DEPARTMENT OF THE AIR FORCE
AIR FORCE REAL PROPERTY AGENCY

30 MAR 2010

MEMORANDUM FOR: Mr. Douglas Pocze
USEPA Region II
Federal Facilities Section
290 Broadway, 18th Floor
New York, NY 10007-1866

Ms. Heather L. Bishop
NYSDEC
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, NY 12233-7015

FROM: AFRPA – Griffiss
153 Brooks Road
Rome, NY 13441-4105

SUBJECT: Draft Record of Decision for the Building 100 Source Removal Area of Concern (AOC)

1. Enclosed please find the Draft Record of Decision for the Building 100 Source Removal AOC for your review.

2. The Record of Decision has been prepared following the Proposed Plan public comment period. Please provide any comments or written concurrence by April 30, 2010. If you have any questions or require additional information, please contact me by phone at 315-356-0810, ext. 202.

Sincerely,

for MICHAEL F. MCDERMOTT
BRAC Environmental Coordinator

Attachment: As Noted

cc: G. Rys, NYSDOH
S. TerMaath, AFRPA/BPM

DRAFT

RECORD OF DECISION

BUILDING 100 SOURCE REMOVAL AREA OF CONCERN
(IRP SITE ST-51)

FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK

UNITED STATES DEPARTMENT OF THE AIR FORCE
AIR FORCE REAL PROPERTY AGENCY

MARCH 2010

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ACRONYMS

AFB	Air Force Base
AFRPA	Air Force Real Property Agency
AOC	Area of Concern
ARARs	Applicable or Relevant and Appropriate Requirements
AST	aboveground storage tank
ATSDR	Agency for Toxic Substances and Disease Registry
bgs	below ground surface
BRAC	Base Realignment and Closure
BTEX	benzene, toluene, ethylbenzene and xylenes
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Contaminant of Concern
DFAS	Defense Finance and Accounting Services
EADS	Eastern Air Defense Sector
EE/CA	Engineering Evaluation/Cost Analysis
EPA	Environmental Protection Agency
FFA	Federal Facility Agreement
FPM	FPM Group, Ltd.
ft	feet
IRA	Interim Remedial Action
IRP	Installation Restoration Program
JP-4	jet propellant fuel grade 4
LAW	Law Engineering and Environmental Services, Inc.
MDL	method detection limit
MSL	mean sea level
MTBE	methyl-tertiary butyl ether
µg/kg	microgram per kilogram
µg/L	microgram per Liter
$\mu g/m^3$	microgram per cubic meter
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
NYANG	New York Air National Guard
NYSDEC	New York State Department of Environmental Conservation
OWS	oil/water separator

ACRONYMS (CONTINUED)

PCBs	polychlorinated biphenyls
PID	photoionization detector
ppb	parts per billion
RL	reporting limit
ROD	Record of Decision
RSCO	Recommended Soil Cleanup Objective
SAC	Strategic Air Command
SCGs	Standards, Criteria, and Guidance values
SI	Supplemental Investigation
STARS	Spill Technology and Remediation Series
SVI	Soil Vapor Intrusion
SVOC	semi-volatile organic compound
TAGM	Technical and Administrative Guidance Memorandum
TBCs	To-Be-Considereds
TCLP	Toxicity Characteristics Leaching Procedure
TVH	Total Volatile Organic Hydrocarbons
UST	underground storage tank
VOC	volatile organic compound

1.0 DECLARATION

1.1 Site Name and Location

The Building 100 Source Removal Area of Concern (AOC) (site identification designation ST-51) is located at the former Griffiss Air Force Base, Rome, Oneida County, New York.

1.2 Statement of Basis and Purpose

This Record of Decision (ROD) presents the selected remedial alternative for the Building 100 Source Removal AOC. It has been developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the Administrative Record for this site, a copy is available on-line at https://afrpaar.lackland.af.mil/ar and in the administrative record file located at 153 Brooks Road in the Griffiss Business and Technology Park.

The remedy for no further action has been selected by the United States Air Force (Air Force) in conjunction with the United States Environmental Protection Agency (EPA) and with the New York State Department of Environmental Conservation (NYSDEC) pursuant to the former Griffiss AFB Federal Facility Agreement (FFA).

1.3 Description of the Remedy

The Selected Remedy of no further action for the Building 100 Source Removal AOC is protective of human health and the environment and complies with the federal and state applicable or relevant and appropriate requirements (ARARs).

Contamination source removal actions were conducted at the site in which the majority of soil contamination found during the previous investigations was removed. The remaining chemicals detected in the soil did not exceed NYSDEC's Technical and Administrative Memorandum (TAGM) #4046 Soil Cleanup Objectives Guidance Values, and the potential source of groundwater contamination has been removed. In addition, groundwater monitoring has confirmed that contaminants of concern (COCs) concentrations are also below New York State Standards, Criteria, and Guidance values (SCGs).

1.4 Statutory Determinations

It has been determined that no additional remedial action is necessary at the Building 100 Source Removal AOC. The Air Force and EPA, with concurrence from the NYSDEC, have determined that the remedy for no further action is warranted for this site.

1.5 Authorizing Signatures

On the basis of the remedial investigations and successfully completed removal actions performed at the Building 100 Source Removal AOC, there is no evidence that residual contamination at the site poses a current or future potential threat to human health or the environment. The NYSDEC has concurred with the Selected Remedy presented in this Record of Decision.

_____ _____

ROBERT M. MOORE Date
Director
Air Force Real Property Agency

_____ _____

WALTER E. MUGDAN Date
Director, Emergency and Remedial Response Division
United States Environmental Protection Agency, Region 2

2.0 DECISION SUMMARY

2.1 Site Name, Location, and Description

The former Griffiss AFB covered 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 (ft) above mean sea level (MSL). Three Mile Creek, Six Mile Creek (both of which drain into the New York State Barge Canal, located to the south of the base), and several state-designated wetlands are located on the former Griffiss AFB, which is bordered by the Mohawk River on the west. Due to its high average precipitation and predominantly silty sands, the former Griffiss AFB is considered a groundwater recharge zone.

The Building 100 Source Removal AOC is located to the east and south of Building 100 (Figure 1). The AOC is defined as the fueling/defueling system components and associated appurtenances which supplied jet propellant fuel grade 4 (JP-4) and aviation gasoline to aircraft from 1953 to the 1960s. The six hydrant pits were located on the airfield apron to the east of Building 100. There is approximately 1,940 linear feet of abandoned 6-inch pipe under the apron that connected the hydrant pits to the filter pit and eventually a 12-inch fuel supply pipe. The former filter pit was located approximately 300 feet south and 75 feet east of Building 100, near the southern edge of the airfield apron. An 8-inch defueling header also serviced the hydrant pits and was drained by a 12-inch main that ran from the hydrant pits to the former 25,000-gallon salvage tank underground storage tank (UST) 131-2. The fueling/ defueling system is illustrated on Figure 2.

The site-specific geology in the vicinity of Building 100 is characterized by soils consisting of mainly sandy silt with gravel. During the source removal excavation activity in 1997, the soil was observed to be very loose, granular material. The groundwater is the vicinity of Building 100 flows towards the southeast and was encountered at approximately 10 feet below ground surface (ft bgs). The hydrant area of the Building 100 AOC is located approximately 800 feet southwest of Six Mile Creek. Surface water run-off from the site formerly drained into a 42-inch storm drain, which ran south along Otis Street, approximately 700 feet southwest of the fuel hydrants. The 42-inch storm drain connected to a 66-inch storm drain that discharged to Rainbow Creek, which in turn discharges to Six Mile Creek. In the summer of 1997, the 42-inch storm drain was replaced by a new 60-inch storm drain at a similar depth, installed on the east side of the former pipeline location. Invert depths range from 5 to 8 ft bgs and do not appear to intersect the groundwater table at any location.

After the fueling system was decommissioned in the 1960s, the former UST 131-2 was reportedly used to store deicing fluid. The tank was later disconnected from the fueling system and used as a holding tank for isopropyl alcohol. Investigative activities in 1993 found approximately 25,000 gallons of an isopropyl-water mixture in the tank. UST 131-2 and its contents were removed in 1997 along with the hydrant pits, tank truck hydrant pit, and the filter pit which resulted in NYSDEC spill number 9704490. In September 2001, NYSDEC spill number 0150007 was assigned to contamination identified at the Otis Street pipeline sampling locations.

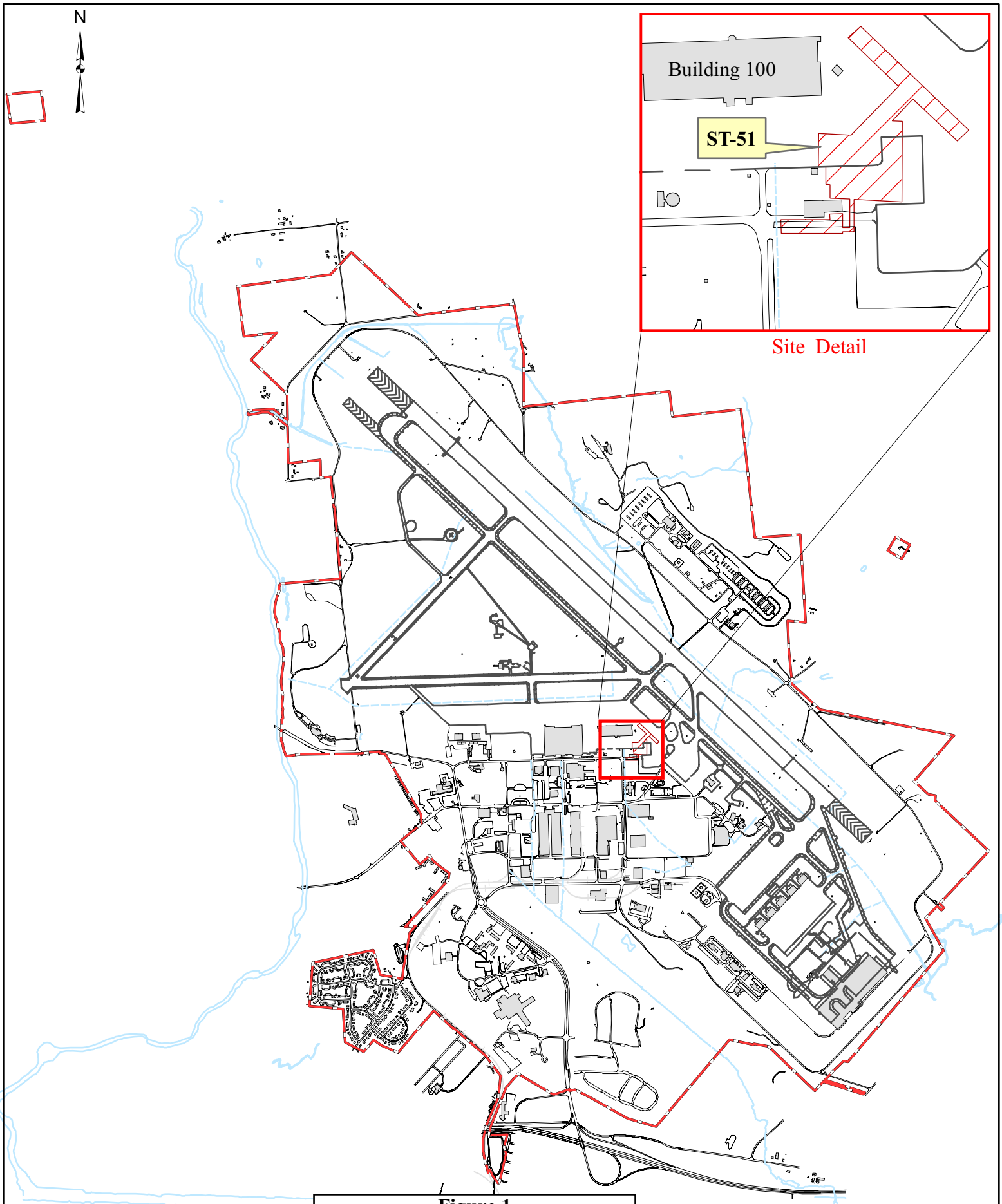
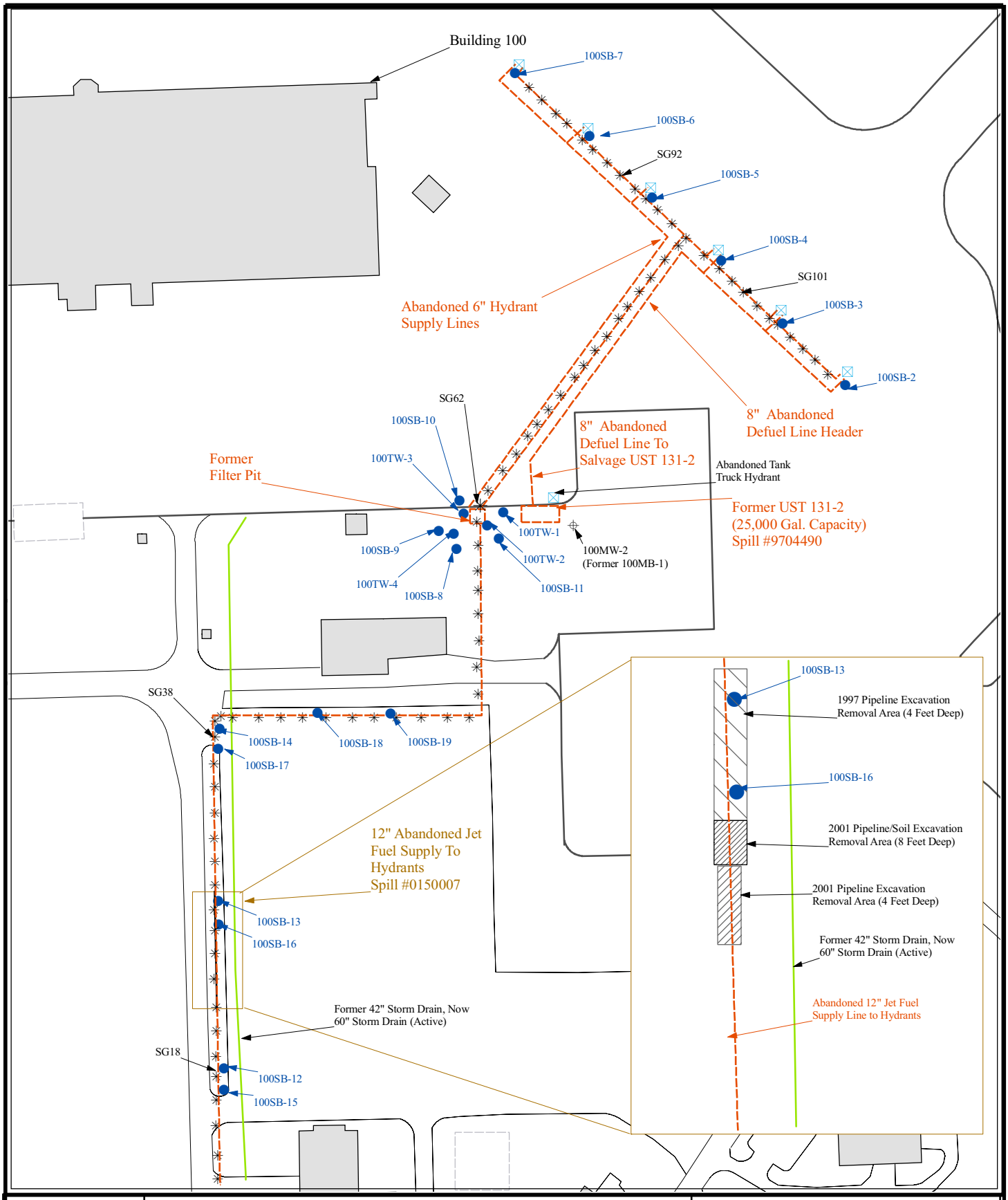


Figure 1
Building 100 Source Removal AOC
Site Location Map



Site Location

Key to Features

- Boring Location
- Former Hydrant Pit
- Tracer Soil Gas Points
- Monitoring Well
- Airfield/Road
- Former Pipeline System
- Storm Drain
- Demolished Facility
- Existing Facility

N

9,600 4,800 0
Feet

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

Figure 2
Building 100 Source Removal AOC
Site Features and Previous Investigations

FPM group

Full Path to the Map Document

2.2 History and Enforcement Activities

The Former Griffiss AFB Operational History

The mission of the former Griffiss AFB varied over the years. The base was activated on February 1, 1942, as 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 in 1947, the depot was renamed Griffiss Air Force Base. The base became an electronics center in 1950, with the transfer of Watson Laboratory Complex (later Rome Air Development Center [1951], Rome Laboratory, and then the Information Directorate at Rome Research Site, established with the mission of accomplishing applied research, development, and testing of electronic air-ground systems). The 49th Fighter Interceptor Squadron was also added. The Headquarters of the Grounds Electronics Engineering Installations Agency was established 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.

Griffiss AFB was designated for realignment under the Base Realignment and Closure Act (BRAC) in 1993 and 1995, resulting in deactivation of the 416th Bombardment Wing in September 1995. The Information Directorate at Rome Research Site and the Eastern Air Defense Sector (EADS) 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 (DFAS) has 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 and toxic substances were used and hazardous wastes were generated, stored, or disposed at various sites on the installation. The defense missions involved, among others, procurement, storage, maintenance, and shipping of war material; research and development; and aircraft operations and maintenance.

Numerous studies and investigations under the U.S. Department of Defense Installation Restoration Program (IRP) have been carried out to locate, assess, and quantify the past toxic and hazardous waste storage, disposal, and spill sites.

These investigations included a records search in 1981, interviews with base personnel, a field inspection, compilation of an inventory of wastes, evaluation of disposal practices, and an assessment to determine the nature and extent of site contamination; Problem Confirmation and Quantification studies (similar to what is now designated a Site Investigation) in 1982 and 1985; soil and groundwater analyses in 1986; a base-wide health assessment in 1988 by the U.S. Public Health Service, Agency for Toxic Substances and Disease Registry (ATSDR); base-specific hydrology investigations in 1989 and 1990; a groundwater investigation in 1991; and site-

specific studies and investigations between 1989 and 1995. The ATSDR issued a Public Health Assessment for Griffiss AFB, dated October 23, 1995, and an addendum, dated September 9, 1996.

Pursuant to Section 105 of CERCLA, Griffiss AFB was included on the National Priorities List (NPL) on July 15, 1987. On August 21, 1990, the Air Force, EPA, and NYSDEC entered into a FFA under Section 120 of CERCLA.

2.3 Community Participation

A proposed plan for the Building 100 Source Removal AOC (AFRPA, February 2010), indicating no further action, was released to the public on January 13, 2010. The document was made available to the public in the Information Repository available on-line at https://afrpaar.lackland.af.mil/ar and in the administrative record file located at 153 Brooks Road in the Griffiss Business and Technology Park.

The notice of the availability of these documents was published in the Rome Daily Sentinel Newspaper on January 14, 2010. In addition, a 30-day public comment period was held from January 13, 2010 to February 16, 2010 to solicit public input on the final Proposed Plan for the Building 100 Source Removal AOC. During this period, the public was invited to review the Administrative Record and comment on the preferred alternative being considered.

In addition, Griffiss AFB hosted a public meeting on January 20, 2010 at the Griffiss Local Development Corporation's Conference Room located at 153 Brooks Road, Rome, New York 13441. The date and time of the meeting were published in the Rome Daily Sentinel Newspaper. At the meeting, the Air Force provided data gathered at the Site, the preferred alternative, and the decision-making process. The meeting provided the opportunity for the community to comment officially on the plan. The public meeting has been recorded and transcribed, and a copy of the transcript has been added to the Administrative Record. No public comments on the Building 100 Source Removal AOC Proposed Plan were submitted. A responsiveness summary documenting the comment solicitation process is included as Appendix A.

2.4 Scope and Role of Area of Concern

The Building 100 Source Removal AOC is one of several sites administered under the Griffiss AFB IRP. The Building 100 Source Removal AOC includes both previously contaminated soil in the unsaturated zone and previously contaminated groundwater at the site. No further action is recommended for the Building 100 Source Removal AOC.

Interim actions conducted at the site have eliminated the source of soil and groundwater contamination. The principal contaminants at the Building 100 Source Removal AOC were petroleum-related hydrocarbons dissolved within the groundwater and soil at the site.

2.5 Site Characteristics

The Building 100 Source Removal AOC is defined as the fueling/defueling system components and associated appurtenances which supplied JP-4 and aviation gasoline to aircraft from 1953 to the 1960s. Fueling/ defueling system operations and residual quantities of petroleum fuels within the system appurtenances resulted in contaminated soil and groundwater at the site at levels above SCGs. Various actions undertaken at the site have removed the sources of groundwater and soil contamination. Currently, no significant threat to human health is posed by the groundwater or soil at the Building 100 Source Removal AOC. Past investigations and Fueling/ Defueling System Removal Actions (Section 2.5.1), Groundwater Monitoring (Section 2.5.2), and Soil Vapor Intrusion Evaluation (Section 2.5.3) are summarized below.

2.5.1 Previous Investigations and Removal Actions

2.5.1.1 Predesign Investigation Activities - 1993

A pre-design investigation was completed by Law Engineering and Environmental Services, Inc. (LAW) at this site in December 1993. The objective of the investigation was to determine whether leakage from the abandoned refueling/defueling pipeline and underground salvage tank had occurred and to assess the presence or absence of any residual petroleum contamination in the soils and groundwater. The results were used to determine whether remediation was required or if the site could be closed. This investigation included a soil gas survey along the pipeline and hydrant system and eleven soil borings. 100MW-2 was installed in 1995 at one of the soil borings located at the 25,000-gallon defueling salvage tank which was formerly associated with the fuel line, and used for deicing fluid storage. All soil and groundwater samples collected were analyzed for Volatile Organic Compounds (VOCs), including methyl-tertiary butyl ether (MTBE) which is a fuel additive, and Semi-Volatile Organic Compounds (SVOCs).

The soil samples were assessed for leachability of contaminants by first processing the soil samples by EPA Method SW1311 Toxicity Characteristics Leaching Procedure (TCLP) and then analyzing for constituents in the resulting water samples. Groundwater samples were also analyzed for total glycols to ascertain if any deicing fluid may have leaked from UST 131-2.

For the soil gas survey, soil gas samples were collected from 121 locations along the entire length of fuel hydrant pipeline; from Former Tank Farm 3 to all six hydrant refueling pits, and around UST 131-2. Samples were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) and Total Volatile Organic Hydrocarbons (TVH). One sample reported a xylene detection of 11 µg/L and five samples reported TVH detections. Four of the five sampling points (SG18, SG38, SG92, and SG101) ranged from 0.5 µg/L to 0.8 µg/L. The sample with the highest level was found at location SG-62, in close proximity to the Filter Pit at a depth of 9.5 ft bgs (Figure 2, Page 5).

Results of the soil sampling analysis indicated concentrations of VOCs and SVOCs in the TCLP extracts from soil samples adjacent to the hydrant pits and the filter pit north of Building 131. Free product was detected in the surficial aquifer at boring location 100SB-8. Strong petroleum odors were also noted during drilling at boring locations 100SB-10 and -11. However, none of

the detected compounds in the TCLP extracts from soil samples exceeded the Spill Technology and Remediation Services (STARS) Guidance Values.

In the groundwater sample collected at monitoring well 100MW-2, 5 VOCs and 8 SVOCs were detected at levels exceeding the NYS Groundwater SCGs. Glycols were not detected.

The predesign investigation report included recommendations for the removal of the 25,000-gallon salvage UST and the closure of the pipeline, including the valve pit and the hydrant.

2.5.1.2 Engineering Evaluation/ Cost Analysis

An Engineering Evaluation/Cost Analysis (EE/CA) was prepared in 1995 in support of the proposed removal actions at the Building 100 AOC, which included the following:

- Removal of the 25,000-gal salvage UST and associated appurtenances;
- In situ cleaning of the fuel hydrants and pipelines followed by injection of grout to plug the system lines.

LAW conducted additional field investigations in the spring of 1995 that were documented in the Addendum to the Final EE/CA. The investigation included the installation of 9 soil borings and 4 temporary wells to assess the presence of petroleum impacts in the vicinity of the filter pit and soil gas sample points SG-18 and SG-38. Borings 100SB-12 through -20 were installed along the fuel line running from former Tank Farm 3 to the filter pit, and in the vicinity of former soil gas sampling locations SG18 and SG38 (Figure 2). Nine soil samples collected from the borings were analyzed for VOCs and SVOCs. Only soil collected from boring 100SB-13, at a depth between 4 and 6 feet bgs, contained exceedances of the STARS TCLP guidance values. Concentrations of ethylbenzene (11 µg/L), toluene (240 µg/L), m,p-xylene (60 µg/L), and o-xylene (19 µg/L) exceeded the STARS TCLP guidance value of 5 µg/L (Table 1).

Table 1
Building 100 Source Removal AOC
Soil Sample Detected Analytical Results from Boring 100SB-13 (1995)

Compound	STARS TCLP Guidance Values	Soil Boring 100SB13 4-6 ft bgs TCLP Extract Detection
VOCs (µg/L)		
1,2,4-trimethylbenzene	5	2.8 J
ethylbenzene	5	11
m,p-xylene	5	60
n-butylbenzene	5	1 J
o-xylene	5	19
toluene	5	240

Note:
J – The analyte was positively identified, the quantitation is approximate.

2.5.1.3 UST Removal and Excavation Activity

In 1997, UST 131-2, the six hydrant pits, the tank truck hydrant, and the concrete filter pit were removed. The site was assigned NYSDEC spill number 9704490 after visual signs of soil contamination were noted during the excavation of UST 131-2.

All associated piping within the Building 100 Source Removal AOC including the remaining 12-inch pipeline (from the filter pit area south along Otis Street to former Tank Farm 3) was abandoned in place with the exception of a 40-ft section of 12-inch pipe, centered at the contaminated soil boring location 100SB-13 which was removed. All contaminated soil surrounding the 40-ft section was also excavated. Although the total volume of soil removed was not indicated in the UST Removal Closure Report, it is estimated that approximately 100 cubic yards of soil was removed based on the excavation dimensions of 40 ft by 9 ft by 8 ft deep.

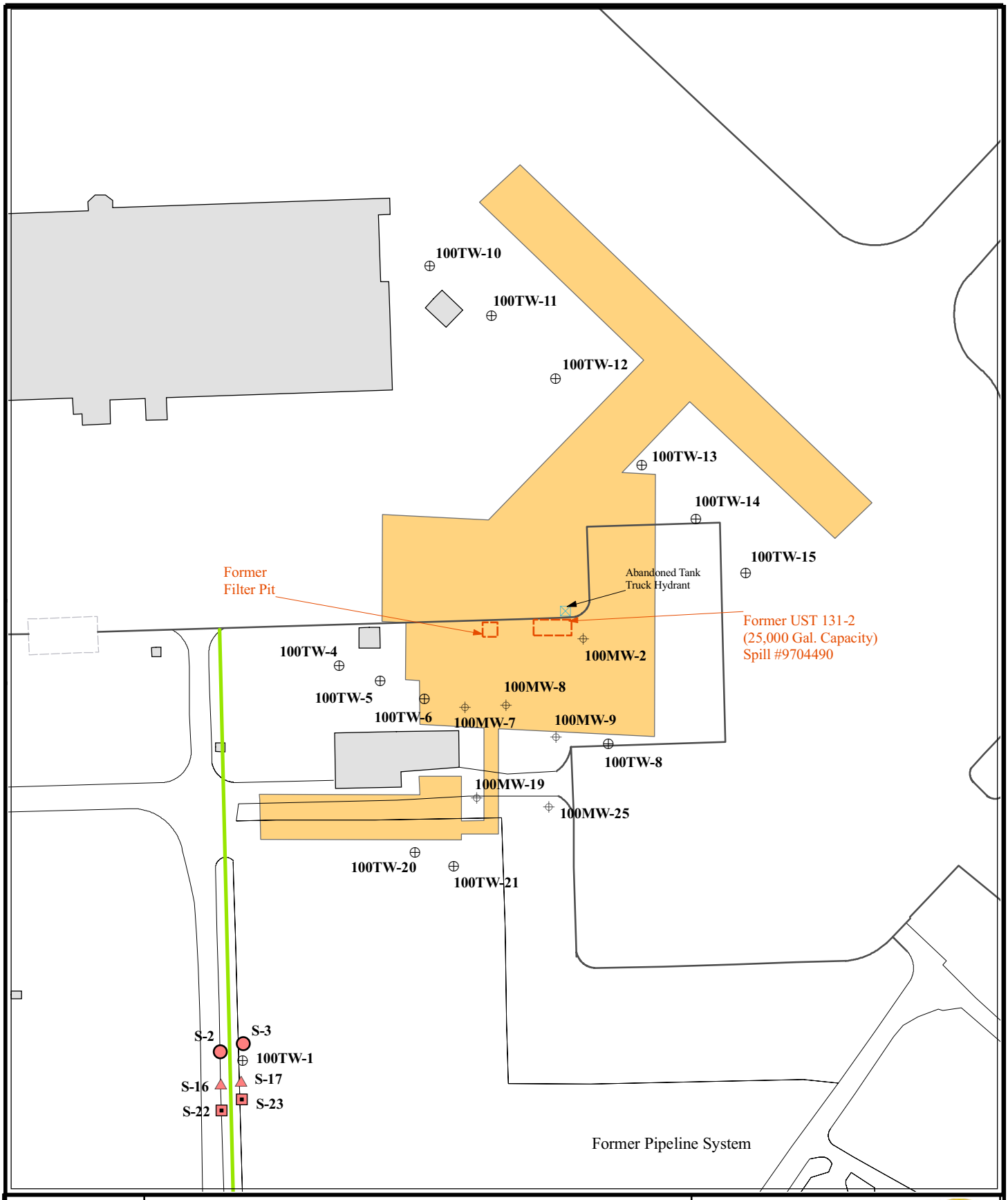
Eight endpoint soil samples were collected from the 40-ft fuel pipeline excavation area and analyzed for total VOCs and SVOCs. One endpoint sample collected from the south wall of the excavation indicated 13 VOC detections at concentrations ranging from one to three orders of magnitude above STARS alternative guidance values. Overexcavation of residual contamination was not completed, due to high groundwater levels (the groundwater was encountered at approximately 10 ft bgs), loose soil conditions and contractual restrictions. Contaminated soil that was removed from the excavation was transported to the on-base landfarm operation for bioremediation. The removed soil was remediated and approved for closure by the NYSDEC on April 20, 2001.

2.5.1.4 Supplemental Study

In 1999 and 2000, a supplemental study was conducted at the Building 100 Source Removal AOC, when 23 soil borings were screened for contamination. Seventeen soil borings and temporary well locations (100TW-4 through 100TW-15, 100TW-18 through 100TW-21, and 100TW-25) were related to the Building 100 AOC and six (S-2, -3, -16, -17, -22, and -23) were associated with soil contamination found at the Otis Street sampling location and are shown on Figure 3.

Two of the 23 soil samples (S-16 and S-17) were collected based on the results of field screening using a photoionization detector (PID) and submitted for VOC analysis following TCLP (Figure 3). S-16 indicated two VOC exceedances of the STARS TCLP guidance values, and S-17 indicated eight VOC exceedances (Table 2). In September 2001, NYSDEC spill number 0150007 was assigned to contamination identified at the Otis Street sampling locations.

During the supplemental study, a total of 21 groundwater samples were collected (100TW-1 through 100TW-21). The supplemental study concluded that groundwater contamination at the Building 100 Source Removal AOC is mostly limited to an area south and east of former UST 131-2. In the vicinity of the fuel hydrants, one minor exceedance for toluene at sampling point 100TW-10 (5.44 µg/L) was the only NYS Groundwater SCGs exceedance.



Site Location

Key to Features

- Monitoring Well
- Temporary Well
- Soil Screening Location
- Contaminated Soil Sample
- Soil Sample and Groundwater Sample
- Airfield/Road
- Storm Drain
- IRP ST-51 Boundary
- Demolished Facility
- Existing Facility

N

9,600 4,800 0
Feet

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

Figure 3
Building 100 Source Removal AOC
Soil and Groundwater Sampling Locations
(FPM 1999 - 2004)

FPM group

Full Path to the Map Document

Table 2
Building 100 Source Removal AOC
Supplemental Soil Sampling Detected Analytical Results (1999 - 2000)

Compound	STARS TCLP Guidance Values	S-16	S-17
VOCs (µg/L)			
1,2,4-trimethylbenzene	5	U	29.8
1,3,5-trimethylbenzene	5	1.82	20.9
ethylbenzene	5	2.2	153
isopropylbenzene	5	U	4.41 F
n-butylbenzene	5	U	56.54 F
n-propylbenzene	5	U	38.6
naphthalene	10	1.36 F	U
sec-butylbenzene	5	0.547 F	516.3
toluene	5	15.1	373
xylenes, total	5	11.3	419

Note:
F – The analyte was detected above the method detection limit, but below the reporting limit.
U – Analyte analyzed for, but not detected.

A slight amount of free product and sheen was observed at former sample locations T7 and T8 (100MW-7 and 100MW-8, respectively). Sample location 100TW-6, northwest of sampling points 100MW-7 and 100MW-8 contained four minor VOC exceedances of NYS Groundwater SCGs. 100MW-2 showed only two minor VOC exceedances (Figure 3).

2.5.1.5 Interim Removal Action

In November 2001, an interim removal action (IRA) was performed whereby soil was removed in efforts to locate the abandoned jet fuel transfer pipeline. The excavation began at the storm drain and proceeded west towards Otis Street. This excavation revealed a water main and the abandoned jet fuel line. In addition, a 30-foot section of the pipeline that had been abandoned in place was removed. Since the soil beneath the northern end of the pipeline exhibited visible signs of contamination where the piping was cut during the previous pipeline removal in 1997, overexcavation of the contaminated soil continued until no evidence of contamination was observed. The final depth of the excavation was 8 ft. During the removal operations, it was determined that a non-friable tarred paper and asbestos wrapping covered the length of the pipeline. Endpoint samples were collected from the excavation sidewalls and bottom; an additional soil sample was collected from the soil surface beneath the former pipeline footprint, 10 ft south of the excavation area to identify possible contamination associated with the tarred paper and asbestos wrapping, as opposed to the jet fuel contamination.

The TAGM #4046 Soil Cleanup Objectives Guidance Values were used after December 20, 2000. No VOCs which had been previously identified in the south sidewall soil sample were detected at levels exceeding Guidance Values.

Four SVOCs were found to exceed TAGM #4046 Soil Cleanup Objectives and were associated with waterproofing and pipeline coverings containing coal tar and tar products, which are insoluble in water.

The total volume of soil removed from the pipeline excavation was 54 cubic yards, which was disposed of off-base at the High Acres Landfill in Fairport, New York. After endpoint sampling confirmed that the remaining soil was clean, the site was restored. The excavated area was backfilled with crushed stone from an off-site source, and topsoil, grass, and blacktop were restored to pre-removal conditions.

Location S-17 was resampled in May 2002 and analyzed for total VOCs and SVOCs in the soil. No petroleum-related constituents were detected in the sample. Based on the removal action and the resampling of S-17, the NYSDEC closed spill number 0150007 on October 16, 2003.

2.5.2 Groundwater Monitoring

Supplemental to the previous investigations and soil sampling, groundwater monitoring events were performed quarterly at the monitoring wells (100MW-2, -7, -8, -9, -19, -25, and 100TW-10) (Figure 3) in the vicinity of the Building 100 Source Removal AOC from February 2002 to March 2004 (except for 100MW-9 and -25 which were sampled from June 2003 to March 2004) to monitor the dissolved phase of the contamination. The objectives of the Building 100 Source Removal AOC LTM were to:

- Monitor the presence of petroleum contamination within and downgradient of the site, and
- Monitor plume attenuation, characterize contamination and delineate localized groundwater flow.

Each sample was analyzed for VOCs using EPA Method SW8260 and SVOCs using EPA method SW8270. These analyses were suggested based upon the results from the previous sampling events that reported exceedances for VOCs and SVOCs. The determination of residual groundwater contamination and requirements for continued monitoring were based on comparisons of sample analytical data to NYS Groundwater SCGs.

Table 3 summarizes the occurrences of groundwater exceedances from February 2002 through March 2004. Of the LTM wells sampled, only monitoring wells 100MW-7 and 100MW-8 were reported to have exceedances during any sampling event.

In LTM well 100MW-7, a VOC exceedance (1,2,4-trimethylbenzene) was reported during the February 2002 round. In well 100MW-8, multiple VOC concentrations were detected above NYS Groundwater SCGs during the February 2002 round. The VOCs included 1,2,4-trimethylbenzene, isopropylbenzene, n-propylbenzene, p-isopropyltoluene, and sec-butylbenzene. sec-Butylbenzene (NYS Groundwater Standard [5µg/L]) was also reported as an

Table 3
Building 100 Source Removal AOC Compounds Exceeding Standards
Groundwater Sampling, February 2002 through March 2004

Compound	Number of Samples	NYS Groundwater Standards (µg/L)	Range of Detections	Frequency of Detection Above NYS Groundwater Standard
VOCs (µg/L)				
1,2,4-trimethylbenzene	78	5	8.1 - 34	2
isopropylbenzene	78	5	0.37 F – 6	1
n-propylbenzene	78	5	0.26 F – 10	1
p-isopropyltoluene	78	5	0.25 F – 11	1
sec-butylbenzene	78	5	0.36 F – 16	5

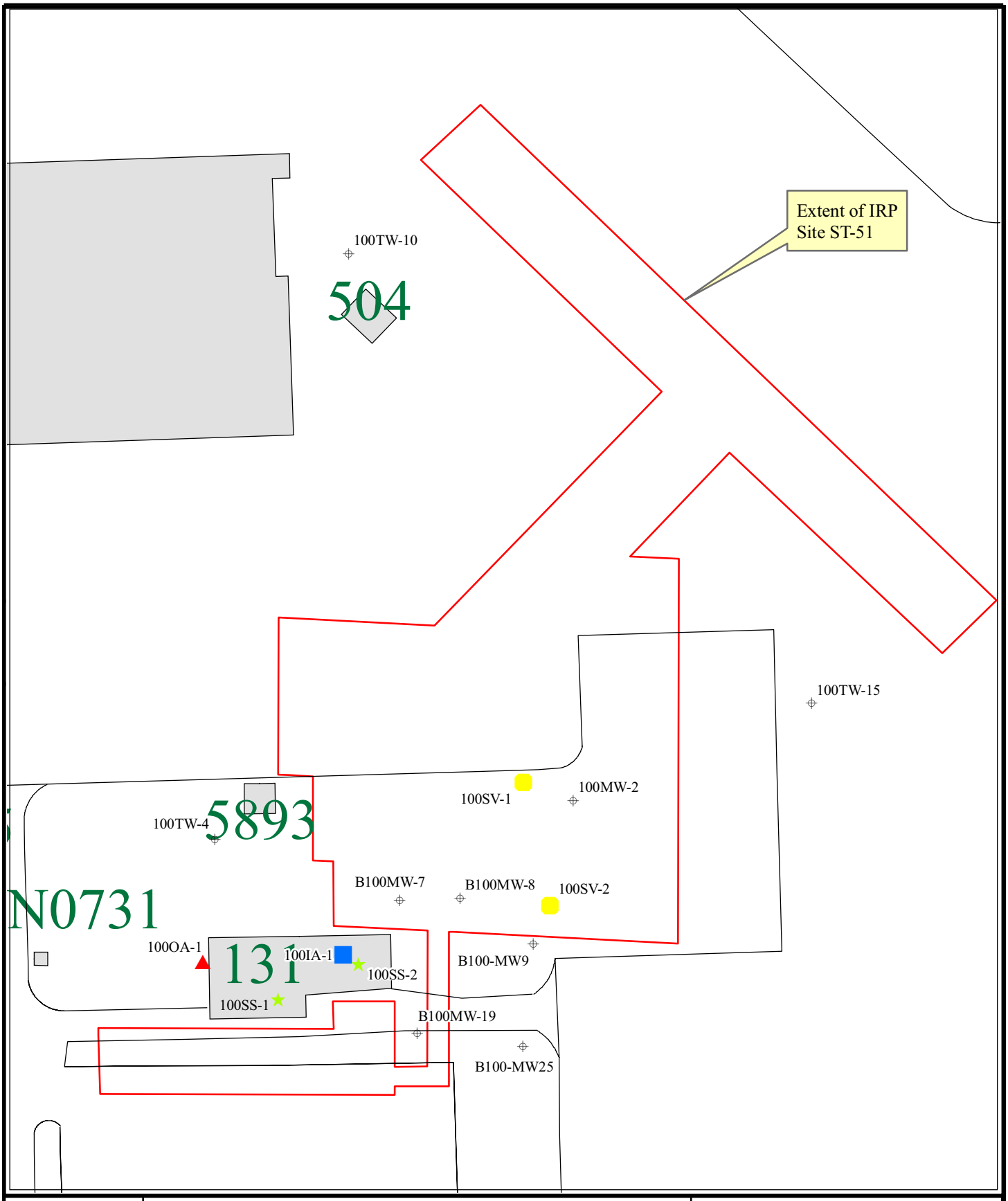
Note:
F – The analyte was detected above the method detection limit, but below the reporting limit.
U – Analyte analyzed for, but not detected.

exceedance in the June 2002, September 2002, December 2002, and March 2003 sampling rounds at 100MW-8.

Since the June 2003 sampling event, residual groundwater contamination from the former filter pit and UST excavation areas has attenuated. None of the detected VOC concentrations exceeded the NYS Groundwater SCGs. Moreover, no increase in detected concentrations was reported throughout the June 2003 through March 2004 sampling rounds. The Long Term Monitoring Report for the Petroleum Source Removal Areas of Concern dated July 2004 was issued to the NYSDEC and the EPA recommending closure of NYSDEC spill number 9794490. The NYSDEC closed spill number 9794490 on September 27, 2004.

2.5.3 Soil Vapor Intrusion Evaluation

Given the location of the Building 100 Source Removal AOC, Soil Vapor Intrusion (SVI) sampling occurred at Building 131 in March 2007 as illustrated in Figure 4. Sub-slab, soil vapor, indoor air, and outdoor air samples (Figure 4) were collected and analyzed for VOCs using the EPA Method TO-15. Sampling results are provided in Tables 4 and 5. Results indicate that all detections are below screening levels.



Site Location

Key to Features

- Indoor
- Outdoor
- Soilvapor
- Subslab
- Wells
- Airfield
- Road
- Existing Facilities

50 25 0 50 100
Feet

N

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

Figure 4
Building 100 Source Removal AOC
SVI Sampling Locations

FPM group

Full Path to the Map Document

Table 4
Building 100 Source Removal AOC Detected Soil Vapor and Sub-Slab Vapor Analytical Results

Sample Location	**100SS-1**	**100SS-2**	**100SV-1**	**100SV-2**
Sample ID	**100SS0101AA**	**100SS0201AA**	**100SV0101AA**	**100SV0201AA**
Sample Type	**Sub Slab**	**Sub Slab**	**Sub Slab**	**Sub Slab**
Sample Date	**20 March 2007**	**20 March 2007**	**20 March 2007**	**20 March 2007**
Sample Depth (ft bgs)	**1**	**1**	**5**	**5**
Sample Collection Duration (hr)	**1**	**1**	**1**	**1**
VOCs (TO-15) (µg/ m^3)				
1,2,4-trimethylbenzene	2.4 M	U	0.65 F	U
1,3,5-trimethylbenzene	1.0 M	U	U	U
1,3-dichlorobenzene	2.3 M	U	U	U
1,4-dichlorobenzene	2.5 M	2.1	U	U
4-ethyltoluene	1.1 M	U	U	U
acetone	100	93	150	410
benzene	5.8 M	4.5	1.9	3.7
carbon disulfide	2.9 M	6.2	0.57	0.44 F
chloromethane	U	U	2.5	U
cyclohexane	5.9	21	U	U
ethylbenzene	2.2 M	U	U	U
freon 11	0.63 F	0.57 F	0.91	0.91
freon 12	1.8 M	1.8	1.6	1.8
heptane	6.3 M	2.3	0.83	1.5
hexane	U	14	5.8	11
isopropyl alchol	25	U	U	U
m,p-xylene (sum of isomers)	31	0.49 F	0.49 F	0.62 F
methyl ethyl ketone	5.1 M	U	U	U
methylene chloride	U	0.42 F	U	U
o-xylene	1.6 M	U	U	U
styrene	1.0 M	U	U	U
tetrachloroethylene (pce)	2.0 M	U	U	0.90 F
tetrhydrofuran	2.9 M	U	U	U
toluene	33	3.3	2.3	16
trichloroethylene	3.2M	U	U	U

Notes:
F = the analyte is detected and the quantitation is between the method detection limit (MDL) and reporting limit (RL).
M = A matrix effect was present.
U = The analyte was not detected above the MDL.

Table 5
Building 100 Source Removal AOC Detected Indoor and Outdoor Analytical Results

Sample Location	**100IA-1**	**100OA-1**
Sample ID	**100IA0105AA**	**100OA0105AA**
Sample Type	**Indoor**	**Outdoor**
Sample Date	**20 March 2007**	**20 March 2007**
Sample Height (ft above ground)	**5**	**5**
Sample Collection Duration (hr)	**24**	**24**
VOCs (TO-15) in µg/m^3		
1,2,4-trimethylbenzene	0.600 F	0.600 F
1,2-dichloroethane	0.823	U
1,4-dichlorobenzene	0.795 F	U
acetone	52.4	18.6
benzene	0.487	0.487
carbon tetrachloride	0.384	0.448
chloromethane	0.819	0.945
cis-1,2-dichloroethene	0.524 F	U
ethylbenzene	0.574 F	U
freon 11	1.20	1.31
freon 12	2.16	2.51
m,p-xylene (sum of isomers)	1.37	0.574 F
methyl ethyl ketone	12.9	U
methylene chloride	29.7	1.17
toluene	2.11	1.03
trichloroethylene	1.09	U

Notes:
F = the analyte is detected and the quantitation is between the MDL and RL.
J = The analyte is positively identified, the quantitation is an approximation
U = The analyte was not detected above the MDL.

2.6 Current and Potential Future Land and Resource Use

The Griffiss Local Development Corporation is responsible for maintaining property and developing base facilities, as necessary, to promote advantageous reuse. The planned future land-use designations for the Building 100 Source Removal AOC are industrial/commercial. In addition, a portion of the AOC is within the Griffiss International Airport, which is operated by Oneida County.

2.7 Summary of Site Risks

Previous investigations, source removals, and groundwater monitoring have confirmed that contamination has been removed from the site. Since the site was remediated to acceptable cleanup levels, a risk assessment was not performed. The selected remedy for no further action at the site is protective of human health and the environment.

2.8 Documentation of Significant Changes

There are no significant changes between the preferred alternative presented in the Proposed Plan for the Building 100 Source Removal AOC and the selected remedy presented in this ROD.

REFERENCES

AFCEE, *Quality Assurance Project Plan, Version 3.1,* August 2001.

E&E, *Basewide Environmental Baseline Survey Supplement (Update 3), Griffiss AFB, New York,* December 1997.

FPM, *Buildings 100 and 110 Source Removal Area of Concern Final Work Plan, Former Griffiss AFB, Rome, New York,* September 1999.

FPM, *Building 100 and 110 Source Removal Area of Concern Draft Supplemental Study Report, Former Griffiss AFB, Rome, New York,* July 2001.

FPM, *Petroleum Spill Sites Long Term Monitoring Program Draft Work Plan Addendum III, Former Griffiss Air Force Base, Revision 0.0,* May 2003.

FPM, *Draft Long-Term Monitoring Report for Petroleum Source Removal Area of Concern at the former Griffiss AFB, Rome, New York,* June 2004.

NYSDEC, *New York State Ambient Water Quality Standards and Guidance Values,* June 1998.

NYSDEC, *Spill Technology and Remediation Series, Guidance Values for Fuel Contaminated Soil*, August 1992.

NYSDEC, *TAGM #4046, Determination of RSCOs and Cleanup Levels*, January 1994.

NYSDEC, *Sampling Guidelines and Protocols Manual*, September 1992.

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GLOSSARY

Administrative Record: A file established and maintained in compliance with section 113(K) of the Comprehensive Environmental Response, Compensation, and Liability Act consisting of information upon which the lead agency bases its final decisions on the selection of remedial method(s) for a site. The Administrative Record is available to the public.

Applicable Requirements: Applicable requirements are those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site. Only those state standards that are identified by a state in a timely manner and that are more stringent that federal requirements may be applicable. See also Relevant and Appropriate Requirements.

Aquifer: A water-bearing formation or group of formations.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). The act requires federal agencies to investigate and remediate releases of hazardous substances.

Groundwater: Water found beneath the earth's surface that fills pores within materials such as sand, soil, gravel, and cracks in bedrocks, and often serves as a source of drinking water if found in an adequate quantity.

Installation Restoration Program (IRP): The United States Air Force subcomponent of the Defense Environment Restoration Program (DERP) that specifically deals with investigating and remediating sites associated with suspected releases of toxic and hazardous materials from past activities. The DERP was established to clean up contaminated sites at Department of Defense facilities nationwide.

Monitoring: Ongoing collection of information about the environment that helps gauge the effectiveness of a cleanup action. Information gathering may include groundwater well sampling, surface water sampling, soil sampling, air sampling, and physical inspections.

National Oil and Hazardous Substances Pollution Contingency Plan (NCP): The NCP provides the organization, structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants. The NCP is required under CERCLA and the Clean Water Act, and USEPA has been delegated the responsibility for preparing and implementing the NCP. The NCP is applicable to response actions taken pursuant to the authorities under CERCLA and the Clean Water Act.

National Priorities List: USEPA's list of the most serious uncontrolled or abandoned sites with hazardous substance contamination identified for possible long-term remedial action under the Superfund program.

Organic Compounds: Any chemical compounds built on the carbon atom, i.e., methane, propane, phenol, etc.

Polychlorinated Biphenyl (PCB): An organic pollutant that was formerly used in electrical transformers and capacitors, their manufacture was banned in 1979. There are 210 different PCB compounds that typically have 40% to 60% chlorine by weight.

Proposed Plan: A public document that solicits public input on a recommended remedial alternative to be used at a site. The Proposed Plan is based on information and technical analysis generated during the RI/FS. The recommended remedial action could be modified or changed based on public comments and community concerns.

Record of Decision (ROD): A public document that selected and explains the remedial alternative to be used at a CERCLA site. The ROD is based on information and technical analysis generated during the remedial investigation, and on consideration of the public comments and community concerns received on the Proposed Plan. The ROD includes a Responsiveness Summary of public comments.

Remedial Action: An action that stops or substantially reduces a release or threat of a release of hazardous substances that is serious but not an immediate threat to human health or the environment.

Remedial Alternatives: Options evaluated to address the source and/or migration of contaminants to meet health-based or ecology-based remediation goals.

Remedial Investigation (RI): An investigation that determines the nature and extent and composition of contamination at a hazardous waste site. It is used to assess the types of remedial options that are developed in the feasibility study.

Standards, Criteria, and Guidance values (SCGs): Sampling results are compared to ARARs and TBCs which include standards, criteria, and guidance values. To simplify the text, ARARs and TBCs are collectively referred to as SCGs.

Semivolatile Organic Compounds (SVOCs): Organic constituents which are generally insoluble in water and are not readily transported in groundwater.

Source: Area at a hazardous waste site from which contamination originates.

Vadose Zone: The volume located between the ground surface and the water table. Also known as the unsaturated zone.

Volatile Organic Compounds (VOCs): Organic constituents that tend to volatilize or to change from a liquid to a gas form when exposed to the atmosphere. Many VOCs are readily transported in groundwater.

Water Table: The surface of a body of unconfined groundwater at which the water pressure is equal to that of the atmosphere.

APPENDIX A

RESPONSIVENESS SUMMARY

On January 13, 2010, AFRPA, following consultation with and concurrence of the EPA and NYSDEC, released for public comment the proposed plan for the Building 100 Source Removal AOC located at the former Griffiss AFB. The release of the proposed plan initiated the public comment period, which concluded on February 16, 2010.

Griffiss AFB hosted a public meeting on January 20, 2010 at the Griffiss Local Development Corporation's Conference Room located at 153 Brooks Road, Rome, New York 13441. The selected remedy for the Building 100 Source Removal AOC was presented at the public meeting and a court reporter recorded the proceedings of the meeting. Copies 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 proposed plan for the Building 100 Source Removal AOC.

No verbal or written comments were received at the public meeting or during the public comment period.

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