

DEPARTMENT OF THE AIR FORCE

AIR FORCE CIVIL ENGINEER CENTER

December 12, 2014

MEMORANDUM FOR: U.S. Environmental Protection Agency - Region 2

Attn: Robert Morse Federal Facilities Section 290 Broadway, 18 Floor New York, NY 10007-1866

New York State Department of Environmental Conservation Attn: Ms. Heather Bishop

Division of Environmental Remediation

625 Broadway 11th Floor Albany, NY 12233-7015

Ms. Kristin Kulow New York State Department of Health Bureau of Environmental Exposure Investigation 28 Hill Street, Suite 201 Oneonta, NY 13820

FROM:

AFCEC/CIBE – Plattsburgh 8 Colorado Street, Suite 121

Plattsburgh NY, 12903

SUBJECT:

Final Site Closure Report for Land Use Control/Institutional Control Site DP012

Building 301 AOC December 2014

Former Griffiss Air Force Base (AFB) Rome, New York Contract Number FA8903-10-D-8595 / Delivery Order 0014

Accompanying this letter please find the "Final Site Closure Report for Land Use Control/Institutional Control Site DP012 Building 301 AOC" in relation to work conducted at the Former Griffiss AFB in Rome, New York under the referenced Performance Based Remediation (PBR) contract. The draft report was submitted on October 17, 2014.

We would appreciate review comments by January 12, 2014 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

Program Manager/BRAC Environment Coordinator

BRAC Program Execution Branch

Distribution:

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(1 CD)

FINAL

SITE CLOSURE REPORT LAND USE CONTROL/INSTITUTIONAL CONTROL SITE DP012 - BUILDING 301 AREA OF CONCERN

FORMER GRIFFISS AIR FORCE BASE SITE ROME, NEW YORK

Prepared for:



Air Force Civil Engineer Center Building 171 2261 Hughes Avenue, Suite 155, Joint Base San Antonio Lackland, TX

Prepared by:



584 Phoenix Drive Rome, NY 13441

In association with:



10901 Lowell Avenue, Suite 271 Overland Park, Kansas 66210

Contract Number FA8903-10-D-8595/ Delivery Order 0014

December 2014

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LIST OF ACRONYMS AND ABBREVIATIONS

AFB Air Force Base

AFCEC Air Force Civil Engineer Center

AOC Area of Concern
AOI Area of Interest

bgs Below ground surface COC Contaminant of Concern

CQCR Chemical Quality Control Report

EM Electromagnetic

EPA United States Environmental Protection Agency

FPM FPM Remediations, Inc.

ft Feet

GPR Ground Penetrating Radar

kg Kilogram

LTM Long Term Monitoring

LUC/IC Land-Use Control/Institutional Control

m Meter

MAG Magnetometer MHz Megahertz

NYCRR New York Codes, Rules, and Regulations

NYSDEC New York State Department of Environmental Conservation

NYSDOH New York State Department of Health OHSWA Oneida Herkimer Solid Waste Authority

PCB Polychlorinated biphenyl
RI Remedial Investigation
ROD Records of Decision
SCO Site Cleanup Objective

S-N South to North

SVOC Semi-Volatile Organic Compound

TCLP toxicity characteristic leaching prodedure

UFP QAPP Uniform Federal Policy Quality Assurance Project Plan

VOC Volatile Organic Compound

W-E West to East µg Microgram

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1.0 INTRODUCTION

FPM Remediations, Inc. (FPM), in association with CAPE, Inc., under contract with the Air Force Civil Engineer Center (AFCEC), conducted a site closure investigation in 2012 and 2013 and a removal action in 2014 at the Land Use Control/Institutional Control (LUC/IC) Site DP012 Building 301 Area of Concern (AOC) at the former Griffiss Air Force Base (AFB) in Rome, New York. The objective of the site closure activities is to achieve unrestricted reuse at the site. Detailed descriptions of the 2013 site investigation are provided in the Final Site Investigation Report for LUC/IC Site DP012 Building 301 AOC (CAPE/FPM, December 2013). This Site Closure Report has been prepared to document the 2014 Removal Action and to recommend unrestricted reuse at the site.

The removal action was conducted on July 16, 2014 in accordance with the Final Site Investigation Report for LUC/IC Site DP012 Building 301 AOC, including Appendix E – Removal Action Plan for DP012 Building 301 AOC (CAPE/FPM, December 2013). The Updated 2014 Uniform Federal Policy Quality Assurance Project Plan (UFP QAPP) for Performance Based-Remediation at the Former Griffiss AFB (CAPE/FPM, June 2014) and Final Addenda Health and Safety Plan for Performance Based-Remediation at the Former Griffiss AFB (CAPE/FPM/AECOM, July 2012) were also adhered to.

2.0 RECORD OF DECISION

The Record of Decision (ROD) for the Building 301 AOC was signed by the Air Force and the United States Environmental Protection Agency (EPA) in September 1999 (E&E, September 1999). Based on the previous investigations and environmental conditions at the site, the remedy for the Building 301 AOC was LUC/ICs for commercial/administrative use and groundwater use restrictions. These groundwater use restrictions were removed in June 2012. The ROD for the Building 301 AOC, provided in Appendix A, states that:

• The property will be commercial/administrative use unless permission is obtained from the EPA, NYSDEC, and New York State Department of Health (NYSDOH).

3.0 SITE BACKGROUND

Building 301 formerly housed the Entomology Shop, which provided pest control for the base. A drywell was reportedly located in the grassy area at the south east corner of the former building. The drywell was reportedly a 4-foot square by 8-foot deep pit filled with stone and gravel. It was used from the 1940s through 1982 to dispose of small quantities of excess pesticides and rinse water from pesticide applications. Previous investigations have not been able to locate this drywell.

The Remedial Investigation (RI) for the Building 301 AOC was completed in 1994 (Law, December 1996). Results showed the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and metals in soils at the site. A risk assessment was also conducted for the RI. For human health, contaminants in the soil and

groundwater were within the lower end of the acceptable EPA target risk range for industrial and commercial users.

Long Term Monitoring (LTM) was conducted at the site from 2003 to 2004. Groundwater was deemed not contaminated and monitoring ceased at the site in 2004 with regulatory approval. Removal of the groundwater restriction at the site was approved by the EPA on June 7, 2012. The removal of the groundwater restriction was also accepted by the NYSDEC (email to AFCEC dated June 6, 2012). The approval documentation is provided in Appendix B.

A Phase II Environmental Site Assessment performed at and surrounding the Building 301 AOC in 2010 indicated contaminant of concern (COC) concentrations were below 6-NYCRR Part 375 Residential use SCOs at soil samples.

4.0 2012 AND 2013 SITE CLOSURE INVESTIGATION

The site closure investigation conducted in 2012 and 2013 included a geophysical investigation and soil sampling. The geophysical investigation was conducted to confirm the absence/presence of the drywell at the site and soil sampling was conducted to delineate/confirm the presence of residual soil contamination at the site above 6- New York Codes, Rules, and Regulations (NYCRR) Part 375 Residential use Site Cleanup Objectives (SCOs).

4.1 Geophysical Investigation

The Geophysical Investigation was conducted in October 2012. The investigation included the collection of electromagnetic (EM), magnetometer (MAG), 200-megahertz (MHz), and 400-MHz ground penetrating radar (GPR) data along a grid established over the approximate location of the suspected drywell. The grid (and suspected drywell) position was located near the former eastern wall of Building 301 in an area that is now largely covered by grass and trees. The grid dimensions were fifteen meters (m) south to north (S-N) and fifteen meters west to east (W-E). Survey line spacing's were established at 1m spacing in both the S-N and W-E directions.

Based on the geophysical survey, the potential drywell location was identified. All other anomalies could be attributed to underground utilities and/or the former building footprint.

4.2 Soil Sampling

Nine soil samples were collected from three soil borings (direct push) within the Building 301 AOC site boundary (Figure 1) and analyzed for pesticides (using EPA method SW8081). Samples were collected from 0 to 4 feet (ft) below ground surface (bgs), 4 to 8 ft bgs, and 8 to 12 ft bgs from each of the borings. The decision to analyze for pesticides only was based on historical site uses and previous sampling results.

4.2.1 Soil Sampling Results

Pesticide concentrations were below the 6-NYCRR Part 375 Residential use SCOs in all samples collected at soil borings B301SCS-1 and -3. Only one pesticide, dichlorodiphenyl-

trichloroethane (DDT) was detected above the 6-NYCRR Part 375 Residential use SCOs in samples collected at soil boring B301SCS-2. DDT was detected with a concentration of 3,000 microgram (μ g)/ kilogram (kg) in the 0 to 4 ft bgs sampling interval. The 6-NYCRR Part 375 Residential use SCO for DDT is 1,700 μ g/kg. The DDT concentrations detected in the 4 to 8 ft bgs and 8 to 12 ft bgs sampling intervals were 230 μ g/kg and 1.2 J μ g/kg, respectively. The J data qualifier indicates that the analyte was positively identified but the quantitation is an estimation. All sampling results are presented in Table 1.

5.0 2014 REMOVAL ACTION

Based on the 2013 Site Closure Investigation, a removal action was conducted on July 16, 2014 to remove contaminated soils at the site.

5.1 Confirmatory Soil Sampling

Confirmatory sampling was conducted on April 7, 2014 to define the boundaries of the excavation. Five soil samples were collected from five soil borings (direct push) within the Building 301 AOC site boundary (Figure 1) and analyzed for pesticides (using EPA method SW8081). Samples from four of the borings were collected from 0 to 4 ft bgs. These borings were positioned at the proposed north, south, east, and west walls (B301EW, B301NW, B301SW, and B301WW). One sample from one boring located in the middle of the proposed excavation was collected at 4 ft bgs (B301BE). This sample was collected to represent the bottom of the excavation. Soil sampling results indicated that all pesticide concentrations were below the 6-NYCRR Part 375 Residential Use SCOs. The confirmatory soil sampling results are presented in Table 2. The daily chemical quality control report (CQCR) completed during this sampling event is provided in Appendix C. The raw laboratory data and the validated laboratory data are provided in Appendix D and E, respectively.

5.2 Toxicity Characteristic Leaching Procedure Sampling

One composite sample from B301BE was also collected from 0 to 4 ft bgs on April 7, 2014. This sample was analyzed for toxicity characteristic leaching procedure (TCLP) pesticides. An additional soil sample was collected at B301BE for TCLP metals analysis on May 21, 2014. Results showed that all pesticide and metals concentrations were below the hazardous waste characteristic levels (EPA, 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 CQCR completed for this sampling event is provided in Appendix C. The raw laboratory data is provided in Appendix D. The approved waste profile form is provided in Appendix F.

5.3 Soil Excavation

The excavation was conducted on July 16, 2014. The excavation was approximately 261 square feet with a depth of 4 ft bgs. The absence of the drywell at the site was verified during the excavation. No material representing the drywell was identified (assumed to be 4-foot square by 8-foot deep pit filled with stone and gravel). The excavated soils were comprised of sandy silt

with rocks/stone located sporadically throughout the excavation. All soils were removed and placed into 20-yard dump trucks for disposal. A total of 66.81 tons (roughly 45 cubic yards (cy)) of contaminated soils were disposed of. Photos taken during the excavation activities are provided in Appendix G.

5.4 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 F.

5.5 Site Restoration

The site was restored on July 16 and 17, 2014. The restoration included the backfilling using clean sand (approximately 45 cy) to approximately 2-inches bgs. This was followed by the application of top soil (2 cy) to grade and reseeding with grass. The daily field forms completed for both restoration events are provided in Appendix C. All photos of the restoration and restored site are provided in Appendix G.

Prior to use, the backfill sand and top soil were sampled and analyzed for VOCs, SVOCs, metals, 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 4. The raw laboratory data is provided in Appendix C. It should be noted that the same backfill material supply was used for two other Griffiss removal actions at Area of Interest (AOI) 72 and AOI 474, and thus one sample was collected and identified as AOI474BF.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Removal of LUC/ICs and site closure is recommended for DP013 Building 301 AOC. The 2014 removal action was successful in removing all residual soil contamination. In addition, the 2012 geophysical investigation and the 2014 removal action confirmed the absence of the drywell at the site.

7.0 REFERENCES

- CAPE/FPM, Final Site Investigation Report for LUC/IC Site DP012 Building 301 AOC at the former Griffiss AFB, New York, December 2013.
- CAPE/FPM, Appendix E Final Removal Action Plan for LUC/IC Site DP012 Building 301 AOC at the former Griffiss AFB, New York, December 2013.
- CAPE/FPM, Updated 2014 Final Uniform Federal Policy Quality Assurance Project Plan for Performance Based-Remediation at the former Griffiss AFB, New York, June 2014.
- CAPE/FPM, Final Addenda Health and Safety Plan for Performance Based-Remediation at the former Griffiss AFB, New York, July 2012.
- Ecology and Environment, Inc, Final Records of Decision for Areas of Concern at the Former Griffiss Air Force Base, Rome, NY, September 1999.
- Law, Draft Final Remedial Investigation for DP013 Building 301 AOC at the Former Griffiss Air Force Base, Rome, NY, December 1996.
- NYSDEC, 6-NYCRR Part 375 Environmental Remediation Programs, December 2006.

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Tables

Table 1 DP012 Building 301 AOC 2013 Soil Sampling Results

Sample Location	NYCRR Part 375		B301SCS-1			B301SCS-2			B301SCS-3	
Sample ID	Residential use Soil	B301SCS0104AA	B301SCS0108AA	B301SCS0112AA	B301SCS0204AA	B301SCS0208AA	B301SCS0212AA	B301SCS0304AA	B301SCS0308AA	B301SCS0312AA
Date of Collection	Cleanup Objectives (µg/kg)	5/6/2013	5/6/2013	5/6/2013	5/6/2013	5/6/2013	5/6/2013	5/6/2013	5/6/2013	5/6/2013
Sample Depth (ft bgs)	Objectives (µg/kg)	0-4	4-8	8-12	0-4	4-8	8-12	0-4	4-8	8-12
Pesticides (µg/kg)										
alpha BHC	97	U	U	U	U	U	U	U	U	U
beta BHC	72	U	U	U	U	U	U	U	U	U
delta BHC	100,000	U	U	U	U	U	U	U	U	U
gamma BHC (Lindane)	NA	U	U	U	U	U	U	U	U	U
alpha-Chlordane	91	19	4.5	U	77 J	6.7	U	4.2	1.3 J	0.51 J
gamma-Chlordane	NA	21	5.8	U	81 J	5.8	U	3.8 J	U	U
p,p'-DDD	2,600	14 J	5.8 J	U	270	19	U	U	U	U
p,p'-DDE	1,800	59	30	0.52 J	1,500	140	1.1 J	13	3.9	2.4
p,p'-DDT	1,700	160	92	1.2 J	3,000	230	1.2 J	82	13 J	19 J
aldrin	19	U	U	U	U	U	U	U	U	U
dieldrin	39	0.66 J	U	U	8.5	0.26 J	U	0.97 J	0.99 J	0.24 J
alpha endosulfan	NA	U	U	U	U	U	U	U	U	U
beta endosulfan	NA	U	U	U	U	U	U	U	U	U
endosulfan sulfate	4,800	U	U	U	U	U	U	U	U	U
endosulfan II	4,800	U	U	U	U	U	U	U	U	U
endrin	2200	U	U	U	U	U	U	U	U	U
endrin ketone	NA	U	U	U	4.1 J	U	U	U	U	U
endrin aldehyde	NA	U	U	U	U	U	U	U	U	U
heptachlor	420	1.4 J	0.55 J	U	1.4 J	U	U	U	U	U
heptachlor epoxide	NA	1.3 J	U	U	8.7 J	0.52 J	U	2 J	0.53 J	U
methoxychlor	NA	U	U	U	U	U	U	U	U	U
toxaphene	NA	U	U	U	U	U	U	U	U	U

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 = No NYCRR Part 375 Soil Cleanup Objective.

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

Table 2
DP012 Building 301 AOC
Confirmatory Soil Sampling Results (2014)

Sample Location	NYCRR Part 375	Building 301 Excavation Endpoint Samples						
Sample ID	Residential use	B301EW04AA	B301NW04AA	B301SW04AA	B301WW04AA	B301BE04AA		
Date of Collection	Soil Cleanup	4/7/2014	4/7/2014	4/7/2014	4/7/2014	4/7/2014		
Sample Depth (ft bgs)	Objectives (µg/kg)	0-4	0-4	0-4	0-4	4		
Pesticides (µg/kg)								
alpha BHC	97	U	U	U	U	U		
beta BHC	72	U	U	U	U	U		
delta BHC	100,000	U	U	U	U	U		
gamma BHC (Lindane)	NA	U	1.2 J	U	U	U		
alpha-Chlordane	91	10 J	8.2 J	U	U	11 J		
gamma-Chlordane	NA	9.3	5.3 J	U	U	10		
p,p'-DDD	2,600	U	U	1.3 J ♦	U	18		
p,p'-DDE	1,800	13	110	0.91 J	0.3 J	16		
p,p'-DDT	1,700	45	120 J	20 J	U	83		
aldrin	19	U	U	U	U	U		
dieldrin	39	0.36 J	U	U	U	U		
alpha endosulfan	NA	U	U	U	U	U		
beta endosulfan	NA	U	U	U	U	U		
endosulfan sulfate	4,800	U	U	U	U	U		
endosulfan II	4,800	U	U	U	U	U		
endrin	2200	U	U	U	U	U		
endrin ketone	NA	U	U	U	U	U		
endrin aldehyde	NA	U	U	U	U	U		
heptachlor	420	U	U	U	U	0.47 J		
heptachlor epoxide	NA	2.9	14 J	U	U	2.6		
methoxychlor	NA	U	U	U	U	U		
toxaphene	NA	U	U	U	U	U		

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 = No NYCRR Part 375 Soil Cleanup Objective.

Table 3
DP012 Building 301 AOC
TCLP Sampling Results

Sample Location	Maximum		Building 301 B301TCLP04AA 4/7/2014 and 5/21/2014	
Sample ID	Concentration of	Reporting		
Date of Collection	Contaminants for the Toxicity	Limit		
Sample Depth (ft bgs)	Characteristic		0-4	
TCLP Analytes (mg/L)				
endrin	0.02	0.0001	U	
heptachlor	0.008	0.0001	U	
heptachlor epoxide	0.008	0.0001	U	
gamma-BHC (lindane)	0.4	0.0001	U	
toxaphene	0.5	0.008	U	
methoxychlor	10	0.0002	U	
technical chlordane	0.03	0.0048	U	
Mercury	0.2	0.00003	U	
Arsenic	5	0.022	0.065 J	
Barium	100	0.002	0.41 J	
Cadmium	1	0.002	0.0033 J	
Chromium	5	0.003	U	
Lead	5	0.035	U	
Selenium	1	0.075	U	
Silver	5	0.015	U	

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

Table 4
Backfill Soil Sampling Results

Sample ID	NYCRR Part 375 Residential use	AOI474BF
Date of Collection	Soil Cleanup Objectives	10/25/2013
VOCs (µg/kg)	1	
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
molybdenum		U
nickel	140	8.5
potassium		770
selenium	36	U
silver	36	U
sodium		U
thallium		U
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

B =

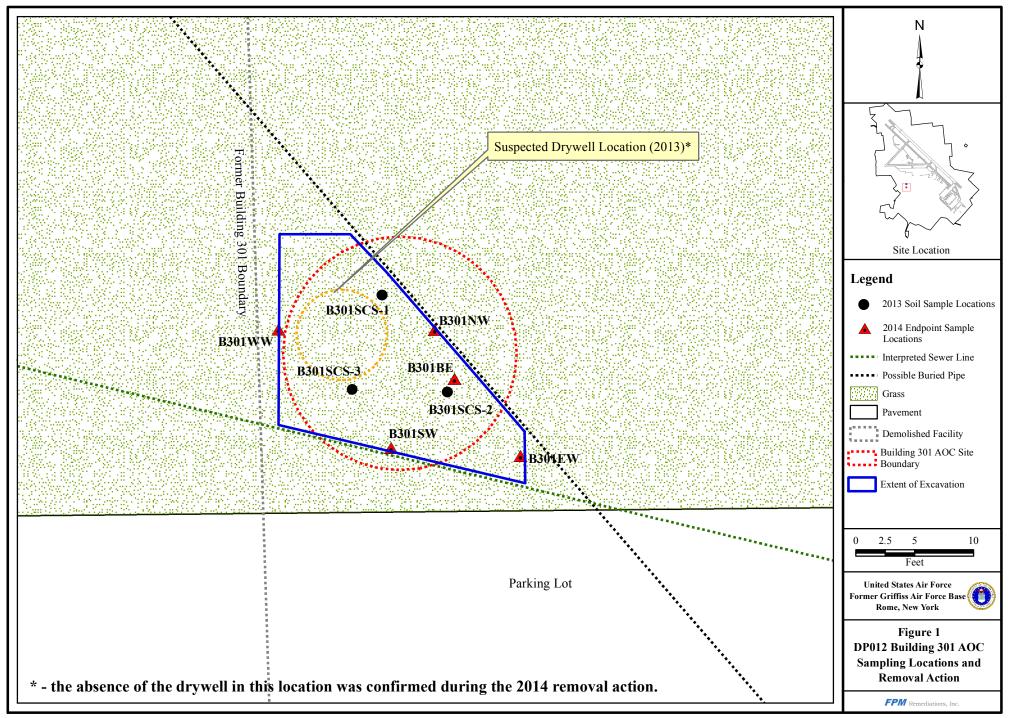
J - The analyte was positively identified, but the quantitation is an estimation.

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.

Figures



Appendix A



GRIFFISS AFB NEW YORK

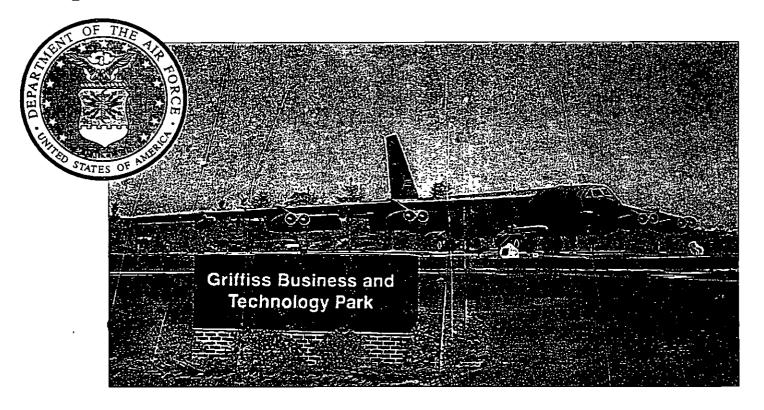
ADMINISTRATIVE RECORD COVER SHEET

AR File Number 1362

Final Records of Decision for Areas of Concern (AOCs)

Former Griffiss Air Force Base Rome, New York

September 1999



- Building 301 Drywell AOC
- Building 219 Drywell AOC
- Building 214 AOC
- Fire Demonstration Area AOC
- Suspected Fire Training Area AOC



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 2

290 BROADWAY NEW YORK, NY 10007-1866

1362

94-7082

17-A-95

RIJFS

Mike W

SEP 30 1999

Mr. Albert F. Lowas Director AFBCA/DR 1700 North Moore Street, Suite 2300 Arlington, VA 22209-2802

Re: Record of Decision for Five Areas of Concern, Griffiss Air

Force Base

Dear Mr. Lowas:

This is to inform you that after considering public comments on the Proposed Plans, Griffiss Air Force Base's responsiveness summary to those comments, the Draft Records of Decision and other supporting documents, the U.S. Environmental Protection Agency (EPA) concurs with the Records of Decision for the Suspected Fire Training Area, the Fire Demonstration Area, Building 301, Building 214 and Building 219. Enclosed is a copy of the signed Records of Decision, which I have co-signed on behalf of EPA.

These Records of Decision address only the above mentioned areas of concern. All other areas of Griffiss Air Force Base are being addressed under separate operable units. Please note that these Records of Decision require certain land use restrictions (e.g., deed restrictions) and are subject to EPA's 5-year review process (excluding the Suspected Fire Training Area which was found acceptable for unrestricted use).

If you have any questions regarding the subject of this letter, please contact me at (212) 637-5000 or have your staff contact Douglas Pocze at (212) 637-4432.

Sincerely,

Jeanne M

Regional Administrator



cc: M. O'Toole, NYSDEC

New York State Department of Environmental Conservation Division of Environmental Remediation, Room 260B

0 Wolf Road, Albany, New York 12233-7010 Phone: (518) 457-5861 • FAX: (518) 385-8404

Website: www.dec.state ny us

SEP 16 1999

94.7082 17-A-95 RIJFS SD-50 BJ214 DP-12 BJ301 SS-24 FDA FT-48 SFTA Mike W.

John P Cahill

Commissioner

Mr. Richard L. Caspe, P.E.
Director
Emergency & Remedial Response Division
USEPA Region II
290 Broadway, 19th Floor
New York, NY 10007-1866

Dear Mr. Caspe:

Re: Draft Final Records of Decision for Bldgs. 214, 219, 301, FDA, SFTA; Griffiss Air Force Base (ID No. 633006)

The New York State Department of Environmental Conservation (NYSDEC), in conjunction with the New York State Department of Health (NYSDOH), has reviewed the referenced Records of Decision (RODs) and find each to be acceptable.

If you have any questions or comments on this matter, please contact Mr. Sal Ervolina, of my staff, at (518) 457-4349.

Sincerely,

iviichael J O'Trole, Jr.

Director

Division of Environmental Remediation

cc M McDermott

R. Wing/D Pocze, USEPA-Region II

H. Hamel, NYSDOH-Syracuse

D. Swedowski, Reg 6, Watertown

R. Joyner

L. Hansak

S Dimeo



DEPARTMENT OF THE AIR FORCE AIR FORCE BASE CONVERSION AGENCY

1362 5

SEP 1 4 1999

→→→ GRIF AFB

1700 North Moore Street **Suite 2300** Arlington, VA 22209-2802

Mr. Richard L. Caspe USEPA-Region II 290 Broadway, 18th Floor New York, NY 10007-1866

Dear Mr. Caspe

Enclosed are four (4) copies of five (5) Final Records of Decision (RODs) for Building 301 Drywell Area of Concern (AOC), Building 219 Drywell AOC, Building 214 AOC, Fire Demonstration Area AOC, and Suspected Fire Training Area AOC for your review and concurrence. Once the RODs are signed, please retain one copy for your files, and forward three (3) copies to Air Force Base Conversion Agency (AFBCA) for distribution.

If you have any questions or need additional information, please contact Ms. Lynn Hancsak at (703) 696-5244.

Sincerely

Director

Attachment:

Final Records of Decision for Areas of Concern

OPTIONAL FORM 99 (7-90)		
FAX TRANSMI	TTAL	# of pages. ►
TO MIKE ILL DERME	Phone #	J. C. J.
Far s	Fgx #	
NS1-7540-01-117-7368 5099-101	GFNES	M SEPVICES ADMINISTRACE

6

Final Records of Decision for Areas of Concern (AOCs) at the Former Griffiss Air Force Base Rome, New York

September 1999

Prepared for:

U.S. ARMY ENGINEER DISTRICT, KANSAS CITY 601 East 12th Street Kansas City, MO 64106-2896



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International Specialists in the Environment

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Blda 301 Drywell AOC

KE6909 D4854

Record of Decision for the Building 301 Drywell Area of Concern at the Former Griffiss Air Force Base Rome, New York

September 1999

Prepared for:

U.S. ARMY ENGINEER DISTRICT, KANSAS CITY 601 East 12th Street Kansas City, MO 64106-2896

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List of Acronyms

Parallel Control

AFBCA Air Force Base Conversion Agency

AFB Air Force Base AOC Area of Concern

ATSDR Agency for Toxic Substances and Disease Registry

BGS below ground surface

CERCLA Comprehensive Environmental Response, Compensation, and Liability

Act

CRP Community Relations Plan
DoD Department of Defense

EPA United States Environmental Protection Agency

FFA Federal Facility Agreement

FS Feasibility Study

GPR ground-penetrating radar

IRP Installation Restoration Program

NCP National Oil and Hazardous Substance Pollution Contingency Plan

NEADS North East Air Defense Sector NYANG New York Air National Guard

NYSDEC New York State Department of Environmental Conservation

PQL Practical Quantitation Limit
QAPjP Quality Assurance Project Plan

RI remedial investigation
ROD Record of Decision
SAC Strategic Air Command
SAP Sampling and Analysis Plan

SARA Superfund Amendment and Reauthorization Act

SVOC semivolatile organic compound

TBC to be considered

USAF United States Air Force VOC volatile organic compound 1 Declaration

1.1 Site Name and Location

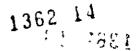
The Building 301 Drywell Area of Concern (AOC) is located at the former Griffiss Air Force Base (AFB) in Rome, Oneida County, New York.

1.2 Statement of Basis and Purpose

This Record of Decision (ROD) presents the institutional controls alternative, in the form of land use restrictions, as the selected remedial action for the Building 301 Drywell AOC at the former Griffiss AFB. This alternative has been chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendment and Reauthorization Act (SARA), and the National Oil and Hazardous Substance Pollution Contingency Plan (NCP). The Air Force Base Conversion Agency (AFBCA), the United States Environmental Protection Agency (EPA), and the New York State Department of Environmental Conservation (NYSDEC) have adopted this ROD through a joint agreement. This decision is based on the administrative record file for this site

1.3 Description of Selected Remedy

The selected remedy for the Building 301 Drywell AOC is institutional controls, in the form of land use restrictions for commercial/administrative use and groundwater use restrictions. The agencies will perform joint five-year reviews to ensure that future land use and restricted groundwater use are in compliance with the transfer documents (deed) and consistent with the risk assessment for commercial/administrative use with groundwater use restrictions.



1.4 Declaration Statement

The AFBCA, EPA, and NYSDEC have determined that institutional controls, in the form of land use restrictions, are warranted for the Building 301 Drywell AOC because the industrial risk assessment indicated potentially harmful levels of contamination in the groundwater when used for consumption purposes. Site soil and groundwater pose no current or future threat to public health or the environment for commercial/administrative use with groundwater use restrictions. Future landowners will be bound, through transfer documents (deed), to the commercial/administrative reuse of the property with groundwater use restrictions.

1.5 Signature of Adoption of the Remedy

On the basis of the remedial investigations (RIs) performed at the Building 301 Drywell AOC, there is no evidence that previous operations at this site have resulted in environmental contamination that poses a current or future potential threat to human health or the environment when used for commercial/administrative purposes. Future landowners will be bound, through transfer documents (deed), to the commercial/administrative reuse of the property. The New York State Department of Environmental Conservation has concurred with the selected remedial action presented in this Record of Decision.

Albert F. Lowas.

Director

Air Force Base Conversion Agency

pomber 15, 1999

Jeanne M. Fox

Regional Administrator

United States Environmental Protection Agency, Region 2

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Decision Summary

This section provides an overview of the site-specific factors and analysis that lead to the institutional controls decision for the Building 301 Drywell AOC.

2.1 Site Name, Location, and Description

Regional Site Description

The former Griffiss AFB covers approximately 3,552 contiguous acres in the lowlands of the Mohawk River Valley in Rome, Oneida County, New York. Topography within the valley is relatively flat, with elevations on the former Griffiss AFB ranging from 435 to 595 feet above mean sea level. Threemile Creek, Sixmile Creek (both of which drain into the New York State Barge Canal), and several state-designated wetlands are located on the former Griffiss AFB, which is bordered by the Mohawk River on the west. Because of its flat topography, sandy soil, and high average precipitation, the former Griffiss AFB is considered a groundwater recharge zone.

Building 301 Drywell Area of Concern

Building 301, which is located in the central portion of the base (see Figure 2-1), formerly housed the Entomology Shop, which provided pest control for the base. Based on interviews with current and retired base personnel, a drywell was reportedly located in a grassy area near the east entrance of the building, south of an existing air conditioning unit (see Figure 2-2). The drywell was reportedly a 4-foot-square by 8-foot-deep pit filled with stone and gravel.

Building 301 is not located near any natural surface water drainage features. Surface water runoff from this AOC is channeled into the base storm drain system, which discharges to the Mohawk River. Groundwater flow in this area is in a westerly direction. Groundwater was encountered at a depth of 15.5 feet below ground surface (BGS) in a soil boring south of the reported drywell location. Subsurface soils in this area were described as black silty fine-grained

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sand from 2 to 4 feet BGS and brown medium- to coarse-grained sand with some gravel and cobbles from 4 to 20 feet BGS.

2.2 Site History and Investigation Activities

The Former Griffiss AFB Operational History

The mission of the former Griffiss AFB varied during its operational history. The former Griffiss AFB was activated on February 1, 1942, as the Rome Air Depot, with the mission of storage, maintenance, and shipment of material for the U.S. Army Air Corps. Upon creation of the U.S. Air Force (USAF) in 1947, the depot was renamed Griffiss Air Force Base. The base became an electronics center in 1950 with the transfer of the Watson Laboratory Complex (later Rome Laboratory). The 49th Fighter Interceptor Squadron was also added during that year. In June 1951, the Rome Air Development Center was established with the mission of accomplishing applied research, development, and testing of electronic air-ground systems. The Headquarters of the Ground Electronics Engineering Installations Agency was added in June 1958 to engineer and install ground communications equipment throughout the world. On July 1, 1970, the 416th Bombardment Wing of the Strategic Air Command (SAC) was activated with the mission of maintenance and implementation of both effective air refueling operations and long-range bombardment capability. The former Griffiss AFB was designated for realignment under the Base Realignment and Closure Acts of 1993 and 1995, resulting in deactivation of the 416th Bombardment Wing in September 1995. Rome Laboratory and the North East Air Defense Sector (NEADS) will continue to operate at their current locations. The New York Air National Guard (NYANG) operated the runway for the 10th Mountain Division deployments until October 1998 when they were relocated to Fort Drum and the Defense Finance and Accounting Services established an operating location at the former Griffiss AFB.

Environmental Background

As a result of the various national defense missions carried out at the former Griffiss AFB since 1942, hazardous substances and hazardous wastes were used, stored, or disposed of at various sites on the installation. The defense missions involved the storage, maintenance, and shipping of war material; research and development; and aircraft operations and maintenance, among others.

Numerous studies and investigations under the U.S. Department of Defense (DoD) Installation Restoration Program (IRP) have been carried out to detect, locate, and quantify contamination of areas by these substances and wastes. These studies and investigations included a records search in 1981 involving interviews with base personnel, a field inspection, compilation of an inventory of wastes, evaluation of disposal practices, and an assessment of the potential for site contamination, problem confirmation and quantification studies in 1982 and 1985; soil and groundwater analyses in 1986, a public health assessment in 1988 conducted by the U.S. Public Health Service, Agency for Toxic Substances and Disease Registry; base-specific hydrology investigations in 1989 and 1990, and a groundwater investigation in 1991. ATSDR issued a Public Health Assessment for Griffiss AFB dated October 23, 1995, and an addendum to the assessment report dated September 9, 1996.

Pursuant to Section 105 of CERCLA, the former Griffiss AFB was included on the National Priorities List (NPL) on July 15, 1987. On August 21, 1990, USAF, EPA, and NYSDEC entered into a Federal Facility Agreement (FFA) under Section 120 of CERCLA. Under the terms of the agreement, USAF is required to prepare and submit numerous reports to NYSDEC and EPA for review and comment. These reports include identification of environmental AOCs on base; a scope of work for an RI; a work plan for the RI, including a sampling and analysis plan (SAP) and a quality assurance project plan (QAPjP); a baseline risk assessment; a community relations plan (CRP); and the RI report. The AFBCA delivered a draft-final RI report covering 31 AOCs to EPA and NYSDEC on December 20, 1996, that incorporated or addressed EPA and NYSDEC comments.

During the RI, a site-specific industrial risk assessment was conducted (using appropriate toxicological and exposure assumptions to evaluate cancer risks and non-cancer health hazards) in order to evaluate the risks posed by detected site contaminants to the reasonable maximally exposed individual. In addition, the RI report compared detected site contaminants to available standards and guidance values using federal and state environmental and public health laws that were identified as potentially applicable or relevant and appropriate requirements (ARARs) at the site. Chemical-specific ARARs are usually health- or risk-based numerical values or methodologies that result in a numerical value when applied to site-specific conditions. Currently, there are no chemical-specific ARARs for soil (other than for PCBs), sediments, or air. Therefore, other non-promulgated federal and state advisories and guidance values, referred to as to-be-considereds (TBCs), or background levels of the contaminants in the absence of TBCs, were considered.

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Proposed Remedy

Based on the results of the RI, AFBCA has proposed that institutional controls, in the form of land use restrictions for commercial/administrative use, be implemented at the Building 301 Drywell AOC. The institutional controls proposal was based on the contaminant levels found at the Building 301 Drywell AOC and is consistent with the commercial/administrative land use indicated in the redevelopment plan for Griffiss AFB provided by the Griffiss Local Development Corporation (GLDC).

Summary of Site Activities

The Building 301 Drywell AOC was used from the 1940s through 1982 to dispose of small quantities of excess pesticides (approximately 2 gallons per year) and rinse water from pesticide containers (less than 1 gallon per day). The wastes were allowed to percolate into the permeable subsoils beneath the drywell.

In the RI, the nature and extent of environmental contamination from historical releases at this AOC were investigated to determine whether any remedial action is necessary to prevent potential threats to human health and the environment that might arise from exposure to site conditions. In 1982, a groundwater monitoring well (301MW-4) was installed east of Building 301 in an area believed to be downgradient from the reported drywell. The monitoring well was sampled after installation and was also included in the 1992-1993 quarterly sampling program at the base. Groundwater modeling performed in 1994 for the RI, however, indicated that groundwater flow in this area is in a westerly direction. Therefore, the monitoring well is cross-gradient from the reported drywell location and would not be impacted by residual contamination from this area

In 1994, during the RI, a ground penetrating radar (GPR) survey was performed, and two test pits were excavated in an attempt to locate the drywell. The drywell was not detected by the survey, and it was not discovered during excavation. Field sampling for the RI included the drilling of one soil boring (301SB-1) in the downgradient direction from the reported drywell location; the collection of seven soil samples from the soil boring; the installation of a temporary monitoring well in the soil boring; and the collection of one grab groundwater sample in August 1994 and a second grab groundwater sample, collected from a temporary monitoring well drilled adjacent to the first, in April 1995.

Headspace screening was conducted on the seven soil samples obtained from boring 301SB-1. In accordance with the RI Workplan, the sample with the highest headspace screening (2 to 4 feet BGS) and one sample from the soil/groundwater interface (14 to 16 feet bgs) were



submitted for chemical analysis. Three volatile organic compounds (VOCs), 11 semivolatile organic compounds (SVOCs), 10 pesticides, and 23 metals were detected in the subsurface soils. The concentrations for seven of these chemicals exceeded the soil guidance values (see Table 2-1)

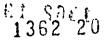
Two grab groundwater samples were collected from adjacent soil borng locations during the RI; one was collected in April 1994 and the other in April 1995. Five VOCs, six SVOCs, nine pesticides, 22 metals, cyanide, and glycol were detected in the samples. Two VOCs and three SVOCs exceeded the standards and guidance values (see Table 2-2). Twelve metals (aluminum, arsenic, beryllium, chromium, copper, iron, lead, manganese, nickel, selenium, sodium, and thallium) were detected above standards or guidance values. Unfiltered grab groundwater samples, however, frequently yield elevated metals results due to the suspended particulate matter that contains naturally occurring metals. Therefore, grab groundwater samples, when analyzed for metals, are not necessarily representative of groundwater conditions

2.3 Highlights of Community Participation

A proposed plan for the Building 301 Drywell AOC indicating no further action as the selected remedial action was released to the public on February 18, 1998. The document was made available to the public in both the administrative record and an information repository maintained at the Jervis Public Library. The notice announcing the availability of this document was published in the *Rome Sentinel* on February 18, 1998. In addition, a public meeting was held on March 10, 1998. At this meeting, representatives from AFBCA, EPA, and NYSDEC answered questions about issues at the AOC and the no further action proposal under consideration. A response to the comments received during this period is included in the Responsiveness Summary, which is part of this Record of Decision (see Section 3).

The agencies have determined institutional controls will be placed on the Building 301 Drywell AOC. This determination is based upon the groundwater ingestion risk assessment. This risk will be abated by eliminating the pathway of exposure (i.e., groundwater ingestion).

This decision document presents the selected remedial action for the Building 301 Drywell AOC at the former Griffiss AFB, chosen in accordance with CERCLA, as amended by SARA and, to the extent practicable, the NCP. The decision for this AOC is based on the administrative record.



2.4 Scope and Role of Site Response Action

The scope of the institutional controls in the form of land use restrictions for the Building 301 Drywell AOC addresses the soils and groundwater at the site. The potential risks from the site contamination can be effectively managed through the use of institutional controls.

2.5 Summary of Site Risks

Site risks were analyzed based on the extent of contamination at the Building 301 AOC. As part of the RI, an industrial risk assessment was conducted to evaluate current and future potential risks to human health and the environment associated with contaminants found in the soils and groundwater at the site. The results of this assessment were considered when formulating this proposal.

Human Health Risk Assessment

A human health risk assessment was conducted during the RI to determine whether chemicals detected at the Building 301 Drywell could pose health risks to individuals under current and proposed future land uses if no remediation occurs. As part of the baseline risk assessment, the following four-step process was used to assess site-related human health risks for a reasonable maximum exposure scenario:

- Hazard Identification--identifies the contaminants of concern at the site based on several factors such as toxicity, frequency of occurrence, and concentration;
- Exposure Assessment—estimates the magnitude of actual and/or potential human exposures, the frequency and duration of these exposures, and the pathway (e.g., ingestion of contaminated soils) by which humans are potentially exposed;
- Toxicity Assessment--determines the types of adverse health effects associated with chemical exposures and the relationship between magnitude of exposure (dose) and severity of adverse effects (response); and
- Risk Characterization--summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative (e.g., one-in-a-million excess cancer risk and non-cancer Hazard Index value) assessment of site-related risks.

Chemicals of potential concern were selected for use in the risk assessment based on the analytical results and data quality evaluation. All contaminants detected in the soil and groundwater at the site were considered chemicals of potential concern with the exception of inorganics detected at concentrations less than twice the mean background concentrations and iron, magnesium, calcium, potassium, and sodium, which are essential human nutrients.

The current and future land use designation for the Building 301 Drywell AOC is commercial/administrative. It is expected that people will continue working in Building 301, as well as in adjacent structures, following base realignment. However, it is unlikely that these people will be exposed to contaminants previously placed in the drywell because the reported drywell location is covered with grass or pavement. Therefore, potentially exposed populations include utility workers and construction workers (if the site is developed in the future) exposed to subsurface soils and industrial workers who might be exposed to groundwater if it is ever used as a potable water supply. Potential routes of exposure to subsurface soil included incidental ingestion of soil, skin contact with the soil, and inhalation of fugitive dusts during excavation of soils in the area. Potential routes of exposure to groundwater included ingestion, contact with the skin, and inhalation of VOCs.

Quantitative estimates of carcinogenic and noncarcinogenic risks were calculated for the Building 301 AOC as part of a risk characterization. The risk characterization evaluates potential health risks based on estimated exposure intakes and toxicity values. For carcinogens, risks are estimated as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to the potential carcinogen. The risks of the individual chemicals are summed for each pathway to develop a total risk estimate. The range of acceptable risk is 1 in $10,000 (1 \times 10^4)$ to 1 in $1,000,000 (1 \times 10^6)$ of an individual developing cancer over a 70-year lifetime from exposure to the contaminant(s) under specific exposure assumptions. A computed risk greater than 1 in $10,000 (1 \times 10^4)$ is considered unacceptable by EPA.

To assess the overall noncarcinogenic effects posed by more than one contaminant, EPA has developed the Hazard Quotient (HQ) and Hazard Index (HI). The HQ is the ratio of the chronic daily intake of a chemical to the reference dose for the chemical. The reference dose is an estimate (with uncertainty spanning perhaps an order of magnitude or greater) of a daily exposure level for the human population, including sensitive subpopulations, that is likely to be without an appreciable risk of deleterious effects during a portion of a lifetime. The HQs are summed for all contaminants within an exposure pathway (e.g., ingestion of soils) and pathways to determine the HI. When the HI exceeds 1, there may be concern for potential noncarcinogenic health effects if the contaminants in question are believed to cause a similar toxic effect.

EPA bases its decision to conduct site remediation on the risk to human health and the environment. Cleanup actions may be taken when EPA determines that the risk at a site exceeds the cancer risk level of 1 in 10,000 or if the noncarcinogenic HI exceeds a level of 1. Once either of these thresholds have been exceeded, remedial action alternatives are evaluated to reduce the risk levels to within EPA's acceptable risk range of 1 in 10,000 to 1 in 1,000,000 and an HI of 1 or less.

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The cumulative carcinogenic risk for both utility and construction workers due to exposure to the chemicals of potential concern in soils was calculated as 1 in 10,000,000 (1 x 10⁻⁷) This result is well below EPA's target level, indicating that potential adverse carcinogenic health effects are not expected to occur from exposure to chemical concentrations in the soil.

Under the hypothetical scenario which assumed use of site groundwater as a potable water supply by future industrial workers, the cumulative carcinogenic risk associated with the reasonable maximum exposure (RME) to groundwater contaminants was estimated as 3 in 10,000 (3 x 10⁻⁴), which was almost all due to the ingestion route. The future use of the groundwater is extremely unlikely since the area is served by the municipal water system. The cumulative HIs for the utility and construction workers were 0.001 and 0 04, respectively, well below the acceptable level of 1.0. The cumulative HI for industrial workers exposed to groundwater was 0.3. Therefore, potential adverse noncarcinogenic health affects are not expected to occur from exposure to chemical concentrations in the soil or groundwater at the Building 301 Drywell AOC.

Toxicity values were not available for five compounds detected in the soil (phenanthrene, benzo[g,h,i]perylene, lead, guthion, and coumaphos); thus, a quantitative risk assessment could not be performed. Therefore, a qualitative assessment was conducted by comparing the concentrations of these five compounds to the soil guidance values. Phenanthrene and benzo(g,h,i)perylene were detected in one of the two soil samples collected from the site at concentrations of 0.15 mg/kg and 0.079 mg/kg, which are below the guidance value of 50 mg/kg. Lead was detected in both samples at concentrations of 5.4 mg/kg and 41 mg/kg, which are well below the guidance value of 400 mg/kg. Guthion was detected in both samples at concentrations of 0.030 mg/kg and 0.070 mg/kg, but no guidance value is available. However, 50 mg/kg of guthion ingested by Wistar rats had no detectable effect. Coumaphos, which also has no available guidance value, was detected in both soil samples at concentrations of 0.090 mg/kg and 0.11 mg/kg. No adverse health effects associated with this compound have been reported for humans.

Uncertainties exist in many areas of the human health risk assessment process. However, use of conservative variables in intake calculations and conservative assumptions throughout the entire risk assessment process results in an assessment that is protective of human health and the environment. Examples of uncertainties associated with the risk assessment for this AOC include: (1) Chemical samples were collected from the suspected source of contamination rather than through random sampling, which may result in a potential overestimate of risk; (2) The risk assessment was quantified based on analysis of a relatively small number of

soil samples, which can contribute to uncertainty in the risk calculations; (3) When assessing the dermal pathway, it was assumed that workers would come into contact with the soil, although the use of protective clothing is more likely. This assumption would result in a potential overestimate of risk, (4) It was assumed that for the proposed future use scenario, construction would occur over a one-year period, though it will probably require less time to complete due to the small size of this AOC. This assumption would result in a potential overestimate of risk; and (5) It was assumed that groundwater would be used for industrial purposes in the future which is very unlikely due to the availability of existing water supplies at the former base and in the City of Rome. This assumption would result in a potential overestimate of risk.

The property at the Building 301 Drywell AOC contains levels of contamination suitable for commercial/administrative usage but not necessarily suitable for residential or similar use.

The transfer documents will contain the following restrictions to ensure that the reuse of the site is consistent with the risk assessment:

- The property will be commercial/administrative use unless permission is obtained from the EPA, NYSDEC, and the New York State Department of Health; and
- The owner or occupant of the property shall not extract, utilize, consume, or permit to be extracted any water from the aquifer below the ground surface within the boundary of the property unless such owner or occupant obtains prior written approval from the New York State Department of Health.

Ecological Risk Assessment

A baseline risk assessment for ecological receptors at the Building 301 Drywell AOC was conducted during the RI. Both current and proposed future land use for this AOC is commercial/administrative, which, by its very nature, minimizes the number of ecological receptors. Habitats critical to ecological receptors were considered to be insignificant because the drywell is below ground level and, based on several studies performed in the 1990s, ecological receptors are not expected to be found at these depths. Although certain state endangered plants and animals have been observed on or in the vicinity of the base, no threatened and/or endangered species have been identified at this site. Overall, this AOC poses no current or potential threat to the environment.

2.6 Description of the Institutional Controls Alternative

Institutional controls, in the form of land use restrictions and groundwater use restrictions, are proposed for the Building 301 Drywell AOC. The majority of the chemicals detected at this AOC do not exceed screening levels. In addition, the risk assessment indicates that the levels of contaminants in the soils and groundwater do not present unacceptable carcinogenic risk to potential receptors as long as the property reuse remains as it is currently used (i.e., commercial/administrative) and the groundwater is not allowed to be ingested

2.7 Significant Changes

The proposed plan for the Building 301 Drywell AOC was released for public comment on February 18, 1998. The proposed plan identified no further action as the preferred alternative. The agencies have reviewed all written and verbal comments submitted during the public comment period. Following the review of these comments, it was determined that the remedy should be amended to clarify institutional controls, in the form of land use restrictions and groundwater use restrictions, placed on the Building 301 Drywell AOC.

Page 1 of 1

	Tabl	e 2-1	
СОМРО		NG GUIDANCE VA SOIL SAMPLES	ALUES
Compound	Range of Detected Concentrations	Frequency of Detection Above Most Stringent Criterion	Most Stringent Criterion
SVOCs (μg/kg)			
Benzo(a)pyrene	200 J	1/2	612
Metals (mg/kg)		<u> </u>	
Calcium	2,040 - 42,000	1/2	23,821
Total chromium	17 - 34.5	1/2	22 6 ^b
Соррег	32.3 - 176	1/2	43 ^b
Lead	5.4 - 41	1/2	36 ^b
Mercury	.028 J - 0 13	1/2	0.12
Silver	1 58 J	1/2	1_1 ^b

a
b NYS soil cleanup objective
Background screening concentration

Key:

J = Estimated concentration

COMPOUN		EDING (ole 2-2 GROUNDWATER ST WATER SAMPLES	TANDARDS	
Compound	Ran Dete Concen		Frequency of Detection Above Most Stringent Criterion	Most Stringent Criterion	
VOCs (μg/L)					
Acetone	340		1/2	5	50ª
Tetrachloroethylene	1.5		1/2	0	7ª

SVOCs (µg/L) 5^b 1/2 2,4 Dinitrotoluene 50 1/1 bis(2-chloroethyl)ether 10 1/2 o-Toluidine

Key

J = Estimated.

a
b NYS groundwater guidance value.
c New York primary maximum contaminant limit (MCL).
NYSDEC Class GA groundwater standard.

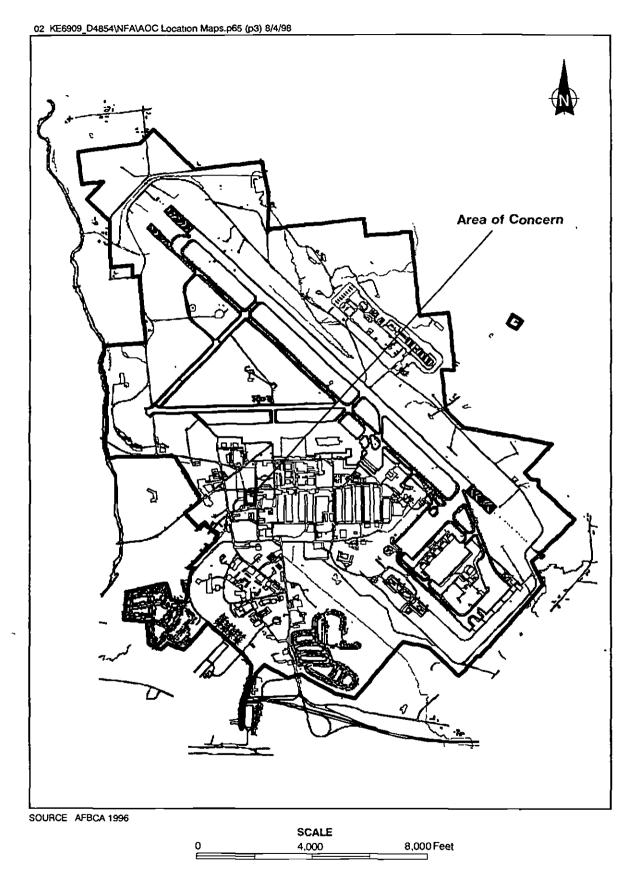


Figure 2-1 BUILDING 301 DRYWELL AOC FORMER GRIFFISS AIR FORCE BASE

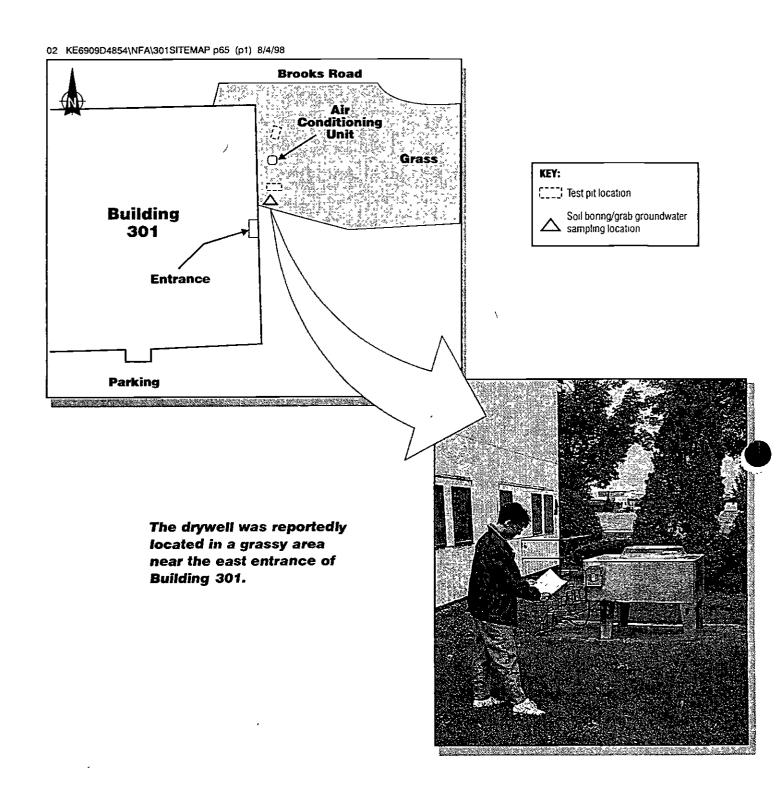


Figure 2-2 SITE MAP OF THE BUILDING 301 DRYWELL AOC

Responsiveness Summary

On Wednesday February 18, 1998, AFBCA, following consultation with and concurrence of the EPA and NYSDEC, released for public comment the no further action proposed plans at the Building 214, Building 219 Drywell, Building 301 Drywell, T-9 Storage Area, Fire Demonstration Area, and Suspected Fire Training Area Areas of Concern (AOCs) at the former Griffiss Air Force Base. The release of the proposed plans initiated the public comment period, which concluded on March 20, 1998.

During the public comment period, a public meeting was held on Tuesday March 10, 1998, at 5:00 p.m. at the former base chapel located at 525 Kirkland Drive. A court reporter recorded the proceedings of the public meeting. A copy of the transcript and attendance list are included in the Administrative Record. The public comment period and the public meeting were intended to elicit public comment on the proposal to take no further action at these sites.

This document summarizes the verbal comments and provides responses to the comments received at the March 10, 1998, public meeting No written comments were received during the public comment period, which ran from February 18 through March 20, 1998.

Comment #1

3

One commentor referred to an article in the Sentinel that indicated that a certain firm involved in computer chips took the Griffiss Park off its list because it is considered a brownfield area. The same commentor also stated, "Last week a state consultant rejected the Griffiss Park's application to be one of the ten potential manufacturing sites around the state. Quoting from the Sentinel article, Dimeo said, 'The fact the park is considered a brownfield because of wastes dumped by the Air Force may have influenced that decision' I'm wondering if any of these sites are part of that decision, are part of that brownfield?"

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Response #1

No. These sites were not selected for consideration as brownfield sites. There is a brownfield site under consideration in Rome, NY; however, such evaluation is independent from the ongoing work at Griffiss.

Comment #2

Two commentors expressed concern that the contaminant levels shown in the tables of the proposed plans are above the stringent regulatory criteria shown in the tables. They requested an answer as to what rationale was used to justify no further action

Response #2

It is assumed that this comment was directed at the T-9 Storage Area proposed plan since several compounds exceeded guidance values for surface soils at that site. Upon further review, it was decided to temporarily postpone the issuance of a ROD for the T-9 Storage Area until an interim removal action is completed. A revised proposed plan for the T-9 Storage Area will be issued. It will include the results of the confirmatory samples taken after the interim removal action is completed.

For this site, as explained in the Environmental Background section of the proposed plans:

The no further action proposal is based on an evaluation of two investigation criteria. First, a site-specific baseline risk assessment for commercial/administrative use, using appropriate toxicological and exposure assumptions, was conducted to evaluate the risks posed by detected site contaminants. Second, the levels of contaminants found were compared to available standards and guidance values for each potential contaminant. The standards and guidance values were determined by using federal and state environmental and public health laws that were identified as potentially applicable or relevant and appropriate requirements (ARARs) at the site. Chemical-specific ARARs are usually health- or risk-based numerical values or methodologies which result in a numerical value when applied to site-specific conditions. Currently, there are no chemical-specific ARARs for soil, sediment, or air. In addition, groundwater and drinking water standards have not been promulgated for all potential contaminants. Therefore, other nonpromulgated federal and state advisories and guidance values, referred to as "TBCs," or background values of the contaminants in the absence of TBCs, were considered. Environmental sampling results were compared to the most stringent of these standards or guidance values during the remedial investigation for the AOC.



No further action was originally proposed for this AOC because the baseline risk assessment evidence and the comparisons of the level of contamination to the appropriate standards and guidance values indicate that this site poses no significant threat to public health or the environment.

Following the review of these comments, it was determined that the remedy should be amended to clarify institutional controls, in the form of land use restrictions and groundwater use restrictions, at the AOC.

Appendix B



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2 290 BROADWAY NEW YORK, NY 10007-1866

JUN - 7 2012

Mr. Michael McDermott BRAC Environmental Coordinator Air Force Real Property Agency 428 Phoenix Drive Rome, NY 13441-4105

Re:

Removal of Groundwater Deed Restrictions

Building 301

Former Griffiss AFB, Rome NY

Dear Mr. McDermott:

The U.S. Environmental Protection Agency (EPA) has reviewed your request to remove the groundwater restrictions from the deed at Building 301, located at the former Griffiss AFB in Rome, New York.

As you are aware, groundwater restrictions and sampling were required as part of the selected remedy for Area of Concern – Building 301. These restrictions and continued monitoring were required as part of the remedy documented in the CERCLA Record of Decision (ROD), dated Sept. 30, 1999.

Since the selection of the remedy, the restrictions were incorporated into the appropriate deed. In addition, additional monitoring has been performed and the results have been below NYSDEC Groundwater Standards. Furthermore, annual land use and institutional control certifications were performed, as well as CERCLA-mandated Five-Year reviews. The information presented in these documents also indicates that the remedy remained protective of human health and the environment.

Therefore, based upon this information (i.e. the ROD, the Five-Year Reviews, annual land use and institutional control certification reports, and Long-Term Monitoring data), EPA concurs with your request to remove the groundwater restrictions from the applicable deed. Please note, this approval is only for this request and does not applied to any other requirements of the ROD.

Should you have any questions, please contact Douglas Pocze, of my staff, at (212) 637-4432.

Sincerely,

John S. Malleck, Chief Federal Facilities Section

Baldyga, Daniel

From: MCDERMOTT, MICHAEL F GS-13 USAF DoD AFCEE/EXC < michael.mcdermott.1

@us.af.mil>

Sent: Monday, October 15, 2012 10:45 AM

To: Baldyga, Daniel

Subject: FW: USEPA NYSDEC reviews

"//SIGNED//"

Michael McDermott

Air Force Center for Engineering and the Environment

Building 770 428 Phoenix Drive

Davis Navy Varle 1244

Rome, New York 13441

Phone: 315-356-0810, ext. 202

FAX: 315-356-0816

email: michael.mcdermott.1@us.af.mil

----Original Message-----

From: Heather Bishop [mailto:hlbishop@gw.dec.state.ny.us]

Sent: Wednesday, June 06, 2012 10:15 AM

To: Pocze.Doug@epamail.epa.gov; MCDERMOTT, MICHAEL F GS-13 USAF DoD

AFCEE/EXC

Subject: Re: USEPA NYSDEC reviews

Mike,

We have no issues or comments with #2 through #6. I'll send a concurrence letter for all the deed restriction removals. The only document that we need to review and provide comments on is the Building 101 Proposed Plan (it will have to go upstairs here and through DOH). While I'm thinking about it, we will need a new copy of the 101 PP, since there is a change to the ICs. Otherwise I'll get a lot of grief here, and I'll probably end up delaying, since they will want a new copy here.

Thanks -Heather

Heather Bishop

NYSDEC

Division of Environmental Remediation

Remedial Bureau A

625 Broadway, 11th Floor

Albany, NY 12233-7015

Phone: (518) 402-9692

Fax: (518) 402-9022>>> "MCDERMOTT, MICHAEL F GS-13 USAF DoD AFCEE/EXC"

<michael.mcdermott.1@us.af.mil> 6/6/2012 10:02 AM >>>

Doug, Heather;

I have a conference call tomorrow with my San Antonio Headquarters. Can you tell me the status of the following:

- 1.) **** Building 101 proposed Plan. We were to start the public notice on 1 June. Given the 30day review time and the time it will take for the ROD, I am concerned that the transfer will not be accomplished by 30Sept2012. Please let me know when I will receive your Proposed Plan acceptance.
- 2.) SS025 T9 Groundwater Deed Restriction Removal (1Mar2012)
- 3.) DP012 Building 301 Groundwater Deed Restriction Removal (1Mar2012)
- 4.) USEPA; SS017 Lot 69 Groundwater Deed Restriction Removal (1Mar2012)
- 5.) SS023 Building 20 Site Closure (6Mar2012)
- 6.) DP011 Building 3 Drywell Site Closure report (24 May 2012)

I am also putting together a list of documents that have been submitted but comments have not provided. Some, in which a closure decision is not required, we will be submitting as final.

Please let me know where you stand on this stuff.

"//SIGNED//"
Michael McDermott
Air Force Center for
Engineering and the Environment
Building 770
428 Phoenix Drive
Rome, New York 13441

Phone: 315-356-0810, ext. 202

FAX: 315-356-0816

email: michael.mcdermott.1@us.af.mil

Appendix C

Daily Chemical Quality Control Report

Project/Delivery Order Number:1015-11-01 Date:4/7/2014
Project Name/Site Number: Building 301
Weather conditions: Temperature: _34 F _ Barometric reading:30.14 _ Wind speed and direction:8 mph SE _ Significant wind changes: _None
General description of tasks completed: Soil Sampling at Bldg 301 with geoprobe.
Explain any departures from the SAP or deviations from approved procedures during the day's field activities: None
Explain any technical problems encountered in the field or field equipment/field analytical instrument malfunction: None
Corrective actions taken or instructions obtained from AFCEC personnel: No corrective action necessary. None
Sampling shipment completed: √Yes □ No Airbill #:
DCQCR Prepared by: Josh Wenzel Date: 4/7/2014
CQCC Signature: Date: 4/7/2014 ATTACHMENTS:
Checklist Daily Chemical Quality Control Report Attachments
✓ Field sampling forms
✓ Equipment Calibration Log
✓ Copies of COCs
✓ SDG Table (See accompanying COCs).
✓ Daily Health and Safety Meeting Form

Project:	015-11-01	Sampled by: JWJP
	de (SITEID):	· · · · · · · · · · · · · · · · · · ·
		B301WW-20114
Date (LOGDAT	TE): 4/7/14	Time: 0945
		71
FIELD OBSER	VATIONS:	
Sample Depth or Interval		Material Description/Color
0-11	Sod , dark	proun, moist
1-4"	Light breen,	gravel moved in, dry, gravel is small and
	angular, F-C	Sands.
Comments/Obse	ervations:	
		/8
Sample Time:	0950	Sample ID: B301WW04AA

Project: 10	15-11-01	Sampled by:	वम्बर
Site and Site Coo	de (SITEID):	Bldg, 301	
		B301NW - 2014	
		Time:	
FIELD OBSER	VATIONS:	No.	
Sample Depth or Interval		Material Description	/Color
0-1	Sod dark bri	ow, moist	
1-41	Light brown, Sm. F-C sands.	all gravel mixed in.	Gravel is angular, dry
Comments/Obse	ervations:		-Ti- 1111
			
Sample Time:	1005	Sample ID:	B301NW04AA

Project:	1015-11-01	Sampled by:	4 L/WL
	de (SITEID): Bldg		
	on ID. (LOCID): <u>B3</u>		
Date (LOGDAT	TE): 4/7/14	Time:	1015
FIELD OBSER	VATIONS:		
Sample Depth or Interval	1	Material Description/	
0-1	Sod dark brown	moist	
1-4	Sod, clark brown dry Fic Sunds	grave ! wind iva . 6	travel is angular
	dry F-c Sands	•	,
Comments/Obse	ervations:	15 15	* - V
		4	
··· <u></u>			·
		····	
Sample Time:	1025	Sample ID: _	B301SWOHAA/AC

Project:	015-11-01	Sampled by:	4L/uL
		Bldg, 301	•
		B301 EW-2014	
Date (LOGDAT	TE): 4/7/14	Time:	0201
FIELD OBSER	VATIONS:		
Sample Depth or Interval		Material Description	/ Color
	Sod, dark 6	rown soll moist.	
1-4" =	Light brown	small gravel mixed in	(angular) F-C sands.
	Dy		•
Comments/Obse	ervations:		· · · · · · · · · · · · · · · · · · ·
		33	
0 1 5			Davie
Sample Time:	1035	Sample ID: _	B301EWOYAA

Project:	to15-11-01	_ Sampled by:	AUGIL	
	de (SITEID): Bldg. 36		ŗ	
Sampling Locati	on ID. (LOCID): <u>B30 B</u>	E-2014	<u></u>	
Date (LOGDAT	E): 4/7/14	Time:		
	, ,			
FIELD OBSER				
Sample Depth or Interval	Mat	erial Description/	Color	
0-1	Sod, Dark brown, m	, di st		
1-4	Light born, small gra		mall rocks dry	
	F-C sands,			
Comments/Obse	rvations:		=	П
		:		
				
Sample Time:	1045	Sample ID: _	B301BE04AA	
Sample Time:	1046	Sample ID! B	301 TCLP OHAA	

Project:	015-11-01	Sampled by: _	JW/JP
Site and Site Co	de (SITEID):	Bldg, 301	<u> </u>
		N/A	
Date (LOGDAT	TE): 4/7/14		N/A
			,
FIELD OBSER	VATIONS:		
Sample Depth or Interval		Material Description	n/ Color
0-1	Sod, Dark	brown, maist	
1-41 =	Light brown,	small gravel mixed in	(angular), F-C sands
4-8		imail gravel mixed in	
Comments/Obse	ervations:	E E	
* This wa	s strictly a	Soil characterization	or down to 8' in noted
the susper	Hed drywell	area. There was ven	little grave noted
in the sleeve		/	J
	/^		/
Sample Time:	N/A	Sample ID:	N/A

CHAIN OF CUSTODY RECORD

COC#: _1_SDG#: ___(Open/Closed) Cooler ID#: _A_

Ship to:	Project Name:	ject Name: Griffiss AFB DP012 Building 301	Send Results to:
Elaine Walker			Daniel Baldyga
Test America Laboratories, Inc.	Sampler Name: Josh Wenzel		FPM Remediations. Inc
4955 Yarrow Street	ı		584 Phoenix Drive
Arvada, Colorado Tel: 303-736-0156			Rome, NY 13441
Carrier: Test America courier.	Sampler Signature:	Ire:	Phone: (315) 336-7721 Ext. 207

		Τ	Τ	Τ	Τ	1	Τ	Т	Τ
	Comments								
	Pesticides and I L smber bottle								-
	TCLP Pesticide, 4 oz glass jar								
	Pesticides: "ore", 4 or glass jar	1	П	H			1		
equested.	# of Containers	1	1	1	1	1	1	1	1
Analyses requested	ZBD\ZED	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
7	SACODE	z	z	Œ	z	z	Z	z	EB
	SWCODE	G	G	Ö	G	G	G	G	Ö
	XIATAM	SO	SO	SO	S	SO	SO	SO	WQ
	Time .	1005	1025	1025	0950	1035	1045	1046	1230
	Date 2014	4/7	4/7	4/7	4/7	4/7	4/7	4/7	4/7
	LocID	B301NW-2013	B301SW-2013	B301SW-2013	B301WW-2013	B301EW-2013	B301BE-2013	B301BE-2013	FIELDQC
	Field Sample ID	B301NW04AA	B301SW04AA	B301SW04AC	B301WW04AA	B301EW04AA	B301BE04AA	B301TCLP04AA	040714AE

Sample Condition Upon Receipt at Laboratory:	Cooler Temperature.
Special Instructions/Comments: Analyze to be conducted in committees with ATOTE Of the 4.0	Corre temporario
Second man demons, commissions, relatives to be conducted in compilative with AFCEE (AFF 4.0	
Note 1: Total SVOCs: method SW8270D	
Note 7: Tatal Beating 1 Office of	
NOW Z. 10121 Festicides: 5 W 808 IB	
Note 3: Total VOCs: SW8260B	
MI-4. A. T. a. 13. a. a. creation of	
Note 4: 1 otal Metals: SW6010C	

#1 Released by: (Sig)	Date:	#2 Released by: (Sig)	Date;	#3 Released by: (Sig)	Date:
	Ĭ				
Company Name:	Time:	Company Name: FPM	Time:	Company Name:	Time:

#1 Received by: (Sig.) Daniel Baldyga	Date.	#2 Received by: (Sig)	Date:	#3 Received hy: (Cin)	Dotor
-9 ((0-) (in	(Storogenous)	Date.
Company Name: FPM	Time:	Company Name:	Time:	Company Name:	Time:
MATRIX WG = Ground water WQ = Water Quality Control Matrix SO = Soil		SMCODE B = Bailer G = Grab. NA = Not Applicable (only for AB/TB) PP = Peristaltic Pump SP = Bladder Pump SP = Submersible Pump SS = Split Spoon	SACODE N = Normal Sample AB = Ambient Blank TB = Trip Blank BB = Equipment Blank FD = Field Duplicate MS = Matrix Spike SD = Matrix Spike Duplicate	e ank te Duplicate	

——Daily Heal	th and Safety Meetin	ig Form
Date: 43/14	Time :	0815
Location: FPM office (sample room)		
Weather Conditions: Fair skies 3	40F SE winds @	8mph.
Meeting Type: Daily Health and Safety		
Personnel Present:		
Josh Wenzel (FPM), Jake A	butt (FPM) Mai	iny Sosa (Zebra)
Visitors Present: None.		
Visitor Training:		
PPE Required: Modified D earplus	steethe, hard ho	ts, safety glasses
Possible risks, injuries, concerns:		•
slip/trip/fall, road/parking	1st traffic, 1	hazads associated u/ drill rig
Anticipated Releases to Environment (if so implemented):	, describe and death	response acaom cona oi measm es
Property Damage:		
None.		
Description (include sequence of events de	escribing step by step	
Analysis for, and Implementation of Corre	ctive/Preventative Pro	ocedure to Prevent Future
Occurrences (to be formulated by SSHO +	FOM, approved by I	
Report made by (Name):losh	'wenzel	
SSHP Organization Title: Site Safety and	Health Officer	

Daily Chemical Quality Control Report

Project/De	Blivery Order Number:1015-11-01 Date: 5/21/14	
Project Na	me/Site Number: _Site Closure Sampling at Building 301	
Weather co	onditions: Temperature: 73 F Barometric reading: 29.90 Wind speed and direction: 8-10 mph, W Significant wind changes: None	
General de	escription of tasks completed: Soil Sampling with dutch auger.	
	y departures from the SAP or deviations from approved procedures during the day ties: None	's
	y technical problems encountered in the field or field equipment/field analytical malfunction: None	
Corrective actions nec	actions taken or instructions obtained from AFCEE/USACE personnel: No correctessary.	tive
Sampling sl	hipment completed: √Yes □ No Airbill #:	
DCQCR Pr	repared by: <u>Daniel Baldyga</u> Date: <u>5/21/14</u>	
CQCC Sigr	nature: Collada y Holse Date: 5/21/14	_
ATTACHM	MENTS:	
Checklist	Daily Chemical Quality Control Report Attachments ✓ Field sampling forms ✓ Equipment Calibration Log ✓ Copies of COCs ✓ SDG Table (See accompanying COCs). ✓ Daily Health and Safety Meeting Form	
	✓ Daily Health and Safety Meeting Form	

Project:	1015-11-01 Sam	npled by: MG/JPUW
	ode (SITEID): Bldg. 38	
Sampling Locati	ion ID. (LOCID): R3018E-	-2013
Date (LOGDAT	TE): Time	ie: <u>1457</u>
FIELD OBSER	EVATIONS:	
Sample Depth or Interval	Material I	Description/ Color
O 2"	Dorth Brown soil, sod, medium	n street grave.
2"-24"	Dark brown soil, course sav	nd, somall-medium answort
	subarouter gravel	. 1
Comments/Obse	ervations:	
Refusa	1 @ 24" Tries	1 6 add time / bornes:
Sample Time:	145Z s	Sample ID: B3017CLP 0204AA

CHAIN OF CUSTODY RECORD

COC% J. SDG#: 361 Coaler ID#: A. Comments Trans. Title Date 1 Phone: (315) 336-7721 Ext. 207 Cooler Transference FPM Remediations, Inc. 584 Phoenix Drive 250 ml poly (HNO₂) Rome, NY 13441 Sera Results to: Daniel Baldyga to the state of th (1) 高速電視 N Book of the Con-Outrast Care ul estig to h ı Couples More POLP MARIE # of Containess Analyses requestrd Griffiss AFB DPC12 Beilding 301 The stuffe 0.00 S 8 **ZED\ZED** Trace. Diet. H EVCODE × Special Discreptions/Communist. Analysis to be evadament in compliance with APCITE Oxop 4.0
Note: 1: Total SVCC; method SWKZ/455. Saraplar Name: Josh Wanzel Ö SYTCODE Ü 0 Sampler Signature: 0 XIXTAM Project Maran; The Second Sec (819) Chaptery Name Pills Section of the second 1540 Time 14.52 Carriery North Date 2014 5/2.1 5/21 B301BE-2013 Locil Pield QC Samult Cunition Unon Repeins at Unberging 13 Aut. いる。 Arvada, Colozado Tel: 303-736-0156 NINE 2: Total Pankather: SWESTE H Rushelly: (M.) Daniel Calduga Test Arrarica Laboratories, Inc. Note 3: Total VOC., SWROAME Note 4: Tein! Matels; NVRFICE Carrier: Test America courier. Field Sample ID B301TCLP0204AA 4955 Yamow Street Congany Vision, FURS By Marshall (Sig) Elaine Walker Charles Wenter 052114AE

MATRIX WG = Ground water WQ = Water Quality Control Matrix SO = Soil

AMCOLLI B = Bailer G = Grab. NA = Not Applicable (only for AB/TB) PP = Periotatio Pump SP = Bladder Pump SP = Bolomerable Pump SS = Spilt Spoot

SACOMR N = Normal Samplo AB = Amblent Blank TB = Thip Blank RB = Equipment Blank RD = Weld Duptlent MS = Matrix Spike SD = Matrix Spike

Date:5/21/14	Time:
Location: FPM office (sample room)	
	0° F
Meeting Type: Daily Health and Safety	
Personnel Present:	
Josh Wenzel, Jake Pro	H, Mark Grifasi
Visitors Present: Nane	
Nsitor Training: N/A	
PPE Required: Modified D Later glo	oves, Safety glasses
Possible risks, injuries, concerns:	,
Slips/trip/fall, Biological 1	(ticks bees), Road Parking Lot traffic
, ,	, ,
plemented):), describe and detail response action/control measure
nplemented): Alone.	o, describe and detail response action/control measure
nplemented): None), describe and detail response action/control measure
nplemented): \[\lambda \lon\left\] roperty Damage: \[\lon\left\] escription (include sequence of events des	o, describe and detail response action/control measure. scribing step by step how incident happened):
nplemented): \[\lambda \lone \] roperty Damage: \[\long \] escription (include sequence of events des \) \[\long \long \]	scribing step by step how incident happened);
nplemented): \[\lambda \lambda \columble \co	scribing step by step how incident happened):
roperty Damage: NONE	scribing step by step how incident happened): ctive/Preventative Procedure to Prevent Future
roperty Damage: NONE	scribing step by step how incident happened): ctive/Preventative Procedure to Prevent Future FOM, approved by PM, and SSHO implemented):

Daily Health and Safety Meeting Form Date: 7/16/14 Time: 0730 Location: FPM office (sample room) Weather Conditions: Fair skies, calm winds 63° F Meeting Type: Daily Health and Safety Personnel Present: Peter Morat, Josh Wenzel Visitors Present: NONE Visitor Training: NA PPE Required: Modified D, sheel toe boots reflective vests, hardhat eve protection ear plugs, Possible risks, injuries, concerns: slip/trip/fall, road/parking 1st traffic, heavy equipment operation Anticipated Releases to Environment (if so, describe and detail response action/control measures implemented): MONE Property Damage: MONE Description (include sequence of events describing step by step how incident happened): Analysis for, and Implementation of Corrective/Preventative Procedure to Prevent Future Occurrences (to be formulated by SSHO + FOM, approved by PM, and SSHO implemented): Report made by (Name): _ _ J ash Wenzel

SSHP Organization Title: Site Safety and Health Officer

DAILY FIELD REPORT		-				
FORMER GRIFFISS AFB, ROI	ME, NEW YORK		FPM			
DATE: 7/16/14						
SITE: Bldg. 301						
Weather	AM	PM				
Temperature (F)	63°F	71°F				
Wind Direction/Speed	calm	NW/13 mph				
Precipitation		_				
Conditions (i.e. sun, clouds)	Partly Clundy	Partly Cloudy				
FPM Personnel on-site:	•					
	,					
Peter Morat, Josh	Nenze!					
						
Visitors:						
Organization Names						
NONE						
Equipment on Site						
Takeuchi mini ex						
Burrous Dump T	CAUCATO					
Burron & Dump I	tuck					
		-				
Deliveries Quantity						
Vertices States	Zauttit,		-			
	1) 40 yara	2.5				
Bank Run Sand (Fill Screened Top Soil	10 yard	<u>-</u>				
SCHOOLER ICH SOIL	10 7010.	1)				

DAILY FIELD REPO	DT		
	AFB, ROME, NEW YORK		<i>FPM</i>
DATE: 77/11/14			
SITE: PU Zo	.1		
Rlag. 30	1		
			D1 1T 1124-1
Materials Shipped	Volume (Current Day)	Volume (total to date)	Disposal Facility/ Location
Soil (tons)	66.81 tons		OHSWA Ava, NY
C&D (tons)			
PPE/Waste (drum)			
* Waste shipment deta	nils presented on shipping lo	g/bill of lading	
Samples Collected fo Media	r Analysis: Number of Locations	Sampling Method	Analysis
	A COMPANY OF LIGHT OF STREET	Desire Lands	
Soil			
Surface water			
Groundwater	No	1E	
	No.		
* Sampling tracking	letails presented on chain of	custody	
THORE A CONTINUES	CONTROL OTED.		
WORK ACTIVITIES			
Bldg. 301 Soil	excavation, ~ (5 tons at so	il removed
Carrie drice 10	Em and . Fall	Neither exemption	40 vaids 6-1
Sand + 10,	you'ds of topsoil	were used to	fill + restore
excavation	area.		
<u> </u>			

DAILY FIELD REPORT FORMER GRIFFISS AFB, ROME, NEW YORK	FPM
DATE: 7/16/14	
SITE: Bldg, 38!	
WORK ACTIVITIES CONDUCTED:	
	<u> </u>
WORK ACTIVITIES COMPLETED TODAY:	
Remove 265 yards of soil + houl to	Ava landfill
Remove 265 yards of soil + houl to 40 yards of sand + Oyards of topsoil	used to fill excavation
, , ,	
<u> </u>	
COMMENTS/QUESTIONS:	
NONE	
Non	
	<u>-</u>
SAFETY ISSUES:	
NONE	
Nov	
P \	
B 10 11 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Report Completed by: Josh Wenzel Will	

Page 3 of 3

Dally Health and Safety Meeting Form

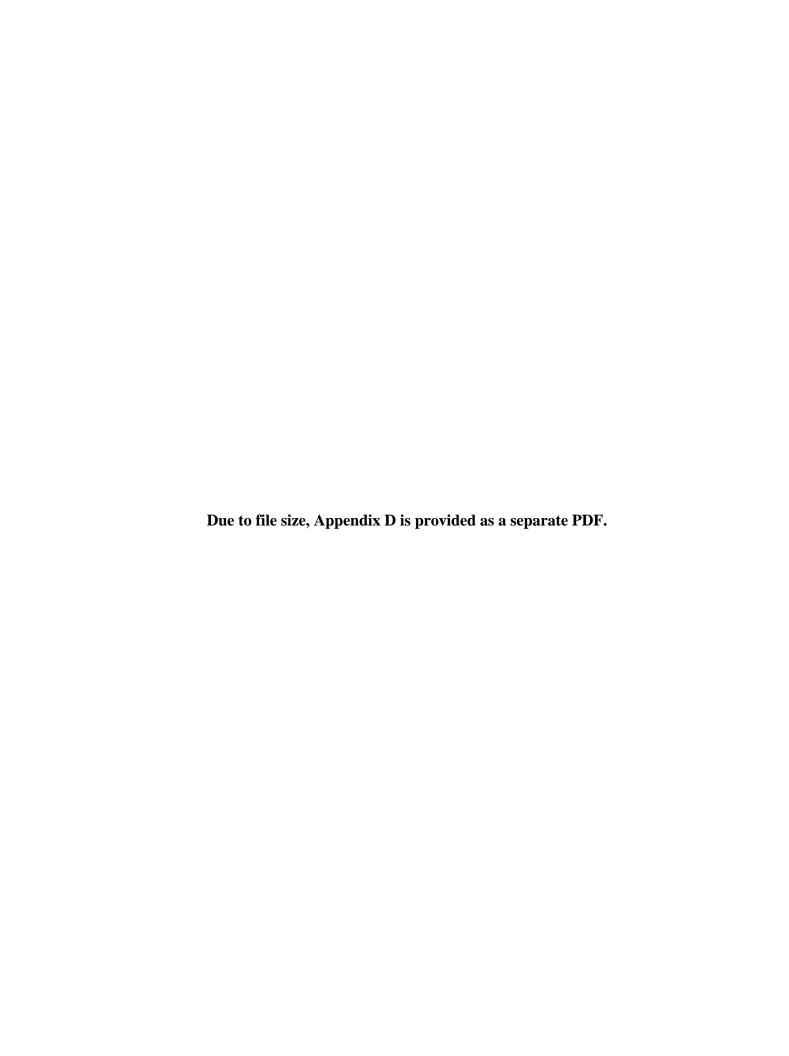
Date:	7/17/14		Time :	<i>0</i> හර
Location:	FPM office (sample	room)		
Weather C	Conditions:	ast calm wind	5801	
	ype: Daily Health ar	•		·
Personnel	Present:			
- Pet	or Morat, Jost	Wenzel		
Visitors Pi	resent:			
Visitor Tra	iining:			
PPE Requ	ired: Modified D	stellae boots	re-flection	vests, hardhard, solerly glosses
Possible ri	isks, injuries, concerr	is:		
Stip,	Hipffall r	sad /parking lot	traffic	, hazads associated u
heavy	equipment of	peration. V		, hands ossociated w
Anticipated implemente		ument (if so, describe	and detail re	esponse action/control measures
Property D	Oamage: NonE			
Description	n (include sequence o	f events describing s	tep by step h	ow incident happened):
Analysis for	r, and Implementatio	n of Corrective/Prev	entative Proc	redure to Prevent Future
Occurrence	es (to be formulated b A	ny SSHO + FOM, app	proved by PA	A, and SSHO implemented):
	le by (Name):		Man	
SSHP Orga	nization Title: Site S	Safety and Health Off	ficet	<u> </u>

DAILY FIELD REPORT	. <u> </u>		
FORMER GRIFFISS AFB, RO	ME, NEW YORK	<u> </u>	FPM
DATE: 7/17/14			
SITE: Bldg.30			
	···		
Weather	AM	PM	
Temperature (F)	58°F	67°F	
Wind Direction/Speed	calm	1. 1.	
Precipitation	Carve	W/ 9mpM	<u> </u>
Conditions (i.e. sun, clouds)		0 1 1	-
(, 0, 0	overcast	Partly Cloudy	
FPM Personnel on-site:		1	
Jost Wenzel Peter	M. A		
	11101.0		
	<u></u> .		
Visitors:			
Organization Names			
		• · · · · · · · · · · · · · · · · · · ·	
NONE			
Nove			
Equipment on Site			
Takeuchi pin excas	ato/		
	<u> </u>		
7.1			
Deliveries	Quantity		
No	NE		
J No	77		
			(1)

	ORT AFB, ROME, NEW YORK		FPM
DATE: 7/17//	4		
SITE: Block	381		
Materials Shipped	Volume (Current Day)	Volume (total to date)	Disposal Facility/ Location
Soil (tons)			
C&D (tons)		6	
PPE/Waste (drum)	Non	35	
* Waste shipment deta	ils presented on shipping log	g/bill of lading	
Samples Collected for	r Analysis:		
Media	Number of Locations	Sampling Method	Analysis
Soil			
Surface water		,	
Groundwater			
	Monte		
	N.	-	-
k () 1' ' ' '	etails presented on chain of o		
Sampling tracking d	cians breschied on chain or c	custoav	
Sampling tracking d	ctans presented on chain of t	custody	
	-	custody	
WORK ACTIVITIES	CONDUCTED:		
WORK ACTIVITIES	CONDUCTED:		t w/ miniperautar
WORK ACTIVITIES	CONDUCTED:		t w/ miniperountar
WORK ACTIVITIES	CONDUCTED:		t w/ miniperounts . w mat over
WORK ACTIVITIES	-		t w/ miniperounts , to mat over Yokes.
WORK ACTIVITIES	CONDUCTED:		t w/ miniercounter w mat over tokes.
WORK ACTIVITIES	CONDUCTED:		t w/ miniperounter w mat over
WORK ACTIVITIES	CONDUCTED:		t w/ miniperounts we mat over

DAILY FIELD REPORT FORMER GRIFFISS AFB, ROME, NEW YORK	FPM
DATE: 7/17/14	
SITE: Blaz 301	
WORK ACTIVITIES CONDUCTED:	
	
WORK ACTIVITIES COMPLETED TODAY:	-
Final Restauration (1) Bldg 301. Top sail lear	eled breedead coast soul
Final Restoration @) Bldg 301. Top Soil lear lay + Secure Strow blanket.	<i>J. J. J. J. J. J. J. J.</i>
in secure and the second of th	
COMMENTS OF TEXTIONS	
COMMENTS/QUESTIONS:	
Non	
	
SAFETY ISSUES:	·
JAN ETT ISSOES.	
NONE	
Λ_{i}	
Report Completed by: \\ \alpha \sh \langle \text{Devize} \\ \langle \langle \langle \text{Devize}	

Appendix D



Appendix E

FPM Remediations Data Verification and Usability Report Former Griffiss AFB Building DP012 301

Contract No. FA8903-10-D-8595, Delivery Order No. 0014 FPM Project No. 1015-11-01

TestAmerica Job # 280-53961-1

Laboratory: TestAmerica Laboratories, Inc.

Sample Matrix: Soil Number of Samples: 8

Analytical Protocol: DOD QSM version 4.2, as per project-specific UFP QAPP

Data Reviewer: Connie van Hoesel Sample Date: April 7, 2014

LIST OF DATA VERIFICATION SAMPLES

This verification report pertains to the following environmental samples and corresponding QC samples:

Sample ID	Date	QC Samples	Date
B301NW04AA	4/7/14		
B301SW04AA	4/7/14	B301SW04AC	4/7/14
B301WW04AA	4/7/14		
B301EW04AA	4/7/14		
B301BE04AA	4/7/14		
B301TCLP04AA	4/7/14	040714AE	4/7/14

Notes:

Refer to attached chain-of-custody for detailed sampling information and sample specific analyses requested.

AA – Primary environmental samples

 $AC-Field\ duplicate\ sample$

AE – Equipment blank sample

DELIVERABLES

The data deliverable report was per requirements of the DOD QSM, version 4.2, as specified in the project-specific QAPP. The report consisted of the following major sections: lab attachment letter, case narrative, chain-of-custody, lab qualifier definitions, analytical results (sheet 2) based on analytical batch, calibration summaries, method blank summaries, laboratory control sample summaries, matrix spike/matrix spike duplicate summaries, holding time forms, performance checks, surrogate and internal standard recoveries, as applicable.

ANALYTICAL METHODS

The analytical test methods and QA/QC requirements used for the sample analyses were per methods as specified in the DOD QSM, version 4.2, with project-specific modifications as listed in the project-specific QAPP. The analytical methods employed included SW-846: Organochlorine Pesticides by Method 8081A/B. One of the samples was submitted for TCLP chlorinated pesticides analysis (B301TCLP04AA).

VERIFICATION GUIDANCE

The analytical work was performed by TestAmerica Denver in accordance with the DOD QSM, version 4.2, and QC requirements of the respective analytical methods and of the project-specific QAPP. The data usability analysis was based on the reviewer's professional judgment and on an assessment of how this data would fare with respect to the DOD QSM, and the criteria as listed in the project-specific QAPP.

QA/QC CRITERIA

The following QA/QC criteria were reviewed for the pesticides analyses, as applicable:

- Method detection limits and limits of quantitation (DL, LOQ)
- Holding times
- Initial and Continuing calibration summaries
- Method blanks
- Field duplicate results
- Serial dilution results
- Matrix spike/matrix spike duplicate (MS/MSD) analysis
- Laboratory control samples (LCS)
- Results reported between DL and LOQ (J-flag)
- Sample storage and preservation
- Data system printouts
- Qualitative and quantitative compound identification
- Chain-of-custody (COC)
- Case narrative and deliverables compliance

The items listed above were in compliance with DOD QSM, version 4.2, and project-specific QAPP criteria and protocols with exceptions discussed in the text below. The data have been verified according to the procedures outlined above and qualified accordingly.

GENERAL NOTES:

SAMPLE LABELING/CHAIN-OF-CUSTODY

No errors in the chain-of-custody were noted. There were no discrepancies noted between the sample labels and the chain-of-custody, or the cooler contents and the chain-of-custody.

PESTICIDES

According to the case narrative, the following analytes were analyzed at initial dilutions:

Sample	Analytes	Dilution
B301NW04AA	4,4'-DDE, 4,4'-DDT, Methoxychlor,	1:10
	Toxaphene	
B301SW04AA, B301SW04AC,	4,4'-DDT, Methoxychlor, Toxaphene	1:10
B301WW04AA, B301EW04AA,		
B301BE04AA		

The dilution results only are reported and are used in data verification as representing original results. The case narrative describes that these samples were analyzed at dilution due to the nature of the sample matrix and/or to bring the concentration of target analytes within the calibration range.

• Laboratory performance on individual samples is established by means of spiking all samples prior to analysis with surrogate compounds and assessing the percent recoveries. The following table summarizes QC exceedances for surrogate recoveries. The sample ID, percent recovery, and QC limits are listed.

Sample ID	Surrogate	%Rec	QC	Flag	Rationale
			Limits (%)	Applied	
B301NW04AA	DCBP	141	55-130	J positive results	%Rec > upper control limit
(PRIMARY)					(UCL)
B301NW04AA	DCBP	176	55-130	J positive results	%Rec > UCL
(PRIMARY) 1:10					
B301SW04AA	DCBP	231	55-130	J positive results	%Rec > UCL
(PRIMARY) 1:10					
B301SW04AC	DCBP	141	55-130	J positive results	%Rec > UCL
(PRIMARY) 1:10					
B301WW04AA	DCBP	160	55-130	None	Associated results non-detect
(PRIMARY) 1:10					
B301EW04AA	DCBP	181	55-130	J positive results	%Rec > UCL
(PRIMARY) 1:10				_	
B301BE04AA	DCBP	165	55-130	J positive results	%Rec > UCL
(PRIMARY) 1:10					

For pesticides, if the recoveries for both of the two surrogates (DBCP or TCMX) are outside control limits, corrective action shall be implemented: the sample shall be reextracted and reanalyzed. If the corrective action is ineffective in resolving the exceedance, and in the absence of matrix interference, then all analytes associated with the surrogate in that sample are qualified. If the recovery of only one surrogate is outside control limits, and chromatographic interference is evident, reanalysis is not required. For samples with surrogate recoveries greater than the upper control limit, positive sample results are considered estimated (flagged "J"). For samples with surrogate recoveries greater than 10% but less than the lower control limit, positive results are considered estimated (flagged "J") and non-detect results are considered estimated (flagged "UJ"). For samples with surrogate recoveries less than 10%, the results are rejected for the analytes. However, using

professional judgment, no corrective action and/or flagging is required for minimal exceedances (i.e., within 1% of the control limits).

<u>Corrective Action</u>: When the %Rec for a surrogate was greater than the upper control limit, "J" flags were applied to positive results. It should be noted that the laboratory reported all preferred results on the "PRIMARY" result type sheet, even if the results were associated with surrogates from the other column.

• The response of the instrument indicated continuing calibration verifications >20% difference for individual analytes. The following table summarizes the exceedances:

Type of Calibration Exceedance Affected Analytes	%D	Method QC Limit	Flag Applied	Rationale		
Pesticides, CCVRT 280-221365/6, Column 1						
4,4'-DDD	21.0	±15	None	Analyte not reported in associated field sample		
Endosulfan sulfate	19.0	±15	None	Analyte not reported in associated field sample		
Endrin ketone	19.7	±15	None	Analyte not reported in associated field sample		
Pesticides, CCVRT 280-221365/6, Column 2						
4,4'-DDE	15.3	±15	None	Analyte not reported in associated field sample		
4,4'-DDD	20.8	±15	None	Analyte not reported in associated field sample		
Endosulfan II	16.5	±15	None	Analyte not reported in associated field sample		
Endosulfan sulfate	18.6	±15	None	Analyte not reported in associated field sample		
Endrin ketone	17.5	±15	None	Analyte not reported in associated field sample		
Pesticides, CCVRT 280-221365	5/25, Coli	ımn 1				
4,4'-DDD	19.6	±15	None	Analyte not reported in associated field sample		
Endosulfan sulfate	18.1	±15	None	Analyte not reported in associated field sample		
Endrin ketone	19.8	±15	None	Analyte not reported in associated field sample		
Pesticides, CCVRT 280-221365	5/25, Colı	ımn 2				
4,4'-DDE	17.0	±15	None	Analyte not reported in associated field sample		
4,4'-DDD	21.6	±15	None	Analyte not reported in associated field sample		
Endosulfan II	17.9	±15	None	Analyte not reported in associated field sample		
Endrin aldehyde	16.4	±15	None	Analyte not reported in associated field sample		
Endosulfan sulfate	19.1	±15	None	Analyte not reported in associated field sample		
Endrin ketone	18.1	±15	None	Analyte not reported in associated field sample		
DCB Decachlorobiphenyl	22.1	±20	None	Results reported from column 1		
Pesticides, CCV 280-221260/3	1, Columi	ı 2				
4,4-DDT	20.9	±20	None	Not associated with field sample		
Methoxychlor	20.7	±20	None	Not associated with field sample		
Pesticides, CCV 280-221260/4	4, Columi	ı 1				
alpha Chlordane	36.6	±20	None	Not associated with field sample		
Pesticides, CCV 280-221260/4	4, Columi	ı 2				
4,4-DDT	23.3	±20	None	Not associated with field sample		
Methoxychlor	25.9	±20	None	Not associated with field sample		

Type of Calibration Exceedance Affected Analytes	%D	Method QC Limit	Flag Applied	Rationale
Pesticides, CCV 280-222219/4	0, Columi	ı 1		
4,4-DDT	-48.8	±20	None	Samples were reanalyzed at dilution for this compound
Methoxychlor	-50.1	±20	None	Samples were reanalyzed at dilution for this compound
Pesticides, CCV 280-222219/4	0, Columi	ı 2		
4,4-DDT	-43.5	±20	None	Samples were reanalyzed at dilution for this compound
Methoxychlor	-41.9	±20	None	Samples were reanalyzed at dilution for this compound
Pesticides, CCV 280-222219/41	, Column	1		
Toxaphene (Peak 2)	-34.5	±20	None	
Toxaphene (Peak 3)	-22.8	±20	None	Average -35.9; samples were reanalyzed at dilution
Toxaphene (Peak 4)	-49.3	±20	None	for this compound
Toxaphene (Peak 5)	-77.1	±20	None	

<u>Corrective Action</u>: According to the case narrative, the sample matrix is believed to have caused the closing CCV (280-222219/40 and /41) to have recovered well below the lower control limit for 4,4-DDT, methoxychlor, and toxaphene. The samples were reanalyzed for these analytes at dilution.

 Method 8081 requires second column confirmation for the detection of pesticides. When the RPD exceeds 40%, review and possible qualification of the data is required per the DOD QSM. The following table lists the RPD results for analytes in field samples:

Sample ID	Analyte	First	Confirmation	RPD	Flag	Rationale
		Column	(CF)			
		Result	Result			
B301NW04AA	gamma-BHC	4.6	1.2	115.3	J	RPD > 40%
	Heptachlor epoxide	14	100	153.2	J	RPD > 40%
	gamma-Chlordane	5.3	68	171.2	J	RPD > 40%
	Alpha-Chlordane	8.2	16	63.4	J	RPD > 40%
	4,4-DDT	120	210	55.4	J	RPD > 40%
B301SW04AA	4,4-DDE	0.91	1.6	53.1	J	RPD > 40%
B301SW04AC	4,4-DDD	1.3	2.2	52.2	J	RPD > 40%
	4,4-DDE	0.76	1.5	66.5	J	RPD > 40%
B301WW04AA	4,4-DDE	0.30	0.67	75.9	J	RPD > 40%
B301EW04AA	Alpha-Chlordane	10	17	48.8	J	RPD > 40%
	Dieldrin	0.36	0.76	70.9	J	RPD > 40%
B301BE04AA	Alpha-Chlordane	11	18	50.8	J	RPD > 40%

<u>Corrective Action</u>: In accordance with the DOD QSM, for pesticides, when the RPD exceeds 40%, the results should be flagged "J." In each case, the lower of the two results was the reported result.

• Field duplicate samples, which are collected at the same location and at the same time using identical collection, handling, and analytical procedures, are used to assess precision of the sample collection process. The UFP QAPP requires qualification of data for field duplicates criterion if the duplicate samples contain detected compounds with concentrations above 5x the reporting limits (RL's) and the relative percent differences (RPD's) between the duplicate sample results exceed RPD control limits (50% for soil samples). If either the parent or the duplicate sample is less than 5x the RL, then the difference between the parent and duplicate sample must be less than 2x the RL. "J" flags for detects and "UJ" flags for non-detects are required per the QAPP for any exceedances. For these purposes the RL is considered equal to the LOQ.

The following table summarizes the relative percent differences (RPD's) of field duplicate sample set B301SW04AA/AC.

Sample ID, Normal	Sample ID, Field Duplicate	Analyte	Normal Result (µg/kg)	Field Dup Result (µg/kg)	LOQ (µg/kg)	RPD/ Total differ ence	Flag Applied	Rationale
B301SW04AA	B301SW04AC	4,4'-DDD	1.2 J	1.3 J	1.8	0.1	None	Total difference < 2xRL
B301SW04AA	B301SW04AC	4,4'-DDE	0.91 J	0.76 J	1.8	0.15	None	Total difference < 2xRL
B301SW04AA	B301SW04AC	4,4'-DDT	20 J	17 J	21	3	None	Total difference < 2xRL

<u>Corrective Action:</u> No "J" qualifiers were applied to the results, since the RPD's and/or total differences among the sample duplicate set B301SW04AA/AC were within QAPP limits.

DATA USABILITY RESULTS

PESTICIDES

Based on the evaluation of all information in the analytical data groups, the results for pesticides are usable with the data qualifiers as noted. Using the verification approach as presented above, the results for all above samples are 100% usable.

DATA USABILITY SUMMARY

All data in Job # 280-53961-1 are valid and usable with qualifications as noted in the data review.

Signed: Concordia van Hoesel Date: 6/13/14

ATTACHMENTS

- Chain of Custody
- Laboratory's case narratives
- Qualified final data verification results on annotated Lab Sheet 2s

SAMPLE SUMMARY

Client: FPM Remediations Inc.

Job Number: 280-53961-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-53961-1	B301NW04AA	Solid	04/07/2014 1005	04/08/2014 0900
280-53961-2	B301SW04AA	Solid	04/07/2014 1025	04/08/2014 0900
280-53961-3	B301SW04AC	Solid	04/07/2014 1025	04/08/2014 0900
280-53961-4	B301WW04AA	Solid	04/07/2014 0950	04/08/2014 0900
280-53961-5	B301EW04AA	Solid	04/07/2014 1035	04/08/2014 0900
280-53961-6	B301BE04AA	Solid	04/07/2014 1045	04/08/2014 0900
280-53961-7	B301TCLP04AA	Solid	04/07/2014 1046	04/08/2014 0900
280-53961-8EB	040714AE	Water	04/07/2014 1230	04/08/2014 0900

CASE NARRATIVE

Client: FPM Remediations Inc Project: Griffiss AFB DP012 Building 301 Report Number: 280-53961-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

Eight samples were received on 04/08/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.5 C.

TCLP CHLORINATED PESTICIDES

Sample B301TCLP04AA (280-53961-7) was analyzed for TCLP chlorinated pesticides in accordance with EPA SW-846 Methods 1311/8081A. The samples were leached on 04/10/2014, prepared on 04/14/2014 and analyzed on 04/16/2014.

TestAmerica Denver's practice for the reporting of dual column data in packages requiring forms and/or raw data is to report the surrogates from both columns, and the preferred result for any given target analyte from the analyst selected column. The preferred results for target analytes and surrogates are reported as PRIMARY on the Sample Datasheets.

No difficulties were encountered during the TCLP pesticides analysis.

All quality control parameters were within the acceptance limits.

CHLORINATED PESTICIDES - SOLIDS

Samples B301NW04AA (280-53961-1), B301SW04AA (280-53961-2), B301SW04AC (280-53961-3), B301WW04AA (280-53961-4), B301EW04AA (280-53961-5) and B301BE04AA (280-53961-6) were analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081B. The samples were prepared on 04/14/2014 and analyzed on 04/22/2014 and 04/23/2014.

TestAmerica Denver's practice for the reporting of dual column data in packages requiring forms and/or raw data is to report the surrogates from both columns, and the preferred result for any given target analyte from the analyst selected column. The preferred results for target analytes and surrogates are reported as PRIMARY on the Sample Datasheets.

The following samples required a Florisil clean-up, via EPA Method 3620B to reduce matrix interferences, the method blank, LCS, and blank spike samples were also florisil cleaned: B301NW04AA (280-53961-1), B301SW04AA (280-53961-2), B301SW04AC (280-53961-3), B301WW04AA (280-53961-4), B301EW04AA (280-53961-5) and B301BE04AA (280-53961-6).

The following samples in prep batch 280-221107 were analyzed at full strength, and were also diluted for method 8081 due to the nature of the sample matrix: B301NW04AA (280-53961-1), B301SW04AA (280-53961-2), B301SW04AC (280-53961-3), B301VW04AA (280-53961-4), B301EW04AA (280-53961-5) and B301BE04AA (280-53961-6). The samples are believed to have caused the closing CCV to recover well below the lower control limit for 4,4-DDT, Methoxychlor, and Toxaphene. Samples B301NW04AA (280-53961-1) and B301EW04AA (280-53961-5) in particular, had numerous non-target peaks and significant baseline rise that could be interfering with the identification and quantitation of target analytes. This inference could cause false positive and/or negative results. Sample B301NW04AA (280-53961-1) appears to contain Arochlor/PCBs.

The continuing calibration verification (CCV) for DCB associated with analytical batch 280-221365 recovered above the upper control limit on the back column. The samples associated with this CCV were bias high as well but the front column was in control for the CCV and the samples. All data is reported from the front column.

No other difficulties were encountered during the pesticides analysis.

All other quality control parameters were within the acceptance limits.

CHLORINATED PESTICIDES - WATER

Sample 040714AE (280-53961-8) was analyzed for chlorinated pesticides (GC) in accordance with EPA SW-846 Method 8081B. The sample was prepared on 04/14/2014 and analyzed on 04/15/2014.

TestAmerica Denver's practice for the reporting of dual column data in packages requiring forms and/or raw data is to report the

surrogates from both columns, and the preferred result for any given target analyte from the analyst selected column. The preferred results for target analytes and surrogates are reported as PRIMARY on the Sample Datasheets.

No other difficulties were encountered during the semivolatiles analysis.

All other quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Samples B301NW04AA (280-53961-1), B301SW04AA (280-53961-2), B301SW04AC (280-53961-3), B301WW04AA (280-53961-4), B301EW04AA (280-53961-5) and B301BE04AA (280-53961-6) were analyzed for percent solids in accordance with EPA SW846 3550C. The samples were analyzed on 04/16/2014.

No difficulties were encountered during the % solids analysis.

All quality control parameters were within the acceptance limits.

Client: FPM Remediations Inc Job Number: 280-53961-1

Client Sample ID:

B301TCLP04AA

Lab Sample ID:

280-53961-7

Client Matrix:

Solid

Date Sampled: 04/07/2014 1046

Date Received: 04/08/2014 0900

8081A Org	ganochlorine	Pesticides	(GC)-TCLP
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Analysis Method: Prep Method: Dilution:

8081A 3510C 1.0

Analysis Batch: Prep Batch: Leach Batch:

280-221365 280-221134 280-220599

Instrument ID: Initial Weight/Volume:

SGC_P2 100 mL Final Weight/Volume: 10 mL

Injection Volume:

1 uL

Analysis Date: Prep Date:

04/16/2014 1325 04/14/2014 2231

Result Type:

PRIMARY

Leach Date:

04/10/2014 1300

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	DL	LOQ
Endrin	THE PARTY OF THE P	0.00010	U	0.000079	0.00050
Heptachlor		0.00010	U	0.000077	0.00050
Heptachlor epoxide		0.00010	U	0.000075	0.00050
gamma-BHC (Lindane)		0.00010	U	0.000069	0.00050
Toxaphene		0.0080	U	0.0037	0.020
Methoxychlor		0.00020	U	0.00013	0.0010
Technical Chlordane		0.0048	U	0.0014	0.0050

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	115	M	34 - 122
Tetrachloro-m-xylene	105		28 - 115

Client: FPM Remediations Inc. Job Number: 280-53961-1

Client Sample ID: **B301NW04AA**

Lab Sample ID: 280-53961-1

Date Sampled: 04/07/2014 1005 Client Matrix: Solid % Moisture: 14.8 Date Received: 04/08/2014 0900

8081B Organochlorine Pesticides (GC)

Analysis Method: 8081B Analysis Batch: 280-222219 Instrument ID: SGC_P2 Prep Method: 3546 Prep Batch: 280-221107 Initial Weight/Volume:

30.4 g Dilution: 1.0 Final Weight/Volume: 10 mL

Analysis Date: 04/22/2014 1856 Injection Volume: 1 uL Pren Date: 04/14/2014 1820

Prep Date: 04	/14/2014 1820		Res	ult Type:	PRIMARY
Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
4,4'-DDD	Colore 1: WWW.life.colore	0.80	UØ	0.63	2.0
Aldrin		0.53	U QC	0.29	2.0
alpha-BHC		0.53	∪ ໔ ໌	0.25	2.0
alpha-Chlordane		8.2	ગ હ ્ય	0.37	2.0
beta-BHC		0.80	U.&	0.77	2.0
delta-BHC		0.80	UQ	0.46	2.0
Dieldrin		0.53	U Q	0.24	2.0
Endosulfan I		0.53	υď	0.20	2.0
Endosulfan II		0.53	UQ	0.33	2.0
Endosulfan sulfate		0.53	UQ	0.32	2.0
Endrin		0.53	U 9 /	0.35	2.0
Endrin aldehyde		0.53	U Q/	0.20	2.0
Endrin ketone		0.80	υæ	0.57	2.0
gamma-BHC (Lindane)		1.2	JŒ	0.54	2.0
gamma-Chlordane		5.3	J 🌠	0.31	2.0
Heptachlor		0.53	UQ	0.25	2.0
Heptachlor epoxide		14	10	0.49	2.0
Surrogate		%Rec	Qualifier	Accep	otance Limits
DCB Decachlorobiphenyl	The second secon	141	Q	55 - 1	30
Totalologo mo sadono		=0			

Job Number: 280-53961-1 Client: FPM Remediations Inc

Client Sample ID: **B301NW04AA**

Date Sampled: 04/07/2014 1005 Lab Sample ID: 280-53961-1

Date Received: 04/08/2014 0900 Client Matrix: Solid % Moisture: 14.8 8081B Organochlorine Pesticides (GC) SGC_P2 Analysis Batch: 280-222483 Instrument ID: Analysis Method: 8081B Prep Batch: 280-221107 Initial Weight/Volume: 30.4 g Prep Method: 3546 Final Weight/Volume: 10 mL Dilution: 10 1 uL DL Injection Volume: 04/23/2014 1444 Run Type: Analysis Date: **PRIMARY** Result Type: 04/14/2014 1820 Prep Date: Qualifier DL LOQ DryWt Corrected: Y Result (ug/Kg) Analyte PRI 2.8 20 110 4,4'-DDE 6.8 23 120 4,4'-DDT UQ 38 5.2 Methoxychlor 8.0 UR 180 2000 Toxaphene 310 %Rec Qualifier Acceptance Limits Surrogate QD 176 55 - 130 DCB Decachlorobiphenyl 70 - 125 111 D Tetrachloro-m-xylene

Client: FPM Remediations Inc. Job Number: 280-53961-1

Client Sample ID:

B301SW04AA

Lab Sample ID:

280-53961-2

Client Matrix:

Solid

% Moisture:

10.1

Date Sampled: 04/07/2014 1025

Date Received: 04/08/2014 0900

8081B Organochlorine Pe	sticides	(GC)
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Analysis Method: Prep Method: Dilution:

8081B

3546

1.0

Analysis Date: Prep Date:

DCB Decachlorobiphenyl

Tetrachloro-m-xylene

04/22/2014 1912 04/14/2014 1820 Analysis Batch: 280-222219

Prep Batch: 280-221107

Instrument ID: Initial Weight/Volume:

SGC_P2 Final Weight/Volume:

55 - 130

70 - 125

31.2 g 10 mL 1 uL

Injection Volume: Result Type:

PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ	
4,4'-DDD		1.2	J M	0.58	1.8	
4,4'-DDE		0.91	J	0.25	1.8	
Aldrin		0.49	U	0.27	1.8	
alpha-BHC		0.49	U	0.23	1.8	
alpha-Chlordane		0.49	U	0.35	1.8	
beta-BHC		0.74	U	0.71	1.8	
delta-BHC		0.74	U	0.43	1.8	
Dieldrin		0.49	U	0.22	1.8	
Endosulfan I		0.49	U	0.19	1.8	
Endosulfan II		0.49	U	0.31	1.8	
Endosulfan sulfate		0.49	U	0.30	1.8	
Endrin		0.49	U	0.33	1.8	
Endrin aldehyde		0.49	Ü	0.18	1.8	
Endrin ketone		0.74	U	0.52	1.8	
gamma-BHC (Lindane)		0.74	U	0.50	1.8	
gamma-Chlordane		0.74	U	0.28	1.8	
Heptachlor		0.49	Ū	0.23	1.8	
Heptachlor epoxide		0.74	U	0.46	1.8	
Surrogate		%Rec	Qualifier	Accenta	nce Limits	

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Client: FPM Remediations Inc

Job Number: 280-53961-1

Client Sample ID:

B301SW04AA

Lab Sample ID:

280-53961-2

Client Matrix:

Solid

% Moisture:

10.1

Date Sampled: 04/07/2014 1025

Date Received: 04/08/2014 0900

8081B Organochic	rine Pesticides ((GC)
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Analysis Method: Prep Method:

3546

8081B 10

04/23/2014 1500

Analysis Batch: Prep Batch:

280-222483 280-221107 Instrument ID:

Initial Weight/Volume: Final Weight/Volume:

SGC_P2 31.2 g 10 mL

Injection Volume:

1 uL

Analysis Date: Prep Date:

Dilution:

04/14/2014 1820

Run Type:

DL

Result Type:

PRIMARY

Qualifier DL LOQ DryWt Corrected: Y Result (ug/Kg) Analyte 21 JØØ 6.3 20 4,4'-DDT Úα 35 4.8 7.4 Methoxychlor 1800 UQ 170 290 Toxaphene

%Rec Qualifier Acceptance Limits Surrogate 55 - 130 231 Q D DCB Decachlorobiphenyl 70 - 125 D Tetrachloro-m-xylene 110

Client: FPM Remediations Inc. Job Number: 280-53961-1

Client Sample ID:

B301SW04AC

Lab Sample ID:

280-53961-3

Client Matrix:

Solid

% Moisture: 9.4 Date Sampled: 04/07/2014 1025

Date Received: 04/08/2014 0900

8081B Organochlorine Pesticides (GC)

Analysis Method: Prep Method: Dilution:

Tetrachloro-m-xylene

3546 1.0

8081B Prep Batch:

Analysis Batch: 280-222219 280-221107 Instrument ID: Initial Weight/Volume: Final Weight/Volume:

70 - 125

SGC_P2 30.1 g 10 mL 1 uL

Analysis Date: Prep Date:

04/22/2014 1929 04/14/2014 1820 Injection Volume: Result Type:

PRIMARY

DryWt Corrected: Y	Result (ug/Kg)			
Tel 175	result (ugring)	Qualifier	DL	LOQ
	1.3	J y	0.60	1.9
	0.76	J ″	0.26	1.9
	0.51	U	0.28	1.9
	0.51	U	0.24	1.9
	0.51	U	0.36	1.9
	0.76	U	0.73	1.9
	0.76	U	0.44	1.9
	0.51	U	0.23	1.9
	0.51	U	0.19	1.9
	0.51	U	0.32	1.9
	0.51	U	0.30	1.9
	0.51	U	0.34	1.9
	0.51	U	0.19	1.9
	0.76	U	0.54	1.9
	0.76	U	0.51	1.9
	0.76	U	0.29	1.9
	0.51	U	0.24	1.9
	0.76	U	0.47	1.9
	%Rec	Qualifier	Accep	otance Limits
and the second section of the Alberta and Section 1995 and the second section 1995 and the section 1995 and the second section 1995 and the se	80	n and man in the way in manifesture, inc. i	55 - 1	30
		1.3 0.76 0.51 0.51 0.51 0.76 0.76 0.51 0.51 0.51 0.51 0.51 0.76 0.76 0.76 0.76 0.76	1.3 J V 0.76 J 0.51 U 0.51 U 0.51 U 0.51 U 0.76 U 0.76 U 0.51 U 0.76 U 0.77 U	1.3 J

78

Job Number: 280-53961-1 Client: FPM Remediations Inc

Client Sample ID: B301SW04AC

Date Sampled: 04/07/2014 1025 Lab Sample ID: 280-53961-3

Date Received: 04/08/2014 0900 Client Matrix: Solid % Moisture: 9.4 8081B Organochlorine Pesticides (GC) Analysis Method: 8081B Analysis Batch: 280-222483 Instrument ID: SGC_P2 3546 Prep Batch: 280-221107 Initial Weight/Volume: 30.1 g Prep Method: Final Weight/Volume: 10 mL Dilution: 04/23/2014 1517 Run Type: DL Injection Volume: 1 uL Analysis Date: PRIMARY Result Type: Prep Date: 04/14/2014 1820 Qualifier DL LOQ Analyte DryWt Corrected: Y Result (ug/Kg) 22 17 JPE 6.5 4,4'-DDT υø, 7.6 4.9 36 Methoxychlor υø 170 1900 Toxaphene 300 Surrogate %Rec Qualifier Acceptance Limits 55 - 130 DCB Decachlorobiphenyl 141 QD D 70 - 125 Tetrachloro-m-xylene 113

Client: FPM Remediations Inc.

Job Number: 280-53961-1

Cilent Sample ID:

B301WW04AA

Lab Sample ID:

280-53961-4

Client Matrix:

Solid

% Moisture:

7.4

Date Sampled: 04/07/2014 0950

Date Received: 04/08/2014 0900

2021R	Organochlorine Pesticides	(CC)
000 ID	Organiocinonne resucides	1961

Analysis Method: Prep Method: Dilution:

DCB Decachlorobiphenyl

Tetrachloro-m-xylene

8081B 3546

1.0

Analysis Date:

04/22/2014 1945 Prep Date: 04/14/2014 1820 Analysis Batch: 280-222219 Prep Batch:

280-221107

Instrument ID: Initial Weight/Volume:

SGC_P2 32.4 g

Final Weight/Volume: Injection Volume:

10 mL 1 uL

Result Type:

55 - 130

70 - 125

PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
4,4'-DDD		0.69		0.55	1.7
4,4'-DDE		0.30	J	0.24	1.7
Aldrin		0.46	U	0.25	1.7
alpha-BHC		0.46	U	0.21	1.7
alpha-Chlordane		0.46	U	0.32	1.7
beta-BHC		0.69	U	0.66	1.7
delta-BHC		0.69	U	0.40	1.7
Dieldrin		0.46	U	0.21	
Endosulfan I		0.46	U	0.18	1.7 1.7
Endosulfan II		0.46	U	0.29	1.7
Endosuifan sulfate		0.46	U	0.28	1.7
Endrin		0.46	U	0.31	1.7
Endrin aldehyde		0.46	U	0.17	1.7
ndrin ketone		0.69	U	0.49	1.7
jamma-BHC (Lindane)		0.69	U	0.46	1.7
amma-Chlordane		0.69	U	0.27	1.7
leptachlor		0.46	U	0.21	1.7
leptachlor epoxide		0.69	U	0.43	1.7
Surrogate		%Rec	Qualifier	Accepta	nce Limits

106

73

Job Number: 280-53961-1 Client: FPM Remediations Inc

B301WW04AA Client Sample ID:

Lab Sample ID: Client Matrix:	280-53961-4 Solid	% Moisture	e: 7.4			ate Sampled: 04/07/2014 095 ate Received: 04/08/2014 090	
		8081B Organoch	lorine Pesticid	es (GC)			
Analysis Method: Prep Method: Dilution: Analysis Date: Prep Date:	8081B 3546 10 04/23/2014 1533 04/14/2014 1820	Analysis Batch: Prep Batch: Run Type:	280-222483 280-221107 DL		Instrument ID: Initial Weight/Volume Final Weight/Volume Injection Volume: Result Type:	-	
Analyte	DryWt Corrected: Y	Result (u	g/Kg)	Qualifie	r DL	LOQ	
4,4'-DDT	Annalder and the second	6.9	3 . 3000 . 70. Tex 1000	U.A.	5.9	20	la C
Methoxychlor		6.9		υœί	4.5	33	
Toxaphene		270		υæ	160	1700	
Surrogate		%Rec		Qualifie	r Accep	otance Limits	
DCB Decachlorobin	phenyl	160		QD	55 - 1	30	
Tetrachloro-m-xyler	ne	106		D	70 - 1	25	

Client: FPM Remediations Inc. Job Number: 280-53961-1

Client Sample ID: **B301EW04AA**

Lab Sample ID: 280-53961-5

Date Sampled: 04/07/2014 1035 Client Matrix: Solid % Moisture: 14.3 Date Received: 04/08/2014 0900

	8081B Organochlorine Pesticides (GC)
--	--------------------------------------

Analysis Method: 8081B Analysis Batch: 280-222219 Instrument ID: SGC_P2 Prep Method: 3546 Prep Batch: 280-221107 Initial Weight/Volume: 31.3 g Dilution: 1.0

Final Weight/Volume: 10 mL Analysis Date: 04/22/2014 2002 Injection Volume: 1 uL

, along the Batto.	O HIZZIZOTT ZOOL		uiler	MOIT VOIGITIE.	I UL
Prep Date:	04/14/2014 1820		Resi	ult Type:	PRIMARY
Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
4,4'-DDD	**	0.77	U	0.61	1.9
4,4'-DDE		13		0.27	1.9
Aldrin		0.51	U	0.28	1.9
alpha-BHC		0.51	U	0.24	1.9
alpha-Chlordane		10	J	0.36	1.9
oeta-BHC		0.77	U	0.74	1.9
delta-BHC		0.77	U	0.45	1.9
Dieldrin		0.36	J	0.23	1.9
Endosulfan I		0.51	U	0.20	1.9
Endosulfan II		0.51	U	0.32	1.9
Endosulfan sulfate		0.51	U	0.31	1.9
Endrin		0.51	U	0.34	1.9
Endrin aldehyde		0.51	U	0.19	1.9
ndrin ketone		0.77	U	0.55	1.9
amma-BHC (Lind	ane)	0.77	U	0.52	1.9
amma-Chlordane		9.3		0.30	1.9
leptachlor		0.51	U	0.24	1.9
leptachlor epoxide	•	2.9		0.48	1.9
Surrogate		%Rec	Qualifier	Accepta	ance Limits
OCB Decachlorobij	-	119	us, a new mison more, us a seek meeting	55 - 13) — — — — — — — — — — — — — — — — — — —
'atrachlara ra sada		40			_

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	119	ALLESS A NEW YORK TOTAL COMMENT COMMENT	55 - 130
Tetrachloro-m-xylene	83		70 - 125

Client: FPM Remediations Inc Job Number: 280-53961-1

Client Sample ID: B301EW04AA

 Lab Sample ID:
 280-53961-5
 Date Sampled:
 04/07/2014 1035

 Client Matrix:
 Solid
 % Moisture:
 14.3
 Date Received:
 04/08/2014 0900

8081B Organochlorine Pesticides (GC)

Analysis Method: 8081B Analysis Batch: 280-222483 Instrument ID: SGC_P2

Analysis Method: 8081B Analysis Batch: 280-222483 Instrument ID: SGC_P2
Prep Method: 3546 Prep Batch: 280-221107 Initial Weight/Volume: 31.3 g
Dilution: 10 Final Weight/Volume: 10 mL

 Analysis Date:
 04/23/2014 1550
 Run Type:
 DL
 Injection Volume:
 1 uL

 Prep Date:
 04/14/2014 1820
 Result Type:
 PRIMARY

Analyte DryWt Corrected: Y Result (ug/Kg) Qualifier DL LQQ

Qualifier DryWt Corrected: Y Result (ug/Kg) Analyte pe 3 22 6.6 45 4,4'-DDT UÆ 37 7.7 5.0 Methoxychlor 1900 UØ Toxaphene 300 180

 Surrogate
 %Rec
 Qualifier
 Acceptance Limits

 DCB Decachlorobiphenyl
 181
 Q D
 55 - 130

 Tetrachloro-m-xylene
 120
 D
 70 - 125

Client: FPM Remediations Inc Job Number: 280-53961-1

Client Sample ID:

B301BE04AA

Lab Sample ID:

280-53961-6

Client Matrix:

Solid

% Moisture:

14.2

Date Sampled: 04/07/2014 1045

Date Received: 04/08/2014 0900

8081R	Organochlorine	Pesticides	(GC)
00010	Organochionnic	Lestifica	1001

Analysis Method: Prep Method:

8081B

3546 1.0

Analysis Date: Prep Date:

Dilution:

04/22/2014 2018

Analysis Batch: 280-222219 Prep Batch:

280-221107

Instrument ID: Initial Weight/Volume: SGC_P2 31.8 g

Final Weight/Volume: Injection Volume:

10 mL 1 uL

•	· ·			Mon volume.	i uL
Prep Date:	04/14/2014 1820		Resi	ult Type:	PRIMARY
Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
4,4'-DDD	**************************************	18	M	0.60	1.9
4,4'-DDE		16		0.26	1.9
Aldrin		0.51	U	0.28	1.9
alpha-BHC		0.51	U	0.24	1.9
alpha-Chiordane		11	J	0.36	1.9
beta-BHC		0.76	U	0.73	1.9
delta-BHC		0.76	U	0.44	1.9
Dieldrin		0.51	U	0.23	1.9
Endosulfan I		0.51	U	0.19	1.9
Endosulfan II		0.51	U	0.32	1.9
Endosulfan sulfate		0.51	U	0.30	1.9
Endrin		0.51	U	0.34	1.9
Endrin aldehyde		0.51	U	0.19	1.9
Endrin ketone		0.76	U	0.54	1.9
gamma-BHC (Lindar	ne)	0.76	U	0.51	1.9
gamma-Chlordane		10		0.29	1.9
-leptachlor		0.47	J	0.24	1.9
Heptachlor epoxide		2.6		0.47	1.9
Surrogate		%Rec	Qualifier	Accepta	ance Limits
DCB Decachlorobiph	enyl	109		55 - 13	
Tetrachloro-m-xylene	•	70		70 - 12	5

Client: FPM Remediations Inc Job Number: 280-53961-1

Client Sample ID: B301BE04AA

DCB Decachlorobiphenyl

Tetrachloro-m-xylene

Date Sampled: 04/07/2014 1045 Lab Sample ID: 280-53961-6 Date Received: 04/08/2014 0900 % Moisture: 14.2 Client Matrix: Solid 8081B Organochlorine Pesticides (GC) SGC_P2 Analysis Method: 8081B Analysis Batch: 280-222483 Instrument ID: 3546 Prep Batch: 280-221107 Initial Weight/Volume: 31.8 g Prep Method: Final Weight/Volume: 10 mL Dilution: Injection Volume: 1 uL 04/23/2014 1606 Run Type: DL Analysis Date: Result Type: **PRIMARY** 04/14/2014 1820 Prep Date: Result (ug/Kg) Qualifier DL LOQ Analyte DryWt Corrected: Y BO J 6.5 22 83 4,4'-DDT UØ 5.0 36 7.6 Methoxychlor US 170 1900 300 Toxaphene Acceptance Limits Surrogate %Rec Qualifier

165

109

QD

D

55 - 130

70 - 125

Client: FPM Remediations Inc Job Number: 280-53961-1

Client Sample ID:

040714AE

Lab Sample ID:

280-53961-8EB

Client Matrix:

Water

Date Sampled: 04/07/2014 1230

Date Received: 04/08/2014 0900

OVO ID CIUAIIUCIIIUIIIR PESUCIURS (GC	8081B	Organochlorine	Pesticides	(GC
---------------------------------------	-------	----------------	-------------------	-----

Analysis Method: Prep Method: Dilution:

8081B 3510C

1.0

Analysis Date: Prep Date:

04/15/2014 1926 04/14/2014 1700 Analysis Batch: 280-221260 Prep Batch:

280-221101

Instrument ID: Initial Weight/Volume:

SGC_P1 1000 mL Final Weight/Volume: Injection Volume:

10 mL 1 uL

Result Type:

PRIMARY

Analyte	Result (ug/L)	Qualifier	DL	LOQ
4,4'-DDD	0.020	Ū	0.0077	0.050
4,4'-DDE	0.020	U	0.0075	0.050
4,4'-DDT	0.020	U	0.015	0.050
Aldrin	0.020	U	0.0059	0.050
alpha-BHC	0.020	U	0.0053	0.050
alpha-Chlordane	0.020	U	0.0053	0.050
beta-BHC	0.020	U	0.0087	0.050
delta-BHC	0.020	U	0.0058	0.050
Dieldrin	0.020	U	0.0063	0.050
Endosulfan I	0.020	U	0.0058	0.050
Endosulfan II	0.020	U	0.0070	0.050
Endosulfan sulfate	0.020	U	0.0057	0.050
Endrin	0.020	U	0.0079	0.050
Endrin aldehyde	0.020	U	0.0088	0.050
Endrin ketone	0.020	U	0.0070	0.050
gamma-BHC (Lindane)	0.020	U	0.0069	0.050
gamma-Chlordane	0.020	U	0.0091	0.050
Heptachlor	0.020	U	0.0077	0.050
Heptachlor epoxide	0.020	U	0.0075	0.050
Methoxychlor	0.020	U	0.013	0.10
Surrogate	%Rec	Qualifier	Acceptan	ce Limits
DCB Decachlorobiphenyl	111	Salar managa, yang salar	30 - 135	
Fetrachloro-m-xylene	71	25 - 140		

Client: FPM Remediations Inc

Job Number: 280-53961-1

General Chemistry

Client Sample ID:

B301NW04AA

Lab Sample ID:

280-53961-1

Client Matrix:

Solid

Date Sampled: 04/07/2014 1005

Date Received: 04/08/2014 0900

DL LOQ Dil Method Units Analyte Result Qual 15 % 0.10 0.10 1.0 Moisture Percent Moisture Analysis Batch: 280-221530 Analysis Date: 04/16/2014 2107 DryWt Corrected: N % 0.10 0.10 1.0 Moisture **Percent Solids** Analysis Date: 04/16/2014 2107 DryWt Corrected: N Analysis Batch: 280-221530

Appendix F

Oneida Herkimer Solid Waste Management Authority Generators Waste Profile Sheet For the Oneida Herkimer Regional Landfill

Waste Profile On F	ile? Yes ☐ No⊠		Р	rofile Number: OHS	Manager of the Control of the Contro
	ion-Hazardous ☐ T	SCA	R	enewal Date:	7/15/2015
A Waste Generato		S WATER STREET	2000年1月1日	SALVING DE TIME	
3. Generator's Stree 5. Generator's City 7. Zip/Postal Code: 9. County: One! 11. Company Nam: 13. Billing Contact: 15. Billing Address: 16. Credit Applicati	da e (Billing): FPM Reparted Baldyga : 584 Phoenix Drivon on file: XYES	mediations ve Rome, New Yor	10. State ID# 12. Custome 14. Custome rk 13441	(315) 356-0810 New York USEPA/Federal ID	0#: NY4571924451 36-7721 ext. 207
	Excavated Soils, D		Area of Co	ncern	and the second seco
b. Process General	ting Waste: Excava	AUDIT OF SOILS.			
***************************************	***************************************	the second secon			
c. Color Brown	d. Strong odor (describe) No odor	e, Physical State ⊠ Solid ∐Liqui □Gas □Slud	d	f. Layers Single Layer Multi Layer	g. Free Liquid Range to % h. pH Range
		☐Other			to%
i. Chemical Com	oint:	stituents (including	140-199° halogenate	'F ∐>200°F ⊠Not d organics, debris,	and Unic S) present in
Constituents	Concentrat	ion Range	Constituen	ts	Concentration Range
***Previous investig	ations showed only	pesticides	1		
above 6-NYUKK P	art 375 Residential v sults (2013 and 201	4 investigations)			
are provided in the	attached spreadshe packets (file names - Mini Final Report, J58	et and attached J53961-1 Std_			A Company of the Comp
Tal L4 Package N	Aini Final Report, 350 Aini Final Report, Bu Building 301 Site Inv	ilding 301			
Results) 2013 Site	Investigation Report	also provided on		i.	
the attached CD.	Total Co	omposition Must	Equal Or Ex	ceed 100%	
		,	Explosive		adioactive
k. Oxidizer Carcinogen Does the waste re OHSA notification	(Liet in Section B.1.	ofile contain any o	Shock Sensiticarcinogens	ive	/ater Reactive
m. Does the waste re	epresented by this pleanesented by this pl	rofile contain any a	asbestos		☐ Yes ⊠No
If your		1 1	riable i in	ion-rhable	
 Does the waste r If yes, concentrate 		itotile contain beni pm	(6416 f	*****************************	☐ Yes ⊠No

Oneida Herkimer Solid Waste Management Authority Generators Waste Profile Sheet For the Oneida Herkimer Regional Landfill

p. q.	n the contain any Class Lar Class II ozone depleting chemicals/.	***********	Yes 🕅
2. (Quantity of Waste Stimated Annual Volume 60 Syards Tons Drums (specify)	Other	
	Shipping Information Packaging: 4 wheeler dump truck		
X	Buik Solid; Type/Size: (16y)	e/Size	and the second s
	Drum: Type; Size:		an Tima
	Other One dump	truck will be used	making 8 trips
	Is this a US Department of Transportation (USDOT) Hazardous Material? (
ď.	i. Reportable Quantity: (lbs,kgs): e. Hazard	Class/ID#	المادية المادي
- f	USDOT Shipping Name:		THE RESERVE OF THE PROPERTY OF
9	Personal Protective Equipment Requirement: None Hauler / Transporters Name: Fred Burrows Trucking	Burdellands, Parker philadella and Assessment and Assessment	
	and the same of th		XYes No
C.	DEC 364 Permit on the General Research Series (Please check appropriate responses, sign, and	d date below.)	The state of the s
1.	is this a USEPA hazardous waste (40 CFR part 261)? If the answer is no si a. If yes, identify ALL USEPA listed and characteristic waste codes (D, F, I	(ip to 2 (, P, U)	□Yes ⊠No
	b. If a characteristic hazardous waste, do underlying hazardous constituen	ts (UHCs) apply?	
	(If yes list in section (B.1.j)		☐Yes ☐No
	 c. Does this waste contain debris? (If yes list the size and type in chemical composition B.1) 		☐Yes ☐No
2.	Is this a state hazardous waste?		☐Yes ⊠No
	Identify ALL state hazardous waste codes		
3.	Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated	clean up?	⊠Yes □No
	If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order	er that governs site inton.	
RE	the state of the s	4 46 110 -	
4.	Does the waste represented by this waste profile sheet contain radioactive disposal regulated by the Nuclear Regulatory Commission?	Marchan At 10	∐Yes ⊠No
5 .	Does the waste represented by this waste profile sheet contain concentration Polychlorinated Biphenyls (PCBs) regulated by 40 CFR 761?	ons of	∏Yes ⊠No
	a. If yes, were the PCBs imported into the U.S.?	** ************************************	Land to be desired
6	Do the waste profile sheet and all attachments contain true and accurate de Waste material, and has all relevant information within the possession of the Regarding known or suspected hazards pertaining to the waste been disclosed.	e Ocherator	⊠Yes □No

Oncida Herkimer Solid Waste Management Authority Generators Waste Profile Sheet For the Oncida Herkimer Regional Landfill

	Contractor?
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor?
×	Check here if Certification of Destruction or Disposal is required.
con dete licer	Sample submitted is representative as defined in 40 CFR 261 — Appendix I or by using an equivalent method. I horize OHSWA to obtain a sample from any waste shipment for purposes of recertification. If this certification is de by a broker, the undersigned signs as authorized agent of the generator and has confirmed the information tained in this profile sheet from information provided by the generator and additional information as it has remined to be reasonably necessary. If approved for management, Contractor has all the necessary permits and insess for the waste that has been characterized and identified by this approved profile. Title: Will EM. CASUP MATER.
Na	me (Type or Print): (NYNEQ INE JAMAN) Company Name: NFCEC Date:) 3/2017 Check if additional information is attached. Indicate the number of attached pages 5
	HSWA Managententis Decisión
B F	Precautions, Special Handling Procedures, or Limitation on Approval.
3, 0	Orect haul to Regional Landfill: Yes No Commingle waste at Eastern or Western Transfer Stations: Yes No Vaste Form:
5. V	Vaste Class. ☐ DH SW ☐ MSW ☐ C&D ☐ Sludge ☐ CS ☐ ADC ☐ Select C&D ☐ Asbestos
	cial Waste Decision: Approved Disapproved
Spe	cial Waste Approvals Signature: 52/15/2014 Date: 7/15/2014

ONEIDA-HERKIMER SOLID WASTE AUTHORITY UNIFORM TRACKING DOCUMENT

1600 Genesee Street, Utica, NY 13502

(315) 733-1224

	FACILITY NAME OR ORIGIN OF MATERIAL/STREET LO	OCATION: DATE:
	· _ /	TO /U /IU
	Former Griffiss AFB Bldg. 30 CONTACT PERSON OR SITE REPRESENTATIVE:	7/16/14
	Josh Wenzel/FPM Remediations	TITLE: Environmental Scientist
SIT	FACILITY LOCATION/MAILING ADDRESS:	TELEPHONE NUMBER;
GENERATION SITE	594 Phoenix Drive Rome, NY 13441	(315) 336-7721 (at 211)
₽₹	WASTE TYPE / PROFILE #	Estimate Yards Container Type Container #
	A: Contaminated soils (CS0714-02	A. 20 A
3	В:	
		B B]
	Certification - I hereby declare that the contents of this con	Usignment are classified as non-hezardous
	- I was an a mileti strage sinuge, construction and demotition	debrie evenerale bestite e e e e e e e e e
	disposal of material has been approved and the tracking is	which tracking has been requested. The
	I TO THE PERSON ASSESSMENT OF THE PERSON OF	910) 6 m d a a a d a d a a d a d a d a d a d a d a
	I will accept the return of the load at n	ny (generator's) expense.
	Generators Signature BNAC EN	N. COONDINATION US/2014
	A FOEL	Title Date -
	TRANSPORTING COMPANY NAME;	AUTHORITY PERMIT NUMBER:
		6A-108
ER.	DRIVER'S NAME (PRINT):	TICKET NUMBER:
HAULER	DRIVERS SIGNATURE:	
=	Right D.	TRAILER NUMBER:
	DATE OF SHIPMENT OF COMMENTS:	B-455
	MATERIAL:	CONTAINER SIZE / TYPE:
·	DISPOSAL FACILITY NAME: DISPO	SAL SITE REPRESENTATIVE NAME:
}	CHRUS ALL	
3	WASTE TYPE RECEIVED:	DATE RECEIVED:
FAC	Cont on	
AL	SCALE FULL EMPT TICKET WEIGHT: WEIGH	
DISPOSAL FAC	NUMBER: CERCE 3930	WEIGHT AZ TELL
SIG	DISPOSAL FACILITY CERTIFICATION:	1 30.70
	- teapenter So	close 7-16-14
	SIGNATURE	TITLE DATE
	COMMENTS:	
I	· 405 · 71 · 8 · 9 · , · 9 ·	**************************************

COPY DISTRIBUTION: WHITE COPY – ONEIDA-HERKIMER SOLID WASTE AUTHORITY
YELLOW COPY – DISPOSAL FACILITY PINK COPY - GENERATOR/HAULER/TRANSPORTER COPY

ONEIDA-HERKIMER SOLID WASTE AUTHORITY UNIFORM TRACKING DOCUMENT

1600 Genesee Street, Utica, NY 13502

(315) 733-1224

	FACILITY NAME OR ORIGIN OF MATERIAL/STREET LO	CATION	D A TOP	
			DATE:	
	CONTACT PERSON OR SITE REPRESENTATIVE:		7/16/14	,
	Josh Ward / FOM David June		Enwonmental Scientis	1
GENERATION SITE	Josh Wenzel / FPM Renediations FACILITY LOCATION/MAILING ADDRESS:			
N.S			TELEPHONE NUMB	
TIO	WASTE TYPE / PROFILE # 1	Estimate Yar	(315) 336-1721 (8	1214
RA	A: Corrionnated soils/CSO714-02			ner#
EN	4: CONTOMINATED 261/3/ C30.114-05	A. 20	·	
9	B:	R		í
		D	B B	
	Certification - I hereby declare that the contents of this con	sionment ar	e classified as you have a	
	I was not an includentage mulye, construction and doministra.	dokuje on on -		
	TO A CARLO AND A WALL OUT THE THE HEALTH HE HEALTH AND A CONTRACTOR AND A	فحالم مسمة المامة والعود		
	disposal of material has been approved and the tracking is a Waste Authority. I certify that the above information is true not as I have stated. I will account the motion of the company	th find common	and a second allocations and a second	id
	and a state of the load at m	y (generator	's) expense.	T I
	Lether Derrol Bruc E	NIV CAN	DAMMOTA 7/15/2	
	Generators Signature AT CEC	Title	ROWATM 7/15/2	017
	TRANSPORTING COMPANY NAME:	5		65 51
		A	UTHORITY PERMIT NUMB	ER:
	DRIVER'S NAME (PRINT):		GA-108	
HAULER	Bill Baxter		ICKET NUMBER:	
AU	DRIVERS SIGNATURE:			
-	RICARA	T	RAILER NUMBER:	
	DATE OF SHIPMENT OF COMMENTS:		8-455	
	MATERIAL:		CONTAINER SIZE / TYPE:	1
	7-16-14			1
<u></u>	DISPOSAL FACILITY NAME: DISPO	SAL SITE RE	PRESENTATIVE NAME:	
>	CHSWE RIF		The state of the s	1
LITY	WASTE TYPE RECEIVED:	D	ATE RECEIVED:	
AC	Carl Sail		THE STATE OF THE S	
7	SCALE FULL EMPTY	,	NET COLOR	
DISPOSAL FAC	TICKET WEIGHT: WEIGH		WEIGHT: 24-20	
SPC	DISPOSAL FACILITY CERTIFICATION:	1980	154a)	_
2	CERTIFICATION:	1		
	SION ATTIMES	<u>X doc</u>	0]-16-16	4
	SIGNATURE	TITLE	DATE	_
	COMMENTS:			\dashv

COPY DISTRIBUTION: WHITE COPY – ONEIDA-HERKIMER SOLID WASTE AUTHORITY
YELLOW COPY – DISPOSAL FACILITY PINK COPY - GENERATOR/HAULER/TRANSPORTER COPY

ONEIDA-HERKIMER SOLID WASTE AUTHORITY UNIFORM TRACKING DOCUMENT

1600 Genesee Street, Utica, NY 13502

(315) 733-1224

	FACILITY NAME OR ORIGIN OF MATERIAL/STR	PEET LOCATION DATE
	Former Griffiss AFB/ Bldg 3	
	CONTACT PERSON OR SITE REPRESENTATIVE:	TITLE:
본	Josh Wenzel FPM Romodiation	Environmental Scientist
S	FACILITY LOCATION/MAILING ADDRESS:	TELEPHONE NUMBER:
ION	WASTE TYPE / PROFILE #	317 336-7771 (01/21)
i≅		Container type Container i
GENERATIONSITE	A: Contaminated Soils (SO714-0	2 A20 AA
9	B:	
		B B
	Certification - I hereby declare that the contents of	Cthis consignment and also (5)
	and are in fact sewage sludge, construction and der NYCRR Part 364 for which disposal has been appr disposal of material has been approved and the trac Waste Authority. I certify that the above informati not as I have stated, I will accept the return of the le	montion debris or special handling waste as defined if roved or which tracking has been requested. The cking is requested by the Oneida – Herkimer Solid
		Title Date
	TRANSPORTING COMPANY NAME:	AUTHORITY PERMIT NUMBER:
	Dunaer Jack	6A-108
*	DRIVER'S NAME (PRINT):	TICKET NUMBER:
HAULER	LBUI Baxter	
¥	DRIVERS SIGNATURE:	TRAILER NUMBER:
	Bull Bull	13-465
	DATE OF SHIPMENT OF COMMENTS:	
	MATERIAL: 7-16-14	CONTAINER SIZE / TYPE:
	DISPOSAL FACILITY NAME:	DISPOSAL SITE REPRESENTATIVE NAME:
1	CHSLIB RIE	DISTUSAL SITE REPRESENTATIVE NAME:
TELL	WASTE TYPE RECEIVED:	DATE BUCDIA
•	Cont Sor O	DATE RECEIVED:
ا بد	SCALE FULL	EMPTY NET
DISPOSAL FA	NUMBER: 03507 WEIGHT:	WEIGHT: WEIGHT: 1960
Sid	DISPOSAL FACILITY CERTIFICATION:	
	- tai centro	San Trude W.
ı	SIGNATURE	TITLE DATE
		DATE
	COMMENTS:	
		er mille seeker en en de de de de de de
	COPY DISTRIBUTION.	

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Appendix G



Excavator at site

Excavator and Dump Truck





Excavation – Photo 1

Excavation – Photo 2





Excavation – Photo 3

Excavation – Photo 4





Excavation – Photo 5

Excavation – Photo 6





Excavation – Photo 7

Excavation – Photo 8





Restoration – Photo 1

Restoration – Photo 2





Restoration – Photo 3

Restoration – Photo 4

