation consisted of two samples collected from a perched water table located within AOI 72 (as illustrated in Figure 3). The activities and screening/sampling results are summarized below. Details of these activities are provided in the Final Site Investigation Report for LUC/IC Site AOI 72 (CAPE/FPM, December 2013).

Confirmatory soil sampling was conducted at 28 soil borings (direct push) within the AOI 72 site boundary (Figure 2) on May 8 and 9, 2013. Samples were collected from 0 to 2 ft bgs and 2 to 4 ft bgs from each of the borings. Based on the results from the 1999 PA/SI, samples collected at four boring locations were analyzed for pesticides using USEPA Method SW8081 and the remaining 24 borings were analyzed for metals using USEPA Method SW6010. The results are presented in Table 1 and showed that all pesticide and metals concentrations were below the 6-NYCRR Part 375 Residential use SCOs.

To confirm the location of the elevated metals concentrations, XRF screening was used to determine the extent of the contamination at each of the previously identified sampling locations. Samples were screened from the 0 to 2 ft bgs and 2 to 4 ft bgs intervals at 28 soil borings (four soil borings each for locations 72SCS-2, -3, -4, -5, -6, and -7). XRF screening showed metal concentrations below the 6-NYCRR Part 375 Residential Use SCOs at all borings except for boring 72SCS-2B (see Figure 2). The copper concentrations in the 0 to 2 ft bgs interval at

72SCS-2B ranged from 271 to 400 ppm. The 6-NYCRR Part 375 Residential Use SCO for copper is 270 ppm. Based on the primary screening performed at 72SCS-2B, three additional step-out borings were advanced and screened to better assess the lateral extent of the metal exceedances. Results of the additional step-out screening showed metals concentrations were below 6-NYCRR Part 375 Residential use SCOs. The XRF screening at the primary locations to the west and south of 72SCS-2B also showed copper concentrations were below 6-NYCRR Part 375 Residential use SCOs.

A petroleum odor was observed during field screening at soil boring 72SCS-6D (72SCS-6 location) from the 0 to 2 ft bgs interval (Figure 2). A photoionization detector (PID) reading was collected with a result of 14.1 parts per million (ppm). Petroleum odor was not observed at locations 72SCS-6A, -6B, or -6C. As a result of the reported petroleum odor, additional delineation of the 72SCS-6D location was conducted on May 16, 2013. The delineation included PID reading collection, soil sampling, perched water sampling, and groundwater sampling. The delineation was conducted at nine borings positioned in a 10-ft grid using direct push (4-foot macro core). The boring locations are illustrated in Figure 3. All borings were advanced until refusal (8 to 10 ft bgs). Groundwater was encountered at 8 ft bgs and a perched water layer was observed at several borings at approximately 4 ft bgs. Soil samples were collected at the intervals which exhibited the highest PID readings. The PID readings ranged from 0 ppm to 90 ppm. Soil samples were collected between 4 to 8 ft bgs if no elevated PID readings were observed in a boring. A water sample was also collected from the perched water layer at 72SCS-9 and a groundwater sample was collected at 72SCS-14. The decision to collect the water samples at these locations was made in the field as they showed the overall highest PID readings for all borings (above 50 ppm). The highest PID reading at 72SCS-9 was 60 ppm and the highest PID reading at 72SCS-14 was 90 ppm. Perched water was not observed at 72SCS-14. All soil and groundwater samples were analyzed for VOCs using USEPA method SW8260.

Soil sampling results showed that all VOC concentrations were below the 6-NYCRR Part 375 Residential Use SCOs (Table 1). Results from 72SCS-9, the perched water table sample, showed two VOCs above their respective NYSDEC Ambient Water Quality Standards and Guidance Values (NYSDEC, June 1998). Trichloroethylene (TCE) was detected at 11 micrograms per liter (µg/L) and 1,2,4-trimethylbenzene was detected at 11 µg/L. NYSDEC Ambient Water Quality Standards for these VOCs is 5 µg/L. Results from 72SCS-14 (the groundwater sample) showed that TCE and 1,2,4-trimethylbenzene were detected in this sample, but all VOCs were below NYSDEC Ambient Water Quality Standards and Guidance Values (NYSDEC, June 1998). Sampling results are presented in Table 2.

3.0 2014 REMOVAL ACTION

Based on the 2013 Site Closure Investigation, a removal action was conducted on April 16, 2014 to eliminate VOC impacts from the perched water table.

3.1 TOXICITY CHARACTERISTIC LEACHING PROCEDURE SAMPLING

Prior to soil disposal, one composite sample was collected and analyzed for toxicity characteristic leaching procedure (TCLP) VOCs, TCLP metals, and TCLP SVOCs in December

2013. Results showed that all VOCs, metals, and SVOC concentrations were below the hazardous waste characteristic levels (USEPA, October 2009). A waste profile for disposal was submitted to Oneida Herkimer Solid Waste Authority (OHSWA), which was approved. The sampling results are provided in Table 3. The daily chemical quality control report (CQCR) completed for this sampling event is provided in Appendix B. The raw laboratory data is provided in Appendix C. The approved waste profile form is provided in Appendix D.

3.2 SOIL REMOVAL ACTION

The approximate extent of the excavation was 40 ft by 20 ft by 6 ft bgs as shown in Figure 3. The excavation was conducted using a tracked excavator. During excavation, soils from 0 to 2 ft bgs were stockpiled for backfill. These soils were used as the 2013 Site Investigation and VOC delineation confirmed the absence of contamination in this interval. All soils from 2 to 6 ft bgs were removed and placed into 20-yard dump trucks for disposal. Approximately 180 cubic yards (cy) of contaminated soils were disposed of.

The excavation area is flat, topographically. Therefore, erosion controls were not implemented. In addition, no dewatering was conducted during the excavation. The only observed water (approximately 5 gallons) within the excavation was from surface runoff (snow melt). No water was observed entering the excavation through the excavation walls. The daily field form completed for the excavation is provided in Appendix B. All photos of the excavation are provided in Appendix E.

3.3 SOIL DISPOSAL

The soils were disposed of through the OHSWA at the Ava regional landfill in Ava, New York. Signed disposal manifests are provided in Appendix D.

3.4 SOIL CONFIRMATORY SAMPLING

Two grab confirmatory soil samples were collected from the bottom of the excavation. No sidewall confirmatory soil samples were collected as the excavation was completed to the uncontaminated points identified in the May 2013 delineation. The grab confirmatory soil samples from the bottom of the excavation were analyzed for VOCs using USEPA method SW8260. Results showed no VOC concentrations above 6-NYCRR Part 375 Residential Use or Protection of Groundwater SCOs. The confirmatory soil sampling results are presented in Table 4. The daily CQCR completed during this sampling event is provided in Appendix B. The raw laboratory data and the validated laboratory data are provided in Appendix C and F, respectively.

3.5 SITE RESTORATION

The site was initially restored following excavation on April 16, 2014. The initial restoration included the backfilling using clean sand (approximately 180 cy) to approximately 2 ft bgs. The stockpiled soils were then placed on the top of the sand to approximately 2-inch bgs. Final restoration activities were conducted during the week of May 27, 2014. This included the application of top soil (30 cy) to grade and reseeding with grass. The daily field forms

completed for both restoration events are provided in Appendix B. All photos of the restoration and restored site are provided in Appendix E.

Prior to use, the backfill sand and top soil were sampled and analyzed for metals, SVOCs, VOCs, pesticides, and polychlorinated biphenyl (PCBs) to demonstrate that the backfill met applicable standards. The sampling results showed that the backfill material was below all SCOs as presented in Table 5. The raw laboratory data is provided in Appendix C. It should be noted that the same backfill material supply was used for two Griffiss removal actions, AOI 72 and the AOI 474 removal action. Therefore, only one sample was collected and identified as AOI474BF.

4.0 2015 SURFACE SOIL SAMPLING EVENT

The 2015 sampling event was conducted on August 11, 2015 to collect surface soil samples at the site (0 to 2 inches bgs). The samples were collected at four borings (72SCS-1, -4, -5, and -7) as shown in Figure 2. One composite surface soil sample was collected at each location. The composite sample consisted of five aliquot points within a 1-foot square. Five aliquot points were collected in order to obtain sufficient volume for sample analysis. Per the results of the Preliminary Assessment/Site Inspection was conducted for AOI 72 in 1999 (E&E, 1999) and based on the recommendations in the Final Site Closure Plan (CAPE/FPM, March 2013), the sample collected at location 1 was analyzed for pesticides and the samples from locations 4, 5, and 7 were analyzed for metals. Sampling results are presented in Table 6. Results showed that metal and pesticide concentrations were below their respective Residential use SCOs. All field sampling forms are attached in the daily CQCRs in Appendix D. The raw data is attached in Appendix E and the validated lab data is provided in Appendix F.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Site closure and removal of the deed restriction for non-residential use is recommended for AOI 72. The 2014 removal action was successful in removing all residual VOC contamination from the perched water table. Soil sampling results from the 1999 PA/SI, 2013 site investigation, 2014 removal action, and 2015 surface soil sampling event showed all soil chemical concentrations were below the 6-NYCRR Part 375 Residential Use SCOs.

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6.0 REFERENCES

Air Force, Deed for Parcel F-9, former Griffiss Air Force Base, 2000.

CAPE/FPM/AECOM, Final Addenda Health and Safety Plan for Performance Based-Remediation at the former Griffiss AFB, New York, July 2012.

CAPE/FPM, Final 2012 Land Use Control/Institutional Control Site Inspection Report at the former Griffiss AFB, New York, March 2013.

CAPE/FPM, Final Site Closure Plan for Land Use Control/Institutional Control Sites at the former Griffiss AFB, New York, March 2013.

CAPE/FPM, 2013 Updated Final Uniform Federal Policy Quality Assurance Project Plan for Performance Based-Remediation at the former Griffiss AFB, New York, May 2013.

CAPE/FPM, Final Site Investigation Report for LUC/IC Site AOI 72 (including Attachment 1 – Removal Action Plan for AOI 72) at the former Griffiss AFB, New York, December 2013.

CAPE/FPM, 2014 Updated Final Uniform Federal Policy Quality Assurance Project Plan for Performance Based-Remediation at the former Griffiss AFB, New York, May 2014.

CAPE/FPM, Final Site Closure Report for Land use Control/Institutional Control Site Area of Interest 72, November 2014.

Ecology and Environment, Inc., Draft Report for Parcel F9 Sampling Investigation at the former Griffiss AFB, Rome, New York, September 1999.

Law, Final Identification of Areas of Interest Report at the former Griffiss AFB, Rome, New York, June 1994.

NYSDEC, 6-NYCRR Part 375 Environmental Remediation Programs, December 2006.

NYSDEC, Division of Water Technical and Operational Guidance Series "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations", June 1998.

USEPA, Hazardous Waste Characteristics, October 2009.

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Tables

Table 1
AOI 72
2013 Soil Sampling Results

Sample Location	NYSDEC	72SCS-1A		72SCS-1B		72SCS-1C		72SCS-1D		72SCS-2A		72SCS-2B		72SCS-2C		72SCS-2D		72SCS-3A		72SCS-3B		72SCS-3C		72SCS-3D	
Sample ID	Residential Use Soil Cleanup Objective	72SCS01A02AA	72SCS01A04AA	72SCS01B02AA	72SCS01B04AA	72SCS01C02AA	72SCS01C04AA	72SCS01D02AA	72SCS01D04AA	72SCS02A02AA	72SCS02A04AA	72SCS02B02AA	72SCS02B04AA	72SCS02C02AA	72SCS02C04AA	72SCS02D02AA	72SCS02D04AA	72SCS03A02AA	72SCS03A04AA	72SCS03B02AA	72SCS03B04AA	72SCS03C02AA	72SCS03C04AA	72SCS03D02AA	72SCS03D04AA
Date of Collection		5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013
Sample Depth (ft bgs)	(µg/Kg)	0 - 2	2 - 4	0 - 2	2 - 4	0 -2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4
VOCs (µg/Kg)																									
1,2,4-trimethylbenzene	47,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,3,5-trimethylbenzene	47,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
acetone	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
benzene	2,900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
ethylbenzene	30,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
isopropylbenzene	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
naphthalene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-butylbenzene	12,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-propylbenzene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
m,p-xylene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
o-xylene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p-isopropyltoluene	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
sec-butylbenzene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
toluene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trichloroethylene (TCE)	10,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trichlorofluoromethane	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
vinyl chloride	210	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Pesticides (µg/Kg)																									
p,p'-DDD	2,600	U	U	34	U	UJ	UJ	U	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p,p'-DDE	1,800	5.9 J	U	6.3	1 J	5.6	1.7 J ♦	9.4 J	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p,p'-DDT	1,700	11 J	U	24	U	UJ	UJ	13 J	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Sample Location	NYSDEC	72SCS-1A		72SCS-1B		72SCS-1C		72SCS-1D		72SCS-2A		72SCS-2B		72SCS-2C		72SCS-2D		72SCS-3A		72SCS-3B		72SCS-3C		72SCS-3D	
Sample ID	Residential Use Soil Cleanup Objective	72SCS01A02AA	72SCS01A04AA	72SCS01B02AA	72SCS01B04AA	72SCS01C02AA	72SCS01C04AA	72SCS01D02AA	72SCS01D04AA	72SCS02A02AA	72SCS02A04AA	72SCS02B02AA	72SCS02B04AA	72SCS02C02AA	72SCS02C04AA	72SCS02D02AA	72SCS02D04AA	72SCS03A02AA	72SCS03A04AA	72SCS03B02AA	72SCS03B04AA	72SCS03C02AA	72SCS03C04AA	72SCS03D02AA	72SCS03D04AA
Date of Collection		5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013
Sample Depth (ft bgs)	(mg/Kg)	0 - 2	2 - 4	0 - 2	2 - 4	0 -2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4
Metals (mg/kg)																									
aluminum	--	NS	NS	NS	NS	NS	NS	NS	NS	3,600	5,400	4,800	6,600	7,000	6400 J	6,300	6,100	5,100	6,600	3,700	7,200	3,700	6,100	3,600	7,900
antimony	--	NS	NS	NS	NS	NS	NS	NS	NS	19	0.62 J	5.7	U	8.1	U	37	U	0.52 J	U	0.82 J	U	1.6 J	U	1 J	U
arsenic	16	NS	NS	NS	NS	NS	NS	NS	NS	2.7	3.6	2.6	3.9	3.4	3.9	4.5	2.7	2.50	5.70	1.5 J	3.10	1.5 J	2.1 J	1.8 J	3.00
barium	350	NS	NS	NS	NS	NS	NS	NS	NS	21	18	23	23	36	21	31	24	30	29	23	28	14	20	21	26
berylium	14	NS	NS	NS	NS	NS	NS	NS	NS	0.12 J	0.24 J	0.2 J	0.29 J	0.29 J	0.28 J	0.28 J	0.29 J	0.21 J	0.29 J	0.17 J	0.26 J	0.14 J	0.25 J	0.17 J	0.31 J
boron - total	--	NS	NS	NS	NS	NS	NS	NS	NS	7 J	2.5 J	5.5 J	2.3 J	4.3 J	2.3 J	4.6 J	2.1 J	5.1 J	2.7 J	5.6 J	1.9 J	7.1 J	2.4 J	5.7 J	2.8 J
cadmium	2.5	NS	NS	NS	NS	NS	NS	NS	NS	0.22 J	0.11 J	0.12 J	0.1 J	0.19 J	0.076 J	0.12 J	0.08 J	0.083 J	0.34 J	0.062 J	0.16 J	0.06 J	0.075 J	0.099 J	0.22 J ♦
calcium	--	NS	NS	NS	NS	NS	NS	NS	NS	240,000	17,000	170,000	14,000	110,000	13000 J	120,000	8,600	130,000	10,000 J ♦	190,000	6,200	240,000	3,500	170,000	30000 J
chromium	22	NS	NS	NS	NS	NS	NS	NS	NS	6.6	6.3	7.4	7.5	8.0	7.6	8.6	6.7	7.7	7.1	6.1	7.6	6.5	6.7	6.1	12
cobalt	--	NS	NS	NS	NS	NS	NS	NS	NS	2.2	4.2	3.4	5.2	4.1	5.1	4.3	4.6	3.6	4.9	2.7	4.7	2.6	4.1	2.5	5.3
copper	270	NS	NS	NS	NS	NS	NS	NS	NS	38	15	72	20	60	21	96	17	26	28	24	20	52	19	18	21 ♦
iron	--	NS	NS	NS	NS	NS	NS	NS	NS	7,200	14,000	9,000	16,000	12,000	15,000 J	13,000	12,000	11,000	15,000	7,600	14,000	6,800	12,000	7,700	16,000
lead	400	NS	NS	NS	NS	NS	NS	NS	NS	8.1	2.7	8	3.5	9.8	4.6	9.5	3.3	7.8	10 J	5.7	6.0	7.9	3.3	6.4	5.7 ♦
magnesium	--	NS	NS	NS	NS	NS	NS	NS	NS	5900	3400	5600	3400	4,700	3,200	5,100	2,700	5,000	2,800	5,200	2,700	10,000	2,600	5,600	3,400
manganese	2,000	NS	NS	NS	NS	NS	NS	NS	NS	270	1300	240	1200	240	500	390	320	280	340	200	500	220	300	190	600 ♦
molybdenum	--	NS	NS	NS	NS	NS	NS	NS	NS	0.63 J	U	0.59 J	U	0.41 J	U	0.62 J	U	0.59 J	0.36 J	0.49 J	U	0.34 J	U	0.54 J	1.4 J
nickel	140	NS	NS	NS	NS	NS	NS	NS	NS	6.8	9.3	10	12	11	12	10	10	13	9.8	11	10	10	10	9.9	12
potassium	--	NS	NS	NS	NS	NS	NS	NS	NS	820	890	960	900	940	920 J	1,000	850	950	960	820	820	940	780	880	900
selenium	36	NS	NS	NS	NS	NS	NS	NS	NS	0.83 J	U	U	U	1 J	U	U	U	U	U	U	U	U	U	U	U
silver	36	NS	NS	NS	NS	NS	NS	NS	NS	U	0.2 J	U	0.16 J	U	U	U	U	U	U	U	U	U	U	U	U
sodium	--	NS	NS	NS	NS	NS	NS	NS	NS	420 J	120 J	260 J	140 J	420 J	260 J	450 J	110 J	380 J	540 J	360 J	180 J	410 J	190 J	390 J	280 J
strontium	--	NS	NS	NS	NS	NS	NS	NS	NS	260	24	230	25	120	32	130	16	240	19 J	310	13	250	9.8	280	36 J
vanadium	--	NS	NS	NS	NS	NS	NS	NS	NS	7.6	9.4	27	11	13	11	12	10	48	13	54	12	35	10	44	15
zinc	2,200	NS	NS	NS	NS	NS	NS	NS	NS	150	27	38	33	55	32	45	29	85	47	29	41	28.0	28	42.0	50 ♦
mercury	0.81	NS	NS	NS	NS	NS	NS	NS	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

Table 1
AOI 72
2013 Soil Sampling Results

Sample Location	NYSDEC Residential Use Soil Cleanup Objective (µg/Kg)	72SCS-4A		72SCS-4B		72SCS-4C		72SCS-4D		72SCS-5A		72SCS-5B		72SCS-5C		72SCS-5D		72SCS-6A		72SCS-6B		72SCS-6C		72SCS-6D	
Sample ID		72SCS04A02AA	72SCS04A04AA	72SCS04B02AA	72SCS04B04AA	72SCS04C02AA	72SCS04C04AA	72SCS04D02AA	72SCS04D04AA	72SCS05A02AA	72SCS05A04AA	72SCS05B02AA	72SCS05B04AA	727SCS05C02AA	72SCS05C04AA	72SCS05D02AA	72SCS05D04AA	72SCS06A02AA	72SCS06A04AA	72SCS06B02AA	72SCS06B04AA	72SCS06C02AA	72SCS06C04AA	72SCS06D02AA	72SCS06D04AA
Date of Collection		5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013
Sample Depth (ft bgs)		0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 -2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4
VOCs (µg/Kg)																									
1,2,4-trimethylbenzene	47,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3300
1,3,5-trimethylbenzene	47,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1300
acetone	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	U
benzene	2,900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	U
ethylbenzene	30,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	150 J
isopropylbenzene	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	220 J
naphthalene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1900
n-butylbenzene	12,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	760
n-propylbenzene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	410
m,p-xylene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	430
o-xylene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	220
p-isopropyltoluene	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	U
sec-butylbenzene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	U
toluene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	U
trichloroethylene (TCE)	10,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	U
trichlorofluoromethane	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	U
vinyl chloride	210	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	U
Pesticides (µg/Kg)																									
p,p'-DDD	2,600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p,p'-DDE	1,800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p,p'-DDT	1,700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Sample Location	NYSDEC Residential Use Soil Cleanup Objective (mg/Kg)	72SCS-4A		72SCS-4B		72SCS-4C		72SCS-4D		72SCS-5A		72SCS-5B		72SCS-5C		72SCS-5D		72SCS-6A		72SCS-6B		72SCS-6C		72SCS-6D	
Sample ID		72SCS04A02AA	72SCS04A04AA	72SCS04B02AA	72SCS04B04AA	72SCS04C02AA	72SCS04C04AA	72SCS04D02AA	72SCS04D04AA	72SCS05A02AA	72SCS05A04AA	72SCS05B02AA	72SCS05B04AA	727SCS05C02AA	72SCS05C04AA	72SCS05D02AA	72SCS05D04AA	72SCS06A02AA	72SCS06A04AA	72SCS06B02AA	72SCS06B04AA	72SCS06C02AA	72SCS06C04AA	72SCS06D02AA	72SCS06D04AA
Date of Collection		5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013
Sample Depth (ft bgs)		0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 -2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4
Metals (mg/kg)																									
aluminum	--	5,300	5,900 J	5,500	6,500	3,100	6,700	5,300 ♦	5,800	5,500	6,500	6,700	8,100	5,700	6,100	7,400	5,400	5,900	6,700	5,000	10,000	5,200	9,100	3,200	7,800
antimony	--	U	U	0.52 J	U	0.62 J	U	0.84 J ♦	0.67 J	2	U	0.62 J	U	2	U	0.43 J	U	1.9 J	U	1.6 J	U	2	U	1.7 J	U
arsenic	16	2.40	3.0	2.90	3.10	1.4 J	4.60	3.1 ♦	3.2	3.80	2.60	3.50	3.40	2.80	7.1	3.3	2.6	2.70	4.70	2.80	4.50	2.50	3.50	1.9 J	3.60
barium	350	31	21.0	21	19	28	22	28 J	19.0	29	22	23	38	22	16	25	17	29	25	28	57	33.0	55.0	12.0	50.0
berylium	14	0.21 J	0.25 J	0.21 J	0.25 J	0.14 J	0.32 J	0.22 J ♦	0.23 J	0.2 J	0.28 J	0.25 J	0.38 J	0.21 J	0.26 J	0.28 J	0.27 J	0.26 J	0.3 J	0.22 J	0.38 J	0.24 J	0.26 J	0.14 J	0.31 J
boron - total	--	3.7 J	1.9 J	3.2 J	2.1 J	3.6 J	1.7 J	4.5 J	3.1 J	3.7 J	2.5 J	2.4 J	3 J	3.2 J	2.3 J	2.6 J	2 J	4 J	2.1 J	3.6 J	1.5 J	4.3 J	1.5 J	1.8 J	2.7 J
cadmium	2.5	0.098 J	0.087 J	0.082 J	0.08 J	0.054 J	0.1 J	0.12 J ♦	0.12 J	0.13 J	0.1 J	0.15 J	0.13 J	0.22 J	0.079 J	0.2 J	0.077 J	0.19 J	0.099 J	0.13 J	0.25 J	0.19 J	0.44 J	U	0.61
calcium	--	88,000	2,200	100,000	7,200	110,000	1,400	150000 J	60,000	89,000	20,000	42,000	15,000	70,000	21,000	17,000	11,000	160,000	13,000	120,000	5,300	15,000	2,300	28,000	10,000
chromium	22	7	6.4	6.7	7.2	5.3	7.6	7.7 ♦	7.8	6.9	7.9	7	11	7	7.4	8	7	7.4	7.7	7.4	11.0	9.2	10	4	8.9
cobalt	--	3.5	3.9	3.4	4.6	2.3	4.7	3.6 ♦	4.1	3.3	4.8	3.9	5.4	3.3	4.6	4.2	4.6	4.1	5.4	3.6	5.3	3.6	4.5	2.7	5.1
copper	270	17	15	26	17	23	18	34 J ♦	29.0	69	24.0	38.0	28.0	130	27	33	18	25	19	73	16	48	15	18	33
iron	--	9,800	12,000 J	11,000	13,000	6,400	18,000	11,000 ♦	12,000	10,000	14,000	11,000	17,000	10,000	12,000	12,000	13,000 J	12,000	13,000	10,000	15,000	10,000	14,000	6,200	13,000
lead	400	15	2.6	48	3.1	11.0	3.1	130 J ♦	94.0	61	6.9	33	4.7	45	4.8	28	3	10	3.3	21	6.2	21	5.9	7.7	12.0
magnesium	--	4,300	2,300	3,900	2,800	3,700	2,200	5,100	4,000	3,600	3,900	2,700	3,500	3,500	3,500	2,400	3100 J	4,700	3,600	4,700	1,900	4,900	2,000	2,200	2,600
manganese	2,000	350	450 J	320	420	230	580	330	350.0	290	550	390	560	330	450	370	910	530	510	390	500	550	460	210	620
molybdenum	--	U	U	U	U	0.26 J	U	0.44 J ♦	0.35 J	0.7 J	U	U	U	0.28 J	0.28 J	U	U	0.32 J	U	0.41 J	0.56 J	0.87 J	0.71 J	U	U
nickel	140	8.7	9.4	8.1	11	7.9	9.7	9.7	10.0	7.9	11	8.5	13	8.0	11.0	9.3	11.0	12	12	11	9.2	11	8.5	5.9	10
potassium	--	860	700	750	740	690	670	900 ♦	820	740	880	660	1,100	650	860	740	900 J	960	930	910	600	940	560	520	810
selenium	36	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
silver	36	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
sodium	--	130 J	U	100 J	U	200 J	84 J	130 J	71 J	98 J	110 J	74 J	78 J	93 J	110 J	86 J	240 J	320 J	77 J	140 J	97 J	230 J	97 J	88 J	93 J
strontium	--	140	7.5	100	12	160	9	190 J	66	98	29	50	24	84	32	23	20	250	20	160	11	180	5.4	37	21
vanadium	--	14	9.8	10	11	22	12	19 J	11	10	11	12	14	11	10	12	9.5	31	11	28	18	30	19	7.4	16
zinc	2,200	31	27	33	32	23	33	45 ♦	43.0	39	34	40	50	46	30	37	26	57	32	47	62	71	64	23	120
mercury	0.81	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

Table 1
AOI 72
2013 Soil Sampling Results

Sample Location	NYSDEC Residential Use Soil Cleanup Objective (µg/Kg)	72SCS-7A		72SCS-7B		72SCS-7C		72SCS-7D		72SCS-9	72SCS-10	72SCS-11	72SCS-12	72SCS-13	72SCS-14	72SCS-15	72SCS-16	72SCS-17
Sample ID		72SCS04A02AA	72SCS07A04AA	72SCS07B02AA	72SCS07B04AA	72SCS07C02AA	72SCS07C04AA	72SCS07D02AA	72SCS07D04AA	72SCS0908AA	72SCS1007AA	72SCS1107AA	72SCS1210AA	72SCS1308AA	72SCS1404AA	72SCS1504AA	72SCS1604AA	72SCS1708AA
Date of Collection		5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/14/2013	5/14/2013	5/14/2013	5/14/2013	5/14/2013	5/14/2013	5/14/2013	5/14/2013	5/14/2013
Sample Depth (ft bgs)		0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	4 - 8		3 - 7	6 - 10	4 - 8	0 - 4	0 - 4	0 - 4	4 - 8
VOCs (µg/Kg)																		
1,2,4-trimethylbenzene	47,000	NS	NS	NS	NS	NS	NS	NS	NS	24	U	U	U	U	U	U	U	U
1,3,5-trimethylbenzene	47,000	NS	NS	NS	NS	NS	NS	NS	NS	9.7	U	U	U	U	U	U	U	U
acetone	100,000	NS	NS	NS	NS	NS	NS	NS	NS	10 J	U	22 J	9.3 J	16 J	41	56	17 J	21 J
benzene	2,900	NS	NS	NS	NS	NS	NS	NS	NS	U	U	U	U	U	U	U	U	U
ethylbenzene	30,000	NS	NS	NS	NS	NS	NS	NS	NS	0.94 J	U	U	U	U	U	U	U	U
isopropylbenzene	--	NS	NS	NS	NS	NS	NS	NS	NS	1.6 J	U	U	U	U	U	U	U	U
naphthalene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	8.8	U	U	U	1.1 J	U	U	4.9 J	0.86 J
n-butylbenzene	12,000	NS	NS	NS	NS	NS	NS	NS	NS	5.4 J	U	U	U	U	U	U	U	U
n-propylbenzene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	3.1 J	U	U	U	U	U	U	U	U
m,p-xylene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	3.4 J	U	U	U	U	U	U	U	U
o-xylene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	1.9 J	U	U	U	U	U	U	U	U
p-isopropyltoluene	--	NS	NS	NS	NS	NS	NS	NS	NS	U	U	U	U	U	U	U	U	U
sec-butylbenzene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	2.8 J	U	U	U	U	U	U	U	U
toluene	100,000	NS	NS	NS	NS	NS	NS	NS	NS	U	U	U	U	1.2 J	1.8 J	1.6 J	1.7 J	U
trichloroethylene (TCE)	10,000	NS	NS	NS	NS	NS	NS	NS	NS	U	U	U	U	U	0.3 J	U	0.29 J	U
trichlorofluoromethane	--	NS	NS	NS	NS	NS	NS	NS	NS	U	U	U	U	U	U	U	U	U
vinyl chloride	210	NS	NS	NS	NS	NS	NS	NS	NS	U	U	U	U	U	U	U	U	U
Pesticides (µg/Kg)																		
p,p'-DDD	2,600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p,p'-DDE	1,800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p,p'-DDT	1,700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Sample Location	NYSDEC Residential Use Soil Cleanup Objective (mg/Kg)	72SCS-7A		72SCS-7B		72SCS-7C		72SCS-7D	
Sample ID		72SCS04A02AA	72SCS07A04AA	72SCS07B02AA	72SCS07B04AA	72SCS07C02AA	72SCS07C04AA	72SCS07D02AA	72SCS07D04AA
Date of Collection		5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013	5/9/2013
Sample Depth (ft bgs)		0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4	0 - 2	2 - 4
Metals (mg/kg)									
aluminum	--	U	6,700	5,900	11,000	7,000	10,000	6,000	10,000
antimony	--	U	U	U	U	U	U	U	U
arsenic	16	U	3.60	3.00	3.20	3.70	3.90	3.40	6.30
barium	350	U	30	19	59	22	58	21	85
berylium	14	U	0.31 J	0.24 J	0.38 J	0.28 J	0.4 J	0.25 J	0.5 J
boron - total	--	U	2.6 J	2.1 J	1.7 J	1.8 J	1.8 J	1.7 J	2.9 J
cadmium	2.5	U	0.089 J	0.059 J	0.33 J	0.076 J	0.2 J	0.076 J	1.1
calcium	--	U	44,000	16,000	1,600	3,500	4,400	6,700 J ♦	4,400
chromium	22	U	10	7.1	11	8.2	12	7.3	11
cobalt	--	U	5.1	4.8	6.2	5.3	6.2	4.8	4.9
copper	270	24	52	19	14	24	21	22	94
iron	--	5.7 J	16,000	12,000	15,000	14,000	16,000	13,000	17,000
lead	400	U	18	3.1	6.4	3.8	5.9	4.1	36
magnesium	--	U	3,700	3,500	2,300	3,200	2,800	2,800	2,200
manganese	2,000	U	700	560	590	650	560	480	560
molybdenum	--	U	0.64 J	U	U	U	0.54 J	U	0.5 J
nickel	140	U	13	11	12	13	14	11	13
potassium	--	U	860	780	630	840	800	760	890
selenium	36	U	U	U	U	U	U	U	U
silver	36	U	U	U	U	U	U	U	U
sodium	--	U	100 J	75 J	89 J	67 J	80 J	61 J ♦	120 J
strontium	--	U	58	31	5.8	11	9.4	13 ♦	15
vanadium	--	U	12.0	10.0	18.0	11	17	10	24
zinc	2,200	34	44	31	69	33	54.0	34	140
mercury	0.81	U	U	U	U	U	U	U	U

Table 1
Notes and Data Qualifiers

J = The analyte was positively identified above MDL, however the concentration is below the reporting limit (RL).

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit.

NA = Not Available, no NYCRR Part 375 Soil Cleanup Objective.

NS = Not Sampled.

♦ = Duplicate value was used.

= Value exceeded 6-NYCRR Part 375 Residential Use Soil Cleanup Objective.

Table 2
AOI 72 Perched Water and Groundwater Sampling Results

Sample Location	NYS Groundwater Standards	AOI72SCS-9	AOI72SCS-14
Sample ID		72SCS09W04AA	72SCS14W08AA
Date of Collection		5/16/2013	5/16/2013
Sample Depth (ft bgs)		4	8
VOCs (µg/L)			
1,2,4-trimethylbenzene	5*	11	0.48
1,3,5-trimethylbenzene	5*	4.2	0.27
acetone	50	3.7 J	5.7 J
cis-1,2-dichloroethene	5*	0.24 J	U
ethylbenzene	5*	0.55 J	U
isopropylbenzene	5*	0.65 J	U
n-butylbenzene	5*	1.1	U
n-propylbenzene	5*	1.2	0.2 J
m,p,-xylene (sum of isomers)	5*	2.1	U
naphthalene	10	8.2	1.1 J
o-xylene	5*	1	0.19 J
sec-butylbenzene	5*	0.91 J	0.19 J
toluene	5*	0.36 J	0.26 J
trichloroethene (TCE)	5*	11	1.6

Notes:

U - The analyte was analyzed for, but not detected. The numerical value is at or below the MDL.

J - The analyte was positively identified, but the quantitation is an estimation.

- Exceedance of the NYS Groundwater Standards or Guidance Values.

* - The principal organic contaminant standard for groundwater of 5 µg/L applies to this substance.

Table 3
AOI 72 TCLP Soil Sampling Results

Sample Location	Maximum Concentration of Contaminants for the Toxicity Characteristic	Reporting Limit	AOI 72
Sample ID			**AOI72TCLP01AA**
Date of Collection			**12/13/2013**
Sample Depth (ft bgs)			**2-6**
TCLP Analytes (mg/L)			
Mercury	0.2	0.00003	U
Arsenic	5	0.022	0.026 J
Barium	100	0.002	0.51 J
Cadmium	1	0.002	0.0026 J
Chromium	5	0.003	U
Lead	5	0.013	0.019 J
Selenium	1	0.024	U
Silver	5	0.004	U
2-Methylphenol (o-cresol)	200	0.0096	U
3 & 4 Methylphenol	200	0.0025	U
Total Cresols	200	0.0025	U
1,4-Dichlorobenzene	7.5	0.0031	U
2,4-Dinitrotoluene	0.13	0.016	U
Hexachlorobenzene	0.13	0.0065	U
Hexachlorobutadiene	0.5	0.032	U
Hexachloroethane	3	0.021	U
Nitrobenzene	2	0.0079	U
Pentachlorophenol	100	0.2	U
Pyridine	5	0.011	U
2,4,6-Trichlorophenol	400	0.0027	U
2,4,5-Trichlorophenol	2	0.0043	U
Benzene	0.5	0.0016	U
2-Butanone (MEK)	200	0.018	U
Carbon tetrachloride	0.5	0.0019	U
Chlorobenzene	100	0.0017	U
Chloroform	6	0.0016	0.005 J
1,2-Dichloroethane	0.5	0.0013	U
1,1-Dichloroethene	0.7	0.0023	U
Tetrachloroethene	0.7	0.002	U
Trichloroethene	0.5	0.0016	U
Vinyl chloride	0.2	0.001	U

Notes:

J - The analyte was positively identified, but the quantitation is an estimation.

U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

Table 4
AOI 72 2014 Confirmatory Soil Sampling Results

Sample Location	NYSDEC Residential Use Soil Cleanup Objective (µg/Kg)	AOI 72 Excavation	
Sample ID		AOI72BT0106AA	AOI72BT0206AA
Date of Collection		4/16/2014	4/16/2014
Sample Depth (ft bgs)		6	6
VOCs (µg/Kg)			
1,2,4-trimethylbenzene	47,000	U	U
1,3,5-trimethylbenzene	47,000	U	U
acetone	100,000	10 J	U
benzene	2,900	U	U
ethylbenzene	30,000	U	U
isopropylbenzene	--	U	U
naphthalene	100,000	U	U
n-butylbenzene	12,000	U	U
n-propylbenzene	100,000	U	U
m,p-xylene	100,000	U	U
o-xylene	100,000	U	U
p-isopropyltoluene	--	U	U
sec-butylbenzene	100,000	U	U
toluene	100,000	U	U
trichloroethylene (TCE)	10,000	U	U
trichlorofluoromethane	--	U	U
vinyl chloride	210	U	U

Notes:

J - The analyte was positively identified, but the quantitation is an estimation.

U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

-- - No NYCRR Part 375 Soil Cleanup Objective or Background Screening Level is known for this compound.

Table 5

AOI 72 and 474 Backfill Soil Sampling Results

Sample ID	NYCRR Part 375 Residential use Soil Cleanup Objectives	AOI474BF
Date of Collection		**10/25/2013**
VOCs (µg/Kg)		
Methylene Chloride	--	4.8 JB
SVOCs (µg/Kg)		
benzo(a)anthracene	1,000	23 J
benzo(a)pyrene	1,000	22 J
benzo(b)fluoranthene	1,000	28 J
dimethyl phthalate	--	100 J
fluoranthene	100,000	40 J
phenanthrene	100,000	20 J
pyrene	100,000	37 J
Metals (mg/Kg)		
aluminum	--	5,300
arsenic	16	3.9
barium	350	24
berylium	14	0.26 J
boron - total	--	2.2 J
cadmium	3	0.11 J
calcium	--	12,000
chromium	22	5.2
cobalt	--	4
copper	270	14
iron	--	11,000
lead	400	5
magnesium	--	3,200
manganese	2,000	420
potassium	--	770
strontium	--	19
vanadium	--	9.5
zinc	2,200	29
mercury	0.81	0.013 J
Pesticides (µg/Kg)		
p,p'-DDE	1,800	0.86 J

Notes:

J - The analyte was positively identified, but the quantitation is an estimation.

U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

Indicates an exceedance of the NYCRR Part 375 Residential use Soil Cleanup Objective

-- - No NYCRR Part 375 Soil Cleanup Objective or Background Screening Level is known for this compound.

Table 6
AOI 72 2015 Surface Soil Sampling Results

Sample Location	NYCRR Part 375 Residential use Soil Cleanup Objectives (µg/Kg)	Griffiss AFB Background Screening Levels	72SCS-4	72SCS-5	72SCS-7
Sample ID			72SCS04ESSAA	72SCS05ESSAA	72SCS07ESSAA
Date of Collection			8/11/2015	8/11/2015	8/11/2015
Sample Depth (ft bgs)			0-2"	0-2"	0-2"
Metals (mg/kg)					
aluminum	NA	18,306	8,700	8,600	2,800
antimony	NA	U	U	U	U
arsenic	16	4.9	4	3	2.2 J
barium	350	71	78	27	U
berylium	14	0.65	U	U	U
boron - total	NA	U	5.6 J	2.9 J	5.2 J
cadmium	2.5	U	0.3 J	0.19 J	0.073 J
calcium	NA	23,821	13,000	2,600	140,000
chromium	22	22.6	9	8	5
cobalt	NA	19	4	4	2
copper	270	43.8	40	28	140
iron	NA	47,350	13,000	13,000	U
lead	400	36	22	11	U
magnesium	NA	7,175	2,600	2,100	4,300
manganese	2,000	2,106	400	U	U
molybdenum	NA	U	U	U	U
nickel	140	U	10	U	U
phosphorus	NA	NA	520	480	280 J
potassium	NA	1,993	930	900	U
selenium	36	U	U	U	U
silver	36	U	U	U	U
sodium	NA	259	U	U	95 J
strontium	NA	55	20	U	U
vanadium	NA	17.9	U	15	11
zinc	2,200	120	60	41	46
mercury	0.81	U	U	U	U

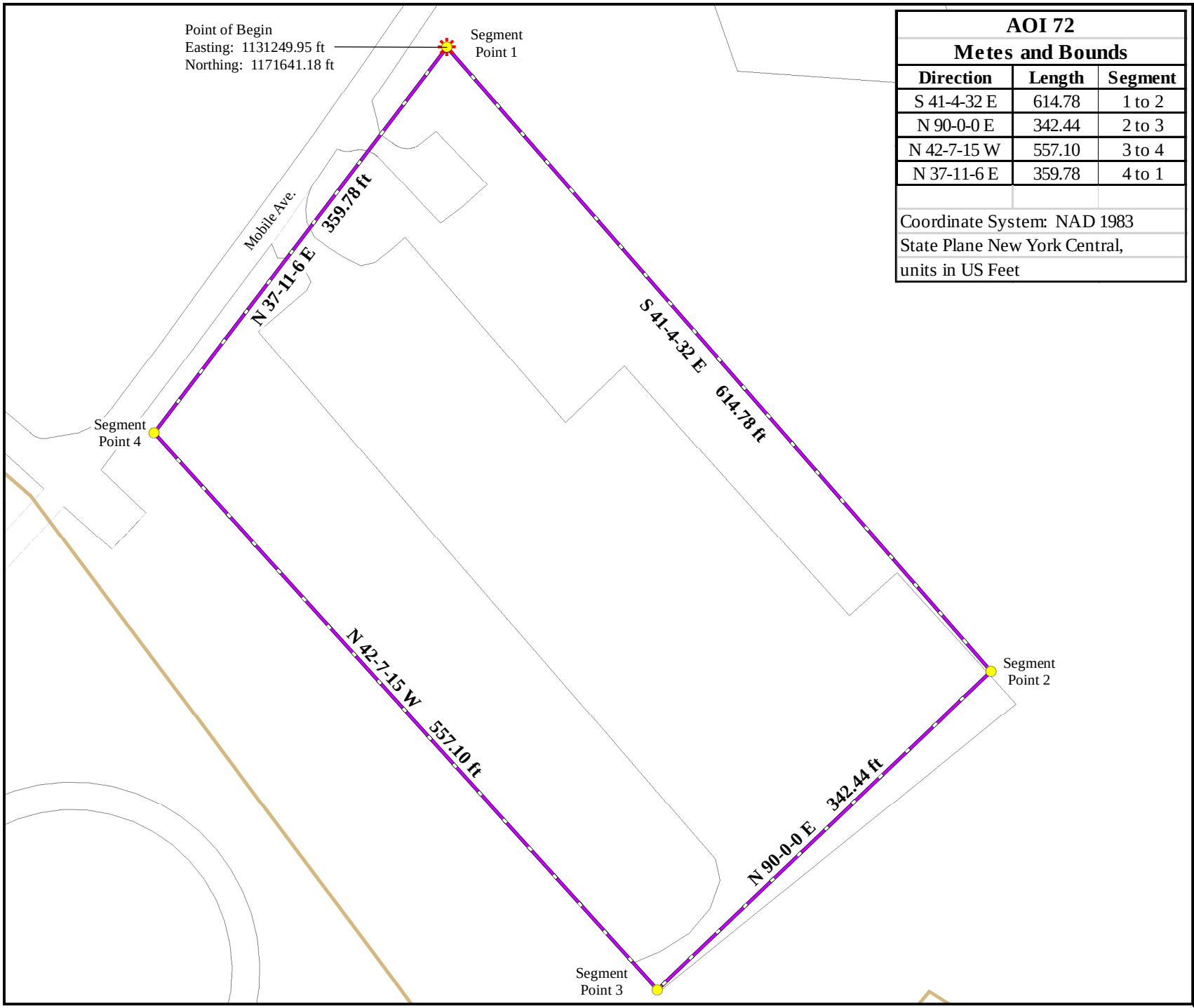
Notes:
J - The analyte was positively identified, but the quantitation is an estimation.
U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
NA - not available
NS - not sampled

Table 6
AOI 72 2015 Surface Soil Sampling Results

Sample Location	NYCRR Part 375 Residential use Soil Cleanup Objectives (µg/Kg)	72SCS-1
Sample ID		72SCS01ESSAA
Date of Collection		8/11/2015
Sample Depth (ft bgs)		0-2"
Pesticides (µg/kg)		
alpha BHC	97	U
beta BHC	72	U
delta BHC	100,000	U
gamma BHC (Lindane)	29	U
alpha-Chlordane	91	U
gamma-Chlordane	NA	U
p,p'-DDD	2,600	U
p,p'-DDE	1,800	U
p,p'-DDT	1,700	U
aldrin	19	U
dieldrin	39	U
alpha endosulfan	NA	U
beta endosulfan	NA	U
endosulfan sulfate	4,800	U
endosulfan II	4,800	U
endrin	2200	U
endrin ketone	NA	U
endrin aldehyde	NA	U
heptachlor	420	U
heptachlor epoxide	NA	U
methoxychlor	NA	U
toxaphene	NA	U

U- Undetected at the Limit of Detection.

Figures

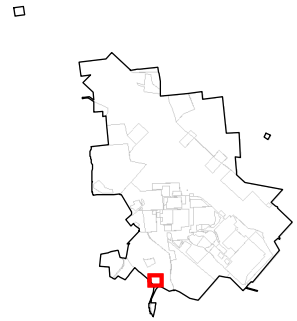


AOI 72

Metes and Bounds

Direction	Length	Segment
S 41-4-32 E	614.78	1 to 2
N 90-0-0 E	342.44	2 to 3
N 42-7-15 W	557.10	3 to 4
N 37-11-6 E	359.78	4 to 1

Coordinate System: NAD 1983
State Plane New York Central,
units in US Feet



Site Location

Legend

- Point of Begin
- Segment Point
- Metes and Bounds
- Existing Airfield / Road
- Removed Airfield / Road
- Existing Facility
- Demolished Facility
- Parcel Boundary

N

0 100
Feet

UNITED STATES AIR FORCE
FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

Figure 1
AOI 72
Site Boundary
Metes and Bounds

FPM

October 2015

Path: Y:\GIS_Projects\Griffiss\Projects\40-05-27\40-04-11\5-year_review\2015\Metes_Bounds\AOI_72_MB.mxd



N

Site Location

Legend

- Surface Soil Sample Location - 2015
- Soil Sampling Location (for pesticides) 2013
- XRF Screening/Sampling Location (for metals) 2013
- Secondary Screening Location (for metals) 2013
- Previous Soil Sample Location 1999
- Parcel F9 Boundary
- Existing Facility
- AOI 72 Site Restriction
- 2014 Excavation

60 30 0 60

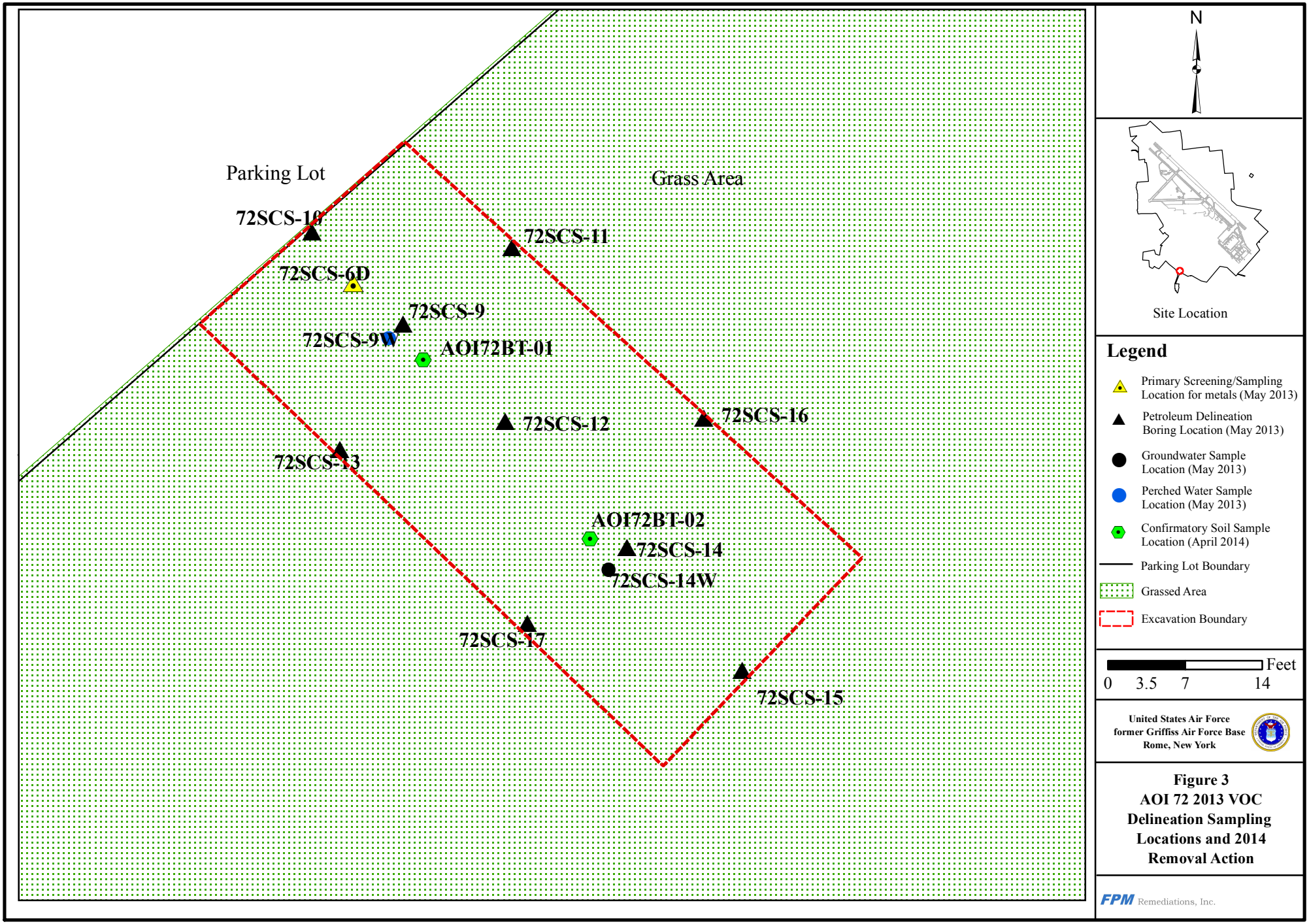
Feet

United States Air Force
former Griffiss Air Force Base
Rome, New York

Figure 2
2013 and 2015 Sampling Locations

FPM Remediations, Inc.

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